PBR
ISSN 1561-8706

PAKISTAN BUSINESS REVIEW

Indexed and Abstracted by ECONLIT, Journal of Economic Literature
Indexed by EBSCO, USA
HEC Approved "Y" Category Journal

Volume 16 Number 3 October 2014

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MONETARY APPROACH TO EXCHANGE RATE DETERMINATION: EMPIRICAL EVIDENCE FROM PAKISTAN

Ehsan Ahmed Shaikh[1] & Javed Iqbal[2]

Abstract

This Study, empirically, investigates monetary approach to exchange rate determination between Pak Rupee vis-à-vis US$ employing flex price Frenkel-Bilson type model. ADF unit root tests are conducted for macroeconomic fundamentals and it is found that all variables, namely differential money stocks, differential industrial production and differential nominal interest rate are integrated of order one. Hence a test of cointegration using Johansen cointegration technique is conducted. The findings of the cointegration test reveal that there is only one cointegrating vector. Sign of coefficient of differential money stock came out to be positive and statistically significant, as we hypothesized it. Similarly, coefficient of differential industrial production is also statistically significant but its sign comes out to be positive which is contrary to the prediction of our model.

Whereas the sign of the coefficient of differential interest is positive; this is also contrary to our hypothesis. However it is what has been envisaged by Mundel-Fleming and Dornbusch models. Vector error model has also been estimated.

Keywords: Exchange rate, purchasing power parity, monetary model

JEL Classification: E 520

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1.Introduction

One of the important puzzles in the areas of international finance and economic literature is obscurity of explaining exchange rate in floating exchange rate regime using macroeconomic fundamentals. These fundamentals are money supply, output, prices and interest rate. According to economic theories, these fundamental variables determine nominal exchange rate. However, practically, no conclusive evidences have been found about the role of fundamentals in predicting future changes in exchange rates. Hence economic profession has long believed that the naive random walk model can well explain nominal exchange rate behavior. This shows that there are no well defined economic forces which serve as determinants of exchange rate. Meese & Rogoff (1983a) showed that flex-price version of monetary model suggested by Frenkel-Bilson, the sticky price version of monetary model pointed out by Dornbusch and the sticky price asset approach by Hooper & Morton (1982) did not perform better than a simple random walk model.

However, not all the results of the structural models of exchange rate have been rejected by all the researchers. For instance, Woo (1985) reformulated monetary model that used a function for money demand based on a partial adjustments mechanism. He found that the random walk model could perform better in case of out of sample forecasting. A monetary approach of the exchange rate determination between German Mark and the U.S. Dollar has also been investigated by MacDonald and Taylor (1994) over a period of 1976 to 1990.The authors found that the dynamic error correction mechanism outperformed a simple random walk model. It is valid for every forecast horizon.

2.Significance of the Study

A number of important developments in the field of exchange rate economics have taken place in the last decade or so. There occurred significant contributions to theory as well as the empirical sides of understanding of exchange rate dynamics. This was because of enormous advances in econometric techniques. Increasing accessibility of data of better quality also contributed a lot. These developments stimulated a lot of empirical research on exchange rate determination. Obviously, this situation has enhanced our knowledge of exchange rate dynamics. But at the same time so many questions and challenges remain unresolved. This situation demands further research.

3.Literature Review

Since the early 1970s, the world economy has experienced a rapid integration of international markets, especially an integration of world financial markets. This shift is considered to be an outcome of deliberate policy changes. These policy changes were the elimination of control over capital flows and policy induced deregulation taking place in domestic financial markets. (See e.g. Mussa & Goldstein 1993) Drastic decrease in the cost of international communication and dramatic improvement thereof contributed a lot to the reduction of natural barriers to international transactions in the financial markets. Besides, policy induced reductions of the barriers to foreign direct investments and merchandise trade and dramatic innovations in information technology were also an important factor responsible for global integration of financial markets. (Obstfeld, 1998 and Baldwin & Martin 1999) The integration of world financial and goods markets initiated a new era of research at theoretical and empirical front in exchange rate economics. For a purpose of investigating monetary model of exchange rates determination, Meese & Rogoff (1983), in one of their most prominent papers, compared forecasting precision of different structural models of exchange rate determination with those of time series models of exchange rate. This study found that random walk exchange rate models performed as good as any estimated structural model. The structural models they estimated included the flex price monetary model suggested by Frenkel and Bilson. They also studied sticky price monetary model, popularly known as Dornbusch-Frenkel model in economic literature. Another version of the sticky price model they investigated in their study was Hooper and Morton's model of exchange rate that incorporated the current account too. A possible reason for the poor performance of these fundamental based monetary models may be a deviation or at least partial deviation from uncovered interest parity condition.

Wolff (1987) employed time varying parameter techniques of estimation, which were based on recursive application of the Kalman filter, for improving forecasting ability of monetary models of exchange rate. Estimation technique allowing time variant parameters considerably enhanced models' forecasting accuracy for the Dollar/ Pound, Dollar/Mark and Dollar/Yen exchange rates. Unlike earlier findings of economic literature (Meese & Rogoff, 1983), forecasts of Dollar/Mark exchange rate almost same as gottax by the simple random walk forecasting technique. So many studies such as Wolff (1987), Wolff (1988) and Schinasi & Swamy (1989) estimated quasi reduced form relationship of monetary approach of exchange rate determination. These studies used time variant coefficients to capture structural differences of data generating processes of two countries. For instance, structural differences in the function of money demand which is a result of liberalization in financial sector and innovations captured by using time varying coefficients, Wolff (1987) found that different versions of monetary model with time variant coefficients could perform better in forecasting exchange rate movements then forecasts made by a naive random walk model. Schinasi and Swamy (1989) found similar results in their study.

Evidence of validity of PPP for Pak-rupee / US-dollar exchange rate was provided with by Khan and Qayyum (2007). They found this evidence by employing Johansen (1988) and Johansen and Juselius (1990) multivariate cointegration technique. The findings of Khan and Qayyum (2007) bring an important implication for policy makers.

Lutfur Rahman & Jashim Uddin (2009) inquires the relationship of stock prices and exchange rates in Bangladesh, India and Pakistan. They used Johansen technique to test for the presence of a cointegrating relationship. They found no cointegrating relationship between stock prices and exchange rates. Authors also used Granger causality test finding no way causal relationship these variables in these countries.

Haffez-ur-Rahman (2010) analyzed the effect of foreign exchange inflow on equilibrium real exchange rate of Pakistan for the period 1993 M7 to 2009 M3. He used behavioral equilibrium real exchange rate model. This study finds that huge FDI inflows and workers' remittances considerably increased equilibrium real exchange rate. The study used Johansen's (1988) cointegration technique for the estimation of long-run relationship between LREER and fundamentals. Unlike Engle & Granger (1987), the Johansen's technique is better for it uses Maximum likelihood method for providing test statistics determining number of cointegrating vectors and coefficient estimates.

4. Methodology and Description of Data

Macroeconomists and experts in international finance have long been utilizing the approach namely fundamental analysis for understanding exchange rate dynamics. This approach is formulated on the assumption of existence of some macroeconomic variables (known as macroeconomic fundamentals) that play significant role to determine exchange rates. These variables are real income, supply of money, rate of interest, general price level changes and current account. Success of this approach of exchange rate determination relies on correct specification of the underlying macroeconomic variable influencing exchange rate movement. To study the dynamics of exchange rate, previous studies employed the fundamental analysis.

$$\mathbf{S_t = \beta_0 + \beta_1 (m_t - m_t^*) + \beta_2 (y_t - y_t^*) + \beta_3 (r_t - r_t^*) + \beta_4 (\pi_t - \pi_t^*) + \varepsilon_t} \qquad 1$$

An asterisk on a variable denotes that it is a variable for foreign country. S_t denotes the log of spot nominal exchange rate (Pak Rupee / U.S. $), m_t shows the log of money supply, y_t stands for the log of real income, r_t denotes nominal interest expressed in percentage (short-term) and we use π_t to denote expected inflation rate. Whereas ε_t shows the random error term.

This equation shows a model which is called Frenkel-Bilson model if it imposes the restrictions on coefficients as given below;

$$\beta_4 = 0, \quad \beta_1 > 0, \quad \beta_2 < 0, \quad \beta_3 > 0$$

In other words, Frenkel-Bilson model which is based on monetary approach implies stronger domestic currency in case of increase in relative real income, i.e. exchange rate decreases as a result of increase in domestic economy's real income relative to foreign economy. Whereas increase in relative interest rate makes domestic currency weaker i.e. nominal exchange rate increases. Both of these implications of Frenkel-Bilson are contrary to those of static version of Mundell-Fleming model. In case of Mundell-Fleming model, increase in real income of domestic economy relative to foreign economy causes worsening of balance of payments through enhancing domestic economy's imports. Whereas in Frenkel-Bilson model based on monetary approach, rise in domestic economy's real income enhances real money which in turn makes domestic currency stronger, i.e. nominal exchange rate increases. Similarly rise in differential nominal interest rate causes capital inflows in Mundell-Fleming model which in turn results in increasing demand for domestic currency in foreign exchange market making domestic currency and resulting stronger domestic currency. On the other hand, in Frenkel-Bilson model, rise in differential nominal interest rate reduces demand for domestic currency making domestic currency weaker.

It is worth mentioning here that Frenkel-Bilson model specifies economic fundamentals, f_t ,as;

$$\mathbf{f_t = \beta_1 (m_t - m_t^*) + \beta_2 (y_t - y_t^*) + \beta_3 (r_t - r_t^*)................2}$$

This is named as Frenkel-Bilson fundamental in the literature.

The second model which has been popularized in the exchange rate economics is Dornbusch-Frankel model.
Economic fundamentals for Dornbuch-Frenkel model is as follows;

$$\mathbf{f_t = \beta_1 (m_t - m_t^*) + \beta_2 (y_t - y_t^*) + \beta_3 (\pi_t - \pi_t^*)................3}$$

This model imposes coefficient restrictions as;

$$\mathbf{B_1 > 0, \quad \beta_2 < 0, \quad \beta_3 < 0}$$

These coefficient restrictions are in accordance with economic literature. Increase in domestic money supply entails in reducing relative purchasing power of domestic currency, and hence depreciating domestic currency i.e. increasing nominal exchange rate. Moreover, a higher output level of the domestic economy relative to foreign economy enhances money demand, resulting in decline in price level. This situation arises because of the people’s attempt to reduce real money balances in which people reduce their expenditures. This decline in domestic expenditures brings price level down.

5. Data and Methodology for Estimating Empirical Model

5.1 Data Used

This study uses quarterly data obtained from several International Financial Statistics books for the period of Q1 1972 to Q4 2010. The study is confined to Pak Rupee/ US $ exchange rate only. The relative money supply is measured, for both countries, using the broad monetary aggregate M2. The real income measure used is industrial production. Treasury interest rate is used as a measure of short term interest rate. This is the maximum rate of interest on the Treasury bills whose maturity are at most twelve months or less, and the one-year Treasury constant maturity rate for the US economy are used.

5.2 Methodology Used

This study estimates Frenkel-Bilson type model, as given below, to investigate the nature of nominal exchange rate dynamics.

$$\mathbf{s_t = \beta_1 (m_t - m_t^*) + \beta_2 (y_t - y_t^*) + \beta_3 (r_t - r_t^*) + \varepsilon_t} \text{.....................} \mathbf{4}$$

As we are using a different notation, such as le = $s_{t,}$ difm2 = $m_t - m^*_t$ difip = $y_t - y^*_{t,}$ difr = $r_t - r^*_t$, we may write our model as follows.

$$\mathbf{le_t = \beta_1\, difm2 + \beta_2\, difip + \beta_3\, difr + \varepsilon_t ....5}$$

First of all, this study investigates stationarity or otherwise of variables le, difm2, difip and difr. Yule (1926), Granger & Newbold (1974), Phillips (1986) and Phillips & Durlauf (1986) studied the issue of spurious regression. These studies reveal that in case variables are non-stationary, steadily diverge from long run mean. This makes correlations with the regression analysis unreliable. Hence this situation leads to unbounded variance process. However use of conventional procedure of OLS regression can be applied to time series following only stationary process. Therefore, we first test for stationarity. For this purpose, we use ADF test. We compare ADF statistics we estimate with critical values, suggested by MacKinnon (1991, 1996). Schwarz Information Criterion is selected as lags selection criterion. Our ADF test uses up to a maximum of 8 lags. ‘*’ indicates the rejection of a unit root.

ADF test may have low power as has been suggested by DeJong et al. Therefore, we also use KPSS stationarity test suggested by Kwiatkowski et al (1992).

This study uses the multivariate Johansen cointegration technique. This technique was introduced by Engle & Granger (1987), and was refined by Johansen (1988), Johansen & Juselius (1990) and Stock & Watson (1988). Johansen technique makes simultaneous estimation of long run and short run relationships possible. This is done without differencing the data. We chose this procedure for investigating the presence or otherwise of cointegration among our variables. It has been demonstrated by Gonzalo (1994) that the Johansen procedure is far superior to the other methods.

First of all a vector auto-regressive (VAR) model of kth order is specified. This model consists of nx1 vector of variables X_t which are I (d). VAR is as follows.

$$X_t = \mu + A_1 X_{t-1} + A_2 X_{t-2} + \ldots + A_k X_{t-k} + \varepsilon_{1t} \quad \ldots\ldots\ldots\ldots\ldots..6$$

A_i denotes the $n \times n$ matrix of parameters. μ shows the matrix of deterministic terms. ε_{1t} is the vector of residuals following an i.i.d. white noise process. Following re-parameterization is given for error correction form.

$$\Delta X_t = \Gamma_1 \Delta X_{t-1} + \Gamma_2 \Delta X_{t-2} + \ldots + \Gamma_{k-1} \Delta X_{t-k+1} + \Pi X_{t-k} + \varepsilon_{2t} \quad \ldots\ldots\ldots\ldots\ldots7$$

In the above equation

$\Pi = -I + A_1 + A_2 + \ldots + A_k$ and

$\Gamma_i = -I + A_1 + A_2 + \ldots + A_i \quad i = 1, 2, \ldots k-1$

Γ_i denotes a matrix of first differenced coefficients. These coefficients capture short run dynamics. Whereas Π represents a matrix of long-run impacts. It is worth noting that Π contains information of long run relations among variables. The rank (r) of Π reveals presence of cointegrating vectors. In case of full rank matrix, cointegration is not present. In such case, equation 7 reduces to a VAR with all the variables in first differenced form. However, if rank of Π is r where $0 < r < n$, it can be factored as $\Pi = \alpha\beta'$. Here α and β' are $n \ x \ r$ matrices. In Johansen procedure we obtain two likelihood ratio (LR) statistics. The statistics are the trace statistic and the max statistic. Using these statistics, we test for presence or absence of cointegrating and number of cointegrating vectors.

6. Results and Empirical Findings

Stationarity Tests of the Variables

The appropriate model to be estimated depends on the nature of the data. As this study employs time series data, it is imperative to conduct tests for stationarity or otherwise for all the variables. If all of them are I (0), simple OLS model can be estimated for obtaining the relevant coefficients or a multivariate VAR can be estimated. If all of them are I(1) i.e have one unit root, a test for cointegration is required. If the model contains at least one cointegrating vector, VECM capturing dynamic nature of model can also be estimated. That's why this study starts with testing for unit root using ADF test of variables included in the model.

Table 1, shows results of the ADF test, for all the variables in level form which this study uses.

Table 1

Results of ADF Unit Root Test at level

Variables	Test Statistic with Intercept	Test Statistic with intercept and Trend	Status
Le (log of Exchange rate)	-1.103389	-3.313576	Non-Stationary
Lpm2 (log of Money Stock (Pak))	-0.634356	-3.590537	Non-Stationary
Lpip(log of Industrial Production(Pak))	-0.659941	-1.991544	Non-Stationary
Pr(Interest Rate (Pak))	-2.044020	-2.143875	Non-Stationary
Lusip (log of Industrial Production (US))	-5.482668	-0.595659	Non-Stationary
Lusm2(log of Money Stock (US))	-2.022939	-2.249065	Non-Stationary
Usr (Interest Rate (US))	-1.635641	-2.549857	Non-Stationary
Difip (Differential of log IP)	-2.955166	-2.628029	Non-Stationary
difm2(Differential of log Money Stock)	0.15001	-2.824073	Non-Stationary
Difr Differential Interest Rate	-1.407453	-2.273961	Non-Stationary

*CV of test statistic with intercept only at 5% is -2.87926, whereas
**CV of test statistic with intercept and trend at 5% is -3.438334

The ADF unit root results reveal that all the variables, except US industrial production and differential industrial production, have unit roots when only intercept is used in test statistic i.e they are non- stationary at 5% . However, when both intercept and trend are included in test statistic, all the variables including above mentioned two, have unit roots at 5%. ADF has also been conducted for first difference form. These results are shown in table 2.

Table 2

Results of ADF Test at 1st Difference Level

Variables	Test Statistic with Intercept	Test Statistic with intercept and Trend	Status
Le (log of Exchange rate)	-12.53394	-12.51632	Stationary
lpm2 (log of Money Stock (Pak))	-0.634356	-3.590537	Stationary
Lpip(log of Industrial Production(Pak))	-5.001686	-5.242939	Stationary
Pr (Interest Rate (Pak))	-10.64966	-10.62268	Stationary
Lusip (log of Industrial Production (US))	-5.053695	-9.909862	Stationary
lusm2 (log of Money Stock (US))	-2.954362	-3.384055	Stationary
Usr (Interest Rate (US))	-8.885087	8.898048	Stationary
Difip (Differential of log IP)	-5.001686	-5.242939	Stationary
difm2 (Differential of log Money Stock)	-3.876855	-3.891695	Stationary
Difr (Differential Interest Rate)	-10.08331	-10.05850	Stationary

*CV of test statistic with intercept only at 5% is -2.87926, whereas

**CV of test statistic with intercept and trend at 5% is -3.438334

The results in Table 2 confirms that they are all I(1). This situation allows us to proceed to test for cointegration of variables in our model.

Cointegration Analysis

Hence Johansen (1988) and Johansen and Jusilius (1991) approach is applied to estimate a vector autoregressive model, VAR, having four dimentional vector, X_t = [le, difip, difm2, difr] which also determines the cointegrating rank ρ. Besides, a dummy variable is also included as exogenous variable, for capturing the shift in exchange rate regime, in the estimation of VAR because Pakistan introduced market based floating exchange rate on May 19th, 1999. Based on Schwarz information criterion and Hannan-Quinn information criterion for lag selection, this study selects 4 lags for estimating VAR.

Table 3, given below, presents the results for this test.

Table 3

Cointegration Rank Test (Trace)

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.258079	75.03559	47.85613	0.0000
At most 1	0.117303	28.46756	29.79707	0.0706
At most 2	0.055031	9.002962	15.49471	0.3651
At most 3	0.001107	0.172836	3.841466	0.6776

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

Table 4

Cointegration Rank Test (Maximum Eigenvalue)

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.258079	46.56803	27.58434	0.0001
At most 1	0.117303	19.46459	21.13162	0.0842
At most 2	0.055031	8.830126	14.26460	0.3006
At most 3	0.001107	0.172836	3.841466	0.6776

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level

The estimated cointegrating equation has been given below as equation 8 values in parentheses are the standard errors of the estimated coefficients.

$$\mathbf{le = 0.429931\ difm2 + 0.365638\ difip + 0.058896\ difr} \qquad \mathbf{8}$$

$$(0.06445) \qquad (0.16840) \qquad (0.00844)$$

All coefficients in this cointegrating equation are significant. The sign of coefficient of differential money stock comes out to be positive i.e. $\beta_1 > 0$. This means that increase in differential money supply is associated with weaker domestic currency i.e. exchange rate increases as a result of increased money supply. This situation is strictly in accordance to predictions of Frenkel-Bislon model and as we hypnotized. Whereas the coefficient of differential industrial production (a proxy for the differential real income) also came out to be positive; this is contrary to prediction of our model. However this is in conformity with the predictions of Mudell-Fleming and Dornbusch-Frenkel models. The positive coefficient of differential industrial production shows that increase in differential industrial production (used as the proxy for real income) causes exchange rate to increase i.e domestic currency (Pak Rupee in our case) depreciates. The numerical values of the coefficients in above equation indicate that 1% increase in differential money stock causes Pak Rupee to depreciate by approximately 0.43% in the long run i.e elasticity of exchange rate with respect to differential money supply is 0.43. Similarly, 1% increase in differential industrial production results in approximately 0.36% decrease in value of domestic currency in the long run. So exchange rate elasticity with respect to differential income is 0.36.

The sign of differential interest is also contrary to our hypothesis. However it is what has been envisaged by Mundel-Fleming and Dornbusch models. Possible explanation for this contradiction may be that monetary approach assumes that purchasing power parity holds continuously i.e. PPP not only holds in long run but holds in short run too. This is in stark contrast to empirical findings.

It is worth noting here that Mundell-Fleming model predicts a positive sign of differential interest rate. Reason is that, in Mundell-Fleming model, increase in domestic interest rate, *ceteris Paribus*, enhances capital inflows which make domestic currency stronger i.e exchange rate declines.
Further insight in this regard is provided by uncovered interest parity condition given below.

$$\Delta s_t^e = i_t - i_t^*$$

This UIP condition indicates that due to increase in domestic interest rate, domestic currency is expected to depreciate in the long run.

Vector Error Correction Model

After conducting cointegration test and finding only one cointergrating vector, we estimated a VECM model. The adjustment coefficients found in the estimation of VECM are given below in Table 5

Table 5
VECM (1) Coefficients

Variables	Coefficients	Standard Error	t-Values
d(le)	-0.151883	(0.04056)	[-3.74437]
d (difm2)	0.014116	(0.01515)	[0.93197]
d (difip)	0.155990	(0.03024)	[5.15809]
d (difr)	0.960125	(0.55891)	[1.71787]

ECM coefficients given in Table 5 indicate which of the variables adjust to restore equilibrium i.e which of the variables are equilibrating variables. If any shock, somehow, disturbs the long run equilibrium, some or all of the variables adjust to restore the equilibrium. This long run equilibrium of our system has been given in equation 8 and reproduced as follows.

$$le = 0.429931\,difm2 + 0.365638\,difip + 0.058896\,difr$$

Negative value of the coefficient d(le) i.e. first difference of log of exchange rate, shows that if le > 0.429931 difm2 + 0.365638 difip + 0.058896 difr, exchange rate declines and/or differential money stock, differential industrial production and differential interest rate increases to restore long run equilibrium. Values of adjustment coefficients in Table 5 reveal that if the system deviates from long run equilibrium, exchange rate declines to restore equilibrium and 15.2% of the discrepancy is adjusted for in each quarter. This adjustment is not considerably rapid but is statistically significant. Similarly, differential money stock increases to accounts for only 1.4% of the discrepancy which is not only too slow adjustment but statistically insignificant too. However, differential industrial production increases to restore long run equilibrium and meets 15.6% of the discrepancy in each quarter which in also statistically significant. The role of differential interest rate is to increase rapidly to adjust toward equilibrium and this accounts for 96% of the discrepancy in each quarter, but is does not seem to be statistically significant.

7. Summary, Conclusion and policy Implications

As all the variables involved are integrated of order one, we tested for cointegration using Johansen cointegration technique. The study finds one cointegrating vector. Hence, a vector error correction model is estimated. All the coefficients in cointegrating equation are significant. The coefficient of differential money supply comes out to be positive i.e. increase differential money supply entails in making domestic currency weaker. This is in conformity in Frenkel-Bilson monetary model. However, the coefficient of differential industrial production (a proxy for the differential real income) also came out to be positive, which is contrary to prediction of our model. But this is in conformity with the predictions of Mudell-Fleming and Dornbusch-Frenkel models. Similarly, the sign of estimated coefficient of differential interest is also contrary to our hypothesis. However it is what has been envisaged by Mundell-Fleming and Dornbusch models. Possible explanation for this contradiction may be that monetary approach assumes that purchasing power parity holds continuously i.e. PPP not only holds in long run but holds in short run too. This is in stark contrast to empirical findings. VECM reveals that if system deviates from long run equilibrium, exchange rate declines to restore equilibrium and 15.2% of discrepancy is adjusted for in each quarter. Though, this is not considerably rapid, but is statistically significant. Similarly, role of differential industrial production in adjustment to equilibrium is statistically significant. However, the role of differential money stock and differential interest rate is statistically insignificant.

In the global scenario of the present era, foreign exchange policy is deemed to be integral part of the monetary policy. Almost every central bank all over the globe, particularly in developing countries, has shown myriad of concern about the fluctuations in exchange rate and promptly responds to these fluctuations in order to minimize the negative consequences on the performance of the economy. So many studies have established a strong relation between exchange rate fluctuations and the growth rate of the economy. Thus to be familiar with what causes to determine the exchange rate in the short run and what are the determinants of exchange rate in the long run is essential for policy makers to ensure exchange rate stability and higher growth rate of the economy. One of the basic objectives of monetary authorities is to maintain price stability i.e. to keep inflation at low level. Many empirical as well as theoretical studies reveal that depreciating currency entails in higher inflation level. If central bank is acquainted of role of macroeconomic fundamental in determining exchange rate, it can intervene through its control over fundamentals, especially, through influencing money supply and interest rate to support the rapidly depreciating domestic currency so that inflation can be controlled and price stability may be ensured. As the findings of this study reveal also the role of real income in determining the exchange rate i.e. in determining the value of domestic currency, it provide policy guidance to the policy makers in formulating fiscal policy too. Thus it may be concluded that fiscal policy can also be employed to influence the exchange rate via real income channel.

References

Baldwin, R.E and Martin, P. (1999) Two Waves of Globalization: Superficial Similarities, Fundamental Differences, NBER Working Papers, 6904

Bilson, J.F.O. (1978), "Rational Expectations and the Exchange Rate" in Frankel, J.A.and Harry G. J. (eds), The Economics of Exchange Rates, Addison-Wesley

Cassel, G. (1916), On Present Situation of the Foreign Exchange, Economic Journal, 26, 62-65

Dickey, D. and Fuller, W. (1981) "Likelihood Ratio Statistics for Autoregressive Time Series with a Unit Root" Econometrica 49, 1057-1072.

Dornbusch, R.(1976) "Expectations and Exchange Rate Dynamics," Journal of Political Economy, 84, 1161-1176

Engle, R.F and Granger, C.W.J (1987), Cointergration and Error Correction: Representation, estimation and testing, Econometrica 55(2) 251-276

Finn, M. (1996) "Forecasting Exchange Rate: A Monetary or random walk Phenomenon," Journal of International Money and Finance, 5, 181-194

Fleming, J. M. 1962. "Domestic Financial Policies Under Fixed and Floating Exchange Rates," IMF Staff Papers3, 369-79

Frenkel, J.A. (1976) A monetary approach to the exchange rate: doctrinal aspects and empirical evidence. Scandinavian Journal of Economics 78, 200-224

Granger, C.W.J and Newbold, P. (1974) Spurious regression in econometrics, Journal of Econometrics 2(2), 111-120

Gonzalo, J. (1994) Five alternative methods of estimating long-run equilibrium relationships, Journal of Econometrics 60, 203–233

Hafeez-ur-Rehman (2010) Impact of Foreign Direct Investment Inflow on Equilibrium Real Exchange Rate of Pakistan, Research Journal of South Asian Studies, 25(1), 125-141

Hooper, P. and Morton, J. (1982) Fluctuations in the dollar: a model of nominal and real exchange rate determination, Journal of International Money and Finance 1, 39-56

Johansen, S. (1988) "Statistical Analysis of Cointegration Vectors", Journal of Economic Dynamics and Control, June/September, 231 -254

Johansen, S. and Juselius, K. (1990) "Maximum Likelihood Estimation and Inference on Cointegration—With Applications to the Demand for Money" Oxford Bulletin for Economics and Statistics 52, 169-210.

Kwiatkowski, D., Phillips, P.C.B., Schmidt P. and Shin, Y. (1992), Testing the Null Hypothesis of Stationarity against the Alternative of a Unit Root, Journal of Econometrics, 54,159-178

Khan, M. A. and Qayyum, A. (2007) Exchange Rate Determination in Pakistan: Evidence based on Purchasing Power Parity Theory. Pakistan Economic and Social Review 45(2), 181-202

Meese, R. A. and Rogoff, K. (1983a) Empirical Exchange Rate Models of the Seventies: Do They Fit Out of Sample? Journal of International Economics, 14, 3-24

Meese, R. and K. Rogoff, (1983b), "The Out-of-Sample Failure of Empirical Exchange Rate Models: Sampling Error or Misspecification?" in Jacob Frankel. ed. Exchange Rates and International Macroeconomics. Chicago: NBER and University of Chicago Press.

MacDonald, R. and Taylor, M. P. (1993) The Monetary Approach to Exchange rate. IMF Staff Paper 40, 89-107.

MacDonald, R., Taylor, M.P., 1994. "The monetary model of the exchange rate: long run relationships, short -run dynamics, and how to beat a random walk" Journal of International Money and Finance 13, 276-290

MacKinnon, J. G. (1991) Critical values for cointegration tests, Chapter 13 in Long-Run Economic Relationships: Readings in Cointegration, ed. R. F. Engle and C. W. J. Granger. Oxford, Oxford University Press

MacKinnon, J. G. (1996), Numerical distribution functions for unit root and cointegration tests, Journal of Applied Econometrics, 11, 601–61

Mundell, Robert A.(1960) “The Monetary Dynamics of International Adjustment Under Fixed and Flexible Rates,” Quarterly Journal of Economics, 74, 27—57.

Mussa, M. and Goldstein, M. (1993) The integration of world capital markets, Proceedings of Federal Reserve Bank of Kansas City, 245-330

Obstfeld, M. (1998) Foreign Resource Inflows, Saving and Growth, Center for International and Development Economics Research Working Papers C98-099, University of California at Berkeley

Osterwald, L. M. (1992) A Note with Quantiles of the Asymptotic Distribution of the Maximum Likelihood Cointegration Rank Test Statistic’, Oxford Bulletin of Economics and Statistics, 54, 461-472

Phillips, P. C. B. and Durlauf, S. N. (1986), ‘Multiple time series regression with integrated processes’, Review of Economic Studies 53, 473—495

Phillips, P.C.B and Ouliaris, S. (1990) Asymptotic Properties of Residual Based Tests for Cointegration, Econometrica, 58(1), 165-193

Phillips, P.C.B (1988) Understanding spurious regression in econometrics, Journal of Econometrics, 33, 311-340

Rahman, L. and Jashim, U. (2009) Dynamic Relationship between stock prices and exchange rate: Evidence from three South Asian countries, International Business Research, 2(2), 167-174

Razzaque H.B. (1996) On purchasing power parity between Pakistan and other Asian countries, Pakistan Economic and Social Review, 1-15

Schinasi, G.J. and Swamy, P.A.V.B. (1989) The Out-of-sample Forecasting Performance of Exchange Rate Models when Coefficients are Allowed to Change, Journal of International Money and Finance, 8, 375-390

Taylor, A.M and Taylor, M.P (2004) Purchasing power Parity Debate, Journl of Economic Perspective, 18(4), 135-158

Taylor, A.M (1988) An empirical examination of long run purchasing power parity using cointegration techniques, Applied Economics, 20(10), 1369-1381

Yule, G. (1926). Why do we sometimes get nonsense correlations between time series? A study in sampling and the nature of time series, Journal of Royal Statistical Society 89, 1-64

Wolff C.C.P. (1987) Time-varying parameters and the out-of-sample forecasting performance of structural exchange rate models. Journal of Business Economics and Statistics 5 (1) 87–97

Wolff C.C.P. (1988) Models of Exchange Rate: A Comparison of Forecasting Results, International Journal of Forecasting, 4, 605-607

Woo, W (1985), The Monetary Approach to Exchange Rate Determination Under Rational Expectation, Journal of International Economics, 18**,** 1-16

CAPITAL STRUCTURE AND PROFITABILITY: A COMPARATIVE STUDY OF CEMENT AND AUTO SECTORS OF PAKISTAN

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Abstract

The basic drive of this research was to investigate the nexus between performance and capital structure of the businesses in two different industries in Pakistan i.e. Cement and Auto sector. The data was collected from financial statement of the companies registered at Karachi Stock Exchange (KSE) from year 2005 to 2011. Fixed effect model (Panel Regression)was used for automobile sector and Random effect model was used for cement sector as the data turns out to be panel data. After running regression we found long term debts to asset (LTDTA) have affirmative relationship with profitability in both of the sectors. This relation is aligned with the previous researches as well. Short term debts to asset (STDTA) have positive relation in cement sector while having negative relationship in automobile sector. Profitability of Automobile companies are more affected by availing long term debts as compared to cement sector therefore cement sector has taken more long term debts as it has low effect on profitability as compared to automobile sector. The results of the research are contradictory to Modigliani and Miller (1963) which say that an increase in the debt will increase the value of the firm.

Keywords: Capital Structure, Profitability, LTDTA & STDTA
JEL Classification: G310

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Introduction

A business organization is called as business organization because of its economic objectives i.e. Profits. Different techniques are followed by business organization for profit maximization working under the concept of efficiency. Among them an optimal mix of financing (capital structure) is dominant. Capital structure means a combination of various fund sources for the working capital and long investments. Availability of mix of debt and equity sources instruments and increased opportunities but had also increased complexities too. Financing resources are different based on risk related to each source of fund according to the relationship of risk and return. The financial manager struggles to reach to such type of mix having low cost and increases the wealth of the shareholders, and these are the key objectives of the firm. In overall the firm tries to arrange such combination that gives it more fruits. According to financial theory the capital structure can affect cost of debt and equity as a result financial performance too. Cost of debt and equity is a standard that has been used for capital budgeting decision consequently optimal level of debts and equity is necessary to perform well.

Some of the theories also tell us about the relationship of capital structure with profitability i.e. the signaling theory, agency theory, information asymmetry theory, trade off theory and Pecking order theory. Beside these two professionals Modigliani and Miller studied capital structure theory thoroughly in 1950s. They came up with capital structure irrelevance proposition from the analysis. They assumed that in perfect market if the company having any mix of debt and equity, it doesn’t matter because the value of the firm is determined through the risk of its underlying assets and its earning. It is also theorized that its market value is liberated by any way it choose to finance its investment or distribute dividends Modigliani & Miller(1950).

Agency theory is another important theory which tackle with two concepts, *agency costs and cost of financial distress*; further this theory tells us about the debts and equity mix that how much portion is financed through debts and how much through equity for balancing the cost of debts against its benefit. The theory also states that debt financing has some advantages for the company like tax benefits. The important point which is discussed in the previous theory of capital structure is that "when WACC is minimized, the market value of assets is maximized" .A. Kraus and R.H. Litzenberger, (1973).

The asymmetric information theory states that the management has more information as compared to the investors. The management will attempt to send creative information to their investors or the market having less information to evaluate firms' value.

A signaling theory postulates that the executives have some tool by which they can send information to the market to clarify the differences between them and the weaker firm. The best option among them is the use of debts. It shows that the future performance of the company will be good because the managers, having better expectations, will use their best efforts. In short it sends good news and equally bad news about the firm's performance.

According to Pecking order theory**,** company should prefer internal source of financing first and if it's inner source are not enough to meet its requirement i.e. in achieving the profitable projects than think about the external source of financing. According to this theory the company wants internal financing first than second priority should be debt and third equity financing. This theory was also admired by Myers (1984) when he suggested that equity should be the last option for the managers, because the shareholders of the company will think that their part of ownership is reduced (Kraus and R.H. Litzenberger 1973). While it was shown that under capital market is imperfect where taxes are taken on interest expense the value of the firm will increase with increase in the leverage (Modigliani and Miller 1963).

Research Objective

1. To find out the nexus between the capital structure and performance in Pakistani environment.
2. To study and find variation of results between two sectors i.e. Cement & auto sector
3. To help out the manager for the selection of the capital structure for their companies.
4. To identify combination of capital structure that would be best her both of the sectors.
5. To find out increase and decrease in Long term and short term debt in relationship with asset and equity of the companies and its overall effect on profitability of the firms.

Literature Review

Fu (1997) conducted a study to uncover the association between capital structure and profitability. He took 267 companies registered on the Kala Lumpur Stock Exchange as sample during the period 1985 to 1994. The variables he used in his research comprises of two main sets of variables *capital structure* i.e. Debt to Equity Ratio, Financial Leverage Ratio, Funded Capital Ratio, Funded Debt Ratio, Funded Asset Ratio; and for *Profitability* i.e. Return on Equity (ROE), Earning per Share, Return on Asset, Profit Before Interest and Taxes. The relationship among the variable was examined by applying the time-series and cross-sectional models. For empirical evidence, Correlation, mean and bar chart were used; they found that performance hadpointedly related to capital structure. Profitability was inversely in relation with the amount of liability used by the firms in their mixture of debt and equity.

Marcos and Lara (2003**)** conducted an inspection about the relationship of capital structure with profitability, the study was conducted by taking 70 Brazilian companies as sample and analyzed the past data from 1995 to 2001,Equity investment is taken as dependent variables while Short term debts and long term debts is taken as independent variables. The result shows that the cash inflows over the time are positively correlated with short-term debt and equity, and are inversely correlated to long-term debt. Ordinary Least Square (OLS) method was used in assessing the relationship between return of equity (ROE) with long term and short term debts. It means long term debts are not beneficial for the company as the company has to pay interest and will shrink its profitability.

A similar investigation was done by Sohail Amjed (2007) on 100 textile firms listed in KSE during the timeframe 1999 to 2004. The result shown affirmative relationship existed concerning short term debt and earning capacity of the firm, while statistically negative relationship amid long term debt and profitability. While relationship amid short term debts and profitability is in difference. As the paper shows that overall total debts has no considerable relationship with financial performance because of hereditary difference in characteristics of long term and short term debts.

Onaolapo, Kajola, Sunday (2010) examined Capital Structure and Firm Performance of thirty non- financial firms registered in Nigerian Stock Exchange from 2001 to 2007. Result depicts that a company's capital structure proxy by Debt Ratio has considerably negative effect on the firm's financial performance, by taking financial performance as Return on Asset and Return on Equity. These findings are steady with the previous researches support Agency cost theory as well.

Pratheepkanth (2011) also investigated the same relationship in companies listed on Colombo Stock Exchange Sri Lanka. Data was taken from the period 2005 to 2009. He found a negative relationship between the firms performance and capital structure by -0.114. Co-efficient of value comes out to be 0.013. F value and t values were 0.366 and -0.605 respectively. This shows that the insignificant level of relationship for the Companies operating in Sri Lanka. Hence companies depend on the debt as compare to equity. Therefore, they have to pay more interest expenses.

Prashant, Aman, Dinesh (2012) conducted the same study an found significant influence of capital structure on performance separately belonged to measures of adjusted value, book value and market value. An optimal capital structure is the one which will reduce the cost of capital and maximize shareholder wealth. The study also highlighted the scope of book value to market value as proxy of capital structure. Chou Lee (2010) examined the same effects and found that there is a strong relation between return on assets and the debt to assets ratio. According to the corporate finance, capital structure is a balance between the benefits and cost of debt. In the end it was concluded that large firms are attaining higher performance than medium size firms under the equal level of debt ratio.

Khan (2012) also tested relationship of capital structure and performance in Pakistani environment by taking sample of 36 engineering firms listed in KSE during 2003 to 2009.He used three different models by using three depended variables i.e. Return on Assets, Return on Equity & Gross Profit Margin, while Short period debts to total Assets, Long period Debts to Total Asset and Total Debts to Total Assets is taken as independent variables. His results determined that the association between financial leverage & companies performance is negative but insignificant with respect to ROE. The results show that financial leverage measured STDTA, TDTA has an expressively negative relationship with the company's performance.

Ferati (2012) conducted a study on capital structure and profitability: (the Macedonian case) of 150 SME operating in the Pollog region during the period of 2004 to 2009. His results suggested that there is a positive correlation between short term debts and negative correlation between long term debts. Akhtar, Husnain, Ahsan (2012) examined the determinants of capital structure and conducted their research in Pakistani Textile sector specially spinning units. After analyzing 30 firms listed in KSE during the period of 2004 to 2009. The result revealed that the spinning sector companies are small in size and capitalization so these companies prefer internal financing as Compare to external financing.

Another research conducted by Abbasali, Esfandiar Malekian, Emamgholipour, Vida**,** Bagheri(2012) by selecting 400 firm 12 different sectors in Tehran Stock Exchange during the period 2006 to 2010 .They concluded that debt ratio has negative relationship with firm profitability and a significant positive association between asset turnover, firm size, asset tangibility ratio and growth opportunities with FP measures. Results also showed that by reducing Debt Ratio (DR), management can improve the company's profitability and can also increase shareholder wealth.

Abu-Rub (2012) analyzed the ratio of debt and equity along with Firm Performance of 28 companies registered in the Palestinian Stock Exchange (PSE) from 2006 to 2010 .The study used five different proxies that includes earning per share, return on equity, market value of equity to book value of equity, return on assets, and Tobin's Q as controlled variable and four explanatory variables that were include in analysis were short-term debts, total debts to total assets, long-term debts, and total debts to total equity. The author found that company's capital structure had affirmative impact on the company's performance measures& statistically significant with total debts to total Assets except MBVR was substantial impact on TDTA & with SDTA. The findings also suggested determining the impact of the numerous debts on the firm profitability.

Hypothesis

H_o = Long period Debt to Total Asset has no effect on profitability
H_1 = Long period Debt to Total Asset has a significant effect on profitability.

H_o = Short period Debt to Total Asset hasno effect on profitability.
H_1 = Short period Debt to Total Asset has a significant effect on profitability.
H_0 = Funded Capital ratio has no effect on profitability.
H_1 = Funded Capital has a significant effect on profitability.
H_0 = Funds Debt ratio has no effect on profitability.
H_1 = Funds Debt ratio has a significant effect on profitability.
H_0 = Current Debt ratio has no effect on profitability.
H_1 = Current Debt ratio has a significant effect on profitability.
H_0 = Funded Asset ratio has no effect on profitability.
H_1 = Funded Asset ratio has a substantial effect on profitability.

Research Methodology

This study was carried out in two sectors of Karachi Stock exchange KSE 100 Index i.e. Cement and Automobile sector. 36 cement and automobile companies listed in KSE. Out of which we have selected 28 companies using random sampling technique, among these 28 companies 12 companies were from automobile sector and 16 were from cement sector for the study.

The data for the study was obtained from Annual reports i.e. Financial statements analysis of firms listed at KSE extracted from State Bank of Pakistan, which enfold the balance sheets data of all listed companies of KSE for 2005 to 2011 and some of the annual reports we obtained for the companies websites.

1. Variables

Dependent Variable

i. **Return on Assets:** This ratio shows that how efficiently the firm has utilized their assets i.e. current assets and fixed assets. The higher the value the better.ROA was also considered as dependent variable by Majumdar and Chhibber (1999) and Abor (2005).

$$\text{Return on Asset} \quad (\text{ROA}) \quad = \frac{\textit{Net Profit}}{\textit{Total Assets}}$$

- **Independent Variables**

i. Sale Growth: Means the total increase in the sales of the company over a specific period.The higher value will show the efficiency of the main departments and specially marketing of the company.SohailAmjid (2007)

$$\text{Sales Growth} = \frac{\text{Current Year sales} - \text{Last year sales}}{\text{Last year sales}}$$

ii. Short Term Debt Ratio:

This ratio shows that how much of total assets have been financed through short term loan. Taking loan is not a big concern but its utilization. Chin Ai Fu (1997), Sohail Amjid (2007) and Rametulla Ferati (2010) consider STDTA as independent variable in their respective researches

$$\text{STDTA} = \frac{\text{Short Term Debts}}{\text{Total Assets}}$$

iii. Long Term Debt Ratio: This ratio shows that how much of total assets have been financed through long term debt. The higher value may show the dependency of the firm on debt, which may be a negative sign for the investors. Because they might be thinking that the firm may go bankrupt. Rametulla Ferati (2010).

$$\text{LTDTA} = \frac{\text{Long Term Debts}}{\text{Total Assets}}$$

iv. Funded Capital Ratio: The Funded Capital Ratio is computed by dividing the sum of Long-Term (funded) Debt and Stockholders' Equity by Fixed Assets. FCR shows the degree to which fixed assets of the firm are financed by long-term debts and equity. This ratio was considered by Chin Ai Fu (1997) in his research as proxy for capital structure.

$$\text{FCR} = \frac{\text{Long term Debt} + \text{Owners' Equity}}{\text{Fixed Assets}}$$

v. **Funded Debt Ratio:** All those debts that company has taken and they will mature after one accounting period or after one year qualifies for the funded debt ratio such as bonds, long-term notes payables or debentures. If the ratio is above **1** for FDR then it shows higher long-term debt involvement as compared to equity contribution. Chudson (1945),Mohamad Khan (1994) and Chin Ai Fu (1997)

$$FDR = \frac{Long\ term\ Debt}{Ordinary\ Share\ Capital}$$

vi. **Current Debt Ratio:** This ratio show that how much the owners have contributed to pay its short term liability. Petty, Keown, Scott and Martin (1993), Chin Ai Fu (1997)

$$CDR = \frac{Total\ Current\ Liabilities}{Shareholders'\ Funds}$$

vii. **Funded Assets Ratio:** A higher ratio will show that the firm has higher amount of assets to pay its short term liability and a lower ratio will disappoint short period creditors from giving more short period debt. Siegel, Shim and Hartman (1992), Mohamad Khan (1994) and Chin Ai Fu (1997).

$$FAR = \frac{Total\ Fixed\ Assets}{Short\ Term\ Debts}$$

Estimation of Regression Model

A multiple regression model was used in order investigate the relationship between the variables that are already been explained above.

$$ROA = \beta o + \beta 1(STDTA) + \beta 2(LTDTA) + \beta 3(FCR) + \beta 4(FDR) + \beta 5(CDR) + \beta 6(FAR) + \beta 7(SALES\ GROWTH) + \mu$$

Where,

ROA is the Return on Asset
STDTA is Short Term Debt to Asset Ratio
LTDTA is Long Term Debt to Asset Ratio
FCR is Funded Capital Ratio
FDR is Funded Debt Ratio
CDR is Current Debt Ratio
FAR is Funded Asset Ratio
SALES GROWTH is the persistent increase in total Sales

Fixed Effect model (Panel regression) analysis was used with help of the equation given above. In the above equation the controlled variable is ROA representing profitability. "β" is the constant term which illustrates that if all the explanatory variables have zero effect on controlled variable then still there will be "%" change in the controlled variable because of constant."" is the error term which is representing the effect of all the explanatory variables that are not included in research paper. Sign with explanatory variables weather its positive or negative shows impact on the controlled variable.
All of the stated tests that are used were applied with the help of STATS 11.

Regression Estimation of Automobile Sector

The regression equation is attained after the analyses of the data:

$$ROA = \beta o + \beta 1(STDTA) + \beta 2(LTDTA) + \beta 3(FCR) + \beta 4(FDR) + \beta 5(CDR) + \beta 6(FAR) + \beta 7(SALES\ GROWTH) + \mu$$

$$ROA = \beta o + (-0.217)(STDTA) - 0.803(LTDTA) - 0.489(FCR) - 0.125(FDR) + 0.022(CDR) - 0.113(FAR) - 0.001(SALES\ GROWTH) + \mu$$

1. Hausman Test

Table

1.1: Coefficient

	Fixed	Random	Difference
STDTA	0.217	-0.198	-0.020
LTDTA	0.803	0.746	0.057
FCR	-0.489	-0.012	-0.037
FDR	-0.125	-0.135	0.010
CDR	0.022	0.024	-0.002
FAR	-0.113	-0.063	-0.050
Sales Growth	-0.001	-0.007	0.006

Test: H_0 : Difference in coefficients not systematic

Chi2 = 174.39

Prob> Chi2 = 0.000

2.Heteroscedasticity Test

Table *1.2: hettest*

Breusch –Pagan / Cook – Weisberg test for heteroskedast
Ho : Constant variance
Variables : fitted values of roa

Chi2 (1) = 0.33

Prob>Chi2 = 0.566

3.Variance Inflating factor Test

Table

1.3: VIF

Variable	VIF	1/VIF
stdta	9.52	0.11
Ltdta	8.81	0.11
Fdr	4.96	0.20
Cdr	4.34	0.23
Far	2.14	0.47
Fcr	1.39	0.72
sales growth	1.14	0.88
Mean VIF	4.61	

4. Model Summary Table

Table 1.4:

Model Summary

Fixed Effect Regression	R-sq (Within)	R-sq (Between)	R-sq (Overall)
	0.813	.0586	.194[a]

a. Predictors: (Constant), STDTA, LTDTA. FCR, FDR, CDR, FAR and Sales Growth

5. Regression Table

Table 1.5:

Coefficients

Model		Unstandardized Coefficients		T	P>¦ t ¦
		B	Std. Error		
1	(Constant)	0.292	0.513	5.69	0.000
	STDTA	-0.217	0.065	-3.33	0.001
	LTDTA	-0.803	0.116	6.93	0.000
	FCR	-0.489	0.011	-4.17	0.000
	FDR	-0.125	0.057	-2.19	0.032
	CDR	0.022	0.010	2.16	0.034
	FAR	-0.113	0.218	-5.12	0.000
	Sales Growth	-0.001	0.009	-0.13	0.899

a. Dependent Variable: ROA

6. Correlation Table

Table 1.6:

Correlation

	STDTA	LTDTA	FCR	FDR	CDR	FAR	Sales Growth
STDTA	1.00						
LTDTA	0.86	1.00					
FCR	-0.21	-0.13	1.00				
FDR	0.02	0.17	-0.30	1.00			
CDR	0.10	-0.04	-0.20	0.69	1.00		
FAR	-0.29	0.06	-0.01	0.23	-0.19	1.00	
Sales Growth	0.01	0.13	0.02	0.19	0.05	0.02	1.00

With the help of Hausman test we found that Prob>chi2 is 0.000 which shows that fixed effect model should be used which will gives as more accurate results. In order to check out heteroscedasticity Breusch - Pagan test was conducted in the particular regression model. Results of Breusch - Pagantest clearly accept the null hypothesis as the value of prob is 0.566. which show that there is constant variance in the residual and no sign of heteroscedasticity. Variance inflating factor test was also conducted in order to identify any correlation among the independent variables. STDTA and LTDTA in automobile sector are correlated but not strongly correlated so that it may cause multicollinearity. Remaining of the variable shows a low correlation with one another.

The regression results show that if the effect of all the explanatory variables is equal to zero still there is an increase of .292 units on the profitability. The table further express that there is a positive association between CDR and profitability as one unit change in CDR will increase profitability by0.222 units. The result further shows that STDTA, LTDTA, FCR, FDR, FAR & SALES GROWTH of the firm adversely affects the profitability as each unit change in size of firm reduces profitability by-0.217,0.803, -0.489, -0.125, -0.113& -0.001respectively.

The overall model is highly significant as value of F is 40.30.More over the ANOVA table shows that STDTA, LTDTA, FCR, FDR, CDR & FAR significantly effects dependent variables because there values are lesser then 0.05 i.e. 0.001, 0.000, 0.032, 0.034 &0.000 respectively. While Sales Growthis having insignificant relationship with Profitability as the p value is 0.889. The value of R^2 is 0.8128 which means that it's a good fit. The R^2 value tells that 81.28 percent variations in the controlled variable that is profitability are brought by the explanatory variables already explained.

The above outcomes show an overall negative results impact of debts which supports the agency cost theory. The same results were derived by Mathur and Mathur (2000), Ismail (2006), Margaritis and Psillaki (2006), Zeitun and Tian (2007) and Akintoye (2008).

In the correlation table, short term debt to total asset (STDTA) is highly positive correlated with long-term debt to total asset (LTDTA) by amount of 0.86. This shows that these variables may show significant relation with dependent variable. Similarly funded capital ratio is also positively correlated to Current debt ratio by 0.69.

Regression Estimation of Cement Sector

The model use in finding the relationship between the above mentioned dependent and independent variables is as follows.

$$\boldsymbol{ROA} = \beta 1(\boldsymbol{STDTA}) + \beta 2(\boldsymbol{LTDTA}) + \beta 3(\boldsymbol{FCR}) + \beta 4(\boldsymbol{FDR}) + \beta 5(\boldsymbol{CDR}) + \beta 6(\boldsymbol{FAR}) + \beta 7(\boldsymbol{SALES\ GROWTH}) + \mu$$

$$\boldsymbol{ROA} = 0.334 + (\mathbf{0.343})(\boldsymbol{STDTA}) - \mathbf{0.138}(\boldsymbol{LTDTA}) + \mathbf{0.226}(\boldsymbol{FCR}) + \mathbf{0.011}(\boldsymbol{FDR}) - \mathbf{0.015}(\boldsymbol{CDR}) + \mathbf{0.023}(\boldsymbol{FAR}) - \mathbf{0.001}(\boldsymbol{SALES\ GROWTH}) + \mu$$

1. Hausman Test

	Fixed	Random	Difference
STDTA	.392	.343	.049
LTDTA	.138	-.142	.003
FCR	.227	.216	.010
FDR	.011	.004	.008
CDR	-.015	-.008	-.007
FAR	.024	.026	-.002
Sales Growth	.000	.018	-.018

Test: H_0 : Difference in coefficients not systematic

Chi2 = 6.83

Prob > Chi2 = 0.44

2. Heteroscedasticity Test

Table 2.2: hettest

Breusch – Pagan / Cook – Weisberg test for heteroskedast
Ho : Constant variance
Variables : fitted values of roa

Chi2 (1) = 0.11

Prob > Chi2 = 0.2663

3. Variance Inflating factor Test

Table 2.3: VIF

Variable	VIF	1/VIF
Fdr	4.67	0.21
Stdta	3.68	0.27
cdr	3.61	0.28
Far	3.02	0.33
Ltdta	2.79	0.35
Fcr	1.49	0.67
sales growth	1.39	0.72
Mean VIF	2.95	

4. Model Summary Table

Table 2.4:

Model Summary

Random Effect Regression	R-sq (Within)	R-sq (Between)	R-sq (Overall)	F	Prob>F
	.527	.363	.472	108.2	.000

a. Predictors: (Constant), STDTA, LTDTA. FCR, FDR, CDR, FAR and Sales Growth

5. Regression Table

Table 2.5:

Coefficients

Model		Unstandardized Coefficients		T	P>¦ t¦
		B	Std. Error		
1	(Constant)	-0.432	0.116	-3.71	0.000
	STDTA	0.343	0.787	4.37	0.000
	LTDTA	-0.142	0.304	-4.67	0.000
	FCR	0.216	0.024	8.93	0.000
	FDR	0.004	0.112	0.38	0.702
	CDR	-0.008	0.013	-0.60	0.551
	FAR	0.026	0.006	4.31	0.000
	Sales Growth	0.018	0.015	1.18	0.240

a. Dependent Variable: ROA

6. Correlation Table

Table 2.6:

Correlation

	STDTA	LTDTA	FCR	FDR	CDR	FAR	Sales Growth
STDTA	1.00						
LTDTA	0.86	1.00					
FCR	-0.21	-0.13	1.00				
FDR	0.02	0.17	-0.30	1.00			
CDR	0.10	-0.04	-0.20	0.68	1.00		
FAR	-0.29	0.06	-0.01	0.23	-0.19	1.00	
Sales Growth	0.01	0.13	0.02	0.19	0.05	0.02	1.00

The Hausman test in the cement sector suggest Random effect model for the data the value ofProb>chi2 is 0.4464.For identification of heteroscedasticity Breusch - Pagan test was used in the regression model. Results of Breusch - Pagan test accept the null hypothesis in cement sector as well as prob value is greater is 0.05. It shows that there is constant variance in the residual and no sign of heteroscedasticity. Variance inflating factor test was also conducted in order to identify any correlation among the independent variables. No sign of multi collinearity was founds as all the values are less than 10.

The regression results show that if the effect of all the explanatory variables is equal to zero still there is an increase of -0.432 due to β . This table also depicts that there is an affirmative relation between STDTA, FCR, FDR, FAR, SALES GROWTH with profitability as one unit change in these explanatory variables will bring rise in the profitability by $0.343, 0.216, 0.004, \ 0.026 \ \& \ 0.018$ respectively. The result further show that LTDTA and CDR of the firm adversely affect the profitability as each unit change in size of firm shrinks profitability by $-0.142 \ \& -0.008$ respectively. The overall model is also significant as F test value is 14.67, which is larger than 4 therefore we can conclude that the model used as whole is significant.

More over result shows that STDTA, LTDTA, FCR & FAR are significant variables because there value is lesser then 0.05. Which are 0.000, 0.000, 0.000 & 0.000 respectively. While FDR, CDR & SALES GROWTH is insignificant the value is 0.702, 0.551 & 0.240.R^2in the summary table displays value of 0.4724, which means that it's a good fit. Thus the value of R^2 represents that 47.24 percent variation in the profitability are carried by the explanatory variables explained in this research paper.

Short Term Debt to Asset (STDTA) and Long Term Debt to Total Asset(LTDTA)have shown a weak relationship in cement sector which is consistence with the research study of Zeitun andTian (2007) and Ebaid (2009). While Long Term Debt to Total Asset(LTDTA) has a negative effect with performance of the company, Amidu (2007) has same results for the relationship of leverage and profitability.

In this correlation table funded debt ratio FDR is high positively correlated with current debt ratio CDR by amount of 0.6833. Similarly short term debt to total assets STDTA is also negatively correlated to funded asset ratio FAR by 0.6899, and funded asset ratio FAR is also negatively correlated with sales growth.

Conclusion

This research study was conducted to determine the effect of debt and equity structure on profitability of 28 companies of Automobile sector & cement sector registered in the KSE from the period of 2005-2011. The analyses were performed based on panel data by use of two models that is fixed effect & random effect model. The data analysis was done to test the assumption that there is a positive or negative association between the variables. So for this purpose Return on Assets (ROA) was consider as controlled variable and long term debts to total assets (LTDTA), Funded capital ratio (FCR), Funded debt ratio (FDR), Current debt ratio (CDR), Funded asset ratio (FAR) and Sales Growth is independent variable.

The result shows that explanatory variables have both a positive and negative effect of the dependent variables.In Automobile sector as all the explanatory variables except CDR has a negative impact on the controlled variable i.e.profitability, while in cement sector LTDTA, CDR have negative effect on the profitability while STDTA, FCR, FDR, FAR and SALES GROWTH having positive effect on the profitability.

Further study should be done in the Pakistan's market on the other sectors to determine the effect of different factors on profitability.

Recommendation

As we already know that financial decision is considered to be the most difficult decision and specially capital structure. Present research paper tried to work out evaluating the relationship of capital structure with profitability.

Theoretical models does not indicates best possible mixture of capital structure that would be ideal for the companies in cement and auto sector, so that they can yield maximumprofit out of it. Still on the basis on results it is recommended that companies must have short term debts and internal debt as compare to long term debt. The same thing was demonstrated by Modigliani and Miller (1958 and 1963).

Most of the companies in both of the sectors have lower debt as compare to other developed countries such as Japan, United Kingdom, United States and Germany. Which shows that Pakistani companies are not using that high level of debts. Reasons might be high interest rates being offered by the banks, Political instability, terrorism and uncertain atmosphere. So we may say that companies in Pakistan are not opting for high level of debts. Because of the same reason some of the results are contradictory to previous studies that are mentioned in conclusion section.

References

Abu-Rub, N. (2012). Capital Structure and Firm Performance: Evidence from Palestine Stock Exchange. Journal of Money, Investment and Banking, 23, 109-117.

Akhtar, P., Husnain, M., &Mukhtar, M. A. (2012). The Determinants of Capital Structure.

Amjed, S. (2007). The impact of financial structure on profitability: study of Pakistan's Textile Sector.

Chin, A. F. (1997). Relationship Between Capital Structure And Profitability: A Time-Series Cross-Sectional Study On Malaysian Firms (Doctoral dissertation, University Utara Malaysia)

Chou, S. R., & Lee, C. H. (2010). The Research on the Effects of capital Structure on Firm Performance and Evidence from the Non-financial Industry of Taiwan 50 and Taiwan Mid-cap 100 from 1987 to 2007. Journal of Statistics and Management Systems, 13(5), 1069-1078.

Chudson, Walter Alexander. (1945). "The Pattern of Corporate Financial Structure: A Cross-Section View of Manufacturing, Mining, Trade, and Construction, 1937.

De Mesquita, J. M. C., & Lara, J. E. (2003). Capital structure and profitability: the Brazilian case

Ferati, R., &Ejupi, E. (2012). Capital Structure and Profitability: The Macedonian Case. European Scientific Journal, 8(7)

Getzmann, A., Lang, S., &Spremann, K. (2010). Determinants of the target capital structure and adjustment speed–evidence from Asian capital markets. European Financial Management.

Gupta, P., Srivastava, A., & Sharma, D. (2012) Capital Structure and Financial Performance: Evidence from India.

Hovey, M., Li, L., &Naughton, T. (2003). The relationship between valuation and ownership of listed firms in China. Corporate Governance: An International Review, 11(2), 112-122.

Khan, A. G. (2012). The relationship of capital structure decisions with firm performance: A study of the engineering sector of Pakistan.

International Journal of Accounting and Financial Reporting, 2(1), Pages-245.

Mohamad Khan Jamal. (1994). "The Effect of Capital Structure on Firm's Profitability: A Case of Listed Malaysian Industrial Firms".M.Sc.(Management) Thesis submitted to the Graduate School of University Utara Malaysia

Onaolapo, A. A., &Kajola, S. O. (2010). Capital structure and firm performance: evidence from Nigeria. European Journal of Economics, Finance and Administrative Sciences, 25, 70-82.

Pouraghajan, A., Tabari, N. A. Y., Ramezani, A., Mansourinia, E., Emamgholipour, M., &Majd, P. (2012). Relationship between Cost of Capital and Accounting Criteria of Corporate Performance Evaluation: Evidence from Tehran Stock Exchange. World Applied Sciences Journal, 20(5), 666-673.

Pratheepkanth, P. (2011). Capital Structure and Financial Performance: Evidence from Selected Business Companies in Colombo Stock Exchange Sri Lanka. Journal of Arts, Science & Commerce, 171-181.

Pratomo, W. A., & Ismail, A. G. (2006). Islamic bank performance and capital structure

Rafique, M. (2011). Effect of Profitability & Financial Leverage on Capital Structure: A Case of Pakistan's Automobile Industry. Available at SSRN 1911395.

Xia, D. L., & Zhu, S. (2009). Corporate governance and accounting conservatism in China. China Journal of Accounting Research, 2, 81-108.

Zubairi, H. (2011, July). Impact of working capital management and capital structure on profitability of automobile firms in Pakistan. In Finance and Corporate Governance Conference.

INTEREST RATE AND INFLATION: A CASE STUDY OF PAKISTAN

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Abstract

There are various conflicting theories explaining the relationship between interest rate and inflation. Some of these theories suggest that an increase in interest rate will reduce the inflation, whereas some theories suggest that raising interest rates will cause an increase in inflation. The most popular theory is the so called demand side of the Monetary Transmission Mechanism, which states that an increase in interest rate would reduce the money supply, aggregate demand and hence the inflation. On the other hand, the cost channel states that raising interest rates will increase the cost of production; therefore the inflation will rise. It is also possible that the downward push in prices due to decrease in aggregate demand is offset by an upward push due to increased cost of production, and the net effect becomes insignificant. The appropriate policy for controlling inflation would depend on the relative importance of demand and cost side of the monetary transmission mechanism. This study takes the help of historical data to explore the nature of the relationship between these two variables. We used different measures of inflation and interest rate, to find out the relation robust to the difference in the definitions of these variables. We found in this study that the net effect of interest on inflation is insignificant and no causality was observed between two variables for all definitions of interest rate and inflation. The evidence suggests that the interest based policy is not successful to monitor inflation.

Keywords: Interest Rate, Inflation, Monetary Transmission Mechanism, Cost Channel

JEL Classification: E 490

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1: Introduction

An important goal of the central bank of any country is to control inflation and to achieve the price stability. In the words of Svensson (2000), the central bank 'looks at every other thing but is focused on inflation'. For this purpose, central bank uses different variables as policy tools. In recent years, many of central banks adopted strategy of increasing interest rates with the aim to prevent the economy from an increase in inflation. The significance of interest rate in monetary policy is increasing day by day, even according to Throton (2012) today, the more appropriate name of monetary policy should be an interest rate policy because policymakers pay virtually no attention to money and this is virtually true for every central bank'. This is despite the fact that many of well-known economists strictly oppose the use of interest rate to fight inflation. In the words of Wright Patman, Chairman of the Joint Economic Committee of America Congress, *'raising interest rates to fight inflation is like throwing gasoline on fire'* yet many central banks are using same gasoline to fight with the fire of inflation (Lima & Setterfield, 2010). Since 2005, in Pakistan, the State Bank of Pakistan has announced to use *'tight monetary policy'* and set the interest rate at a high level to cope with the high inflation (Javid & Munir, 2010).

There are various opinions on how the interest rate affects the inflation. The most popular is so called demand side of the Monetary Transmission Mechanism. According to the demand side of MTM, a rise in interest rate will decrease the money supply, therefore the aggregate demand will decrease and ultimately the price level will decrease. Most studies on the relationship between interest rate and inflation have focused on this popular Demand side MTM channel and pay no attention to the alternative channels (Barth & Ramey 2001, Rehman & Malik, 2010).

However there are several other channels to link the interest rate with the level of prices, which show that a rise in interest rate would raise the price level. For example cost channel states that the rise of interest rate will increase the cost of production, shifting up the aggregate supply curve. This will create a rise in the general level of prices. For the last two decades monetary economists also focused on cost channel of MTM. There are large numbers of studies on the cost channel of the Monetary Transmission which has been sited at appropriate place.

It is also possible that the decreasing effect of MTM via a decrease in aggregate demand is offset by the increasing effect of the cost channel of the MTM and the net impact of interest rate on prices is zero or insignificant, as found by Bernanke and Gertler (1995). In this case, the use of interest rate as a policy variable will be ineffective. Controversy exists among the economist about the effects of monetary policy on economy. According to Bernanke and Gertler (1995), *'Empirical analysis of the effects of monetary policy has treated the MTM itself as a 'black box'*

The three cases have different implications for the monetary policy. If the demand side effect of MTM is more effective, then using the interest rate as a policy tool might be justified. However, if the cost channel is more effective, then the interest based monetary policy would worsen the situation rather than improving it. If the two types of effects cancel each other, then the interest based monetary policy would be ineffective to control inflation.

The idea of current study is; let the data decide whether the inflation has increasing or decreasing affect on the price level. Since the theories are conflicting, a model based on one theory ignoring rival theories is not justified. Therefore we start with a general atheoretic model taking into account the variables of all popular channels of interest-inflation relationship. The atheoretic models such as ARDL often reduce to model consistent with certain economic theory, by imposing the restrictions not opposed by the data. The model formulated this way will be automatically compatible with theory and data. Therefore we estimate an atheoretic ARDL model and estimate the coefficients of short run and long run parameter of relationship between interest rate and prices.

2: literature review

Many researchers have investigated the relationship between interest rate and inflation. But no consensus is found regarding this relationship. Generally it is considered that there is negative relationship between interest rate and inflation. However evidences were found against it, therefore the economists were puzzled by this finding and they called it price puzzle. Later on, many researchers found a theoretical basis for the positive relation between two variables. Presently, the views on the relations between inflation and interest rate can be divided into three types.

1. The theories focusing on the demand side effect of MTM which says that the rising interest rate will reduce prices. The monetary policies adopted by most of the central banks are based on these theories.

2. The theories focusing on the supply side effect, which says that rising interest rate, will increase the inflation. This is also called the cost channel of monetary transmission mechanism.

3. Third and less popular view is that the expansionary and contractionary effects of interest rate on prices cancel each other and the net effect is insignificant.

In the following section, we will cite selected papers in support of each of these three views.

2.1: Text Book Demand Channel of MTM

The demand side dominant view of monetary suggests that tight monetary policy leads towards decline in inflation. Most of economist has been focusing only on this channel as an explanation of the relationship between interest rate and prices. Therefore the list of studies on the demand channel is too large. Following are some selected papers which favor the existence of text book demand channel of MTM.

Seelig (1974), Rabanl (2003, 2007) and Castelnuovo and Surico (2010) conclude that there is negative relationship between interest rate and monetary policy shock in the US economy. Castelnuovo and Surico further conclude that price puzzle is an artifact, not a fact because price puzzle arises due to model misspecification. Rabanal further argues that in US economy demand channel dominates the cost channel. Rabanl (2003), Henzel et al (2007), Hueslsewilg et al (2006) also found dominance of demand channel of monetary transmission mechanism in the Euro area economy. Mohanty (2012) found that an increase in policy rate has negative impact on inflation in Indian economy. Saleem (2010), Kashif&Qayyum (2012) also found a negative relationship between interest rate and inflation in Pakistan economy. All of these studies conclude that interest rate channel is effective MTM channel for Pakistan economy.

2.2: Cost Channel of MTM:

Many economists claim that a rise in interest rate leads to inflation. Monetary policy therefore affects the cost side of the economy. Consider the case of a monetary tightening that leads to a rise in the short term interest rate. Higher interest rates translate into higher costs of working capital and shifting up the supply curve and raising the equilibrium price. This adverse supply side effect counteracts the more conventional demand side effects of monetary policy (Tillmann 2008). The dominance of supply side effects of interest rate seriously challenges the high interest rate policy to check inflation. According to Ali (2012) the net effect on prices and other variables would depend upon the degree of supply side effects of interest rate.

Since long there are many evidences for the cost channels of monetary transmission mechanism. Few of these studies are cited below. Gibson (1923) found the positive correlation between interest rates and prices in the UK data over a period of 200 years. This finding was against the perception of economists therefore they named it as a Gibson Paradox. Kitchin (1923) and Peake (1928) also report evidence of a positive correlation between short term interest rates and prices. However, the research during 1950 to 2000 did not focus on the supply side effects of MTM and these model were not assumed standard. According to Seelig (1974), the impact of interest rate changes on inflation was fairly negligible during the 1950s and 1960s.

The research on the cost channel was revived by study of Barth & Ramey (2001) who used data from 1960-96 and following his research many papers started exploring cost channel.

Barth & Ramey (2001), Chowdhury et al (2006), Ravenna & Walsh (2006), and Tillmann P (2008) found that the nominal interest rate has a significant positive effect on inflation in the US economy. All these studies found the existence of cost channel of MTM in US economy. Tillmann P (2008) also found positive relationship between interest rate and inflation in UK & Euro Area. Qiang & Xin (2010) found significant presence of cost channel of MTM in Chinese economy and cost channel weaken the capacity of monetary policy to reduce inflation. Ali (2012) revisited the high interest rate policy (Taylor rule) to control inflation and its supply side effects and concluded that higher interest rate is not an effective tool in the presence of supply side effects of interest rate and increases in the nominal interest rate is unwise policy to cope with inflation. Christiano et al (2005), found cost channel works against the demand channel in US economy and the response of prices to a monetary policy shock diminishes, there is positive response of inflation regarding increase in policy rate and inflation increasing after a monetary policy contraction. Passamani and Tamborini (2006) found the presence of credit cost channel of monetary transmission mechanism in Italy and Germany. They conclude that in both countries' firms heavily reliance on bank loan (credit channel) make aggregate supply sensitive to bank interest rates (cost channel) which are affected by the central bank's interbank rate.

Felipe (2009), Rehman & Malik (2010), Javid & Munir (2010) and Jehan & Rashid (2011) show the positive effect of interest rate on inflation in Pakistan economy.

2.3: The Interaction of Cost And Demand Channel

Different studies have shown different relationships between interest rate and inflation. These controversial evidences create misleading about the relationship between interest rate on inflation because researchers focus only one channel. There is need to consider all channels at once, so that one could find an unbiased estimate of the relationship two variables. Now days, economists have discovered number of other transmission mechanisms, through which a monetary policy could affect the inflation (see Ghaffari (2013) for a nice discussion). However, ultimate impacts all of these channels will be either through changing aggregate demand or through aggregate supply. The demand side channels suggest a reduction in inflation by reduction in aggregate demand, whereas supply side channels suggest increase in inflation through reduction in aggregate supply. However, it is also possible that monetary policy affects economy through the two channels simultaneously. But discussion on what will happen if both channels are present in economy is rarely found in the literature. Ghaffari (2013) in his MS thesis discusses the implications of simultaneous effect of cost and demand side effects.

There is also the possibility that increasing effect on prices due to supply side effects is offset by decreasing the effect of the demand side and the net effect of interest rate on prices is insignificant. The first study supporting this possibility is due to Bernanke and Gertler (1995) found that empirical results suggest that small and temporary fluctuations in open market interest rates caused by monetary policy shocks have a large and continuous effect on output. *‘They further claimed that credit channel and traditional monetary channel working in tandem as a result both the AD curve & AS curve shifts upward, leading to a large change in output accompanied by a small change in prices’*

Some other studies also support the clue that effect of interest rate on inflation is insignificant. Rehman (2011) made a final model of inflation using Hendry methodology, after comparing various existing models for inflation in Pakistan. His final model does not contain interest rate. This implies that according to Rehman (2011) interest rate is not a significant determinant of inflation. Rizvi et al. (2012) also found insignificant relation between interest Rate and inflation for Pakistan economy. Ghaffari (2013) found insignificant relationship between different combination of interest rate and inflation.

For Pakistan one can find the studies which are based on the cost channel and the studies which are based on the demand channel. But since there is strong theoretical justification for both types of theories, an analysis based on one type of theory ignoring the rival theories is subject to missing variables bias. The current study is an attempt to find the net impact of interest rate on inflation; taking into account both supply side and demand side variables in order to avoid the missing variable bias.

3.1. Methodology and Data Description

As stated earlier, different theories suggest a different impact of interest rate on inflation. The famous demand side effect of the Monetary Transmission Mechanism suggests that the rise of interest rate should decrease the inflation, whereas the cost channel suggests that the rise of interest will cause a rise in prices. We have no reason to prefer one theory over another. Therefore we start with a general model that encompasses all the transmission mechanisms and construct a final model by simplifying it. The methodology consists of the following:

3.1.1 General to specific methodology and construction of most general model

Interest rate is not the only determinant of inflation, inflation depends on many other variables, and if these variables are not included in the regression model, the estimates of remaining model would be biased. Therefore it is necessary to include all potential determinants of inflation in the regression model to get consistent and unbiased estimates of coefficients of interest rate in the inflation – interest rate relationship.

The theories linking interest rate with inflation are conflicting and do not lead us clear conclusion. In this case, estimating a model based on one theory and ignoring the rival theories is not justified. This problem can be solved by formulating a most general a theoretic model which encompasses conflicting theories and then imposing various restrictions on the parameters of model after testing their validity. Following Davidson et al. (1978) general to specific methodology will be utilized in this study.

3.1.2 Constructing the Most General Model

Different channel of MTM states that inflation may be a function of interest rate (i), total credit (CR), index of import prices (IP), index of export prices (EP), exchange rate (ER) and money supply (MS). These are considered as monetary determinants of inflation.

$$\pi = f(i, CR, IP, ER, MS, EP) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(1)}$$

Many other determinants of inflation are also cited in literature. Especially with reference to Pakistan, Rehman (2011) compares these models and finds Markup Pricing Model to be best performing. According to Rehman (2011) this model "encompasses and is not encompassed by" other models. This implies that other models cannot improve over the predictive performance of Markup Pricing Model[4]. This model involves following variables; unit labor cost (ULC), tax rate (TAX) and fuel prices (FP).

$$\pi = f(ULC, TAX, FP) \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots . \text{(2)}$$

The Taylor Rule set the rate of interest on looking at the output and inflation. Therefore the inflation actually observed is indirectly dependent on these variables and model for inflation takes from

$$\pi = f(y, i) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(3)}$$

Therefore the most general model takes the following form

$$\pi = (i, CR, IP, ER, MS, SP, ULC, TAX, FP, y, y^*) \ldots\ldots \text{(4)}$$

We are using wage as an indicator of unit labor cost and output gap as the actual output and potential output therefore the model we will be estimating will become:

[4]Mark up pricing model made by Rehman (2011). He took all existing inflation models for Pakistan economy and after applied Hendry 's methodology; he constructed a markup model which is most suitable model of inflation for Pakistan economy because the beauty of Hendry 's methodology is that it has the statistical properties of being empirically constant, parsimonious; data consistent and the existing model automatically consistent with theory.

$\pi = (i, CR, IP, ER, MS, SP, W, TAX, FP, OG)$.................... (5)

In Eq. no 5, the inflation (π) is a function of interest rate (i), total credit (CR), index of import prices (IP), exchange rate (ER), money supply (MS), and share price (SP), unit labor cost (ULC), tax (TAX), fuel prices (FP), difference of actual output and potential output (OG).

The model (5) encompasses the monetary and non-monetary determinants of inflation as well as the indicators used by the central bank to set the interest rate. Since all the important determinants of inflation are included in the model (5), and this model is capable of providing unbiased estimators.

If the sign of long run coefficients of interest rate in the model (5) is negative, this should be consistent with the popular demand channel of MTM which provides the basis of Taylor rule. If the sign is positive, this may be consistent with cost channel of MTM. The coefficients of remaining variables are important in their own place, but have no direct relation with MTM; however these variables are necessary in order to avoid missing variable bias.

3.1.3 Simplifying the Most General Model

Including all the relevant variables in a model for inflation yields a very large model, which is not suitable because a parsimonious model is always preferable over a large model. Therefore general to simple methodology can be adopted to select the set of regressors for inflation. General to specific methodology can be applied in many ways. The method which we are using is described as below.

Consider the most general model described in Eq. (5). We are using various measures of inflation and interest rate.

Let set 1= $(\pi_{1t}, \pi_{2t}, \dots \dots \dots \pi_{kt})$ be the set of different measures of inflation and set 2 = $(i_{1t}, i_{2t}, \dots \dots \dots\ i_{lt})$ be the set of different measures of interest rate.

1. We take the pair $(\pi_j\ , i_m)$ where π_j is a measure of inflation from set 1 and i_m is measure of interest rate from set 2

2. Estimate Auto Regressive Distributed Lag Model (ARDL) taking as dependent variable and lags of , lag and current values of and lagged and current values of other regressors as independent variables.

3. Test exclusion restrictions on all lags of each regressor.

4. Repeat the above mentioned process for all possible combinations of &

5. Exclude a variable if it is not significant in all the models in step 4

3.1.4. Testing the Long Run Relationship

Non stationarity in economic variables have created extraordinary complications in the analysis of time series data. The existence of a long run relationship between two variables is tested via bound testing approach introduced by Pesaran (2001). Bound testing approach has the beauty to bypass the complications involved in stationarity testing and can be used to verify the existence of the long run relationship between series regardless of the fact that whether they are stationary or non-stationary. Bound testing approach is described below.

Run the following Regression

$$\Delta\pi_t = \alpha + \beta_1\pi_{t-1} + \beta_2 i_{t-1} + \alpha_1 \Delta i_t + \sum_{j=1}^{k}\left(\delta_j\Delta\pi_{j-1} + \gamma_j\Delta i_{t-j}\right) + \epsilon_t \dots\dots\dots\dots (6)$$

In Eq. 6 p denotes inflation and denotes interest rate. The Greek letters denotes the regression coefficients and is the stochastic error term.

Test the restriction of
Using F- statistics proposed by Pesaran (2001).
If the F- statistics is greater than the upper bound, then long run relations exist.

If the F- statistics is smaller than the lower bound, then the long run relation does not exist.

If the long run relation in the above model is intimated, this will mean that the interest rate and inflation are correlated in the long run and the effect of all other variables is transitory. If the long run relation is not confirmed, then this model will be augmented by incorporating control variables and the long run relation for this augmented model will be tested. The augmented model takes the following form:

$$\Delta\pi_t = \alpha + \beta_1\pi_{t-1} + \beta_2 i_{t-1} + \beta_3 X_{t-1} + \alpha_1 \Delta i_{t-1} + \alpha_2 \Delta X_t + \sum_{j=1}^{k}\left(\delta_j\Delta\pi_{t-j} + \gamma_j\Delta i_{t-j} + \rho_j\Delta X_{t-j}\right) + \epsilon_t \text{ ...... } (7)$$

X denotes the vector of all control variables. The coefficients of X are in vector form. The long run relationship can be verified by testing restriction.

3.1.5 Testing Granger Causality

The First objective of this research is to analyze whether if there is some impact of interest rate on inflation. For this purpose we will test the existence of relationship between two variables via Granger Causality.

Suppose we want to test whether granger causes on or not. Other things remaining same if the distribution of conditional on lag values of and lag values of is equal to distribution of conditional it's on lag then does not grange cause .

Following procedure willbe adopted in order to testing ganger causality.

•Regress on its own lags, lag value of and lag value of other control variables

•Test restrictions of all lags of via standard Long Run test

•If the restriction is valid then lag values of play no role to determine ð and does not Granger cause .

3.1.6. Contemporaneous Granger Causality and Estimating Long Run Relationship

Major difference between Grange causality and contemporaneous Granger causality is the inclusion of current values of regressors, along with their lags. In the testing procedure of standard Granger causality is assumed that the cause appears before the consequence. However contemporaneous Granger causality assumes that the current values of cause variable also affect the dependent variable. Therefore the procedure is as follows:

•Regress π on lags of π, current value and lags of, and current values and lags of X.

•Test restrictions of all lags of via standard Long Run test.

•If the restriction is valid then lag values of play no role to determine π & i does not Grange cause .

3.1.7 Estimation of Static Long Run solution

The third step to investigate the impact of interest rate on inflation is to calculate the Static Long Run relationship between interest rate and inflation. For this purpose, ARDL model will be estimated and then static long run solution will be calculated. The long run solution can be calculated by setting

$i_t = i_{t-1} \ldots, \pi_t = \pi_{t-1}, \ldots$ and

$$X_t = X_{t-1} = X_{t-2}, \ldots.$$

We used the following measures of interest rate as named: Discount rate (DR)[5], Treasury bill Rate (TB), Call Money Rate (CMR), Govt. Bond Yield (GB), the overnight interest rate (ONIR)[6]. We used the following measures of inflation name as Consumer price index general (CPIG).

Consumer price food index (CPIF), Consumer price nonfood index (CPINF), Wholesale price index general (WPIG), Wholesale price index food (WPIF) and Wholesale price index nonfood (WPINF).

We used the above mentioned procedure for all measurements of inflation. Similarly the data on growth in money supply and the output will be used as annual quarterly and monthly growth in money supply. Other variables that we used in the model are.

- Manufacturing Production index (MPI),
- Wage Index as a proxy of unit labor cost
- Import Prices Index
- Export Price Index
- The ratio of total income tax to GDP
- The output gap, measures the deviation of the natural log of MPI from the natural log of trend MPI.
- Money supply (M2)
- Total credit provided by banking sector
- Exchange rate (official Pkr/ $ US)
- Share Prices
- Fuel Prices

We used the monthly data from July 1991 to June 2010 in this study. The data on these variables is obtained from various issues of State Bank of Pakistan (SBP), International Financial Statistics (IFS), Statistical Bulletin of Pakistan and Economic Survey of Pakistan.

4. Results

4.1.1. Simplifying the Most General Model

We have following measures of interest rate as named Govt. Treasury Bill Rate (TB), Call Money Rate (CMR), Discount Rate (DR) and Overnight Interest Rate (ONR) and Govt. Yield Bond (GB).

[5]SBP Reserve Repo rate is also used for the name of discount rate; rate at which banks borrow from SBP on an overnight basis.

[6]Overnight Repo rate is also used for the name of overnight interest rate; a rate at banks deposits their end of cash with SBP at overnight basis

We have following measures of inflation named as Consumer Price Index General (CPIG), Consumer Price Food Index (CPIF), Consumer Price Non Food Index (CPINF), Wholesale Price Index General (WPIG), Wholesale Price Food Index (WPIF) and Wholesale Price Non Food Index (WPINF) Total Credit (CR), Index of Import prices (IP), Index of Export Prices (EP), Exchange Rate (ER), Money Supply (MS), Share Price (SP), Tax Rate (TX) Fuel Prices (FP) and Output Gap (OG). The results are summarized in Table.

Table No. 1.

Simplifying the Most General Model

Table No. 1.

			SP	ER	TX	IP	EP	CR	W	FP	OG	M2	i
CPIG	ONR	Coefficient	1.58	2.99	0.28	1.95	3.97	0.6	3.12	3.63	2.59	1.91	0.28
		P-value	*0.16*	*0.01***	*0.95*	*0.08*	*0.00***	*0.73*	*0.01***	*0.00***	*0.02**	*0.08*	*0.95*
	DR	Coefficient	1.59	2.55	0.25	2.22	2.46	0.38	3.24	3.54	3.12	1.77	1.09
		P-value	*0.16*	*0.02**	*0.96*	*0.05*	*0.03**	*0.89*	*0.01***	*0.00***	*0.01***	*0.11*	*0.37*
	TB6	Coefficient	1.51	2.78	0.21	2.18	3.21	0.36	3.25	3.48	3.03	1.94	0.19
		P-value	*0.18*	*0.01***	*0.97*	*0.05*	*0.01***	*0.9*	*0.01***	*0.00***	*0.01***	*0.08*	*0.98*
	CMR	Coefficient	1.58	2.73	0.31	1.93	3.99	0.62	3	3.58	2.66	1.88	0.28
		P-value	*0.16*	*0.02**	*0.93*	*0.08*	*0.00***	*0.71*	*0.01***	*0.00***	*0.02**	*0.09*	*0.95*
CPIF	ONR	Coefficient	1.85	3.17	0.38	2.22	4.44	1.52	3.22	3.6	3.31	1.09	0.25
		P-value	*0.09*	*0.01***	*0.89*	*0.05*	*0.00***	*0.18*	*0.01***	*0.00***	*0.00***	*0.37*	*0.96*
	DR	Coefficient	2.01	2.54	0.27	2.66	3.06	0.59	3.28	3.43	3.55	1.15	1
		P-value	*0.07*	*0.02**	*0.95*	*0.02**	*0.01***	*0.74*	*0.00***	*0.00***	*0.00***	*0.34*	*0.43*
	TB6	Coefficient	1.57	2.64	0.52	2.48	4.48	1.32	3.75	3.72	3.48	1.4	0.69
		P-value	*0.16*	*0.02**	*0.79*	*0.03**	*0.00***	*0.25*	*0.00***	*0.00***	*0.00***	*0.22*	*0.66*
	CMR	Coefficient	1.8	2.84	0.41	2.17	4.49	1.51	3.09	3.39	3.57	1.06	0.41
		P-value	*0.1*	*0.01***	*0.87*	*0.05*	*0.00***	*0.18*	*0.01***	*0.00***	*0.00***	*0.39*	*0.87*
CPINF	ONR	Coefficient	2.58	1.28	1.02	2.1	1.06	0.52	2.79	2.11	1.15	0.96	0.26
		P-value	*0.02**	*0.27*	*0.41*	*0.06*	*0.39*	*0.79*	*0.01***	*0.06*	*0.34*	*0.45*	*0.96*
	DR	Coefficient	1.87	1.18	1	2.27	0.61	0.91	2.64	2.59	1.18	1.03	2.01
		P-value	*0.09*	*0.32*	*0.43*	*0.04**	*0.72*	*0.49*	*0.02**	*0.02**	*0.32*	*0.41*	*0.07*
	TB6	Coefficient	2.52	1.95	1.76	2.25	0.86	1.07	3.05	2.65	1.41	0.81	2.82
		P-Value	*0.02**	*0.08*	*0.11*	*0.04**	*0.53*	*0.39*	*0.01***	*0.02**	*0.22*	*0.57*	*0.01***
	CMR	Coefficient	2.61	1.27	1.04	1.97	1.13	0.56	2.67	2.31	1.26	1.17	0.56
		P-Value	*0.02**	*0.28*	*0.4*	*0.07*	*0.35*	*0.76*	*0.02**	*0.04**	*0.28*	*0.33*	*0.76*
WPIG	ONR	Coefficient	2.73	0.71	0.62	1.76	2.56	0.18	2.98	3.23	6.78	1.64	0.12
		P-Value	*0.02**	*0.64*	*0.71*	*0.11*	*0.02**	*0.98*	*0.01***	*0.01***	*0.00***	*0.14*	*0.99*
	DR	Coefficient	3.21	1.07	0.97	2.98	2.14	0.66	3.26	3.47	7.83	1.44	2.02
		P-Value	*0.01***	*0.38*	*0.45*	*0.01***	*0.05*	*0.68*	*0.01***	*0.00***	*0.00***	*0.2*	*0.07*
	TB6	Coefficient	3.06	0.88	0.76	2.25	2.09	0.52	3.59	3.16	7.77	1.48	0.82
		P-Value	*0.01***	*0.51*	*0.6*	*0.04**	*0.06*	*0.79*	*0.00***	*0.01***	*0.00***	*0.19*	*0.56*
	CMR	Coefficient	2.65	0.78	0.63	1.62	2.55	0.18	2.97	3.49	6.78	1.72	0.13
		P-Value	*0.02**	*0.59*	*0.71*	*0.15*	*0.02***	*0.98*	*0.01***	*0.00***	*0.00***	*0.12*	*0.99*
WPIF	ONR	Coefficient	1.39	2.38	0.67	1.29	4.45	1.46	4.62	2.33	2.56	1.21	0.34
		P-Value	*0.23*	*0.03**	*0.67*	*0.27*	*0.00***	*0.2*	*0.00***	*0.04**	*0.02**	*0.31*	*0.92*
	DR	Coefficient	1.51	2.59	0.53	1.71	3.64	0.65	5.59	2.42	3.46	1.55	2.37
		P-value	*0.18*	*0.02**	*0.79*	*0.12*	*0.00***	*0.69*	*0.00***	*0.03**	*0.00***	*0.17*	*0.03**
	TB6	Coefficient	1.41	1.85	0.92	1.49	4.84	1.61	5.15	2.36	3.05	1.45	0.64
		P-value	*0.22*	*0.09*	*0.48*	*0.19*	*0.00***	*0.15*	*0.00***	*0.03**	*0.01***	*0.2*	*0.7*
	CMR	Coefficient	1.43	2.25	0.75	1.24	4.64	1.52	4.5	2.3	2.69	1.38	0.37
		P-value	*0.21*	*0.04**	*0.61*	*0.29*	*0.00***	*0.18*	*0.00***	*0.04**	*0.02**	*0.23*	*0.89*
WPINF	ONR	Coefficient	2.3	0.81	0.93	1.81	1.33	0.83	1.88	5.48	6.55	2.26	0.24
		P-value	*0.04**	*0.56*	*0.47*	*0.1*	*0.25*	*0.55*	*0.09*	*0.00***	*0.00***	*0.04**	*0.96*
	DR	Coefficient	3.23	1.44	1.86	3.27	1.34	1.94	1.88	5.93	7.86	1.76	3.05
		P-value	*0.01***	*0.2*	*0.09*	*0.01***	*0.25*	*0.08*	*0.09*	*0.00***	*0.00***	*0.11*	*0.01***
	TB6	Coefficient	2.94	1.12	1.67	2.44	1.4	1.77	2.52	5.6	7.65	1.79	1.63
		P-value	*0.01***	*0.35*	*0.13*	*0.03**	*0.22*	*0.11*	*0.02**	*0.00***	*0.00***	*0.11*	*0.14*
	CMR	Coefficient	2.27	0.9	0.96	1.75	1.26	0.87	1.88	5.66	6.62	2.37	0.4
		P-value	*0.04**	*0.5*	*0.46*	*0.11*	*0.28*	*0.52*	*0.09*	*0.00***	*0.00***	*0.03**	*0.88*

***, Significant at 5% level, **, significant at 1% level**

e results are based on monthly data. The variable TX, CR and W are not available at monthly frequency, so their values were estimated interpolation (exponential smoothin

Since the variables tax and credit appeared to be insignificant in all of the models estimated, which are tabulated above, we exclude them from the model and the model takes following form.

$$\pi = f(i, IP, ER, MS, SP, W, FP, OG).$$

4.1.2. Verifying of Existence of Long Run Relation

There are two potential sources of basis in analysis of time series data.

1. Missing Variable Bias

2. Spurious Regression.

We have adopted general to specific methodology to avoid missing variables bias. Now to avoid Spurious Regression problems, we have to verify the Long Run relation (cointegration in the loose sense) between desired variables. We have applied bound test to test Long Run relation between interest rate and inflation. The results are summarized table 2 (a) and table 2 (b).

Table 2a
Long Run Relationship between Interest Rates and Inflation

	ONR	DR	TBR6	CMR
CPIG	2.5072	4.2805	2.0572	3.8117
CPIF	1.4643	1.8711	1.1924	1.0715
CPINF	3.5682	2.6201	4.9630	3.5748
WPIG	*5.9668**	*8.0459**	*7.0730**	*5.9907**
WPIF	*24.403**	*26.013**	*26.435**	*27.916**
WPINF	*6.2535**	*10.977**	*7.4482**	*5.8373**

Lower Bound: 4.94, Upper Bound: 5.73
***, Null hypothesis (no long run relations) is rejected**

We observed that long run relation exists between all kinds of wholesale price indices and all kinds of interest rate; however this table is not giving information about the nature of relation, whether it is positive or negative. In the above table no 2 (a) we found there exist long run relationship between interest rate and Wholesale Price Index. We did not find long run relationship between interest rate and Consumer Price Index because demand side effects cancel out with supply side effect.

This table only supports the fact that if we run a regression of two variables, the result will not be spurious.

There is no Long Run relation between consumer price and interest rate.

Table 2b

Long Run Relationship between Interest Rates, Inflation and Covariates

	ONR	DR	TBR6	CMR
CPIG	*5.3320**	*4.8576**	*5.2511**	*5.6088**
CPIF	*4.8580**	*4.5244**	*4.8261**	*5.1423**
CPINF	*4.4547**	*3.9465**	*4.3173**	*4.5528**
WPIG	*4.2634**	*4.0498**	*4.2411**	*4.2753**
WPIF	*3.8856**	*2.7106*	*4.2411**	*4.0818**
WPINF	*3.7247**	*3.6951**	*3.6768**	*3.7264**
Lower Bound: 2.32, Upper Bound: 3.50				
***, Null hypothesis (no long run relations) is rejected.**				

We observed that long run relation exists between all kinds of price indices and all kinds of interest rate. This implies that estimates of regression with covariates are not subject to spurious regression bias.

4.1.3. Granger Causality

After verification of the long run relation between inflation and interest rate, we proceed to testing Granger Causality. We want to test whether interest rate Granger Cause inflation or not.

Table 3.

Testing Granger Causality between Inflation and Interest Rate

			SP	ER	TX	IP	EP	CR	W	FP	OG	M2	i
CPIG	ONR	Coefficient	1.55	4.09	0.52	2.3	5.92	0.65	4.32	5.06	1.89	1.69	0.6
		P-value	0.18	0**	0.76	0.05	0**	0.66	0**	0**	0.1	0.13	0.7
	DR	Coefficient	1.6	4.22	0.88	2.58	4.52	0.61	3.63	4.57	2.33	1.76	1.47
		P-value	0.16	0**	0.5	0.03*	0**	0.69	0**	0**	0.05	0.11	0.2
	TB6	Coefficient	1.44	3.93	0.54	2.51	5.18	0.55	4.44	4.74	1.89	1.55	0.16
		P-value	0.22	0**	0.75	0.03*	0**	0.74	0**	0**	0.1	0.17	0.98
	CMR	Coefficient	1.47	3.74	0.51	2.31	5.7	0.6	4.16	4.77	1.93	1.56	0.49
		P-value	0.2	0**	0.77	0.05	0**	0.7	0**	0**	0.09	0.16	0.78
CPIF	ONR	Coefficient	1.83	4.34	0.08	2.15	6.7	1.25	3.22	5.44	3.05	1.84	0.68
		P-value	0.11	0**	0.99	0.06	0**	0.29	0.01**	0**	0.01**	0.11	0.64
	DR	Coefficient	2.09	3.86	0.28	2.62	4.74	0.32	2.4	4.67	3.17	1.98	1.31
		P-value	0.07	0**	0.92	0.03*	0**	0.9	0.04	0**	0.01**	0.09	0.27
	TB6	Coefficient	1.39	3.7	0.07	2.37	6.36	0.98	3.41	5.43	2.67	1.93	0.61
		P-value	0.23	0**	1	0.04	0**	0.43	0.01**	0**	0.02*	0.09	0.7
	CMR	Coefficient	1.68	3.9	0.07	2.11	6.67	1.19	3.05	5.23	3.09	1.76	0.83
		P-value	0.14	0**	1	0.07	0**	0.32	0.01**	0**	0.01**	0.12	0.53
CPINF	ONR	Coefficient	3.07	0.98	0.51	2.45	1.26	0.81	4.63	1.51	1.15	0.78	0.24
		P-value	0.01**	0.43	0.77	0.04	0.29	0.55	0**	0.19	0.34	0.56	0.94
	DR	Coefficient	2.54	1.27	0.93	2.54	1.04	1.06	4.9	1.89	1.46	1.1	2.16
		P-value	0.03*	0.28	0.46	0.03*	0.4*	0.38	0**	0.1**	0.21	0.36	0.06
	TB6	Coefficient	3.25	1.89	1.54	2.49	1.28	1.67	5.76	1.61	1.37	0.64	4.14
		P-Value	0.01**	0.1	0.18	0.03	0.28	0.14	0**	0.16	0.24	0.67	0**
	CMR	Coefficient	3.27	1.07	0.59	2.4	1.36	0.9	4.8	1.57	1.38	0.71	0.86
		P-Value	0.01**	0.38	0.71	0.04*	0.24	0.48	0**	0.17	0.24	0.61	0.51
WPIG	ONR	Coefficient	1.8	0.51	1.25	2.33	3.32	1.75	3.49	3.24	2.96	1.77	1.15
		P-Value	0.12	0.77	0.29	0.05	0.01**	0.11	0.01**	0.01**	0.01**	0.12	0.34
	DR	Coefficient	1.31	0.47	1.45	1.94	2.97	1.35	3.52	3.03	2.59	1.44	1.03
		P-Value	0.26	0.8	0.21	0.09	0.01**	0.24	0.01	0.01**	0.03*	0.21	0.4
	TB6	Coefficient	1.63	0.41	1.37	1.84	2.98	1.52	3.91	3.26	2.92	1.18	0.54
		P-Value	0.16	0.84	0.24	0.11	0.01**	0.18	0**	0.01**	0.02*	0.32	0.75
	CMR	Coefficient	1.65	0.5	1.21	2.37	3.14	1.78	3.38	3.07	2.94	1.73	0.75
		P-Value	0.15	0.78	0.31	0.04*	0.01**	0.11	0.01**	0.01**	0.01**	0.13	0.59
WPIF	ONR	Coefficient	0.66	2.23	0.23	1.38	5.9	0.81	4.25	3.48	1.46	1.84	0.84
		P-Value	0.65	0.06	0.95	0.24	0**	0.54	0**	0.01**	0.21	0.11	0.53
	DR	Coefficient	0.7	2.99	0.52	1.35	5.01	0.56	4.79	2.88	2.29	2.49	3.21
		P-value	0.63	0.01**	0.76	0.25	0**	0.73	0**	0.02*	0.05	0.03*	0.01**
	TB6	Coefficient	0.5	1.99	0.39	1.49	5.79	1	4.46	3.05	1.5	1.7	0.56
		P-value	0.78	0.08	0.85	0.2	0**	0.42	0**	0.01**	0.19	0.14	0.73
	CMR	Coefficient	0.63	1.94	0.31	1.46	5.86	0.76	4.05	3.38	1.46	1.93	0.87
		P-value	0.67	0.09	0.9	0.21	0**	0.58	0**	0.01**	0.21	0.09	0.5
WPINF	ONR	Coefficient	1.44	0.51	1.34	2.5	1.49	2.15	2.65	3.34	2.34	1.9	0.45
		P-value	0.21	0.77	0.25	0.05	0.2	0.06	0.03*	0.01**	0.04*	0.1	0.81
	DR	Coefficient	1.73	0.5	1.83	2.42	1.5	2.27	2.9	2.56	2.24	1.69	1.19
		P-value	0.13	0.78	0.11	0.04	0.2	0.05	0.02*	0.03*	0.05	0.14	0.32
	TB6	Coefficient	1.54	0.29	1.59	1.82	1.6	2.13	3.22	3.24	2.17	1.41	0.46
		P-value	0.18	0.92	0.17	0.11	0.16	0.06	0.01**	0.01**	0.06	0.22	0.81
	CMR	Coefficient	1.32	0.54	1.36	2.16	1.5	2.31	2.7	3.22	2.38	1.87	0.27
		P-value	0.26	0.75	0.24	0.06	0.19	0.05	0.02*	0.01**	0.04*	0.1	0.93

*, Significant at 5% level, **, significant at 1% level

As the last column of the results summarized in table 3 shows that the interest rate does not Granger Cause inflation for all combinations of choice of interest rate and inflation except for pairs only (CPIF, DR).

4.1.4. Static Long Run Relation between Interest Rate and Inflation

The Granger Causality test only shows that whether or not the cause variable affects the consequence variable. However it cannot tell the direction in which the cause variable pushes the consequences to know about the direction of the relation between interest rate and inflation. Our last objective is to find coefficient of interest rate in interest rate- inflation relationship. We estimate the Eq. 5 which is constructed after simplifying most general model. The Static Long Run was founded based on the procedure described in section 3.1.7. The coefficients of interest rates in table 4 are found insignificant for all combinations of Consumer Price Indices, Wholesale Price Indices and interest rate, except for a pair (CPIF, DR). This means that the interest rate does not effect on inflation except the food price inflation but the coefficient is positive which implies an interest rate raises the food price inflation. Results show that interest rate has no affects on inflation. In the table4 only the combination of (CPIF, DR) showed a significant relationship between interest rate and inflation and only the combination of (WPIF, CMR) showed an insignificant but negative relationship between interest rate and inflation. Our results confirmed that the interest rate is not a significant determinant of inflation (Rehman, 2011).

We found that long run relationship exists. This implies that there are very strong evidences that the relation between interest and inflation is either insignificant or positive. Therefore the use of interest rate for controlling inflation is strictly undesirable.

Table no.4

Static Long Run Relation between Inflation and Interest Rate

			Constant	SP	ER	IP	EP	W	FP	OG	M2	i
CPIG	ONR	Coefficient	-102.36	0.01	0.59	0.06	-0.18	0.01	0.08	0.02	9.29	-0.05
		P-value	0.03*	0.87	0.00**	0.05	0.00**	0.00**	0.04	0.84	0.01**	0.67
	DR	Coefficient	-93.47	0.05	0.65	0.03	-0.14	0.01	0.07	0.03	7.98	0.38
		P-value	0.05	0.25	0.00**	0.28	0.00**	0.00**	0.07	0.74	0.04*	0.11
	TB6	Coefficient	-118.51	0.03	0.58	0.03	-0.16	0.01	0.08	0.06	10.41	0.16
		P-value	0.02	0.39	0.00**	0.28	0.00**	0.00**	0.04	0.54	0.01**	0.25
	CMR	Coefficient	-110.16	0.01	0.59	0.06	-0.18	0.01	0.08	0.02	9.93	-0.08
		P-value	0.02	0.88	0.00**	0.04	0.00**	0.00**	0.04	0.87	0.01**	0.56
CPIF	ONR	Coefficient	16.37	0.11	0.72	0.07	-0.34	0.02	0.07	0.00**	-0.01	0
		P-value	0.86	0.15	0.00**	0.18	0.00**	0.00**	0.34	0.99	1	0.99
	DR	Coefficient	26.73	0.2	0.83	0.01**	-0.25	0.02	0.07	0.01**	-2.12	0.91
		P-value	0.77	0.02	0.00**	0.91	0.00**	0.00**	0.32	0.97	0.78	0.04
	TB6	Coefficient	-52.81	0.15	0.68	0.03	-0.3	0.02	0.08	0.08	5.29	0.38
		P-value	0.57	0.03*	0.00**	0.66	0.00**	0.00**	0.24	0.63	0.48	0.15
	CMR	Coefficient	9.4	0.11	0.7	0.07	-0.34	0.02	0.07	-0.02	0.55	-0.03
		P-value	0.92	0.14	0.00**	0.19	0.00**	0.00**	0.33	0.91	0.94	0.9
CPINF	ONR	Coefficient	-150.62	-0.08	0.46	0.04	-0.08	0.01	0.11	-0.07	12.8	-0.07
		P-value	0.01**	0.09	0.00**	0.26	0.06	0.00**	0.02*	0.58	0.00**	0.64
	DR	Coefficient	-143.33	-0.06	0.48	0.02	-0.05	0.01	0.11	-0.07	11.9	0.18
		P-value	0.01**	0.21	0.00**	0.65	0.28	0.00**	0.04*	0.58	0.01**	0.5
	TB6	Coefficient	-113.76	-0.08	0.48	0.04	-0.09	0.02	0.1	-0.11	9.79	-0.05
		P-Value	0.09	0.12	0.00**	0.33	0.08	0.00**	0.04*	0.46	0.07	0.8
	CMR	Coefficient	-160.48	-0.08	0.47	0.05	-0.09	0.01	0.11	-0.05	13.68	-0.1
		P-Value	0.00**	0.1	0.00**	0.21	0.04*	0.00**	0.02*	0.69	0.00**	0.49
WPIG	ONR	Coefficient	-189.01	-0.01	0.3	0.01	-0.17	0.02	0.14	0.03	15.81	0.09
		P-Value	0.01**	0.9	0.04	0.9	0.00**	0.00**	0.02*	0.85	0.00**	0.63
	DR	Coefficient	-119.07	0.07	0.44	-0.04	-0.16	0.02	0.17	-0.18	9.26	0.72
		P-Value	0.21	0.33	0.02*	0.52	0.03*	0.00**	0.05	0.47	0.24	0.14
	TB6	Coefficient	-150.59	0.01	0.21	-0.05	-0.14	0.02	0.16	-0.1	12.42	0.3
		P-Value	0.1	0.82	0.28	0.48	0.04*	0.00**	0.03*	0.67	0.1	0.25
	CMR	Coefficient	-194.92	-0.01	0.3	0.01	-0.18	0.02	0.14	0.05	16.35	0.06
		P-Value	0	0.91	0.04	0.83	0.00**	0.00**	0.02*	0.74	0.00**	0.77
WPIF	ONR	Coefficient	-83.97	0.05	0.44	0.07	-0.35	0.02	0.04	0.01	8.01	0.00**
		P-Value	0.31	0.39	0.01**	0.13	0.00**	0.00**	0.49	0.94	0.23	1
	DR	Coefficient	-48.33	0.15	0.56	0.02	-0.3	0.02	0.02	-0.05	4.18	0.71
		P-value	0.56	0.04*	0.00**	0.7	0.00**	0.00**	0.7	0.78	0.54	0.07
	TB6	Coefficient	-109.19	0.09	0.42	0.04	-0.32	0.02	0.04	0.05	9.77	0.29
		P-value	0.21	0.12	0.02*	0.48	0.00**	0.00**	0.53	0.78	0.17	0.24
	CMR	Coefficient	-86.18	0.05	0.43	0.08	-0.36	0.02	0.04	0	8.2	-0.03
		P-value	0.31	0.38	0.02	0.14	0.00**	0.00**	0.51	1	0.24	0.89
WPINF	ONR	Coefficient	-280.15	-0.02	0.25	-0.04	-0.08	0.01	0.22	0.1	22.73	0.17
		P-value	0.00**	0.78	0.17	0.44	0.24	0.00**	0.01**	0.57	0.00**	0.45
	DR	Coefficient	-222.78	0.02	0.36	-0.09	-0.09	0.02	0.28	-0.16	17.42	0.61

Conclusion

An important goal of the central bank of any country is to control inflation and to achieve the price stability. For this purpose, central bank uses different variables as policy tools. In recent years, many of central banks adopted strategy of increasing interest rates with the aim to prevent the economy from an increase in inflation.

There are various conflicting opinions on how the interest rate affects the inflation. The popular opinion is that interest rate has negative impact on inflation, however many economists have quite opposite opinion and the empirical evidences found in literature are mixed. Some evidence suggests net effect of interest rate on prices to be insignificant.

In the current study we took the help of data to decide whether the interest rate has increasing or decreasing effect on the price level. To avoid missing variable bias all potential determinants of inflation suggested by earlier studies were used, using general to specific framework.

We found the insignificant effect of interest rate on inflation. These finding verify the results of many earlier studies including Rehman (2011.) the result presented in this study suggest that the interest rate had been ineffective to control inflation. On the other hand, high interest rate is a big hurdle in investment and employment opportunities. Therefore, the State Bank should abandon the use of interest rate to control inflation and the interest rate should be reduced in order to promote employment opportunities.

Recommendation

Empirical evidences presented in the thesis and many of earlier studies in Europe suggest that the use of interest rate as a policy tool to cope with inflation is redundant because interest rates have insignificant effect on inflation. The insignificant effect of interest rate on inflation also implies a very huge reduction in output. Therefore the use of tight monetary policy only results in decrease in the output without any impact on prices. Therefore in order to avoid the loss of output, state bank should avoid the use of tight monetary policy. Furthermore the inflation should be handled with appropriate fiscal policy instead of the monetary policy. The tax reduction on petroleum product might be useful option for reduction in inflation.

References

Ali, S. Z. (2012, January). Supply Side Shocks Near Rational Expectations, Cost Channel, and Monetary Policy. DPRC Working Paper . Development Policy Research Centre; School of Humainities Social Science and Law (LUMS).

Barth III, M. J., & Ramey, V. A. (2001). The Cost Channel of Monetary Transmission. (B. S. Bernanke, & K. Rogoff, Eds.) NBER Macroeconomics Annual 2001 , 16, 199-239.

Bernanke, B. S., & Gertler, M. (1995). Inside the Black Box: The Credit Channel of Monetary Policy. Journal of Economic Perspective , 9 (4), 27-48.

Castelnuovo, E., & Surico, P. (2010, December). Monetary Policy, Inflation Expectation and The Price Puzzle. The Economic Journal , 1262–1283.

Charemza, W. and Deadman, Derek (1998), New directions in econometric practice: General to specific modelling, cointegration, and vector autoregression.

Chowdhury, I., Hoffmann, M., & Schabert, A. ((2006)). Inflation dynamics and the cost channel of monetary transmission. European Economic Review 50 , 995–1016.

Christiano, L. J., Eichenbaum, M., & Evans, C. L. (2005). Nominal Rigidities and the Dynamic Effects of a Shock to Monetary Policy. Journal of Political Economy , vol. 113, (no. 1]).

Felipe, J. (2009). Does Pakistan Need To Adopt Inflation Targeting? Some Questions. SBP Research Bulletin , 5 (1).

Ghaffari A (2013), Interest Rate, Inflation and Output; Relationship Revisited, Unpublished MS Economics thesis, International Islamic University, Islamabad

Gibson, A. (1923). The future course of high class investment values, Banker's Magazine, January, pp. 15–34.

Henzel, S., Huslewig, O., Mayer, E., & Wollmershauser, T. (2007), The Price Puzzle Revisited: Can the Cost Channel Explain A Rise In Inflation After A Monetary Policy Shock?

Javid, M., & Munir, K. (2010). The price puzzle and monetary policy transmission mechanism in Pakistan: Structural vector autoregressive approach. The Pakistan Development Review , 449–460.

Jehan, Z., & Rashid, A. (2011). On the Response of Economic Aggregates to Monetary Policy Shocks. EERI Research Paper Series No 01/2011 (1).

Kitchin, J. (1923) Cycles and trends in economic factors, Review of Economics and Statistics, 5,
pp. 10–16.

Lima, G. T., & Setterfield, M. (2010). Pricing Behaviour and the Cost-Push Channel of Monetary Policy. Review of Political Economy , 22 (1), 19-40.

Maddala and Kim (1998), Unit Roots, Cointegration, and Structural Change, Cambridge University Press.

Mohanty, D. (2012, May). Evidence of Interest Rate Channel of Monetary Policy Transmission in India. WPS (DEPR) : 6 / 2012 RBI Working Paper Series . The Reserve Bank of India (RBI), Department of Economic and Policy Research.

Passamani, G., & Tamborini, R. (2006). Monetary policy through the "credit-cost channel". Italy and Germany. Discussion Paper No.9, 2006 Department of Economics University of Trento, Italy .

Peake, E.G. (1928) Connection between the prices of commodities and the prices of securities,
Bankers' Magazine, 125, p. 720.

Qiang, T. J., & Xin, l. Z. (2010). Existence of The Cost Channel of China's Monetary Transmission. IEEE 2nd International Conference , 329-332. Beijing, China: School of Economic & Managment Beihang University Beijing China.

Rabanal, P. (2007). Does inflation increase after a monetary policy tightening? Answers based on an estimated DSGE model. Journal of Economic Dynamics & Control 31 , 906–937.

Rabanal, P. (2003). The Cost Channel of Monetary Policy Further Evidence Furthe Evidence for the United States and the Euro Area.

Ravenna, F., & Walsh, C. E. (2006), Optimal monetary policy with the cost channel. Journal of Monetary Economics 53, 199–216.

Rehman M. (2011), Resolving controversies about determinants of inflation in Pakistan, PhD Econometrics thesis, International Islamic University, Islamabad.

Rehman, F. u., & Malik W. S. (2010), A structural VAR approach to cost channel of monetary policy MRPA Paper. Munich Personal RePEc Archive (MRPA). Retrieved from http://mpra.ub.uni-muenchen.de/32349/.

Rizvi, S. K., Naqvi, B., & Rizavi, S. S. (2012). What Does Pakistan Have to Join the Inflation Targeters' Club—a Royal Flush or a Seven-Deuce Offsuit? The Lahore Journal of Economics , 17 (2), 35-62.

Saleem, N. (2010). Adopting Inflation Targeting in Pakistan: An Empirical Analysis. The Lahore Journal of Economics , 51-76.

Seelig, S. A. (1974). Rising Interest Rates and Cost Push Inflation. The Journal of Finance , Vol. 29 (No. 4), 1049-1061.

Svensson, L. E. (2000). Open-economy inflation targeting. Journal of International Economics , 50, 155–183.

Thornton, Dainel L (2012). Monetary Policy : Why Money Matters and Interest Rates Don't. St. Louis Federal Reserve Bank of St. Louis Research Division P.O. Box 442 St. Louis, MO 63166.

Tillmann, P. (2008). Do interest rates drive inflation dynamics? An analysis of the cost channel of monetary transmission. Journal of Economic Dynamics & Control 32 , 2723–2744.

KEY TO SUSTAINABILITY: EMBRACING CHANGE

Murtaza Abbas[1]

Abstract

Change - a phenomena which is difficult to absorb and even more difficult to implement. A change is often proves to be a discomforting experience and leads to resistance, where a leader plays the pivotal role of making this experience as seamless as it can be by shared vision and an active support of Change Agents or Change Manager. Resistance mainly comes from three sources – technical resistance, political resistance and cultural resistance where in order to implement change, conflict resolution becomes the most important task to perform. Survey research method was used covering aspects of 50 managers/representatives view point from different layers of organization. The information gathered was analyzed, cross examined and debated in the context of the situation and environment in which the organization is operating. As the change agents or change managers can be or cannot be managers, it is important for the lead to communicate the reasons of change very clearly and make people understand the concept of WIIFM (Whats In It For Me). The findings suggest that those leaders who develop new responses based on new information and technology to achieve their goals and compete in the market are successful. If the communication is clear and the question related to transition requirement and challenges which organization will face in the future have been properly communicated the relevant people can play an effective role in the achievement of organizational goals. Change management can be an uphill task if it is not managed in a structured and sensitive manner. Change cannot be imposed rather related people needs to be empowered so as to make efforts and find solutions, that indeed requires supervision of a manager / leader.

Keywords: Embracing change, Feedback, Conflict Management, Managing Fear

JEL Classification: Z 000

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Introduction

Denying the reality has destroyed so many organizations and people than incompetence ever did. New realities require new strategies, new response plan and proper execution; however, one should not let go of the established and long standing rules and principles that are tried and tested many a times before, instead these should be re-tweaked to match, counter and comprehend the new ground realities and proceed accordingly.

The systematic process of planning, initiating, realizing, controlling, stabilizing and sustaining new and altered work activities at the corporate, group and personal level is termed as *Change Management*. Heldman (2005)[2] says the sequence should always be: 1) Initiate, 2) Plan, 3) Baseline, 4) Execute. “If you arrange your project management activities in this order, you’ve set the basis for a good change management system.” (Heldman 2005, 333)

Change is seen as a competitive advantage in today’s world; however change can be disquieting, hence, ‘Change Manager’ needs to establish influence. Change should be understood, effectively and timely communicated and managed in order to implement effectively. It is a path which organizations follow for transitioning from current state to a desired future position and, consequently take the organization forward to achieve its objectives and remain competitive.

This study helps leaders and individuals to understand Change as a subject from different perspectives as mentioned above and in specific several ingredients of managing change which are as follows;

Research Objective

- To identify reasons of change

2- Heldman, Kim (2005) Project management jumpstart. Hoboken, New Jersey: John Wiley & Sons

- How employees' resistance to change can be handled;
- Identify who will lead the change process (can only managers be change agents?)
- Identify how organizations can remove employees' fear and uncertainty about Change;
- Understand the management's actions and attitude to change; and

For the purpose of this study a survey research method used covering 50 managers/representatives from different layers of organization who served as contact for this research and provided their view point on the challenges faced by their organization while implementing change. The summary of major responses based on survey are enclosed as Annexure A**.** The information gathered was analyzed, cross examined and debated in the context of the situation and environment in which the organization is operating. The questions in the survey were a mix of open-ended questions to give their feedback and close-ended questions to give their rating on a scale of satisfaction levels.

As the study puts the leaders (like CEOs, Country Managers) and change agents (like managers who are trustworthy of CEOs, Outside Consultant) in the limelight in terms of their part in implementing change and discusses how they handle resistance to change, one existing concern that rises well above the rest for the change agents is the knack to achieve premeditated affiliation (intended/ planned association). Achieving premeditated affiliation demands accumulating worth to the entity by predicting, scheduling, and acclimatizing to the transformations and adapting a hands-on approach in administrating the transformation. Another issue which is highlighted during the process of change implementation in organizations is a difference between styles of thinking among people of different categories (demographics), specially age groups. It is generally observed that a relatively new graduate in an organization introduces change and faces resistance from his old fellows. The different styles of thinking of young and old people often become a cause of confrontation in organizations which can have adverse effect on their overall performance.

When Change becomes Undone

Change is a continuing and boundless course of institutional existence. Even though this process is elucidated, envisaged, and managed in different ways by individuals, institutional transformation habitually doesn't unfurl in conventional manners. (Van de Ven & Sun 2011, 58)[3] Following are the six leadership and change criteria — identifying the area where the change is required, creating awareness about the need for change, suggesting ways to apply change, executing the change, helping people in adjusting with the change and dealing resistance to change.

It is very clear that a change, whether it is the outcome of an external factor or internal, will become a cause of discomfort for some individuals in the organization and thus invite resistance from them. According to Cummings and Worley (2008)[4], change creates deep resistance in organizations and sometimes it becomes very difficult to resolve conflicts which develop as a result of people's reluctance to transformation. "Organization change often implies a different allocation of already scarce resources, such as capital, training budgets, and good people." (Cummings & Worley 2008, pg 166-167)[5] They are of the opinion that resistance to change in an organization comes from three sources — technical resistance, political resistance and cultural resistance. Therefore, Conflict resolution becomes the most important task for change managers.

It is usually observed that people feel comfortable with their old way of working. When a new method of working is introduced,

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3- Van de Ven, Andrew H.; Sun, Kangyong (2011) Breakdowns in Implementing Models of Organization Change. Academy of Management Perspectives, August, Vol. 25 Issue 3, p58-74

4- Cummings, Thomas G.; Christopher G. Worley (2008) Organization development & change, Publisher: Cengage Learning, Stamford, Connecticut.

5- Cummings, Thomas G.; Christopher G. Worley (2008) Organization development & change, Publisher: Cengage Learning, Stamford, Connecticut people following traditional ways do not accept it and this is called technical resistance. Change in an organization faces political resistance when it is affecting the positions of powerful stakeholder for example people in senior position. Cultural resistance arises when the change has an effect on the existing values and norms of the organization.

The issue facing us today is how to manage change. Organization development provides a renewal process that enables managers to adapt their style and goals to meet the changing demands of the environment. These changes - improving quality, increasing innovation, adopting a customer orientation - are so fundamental that they usually mean changing the organization's culture." (Brown 2006,94)

There are no two opinions that change has now become essential not only for our lifestyles, but also for the success of our businesses. The ways people live their lives in different manners merely represent the migration from one way of looking at things to another defined attitude in life and when put in perspective for how different organizations behave, alterations in outer surroundings such as wealth distributions systems, state affairs, communal or industrial aspects demand an adjustment that is commonly termed as change, that happens to be the sole assurance in the face of hardship. Hence, individuals and organizations that welcome transformation with open arms and beat others in accepting it, reap the rewards in the shape of amplified output. According to Brown (2006), change has its impact on all sections of the society.

Change for survival

Change is the need of business organizations for survival. Auster, Wylie and Valente (2005)[6] are of the opinion that people who

6- Auster, Ellen R.; Wylie, Krista K., Valente, Michael S. (2005) Strategic organizational change. New York: Palgrave Macmillan are willing to change are attracted by organizations. "So when new folks are hired, ease back on trying to make them 'fit in', and instead try to value what they bring to the table that is unique." (Auster, Wet a12005, 167)[7]

With the increasing involvement of the concept of change and the progress envisaged, it is established that it has now become a necessary element of one's life. A simple example could be that if there were no seasonal shifts, agricultural output would've been affected and in turn would severely cause the way provisions are supplied which would ultimately hit hard on the entire human race and its existence. Similarly business organizations need change for their survival. "We live in an arrangement of structures that are either inter dependent on each other or are directly proportional i,e. they affect one another nonetheless, change becomes a continuing and boundless course of institutional existence. Even though this process is elucidated, envisaged, and managed in different ways by individuals, institutional transformation habitually doesn't unfurl in conventional manners". (Van de Ven & Sun 2011, 58)[8]

Effective implementation is a must

Paton and McCalman (2008)[9] have stressed need for the effective implementation of change process for gaining desired results. In this day and age adapting to change is witnessed more than ever. If an organization wishes to stay in the race and brave out the competition in the outside world, it must overcome the obstacles and hurdles in

7- Auster, Ellen R.; Wylie, Krista K., Valente, Michael S. (2005) Strategic organizational change. New York: Palgrave Macmillan

8- Van de Ven, Andrew H.; Sun, Kangyong (2011) Breakdowns in Implementing Models of Organization Change. Academy of Management Perspectives, August, Vol. 25 Issue 3, p58-74

9- Paton Robert A.; Paton, Rob; McCalman, James (2008) Change Management: A Guide to Effective Implementation. London: SAGE Publications Ltd between and forge ahead and embrace latest technologies and trends to compete with their contemporaries.

We have deduced from our research that people are causing resistance to change and these are the very individuals that play a major part in tackling the reluctance to transformation. Should a business want to implement new practices and throw a few new theories in to practice; a lot depends on how it will be received by the said business' employees and the management. It is often witnessed that some great ideas are often rejected or not implemented at all because the 'People Factor' came in the way.

This entire organized method of preparation, commencing, recognizing, calculating, evening out and supporting novel and untouched actions at the commercial, faction and individual point is phrased as change management. A term change management represents three diverse features — adapting to change, controlling change, and effecting change. Being ahead of the game and not waiting till last is a guarantee one must provide to enjoy full benefits. Change management doesn't only mean merely implementing something new, it is the implementation of new rules and practices to deal with the changes in business and profit from these changing opportunities. As for an individual, embracing new methodologies and lifestyles bring about improvements in the way they look at the world which in turn boost their psychological aspects as well as physical and social characteristics. Though team work is necessary for the success of change in an organization, individual performance of a change leader also plays a very important role. Therefore, it would not be wrong to say that for an individual, the implementation of change largely depends on how that person reacted and responded to the change in the past or how they embrace it in the present or what their reaction would be in the future.

Oreg (2006) also classified how different people approach handling change in three different ways — affective component, cognitive component and behavioral component. Affective component denotes the feelings of an individual towards the change; cognitive component is where how an individual rationally believes the change and behavioral component shows an individual's reaction with respect to the change. The achievement of interim and durable targets and intentions are greatly dependent on the change in their behavior.

Oreg (2006) emphasize that framework and conditional understanding are of enormous significance for initiators and administrators who commence a change practice. Change implementers who assess the situation well and dig deep in to ground realities while applying the process of change are tipped to be more successful in carrying it out effectively. It is considered directly proportional to what change strategies will be selected. Individuals and organizations behave differently in various circumstances and situations. To analyze correctly and pin point the matters of attention and react according to the situation helps implement the right change policies at the right time. Having said that, to achieve this, one has to read the situation well and it's not always easy to achieve that with clarity and objectivity.

A variety of surveys and interviews were conducted depicting backgrounds with varying lengths and mindsets. It came out, that participants when put thru the process of change management reacted differently to the change due to various reasons, especially when resisting the change. After all, the very idea of bring about and implementing change process demands that the participant is taken out of its comfort zone hence the resistance. Fear factor is on plays a major part for people to be reluctant of change; it's the uncertainty of the new and the doubt of how things will turn out. Therefore, reluctance can be defined as that feeling amongst individuals that the change might bring about something bad or adverse. It could be a real threat or it could just turn out to be a mere perception.

There is a Formula developed by Richard Beckhard and David Gleicher called as Gleicher's Formula. This Formula demonstrates that the blend of institutional discontent, future vision and the likelihood of instant, strategic deed have to be better than the confrontation inside the organization for occurrence of consequential transformations. Lussier, Robert N. (2011)[10]says there are four phases of the change practice: denial, resistance, exploration, and commitment. We have observed that in the initial period people are in the phase of denial. The strategy to this problem is "buy in" through proper communication. Atleast in the first case "the buy in" of the opinion leaders is vital to success. When going through the phase of resistance, an individual typically experiences responses and feelings of annoyance, failure and upset, inflexibility, charging others and being unreasonable. This being so as people feel as if they are stuck in a situation and there is no way out of it. In this case people mostly are ignorant about their local surroundings and become self-centric. One little achievement and it is celebrated overly in these circumstances.

A fine change management practice thus calls for a lucid explanation of resources subsequent to the method of unfreeze, move and freeze. Unfreeze is the phase where the partakers are to unfreeze themselves from their existing practice then shift in the direction of the latest method and then freeze themselves on the fresh process once the execution course is finished. Hence, for a triumphant changeover the accurate means are necessary to be acknowledged. People more often than not get perplexed in recognizing their resources and ends while developing the requisite changes.

Strategy, structure, technology and people

Performance of an organization is heavily depended on its strategy, structure, technology and people. Its efficiency in fact is the direct outcome of the performance of these four areas. Therefore, it would not be wrong to say that if we want to improve the performance

10- Lussier, Robert N. (2008) *Management Fundamentals: Concepts, Applications, Skill Development*, Publisher: Cengage Learning, Stamford, Connecticut of the organization, we need to take measures to improve the efficiency of organization's strategy, structure, technology and people.

Since people are the input to almost all outputs, therefore, there importance is paramount and critical to success of all strategies. Howsoever, efficient the strategies, people who execute those strategies actually hold the key to its success. It is for the same reason that for any change to be recognized accepted and implemented in the organization; need to be cognizant of the people issues that it may entail.

A mistake managers often do is that they take— structure, technology and people — as separate components and fail to implement the change successfully. Taking any of these factors in isolation always produce bad results. Thus, we can say that for the success of change, managers need to have a systematic point of view in which organizations could give equal importance to all these areas.

According to Mosley, Pietri and Jr Mosley (2010)[11] improvement in the performance of an organization is the direct result of its strategy of giving importance to its structure, technology and people. "In general, the desired outcome is either improved employee behavior or activities that will result in improved performance.

Five Primal Challenges in Implementation of Change Management

1.Importance of communication

When it comes down to smooth penetration of change in organization, communication is often the most important tool. It is not important how loud it is communicated but it is important how effectively it is communicated. For example, if the management wisely communicates with the employees in order to find out their feedback

11- Mosley, Donald C.; Paul H. Pietri; Jr Mosley (2010) Supervisory Management, Publisher: Cengage Learning, Stamford, Connecticut regarding implementing a change management program then the resistance to the change can be significantly brought down since the employees were communicated properly.

Another benefit of constant communications is that it eradicates any misunderstandings to arise and nips any misconceptions right in the bud and it helps create a more open and friendly environment which paves the way for good change management practices. Gustin (2007)[12] says a good change management strategy must includes communication, discussion and involvement. "In any business setting, a good change management program must include communication. Communication is at the core of the change management program. The change itself should be communicated to the tenant/occupant/employee along with the hows, whys and wherefores." (Gustin 2007, 209)

2.Managing Fear

Fear is one of the most important barriers to change. When a change is introduced people fear that it can affect their positions and sometime they fear that they can lose their jobs. Because of the fear factor, it is always suggested that change implementation should be careful and incremental where employees could find themselves involved in the process of change. When change is introduced employees fear that it entails some dangers for them and they offer resistance to it. Because change is imposed top-down, resistance to it comes in the same way. In other words top executives in organization who are not the part of the strategy will be the first to offer resistance to change. The reason is that they will fear that change will affect their positions. Because top executives usually have an influence on their subordinates, they can create an environment in which everyone in the organization will fear that change has some dangers for them.

12- Gustin, Joseph F. (2007) Safety Management: A Guide for Facility Managers. New York: The Fairmont Press, Inc.

The sense of insecurity created among employees because of poorly communicated change compels them to go against change. Another important aspect is that people have a fear of failure. They do not feel confidant that they would not be able to transform themselves for meeting the challenge of change. In this situation they show the desire to cling to the status quo.

According to Hickman (2009)[13], a number of employees oppose change because of the fear factors. He lists the following reasons which become the basis of employees' reluctance to accept change: lack of belief, a thought that change is uncalled for, thought that the change is not viable, financial pressure, relative soaring expenses, fright of individual collapse, loss of standing and control, threat to morals and ethics, dislike of intrusion. (Hickman 2009, pg 87)[14]

3.Retention of Employees

Among the many other challenges organizations facing today one is retention of employees. And for organizations which are involved in the businesses of high technology the issue of employees' retention becomes more important. The tussle between Google Inc. and Microsoft Corporation over attracting each other employees in recent years is an example.

The shortage of highly skilled and technologically advanced people and the high costs associated with worker turnover have it a daunting task for human resource managers that how to attract and retain employees. The Karachi-based IT firm, Axact, is an example in

13-Hickman, Gill Robinson (2009) Leading Change in Multiple Contexts: Concepts and Practices in Organizational, Community, Political, Social, and Global Change Settings, Publisher: SAGE, Thousand Oaks, California

14-Hickman, Gill Robinson (2009) Leading Change in Multiple Contexts: Concepts and Practices in Organizational, Community, Political, Social, and Global Change Settings, Publisher: SAGE, Thousand Oaks, California

Pakistan where retention of employees has always been an issue for the management since the company was founded in 1997.

Today's competitive business environment has made the issue of employees' retention very important for organizations and it is generally observed that now organizations invest heavily on their human resource departments to design such working condition which could attract skilled working force. For doing so organizations need to take in account of a number of factors. For example, money is the number one point of attraction and also major cause for which people join or leave an organization. This is the reason it is considered the most effective human resource tool to keep good employees. If the people are underpaid they will definitely look for other opportunities. But if an organization is paying its employees close to the competitive level, it has little chances of losing its good people.

Another important aspect in the retention of employees is recruiting right people. It would be to say wrong that recruiting has nothing to do with retention. In a hurry to hire people for a particular project, human resource managers often make mistake in recruiting workers who, in fact, do not fulfill the criteria required for the vacant position. Therefore, human resource managers should keep in mind that right hiring can increase retention.

Providing training or designing programs for employees that could help them to improve their professional capabilities can go a long way in improving retention of employees. But if organizations do no care for other things in this training strategy, they just train people for other employers. For example, an individual who has improved his professional capabilities by taking part in an organizational training program but is not being paid according to his new skills will definitely look for other opportunities.

4.One Breakthrough is Important

Success at initial stage of the change introduction becomes a base of the future successes. Therefore it is important to have one breakthrough during the initial stages. The breakthrough can come in different shape such as increased productivity or profitability. It is obvious that the initial stages of change implementation are stressful for both management and employees and expecting a breakthrough on these stages is difficult.

Having a breakthrough in initial stages of change implementation is important for giving a boost to the confidence of both managers and employees. According to Anderson (2010), organizations can have breakthroughs in the initial stages of change implementation by giving special attention to human potential. He says better change processes enable people to contribute more openly. "Breakthroughs can occur in your culture and its ability to catalyze great performance in your people: enhanced commitment to service, more innovation and learning, more openness and authenticity, more alignment, and dedication to enterprise success." (Anderson 2010, pg 17)[15]

5.Conflict Management

Conflicts which are considered inevitable among people are part of organizational environment. Because of rapidly changing business environment conflict management has now become a fascinating topic for managers. We have discussed in this chapter earlier that when change is introduced in an organization, it invites resistance from people. Managing conflicting personalities is the most important task of managers who are involved in the change processes.

In organizations, conflict is a natural phenomenon which develops whenever some individuals and groups work together for the achievement of a particular goal. It happens when people have

15- Anderson, Dean; Linda S. Ackerman-Anderson (2001) Beyond Change Management: Advanced Strategies for Today's Transformational Leaders, Publisher: John Wiley and Sons different point of views on a particular subject or have different backgrounds, beliefs and values.

In the modern business environment, conflict resolution has become a very important subject and has been thoroughly investigated by manager and psychologists. Great attention was given to the scientific investigation of organizational conflicts in the last 20 years of 20th century. According to Rahim (2010) [31], conflict influences the performance of people and making strategies for conflict resolution has become necessary for the success. "Over the years the phenomena relating to conflict have been investigated by the economists, historians, novelists, philosophers, political scientists, sociologists, psychologists, and theologians; and biologists have investigated the 'struggle for existence' by species of differing genetic inheritance." (Rahim 2010,pg1)[16]

Conclusion

Ask yourself these clinical questions before embarking on implementing an organizational change across your place of work: What are our objectives for implementing this change, why are we going ahead with this, and how and when will we know that what we wanted to achieve has been accomplished successfully? Who this change will directly affect, and what will be their reaction to it? What portion of this change can be accomplished by our own individual efforts, and at what stages and parts we might need help from others? All these questions and aspects strongly relate to both personal and organizational change.

-Transformation Needs Involvement – It may not be Imposed

Change cannot be imposed; it's as simple as that. People need to be empowered to make their own effort and find out solutions out of their own consciousness and that is of course with the help of managers as they support them and facilitate them with anything they need as well as back up from the leadership and executives that

16- Rahim, M. Afzalur (2010) Managing Conflict in Organizations, Publisher: Transaction Publishers, Piscataway, New Jersey would give them courage to carry out the task and make the process ever more easier.

-Don't appreciate too soon or too late

Appreciate the ones who perform but keep telling them to forge forward – be consistent – reporting progress at every stage – always keep in mind and in black and white what you've achieved and what is yet to be accomplished.

-Make it Stick

Don't let it slip when you're almost there. Hire new recruits, show them how it's done, encourage new change torch bearers. Make that change that you've brought about a constant feature of your culture.

-Leadership is vital to success

Effective, approachable and friendly leadership is must for the success of change because it's never easy managing change. Doesn't matter where the change agent is situated in the hierarchy, it is imperative that a set standard of output is expected of that individual and it should be their responsibility to motivate their subordinates and others around them. A leader should posses certain leadership qualities for the change implementation program to be successful.

In conclusion it would not be wrong to say that for staying competitive in today's business environment, organizations need to introduce change and for its successful implementation they need a strong team and strong leadership. Leaders and managers should acknowledge that communities and organizations are made up of people. It is mostly people who are at the heart of the change process. Therefore, change mangers should be able to ensure that their vision is shared by all stakeholders. Those involved and affected by the change should be able to understand the context of the change and they should also be clear of the need and advantages of the change.

References

Auster, Ellen R.; Wylie, Krista K., Valente, Michael S. (2005) Strategic organizational change. New York

Cengage Learning Franken, Arnoud; Edwards, Chris; Lambert, Rob. (2009) Executing Strategic Change: Understanding the Critical Management Elements that Lead to Success. California Management Review, Spring, Vol. 51 Issue 3, p49-73Gustin, Joseph F. (2007) Safety Management: A Guide for Facility Managers. New York

Cengage Learning Oreg, Shaul (2003) Resistance to change: Developing an individual differences measure.

Claudine; Hisrich, Robert D.; Roche, Frank W. (2010) Change Management through Entrepreneurship in Public Sector Enterprises. Journal of Developmental Entrepreneurship, Dec2010, Vol. 15 Issue 4, p415-437

Earthscan Van de Ven, Andrew H.; Sun, Kangyong (2011) Breakdowns in Implementing Models of Organization Change. Academy of Management Perspectives, August, Vol. 25 Issue 3, p58-74

John Wiley & Sons Jeffers, Jennifer (2010) Climate Change and the Arctic: Adapting to Changes in Fisheries Stocks and Governance Regimes. Ecology Law Quarterly, 2010, Vol. 37 Issue 3, p917-977, 61pJournal of Applied Psychology, Vol. 88, No. 4. (August), pp. 680-693.Kearney

Kondalkar, V.G. (2010) Organization Effectiveness and Change Management, New Delhi, PHI Learning Kreitner

McGraw-Hill/Irwin Lussier, Robert N. (2011) Management Fundamentals: Concepts, Applications, Skill Development. Stamford, Connecticut

Oreg, Shaul (2006) Personality, context, and resistance to organizational change. European Journal of Work & Organizational Psychology, Vol. 15, No. 1. (March), pp. 73-101

Paton Robert A.; Paton, Rob; McCalman, James (2008) Change Management: A Guide to Effective Implementation. London: SAGE Publications Ltd

Paton Robert A.; Paton, Rob; McCalman, James (2008) Change Management: A Guide to Effective Implementation. London SAGE Publications LtdPiderit

Sandy Kristin (2000) Rethinking Resistance and Recognizing Ambivalence: A Multidimensional View of Attitudes toward an Organizational Change. The Academy of Management Review. Vol. 25, No. 4 (October), pp. 783-794

Annexure A

SUMMARY OF MAJOR RESPONSES OF SURVEY CONDUCTED

I have prepared a questionnaire, based on which Survey has been conducted covering 50 managers / participants. The major responses of the participants of survey summarized below:

1. **Kindly share your understanding / views about Change Management:**

- It is a path which organizations follow for transitioning from current state to a desired future position and, consequently take the organization forward to achieve its objectives and remain competitive.
- A term change management represents three diverse features — adapting to change, controlling change, and effecting change.
- Change management doesn't only mean merely implementing something new, it is the implementation of new rules and practices to deal with the changes in business and profit from these changing opportunities.
- Life Blood of Organizations
- Success depends on Change is managed.
- Process to modify processes and ways of doing business according to the emerging needs and requirements.

2. **Do you think change is necessary for the success of an organization? And Why?**

- Change has now become essential for our lifestyles, but also for the success of our businesses. The ways people live their lives in different manners merely represent the migration from one way of looking at things to another defined attitude in life and when put in perspective for how different organizations behave, alterations in outer surroundings such as wealth distributions systems, state affairs, communal or industrial aspects demand an adjustment that is commonly termed as change, that happens to be the sole assurance in the face of hardship.

- Leaders who develop new responses based on new information and technology to achieve their goals and compete in the market are successful.
- Organizations which can anticipate change before time and quickly adopt it can survive in long term.
- It is the time of continuous innovation. every business has to come up with new ideas, newer ways of managing their business, doing their day to day tasks.
- In order to gain competitive advantage it is conducive to innovate constantly.
- A change is required to improve Globalization, in turn, is being driven by broad powerful set of forces associated with technological change, international economic integration, domestic market maturation within the more developed countries, & the collapse of the world wide communism.
- In order to streamline operations of company in this fast moving environment, change is a necessity.

3. What role a manager has in the success of change implementation and how do you differentiate with change agents.

- Change agent and a manager perform almost the same duties. A manager's role is to compose the daily activities in such a manner that the flow of organization from its present state to an advanced is with very few bumps. The change agent is however always forward looking and is bringing about the change and the manager is managing that change.

- It is considered directly proportional to what change strategies will be selected. Individuals and organizations behave differently in various circumstances and situations. To analyze correctly the matters of attention and react according to the situation helps implement the right change policies at the right time. Having said that, to achieve this, one has to read the situation well and it's not always easy to achieve that with clarity and objectivity what will be the role of change manager and what has to be done by change agents / change champions.

- Key to success of change implementation, only if people see their managers happily adopting the change & are positively vocal about the same, they will feel & understand the need of change.

- Change agents can be or cannot be a manager but they are who champions the new idea.

- To help employees in understanding the change management process in steps, continuous liaison required, in time feedback, corporate objectives remains on top. Give time frame to gauge the performance.

- A manager's role is to be in control of the whole change process i.e. from the time change is planned to its final implementation. He should be looking at the BIG picture of the change process and should be monitoring the progress of the change process to bring about the desired results.

- Manager has to play the pivotal role in change implementation and should facilitate the process of this change.

- Change Agent is more towards a Leadership role than a simple Manager.

- Manager is an advocate which translates the change into positive or negative. If the manager maintains open communication and makes sure that the change is perceived positively by his subordinates the transition is smoother.

- Manager should change his role in to Leader while the manger has certain role to play, a leader has a role to play for introducing a change (this is the change agent).

- Manager does: Planning & Budgeting; Organizing & staffing, Controlling & problem solving all these to result in degree of predictability & order & the potential to consistently produce the short term results expected by stakeholders.

- Leader: Establishes direction, align people, motivates and inspires to result in change to a dramatic degree & has the potential to produce extremely useful change.

- Change agent would propagate the change management.

4. Introduction of a change in an organization invites resistance from its employees: however small or large, please state if you agree.

- Agreed. It is very clear that a change, whether it is the outcome of an external factor or internal, will become a cause of discomfort for some individuals in the organization and thus invite resistance from them.
- Yes I agree. When a new method of working is introduced, people following traditional ways do not accept it and this is called technical resistance. Change in an organization faces political resistance when it is affecting the positions of powerful stakeholder for example people in senior position. Cultural resistance arises when the change has an effect on the existing values and norms of the organization.
- Change & resistance are always together. No matter even if employees understand the benefits of change right from the beginning, there will always be some degree of resistance primarily because it requires something different to be done.
- As the change is quite stressful, resistance is quite normal in the change process.
- Change process to be translated into a simple way so everyone could understand.
- Obviously employees resist change because everyone becomes comfortable in doing what they do on a Daily basis.
- Yes because many employees are happy in their comfort zones and do not want to get out of it.

- Resistance to change appears definitely at all levels of management.

5. In your opinion what are the possible reasons of the employees' resistance to change:

- It is usually observed that people feel comfortable with their old way of working. When a new method of working is introduced, people following traditional ways do not accept it and this is called technical resistance. Change in an organization faces political resistance when it is affecting the positions of powerful stakeholder for example people in senior position. Cultural resistance arises when the change has an effect on the existing values and norms of the organization.
- We have observed that in the initial period people are in the phase of denial. The strategy to this problem is "buy in" through proper communication. Atleast in the first case "the buy in" of the opinion leaders is vital to success. When going through the phase of resistance, an individual typically experiences responses and feelings of annoyance, failure and upset, inflexibility, charging others and being unreasonable. This being so as people feel as if they are stuck in a situation and there is no way out of it. In this case people mostly are ignorant about their local surroundings and become self-centric. One little achievement and it is celebrated overly in these circumstances.
- The reason is that they will fear that change will affect their positions. Because top executives usually have an influence on their subordinates, they can create an environment in which everyone in the organization will fear that change has some dangers for them.

6. What are the three major concerns of employee towards change?

- Fear that change will affect their positions. Because top executives usually have an influence on their subordinates, they can create an environment in which everyone in the organization will fear that change has some dangers for them.
- Fear of failure. They do not feel confidant that they would not be able to transform themselves for meeting the challenge of change. In this situation they show the desire to cling to the status quo.

7. How can the problem of employees' resistance to change be tackled in different ways:

- Leaders and managers should acknowledge that communities and organizations are made up of people. It is mostly people who are at the heart of the change process. Therefore, change mangers should be able to ensure that their vision is shared by all stakeholders.

8. When your organization last introduced a transformational change: was it coming out of internal reasons or external?

INTERNAL AND EXTERNAL

- No transformational change should be triggered just because of internal reasons. In some organizations decisions are customer centric and all internal changes are also to serve customers in a better manner.
- 1) Internal : performance effectiveness and productivity 2) External : Globalization of markets and competition

INTERNAL REASONS

- The change was introduced to cater to internal growth of the company.

9. What are the key success factors in gauging change implementation?

- Effective, approachable and friendly leadership is must for the success of change because it's never easy managing change. Doesn't matter where the change agent is situated in the hierarchy, it is imperative that a set standard of output is expected of that individual and it should be their responsibility to motivate their subordinates and others around them. A leader should posses certain leadership qualities for the change implementation program to be successful.

10. Do you think your organization was successful in implementing the change?

- I believe my organization is continuously implementing & evolving change. To me one of the key reasons for J&J's survival over 120 years is its capability to adopt & implement change.
- It is still in process so I can't comment much but so far it looks like that we are "getting there".
- I reckon it is getting success gradually as depicted by the KPIs, however the change is in its initial stages

11. How did the management deal with the resistance from employees in the implementation of change?

- Management communication is the key, with the employees in order to find out their feedback regarding implementing a change management program then the resistance to the change can be significantly brought down since the employees were communicated properly.

		ANSWERS		
	QUESTİONS	**Yes**	**I have no idea**	**No**
1	Is change essential for organizational success?	80%	10%	10%
2	Can resistance to change be managed?	100%	0%	0%
3	Can change be managed effectively without change agents?	55%	10%	35%
4	Does communication play a vital role in the “change process”?	68%	10%	22%
5	Do leadership traits affect the change management process?	60%	24%	16%

EFFECT OF ORGANIZATIONAL ETHICS ON JOB SATISFACTION OF NON-LIFE INSURANCE EMPLOYEES IN PAKISTAN

Mehrukh Salman[1] & Ali Taimur Baig[2]

Abstract

In this study, a link between job satisfaction and top management's support for ethical behavior, ethical climate and association between career success and ethical behavior has been probed. For this reason, perceptions of managers of non-life insurance sector have been found out to examine the link between organizational ethics and job satisfaction. Overall, the results depicted that top management's support for ethical behavior has no link with job satisfaction which is consistent with the findings of (Visweswaran et al., 1998).

Moreover, ethical climate also has no direct link with job satisfaction. However; it is indirectly linked towards Job satisfaction via ethical behavior and career success association.

Keywords: Job satisfaction, insurance companies, ethical climate, organizational ethics, top management's support for ethical behavior , association between ethical behavior and career success
JEL Classification: G 220

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1.Introduction

1.1 An Overview of the topic

Organizational ethics can have considerable impact on an enterprise's performance. A significant number of organizations are engaging in ethical practices to ensure that a just environment prevails. Ethical codes tend to work more effectively when incorporated within the organization and are readily acceptable by the employees (Stevens, 1999).Companies are expected to devise code of conduct which will not only enable them to achieve an ethical climate but also creates a win-win situation for all the stakeholders. Those days are long gone when any unethical behavior was tolerated and issues were brushed under the carpet. But the million dollar question is that how the companies can ensure implementation of their code of conduct in a rightful manner. Organizational ethics, indeed, can put heavy weight on the shoulder of top managers; it is expected that these managers should make ethics a priority. A fake ethical program might only serve window dressing purposes but can potentially cause more damage than benefit. Employees are directly affected by the organizational climate that prevails within an organization (Viswesvaran and Deshpande, 1996). Various studies have also proved that dissatisfied employees have the tendency to leave the organization for good. Ethical situations in business are becoming increasingly more complex, involving issues such as societal expectations, fair competition, legal protection and rights, and social responsibilities.(Koh and Boo, 2001). So it is imperative for the top brass of the company to ensure that their company follows the ethical code of conduct to conform to the societal expectations. In the past researchers have tried to determine the factors that affect the ethical behavior. Among these determinants, personal attributes, employment background, values and education referent group caught the attention of researchers and were the ones subjected to frequent study.

1.2 Study Objectives

The objective of this research was to determine the effect of organizational ethics on job satisfaction amongst managers of Insurance companies in Pakistan. Insurance industry, besides being, relatively small as compared to other sectors in Pakistan, is also considered as one of the neglected sectors of Pakistan. Little or no management related research has been conducted to date. According to the statistics of State Bank of Pakistan, there are 4 public sector and 55 private sector insurance companies operating in Pakistan. This study helps unravel the factors that are potentially affecting the job satisfaction of employees of insurance companies in Pakistan and could also pave way for future research.

1.3 Research Questions:

This study concentrated on the following questions:

1. Does ethical climate affect the employee's job satisfaction in insurance companies of Pakistan?
2. Does top management's support influence the ethical behavior of its employees?
3. Does association between ethical behavior and career success affect job satisfaction?
4. Does satisfaction level of employees vary from city to city?

1.4 Definitions of Job Satisfaction over the years:

Job Satisfaction has been defined and interpreted in different aspects by various researchers .The term job satisfaction caught the eyes of researchers since the advent of the 20th century. The earliest work recorded in this regard was by (Taylor, 1911)whose work laid the cornerstone for future studies. The Hawthorne studies were the first research carrying practical evidence of job satisfaction. Hawthorne studies were inspired by Taylor. As events unfolded, there was a shift in Hawthorne studies from scientific management to behavioral management. According to Doctor Robert Hoppock , a pioneer in the field of vocational guidance, job satisfaction was " any combination of psychological , physiological and environmental circumstances that cause a person truthfully to say I am satisfied with my job" (Hoppock, 1935).Hence, it was established in the early phase of job satisfaction research that multiple exogenous and endogenous factors play pivotal role in job satisfaction However, the most noted definition is the one penned by (Locke, 1976)according to him "job satisfaction is a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences."Vroom, (1982) defined job satisfaction as "workers emotional orientation toward their current job roles. Weiss, (2002) defined it as "a positive (or negative) evaluative judgment one makes about one's job or job situation". More recently, Daneshfard, Rahimi, & Damirchi, (2011) described job satisfaction as "how content an individual is with his or her job". Haroon, Zaman, & Rehman, (2012)defined Job satisfaction as "an enjoyable emotional state resulting from the judgment of one's job; a sentimental response to one's job; and an approach towards one's job".

1.5 Facets of Job Satisfaction:

There are various facets of Job Satisfaction as determined by Smith, Kendall, & Hulin, (1969)

Pay Satisfaction:

Pay satisfaction is defined as "the amount of overall positive affect (or feelings) individuals have toward pay" (Miceli and Lane, 1991). Pay plays a vital role in determining composite job satisfaction (Oshagbemi and Hickson, 2002). It indicates that an employee's satisfaction can be derived from the pay that he receives. It clearly indicates that pay satisfaction weighs the greatest when determining one's job's satisfaction.

Promotion Satisfaction:

Moving up in the ranks to a designation, which is recognized by having higher status, greater respect or even greater pay Jackson and Schuler, (2000).According to Judge and Klinger, (2008), Pay and promotion are considered extrinsic factors

Supervision Satisfaction:

Employees desire to work under supervisors who are competent, selfless and honest. (Henne and Locke, 1985). Supervision, Co-worker and Work satisfaction are considered as intrinsic factors (Judge and Klinger, 2008).

Co-Workers Satisfaction:

Employees associate themselves with other employees who share similar set of values and facilitate in getting the job done. (Henne and Locke, 1985).

Work Satisfaction

According to Adam, (1965), right balance should be achieved between the work performed by employee and the reimbursement he receives for getting the job done; inability to do so will result in job dissatisfaction. Employees prefer working in environment that is conducive to job satisfaction. Furthermore, employees want to work in organizations that admire and respect them for their values.

1.6 Theories:

The link between organizational ethics and job satisfaction is explained by the following theories:

1)Organizational Justice Theory

2)Cognitive Dissonance Theory

Organizational Justice Theory

According to Organizational Justice theory, "Justice Perceptions of employees influence their job attitudes and organizational outcomes". Further, organizational justice theory is bifurcated into distributive justice and procedural justice. Distributive justice refers to the impartiality by top managers in context of pay, promotion and other organizational outcomes. On the other hand, procedural justice focuses on how managerial decisions are made. Both distributive justice and procedural justice play a significant role in context to job satisfaction (Koh and Boo, 2001).

Cognitive Dissonance Theory

According to this theory, individuals try hard to reduce dissonance in their environment. If the dissonance persists than the individual will continue to be dissatisfied with the situation (Visweswaran, Deshpande, & Joseph, 1998). Thus, it is significant to mention that there will be dissonance if there is discrepancy in employee's perception about organization ethical climate, career success and support of top brass of the company for ethical behavior.

2.Literature Review

2.1 Job Satisfaction

Weiss, (2002) defined job satisfaction as “a positive (or negative) evaluative judgment one makes about one’s job or job situation”. Job satisfaction has been the subject of research over the past few decades. It is also one of the most intricate subject matter that supervisors are facing when it comes to managing their sub-ordinates. Employee’s perception about the nature of work can be pivotal for job satisfaction. Job Satisfaction can be composed of various factors. The ones that are a part of Minnesota Satisfaction Questionnaire are Co-workers, Achievement, Activity, Advancement, Authority, Company Policies, Compensation, Moral Values, Creativity, Independence, Security, Social Service, Social status, Recognition, Responsibility, Supervision – Human Relations, Supervision – Technical, Variety and Working condition (Aziri, 2011). A research conducted to determine the relationship between job satisfaction and organizational culture clearly manifested the presence of relationship between these aforementioned variables (Semapane, Reiger, & Roodt, 2002). Job satisfaction of individuals having jobs with career prospects is higher and their returns are also significantly higher (Theodossiu and Zangeladis, 2009). Besides organization culture, Job Satisfaction is also considered a factor of labor productivity besides impacting turnout and stability (Renu and Natarajan, 2011).

2.2 Job Satisfaction and Insurance Companies:

Role of hierarchy and stress on employee’s satisfaction in insurance company of Chandigarh, India was studied by. Renu and Natarajan, (2011).The researchers stressed on the point that people play pivotal role in making or breaking an organization. Therefore, satisfaction of employees is of great essence and is directly related with the growth of an industry. Despite, motivation and job satisfaction being two distinct terms, they are linked. Role is a reflection of person’s status in the system. Role ambiguity comes into play when roles are not defined properly or are inadequate. Presence of role conflict and role ambiguity will result in job dissatisfaction. Furthermore, organizational commitment will dwindle as a result of this. The results indicated that role stress has no significant correlation with job satisfaction which might be due to the fact that employees under stress tend to work harder resulting in job satisfaction. Moreover, the correlation between job satisfaction and role of hierarchy was moderate and positive.

Examination of extent of job satisfaction on private and public sector employees of Indian Punjab depicted that private and public sector employees are satisfied by entirely different set of variables. Employees in public sector opined that they are not given enough training opportunities. Furthermore , it was determined that as far as income is concerned, private sector employees are more satisfied with their jobs than the public sector employees (Kaur, 2012).

(Anita, 2012)Studied the impact of job satisfaction on one of the booming sector of India, insurance. To determine the results, an exploratory and descriptive research was conducted on top ten insurance companies of Lucknow. The questionnaires were administered to 150 respondents. Majority of the respondents were from sales department. Results indicated that work culture is the most significant factor in insurance sector that impacts employee's job satisfaction level. Pay for performance and growth and recognition also emerged as other factors that have high level impact on job satisfaction of insurance employees.

According to Wang, Lee, and Ho, (2012),Insurance sector in Taiwan is saturated with dozens of companies. In current situation it is an uphill task for the companies to retain existing employees. The researcher stressed that the greater the extent of stay of an employee in a company, the greater will be his job satisfaction. The results depicted that job satisfaction enhances the operating performance of insurance companies which deals specifically with property. A negative relationship was observed between turnover intention and operating performance. Poor reliability could have possibly marred the result.

2.3 Ethical Climate:

Victor and Cullen (1987)defined ethical climate as the "shared perceptions of what is ethically correct behavior and how ethical issues should be handled within an organization". A two dimensional theoretical typology was developed comprising ethical criterion and locus of analysis. The foundation of this multidimensional construct was laid by sociological and psychological theories. Furthermore, they classified ethical climate into three major categories: Benevolence, egoism and principles and linked these categories with Kohlberg's model of cognitive moral development. Egoistic ethical climate refers to the climate that prevails in an organization with employees being self-centered and working for self-interest. Benevolent ethical climate refers to the altruistic and cooperative environment that exists within an organization. Employees conforming to rules and regulations that are formulated by the top management give rise to principled climate.

Besides, role of leaders and organization structure; other factors like communication and empowerment can also impact ethical climates (Parboteeah, Chen, Lin, Chen, Lee, & Chung, 2010). Furthermore, ethical values can also shape the ethical climate of organizations. (Stevens, 1999)Focused on effective communication of ethical values to employees and identification of particular sources of communication effectiveness. Even before the abysmal behavior in the organization and corporate scandals came to lime light, business ethics were being bluntly criticized by media and public in 70's. Therefore it was established that formulation of ethical codes and ethical organization is not a solution itself but a minuscule step in problem solving panacea. Communication of ethical issues is becoming a cause of concern for the number of organizations. The methodology comprises two different hotels situated in two Midwestern cities involving total 215 employees. The article supports concept of participative learning and also significance of training and orientation programs was highlighted. Ethical codes tend to work more effectively when incorporated within the organization and are readily acceptable by the employees.

2.4 Job Satisfaction and Top management's support for ethical behavior:

(Visweswaran et al ., 1998) tried to ascertain the relationship between all dimensions of job satisfaction with top management's support for ethical behavior. Job satisfaction was measured in terms of pay, promotion, co-workers, supervision, work and overall combination of all these facets. The results depicted that perceived top management's support for ethical behavior has no significant impact on job satisfaction. Pakistan shares its eastern borders with India and both these countries have almost similar cultures. Therefore it can be deduced that results in India might yield same results in Pakistan. However, contrary to that Koh and Boo,(2001) found a significant relationship of top management's support for ethical behavior with job satisfaction. This study was primarily linked towards managers of Singapore. Their findings were not consistent with the Indian one. Main rationale behind this could be the cultural differences. Kim and Brymer, (2011)postulated that ethical leadership of top brass of the company has significant relationship of job satisfaction on middle level managers. To test this 30 hotels were selected and were given questionnaires that were filled by 324 middle managers. Kim and Brymer, (2011) were also of the view that due to economic slump the banking and finance industry are not the only ones to have been hit hard, hospitality sector requires more attention as these difficult times require middle level managers to excel in their field which can't be done without the presence of ethical leadership. However, they opinioned that feedback from hourly staff could have further consolidated the result. Other hospitality sectors like restaurants and casinos should also be explored vis-a-vis ethical leadership. Brown, Treviño, & Harrison, (2005) also concluded that job satisfaction of employees has strong positive relationship with ethical leadership of the top management. Vitell and Davis, (1990)conducted an empirical research to ascertain the relationship between job satisfaction and ethics. MIS professionals were specifically targeted in this research because they were thought to be facing more moral problems as compared to employees of other functional areas of business. Job satisfaction was measured using five separate dimensions consisting of pay satisfaction, promotion satisfaction, co-worker satisfaction, supervisor satisfaction and work satisfaction. The results, interestingly, showed that with the exception of pay satisfaction top management's support for ethical behavior has significant positive impact on all facets of job satisfaction. Also, no significant relationship was established between social responsibility and job satisfaction. Mumtaz, Ahmed, Shad, & Ghouri, (2011)found a significant positive relationship between top management's ethical behavior and job satisfaction of sub-ordinates in banking sector of Pakistan. They opinioned that dissatisfaction, leading to high turnover of employees tends to decrease productivity, efficiency and effectiveness of banks. Another research conducted in Pakistan by Ahmed, Shad, Mumtaz, & Tanveer, (2012)recognized the previous research as they also successfully determined that top management's support for ethical behavior has significant positive relationship with job satisfaction of bank employees. Therefore, in the light of aforementioned results and similarities between insurance sector and banking sector in Pakistan; a null hypothesis was developed.

H_1:Top management support for ethical behavior has significant effect on job satisfaction

2.5 Job satisfaction and Ethical Climate:

Ethical climate of an organization can have considerable impact on job satisfaction of employees. (Ulricha, O'Donnell, Taylor, Farrar, Danise, & Grady, (2007)Probed into relationship between ethical climate, ethic stress and job satisfaction. Prior to this study, there was no research done that established link corresponding to these factors. Employees' intentions to leave the organization were reversed in case of positive ethical climate and job satisfaction. The ethical climate was also found to be acting as a mediator in relationship between ethical stress and job satisfaction. Schwepker, (1999) was of the view that due to difference in opinions, positions, workgroups and employment histories; every organization might have different organizational climate. It is an irrefutable fact that both ethical and unethical climate exist in every organizations. A positive relationship between salespeople's perception of their organization's ethical climate and their job satisfaction was determined. Furthermore, commitment prevents people from leaving the organization. Daneshfard et al., (2011) surveyed the role of ethical climate on job satisfaction in small and medium enterprises. Small and medium enterprises act as a corner stone for the economy of Iran. 10 to 49 employees working in an enterprise can be considered as SME in Iran. Job satisfaction can be understood in terms of its relationships with other key factors, such as general well-being, stress at work, control at work, home-work interface, and working conditions. Nine theoretical ethical climate types which consisted of self-interest; company profit; efficiency; friendship; team interest; social responsibility; personal morality; company rules and procedures; laws and professional codes were used for the measurement of ethical climate of an organization. The results confirmed that ethical climate and all of its facets are significantly correlated with job satisfaction. One of the dimensions, "Personal Morality" was strongly positively correlated with job satisfaction. Zehir, Muceldili, & Zehir, (2012) Were of the view that ethical climate moderates the link between Job satisfaction, affective commitment and continuance commitment. One of the noteworthy contributions of this study is that existence of ethical climate in an organization will play a positive role in increasing continuance commitment. In Pakistan's banking sector, Egoistic climate has negative relationship with job satisfaction; on the other hand benevolent climate has positive significant relationship with job satisfaction indicating that when organizations works for the benefit and welfare of its employees, the satisfaction level of employees increases manifold .Contrary to that, prevalence of climate that supports interest of management; yields lower levels of job satisfaction. Principled climate was observed to have no significant relationship with job satisfaction (Ahmed et al., 2012). Research in Singapore depicted that ethical climate has significant relationship with job satisfaction. Principled ethical climate's relationship with job satisfaction was significant. Contrary to that, benevolent ethical climate had no significant relationship with job satisfaction (Koh and Boo, 2001). Therefore, keeping in view these results a null hypothesis was proposed:

H_2: Ethical climate in the organization has significant effect on job satisfaction

2.6 Job satisfaction and association between ethical behavior and career success:

Luthans and Stajkovic, (1999)concluded from their study that behavior of employees can be encouraged through money, feedback and social recognition .Therefore in an organization where employees perceive a close association between ethical behavior and career success, the reinforcement becomes pivotal for job satisfaction. Pay for performance might not at all time accelerate improvement in performance but contrary to that reinforcing for performance will certainly improve performance for sure. Research on MIS personnel indicated that they are more satisfied with their job when they are optimistic about the affiliation between ethics and career success. However, one of the dimension of job satisfaction, pay, was found to be insignificant with ethics and career success (Vitell and Davis, 1990).

Managers from Singapore were more satisfied with their job if they perceive a linkage between ethical behavior and career success (Koh and Boo, 2001). Similarly in India, employees were of the view that they will be satisfied with their job if their career prospects were high due to ethical behavior. This result was parallel with cognitive dissonance theory (Viswesvaran and Deshpande, 1996). Thus, a null hypothesis was postulated:

H_3: The association between ethical behavior and career success in

the organization has significant effect on job satisfaction

3.Methodology

The research was conducted between January and March 2013.The reliance of this research will be on primary data. Since the primary aim of this research is to investigate the link between organizational ethics and job satisfaction, so primary data will facilitate to determine this link. Following research instruments were used:

Job Satisfaction:

Division of Job satisfaction into different facets and their measurement has varied from researcher to researcher. The most eminent ones include Job Satisfaction Index (JSI), Minnesota Satisfaction Questionnaire (MSQ), Job Satisfaction Survey (JSS) and INDSALES. (Zehir et al.,2012).

Smith et al., (1969)recognized Job Satisfaction as a combination of multiple factors thus they divided Job Satisfaction into six dimensions; pay, promotion, co-workers, supervision , work and Overall Job Satisfaction. Integration of first four facets gives value for composite Job Satisfaction.

Managerial Job Satisfaction Questionnaire (MJSQ)

MJSQ, developed by Cellucci and DeVries, (1978) consists of a 20-item instrument with the five facets identified by Hulin et al,. (1969) consisting of 4-items each. It has been used and assessed by various researchers from different parts of the world ever since its formulation. The original MJSQ consisted of 7-point Likert scale. Over the years, it has been modified and reduced to a 4-point Likert scale. The 7-point Likert scale MJSQ was used by Cellucci and DeVries, (1978) and Vitell and Davis, (1990). On the other hand, Joseph and Deshpande, (1996), Viswesvaran et al, .(1998), Koh and Boo (2002) and Ahmed et al,. (2012) have made use of 4-point Likert scale.

Successful usage of MJSQ in Asian countries like Singapore and India favor its adoption and acceptation in Pakistan as well.

Top management's support for behavior:

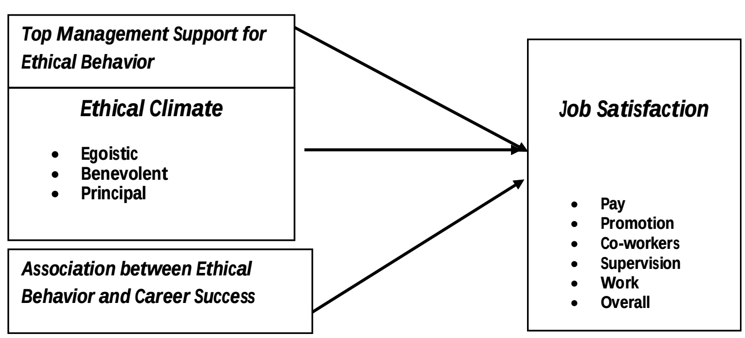
A 3- item instrument developed by (Hunt et al., 1984) was used. An additional item was added by (Koh and Boo, 2002) for its measurement. Therefore, a total 4-item instrument was used.

Association between ethical behavior and career success in Organization:

A 6-item ethical optimism scale developed by (Hunt et al., 1984) was used. An additional item developed by (Koh and Boo, 2006) was added to give a total 7-item instrument.

Figure 1.:

Proposed Theoretical Framework



Ethical climate in an organization:

The ethical climate questionnaire developed by (Cullen, Victor, & Bronson, 1993)was adopted and measured on 4-item scale. An additional item was added to each type of climate by (Koh and Boo, 2002).Ethical climate was computed on following:

a) Egoistic

b) Benevolent

c) Principled.

Information Gathering & Sampling Procedures:

Survey Design:

The questionnaires were administered to the employees of non-life insurance companies having designation of manager which included assistant, deputy, chief and senior positions. In some companies, managerial designations are replaced with that of a president. So that was taken into account as well. For Karachi, Peshawar, Faisalabad and Multan the questionnaires were sent via post. On the other hand, questionnaires for Lahore were self-administered.

Population, working population and planned sample:

The total population of Pakistan is 18 crore approximately. According to (The Insurance Association of Pakistan, 2012) , there are around 8130 employees working in various insurance companies of Pakistan. Head offices of most of the insurance companies are located in Karachi, However, 12 companies have their head office in Lahore and one company has its in Rawalpindi. Since samples from a single city wouldn't have depicted results for the entire sector. Therefore, the research was focused on 4 cities of Pakistan, one, each from Sindh and Khyber Pakhtunkhwa, and three from Punjab. Thus research was confined to Karachi, Lahore, Multan, Faisalabad and Peshawar. So, a total 330 questionnaires were disseminated. Since, there were many insurance companies operating in Karachi and Lahore having broad scope of operations; thus planned sample was 110 for Karachi and 90 for Lahore. Whereas for Peshawar, Multan and

Faisalabad; the sample size was 50 each due to lack of workforce available there. See Table 1

Table:
Intended Sample and Response Rate

City	Intended Sample	City	Usable Responses
Karachi	110	Karachi	110 (100%)
Lahore	90	Lahore	82 (91.1%)
Faisalabad	50	Faisalabad	44(88 %)
Multan	50	Multan	40 (80%)
Peshawar	50	Peshawar	38 (76%)
TOTAL	350	TOTAL	314 (89.7%)

3.6 Data Analysis Tools & Techniques:

SPSS and AMOS were used for this study. From SPSS, descriptive statistics were used to calculate percentage, mean, standard deviation and frequency distribution of the respondents.
Harman's one factor test was also done via SPSS.

As far as AMOS is concerned, SEM was done which included Confirmatory Factor Analysis (CFA) followed by exploratory analysis. Multiple regression, model fit and values for validity and reliability were ascertained through AMOS.

3.7 Respondent Characteristics:

Majority of the respondents, 27.7% to be exact, were aged"45 and above ". Whereas, only 12.2% of the respondents aged between "25 and 29"constituted a minuscule proportion of the sample. Promotion to a managerial position requires a respectable work experience, good academic qualification and proficiency in technical skills Therefore only handful of employees can attain status of a manager in early age. The other age brackets "30-35" ,"36-39" and "40-44" comprised 19.6% , 17.6% and 23% of the total respondents.

Presence of females in corporate sector of Pakistan is negligible. Main rationale behind this is the male dominant culture in financial institutions that hinders women to work with ease of mind and up to their potential. Moreover Pakistani culture is a bit on the conservative side where women are looked down upon if they work. This all was depicted by this sample as the proportion of male was 95% (298 out of 314). Female were only 5% of the total samples (16 out of 314).

Approximately 122 respondents did their bachelors which made 39% of the entire sample. 50% of the respondents which were in majority acquired post graduate education. Only 19(6%) respondents had diplomas pertaining to Insurance sector. It includes ACII etc. Interestingly, only 16 respondents (5%) were educated till secondary level. It depicts that these respondents were old employees of the organizations and even though they were far behind from others as far as education is concerned but still they had the technical know-how and experience which elevated their status and rank as managers in their organizations.

Married employees comprised 87.8% of the entire sample (276 out of 314) and unmarried employees were 12.2% (38 out of 314) of the sample.

Majority of the respondents were from Karachi 35.03% of the entire sample. Second highest numbers of respondents were from Lahore (26.11%).Smallest numbers of respondents were from Peshawar (12.10%). Proportion of respondents from Faisalabad and Multan were 14.01 % and 12.7% respectively. Cumulative proportion of respondents from provinces was 52.86% from Punjab, 35.03% from Sindh and 12.10% from Khyber-Pakhtunkhwa.

A high percentage of respondents (40.5%) had work experience of "5 to 10 years "in their current organization where they are employed. Respondents with work experience "Less than 5 years "was28.4% of the entire sample. It depicts that turnover intention among employees is high in insurance sector and they frequently part ways with their organization. Experience of “20 years of more” was on the lower side “with only 8.1% falling in this category. Approximately, 10.8% and 12.2% respondents had work experience of “11 to 15 years” and “16 to 20 years” respectively.

29.7% respondents had salary ranged between “31000-50000”. Respondents, mainly top brass of the company had salary “80000 and above” and made 14.9% of the total sample. 34.5% and 20.9%respondents had salary ranged between “31000-50000” and “51000-80000” respectively.

4.Analysis:

The analysis was conducted using Job Satisfaction as a dependent variable, whereas the independent variables were Top management’s support for ethical behavior, Ethical Climate (Egoistic climate, Principled Climate and Benevolent Climate). The dependent variable was further categorized into ‘Pay’, ‘Promotion’, ‘Co-Workers’, ‘Supervisors’ and ‘Work’.

4.1 T-Test Analysis:

T-Test for Gender and marital status confirmed that there was no difference in the opinion regardless of gender and marital status when it comes to Pay Satisfaction, Supervision Satisfaction, Co-worker Satisfaction, Work Satisfaction and Job satisfaction holistically. Moreover, the opinion also didn’t differ with gender and marital status when it came to ethical, benevolent and principled climates. They also didn’t posit any variation in opinion between ethical behavior and career success.

4.2ANOVA:

The results indicated that there was no difference in opinion for pay satisfaction, promotion satisfaction, co-worker satisfaction, supervisor satisfaction, work satisfaction, overall job satisfaction, egoistic climate, benevolent climate, principled climate and association between ethical behavior and career success when it comes to employee of different age brackets, education level, departments, experience and salary.

Nevertheless, the response was different for employees that hailed from different cities. Employees from Lahore were 0.51848 units more satisfied with their pay as compared to satisfaction level of employees from Multan at significance level of 0.019(á = 0.05). Likewise, respondents from Faisalabad were 0.71364 units more satisfied with their pay if compared with respondents from Multan at significance level of 0.002(á = 0.05). Employees from the city of light's satisfaction with pay, like many other cities from Punjab also appeared to be more than that of Multan 0.61220 (á = 0.05).

When it comes to presence of ethical climate, respondents from Lahore seem to have been enjoying benevolent climate with greater extent as compared to respondents from Multan with 0.49022 points (á = 0.05).

TABLE II

Confirmatory Factor Analysis

Items	Job Satisfaction	Ethical Climate	Ethical Behavior and Success
JSPayQ2	0.49		
JSPayQ4	0.78		
JSCowQ10	0.57		
JSCowQ11	0.66		
JSCowQ12	0.67		
JSSupQ13	0.82		
JSSupQ14	0.73		
JSWorkQ17	0.71		
JSWorkQ19	0.41		
ETCLEgoQ26R		0.83	
ETCLEgoQ28R		0.30	
ETCLBenQ30R		1.11	
ETCLBenQ32R		0.49	
ETCLPrinQ35		0.38	
ETCLPrinQ36R		0.95	
CARQ40R			0.74
CARQ41R			0.77
AVE	0.679	0.566	0.597
ρ (Reliability)	0.882	0.792	0.747

Likewise, presence of benevolent climate was present to greater degree in Faisalabad, Peshawar and Karachi as compared to Lahore with 0.6973, 0.83947 and 0.65366 at significance level of 0.001, 0.000 and 0.000 (á = 0.05) .

Perception of association between ethical behavior and career success appeared to be greater in Multan if compared with Lahore with mean difference of 0.42547 points at (á = 0.05).

Table III

Convergent and Discriminant Validity

	CR	AVE	MSV	ASV
EthCl	0.79	0.56	0.55	0.39
CAR	0.74	0.59	0.55	0.33
JS	0.88	0.67	0.24	0.18

Validity:

Two types of validity were tested :Convergent and Discriminat validity.Convergent Validity is the extent to which several attempts are in agreement to the measures (Bogazzi and Philips, 1982). Convergent Validity would exist if the t-values are greater than two or each item's co-efficient should be significant (Anderson and Gerbing, 1988)The discriminant validity refers to the extent to which the constructs are different from each other(John and Reve, 1982).Thevalues of AVE should be greater than the value of all squared correlation. The result showed no validity concerns

4.4 Hypothesis Testing result:

A total of three hypotheiss were developed . Since one entire independent variable, "Top Managemenet's Suport for ethical behavior was deleted", thus only two hypothesis, H2 and H3, were left to be tested.

To test for Hypothesis 2, Ethical climate was related to Job satsifaction and the results were insignificant. Thus it indicated that ethical climates were not linked with job satsifaction in insurance sector of Pakistan. Therefore, the null hypothesis is accepted .

Table IV
Hypothesis Test

Hypothesis	Path			Estimate	S.E.	C.R.	Significance
H1	JS	<---	TopM	-	-	-	Dropped
H2	JS	<---	EthCl	-	-	-	Insignificant/Dropped
-	CAR	<---	EthCl	1.888	.654	2.887	***
H3	JS	<---	CAR	.130	.061	2.118	**

*** p<0.01
** p<0.05

Hypothesis 3 was tested by establishing a realtionship between "association between ethical behavior and career success with Job Satsifaction". The coefficient came out to be 0.130 .The realtionship between these variables was positive and significant with p value 0.034< 0.05. The C.R for this relationship was 2.118 Therefore, the null hypothesis is rejected . The relationship of ethical behavior and career with job satisfaction is significant.
A new association was developed, " ethical climate's linkage with ethical behavior and career success". The estimate came out to be 1.888 with C.R of 2.887. This relationship was highly signifcant with p value of 0.004 ($\alpha = 0.01$).

4.5 Model Fit

According to(Segars and Grover, 1998), values of CFI ,TLI and IFI should be greater than 0.80. The final model showed a respectablegood fit for the entire model fit indices as shown in Table V.

The CFI explains the average correaltion among variables Higher the value, better it is. The CFI of 0.850 depcits a high correatlion among the varaibles. RMSEA is anindicator of model fit. Usually, values greater than 0.10 depicts poor fit. For this research the value of RMSEA came out to be 0.082 which indicates a good fit

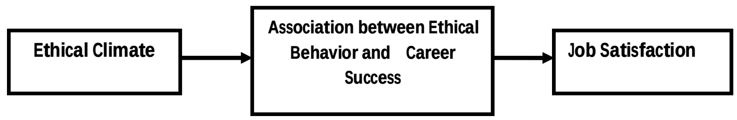
Table V
Model Fit

Result (Default model)	**Values**
Chi-square	217.448
Probability level	.000
CMIN/df	1.977
CFI	0.850
TLI	0 .815
IFI	0.856
RMSEA	0.082

5.Discussion

Top management's support for ethical behavior had insignificant relationship with job satisfaction. The results contradicts many empirical researches(Kim and Brymer, 2011),(Vitell and Davis, 1990),(Koh and Boo, 2001),(Mumtaz et al., 2011)and (Ahmed et al., 2012). Adding to that ,Similar research on banking sector in Pakistan yielded significant results as far as top management's support for ethical behavior and job satisfaction's link is concerned(Mumtaz et al., 2011)and (Ahmed, Shad, Mumtaz, & Tanveer, 2012). Even though both insurance and banking sector are financial institutions but still insurance sector is the neglected one in terms government policies and religious beliefs therefore results were not same. Nonetheless, the results were consistent with the Visweswaran et al., (1998) study of Indian Managers.

Figure 2 .
Final Structural Model



Apart from work, pay, supervision and coworkers, the fifth dimension called Promotion Satisfaction was not a significant dimension of job satisfaction vis-à-vis ethical climate of insurance companies. This is so because they don't expect themselves to be promoted on the grounds that they have acted within the parameters of ethical climate of their organization.

According to Schwepker, (1999), due to difference in opinions, positions, workgroups and employment histories; every organization might have different organizational climate. Therefore it is an irrefutable fact that many organizational climates exist in an organization. In reality, the type of ethical climates might take a U turn in a particular organization due to change in board of directors, government policies, nature of coworkers and supervisors, change in rules and regulations of company and change in top management. Therefore existence of one particular climate might seem unviable. Along with that, top management might have conflicting interest due to which a blend of egoistic, principled and benevolent climate might exist at the same time in an organization. The model of job satisfaction in insurance sector illustrates the same. Presence of such multi-faceted climate could act as an obstacle for an employee to be satisfied from his job. Nevertheless, an employee recognizes this conflicting climate and adapts his behavior accordingly which in turn leads towards career success. Once this perception is developed, and then the employee gets satisfied from multi dimension of job satisfaction which includes the likes of Pay Satisfaction, Supervisor Satisfaction, Co-worker Satisfaction, Work satisfaction and overall job satisfaction. Nonetheless, respondents were of the view that it is highly unlikely that they'll move up in the rank for acting ethically.The relationship of "association between ethical behavior and career success "and "Job Satisfaction" was established in previous studies as well (Vitell and Davis, 1990),(Viswesvaran and Deshpande, 1996) and (Koh and Boo, 2001.

Employees in one of the city were least satisfied with their jobs as compared to employees in other cities. This could probably be because of the prevalence of strict and rigid rules in order to restrain and avoid any uncalled for behavior in the organization. On the condition of anonymity, a top manager of an insurance company from Lahore revealed that employees in that particular city engage in immoral and unethical activities like accepting false claims in order to ante up a lot of money for their personal use. As this happens without the knowledge of their managers, the administration and the respective head offices are left with no other option but to enforce rigorous disciplinary policies and punitive actions against the deviants. The reason behind breaking the rules and going for corrupt practices is their meager salary and non-benevolent climate in the organization.

Job satisfaction is an important determinant of job attitudes, behaviors, turnover intention, absenteeism and organizational outcome. Greater job satisfaction directs to stronger organizational commitment (Viswesvaran and Deshpande, 1996) and (Sims and Kroeck, 1994). Commitment of insurance companies' employees will increase manifold if the ethical climate allows them to grow as an employee who eventually helps them comprehend the fact that their ethical behavior can ultimately lead to job satisfaction and organizational commitment. Absenteeism and turnover can have a dire impact on an organization. (Koh and Boo, 2001). Dissatisfied employee will show weariness in work and won't devote his mind and soul to work. Moreover, he will not show up for work often. An employee can even go on to make an extreme decision to bid farewell to the organization and seek his fortune somewhere else. Therefore, top brass of the company should try their utmost to create an ethical climate that is for the interest of the employees also keeping in view company's interest. This will in due course create a win- win situation both for the company and for the employee and lead to a substantial de-escalation of absenteeism and turnover rate of employees in the company. Ethical behavior can be enforced through formulation of code of ethics (Cleek and Leonard, 1998). An anonymous top manager said that the code of ethics for most of the insurance companies is vague and flawed. Therefore the need arises to develop a clear and comprehensive code of ethics which clearly defines the do's and don'ts.

In the light of discussion above, it can be observed that organizational ethics can have detrimental effect on organizational outcomes. Therefore the findings of this study can help administration of the company to supervise and be in command of their employees by making it mandatory for employees to attend workshops and seminars for training and education purpose. Last but not least, supervisors themselves should also be part of those training sessions so that they can play more active part in supporting ethical behavior which at the moment is nonexistent in insurance sector.

6.Conclusion:

This study examines the link between organizational ethics and job satisfaction as perceived by managers of non-life insurance sector. To be more specific, link between job satisfaction and association between ethical behavior and career success, top management's support for ethical behavior and ethical climates were ascertained. Managers from 14 different companies from Karachi, Lahore, Peshawar, Multan and Faisalabad were administered questionnaires. The response rate was 89.6%. Employees from Multan appeared to be less satisfied with their job. The results overall depicted that top management's support for ethical behavior has no link with job satisfaction which is consistent with findings of Visweswaran et al., (1998). Moreover, ethical climate also has no direct link with job satisfaction. However; it is indirectly linked towards Job satisfaction via ethical behavior and career success association.

The time period during which the questionnaires were administered to the employees coincided with the period that companies tell their employees of the increments that they'll be getting. This might have affected the results as in the case of high increments the employees will be satisfied with their jobs and organization and vice versa. Thus indicating Extremity biasness. The findings cannot be generalized for the entire sector as all the insurance companies were not made part of the research. Baluchistan was excluded from the research as the province has very few branches owing to limited scope of operation. Questionnaires were sent via e-mail to places that were geographically distant. The absence of researcher in such places may have caused the difficulty in comprehending the questionnaires.

Future research should encompass various other aspects of organizational outcome and organizational ethics .Moreover, impact of different religions and ethnicity on link between job satisfaction and organizational ethics should be considered. It is also advised that a question "Top management in my organization should have higher ethical standards than they do now" of top management's support for ethical be removed from future research as it has persistently been giving reliability issues. Koh and Boo, (2001) faced the same issue. Last but not least the impact on job satisfaction prior and after the successful implementation of behavioral and ethical training program in an organization should also be studied. Impact of role stress should also be studied as was done by Renu and Natarajan , (2011). Future research should also focus on job satisfaction of employees who deal with Life insurance.

References

Adams, J.S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental social psychology*(Vol. 2) :267-299. New York: Academic Press.

Ahmed, B, Shad, I., Mumtaz, R., &Tanveer, Z. (2012). Organizational Ethics and Job Satisfaction: Evidence from Pakistan. *African Journal of Business Management,* 6(8), 2966-2973.

Anderson, J.C. ,Gerbing,D.W. (1988), Structural Equation Modeling in Practice: A review and recommended two-step approach,*Psychological Bulletin*, 103(3), 411-423.

Anita, S. (2012). Job Satisfaction in Insurance Sector: an empirical investigation.*International Journal of Engineering and Management Sciences*, 3(4), 425-432

Aziri, B. (2011). Job Satisfaction : A literature review. *Management Research and Practice* , 3 (4),77-86.

Bogazzi, R.P., Philips, L.W., (1982). Representing and Testing Organizational Testing Theories : a holistic construal . *Administrative Science Quarterly*, 27(3), 459-489.

Brown, M. E., Treviño, L. K., & Harrison, D. A. (2005). Ethical Leadership: A social learning perspective for construct development and testing. *Organizational Behavior and Human Decision Processes, 97*(2), 117-134.

Cellucci,A.J,&DeVries, D.L (1978). Measuring Managerial Satisfaction: A manual for the MJSQ. Technical Report II, Center for Creative Leadership.

Cleek, M. A. ,& Leonard, S. L.(1998) . Can Corporate Codes of Ethics Influence Behavior?,*Journal of Business Ethics*,17, 619–630.

Cullen, J.B, Victor, B. & Bronson, J.W. (1993). The Ethical Climate Questionnaire: An assessment of its development and validity. *Psychol. Rep*., 73, 667–674.

Daneshfard, K., Rahimi, G., &Damirchi, Q. V. (2011).Surveying the Role of Ethical Climate on Job Satisfaction in Iran's Small and Medium Enterprises.*Kuwait Chapter of Arabian Journal of Business and Management Review* , 1 (2) , 11-19

Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., & Tatham, R.L.(2006). Multivariate Data Analysis , 6th ed. Prentice-Hall, Inc., New Jersey.

Haroon, M., Zaman, H.M.F.&Rehman, W. (2012). The Relationship between Islamic Work Ethics and Job Satisfaction in Healthcare

Sector of Pakistan.*International Journal of Contemporary Business Studies* , 3(5), 6-12.

Henne, D., & Locke, E. A. (1985). Job dissatisfaction: What are the consequences? *International Journal of Psychology*, 20, 221-240.

Hoppock,R. (1935).*Job Satisfaction*, Harper and Brothers, New York, p. 47

Hult, G., Ketchen, D., & Slater, S. (2004). Information Processing , knowledge development , and strategic supply chain performance . *Academy of Management* ,47(2), 241-253.

Jackson, S. E., & Schuler, R. S. (2000).*Managing Human Resources: A partnership perspective*. 7th edn, South-Western Collage , a division of Thomas Learning : Cincinnati ,OH.

John, G.&Reve, T.. (1982). The Reliability and Validity of Key Informant Data from Dyadic Relationships in Marketing Channels. *Journal of Marketing Research*,19(4) ,517–524.

Judge, T. A., & Klinger, R. (2008).Job Satisfaction subjective well being at work. In M. Eid, & R. J. Larsen, The Science of Subjective Well-being (1st Edition ed., pp. 393-413). New York, United States of America: Guilford Press.

Kaur, H. (2012). Job Satisfaction during Recession Period : A study on public & private insurance in Punjab. *International Journal of Advanced Research in Management and Social Sciences* , 1(1), 24-42.

Kim, W. G., &Brymer, R. A. (2011).The Effects of Ethical Leadership on Manager Job Satisfaction, Commitment, Behavioral Outcomes, and Firm Performance.*International Journal of Hospitality Management, 30*(4),1020-1026

Koh, H.C. & Boo, E.H.Y (2001). The Link between Organizational Ethics and Job Satisfaction: a study of managers in Singapore. *Journal of Business Ethics*,29,309-324.

Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), Handbook of industrial and organizational psychology (pp. 1297–1349). Chicago: Rand McNally.

Luthans, F. & Stajkovic , A. D.(1999), Reinforce for Performance: The need to go beyond pay and even rewards, *The Academy of Management Executive*,13, 49–57.

Miceli, M.P & Lane, M.C. (1991). Antecedents of Pay Satisfaction: A review and extension. In Ferris GR, Rowland KM (Eds.), *Research* *in personnel and human resources management* (Vol. 9, pp. 235-309). Greenwich, CT: JAI Press.

Mumtaz, R., Ahmed, B., Shad, I., & Ghouri, T. A. (2011). Impact of Top Management Ethical Behavior on Job Satisfaction: evidence from Pakistan. *Research Journal of Finance and Accounting* ,114-120.

Oshagbemi, T,& Hickson, C (2003). Some aspects of overall job satisfaction: a binominal logit model. Journal of Managerial Psychology., 18(4): 357-367

Parboteeah, K. P., Chen, H. C., Lin, Y.-T., Chen, I.-H., Lee, A. Y.-P., &Chung, A. (2010). Establishing Organizational Ethical Climates: How do managerial practices work?.*Journal of Business Ethics*, 97(4) , 599-611

Schwepker, C. H.(1999). The Relationship Between Ethical Conflict, Organizational Commitment and Turnover Intentions in the Sales force , *Journal of Personal Selling & Sales Management,*19, 43–49

Segars, A., & Grover, V. (1998). Strategic information Systems Planning Success : an investigation of the construct and its measurement. *MIS Quarterly* ,22(2) , 139-163.

Semapane, M., Reiger, H., & Roodt, G. (2002).Job Satisfaction in Relation to Organisational Culture. *South African Journal of Industrial Psychology* , 28(2): 23-30.

Sims, R. L., & Kroeck, K. G. (1994).The Influence of Ethical Fit on Employee Satisfaction, Commitment and Turnover.*Journal of Business Ethics* ,13 ,939-948.

Smith, P., Kendall, L., & Hulin, C. (1969). The Measurement of Satisfaction in Work and Retirement: A strategy for the study of the attitudes. Chicago: Rand McNally

Stevens, B. (1999). Communicating Ethical Values: A Study of Employee Perceptions.*Journal of Business Ethics* ,20, 113-120.

Taylor, F. W. (1911). The Principles of Scientific Management. New York: Harper.

The Insurance Association of Pakistan. (2012). Insurance Year Book 2011-2012. Karachi: The Insurance Association of Pakistan.

Theodossiu, I., & Zangeladis, A. (2009). Career prospects and tenure–job satisfaction profiles: evidence from panel data. *The Journal of Socio-Economics* ,38(4) ,648-657.

Ulricha, C., O'Donnell, P., Taylor, C., Farrar, A., Danise, M., & Grady, C. (2007). Ethical Climate, Ethics Stress, and the Job Satisfaction

THE INFLUENCE OF ORGANIZATIONAL FACTORS ON EMPLOYEES' COMMITMENT LEVELS: A STUDY OF THE BANKING SECTOR OF PAKISTAN

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Abstract

Although a lot of international research studies have highlighted organizational practices to be an important determinant of employees' commitment to their organizations, little attempt has been made to explore the relationship of these two concepts by researchers in Pakistan.

The rationale for this study was to offer an insight into how Organizational Commitment and its three components namely Affective, Continuance and Normative Commitment may be influenced and enhanced by organizational factors consisting of Teamwork, Rewards, Training and Communication. This study also examined the relationship of demographic factors with the employees' organizational Commitment to ascertain which set of variables has the highest impact on employee commitment. A random sample of 200 commercial bank employees was surveyed in Lahore through a questionnaire. Correlational, stepwise regression analyses were carried out to study the association between the dependant and the independent variables. Results revealed that on the whole, organizational factors were important determinants of employees' commitment levels, while demographic factors had a relatively less significant association with the organizational commitment and its forms. Continuance form of commitment also showed weaker association with organizational factors as compared to Affective and Normative Commitments. Implications and recommendations have been presented for managers to utilize key organizational factors in order to enhance employees' commitment levels.

Keywords: Organizational Commitment, organizational practices, Banking sector, demographics.

JEL Classification: Z 000

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1.Introduction

Organizational commitment has been labeled as a key determinant and the driving force of many positive organizational level outcomes .Organizational commitment is referred to as the "psychological link between the employee and his organization" which makes the employee leaving the organization voluntarily less likely (Allen & Meyer, 1996). People working for organizations "have certain needs, desires, skills, and so forth and expect to find a work environment where they can utilize their abilities and satisfy many of their basic needs"(Dessler, 2005). Organizational commitment can be increased if an organization is successful in providing such a vehicle. Employee commitment has been linked to several positive results namely lower turnover rate and absenteeism, higher level of motivation and job satisfaction , lower operating costs, higher productivity and higher efficiency (Morrow, 1993; Meyer & Allen, 1996; Lieu, 2008). Thus a committed employee can be favorable to the organization and its goals.

Since the linkage between how an organization deals with its employees and the way it affects their attitudes such as commitment has been established, exploration of such linkages is of great significance. In earlier studies, many aspects of organizational practices have been identified which were related to organizational performance. Some of these dimensions were communication, teamwork, training and development, stability, respect for coworkers, rewards and recognition, proactive planning and fairness in management practices etc.,(Ricardo and Jolly,1997; Lau and Idris, 2001). Positive employee behaviors such as job satisfaction and organizational commitment along with negative outcomes of employees, such as absenteeism or turnover are directly linked to organizational practices and policies.

Having established the importance of Organizational Commitment, this study will attempt to present an insight into what factors impact the organizational commitment of employees of banking organization. Aim of this study is to build on existing literature on organizational commitment with main focus on organizational practices in the Pakistani banking sector. The banking sector as the empirical setting for this study was chosen for various reasons. Firstly, there is a dearth of research studies on organizational behavior issues in Pakistan. Secondly, the banking sector in Pakistan is important and has considerable national as well as international significance and yet continues to be ignored in research settings. Over the years, the role of a bank employee has transformed from "teller to seller" (Burton, 1991). Thus banks, just like any other organization which aims to deliver better services must have the right practices in place in order to keep the workers motivated. This will eventually assist in increasing operating efficiencies.

Rewards, Teamwork, Training and Communication are the organizational factors chosen for this study as the independent variables. Numerous international research studies (e.g Boon et. al 2006; Karia and Asaari, 2006; Zain et al,2009) have found a significant relation between these dimensions and employees' commitment levels. Moreover, organizational commitment is going to be assessed within a multidimensional structure for this study. Allen & Meyer (1990), proposed that Organizational commitment has three dimensions namely, Affective, Continuance and Normative commitment. It is established that the development of these forms of commitment is influenced by different sets of variables (Mathebula, 2004). For instance continuance commitment is reported to be related to company's compensation policies as the employee may want to be with the organization, in order to avoid losing those benefits. Contrarily, training has been reported to inculcate normative form of commitment. Thus for this study organizational commitment will be explored as multidimensional in nature and will be the dependant variable of this study.

The studies on commitment that have been carried out in Pakistan are far and few (e.g. Chughtai & Zafar, 2006; Tayyab &

Tariq, 2001). Moreover, they have not discussed the relationship between organizational factors and organizational commitment. Further, most of the research studies have measured commitment as a uni-dimensional construct (e.g. Chughtai & Zafar, 2006; Iqbal, 2010; Bushra et al, 2011), as opposed to the more established multidimensional construct. Most of the local studies were based on how demographic factors affect the organizational commitment . Research however demonstrates that demographic factors play a relatively less significant role in the development of organizational commitment and all its form (Meyer et al, 2002). Thus this study attempts to measure the present levels of three forms of commitment of the banking sector employees. Also, their perception of organizational practices is going to be studied with respect to commitment levels. Are the prevalent organizational factors amplifying the worker and the organization bond or are they driving them away? This study aims to also find out the set of predictor variables (demographic and organizational) which has the strongest impact on organizational commitment and its three forms. This study's findings may be useful for managers who can implement steps and make strategic interventions in order to ensure their employees' longer and more productive stay with the organization, leading to minimized costs and higher efficiency.

The next section of this paper defines Organizational commitment and its forms and highlights the advantages of higher levels of commitment for organizations. Next we discuss the relationship between the Organizational factors and the three forms of Organizational commitment. We then discuss the methods adopted along with the details about each of the variables' measurement. Then the study's results based on the independent variables will be discussed. Finally a concluding discussion along with the study's limitations, practical implications and recommendations for future research is presented.

2. Literature Review

2.1Organizational Commitment

Organizational commitment's construct is extensively studied across the globe in the past few decades (e.g., Buchanan, 1974, Porter et al., 1976, Mowday et al., 1979, Allen &Meyer, 1990). Several definitions have also emerged over the years "an employee's identification with the organization's goals and values; their willingness to exert a great effort on behalf of the organization; and their intention to stay with the organization" (Porter et al., 1976). Mowdeay et al (1979) define it as being the "employees' psychological attachment to the organization". However, the earlier approaches to study commitment were criticized in later years for lack of consistency and a unidimensional approach being used to define the construct of commitment and its antecedents. Meyer and Allen (1991) proposed the three-component model, which has earned credit and popularity in the last two decades. The three forms (affective, normative and continuance commitment) provide a more in-depth and accurate analysis of the commitment concept. This model was developed with the rationale that all the three abovementioned forms of commitment are distinguishable. Although they relate negatively to turnover, the nature of the link differs. Moreover affective, normative and continuance commitment are reported to relate differently to other organizational behaviors such as employee attendance, turnover, organizational citizenship behavior or in-role performance (Meyer et al.2002).

An employee can experience varying degrees of the three forms of commitment, thus these are distinguishable, separable, psychological states (Allen and Meyer, 1990). *Affective commitment* is defined as an "employees' emotional attachment to, identification with and involvement in the organization" (Allen& Meyer, 1990). Positive job experiences *help develop affective commitment and it is linked to* positive organizational outcomes such as lower level of absenteeism and higher citizenship behavior (Meyer & Allen, 1997). Workers displaying a stronger level of affective commitment are claimed to be working for their organization as "they want to, and they show greater keenness to put in more effort on behalf of their organization" (Meyer & Allen, 1997).

Continuance commitment is the second dimension of organizational commitment construct proposed by Allen and Meyer (1991_) It is the "employees' commitment to the organization as they perceive high costs of losing organizational membership". Employees with higher levels of continuance commitment find it more difficult to leave their organizations due to higher "un-transferable investments" such as years of service in a company, pensions, retirement funds, friendship and attachment developed with co-workers etc (Meyer & Allen, 1991).

Moreover, it is claimed by Meyer & Allen (1991) that n*ormative commitment might be* derived from more than one factor such as "employees' sense of obligation towards his organization". Employees for instance, may feel a moral obligation to put in their best effort and show loyalty to their work in case the organization has invested resources (money and time) in the employee's training. Normative commitment is claimed to be not as strong as affective commitment in predicting employees overall commitment.

"Employees with strong affective commitment remain with the organization because they *want* to, those with strong continuance commitment because they *need* to and the ones with strong normative commitment as they feel they *ought* to", Allen and Meyer (1990). It is important to note that the affective commitment's advantages such as desirable work behaviours are expected to be greatest while the continuance commitment outcomes may be negative for organizations.

2.2Organizational Factors:

Literature has identified various Organizational commitment's antecedents. Variables such as Job attributes (e.g. communication, job challenge, and the amount of feedback etc), Personal characteristics (e.g. age, gender, tenure, education, etc), and work experiences (e.g. organizational trust, dependability etc) have been studied for their impact on the employees' commitment.

The link between commitment and several organizational factors has also been extensively studied and multiple dimensions of an organizations practices and policies, which may relate to organizational commitment, have been identified and measured.

The organizational factors chosen for this study as the independent variables (i.e., teamwork, communication, rewards and training) are listed alongside the most important dimensions as identified by Jung et al (2009) in his meta analysis. Various studies have also individually discussed the role of these factors on commitment e.g. teamwork and commitment was studied by (Denison,1990, O'Reilly et al., 1991) Rewards and commitment by(Schein, 1990), Communication and commitment by(Tsui et al, 2006 and Xenikou & Simosi, 2006) training and commitment by (Lau and Idris, 2001) .

Bratton & Gold, (1994) refer to rewards as "all forms of financial return, tangible services and benefits an employee receives as part of an employment relationship". S. Su et al, (2009) suggest that employees rewarded for achieving set goals and improved performances are reported to have an increased likelihood of higher motivation levels and commitment. It has been suggested that rewards should be made contingent on employees' performance as this will encourage them to put in an extra effort. Thus when organizations create links between employee performance and rewards can lead to higher commitment. Training is defined as "systematic activities to develop and improve employees skill, knowledge and behaviors to enable them to perform job related duties, accomplish specific tasks and meet the quality requirements of human resource for the future", (Bulut & Culha,2010). Studies have shown Training is involved in significantly enhancing various forms of organizational commitment, with strongest impact on affective commitment (Ahmad&Bakar, 2003). Teamwork has been defined as "the extent to which employees within a firm cooperate with each other and work in unison towards overall organizational goals" (Delarue, et al, 2008). Several terms such as 'groups', 'teams'and 'work units' have been used at different times and in different settings, to describe this form of work. It was found that teamwork was one of the most significant factors that influence organizational success (Karia and Asaari, 2006). Teamwork led to the development of a strong, supportive relationship amongst employees and the managers.

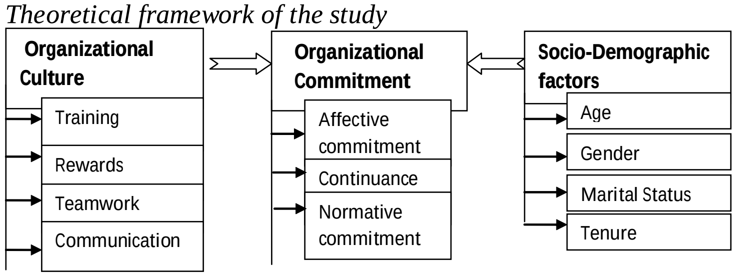
Communication is the fourth dimension of this study and it is defined as "a process whereby individuals and groups transact in a variety of ways and within different areas with the objective of carrying out organizational goals" (Smidts et al., 2001). Positive influences such as higher job satisfaction and motivation, lower turnover and better organizational climate and higher commitment have been linked with effective communication by a growing body of literature. This eventually leads to improved organizational performance (Nakra,2006).

2.3 Demographic Factors:

The secondary motive of this study is to verify the impact of several demographic factors on organizational commitment. Some studies have suggested a positive link between marital status, age, tenure of work and organizational commitment (e.g, Mathieu 7 Zajac, 1990). Married employees may show higher levels of commitment due to higher financial needs and responsibilities. In another study by Ahmad and Bakar(2003) no link was found between gender and our dependant variable. However, opposite results were reported by Mathieu and Zajac(1990) as women were found to have higher levels of commitment. Contradicting results have been reported in studies in the past for age and organizational commitment as well. For example, Salami(2008) and Meyer and Allen (1998) showed a significant relationship between the two studied variables. However it was also noted that older employees had a higher level of continuance for of commitment than younger employees because of higher stakes involved. Not only this study will explore the relationship of the above mentioned demographic factors and organizational commitment but it will also find out whether demographic factors have a stronger or weaker impact as compared to organizational factors. Below we present the theoretical framework.

Figure 1:

Theoretical framework of the study



Based on the above mentioned literature, five main hypotheses are presented in this study:

H1: *Rewards are significantly related with organizational commitment and its forms,*

H2: *Teamwork is significantly related with organizational commitment and its forms*

H3: *Training is significantly related with organizational commitment and its forms*

H4: *Communication is significantly related with organizational commitment and its forms*

H5: *Demographic factors are significantly related with organizational commitment and its forms*

3.Research Methodology

3.1Sample:

Several studies (Karia and Asaari,2006, Su, et al.,2009) have also adopted convenience sampling to study organizational commitment and used a sample size ranging from 150 to 400, (e.g Allen &Brady,1997 ; Su.et al,2009). Mathebula (2004) confirms in his study that at least 10 degree of freedom is generally deemed to be adequate for a regression analysis per variable to achieve “adequate statistical power”. Therefore given the temporal and logistical constraints for this study convenience method sampling was adopted and 250 questionnaires were distributed in 21 different banks operational in Lahore. A total of 200 usable questionnaires were returned, providing a return rate of 80 percent. One reason for the high response rate was that the questionnaires were disseminated and collected personally at their respective branches. The sample consisted of 200 respondents, out of which 149 were males and 51 were females.

The study’s sampling frame included banking sector employees with permanent status. The majority of the respondents were males 74.5%. Moreover, 58% of the respondents were married. Respondents who had been working for their current bank for less than 5 years comprised 72.5% of the total sample. The age group of 26 to 35 years had the highest representation with their proportion being 60.5% of the total sample. The majority of the respondents (48.5%) reported themselves to be a part of the middle management, 12.5% were in the upper management while the remaining 39% were in the lower managerial category.

3.2 Variable Measurement:

The scales used in the research questionnaire were adopted from the existing literature. The scales applied likert scale with 1=Strongly Disagree forming the one end of the continuum and

7=Strongly Agree the other end. Reverse coding was applied for items with negative statements. The questionnaire consisted of three main sections. The first section includes statements to measure Organizational commitment and its forms. The second section addresses questions related to organizational dimensions. Lastly, the third section requests the respondents to provide demographic details.

To measure the dependant variable i.e Organizational commitment and its forms, Allen and Meyer's (1990) 24-item scale. It is a widely used instrument , across the globe consisting of three subscales measuring affective, continuance and normative forms of organizational commitment respectively.

The questionnaire used in this study to measure Organizational practices was developed by Lau and Idris (2001). This instrument has been used by various studies conducted in Asian countries (e.g; Boon and Arumugam, 2006 and Zain et. al, 2009). Therefore its validity and reliability in a Pakistani city is more feasible. Also, it comprises if the four most important organizational factors, as suggested by other research studies also. It constitutes of 17 items to measure the four dimensions (, teamwork, rewards, training and communication) Again, a seven point likert scale was applied which ranged from 1 being "strongly disagree" to 7 being "strongly agree".

The descriptive statistics summary of independent and dependent variables of this study is presented in Table 1. It is to be observed that affective commitment levels were relatively higher than the other two aspects. However the variation in affective commitment levels was also noted to be the highest (0.987). This pattern depicts that some employees did not exhibit the ideal levels of affective commitment. The Cronbach Alphas were computed and also reported in Table1. The values of Cronbach Alphas exceeded the .50 threshold value, which is considered acceptable for the scale reliability for a survey based study (Nunnaly, J. C., 1978). Thus it can be stated that the reliability of the survey items are acceptable.

Table1:

Descriptive Statistics of Banking Employees Perceptions of Organizational Commitment forms and Organizational Factors

Variable	N	Mean	S. Dev	Cronbach Alpha
Organizational Commitment	200	4.40	.634	-
Affective Commitment	200	4.55	.987	0.73
Continuance Commitment	200	4.28	.818	0.72
Normative Commitment	200	4.37	.882	0.60
Organizational factors	200	4.70	1.11	-
Rewards	200	4.52	1.36	0.87
Teamwork	200	4.71	1.15	0.70
Communication	200	4.70	1.34	0.86
Training	200	4.89	1.37	0.82

4. Results:

The SPSS statistical software Version 15 was utilized to carry out the calculations and statistical analyses. Firstly, correlations had been calculated to show the link between the dependant variable i.e organizational commitment and its subscales with organizational and demographic factors. The results , presented in table 2, indicate that organizational factors have a meaningful conceptual relationship with organizational commitment and its forms.VIF (variance inflation factor) was computed to check the multicolinearity amongst the set of independent variables. The largest VIF value was 3.25, which is significantly lower than the cut-off value of 10 (Chatterjee, Hadi & Price, 2000). Thus it can be stated that multi-co linearity did not seem to be a problem for this study.

Teamwork displayed a significantly positive association with overall organizational commitment as well as all three forms of commitment separately. It had the highest positive correlation with Overall organizational commitment ($r = .472$, $p < .01$) and lowest with continuance commitment ($r = .219$, $p < .01$). Communication had the highest positive correlation with overall commitment ($r = .463$, $p < .01$). A relatively weaker correlation was found between continuance commitment and communication($r = .177$, $p < .05$). Communication had a moderate correlation with normative commitment ($r = .368$, $p < .01$).

Similarly, affective commitment had a useful conceptual correlation with rewards ($r = .368$, $p<.01$), followed by normative commitment ($r = .349$, $p<.01$).

Age had a significant positive link with overall organizational commitment ($r = .164$, $p<.05$) and affective commitment($r=.162$, $p<.05$). This is in line with earlier research findings (e.g. Allen and Meyer, 1990) where age was shown to have a moderately positive correlation with affective commitment. Current work experience for our data showed positive correlation ($r=.198$, $p<.01$) with organizational commitment and affective commitment ($r=.197$, $p<.01$). Mathieu & Zajac (1990) also suggested that affective commitment may increase in employees belonging to higher age and tenure groups. This could be due to their higher satisfaction with jobs and receiving better perks and positions etc.

Gender and the forms of commitment did not reveal any form of significant relationship which is in line with Mathebula's (2004) findings. Similarly marital status did not have any significant relationship with the three forms of commitment.

Table 2:

Correlation analysis between Organizational commitment and its forms with Organizational and Demographic variables

	1	2	3	4	5	6	7	8	9	10	11	12
1. Gender	1											
2. Marital status	-.083	1										
3. Age	-.184(**)	.549(**)	1									
4. Work experience	-.144(*)	.344(**)	.735(**)	1								
5. Teamwork	-.008	.052	.107	.126	1							
6. Communication	.080	-.023	.040	.102	.685(**)	1						
7. Rewards	.100	.018	.031	.090	.564(**)	.682(**)	1					
8. Training	.015	-.005	.018	.123	.562(**)	.581(**)	.667(**)	1				
9. Affective Commitment	-.022	-.008	.162(*)	.197(**)	.368(**)	.417(**)	.432(**)	.382(**)	1			
10. Continuance Commitment	-.073	.054	.129	.126	.219(**)	.177(*)	.171(*)	.124	.105	1		
11. Normative Commitment	.000	.003	.053	.089	.402(**)	.368(**)	.349(**)	.382(**)	.465(**)	.150(*)	1	
12. Overall Commitment	-.043	.021	.164(*)	.198(**)	.472(**)	.463(**)	.459(**)	.429(**)	.780(**)	.554(**)	.770(**)	1

Significant at the 0.05 level; **Significant at the 0.01 level.

Gender: 1= Male, 2 = Female, Marital status: 1= Yes, 2 = No, Commitment and Organizational subscales were measured on a Likert scale from 1-7

Furthermore, stepwise regression analysis was performed to explore the relationship between organizational commitment and its components with the predictor variables. Stepwise method of regression was employed in this study because it helps in determining the set of factor with the higher predictive power on organizational commitment and its form. The focus of our study is to find out which independent variables are able to best predict the dependant variable , there for stepwise regression is the appropriate method to determine it as it assisted in identifying the particular variables with the highest impact on overall organizational commitment and its three forms. The results of the analysis are presented in Table 3. All of the models tested were significant with moderately high R^2 values ,except for continuance commitment. In Model 1, Overall Organizational Commitment was regressed on demographic and organizational factors and they explained just over 29% of the variance in the Overall commitment. The identified significant beta coefficients amongst the proposed antecedents were two organizational factors, (teamwork and rewards) and one demographic factor i.e. current work experience.

In Model 2, rewards and communication were positively related to affective commitment. This means that the higher the rewards and communication level in a banking organization, the higher the employees' affective commitment. Amongst the demographic factors, current work experience was positively associated with affective form of commitment. The R^2 value was 24%, slightly lower than the value for Overall commitment in the first model. Meanwhile the stepwise regression analysis performed in Model 3 for continuance commitment in Table 3 indicated that only 4.8% variation was explained by one organizational dimension i.e. teamwork. None of the other organizational and demographic variables were significant enough to appear in the stepwise multiple regression equation. Lastly, in Model 4, two organizational organizational factors (teamwork and training) entered the equation collectively accounting for 18.9% of the total variance in the normative form of commitment. Higher teamwork and training opportunities in the organization is thus expected to increase the bank employees' normative commitment i.e moral obligation to stay with the company. None of the demographic variables had a significant relationship with normative commitment, however.

Table 3:

Results of stepwise regression analysis

	Model 1		*Model 2*		*Model 3*		*Model 4*	
Variables	*Overall Org Commitment*		*Affective commitment*		*Continuance commitment*		*Normative Commitment*	
	Co-efficient	T-stat	Co-efficient	T-stat	Co-efficient	T-stat	Co-efficient	T-stat
Rewards	0.288	3.957**	.291	3.389**				
Teamwork	0.290	3.971**			.219	3.153**	.274	3.547**
Communication			.212	2.46*8				
Training							.228	2.955**
Gender								
Marital status								
Age								
Work experience	0.134	2.225*	.153*	2.446				
F-value	27.653		20.63		9.94		24.21	
p-value	0.00		.000		.002		.000	
R^2	0.297		.240		.048		.197	
Adjusted R^2	0.287		.228		.043		.189	
N	200		200		200		200	

*Significant at the 0.05 level; **Significant at the 0.01 level.

5.Conclusions

The rapidly changing dynamics of the employee-organization relationship have made it imperative for managers to understand the factors that may affect an employee's commitment to his organization positively. The study's basic purpose was to determine the impact of two sets of factors on the organizational commitment of employees – which is a source of competitive advantage for an organization. The relationship of organizational commitment was studied with four independent key organizational factors i.e rewards, teamwork, communication and training. A relatively low variation in the three dimensions of organizational commitment was linked with the study's chosen demographic variables, as indicated by R-square value. On the other hand, the findings from the statistical analyses showed a relatively stronger evidence for the hypothesized relationship between organizational commitment and the organizational factors.

The best results were witnessed for organizational commitment and affective commitment, whereas the weakest association was between organizational components and continuance commitment. This substantiates the argument that an employee's feelings of obligation to stay with his company are largely determined by positive work experiences which are result of preferred organizational practices. Their willingness to stay with the company will be resultant of their emotional attachment to the organization.

Consistent with earlier studies (e.g Malhotra et al, 2007) rewards were found to be significantly, positively related with overall organizational commitment and affective commitment. Thus H1 was partially supported. However, unlike the findings of the study by S. Su et al, (2009), in which rewards were positively linked to normative commitment, our study found no such association. Similarly no link was found between rewards and continuance form of commitment, which was in contrast to earlier findings (Mathieu and Zajac, 1990 & Malhotra et al., 2007). The study's findings show that overall , continuance and normative commitment are significantly related to teamwork, thus partially supporting H2. The result confirms the study by Karia and Asaari (2006), which showed that there is a significantly positive relationship between teamwork with organizational commitment. Our study also supports the finding of the meta-analysis performed by Delarue et al., (2008), in which teamwork was identified to have a positive link with employee performance attitudes and behavior. Training showed a significant relationship with normative commitment as displayed by the stepwise regression analysis but it did not reveal any relationship that was significant, with other forms of commitment . A Malaysian study by Ahmad and Bakar, (2003)supports these findings. This phenomenon signifies that the employee might show a higher level of normative commitment if the organization has invested in training the employee and so he might feel indebted to his organization . From the results of Table 3, Communication showed a positively significant link with only affective form of commitment. This result is in accord with the literature that states that employees who have a positive impression of communicational factors are expected to exhibit higher levels of commitment to the organization (Smidt et al, 2001). Better communication environment, where the employees' responsibilities, expectations and performance evaluation criteria are clarified, might create a climate of fairness and thus promote affective commitment. Our results, on the other hand, were unable to establish a link between the other forms of commitment and communication, thus H4 was only partially supported.

This study's findings are of great importance and relevance for managers aiming for their organizations' development. Results confirmed the organizational factors to collectively explain a higher percentage change in organizational commitment and its components as compared to the demographic factors. The study suggests that organizational practices are key for the development of affective and normative ties with the company, which are the preferred forms of commitment. Thus the managers need to focus on the potential mechanisms to enhance employees' commitment in order to develop and maintain organizational values and success. Moreover, emphasis should be laid on rewards and communication policies within the banking organizations as they are the most significant predictors of affective commitment.

As far as the hypothesis (H5) for the relationship between demographic factors and forms of organizational commitment is concerned, it was only partially accepted . Out of the four chosen demographic variables, only work tenure showed a significant relationship with organizational commitment and its affective form. This implies that as the work years increase for an employee with a company, his affective commitment and sense of belonging to the organization will also grow. Young workers with a smaller work tenure might not feel attached to the company and have higher likelihood to leave the organization for better job opportunities etc

The study's findings also support the Three Component Model of commitment by indicating that the three forms of organizational commitment have different antecedants . While affective and normative commitment have a positive link with important organizational variables, continuance commitment shows a much weaker relationship with the demographic or organizational set of independent variables.

6. Limitations and Suggestions for Future Research

This research study had certain limitations. Firstly the sampled population was restricted to Lahore, Pakistan and might not be representative of the whole country. Secondly, the banking sector was chosen as the area for investigation, so the findings may not be applicable to the organizations outside the banking sector. However, the findings of this research were largely consistent with the earlier research findings carried out in other Asian and Western regions.

Moreover, it is also known that standardized questionnaires are only reflective of the volunteering respondents perceptions thus there is a compromise on the depth of the data. Also, a close ended questionnaire may not be to reflective of an employee's real emotions and working conditions in the true sense , therefore qualitative analysis based on interviews and forum discussions are also advised. Further research is recommended be taken up in other cities of Pakistan to make a cross country comparison. Similarly this study could also be replicated in other business sectors across other countries in order to do a cross country comparison of commitment levels .

This study's findings have shown several avenues which could be taken up for further investigation by researchers. Organizational factors have emerged as important features related to commitment however the factors under examination in this study are not exhaustive. Therefore, it is also important to explore other organizational aspects that may help to increase employees commitment.

References

Ahmad, K.Z & AbuBakar, R. (2003).The Association between Training and Organizational Commitment among White-Collar Workers in Malaysia. *International Journal of Training and Development*. 7, 166-185.

Allen, N. J., & Meyer, J. P. (1990).The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology.*63,1-18.

Allen, N. J., & Meyer, J. P. (1996). Affective, continuance, and normative commitment to the organization: An examination of construct validity. *Journal of Vocational Behavior,* 49, 252–276.

Bratton, J., Gold, J.(1994). *Human Resource Management: Theory and Practice*. Macmillan, Basingstoke.

Bulut, C & Culha, O. (2010). The effects of organizational training on organizational commitment. International Journal of Training & Development*;* 14 (4), 309-322.

Buchanan, B. (1974).Building organizational commitment: the socialization of managers in work organizations', *Administrative Science Quarterly.* 19, 4, 533–46.

Burton, D. (1991),Tellers into sellers. *International Journal of Bank Marketing.* 9 (6), 25-29.

Bushra, F., Usman, A., & Naveed, A. (2011). Effect of Transformational Leadership on Employees' Job Satisfaction and Organizational Commitment in Banking Sector of Lahore (Pakistan). *International Journal of Business & Social Science*.

Chughtai, A.A & Zafar, S.(2006), Antecedents and consequences of Organizational Commitment Among Pakistani University Teachers, *Applied H.R.M Research.*11 (1), 39-64.

Chatterjee, S., Hadi, A. S., & Price, B. (2000). *Regression Analysis by Example*. New York: John Wiley & Sons Inc

Delarue, A. Hootegem, G.V., Procter, S. & Burridge, M. (2008). Team working and organizational performance: A review of survey-based research. *International Journal of Management Reviews.* 10 (2), 127–148

Dessler, G. (2005), How to earn Employees' commitment. *Academy of Management Executive*. 13(2),58-67.
Iqbal, A. (2010). An empirical assessment of demographic factors, organizational ranks and organizational commitment. *International Journal Of Business Management* , 5,16-27
Jung, T., Scott, T, Huw T. O., Bower, P , Whalley, D. , McNally, R.& Mannion, R. (2009). Instruments for Exploring Organizational Culture: A Review of the Literature. *Public Administration Review*. 69(6),1087-1095
Karia,N.& Asaari, M.H. (2006) .The effects of total quality management practices on employees' work-related attitudes. *The TQM Magazine*, 18 (1), 30 - 43
Lau, H. C., & Idris, M. A. (2001). Research and concepts: The soft foundation of the critical success factors on TQM implementation in Malaysia. *The TQM Magazine*, 13(1), 51–60.
Malhotra, N , Budhwar,P.&Prowse, P.(2007) .'Linking rewards to commitment: an empirical investigation of four UK call centres. *The International Journal of Human Resource Management,* 18(12), 2095 —2128
Mathebula, M.R. (2004) Modeling the Relationship between Organizational Commitment, Leadership Style, HRM Practices and Organizational Trust, *Doctoral dissertation, Faculty of Economic and Management Sciences, University of Pretoria.*
Mathieu, J., & Zajac, D. (1990). A review of meta-analyses of the antecedents, correlates and consequences of Organizational commitment. *Psychological Bulletin*, *108*(2), 171–194.
Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review,* 1, 61–89.
Meyer, J.P., & Allen, J.J (1997). *Commitment in the Workplace: Theory, Research and Application.* Thousand Oaks, CA. Saga Publication onc.
Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2002). Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. Journal of Vocational Behavior, 61, 20– 52.
Mowday, R., Steers, R. & Porter, L. (1979).The Measurement of Organizational Commitment. *Journal of Vocational Behavior*, 14,224-247.

Nakra , R.(2006) Relationship between communication satisfaction and organizational identification: an empirical study. *The Journal of Business Perspective*.10 (2) 41-51.

Nunnaly, J. C. (1978), *Psychometric Methods,2nd edition.* (New York: McGraw-Hill).

Ooi, K.B & Arumugam, V. (2006). The influence of corporate culture on organisational commitment: Case study of semiconductor organisations in Malaysia. *Sunway Academic Journal*.3, 99-115.

Porter, L.W.,Crampon, W. & Smith, F. (1976). Organizational commitment and managerial turnover: A longitudinal study. *Organizational Behavior and Human Performance*, 15, 87-98.

Schein, E.H. (1990), Organizational Culture, *American Psychologist*. 45(2),109-119.

Smidts, A., Pruyn, A.T.H., & Van Riel, C.B.M.(2001). The impact of employee communication and perceived external prestige on organizational identification. *Academy of Management Journal*. 49/5: 1051-1062.

Su,S. Baird,K.& Blair, B.(*2009)*.Employee Organizational commitment: the influence of cultural and organizational factors in the Australian manufacturing industry . *The International Journal of Human Resource Management*. 20, 2494–2516.

Tayyab S, Tariq N (2001). Work values and organisational commitment in public and private sector executives. *Pakistan Journal of Psychological Research* 16(3/4), 95-112.

Zain,Z.M., Ishaq,R. & Ghani,K. (2009).The Influence of Corporate Culture on Organisational Commitment: A Study on a Malaysian Listed Company. *European Journal of Economics, Finance and Administrative Sciences*.17, 16-26.

INTRINSIC MOTIVATION EFFECT ON LEARNING IN A PRIVATE BUSINESS SCHOOL IN KARACHI

Shagufta Ghaur[1]

Abstract

This study is an exploratory research, based on an attempt to explore the variables that cause intrinsic motivation and to understand student's perception about the usefulness of the Organizational Behaviour course, on a private Business University in Karachi. The course was delivered to two different addressees-BBA and BS-J. The data has been collected through primary and secondary sources via questionnaire and also follow up focus group was carried out with a subset of the students after the course ended to gain insight on students' response. The study reveals interest in the subject matter, course design, novelty and teacher's enthusiasm plays a very important role in intrinsically motivating student, intrinsically motivated student has positive effect on their learning, but perceived usefulness and student learning were mixed, students of BBA-HR were more intrinsically interested in the subject matter of the course than were the other students. The results are discussed, that will assist other faculty to decide upon the ways to design course content that intrinsically motivates student, their learning and enhances their perception that leads to success in life.

Keywords: Intrinsic motivation, students learning, organizational behavior
JEL Classification: I 290

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Introduction

This research was an attempt to understand the variables that intrinsically motivates a student and effect it has on their learning, are the activities, projects, moderate balance of theory and practise, empowerment, course content, intrinsically motivates a student or not, further the researcher want to analyse the perception they have about Organizational Behaviour course. This study was conducted is the second business leading university of Pakistan. This study is of immense importance keeping in view the declining students interest and motivation in courses, as their focus is on earning grade rather than acquiring knowledge. This problem is augmented by the sensitivity that in today's competitive world only those individuals will survive who has mastery over things and are intrinsically motivated rather than having a superficial knowledge of everything, this will not get them ahead in this highly competitive battle, as a responsive researcher it is the duty of the educationist to channel their abilities and competencies in such a manner that not only makes them successful but comprehensively move them towards a better society.

Over the years there have been smattering of articles on student interest and motivation (e.g., Hiller & Hietapelto, 2001; Levy, 2007; Vaill, 2007; Robbins, 1998). As other academicians' have noted an incessant problem with pupil's motivation in the college classroom in general (e.g., Debnath, Tandon, & Pointer, 2007).

It has been observed that students' interest and motivation has declined. Various researchers have suggested that the problem is with the grades and grading (e.g., Edwards &Edwards, 1999; Levy, 2007; Van Seters & Field, 1989). Hietapelto & Hiller(2001) for example illustrated that students are more" performance oriented" than "mastery oriented" in class. This situation clearly identifies that their focus is not on learning but is an earning grades, this leads to low intrinsic motivation, involvement and commitment to the course. As there is a superfluity of evidence that high student interest is related to positive learning outcomes(Schiefele,1991,1996;Bergin,1999;Frymier, Shulman,&Houser,1996;Hidi,1990).

The study explored this area and understands how to make the course intrinsically motivating and interesting to all students and then measure the differences in their perception and selection of the career. Additional study supports the basic casual chain from interest to intrinsic motivation to learning outcomes (Webber & Patterson, 2000; Young, 2005).

The researcher's interest in undertaking this research was an effort to enhance the students' intrinsic interest in the Organizational behavior (OB) course and to determine which features in a course contribute to enhance the intrinsic motivation of a student and to evaluate difference in the intrinsic motivation that might be present in BBA students compared to BS-J.

This research will assist other faculty to decide upon the ways to design course content that intrinsically motivates student, their learning and enhances their perception that leads to success in life. Given below are the qualitative research questions:

· To explore the variables that cause intrinsic motivation
· To analyze student perception about the usefulness of OB course content

On the basis of some related literature review the following hypothesis were formulated:

H 1: Intrinsic motivation impacts positively upon students learning.
H2: To examine association between intrinsic motivation and satisfaction with OB course.

Literature Review

There is a surfeit of facts that students' positive learning outcomes are related to their interest (Bergin, 1999; Frymier, Shulman, & Houser,1996; Hidi, 1990; Schiefele, 1991, 1996). There were sequence of experiment; Schiefele (1991) found a strong correlation between interest and time spent. Highly interested students spent more time in significant thinking, seeking information, where as uninterested pupils use time memorizing.

Students can only pursue scholastic learning if they are motivated. Motivation is a significant factor for learning .As suggested by Uguroglu & Walbert (1979), motivation is an imperative contributor to academic learning and enhancement of student's achievement, Researches suggested that diverse outcomes like persistence in performance and learning are related to motivation (Deci &Ryan, 1985). There are three types of motivation, according to self determination theory (Ryan & Deci, 2000); these types are extrinsic motivation, a motivation and intrinsic motivation.

According to Deci (1975), extrinsic motivation refers to a wide variety of behaviour that is exhibited for the end means rather than for own sake, this can be further classified into different types i.e. introjections, identification and external regulation. The introjections regulation starts with an internal reason for actions, the amount to which behaviour is judged and valued for the individual, perceived as selected by oneself, then internalization of motives becomes synchronized through identification, where as external regulated behaviour is channelled through constraints and rewards.

A motivation refers to a state in which an individual is neither intrinsically nor extrinsically motivated, the individual feels incompetent and perceive his/her behaviour is caused by forces beyond their control.

The third type of motivation is intrinsic motivation, in this type the individual derives pleasure and satisfaction from participating in activities (Deci, 1975).

In academics intrinsic motivation plays a vital role, where achievements, academic learning and competency are concerned. According, to Deci and Ryan (1985), they hypothesize that intrinsic motivation stalk out from the inherent psychological need of self-determination and competence. Several studies have concluded that from childhood through adolescence, across diverse population, those having higher academic intrinsic motivation are more competent, having significantly superior academic achievements and lower anxiety and less extrinsic motivation and more positive perception of their competency(Gottfried, A.W., Gottfried, Cook, & Morris, 2005). It is also evident that particularly intrinsic motivation is related to significant learning outcomes (Love, Love, & Northcraft, 2010; Svinicki, 1998) and may have immense influence on learning than even cognitive skills (Lepper & Chabay, 1985).

Students can be taken as “strategic learners”, the focus mostly is in getting good grades in college, they avoid challenges that damage their potential academic reputation and avoid those challenges that make them uncomfortable and hinder their performance, and therefore they fail often to develop real and deep understanding of the course subject matter. According to Bain (2004) to keep away from this problem, he suggested the following strategies for instructors, in the literature on “best practices”:

- Environment should be created where students learn by dealing, intriguing significant problems, employ in authentic tasks and to study their own mental models of reality- try to involve them in considerable emotional occurrence where they invalidate their own “theories in use” (p.18) and have a wisdom of control over their own education, work with others and obtain advance feedback of any cumulative judgment of their learning (p.18)

- Make comprehensive exams giving them ample opportunity to show their competence (p.36)

- Facilitate students to keep the main questions of the course in the forefront constantly (p.38)

- Educate students to analyze and examine a book before reading it (p.88)

- Assess and anticipate both intellectual and personal development (pp.189-190): *intellectual development*- understanding material, learning to reason from facts, to utilize concepts and to engage in thinking and conversation; *personal development*- understanding ones emotion, abilities, limits, insights, nature, assumption and develop a sense of responsibility towards one’s self and others, the capability to use compassion, and capacity to understand and employ one’s emotion.

According to Bain (2004), when students are intrinsically and genuinely interested in solving problems real learning occurs.

In today's competitive world practicing managers have realized the significance of interpersonal skills referred as "soft skills" for managerial effectiveness. Over the years business institute have realized the importance of understanding human behaviour which determines the effectiveness of managers. In this challenging environment interpersonal skills are strongly tied to the need for organizations to keep high performing employees. Behavioural skills have been rated as a very important factor in the evaluation of job candidates, and in particular, in the decision to hire recent college graduates (e.g., Alsop, 2004, Cappelli, 1995; Merritt, 2004; Porter & McKibbon, 1988). Due to this preference for soft skills, it would apparently elevate the importance of OB classes in college programs. As organizations are complex systems therefore it is important to understand and deal with human behaviour effectively, this leads to the significance of OB course.

There is some confirmation that intrinsically motivated pupils become more fully devoted and more legitimately engaged in the materials to be learned (Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). Facts suggests that students who study a course only to get good grade, do not achieve as much as those who learn, as they are intrinsically interested in the understanding of the concept, as they do not think critically, infer problems thoroughly, synthesize logically , or analyze information and data systematically. Students that are extrinsically motivated usually select easier problems where as intrinsically motivated will search for challenging responsibilities, tasks that display creativity and innovation, will take moderate intellectual risks, make fewer mistakes, and achieve better under difficult conditions (Edwards & Edwards, 1999; Lepper, 1988; Pittman, Emery, & Boggiano, 1982).

The researcher's interest in undertaking this research was an effort to enhance the students' intrinsic interest in the Organizational behavior course and to determine which features in a course contribute to enhance the intrinsic motivation of a student and to evaluate difference in the intrinsic motivation that might be present in BBA students compared with BS-J students.

Methodology

Design:

Mixed method was used in this research, quantitative as well as qualitative method, while investigating into the various qualitative approaches, it is inferred that phenomenological approach will be used to understand the students perception about the organizational behaviour classes, it also aims to understand the experience of the participants with the phenomenon of organizational behaviour course. Quantitative method will identify the variables that influence intrinsic motivation on students learning. This study will enrich the researcher to better understand intrinsic motivation variables, their effect on learning and help the researcher to analyse her own predetermined ideas about the course.

Sample:

For quantitative analysis the sample size for the study was the four OB classes from Fall 2012, it was random sampling every fifth student was picked, the sample size consisted of 80 students from both BBA and BS Joint program. Among the sample, 61.4% respondents age were from 18 to 20 years, 32.8% were from 21to 22 years of age and 5.7% were 22 to 24 years of age. Male students sample size was 52.8% and 47.1% were females. There were35.7% students from the third semester, 5.7% from the fourth semester, 37.1% from the fifth semester, 7.1% from sixth semester, 11.4% from the seventh semester and 2.9 % were from eighth semester.75.7% respondents were from BBA and 24.3% were from BS-J.

As Phenomenological approach was used in this study for qualitative analysis, therefore for the study two focus groups consisting of six students were interviewed, as it is a purposive sample i.e. those participant were selected who have completed the OB course in different semesters in Fall 2012 , to gain insight on student's perception about the organizational behaviour (OB) course. As suggested by Sorrell and Redmond (1995) mainly phenomenological interviews are on one-to-one basis, yet, these interviews can also take place in groups where each respondent communicates his/her point of view. This append that group- interviews help in adding important information and insight into a phenomenon. As the sample group consists of only six people, therefore, semi-structured (Appendix-2b) interview were conducted.

Instrument:

To measure 'Intrinsic Motivation" of students, Motivated Strategies for Learning Questionnaire or MSLQ (Pintrich & DeGroot, 1990; Pintrich et al., 1993) was used and the Learner Empowerment Scale (LES: Frymier et al., 1996; Weber, Martin, & Cayanus, 2005) was used to measure the variables that empower students to learn (Appendix-2a).

To investigate student's perception about the OB course, semi – structured interview were conducted. (Appendix-2)

Results

Qualitative Analysis

Subsequently after going through the interview data it was observed that the interviews could be roughly divided into two major codes:

- To explore the variables that cause intrinsic motivation
- To analyze student perception about the usefulness of OB course content?

A:1 Variable that cause intrinsic motivation?

One thing was evident, the participants talked about the interest level in the student that intrinsically motivates a student, that was, their passion, aim in life, knowledge, something that brings a change in them, but all the respondents talked about the interest in the subject matter that intrinsically motivates them. There statements were:

Respondent 1. '*It is my interest in a particular course that drives me to a class, in my wild dreams also I can't think of bunking my class and desperately wait for the class, so it is the interest factor.*'

They all believed that it is the teacher's enthusiasm, the course design that includes activities, novelty, curiosity are some of the factors that drives them to the class and the rest of the respondents joined and agreed to it. One student added as:

Respondent 2. *'I never had liking for the course but the teacher's enthusiasm , concepts, examples and activities are so interesting that eventually I have developed an interest about the course and can't think of absences.'*

Researcher further probed the focus group by asking, is it the grades that intrinsically motivates a student for a course or the mastery over a subject. There was a pause three of them had an opinion that it is the mastery over a subject that motivates you to study. One of the participants added:

Respondent 3. '*You do forty eight* **-***courses, in all the courses you can't have mastery, and it is only some of the courses in which you want to have mastery as they are relevant to your interest*".

Further participants added that the concepts you learn and the practicality is more important rather than grade, one of the participants quoted his experience by saying:

Respondent 4. '*I got an A grade in a particular course, but I hated the class so very badly, as I had to rote learn everything, I think grade is not important when the concepts are not clear, if the teacher is simply showing slides and quoting examples from the book ,even if you are interested, this interest will gradually vanish, it is the activities, practical example from the world where you are living, things that are novel, teacher's concepts and enthusiasm all leads to learning rather than grades, he further added saying unless you are not sure how something will help you in future you will not be even motivated'*

Respondent 5*."In the course I enjoy the readings, they are more interesting and helped me to see the concepts connection to the real world, I love cases, the extra readings were especially helpful for me to understand current issues, I love those classes were we can speak and get our issues and voices heard, rather than asked to be quiet as we are running out of time, my motivation gets down and I start hating those classes."*

Respondent 6.*"I love those classes which has the element of curiosity in them, which the teacher builds, making the student more interested* *in the subject and enabling them to attend the classes regularly which helps them satisfy their curiosity which was built."*

Therefore, it can be summed up by saying that variables that intrinsically motivate a student to come to the class are interest, knowledge, teacher's enthusiasm, interactive classes, the course design, autonomy and novelty and they want to learn those concepts that will enhance their competency in future and also wants to see the relevance of the course with future practicality.

A:2 Student perception about the usefulness of OB course content?

The themes that emerged from the student perception about the usefulness of OB course content fell under headings:

(i)Behavioural skill: The first theme that was very obvious among the participants was that OB is a course that develops "people skills".

Respondent 1. *'OB deals with three independent variables that are; individual, group, and structure and their relations with different dependent variables like job satisfaction, deviance behaviour, turnover etc. It talks about how you will deal with different people in organization, the different personalities found, and their behaviour pattern and to be successful you need to have a clear and strong understanding of all this that makes this course very useful'*

Dependent variables and independent variables: As a manger once these graduates are hired has the responsibility to control the dependent variables that are turnover, deviance behaviour, absenteeism and increase productivity, job satisfaction and organizational commitment, so whether you work for a small company, service industry, product industry, a multinational company or local company, you have the pressure to deal with these issues. OB as a course gives you insight about these variables and some contingency answers to pull through. As said by one of the participants:

Respondent 2. *'OB is a core course, it actually expose you to so many realities that you are suppose to face in the real practical world, it is a very important and useful course'*

Respondent 3. *'The concepts that are taught in the course are so practical that it is not only important to be successful in organization , but you can even apply on college and personal level, for example I especially like the personality topic , I have started observing people as I have a friend, who is a Mach, I can see it, his behaviour, communication all can be clearly seen ,what I had observed while the teacher was giving me these concept, now I know how to behave with him, actually now I know how to deal with him, so you can see the usefulness of this course, it makes you more sensible'.*

The exposure of dependent and independent variable, according to the participants is very important in the practical world.

(ii) Contingency approach*: No two people are same nor their behaviour is same, therefore the participants talked about the usefulness of OB by saying it prepare us for if -then situation.*

Respondent 1. *"Well, it prepares us for the practical world."*

Respondent 2 . *"It exposes us to different situations which we might encounter in the organization."*

Respondent 3. *"Let me tell you, you can even judge people by their behaviour and then deal with them accordingly."'I have my passion to know and understand human variable it is so interesting and challenging which I have explored in OB, I can't think at present of anything.'*

Respondent 4*. "It is a good course ,I should say but I am not a people oriented person the topics like negotiation, organization change appeals me ,I am still not sure that how it will help me but as it is a course I think it will, can't say much at this level.'*

Respondent 5. *"I was not sure about the course in the beginning, but as I matured in this course it gave me more of self awareness and awareness about others, I used to be confused earlier that why is the other person taking me wrong, when I don't have those intentions, after taking the course I got few answers to my issues, it is an useful course and expose you to the challenges and opportunities you will face in the upcoming time."*

Respondent 6." *it is an useful course but I hope to remember the contents after wards, I feel it teaches you the art to deal with people ,to understand their attitudes, values and how to predict their behaviour, it's an interesting course, I must say ".*

Therefore, it can be concluded up by saying that majority of the participants strongly felt that OB teaches them how to deal with contingencies, it does not give clear cut answers to so many issues but touches them and create awareness. It is a very useful course as it prepares them how they need to behave in the organization.

Quantitative Analysis

The results were tabulated on excel sheet and analyzed by using SPSS version 17. A Linear Regression analysis was used to assess the effect on intrinsic motivation on students learning (See Table 2 & 3). The statistical analysis [(R^2 =.285, F (27, 132) = 27.132, p <.05)] reveals that intrinsic motivation effects on learning of the students.

To examine the relationship between intrinsic motivation and perceived usefulness of course a bivariate correlation was performed (Table 4 & 5), which depicts positive correlation intrinsic motivation and perceived usefulness of the course (r =.534; p<0.000, N=70). Moreover, results also predicts positive correlation between intrinsic motivation and overall satisfaction with the course (r =.688; p<0.000, N=70). This result illustrates that intrinsic motivation is significantly associated with perceived usefulness and satisfaction with the course, which is consistent with formulated hypotheses.

Table 1

Demographic Information of the Participants

Demographic Information	Frequency	Percentage %	Demographic Information	Frequency	Percentage%
Age			Programme		
18 to 20 years	43	61.4%	BBA (Hons)		
21 to 22 years	23	32.8%	BS (Joint)	53	75.7%
22 to 24 years	04	5.7%		17	24.3%
Gender			Specializations		
Male	37	52.8%	Accounting &	2	2.8%
Female	33	47.1%	Finance	4	5.7%
Semester			Economics &	4	5.7%
3^{rd} Semester	25	35.7%	Finance	11	15.7%
4^{th} Semester	4	5.7%	Economics	25	35.7%
5^{th} Semester	26	37.1%	Finance		
6^{th} Semester	5	7.1%	Human Resource	4	5.7%
7^{th} Semester	8	11.4%	Management	19	27.1%
8^{th} Semester	2	2.9%	Management	1	1.4%
			Marketing		
			Supply Chain		

Table 2

Analysis of Variance for Linear Regression with Intrinsic Motivation as Predictor of Learning

Model	SS	df	MS	F	Sig.
Regression	68.792	1	68.792	27.132	.000[a]
Residual	172.408	68	2.535		
Total	241.200	69			

a. Predictors (Constant), Intrinsic Motivation

b. Dependent Variable: Perceived Usefulness

Table 3

Coefficients for Linear Regression with Intrinsic Motivation as Predictor of Learning

Model	Un-standardized Coefficient		Standardized Coefficient	T	Sig.
	B	SE	B		
Constant	6.276	1.343		4.673	.000
Intrinsic Motivation	.192	.037	.534	5.209	.000

a. Dependent Variable: Perceived Usefulness

Table 4

A Correlation between Intrinsic Motivation and Perceived Usefulness

		Intrinsic Motivation
Perceived Usefulness	Pearson Correlation	.534**
	Sig. (2-tailed)	.000
	N	70

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

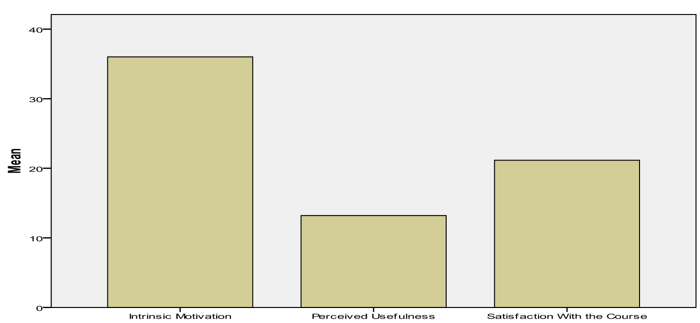
Table 5

A Correlation between Intrinsic Motivation and Satisfaction with the Course

		Intrinsic Motivation
Satisfaction With the Course	Pearson Correlation	.688**
	Sig. (2-tailed)	.000
	N	70

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

Figure 1



Discussion

At the start of this research, it was eminent, that the problem the researcher identified and wanted to study was, ‘to explore the variables that causes intrinsic motivation and to analyze students’ perception about the usefulness of the OB course’ .

The respondents of the study also synthesis that if a student has intrinsic passion, the aim of life is clear and any thing that will improve his future, the individual gets motivated,they also stated that the course design that includes activities, some uniqueness that makes them curious are also associated with intrinsic motivation.There was a strong consensus among the respondents regarding the feeling of autonomy given to them in class that leads to healthy interaction, by getting their views,issues and ambiguity heard and strongly require feedback on it.

As suggested by different researchers that learning can only take place when there is intrinsic motivation, this enhances free choice consistency in learning.Intrinsic motivation can be enhanced by using supportive feedback and interaction, clearly defined goals emphasizing over grades and by using application oriented practical exercise (Young ,2005). Even, Hiller and Hietapello (2001) suggested that when students have “voice” in the evaluation process it will lead to increase in intrinsic motivation.

From a respondent it was evident that readings that are given from real world scenario also makes them intrinsically motivated,but this point cannot be generalized ,as it has been observed that individuals who have passion for relating the theoretical concepts to the real world and want to quench their thirst of curiosity,knowledge and are internally motivated are the individuals who fall in this group.

It can be comprehended with refrence to the respondents view that the variables that intrinsically motivates an individual is the interest, thirst for knowledge,interactive classes with autonomy and feedback, novelty, course design , teacher’s enthusiasm and its relevance with the future .

Another variable that was under study was the analysis of students perception about the usefulness of Organizational Behaviour course. Interestingly, it is evident from the study conducted by Fred Luthans and his associates (May, 1988) analyzed what activities managers perform that helps them to move up quickly on job,they studied more than 450 managers, the result stated that those managers are successful(in terms of speed) who spend 48% of their time in networking. There had been recent studies in Israel,Australia,US,Italy and Japan that authenticate the link between social relationship ,networking and success within an organization as stated by Robbins et al. (2011).

These studies offer an important insight by confirming the strong link between effective managers and communication, and thus lay the importance of Organizational Behaviour as a course. When this aspect was analyzed from the participants perspective , most of them stated that it is a core course and it exposes them to realities which they will face in the real world, it explains the different personalities one will encounter, it provides you awareness about oneself and others and some contingency answers to deal with them ,which is found to be important.

Further the hypothesis formulated was 'Intrinsic motivation impacts positively upon students learning.' The focus group conducted, strongly suggest that intrinsically motivated students learning is strong, hands on activities , novelty enhances their interest, the results are in line with findings, for example, Bergin(1999) suggested that interest in the subject matter could be improved by helping student see relevance of the subject matter to their own situations, activities, and increasing novelty.

Additionally, the students who are intrinsically motivated their perception about the course is very different in comparison to take a course just to earn grade. Evidence proves that students who study only for grades is never able to achieve as much as those who learn because they are intrinsically motivated in the matter; they never analyze or synthesis issues logically, systematically and critically. Students that are externally motivated usually select easy problems, where as intrinsically motivated students will search for challenging, creative, innovative, intellectual problems, will make very few errors and perform superior under complex conditions (Edwards & Edwards, 1999; Lepper, 1998; Pittman, Emery, & Boggiano, 1982). As even suggested by Bergin (1999), there is a plethora of evidence showing positive correlation with student's interest and learning outcomes.

Students have more "influential" relationship with their courses in general, and with OB course in particular. The current research provides limited evidence for this problem, as students are no doubt drawn to professional degree because of the employment prospects. If they were only looking for job opportunities, rather than an interest in the subject matter of HR than their perception will be different and would likely pursue the MBA degree. For illustration, De Marie and Aloise- Young (2003) found out that business majors compared with education majors, were considerably less likely to say that they chose their major because of "interest area" or "interest in the class" and notably more likely to say they picked their major because it would help them "find a job more easily" and lead to "high salary". Looking at the harsh reality and belonging towards an underdeveloped country, there is a great pressure over students to take a specialization course that may earn them lucrative job prospects.

The second hypothesis of this study was to explore the whether intrinsic motivation effects learning, the statistical analysis of the study reveals that there is a strong relation between intrinsic motivation of a student and learning. Schiefele (1996) in his study investigated the effect of interest on text learning. He found that highly interested readers find material more meaningful and are more able to assimilate text material more completely. Though student interest has been refereed to as a variable impacting both learning and motivation (Frymier, 1994; Gorham & Millette, 1997; Richmond & Gorham, 1996).

The limitation in this study was that, the data and interview was collected and taken from single business school and from those OB sections that the researcher teaches, there could have been a more detailed study by also analyzing the different demographic variable provided and their relation to the topic researched. Since only those sections were tested whom the researcher taught, there might be a possibility of biasness in answering done by the participants. Going forward, the researcher even tested the relation between intrinsic motivation and course grades, as they were a part of the demographics. Due to time constrain there could have been an in-depth study on this research as there are lots of variables coming in the researcher's mind that could have been unfolded in this research to give a more rich insight to the reader.

Conclusion

In summary, the research was to explore the variables that cause intrinsic motivation and its effect on learning and to analyze students' perception about Organizational Behaviour course. The findings of the study supports this view that an intrinsically motivated student has a positive effect on their learning and variables like supportive feedback, interaction, course design, practical oriented exercise, knowledge thirst, curiosity, teacher's enthusiasm, practicality of concepts and interest are associated with intrinsic motivation and has a positive impact on learning. The results further supported that intrinsically motivated students perception and satisfactions about OB course is positive which was also proven statistically.

Teachers need to closely identify the variables in this research that leads to intrinsic motivation, as participants mentioned that, there should be examples, activities beside the text book that create interest in the students that motivates them to come to the class. Students should have a voice in their evaluation that gives them a feeling of autonomy that also leads to intrinsic motivation. The study clearly identify that the teacher enthusiasm, passion plays a very important role in developing intrinsic motivation, teachers instead of teaching should move towards learning, bringing a permanent change in them, further they should design the syllabus, keeping the practicality of the application on job that also enhances their perception about courses that will further aid them in selection of specialization. They should also work towards moulding the mindset of the lost students, channelling their energy in right and constructive direction.

Thus, teachers teaching courses should create course outlines in such a way that intrinsically motivates a student to learn and change their perception. Enthusiasm and passion of the teacher plays a very important role in maximizing the effect. Course redesign should be an ongoing process and incorporate a variable that intrinsically motivates them towards learning a course.

References

Alsop, R. (2004, September 22). And the winners are . . . *WSJ* guide to business schools: Recruiters' top picks. *Wall Street Journal*, R1-R10.

Bain, K. (2004). *What the best college teachers do*. Cambridge, MA: Harvard University press.

Bergin, D. A. (1999). Influences on classroom interest. *Educational Psychologist, 34,* 87-98.

Cappelli,P.(1995).Is the "skills gap" really about attitudes? *California Management Review,37,*108-124.

Debnath, S. C., Tandon, S., & Pointer, L. V. (2007). Designing business school courses to promote student motivation: An application of the job characteristics model. *Journal of Management Education, 31*, 812-831.

Deci,E.L., Koestner,R.,& Ryan,R.M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin, 126*,627-668.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self determination in human behavior.* New York: Plenum.

Deci, E.L. (1975). *Intrinsic motivation.* New York: Plenum Press.

DeMarie, D., & Aloise-Young, P. A. (2003). College students' interest in their major. *College Student Journal*, *37*, 462-469.

Edwards, C. H., & Edwards, L. (1999). Let's end the grading game. *The Clearing House*, *72*, 260-263.

F.Luthans," Successful vs. Effective Real Managers," *Academy of Management Executive*, May 1988, pp. 127-132; and F. Luthans, R.M. Hodgetts, and S.A. Rosenkrantz, RealManagers (Cambridge, MA: Ballinger, 1988).

Frymier, A. B., Shulman, G. M., & Houser, M. (1996). The development of a learner empowerment measure. *Communication Education*, *45*, 181-199.

Gottfried, A.W. (1985). Measures of socioeconomic status in child development research: Data and recommendations. *Merrill-Palmer Quarterly*, *31*, 85–92.

Hidi,S. (1990). Interest and its contribution as a mental resource for learning. *Review of Education Research,60*, 549-571.

Hiller, T. B., & Hietapelto, A. B. (2001). Contract grading: Encouraging commitment to the learning process through voice in the evaluation process. *Journal of Management Education*, *25*, 660-684.

Lepper, M. R., & Chabay, R. W. (1985). Intrinsic motivation and instruction: Conflicting views on the role of motivational processes on computer-based education. *Educational Psychologist*, *20*, 217-230.

Levy, S. (2007). An inquiry into motivation using the case of Phaedrus' demonstrator. *Journal of Management Education*, *31*, 797-811.

Love, E. G., Love, D. W., & Northcraft, G. B. (2010). Is the end in sight? Student regulation of in-class and extra-credit effort in response to performance feedback. *Academy of Management Learning & Education*, *9*, 81-97.

Merritt,J. (2004, October 18). The best B-schools. *Business Week*, 63-94.

Pintrich, P. R., & DeGroot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology*, *82*, 33-40.

Pintrich, P. R., Smith, D. A. F., Garcia, T., & McKeachie, W. J. (1993). Reliability and predictive validity of the Motivated Strategies for Learning Questionnaire (MSLQ). *Educational and Psychological Measurement, 53*, 810-813.

Pittman, T. S., Emery, J., & Boggiano, A. K. (1982). Intrinsic and extrinsic motivational orientations: Reward-induced change in preference for complexity. *Journal of Personality and Social Psychology, 42*, 789-797.

Porter, L.W., & McKibbon, L.E. (1988). *Management education and development: Drift or thrust into 21st century.* New York, NY: McGraw-Hill.

Ryan, R.M., & Deci, E.L. (2000). *When rewards compete with nature: The understanding of intrinsic motivation and selfreulation*.pp14-54.

Robbins, S P.(1988). Forgetcontingency theories in the classroom or why students like directive leadership. *Organizational Behavior Teaching Journal*, 12(4), 77-78.

Robbins,S.P.,Judge,A.T. &Vohra,N. (2012). Organizational Behavior,14th edition,8-9. India: Prentice Hall press.

Schiefele, U. (1991). Interest,learning, and motivation. *Educational Psychologist, 26*, 299-323.

Schiefele, U. (1996). Topic interest, text representation, and quality of experience. *Contemporary Educational Psychologist, 21*, 3-18.

Sorrell, J. M., & Redmond, G. (1995). Interviews in qualitative nursing research:differing approaches for ethnographic and phenomenological studies. *Joumal of Advanced Nursing*, 1117-1122.

Uguroglu, M. E., & Walberg, H.J. (1979), Motivation and achievement: A quantitative synthesis. *American Educational Research Journal*, 16, 375-389

Vaill, P.B. (2007).F.J. Roethlisberger and the elusive phenomena of organizational behavior. *Journal of Management Education,31*,321-338.

Van Seters,D., & Field, R.H.G. (1989). The MBA program: Viewsfrom a student and a professor. *Organizational Behavior Teaching Review,13* (3),59-71.

Vansteenkiste, M., Simons, J., Lens, W., Sheldon, K. M., & Deci, E. L. (2004). Motivating learning, performance, and persistence: The synergistic effects of intrinsic goal contents and autonomy-supportive contexts. *Journal of Personality and Social Psychology*, *87*, 246-260.

Weber, K., & Patterson, B. R. (2000). Student interest, empowerment, and motivation. *Communication Research Reports*, *17*, 22-29.

Young, M. R. (2005). The motivational effects of the classroom environment in facilitating self-regulated learning. *Journal of Marketing Education*, *27*, 25-40

SHORT RUN AND LONG RUN PERFORMANCE OF INITIAL PUBLIC OFFERINGS IN PAKISTAN

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Abstract

This research analyzes the performance of IPO's on first trading day and in long run for firms listed on Karachi stock exchange during period 2000-2011. First trading day IPO performance is measured with market adjusted abnormal return. Sample for first trading day IPO performance consists of 69 IPOs. Results show that on first trading day market awards investors with mean abnormal return of 53.82%. First trading day returns are analyzed on sectoral and yearly basis as well. Results show that performance of IPOs in some sectors was better than others and similarly in some years IPOs performance was better than others.

The performance of IPO's was at peak during year 2008. For long run performance which is measured through cumulative abnormal return model, sample consists of 57 IPOs held at Karachi stock exchange during period 2000-2009. To observe long run performance for three years, those IPOs are not taken that has not completed three years period. The long run performance is measured on weekly, fortnightly, and monthly returns basis up to three years. There are 156 weeks, 78 fortnights and 36 months. Cumulative abnormal returns show that market outperforms in long run and IPOs underperform.

Keywords: IPO, Karachi Stock Exchange, market adjusted abnormal return, cumulative abnormal return.
JEL Classification: E 440

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Introduction

When a firm goes public, it becomes under more examination and inspection by the people and investors. Such firms are also monitored by authorities such as stock exchanges, security exchange commission of Pakistan etc. to make sure that such firms may not deceive their shareholders and general public who might be interested in making investing in those firms. After issuing shares company has more responsibility than before. On the other hand investors will be more interested in company than before as now they have stake in it. Whenever businesses plan to expand, they need funds and for that purpose they have to select one of four options; 1) retain earning, 2) borrowing money from banks, 3) issue bond or 4) issue equity. Small businesses and partnership businesses use first two options to raise money; however a corporation has all four means to raise funds. Every method of financing has its own merits and demerits which depend on the circumstances. First of all company go for internal financing to capitalize investment opportunities which is the easiest way as they don't have to go anywhere to search for capital but along with this company have to see their dividend policy like if they have policy of giving stable dividends then they can't stop giving dividend because otherwise it will be against the interest of company. If it is depleted then company go for external financing. Among external financing debt is given preference but after a certain level it is no more sensible to issue more debt so company go for preferred stock and after its depletion company issue convertible securities and as a last resort equity is issued. Shareholders don't like company to issue further equity and if company does, it is taken as a negative signal representing that market price of share is undervalued as the managers better know about the condition of the company and they are trying to get benefit from overvaluation of their stock.

When a new security comes into the market, a question is raised that how much to pay for that security. To answer this question investors use different approaches while all lie on the expected future benefits of that security. Some investors rely on the past earning of that company. In some countries a prospectus is issued and from that investor evaluates the security and corporation. Sometimes these earnings are manipulated to misguide the investor about the truth of the business which leads them to pay idealistic price for the security. Sometimes it is in the favor of the company to manipulate their earnings downward and sometimes it is favorable to manipulate upward. Managers have more discretion on selecting any accounting method to use, they know better than others about company's risk, business and opportunities, so they follow such procedure which might shows performance of that business in a way which is not the reality but favorable to managers or company. The most common terminology used for these kind of activities is called earning management. It is found by most researchers that venture-backed represent lower manipulation in earning and venture-backed corporations perform better than non-venture-backed corporations. Because of lots of reasons there is greater chance of occurrence of such activities at the time of IPO which took the interest of researchers towards itself. They are legal but can misguide the investor. Lot of research has done on this topic by taking different variables and from different dimensions. Some uses annual data while some used quarter data. They involve the manipulation of accounts and are based on manager's judgment. Potential area of such manipulation is that of accruals. These accruals are one way or other used as proxy for manipulation in earning (Gaioielli and Carvalho, 2008).

This study contributes to literature in performance of firms after IPO in short run as well as in long run. As KSE is more volatile market in the world, therefore this research contributes the existing literature as long run performance is not measure after the period of three years in KSE. So this research will help the investor whether they retain shares for longer run or not considering the volatile nature of KSE. This study can be generalized not only for Pakistan but for other countries as well. As we all know stock market is much sensitive to information coming into it, it responds quickly to that information.

Value of a stock depends heavily on information. Extensive research has done on the performance of IPO's. Most of researches have shown that stock market rewards its investors with positive abnormal returns on first trading day. The specific objectives of this study are to analyze the IPO performance on first trading day using abnormal returns and also to analyze the long run performance of IPO's on weekly, fortnightly, and monthly returns up to three years.

Literature Review

Stock markets came into existence to protect investors against their investment. It facilitates investors in trading. Karachi stock exchange is known as the most unpredictable market of the words. Stock market is very much sensitive to any information that comes into it. Sometimes broker manipulate this information in their favor which lead investor to suffer losses. In 2005 due to a stock market crash investor lose a lot. Brokers were believed to manipulate but no appraisable step was taken. Only show cause was sent to 88 brokers. To prevent any such happening in future stock exchange demutualization bill was approved by National assembly (on October 8, 2009) and parliament (on March 27, 2012). Sohail and Nasr (2007) was the first study to our information on IPO performance in Pakistan which took sample of 50 IPOs held during period of 2001 to 2006.

Sohail and Raheman (2010) studied the short run market-adjusted performance of IPOs under different state of economy; normal, boom and recession. They took sample of 73 IPOs of Karachi stock exchange covering period 2000-2009. KSE index is used as base for division of market into these three states of economy. This study found that Pakistani IPO market performs better in short run pleasing investors with unusual positive returns. Wealth relative model was used to confine the impact of these unusual returns. Sector-wise analysis indicates that some sectors performed better even in recession. Year-wise analysis showed year 2008 an excellent performance year.

Sahoo and Rajib (2010) studied the IPO undervaluation on the first day trading and their poor performance after that as compared to market benchmark. Focal point of the study is the valuation of price performance of IPO up to 36 month including first day. The study conducted on a sample of 92 IPO's of India and found that they did not perform well in long and short run. The article shows that on average Indian IPO do not perform well on the first day compared to market index. The result shows that IPO underperformance is more seen in first year trading i.e. up to 12 months. On the other hand long run performance is measured with wealth relative and BHAR. Calculation of wealth relative for 12 month,24month, and 36month from the first day of trading. Wealth relative greater than 1 shows better IPO performance than market and vice versa. The BHAR results showed that in 1st year the IPOs did not perform but for 24 and 36month they outperform as value of BAHR for this period is positive. Regression analysis is used to check factors influencing underperformance. Results showed that first day return, offer size, leverage at IPO date, timing of issue were extensively influencing underperformance. Some factors have no impact on underperformance like age of the IPO firm, rate of subscription, promoter group's retention, and price-to-book value.

Rizwan and khan (2007) studied the long run performance of private versus public sector IPOs of Pakistan. The study aimed to examine that to what extent private sector IPOs and public sector IPOs are different in context of under pricing in Pakistan, why under pricing is done and how to compare long run performance of public and private IPO. Sample taken was of 35 IPOs from Karachi stock exchange where 7 were private sector IPOs and rests were public IPOs held in period 2001-2006. Buy and hold returns were calculated to analyze the short term stock performance. To analyze the performance market adjusted returns which were the difference between initial return and respective market return were also calculated. Study found that initial abnormal returns have positive relationship with corporation size indicating that government sold big corporations at cheaper rates. In long run public sector perform better than that of private. Empirical results indicate that in short run private sector IPOs were considerably more underpriced than that of public sector. Study also found that signaling model does not work to explain initial excessive returns of Pakistan IPOs.

Sohail and Nasar (2007) studied the IPOs of Pakistan. The purpose of the study was to find out the initial public offerings performance in Pakistan. They have taken sample on 50 IPO companies listed in Karachi stock exchange from year 2000 to year 2006. In year 2000 to year 2006 total 55 IPO's took place. Different methodologies (market adjusted abnormal return, Buy and hold returns, cumulative abnormal return etc) were used in order to measure the performance of initial public offering in Pakistan. According to this article an average under-pricing in KSE index during year 2000 to year 2006 is 35.66% and buy-and-hold abnormal return and cumulative abnormal return shows negative results for first year of its listing period. Furthermore 15 out of 50 IPO's (30%) provide negative initial abnormal return, While 35 out of 50 IPO's (70%) provide positive access abnormal return. For entire sample market adjusted abnormal return (MAAR) is 35.66.The variables used are P/E, market capitalization, M.V gross proceeds, size etc. According to this article, investments in IPO companies have negative return over a period of one year after listing.

Procianoy and cigerza (2007) studied the short run and long run performance among India, china, and Brazil. The purpose of this study was to compare the performance of IPOs issued during 2001-2006 by the Brazil, India, and china companies. The short run and long run performance is checked by different methodology, short run performance is calculated through initial return, e.g. difference between first day closing price and offer price. For long run performance is measured using BHAR and average monthly market-adjusted return. Linear regression is used to clarify the IPOs performance. dependent variable is taken from short time period performance(return) and from long-run performance (BHAR).independent variable used from previous studies, like interest rate, inflation, country risk, FDI, GDP growth etc .193 IPOs is included in the sample 29 from brazil 91 from India and 70 IPOs from china. Data is taken from Bombay stock exchange, BOVESPA stock exchange, and Hong Kong stock exchange. Due lack of data of Chinese offer calculation of initial return are not possible in case of china the initial return of brazil and India are 7.10% and 30.68%.buy-and –hold –market adjusted return for brazil 10.94% and negative for india-7.06%. The result shows us that IPOs of china and Brazil are over perform MMAR result for Brazil, India, and china were 1.06%,-0.66%, and 3.65%.

Alvarez and Gonzalez (2001) studied the long run Spanish IPO performance from 1987-1997 holding a sample of 56 companies. Data is gathered from Madrid stock exchange and Spanish security commission. Stocks return of initial moments of investors, first trading day and in long run for 12, 36 and 60 months after initial day are calculated. Different (Buy and hold returns, fama & fench three factor model) methodologies and benchmarks were used to determining the strength of IPOs performance. Buy and hold return and fama & fench have given different results. The study found that unusual returns for first year are positive while for 3rd and 5th year they are negative. Aggarwal et. al. (2001) studied about tactic behind the under-pricing of initial public offering and selling of share at the time of its expiration of lockup duration. They took sample of 621 non-internet IPOs and internet related IPOs during period year 1993 to year 1999. The purpose of this paper is to check manager tactics to under-price the IPO, its information which flow in the market and selling the share at the end of lockup duration. According to this paper manager intentionally under-priced IPO at first day trading to increase their wealth by selling a part of their share at lockup period’s end, in fact this under-pricing create positive information in the market and ultimately the demand curve shifts upward for these stock which allow the manage selling of their shares at higher price on the expiration of lock up duration (usually 90 to 180 days after IPO).They used regression model to gauge the impact of different variables on under pricing which show that first-day IPO under-pricing and manager lockup shares, analyst coverage research and under-pricing, research coverage and price of stock throughout lockup period end and manager selling of lockup share at its expiration period are positively correlated with each other. Khurshed et. al. (1999) studied the long- run IPO performance. This study intended to find that either long-run IPO performance is affected by factors before IPO with sample of 240 UK issuing companies for period of 1991-1995. Initial trading information was obtained by using UK equity database. Market adjusted abnormal return are calculated through HGSC index. The study reveals the positive relation between firm size and long-run performance. Larger the size of the company, better the performance and less risk the company is. This study also found that being multinational is associated with higher performance and it showed that greater the amount of equity sold at issue, poorer the performance will be in long-run.

Firth (1997) studied the Long run stock performance of New Zealand's IPOs where huge number of companies were listed during 1977-1997. In New Zealand most important factor for valuation of companies is their expected earning mentioned in their prospectus. They took sample of 143 IPOs covering period 1979-1987. Company relevant data was taken from its prospectus while stock data was taken from stock exchange and local database. For analysis they considered the abnormal stock returns which were the difference between company's stock returns and equivalent companies stock returns of the same period. Those equivalent companies were from the same industry and are close in terms of market capitalization. Returns were the average of monthly returns. They found wealth relative where wealth relative of more than one indicate the outperformance and below than one shows underperformance. 1st day abnormal return was 25.87%. Regression analysis revealed that gross proceeds of IPO and retention of ownership of pre-issue owners have no relation with IPO performance. Study shows that cumulative average returns of 1st and 3rd month was positive while that of 2nd, 12th,24th,36th,48th and 60th were negative.

In our study we focus on the methodology point of view i.e. the way long run performance is measured. We applied CAR method. Fama (1998) also preferred this model instead of BHAR model. In literature long run performance is measured on monthly basis but in our study we measured long run performance on weekly, fortnightly basis in addition to monthly basis.

Research Methodology

In this study we have used market returns and stock return as variables where KSE 100 Index is used as a proxy for market and any increase or decrease in this index is taken as market return. This return is calculated as

$$R_m = (I_{t2} - I_{t1}) / I_{t1}$$

Where, R_m = market return during period t1 to t2, I_{t1} = KSE 100 index at period t1 and I_{t2} = KSE 100 index at period t2.

While calculating on monthly basis t2 is current month KSE 100 index and t1 is previous month KSE 100 index. Similar is for fortnight and week. We calculated returns on first trading day, weekly, fortnightly, and monthly basis for each IPO. For calculating weekly returns we took every fifth observation, for fortnight every tenth and for month every 22th observation of KSE100 against the respective trading days for three years.

Similarly stock return is calculated from period t1 to t2. This period is one day or whatever period is selected. T1 represents the starting date of the period while t2 represents the end date of the period.

$$R_s = (P_{t2} - P_{t1)} / P_{t1}$$

Where, R_s is stock return during period t1 to t2, P_{t1} is closing price of stock at first date of period and P_{t2} is closing price of stock at end date of period

While calculating on monthly basis p2 is current month's closing price and p1 is previous month's closing price. Similar is for fortnight and weekly returns. We calculated returns on first trading day, weekly, fortnightly, and monthly basis for each IPO. For calculating weekly returns we took every fifth observation, for fortnight every tenth and for month every 22th observation of IPO trading days for three years. In order to measure the returns, we have used abnormal return and cumulative abnormal returns model.

Market adjusted abnormal returns

For analyzing first day trading we have used market adjusted abnormal return. This measures the first day abnormal return of IPO. It is calculated as the difference between first day stock return and respective market return.

MAAR = first day stock return – respective day market return

$$MAAR = R_{s,f} - R_{m,f}$$

First day stock return is calculated as

$$R_{s,f} = (P_1/P_s)-1$$

Where, Rs is stock return price on first trading day, P_1 is stock closing price on first trading day, Ps is stock subscription price

While respective market return is calculated as

$$R_{m,f} = (KSE100_f/KSE\ 100_s)-1$$

Where, $R_{m,f}$ = market return from subscription of IPO to first trading day of IPO, $KSE100_f$ = KSE100 at first trading day of IPO, $KSE100_s$ = KSE100 at subscription date of IPO

Abnormal returns

Abnormal return is defined as the performance of IPO that varies from market return. Abnormal returns are calculated as the difference between stock returns and market returns. Abnormal returns are normally calculated as the difference between the security return and its expected return. Here it is assumed that market return is the expected return for the securities. If stock performance is more than the respective period's market return then its abnormal return will be positive while if its performance is weaker than respective period market return then abnormal return will be negative. We calculated abnormal returns on first trading day, weekly, fortnightly, and monthly basis for each IPO. For calculating weekly returns we took every fifth observation, for fortnight every tenth and for month every 22th observation of the trading days for three years.

$$AR_t = R_{s,t} - R_{m,t}$$

Where, $R_{s,t}$ = stock return at time t, $R_{m,t}$ = market return at time t

Cumulative abnormal return

Abnormal return is a measure of performance of IPO at a specific time but it does not consider variations that normally occur over period. To account for these variations Cumulative abnormal return is used which is the summation of all abnormal returns over a period of time. Cumulative abnormal returns provide Long run effect of initial public offering. We calculated cumulative abnormal returns on first trading day, weekly, fortnightly, and monthly basis for each IPO.

CAR_t = " AR_t

CAR_t = cumulative abnormal return at time t

" AR_t = summation of all abnormal returns till period t

t = week, fortnight or month

Based on the above models, we developed following hypothesis

H1: Stock market offer its investor abnormal returns on first trading day

H2: Investor is rewarded negative abnormal return in long run

Sample and data

We have analyzed those IPOs which took place during period 2000 to 2010 and listed at Karachi stock exchange. For short run analysis which is initial trading day, a sample of 69 IPOs while for long run performance a sample of 57 IPOs was selected. Selection is based on the listing data collected from Karachi Stock Exchange website. There are 86 listed IPOs among which 10 were mergers while 7 were already subscribed. We exclude these IPOs from our analysis because no subscription dates were available for those already subscribed. We excluded mutual funds, mergers, preferred stock, and companies which were already listed. Data is collected from website of Karachi Stock Exchange and brecorder.com. For long run analysis, the performance is analyzed for three years which restricted our analysis to years 2010 as the IPOs in year 2010 and 2011 have not completed three years yet.

Data Analysis and Discussion

This section describes the results of our study and their interpretation. Results are categories according to model used to measure the performance. Performance of IPOs on first trading day is analyzed through MAAR. First trading day IPO performance is viewed in context of sectors and years. Long run performance of IPOs is measure through cumulative abnormal returns.

Short Run Analysis (First Trading day)

We took sample of 69 IPOs occurring from 2000 to 2011 to analyze first day return. Our study shows that on average MAAR is 53.82% with a standard deviation of 1.71 as presented in following Table No.1. On the other hand abnormal returns of 57 IPOs are 64.46% show that underpricing is reduced in 2010 and 2011. Results can be shown in table 1-B. Statistics shows that these results are significance. Results show that some IPOs perform extremely well while performance of some IPOs were poor with respect to market. Analysis shows that overall Karachi stock exchange rewards its investors with considerable abnormal return on first trading day. First table in the annexure presents the market adjusted abnormal returns (MAAR) for these IPOs. This MMAR means that if an investor buy stock from primary market and sell it at the end of first trading day on secondary market then how much excess return it earn from market.

Table 1-A				
Initial Day Abnormal Return				
N	Mean	Std. Deviation	T stat	Sig. (2-Tailed)
69	0.538207	1.711811	2.61167	0.011078
Sector Wise Initial Abnormal Returns				
N	Mean	Std. Deviation	T stat	Sig. (2-Tailed)
20	53.82%	52.24%	4.40	0.00031

Table 1-B.				
Initial Day Abnormal Return for 57-IPOs				
N	Mean	Std. Deviation	T stat	Sig. (2-Tailed)
57	0.6446	1.8165231	2.723173	0.002310
Sector Wise Initial Abnormal Returns				
N	Mean	Std. Deviation	T stat	Sig. (2-Tailed)
17	654.64%	50.61%	4.51	0.00027

Sector wise analysis reveals that some sectors' IPOs perform better while some sectors' IPOs perform weaker than market. As shown in table 2-(a) and 2-(b) that there were 3 sectors out of 20 whose market adjusted abnormal returns were negative while rests of the sectors perform better than that of market. Average sector wise abnormal return presented in above table No. 1 was 53.82% with standard deviation of 52.24%. This shows that on average performance of IPOs on first trading day across sectors was better than market as presented in table 2-(b).

Table 2-(a)

Sector-wise Average Abnormal Return

Sector Name	No of IPOs	Abnormal Return
Fixed line telecommunication	5	-0.54%
Automobile and parts	1	-9.31%
Bank	10	174.14%
Construction and materials	5	14.03%
Oil and gas producers	4	94.02%
Chemicals	7	65.86%
Support services	1	58.61%
Industrial transportation	1	86.40%
General industrials	1	107.68%
Media	4	12.04%
Personal goods	7	-11.64%
Financial services	11	38.46%
Electricity	4	23.56%
Software n computer services	1	32.57%
Industrial metals and mining	2	31.09%
Real estate investment and services	1	99.35%
Segment	1	143.67%
Non life insurance	1	0.92%
Food producers	1	7.92%
Non life insurance	1	58.61%
Total	69	53.82%

Sector-wise average first IPO day's returns are presented in the following Table 2-(b)

Table 2-(b)

Sector wise average first IPO day's returns

S#	SECTOR	1st IPO day's return	MARKET RETURN	1st day Abnormal Returns
1	Fixed Line Telecommunication	(0.0209)	(0.0156)	(0.0054)
2	Automobile and Parts	(0.0050)	0.0881	(0.0931)
3	Bank	1.7958	0.0545	1.7414
4	Construction and Materials	0.1501	0.0098	0.1403
5	Oil and Gas Producers	1.0470	0.1068	0.9402
6	Chemicals	0.6673	0.0088	0.6586
7	Support Services	0.8300	0.2439	0.5861
8	Industrial Transportation	0.7800	(0.0840)	0.8640
9	General Industrials	1.1500	0.0732	1.0768
10	Media	0.0495	(0.0709)	0.1204
11	Personal Goods	(0.0855)	0.0309	(0.1164)
12	Financial Services	0.4066	0.0220	0.3846
13	Electricity	0.2435	0.0080	0.2356
14	Software & Computer Services	0.3620	0.0363	0.3257
15	Industrial Metals and Mining	0.4049	0.0940	0.3109
16	Real Estate , Invest. & Services	1.0643	0.0708	0.9935
17	Segment	1.3850	(0.0517)	1.4367
18	Non Life Insurance	(0.0040)	(0.0132)	0.0092
19	Food Producers	(0.0116)	(0.0908)	0.0792
20	Non Life Insurance	0.8300	0.2439	0.5861
	Average	**0.5520**	**0.0282**	**0.5352**

Furthermore, sector-wise analysis is also made on broader sectoral basis covering manufacturing, financial institutions and other services sectors which is presented in table 2-(c). The significant abnormal returns are observed on first trading day as shown in following Figure No.1. The investors of financial institution sectors can earn higher return as compared to manufacturing and other services sectors.

Table 2- (c)

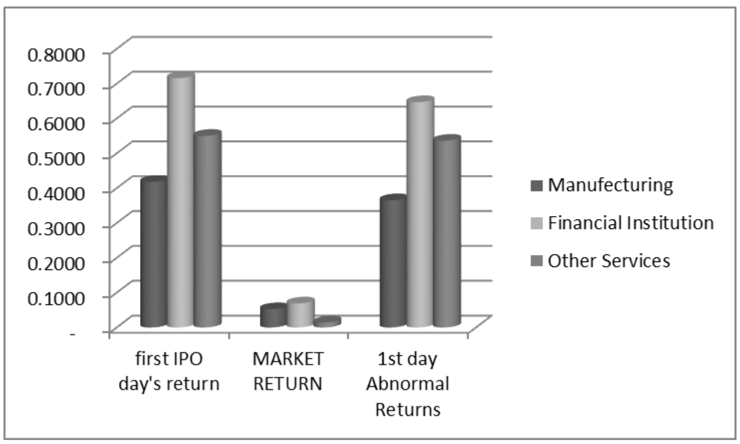
Analysis of Manufacturing, Financial Institutions and Other services

S#	SECTOR	first IPO day's return	MARKET RETURN	1st day Abnormal Returns	t-Stat
1	Manufacturing	0.4180	0.0526	0.3654*	3.3201
2	Financial Institution	0.7161	0.0691	0.6470*	4.4002
3	Other Services	0.5503	0.0142	0.5361*	3.821
	Average	0.5520	0.0282	0.5382*	4.40

*significant at 1% level

Figure No. 1

Analysis of Manufacturing, Financial Institutions and Other services



Year wise analysis shows that in some year IPO performance was superior to that of others. In year 2008 highest performance of IPOs is recorded. In year 2008 abnormal return was 195.95%. Overall year wise market adjusted abnormal return was 45.86% with standard deviation of 58.16%. During period 2000 to 2011 every year IPO performance was better that market except year 2010. Results show than on average performance of IPOs across years was better than market.

Table No. 3
Year -wise Abnormal Returns

N	Mean	Std. Deviation	T	Sig. (2-Tailed)
12	45.86%	58.16%	2.73	0.01954

Year-wsie Market Adjusted Abnormal Returns

YEAR	No of IPOs	MAAP
2000	3	0.0827
2001	2	0.0710
2002	4	0.1037
2003	3	0.6848
2004	10	0.3314
2005	14	0.3036
2006	2	1.0852
2007	9	0.7128
2008	9	1.9595
2009	3	0.1604
2010	6	-0.0108
2011	4	0.0188
TOTAL	69	53.82

Long Run Performance Analysis

We have measured the long run performance for three years. To measure long run performance we took weekly, fortnightly, and monthly returns. We calculated cumulative abnormal returns for 36 months, 78 fortnights and 156 weeks, in other words we get results for three years. We calculated cumulative abnormal returns for every week, fortnight, and month.

Weekly cumulative abnormal returns for a specific period mean that if investor purchase IPO on second trading day of IPO and hold it for a specific period then how much it earn. Cumulative abnormal return for one week means that if investors keep it for one week then how much it earn, cumulative abnormal return for week 2 means that if investor keep it for two weeks then how much total return it earn and so on. Positive value for a specific period means that IPO has performed well than market in that period. Cumulative weekly abnormal returns presented in Figure No. 2, shows that in long run IPO underperform. Out of 156 weeks only 21,39,40,41 and 47th week cumulative abnormal returns were positive while rests of the weeks cumulative abnormal returns were negative. T stat shows that up to 10 weeks results were significant while afterwards they were insignificance. If we take alpha at 10% then week 150-156 are also significant.

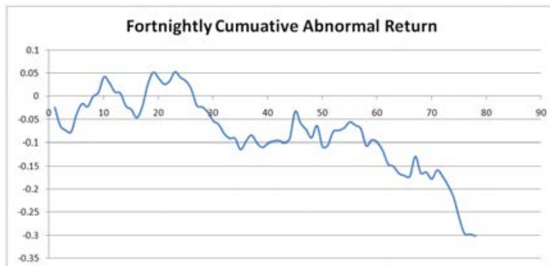
Figure No. 2

Cumulative Weekly Abnormal Returns

Fortnightly cumulative abnormal returns for a specific period mean that if investor purchase IPO on second trading day of IPO and hold it for a specific period then how much it earn. Cumulative abnormal return for one fortnight mean that if investors keep it for one fortnight then how much it earn. Positive value for a specific period means that IPO has performed well than market in that period. Annexure 2 contains the cumulative fortnightly abnormal returns. Out of 78 fortnights only 9-13, 18-26 fortnights' returns were positive. Mean if an investor hold till these periods then he will earn more returns then market. T-stat shows that only in 2nd and 3rd fortnight results was significance while they were insignificance for rests of the fortnights. At alpha of 10% CAR for 4th, 76th, 78^{th,} and 79th fortnight also become significant. Overall results indicate that IPO underperform.

Figure No. 3

Cumulative Fortnightly Abnormal Returns



Monthly cumulative abnormal returns for a specific period mean that if investor purchases IPO on second trading day of IPO and hold it for a specific period then how much it earn. Positive value for a specific period means that IPO has performed well than market in that period. Annexure 3 represents the cumulative monthly returns. Monthly cumulative abnormal returns in Table No. 4 show that out of 36 months only for 2-10, 13-17th month IPO perform better. T-stat shows that all results are insignificant.

Figure No. 4

Cumulative Fortnightly Abnormal Returns

Comparison of Results with Prior Research

Our results are consistent with prior research. Our study found initial trading day abnormal return of 53.82%. Following table No. 4 show a comparison of our study with prior studies. As shown our results for

Table No. 4
Initial Day Abnormal Return

Author/Year	Country	First Day Abnormal Return
Our Study	Pakistan	0.5382
Sohail And Raheman (2010)	Pakistan	0.4217
Sohail And Nasar (2007)	Pakistan	0.3566
Rizwan And Khan (2007)	Pakistan	0.36476
Procianoy And Cigerza (2007)	India	0.071
	Brazil	0.3068
Alvarez And Gonzalez (2001)	Spain	0.1177
Rydqvist (1997)	Sweden	0.39
Khurshed, Mudambi, And Gergen (1999)	U.K	0.0974
Michael Firth (1997)	Newzealand	0.2587

Long Run IPO performance

Author/Year	Country	Long Run Performance	Duration
Our Study	Pakistan	-0.84%	12 Months
		-6.07%	24 Months
		-18.62%	36 Months
Sohail And Nasar (2007)	Pakistan	-19.67%	12 Months
Rizwan And Khan (2007)	Pakistan	-11.26%	12 Moths
		-23.68%	24 Months
Procianoy And Cigerza (2007)	China	1.06%	45 Months
	India	-0.66%	44 Months
	Brazil	3.65%	29 Months
Alvarez And Gonzalez (2001)	Spain	-27.80%	36 Months
Khurshed, Mudambi, And Gergen (1999)	U.K	-17.81%	36 Months
Michael Firth (1997)	Newzealand	-7.72%	12 Months
		-10.12%	24 Months
		14%	36 Months
		16.83%	48 Months
		-17.91%	60 Months

initial trading day and for long run are aligned with researches done in different countries of the world.

Conclusion

We have analyzed the IPO performance on first trading day and long run IPO performance for a period of three years on weekly, fortnightly, and monthly basis. Using market adjusted abnormal return (MAAR) model study reveals that on first trading day investors are rewarded with abnormal returns with a mean of 53.82%. Sector-wise analysis reveals that in some sectors performance of IPOs on first trading day was better than other. Year wise analysis reveals that some year performance of IPOs on first trading day was better than other. Year 2008 performance of IPOs on first trading day was at its peak. For long run weekly, fortnightly and monthly cumulative abnormal returns (CAR) model show that in long run IPO remain underperformed. For one year our research shows that stock market rewards its investors with positive abnormal returns. If investors can get access to primary market they must invest in IPOs and sell them at the end of the first trading day. Investors should not keep stock for long time. Before investing in stock market investor must analyze the history of the sector as some sectors outperform than others.

The research is helpful for managers, fun mangers, academia and specially investors. If investors can get access to primary market they must invest in IPOs and sell them at the end of the first trading day. Investors should not keep stock for long time. Before investing in stock market investor must analyze the history of the sector as some sectors outperform than others.

We have used cumulative abnormal returns to gauge the long run performance of initial public offerings. In future same research can be done by adopting other models like CAPM BHARs model, Fama and French measures which is an advanced form of capital asset pricing model. Research can be conducted to check the performance of initial public offerings before and after 2005 and 2008 period under Stock market crises.

References

Agarwal, S. and L. Chunlin. 2003. Investor Demand for IPOs and Aftermarket Performance: Evidence from the Hong Kong Stock Market. *Journal of International Financial Markets, Institutions, and Money,* to be published.

Aggarwal, R. K., K. Laurie and W. Kent L. 2001. Strategic IPO Under pricing, Information Momentum, and Lockup Expiration Selling. *Journal of Financial Economics,* 66 (2002) 105–137

Alvarez, S, and G. Victor M. 2001. Long-Run Performance Of Initial Public offerings (IPOs) In The Spanish Capital Market. *Available at SSRN: http://ssrn.com/abstract=274086.*

Ber, H. and Y. Yishay. 2003. Venture Capital Funds and Post-IPO Performance in Booms and Busts: Evidence from Israeli IPO's in the US in the 1990s1. *Research Department, Bank of Israel, POB 780, Jerusalem 91007, Israel*

Brown, J. R. 2005. Venture Capital and Firm Performance Over the Long-Run: Evidence from High-Tech IPO. *The Journal of Entrepreneurial Finance,* 10(3), 1-34

Coakley, J., H. Leon and W. Andrew. 2004. Post-IPO operating performance, venture capitalists and market timing. *Essex Finance Centre Discussion Paper,* No. 04/16

Doukas, J. A. and G. Halit. 2000. Long-term Performance of New Equity Issuers, Venture Capital and Reputation of Investment Bankers. Available *at SSRNhttp://papers.ssrn.com/paper.taf?abstract_id=239421*

Dunbar, C. G. 1997. Factors Affecting Investing Bank Initial public offering Market Share. *Journal of Financial Economics,* 55: pp. 3-41

Firth, M. 1997. An analysis of the stock market performance of New issues in New Zealand. *Pacific-Basin Finance Journal,* 5 (1997) 63-85

Gioielli, S. P. O. and C. A. Gledson de. 2008. The Dynamics of Earnings Management in IPOs and the Role of Venture Capital. *journal of behavioral finance,* vole: 13 issue 2

Goergen, M .1998. Insider Retention and Long Run performance in German & UK. *Working Paper, University of Manchester Institute of Science and Technology.*

Iqbal, A. M., A. Zeeshan, and K. Iram A. 2011. Earnings Management and Privatizations: Evidence from Pakistan. *Asian Finance Association 2009 International Conference*

Kipngetich, T. J., K.B. Julius, G .S. Adan and K. B. Julius. 2011. Determinants of initial public offer pricing in Kenya. *Annual Conference on Innovations in Business & Management*

Khurshed, A., M. Ram and G. Marc. 1999. On the Long-Run Performance of IPOs. *European Financial Management Association*

Lowry, M., O. Micah S., And S. G. William, .2010. The Variability Of IPO Initial Returns. *The Journal Of Finance (forthcoming)*

Nasr, M. and S.M. Khalid. 2007. Performance of initial public offering in Pakistan. *International Review of Business Research Papers,* Vol.3 No.2 June 2007, Pp. 420 – 441

Peristiani, S. and H. Gijoon. 2004. Pre-IPO Financial Performance and Aftermarket Survival. *Federal Reserve Bank Of New York,* Volume 10,Number 2

Procianoy, J. L. and C. G. Chemale**.** 2007. IPOs in Emerging Markets: a comparison of Brazil, India and China. Available *at SSRN: http://ssrn.com/abstract=968300*

Rizwan, M. F. and K. Safi-Ullah. 2007. Long run performance of privatization versus private sector Industrial IPOs in Pakistan. *The Pakistan Development Review,* 46 : 4 Part II pp. 421–433

Rydqvist, K. 1997. IPO under pricing as tax-efficient compensation. *Journal of Banking & Finance*, 21 (1997) 295-313

Sahoo, S. and R. Prabina. 2010. After Market Pricing Performance of Initial Public Offerings (IPOs): Indian IPO Market. *Available at SSRN:http://ssrn.com/abstract=2019899*

Shachmurove, Y. 2004. The Reality of IPO Performance An Empirical Study of Venture-Backed Public Companies. *working paper*

Sohail, M. K. and R. Abdul. 2010. Examining the Short-run IPOs Performance in State of Economy: Normal, Boom & Recession. *International Research Journal of Finance and Economics*, ISSN 1450-2887 Issue 35.

Zaluki, N. Ahmad. 2008. Post-IPO Operating Performance and Earnings Management. *International Business Research,* Vol 1, No 2

Zheng, S. X. and L. Mingsheng. 2005. Under pricing, ownership dispersion, and aftermarket Liquidity of IPO Stocks. *Journal of Empirical Finance*, 15 (2008) 436–454

Annexure

Table 1	
NAME	MAAR
WorldCall PayPhone Ltd.	37.46%
Dewan Farooque Motors Ltd.	-9.31%
Al-Meezan Investment Bank Ltd.	-3.33%
Bestway Cement	10.25%
Arif Habib Securities Ltd.	3.95%
WorldCall Multimedia	-6.39%
National Bank Of Pakistan Limited	45.20%
Attock Cement Pakistan Limited	14.65%
Bosicor Pakistan Limited	-12.00%
Ittehad Chemicals Limited	60.42%
TRG Pakistan Limited A-class	58.61%
Pakistan International Container Terminal Ltd.	86.40%
Oil & Gas Development Company Limited	40.97%
WorldCall Broadband Limited	-4.22%
MACPAC Films Limited	107.68%
Callmate Telips Telecom Limited	-1.31%
Southern Networks Limited	5.15%
Bank Alfalah Limited	75.79%
Pakistan Petroleum Limited	106.75%
Chenab Limited	-3.27%
First National Equities Limited	14.03%
AMZ Ventures Limited A-class	-10.10%
Network Microfinance Bank Limited	-14.90%
International Housing Finance Limited	-11.00%
Jahangir Siddiqui Capital Markets Limited	32.63%
Attock Petroleum Limited	240.35%
Kot Addu Power Company Limited	80.68%
Dewan Farooque Spinning Mills Limited	5.06%
United Bank Limited	36.83%
Eye Television Network Limited	11.57%
Zephyr Textiles Limited	1.81%
Chenab Limited	-43.25%
NetSol Technologies Limited	32.57%
WorldCall Telecom Limited	-9.10%
D. S. Industries Limited	0.10%
Siddiqsons Tin Plate Limited	61.69%
The Bank of Khyber	134.39%

BankIslami Pakistan Limited	82.64%
Arif Habib Limited	8.47%
Hira Textile Mills Limited	-32.90%
PACE (Pakistan) Limited	99.35%
JS ABAMCO Limited	-6.20%
Flying Cement Company Limited	24.53%
Pervez Ahmed Securities Limited	56.97%
Sitara Peroxide Limited	320.53%
Habib Bank Limited	27.07%
Dost Steels Limited	143.67%
Arif Habib Bank Limited	1353.74%
Invest and Finance Securities Limited	221.64%
Thatta Cement Company Limited	25.67%
Dawood Equities Limited	122.41%
Engro Polymer & Chemicals Limited	49.80%
KASB Securities Limited	6.24%
First Credit and Investment Bank Limited	2.85%
Arif Habib Investment Management Limited	-21.10%
Descon Oxychem Limited	2.28%
Media Times Limited	32.77%
Nishat Power Limited	14.22%
Nishat Chunian Power Limited	1.13%
Ghani Gases Limited	50.26%
Fatima Fertilizer Company Limited	-2.50%
Safe Mix Concrete Products Limited	-4.94%
Agritech Limited	-19.80%
Amtex Limited	-9.05%
Wateen Telecom Limited	-20.44%
International Steels Limited	0.48%
Pakgen Power Limited	-1.81%
Engro Foods Limited	7.92%
TPL Direct Insurance Limited	0.92%
Average	53.82%

Annexure 1 Weekly Cumulative Abnormal Returns					
Week	N	Mean	Std. Deviation	T	Sig. (2-Tailed)
Week 1	57	-0.03165	0.103919207	-2.29957	0.025224
Week 2	57	-0.04399	0.151184761	-2.19671	0.032197
Week 3	57	-0.05731	0.161399152	-2.68061	0.009635
Week 4	57	-0.07713	0.163854237	-3.55383	0.00078
Week 5	57	-0.10028	0.190990524	-3.96392	0.000211
Week 6	57	-0.1006	0.216764134	-3.50376	0.00091
Week 7	57	-0.11057	0.260215685	-3.20794	0.002212
Week 8	57	-0.12018	0.296751614	-3.05749	0.003419
Week 9	57	-0.11567	0.309079104	-2.82542	0.006532
Week 10	57	-0.11152	0.341716761	-2.46386	0.016842
Week 11	57	-0.07672	0.358356846	-1.61629	0.111652
Week 12	57	-0.07671	0.371424589	-1.55916	0.124592
Week 13	57	-0.05275	0.3845579	-1.03564	0.304821
Week 14	57	-0.05941	0.39072889	-1.14793	0.255879
Week 15	57	-0.06014	0.391809149	-1.15888	0.251423
Week 16	57	-0.04583	0.38573387	-0.89708	0.373516
Week 17	57	-0.03834	0.392351514	-0.73783	0.463696
Week 18	57	-0.03576	0.380056266	-0.71031	0.480458
Week 19	57	-0.02617	0.375051616	-0.52672	0.600468
Week 20	57	-0.00885	0.374496386	-0.17837	0.85908
Week 21	57	0.003984	0.386563239	0.077804	0.938261
Week 22	57	-0.00249	0.390722688	-0.04812	0.961791
Week 23	57	-0.01128	0.405107469	-0.21017	0.8343
Week 24	57	-0.00914	0.406031083	-0.16991	0.865692
Week 25	57	-0.02913	0.416705918	-0.52783	0.599703
Week 26	57	-0.03913	0.428418182	-0.68952	0.493345
Week 27	57	-0.03758	0.415819319	-0.68237	0.497821
Week 28	57	-0.04638	0.427927177	-0.81825	0.416682
Week 29	57	-0.06356	0.436027571	-1.10048	0.275833
Week 30	57	-0.07461	0.42922767	-1.3124	0.194738
Week 31	57	-0.06957	0.451752138	-1.16261	0.24992
Week 32	57	-0.0879	0.463542417	-1.43172	0.157783
Week 33	57	-0.08855	0.488505998	-1.36851	0.176619
Week 34	57	-0.08725	0.485723259	-1.35615	0.180496
Week 35	57	-0.06257	0.494022922	-0.95618	0.343091
Week 36	57	-0.04257	0.519543226	-0.61864	0.538664
Week 37	57	-0.01763	0.534468903	-0.24899	0.804279
Week 38	57	-0.00793	0.539968528	-0.1109	0.912096
Week 39	57	0.011154	0.560695037	0.150184	0.881159
Week 40	57	0.004762	0.56994437	0.063077	0.94993

Week 41	57	0.00078	0.58692218	0.010038	0.992026
Week 42	57	-0.01002	0.583099084	-0.12974	0.897237
Week 43	57	-0.01204	0.607681492	-0.14955	0.881654
Week 44	57	-0.02168	0.616888108	-0.26535	0.791714
Week 45	57	-0.00766	0.608059477	-0.0951	0.924576
Week 46	57	-0.00907	0.616250995	-0.11116	0.911885
Week 47	57	0.008576	0.632138833	0.102426	0.918785
Week 48	57	-0.00882	0.617990755	-0.1077	0.914615
Week 49	57	-0.00192	0.618237482	-0.0235	0.981334
Week 50	57	-0.00028	0.63487704	-0.00335	0.99734
Week 51	57	-0.01011	0.642674841	-0.11875	0.905897
Week 52	57	-0.00744	0.642884519	-0.08738	0.930683
Week 53	57	-0.02783	0.652309845	-0.32212	0.748558
Week 54	57	-0.03927	0.645506628	-0.45933	0.647778
Week 55	57	-0.06027	0.647685725	-0.70252	0.485263
Week 56	57	-0.05042	0.652406005	-0.58351	0.561892
Week 57	57	-0.05936	0.660010262	-0.679	0.499936
Week 58	57	-0.04962	0.651292987	-0.57524	0.567432
Week 59	57	-0.07412	0.65728158	-0.85138	0.398182
Week 60	57	-0.08639	0.652575112	-0.99953	0.32184
Week 61	57	-0.08907	0.680599451	-0.98801	0.327396
Week 62	57	-0.08517	0.689495185	-0.93263	0.355016
Week 63	57	-0.09575	0.689810231	-1.048	0.299141
Week 64	57	-0.11544	0.685088124	-1.27221	0.208557
Week 65	57	-0.11046	0.69980756	-1.19174	0.238388
Week 66	57	-0.11726	0.666471238	-1.32828	0.189475
Week 67	57	-0.11324	0.709767928	-1.20459	0.233429
Week 68	57	-0.09537	0.721158322	-0.99845	0.322354
Week 69	57	-0.11384	0.725852503	-1.1841	0.241377
Week 70	57	-0.1302	0.726219616	-1.35358	0.18131
Week 71	57	-0.13655	0.713390146	-1.44509	0.154004
Week 72	57	-0.11839	0.713256611	-1.25314	0.215363
Week 73	57	-0.11844	0.719625225	-1.24263	0.219182
Week 74	57	-0.11032	0.744817359	-1.11823	0.268243
Week 75	57	-0.10538	0.746228882	-1.0662	0.290907
Week 76	57	-0.11823	0.761903658	-1.17153	0.246345
Week 77	57	-0.1188	0.770680209	-1.16379	0.249443
Week 78	57	-0.12167	0.782072612	-1.1746	0.245127
Week 79	57	-0.12691	0.779984577	-1.22838	0.224444
Week 80	57	-0.12847	0.783928169	-1.23722	0.221167
Week 81	57	-0.11407	0.752273258	-1.14477	0.257174
Week 82	57	-0.10756	0.791457782	-1.026	0.309303
Week 83	57	-0.11315	0.801498994	-1.06588	0.291053

Week 84	57	-0.11272	0.797870419	-1.06659	0.290735
Week 85	57	-0.11156	0.790836678	-1.06502	0.291439
Week 86	57	-0.10913	0.798898793	-1.03133	0.306818
Week 87	57	-0.11262	0.773561863	-1.09914	0.276408
Week 88	57	-0.10136	0.797446891	-0.95966	0.341353
Week 89	57	-0.10737	0.808480943	-1.00269	0.320324
Week 90	57	-0.0773	0.793799044	-0.73519	0.465295
Week 91	57	-0.05756	0.799268321	-0.54375	0.58877
Week 92	57	-0.07013	0.799491506	-0.66224	0.510535
Week 93	57	-0.08336	0.803833069	-0.78294	0.436961
Week 94	57	-0.08815	0.788567883	-0.84395	0.40229
Week 95	57	-0.09375	0.791695145	-0.89405	0.37512
Week 96	57	-0.10452	0.774815763	-1.01844	0.312849
Week 97	57	-0.10966	0.807144381	-1.02577	0.30941
Week 98	57	-0.08839	0.796152467	-0.83822	0.405473
Week 99	57	-0.08006	0.802538746	-0.75313	0.454526
Week 100	57	-0.10222	0.800440171	-0.96416	0.339109
Week 101	57	-0.12116	0.799040026	-1.14476	0.257178
Week 102	57	-0.1306	0.804862528	-1.22506	0.22568
Week 103	57	-0.12127	0.800361181	-1.1439	0.257532
Week 104	57	-0.11046	0.826185603	-1.00941	0.317121
Week 105	57	-0.09272	0.798026394	-0.87714	0.384156
Week 106	57	-0.09237	0.80503728	-0.86625	0.390049
Week 107	57	-0.09276	0.811093377	-0.8634	0.391602
Week 108	57	-0.08819	0.827735021	-0.80435	0.424599
Week 109	57	-0.09006	0.839786868	-0.80965	0.421569
Week 110	57	-0.07268	0.857331802	-0.64004	0.524759
Week 111	57	-0.07702	0.857025627	-0.67851	0.500241
Week 112	57	-0.08748	0.859126679	-0.76878	0.445255
Week 113	57	-0.08903	0.882195188	-0.76194	0.449296
Week 114	57	-0.09057	0.909681529	-0.75165	0.455409
Week 115	57	-0.09379	0.918949144	-0.77053	0.444225
Week 116	57	-0.11768	0.892154986	-0.99585	0.323605
Week 117	57	-0.13456	0.887634305	-1.14451	0.257279
Week 118	57	-0.13825	0.905044269	-1.15324	0.253709
Week 119	57	-0.12796	0.918123043	-1.0522	0.297229
Week 120	57	-0.12162	0.917900035	-1.00037	0.321434
Week 121	57	-0.13366	0.943883025	-1.06911	0.289609
Week 122	57	-0.13844	0.946877481	-1.10387	0.274372
Week 123	57	-0.15208	0.937590748	-1.22464	0.225837
Week 124	57	-0.16723	0.938915769	-1.34472	0.184137
Week 125	57	-0.18052	0.95073785	-1.43348	0.157282
Week 126	57	-0.1757	0.947752095	-1.39966	0.167132

Week 127	57	-0.18695	0.939443541	-1.50245	0.138598
Week 128	57	-0.20914	0.947516068	-1.66641	0.101216
Week 129	57	-0.20425	0.964096283	-1.5995	0.115336
Week 130	57	-0.20831	0.958543945	-1.64074	0.106456
Week 131	57	-0.21146	0.97022018	-1.64552	0.105464
Week 132	57	-0.22148	0.970097957	-1.72367	0.090285
Week 133	57	-0.21223	1.011126283	-1.58469	0.118669
Week 134	57	-0.19966	1.01004387	-1.4924	0.141207
Week 135	57	-0.16877	1.00710324	-1.26522	0.211033
Week 136	57	-0.17805	1.013200897	-1.32676	0.189972
Week 137	57	-0.20239	1.027598397	-1.48697	0.142633
Week 138	57	-0.19872	1.034039657	-1.45095	0.152373
Week 139	57	-0.19723	1.034512909	-1.43939	0.155606
Week 140	57	-0.22411	1.03553227	-1.63395	0.107878
Week 141	57	-0.21069	1.04430619	-1.52322	0.133331
Week 142	57	-0.22223	1.058904828	-1.58444	0.118725
Week 143	57	-0.1858	1.068838917	-1.31245	0.194723
Week 144	57	-0.20746	1.077947871	-1.45305	0.15179
Week 145	57	-0.19881	1.081013086	-1.38847	0.170492
Week 146	57	-0.20022	1.097672188	-1.37713	0.173951
Week 147	57	-0.20998	1.106690305	-1.43247	0.157569
Week 148	57	-0.23251	1.132675545	-1.5498	0.126822
Week 149	57	-0.22426	1.119858744	-1.51188	0.136187
Week 150	57	-0.27335	1.138899516	-1.81205	0.075341
Week 151	57	-0.25995	1.138872633	-1.72328	0.090355
Week 152	57	-0.27313	1.13273522	-1.82043	0.074038
Week 153	57	-0.28717	1.138007168	-1.90516	0.061899
Week 154	57	-0.28278	1.152456739	-1.85252	0.069224
Week 155	57	-0.28091	1.166108566	-1.8187	0.074307
Week 156	57	-0.2728	1.166584765	-1.76548	0.082935

Annexure 2 Fortnightly Cumulative Abnormal Returns					
Fortnight	N	Mean	Std. Deviation	T	Sig. (2-Tailed)
Fortnight 1	57	-0.02473	0.131132859	-1.42402	0.159989
Fortnight 2	57	-0.06442	0.158263502	-3.07292	0.003271
Fortnight 3	57	-0.07441	0.227400752	-2.47042	0.016567
Fortnight 4	57	-0.07735	0.291990445	-2.00006	0.050353
Fortnight 5	57	-0.03871	0.366688074	-0.79702	0.428808
Fortnight 6	57	-0.01667	0.383437804	-0.32832	0.743895
Fortnight 7	57	-0.02312	0.39476854	-0.44222	0.660033
Fortnight 8	57	-0.00121	0.405437286	-0.02249	0.982139
Fortnight 9	57	0.007922	0.39067381	0.153095	0.878874
Fortnight 10	57	0.041364	0.402323518	0.776227	0.440881
Fortnight 11	57	0.028427	0.414039035	0.518358	0.606251
Fortnight 12	57	0.00889	0.416705035	0.161069	0.872619
Fortnight 13	57	0.006091	0.418321326	0.109921	0.912865
Fortnight 14	57	-0.02138	0.42761232	-0.37746	0.707258
Fortnight 15	57	-0.02908	0.448768822	-0.48926	0.626566
Fortnight 16	57	-0.04711	0.488956969	-0.72748	0.469963
Fortnight 17	57	-0.02348	0.502168013	-0.35305	0.725376
Fortnight 18	57	0.023852	0.541071643	0.332814	0.740517
Fortnight 19	57	0.050977	0.575289367	0.668998	0.506245
Fortnight 20	57	0.038801	0.603508095	0.485399	0.629287
Fortnight 21	57	0.025595	0.620255189	0.311546	0.756542
Fortnight 22	57	0.032074	0.628173848	0.385487	0.701337
Fortnight 23	57	0.052328	0.652009775	0.605919	0.547017
Fortnight 24	57	0.039992	0.641488061	0.470679	0.639698
Fortnight 25	57	0.032362	0.661451286	0.369387	0.713233
Fortnight 26	57	0.014489	0.674809981	0.162109	0.871803
Fortnight 27	57	-0.0208	0.668960233	-0.23469	0.815302
Fortnight 28	57	-0.02377	0.683691636	-0.26251	0.793889
Fortnight 29	57	-0.0348	0.681419093	-0.38559	0.701259
Fortnight 30	57	-0.0537	0.691565251	-0.58624	0.560071
Fortnight 31	57	-0.06167	0.70517568	-0.66021	0.511826
Fortnight 32	57	-0.08136	0.721556792	-0.85127	0.398247
Fortnight 33	57	-0.09143	0.707566212	-0.97552	0.333496
Fortnight 34	57	-0.0917	0.724382852	-0.9557	0.343333
Fortnight 35	57	-0.11423	0.713982471	-1.20795	0.232145
Fortnight 36	57	-0.0977	0.720009877	-1.02441	0.310046
Fortnight 37	57	-0.08475	0.738214397	-0.86676	0.389771
Fortnight 38	57	-0.10047	0.765585596	-0.9908	0.326044
Fortnight 39	57	-0.10982	0.770792451	-1.07568	0.286684
Fortnight 40	57	-0.10148	0.744485214	-1.02915	0.307835
Fortnight 41	57	-0.0974	0.786031109	-0.93553	0.353534

Fortnight 42	57	-0.09622	0.771053556	-0.94212	0.350179
Fortnight 43	57	-0.10027	0.757968928	-0.99876	0.322205
Fortnight 44	57	-0.0926	0.792737049	-0.88186	0.38162
Fortnight 45	57	-0.03348	0.771976278	-0.32747	0.744532
Fortnight 46	57	-0.05873	0.787590887	-0.56301	0.575677
Fortnight 47	57	-0.07253	0.77628426	-0.70542	0.483474
Fortnight 48	57	-0.09046	0.79412404	-0.86002	0.393446
Fortnight 49	57	-0.06399	0.781942728	-0.61787	0.539166
Fortnight 50	57	-0.10786	0.788257437	-1.03308	0.306009
Fortnight 51	57	-0.10482	0.783621435	-1.00993	0.316873
Fortnight 52	57	-0.0766	0.781632399	-0.73987	0.462468
Fortnight 53	57	-0.07459	0.80024639	-0.70367	0.484554
Fortnight 54	57	-0.06871	0.830950569	-0.6243	0.534964
Fortnight 55	57	-0.05612	0.85289439	-0.49676	0.621305
Fortnight 56	57	-0.06317	0.875048116	-0.54502	0.587902
Fortnight 57	57	-0.07026	0.913603586	-0.58057	0.563857
Fortnight 58	57	-0.10616	0.881292925	-0.90943	0.367021
Fortnight 59	57	-0.09513	0.912088117	-0.78746	0.434334
Fortnight 60	57	-0.09925	0.944106186	-0.79372	0.430709
Fortnight 61	57	-0.11596	0.938448693	-0.93286	0.354897
Fortnight 62	57	-0.14552	0.95316344	-1.15267	0.253944
Fortnight 63	57	-0.1509	0.947802844	-1.20203	0.234409
Fortnight 64	57	-0.16607	0.973927588	-1.28738	0.203259
Fortnight 65	57	-0.17057	0.986781141	-1.30504	0.197217
Fortnight 66	57	-0.17255	1.035895421	-1.2576	0.213755
Fortnight 67	57	-0.1294	1.035058144	-0.94383	0.349311
Fortnight 68	57	-0.16534	1.057153569	-1.18081	0.242668
Fortnight 69	57	-0.16335	1.063255047	-1.15989	0.251015
Fortnight 70	57	-0.17812	1.077690799	-1.24782	0.21729
Fortnight 71	57	-0.15894	1.108878133	-1.08212	0.283835
Fortnight 72	57	-0.17266	1.129146441	-1.15447	0.253211
Fortnight 73	57	-0.19219	1.158217865	-1.25282	0.215478
Fortnight 74	57	-0.21736	1.182428035	-1.38783	0.170688
Fortnight 75	57	-0.26087	1.214921931	-1.6211	0.110614
Fortnight 76	57	-0.29612	1.224683213	-1.82553	0.073256
Fortnight 77	57	-0.29773	1.267542264	-1.77338	0.081604
Fortnight 78	57	-0.30119	1.299296316	-1.7501	0.085578

Annexure 3 Monthly Cumulative Abnormal Returns					
Month	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Month 1	57	-0.0442	0.21271	-1.5672	0.12269
Month 2	57	0.01387	0.40019	0.26165	0.79455
Month 3	57	0.0607	0.44699	1.02526	0.30965
Month 4	57	0.11437	0.46198	1.86909	0.06684
Month 5	57	0.0713	0.4619	1.16539	0.2488
Month 6	57	0.02607	0.45469	0.43288	0.66677
Month 7	57	0.03017	0.52758	0.43179	0.66756
Month 8	57	0.09863	0.61639	1.20807	0.2321
Month 9	57	0.07584	0.64936	0.88172	0.3817
Month 10	57	0.03277	0.70388	0.35144	0.72658
Month 11	57	-0.0125	0.74016	-0.1271	0.89929
Month 12	57	-0.0084	0.83586	-0.0755	0.94007
Month 13	57	0.0601	0.97393	0.46586	0.64312
Month 14	57	0.0373	1.02094	0.27585	0.78368
Month 15	57	0.06071	1.00623	0.45551	0.65051
Month 16	57	0.04772	1.04192	0.34579	0.7308
Month 17	57	0.01415	1.04502	0.1022	0.91896
Month 18	57	-0.0184	1.05775	-0.1314	0.89595
Month 19	57	-0.0377	1.08823	-0.2615	0.79464
Month 20	57	-0.0695	1.09203	-0.4803	0.63286
Month 21	57	-0.0531	1.13074	-0.3543	0.72447
Month 22	57	-0.0636	1.16526	-0.4119	0.68198
Month 23	57	-0.0476	1.14366	-0.3141	0.75462
Month 24	57	-0.0607	1.13585	-0.4034	0.68818
Month 25	57	-0.0251	1.1736	-0.1615	0.87231
Month 26	57	-0.0467	1.13709	-0.3099	0.7578
Month 27	57	-0.0757	1.15984	-0.4927	0.62414
Month 28	57	-0.0778	1.18826	-0.4945	0.62291
Month 29	57	-0.06	1.25992	-0.3598	0.72038
Month 30	57	-0.0636	1.31423	-0.3654	0.7162
Month 31	57	-0.1109	1.30592	-0.641	0.52416
Month 32	57	-0.1084	1.34364	-0.6093	0.54482
Month 33	57	-0.1425	1.33371	-0.8068	0.42319
Month 34	57	-0.1722	1.35066	-0.9623	0.34002
Month 35	57	-0.1415	1.40283	-0.7616	0.44948
Month 36	57	-0.1862	1.43368	-0.9804	0.33112

ACADEMIC MOTIVATION AND PERFORMANCE OF FEMALE STUDENTS IN CO-EDUCATION

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Abstract

As graduates of today will hold important positions in all aspects of life, it becomes imperative to understand their academic motivation. This paper tries to examine under graduate female students' level and type of motivation while they are studying in a co-education institution. This study worked on a two tail hypotheses. 1) There would be gender difference on academic performance in co- education undergraduate Business and Social Science Programmes in Private Universities in Pakistan. 2) Female academic motivation is performance oriented and is better than males in co-education undergraduate Business and Social Science Programmes in Private Universities in Pakistan. Research data was collected through a survey of 135 students. Findings of the study correspond to hypothesis (1). But for hypothesis (2) no difference was found in the performance orientation of both genders. The study would provide useful information to undergraduate school educators, allowing them to understand the type and level of motivation of their female students, describe factors that can influence their motivation, and highlight policy guidelines for undergraduate teaching in co-education environment. The study concludes that although females score better GPA than males, there is no difference in male and female introjected performance oriented motivation.

Keywords: Academic performance, female motivation, undergraduates, co-education
JEL Classification: I290

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Introduction

Education is the systematic training given specially to the young in preparation of life (Cllins, 1993 cited by Jabbar). A number of studies highlight benefits of higher degree in personal and public life as it ensures higher earnings, increased productivity, awareness of making appropriate choices in one's life and reduced criminal activities, "Attending college influences not only occupation and earnings but also cognitive, moral and psychosocial characteristics as well as values and attitudes and various indices of the quality of life. Evidence also suggests that postsecondary education's influences extend beyond the individuals who attend college to the nature of their children's lives" (Pascarella and Terenzini, 2005).Co-education in educational institutions is a modern concept. It was first introduced in Switzerland, and is now adopted everywhere. Coeducation institutes are economically viable institutions suitable for the developing countries because they make maximum use of their resources. Here boys and girls study side by side in one class room. The concept presents distinct advantages which outweigh their disadvantages. Various studies have been done in recent times to compare gender performances, in mixed and single gender classes at all educational levels. One view is that an environment where both genders are present definitely provides a healthy social environment enriching student's abilities to cope with real life situations over a wide spectrum of their professional as well as family life(Vexter, 2011). The coeducation environment also provides healthy moral and intellectual stimulation without undue excitement which results due to the present system of isolation. To take into account the disadvantage, environment in these institutions is known to cause distractions in classroom and creation of stereotypes.This is confirmed by A Department of Education study (2008) findings where "both principals and teachers believed that the main benefits of single-sex schooling are decreasing distractions to learning and improving student achievement". Stereotyping generally displays a strong influence on choices made towards their profession and choices made in their everyday life (Hutchison & Mikulski, 2012). Therefore in the US and Europe there is a debate going on regarding the benefits of single sex education, " negative gender roles are often sharpened in coeducational environments. Boys are more likely, for instance, to buy into the notion that reading isn't masculine when they're surrounded by (and showing off for) girls". Girls shy away from queries in coeducation class rooms. It has been demonstrated time and again that young girls are more willing to ask and answer questions in classrooms without boys (Hutchison & Mikulski 2012). In a 3 year longitudinal study done at Florida's Stetson University (2000), even at the elementary school both boys and girls showed higher proficiency in single sex schools.

The Hutchison &Mikulski (2012) study continues to argue that girls are such high achievers that they are out numbering boys in post graduate programs. A study published in (2004) in the Pendulum, Elon University's Student Newspaper by Christine Pennigton (2004), outlined the national trend. "Female college graduates – fewer than half of all graduates a decade ago – now outnumber their male counterparts in most industrialized countries," the article stated. She continues that there exists a positive relationship between co-education and female performance. She quoted from the research and interviews conducted by USA Today (Runge, 2003) that "even the most academically talented boys never catch up to girls in high school grade. This study also cited Karen Cottrell, associate provost for enrollment at the College of William & Mary, pointing out that "Girls typically have better high school transcripts," she said. Regarding three phenomena—numbers, achievement and behavior, "The data might seem to suggest that there are fewer and fewer boys, getting poorer grades, with increasing numbers of behavioral problems"(Kimmel, 2000). Sociologist Andrew Hacker (2003) in his book "Mismatch: The Growing Gulf between Women and Men," argues that girls spend more time doing their homework and boys spend that time on watching TV and video games. Hacker continues, "It's almost as if being a man and being masculine, macho and powerful is not conducive to being a good student." Further boys get mixed messages like it is not "cool" to be a good student but it is more masculine to be a good athlete (Michael Thompson 2000). A study conducted in July 2009, on graduates from Boston Public Schools of 2007, by the Center for Labor Market Studies at Northeastern University States that for every 167 women in four-year colleges there were only 100 men (Whitmire & Bailey, 2013).The bottom line according to studies reviewed and mentioned above is that males are becoming a minority group on most of university campuses across united states because of their lower performance. This is the situation in United States and Europe.

To get a glimpse of this issue in Pakistan cultural scene presents a somewhat different picture. Pakistan being a muslim country there are reservations about the concept of co-education. In 1947 only one university of the Panjab existed which was coeducational Out of 40 colleges across the four provinces very few colleges but none of the schools were into coeducation. Females were 5% (UNESCO, 2009) of the then student body. After 1980 Islamisation programme single sex women universities were established. The following statistics have been taken from UNESCO's 2009 Global Education Digest. UNESCO definition for a literate adopted since 2004-2012, is one who can read a newspaper and write a simple letter, in any language. Accordingly in Pakistan literacy rates are amongst the lowest in South Asia (lower than India, BanglaDesh, Nepal and Bhutan). For higher education in Pakistan 6.3% of Pakistanis (8.9% of males and 3.5% of females) were university graduates as of 2OO7. Pakistan plans to increase this figure to 10% by 2015 and subsequently to 15% by 2020. Youth literacy rate for males is 79% and for female is 61% (2012). These statistics relate differently to the situation in the literature review where the female enrolement was overtaking the male enrolment in undergraduate programs.

Demographic Factors like family size, socio economic status, and gender are issues which play an important role in academic performance (Jabbar, 2011) in the Pakistan context.

Literature review

To assess academic motivation and performance , the literature reviewed pointed that by late 1980's a specific theoretical base was established as Self Determination Theory (Deci & Ryan, 1985). This theory tries to find out the causes of human behavior. The theory constructs its argument that to fulfill a wide spectrum of desires human beings act according to their internal and external environment and attributes success in performance as not solely dependent on inherent qualities but to a set of psychological and social forces that drive an individual to achieve success. Motivation is understood as to be energized and activated towards doing something. It is imperative to understand this Motivation Orientation of today's graduate which will determine the future direction that society will take (Ryan and Deci, 2000). Researchers argue and experimental evidence demonstrates that Motivation has a strong relationship with school performance (Deci, Vallerand, Pelletier, & Ryan, 1991; Fortier et al., 1995; Komarraju, Karau, & Schmeck, 2009) Self-determination theory explains three categories of motivation, Intrinsic, Extrinsic and Amotivation. Intrinsic Motivation can be defined as a force to participate for the sake of satisfaction and pleasure experienced due to that participation (Deci & Ryan, 1985;) Intrinsic motivation is defined by the theory as — "an approach to human motivation that highlights people's inner motivational resources in explaining healthy personality development and autonomous self-regulation" (Reeve, Deci, & Ryan, 2004, p.33). Intrinsic motivation is further divided into three types, intrinsic motivation to know, to accomplish and for the stimulation experienced while participating. Because intrinsic motivation results in high-quality learning and creativity, it is especially important to detail the factors and forces, which can be enlisted as competence, autonomy, goal orientation and physical appearance that engender or undermine it (Ryan &Stiller, 1991, cited in 2000 by Deci and Ryan). Intrinsic motivation is a very important factor in academic achievements; Scholars' specific concern was to identify factors undermining it. Since it was noticed that intelligent students(who displayed most of the above factors) were seen to have not achieved attainable levels of performance. This shortcoming is illustrated by researchers both in the classroom and laboratories (Ames, 1978 cited by Hegarty 2012), who show that, although children may have the same intellectual capabilities, they then choose either adaptive or maladaptive patterns which then have deep effects on cognitive performance.

The theory also links motivation with extrinsic motivation as the environmental factors within a specific socio cultural context. Every school has its own set of values, beliefs and traditions. These are made by school administration, the teachers, students and social systems. School is a sum of the values, cultures, safety practices, and organizational structures (Renchler, 1992 cited by Bang and Baker,2013). This category of motivation plays a very important role in educational setting (Reeve et al., 2004). The factors of extrinsic motivation can be identified as urge to prove one's competency to parents, teachers and peers (Shia, R. 1998) and can be promoted by school culture. This is the introjected regulation, because a task is performed to attain a feeling of self enhancement and pride " introjection represents regulation by contingent self-esteem" (Nicholls, 1984; Ryan, 1982). Extrinsic motivational factors prove competency while intrinsic motivational factors improve competency. Amotivational construct is lack of intent to participate in the activity (Vallerand & Bissonnette, 1992.)

Academic motivation has positive relationship with college GPA (Fortier et al., 1995). Motivation which gets expressed as conscientious behavior, a willingness to work hard to learn material even if it does not lead to a higher grade, the importance of getting good grades, reading more for a class than required because the material was interesting, enjoyment of academic challenge, and the importance of academic experiences in college is termed as "Mastery Goals" (intrinsic motivation), Where as motivation to prove one's competency by outperforming others is termed as " Performance Goals" (Dweck, 1986). Performance Goals are extrinsically motivated.

On the basis of above literature review following hypotheses were formulated:

1. There will be gender difference on academic performance in co-education undergraduate Business and Social Science Programmes in Private Universities.

2. Female academic motivation is performance oriented and is better than males in co-education undergraduate Business and Social Science Programmes in Private Universities.

Methodology

To find out gender differences in academic performance and female performance orientation, a Survey was conducted to collect data on variables of academic performance and performance orientation of males and females. The population for this research was undergraduates both genders from private universities in Karachi. Survey was conducted in the class room with the teacher's permission and students consent. The students belonged to families from educated Middle and Upper middle class and ranged between the age group of 18-25 years. The survey administered random sampling of 135 participants (83 male; 52 female). Demographic Information Form included: age, gender, socio-economic status, parent's education, current and last year GPA was asked. To assess the academic performance the questionnaire developed by Vallerand's (1989) Achievement Motivational Scale (AMS) was used. The Scale assesses 7 types of constructs: Intrinsic motivation towards knowledge, accomplishments, and stimulation. It also assesses external, introjected and identified regulations and finally Amotivation. There are 28 questions, 4 questions per subscale, assessed on a 7 point scale, which has been tested and generally accepted as a valid instrument that accurately examines motivation. The instrument is the result of extensive research done in the realm of self determination theory which is based on three subscales i.e. intrinsic, extrinsic and amotivation.

The collected data from the questionnaires was scored according to the scoring criteria of Academic Motivation Scale (Vallerand, 1992) as described in the manual. To analyze the data mean and standard deviation were calculated. To find gender difference in academic performance and performance orientation, T-test was applied through Statistical Package for Social Sciences, 17 version. Table 2 result showed significant difference in academic performance of males and females, where girls were achieving higher performance.

Table 3 showed significance of difference as .154 and therefore there was no gender difference in performance orientation.

Results

Table 1

Demographic Information

Demographic Variables	Frequency	Percentages%
Age		
18-20 years	26	19.5
21-23 years	97	71.6
24 – 26 years	12	8.9
Gender		
Male	83	61.5
Female	52	38.5
Semester		
Freshman	23	17.0
Sophomore	57	42.2
Junior	36	26.7
Senior	19	14.1
Family Income		
20,000-30,000 Rupees	5	3.7
31,000-40,000 Rupees	3	2.3
41,000-50,000 Rupees	27	20.0
51, 000- 60,000 Rupees	18	13.3
61,000 or above	82	60.7
Parents Education		
Father's Education	2	1.5
Intermediate	21	15.5
Bachelors	58	43.5
Masters	54	39.5
Professional Degree		
Mother's Education		
Matric	26	19.3
Intermediate	21	15.6
Bachelors	55	41.0
Masters	23	17.0
Professional Degree	10	7.1
GPA (Current)		
0-2.5	17	12.6
2.6-3.67	113	83.7
3.78-4	5	3.7
GPA (Last Semester)		
0-2.5	28	20.7
2.6-3.67	100	74.2
3.78-4	7	5.1

Table 2

The Mean Difference between Male and Female on the Variable of Academic Performance

	Gender	N	Mean	Std.	t	df	Sig
Academic Performance (GPA Current)	Male	83	2.71	.479	-2.757	133	.007
	Female	52	2.92	.330			

Table 2 shows the gender difference of Academic Performance (GPA). It verifies significant difference found between male and female on the variable of academic motivation and academic performance.

Table 3

The Mean Difference between Male and Female on the Variable of Performance Orientation

	Gender	N	Mean	Std.	T	Df	Sig
Performance Orientation (Introjected)	Male	83	13.43	3.101	-1.435	133	.154
	Female	52	14.19	2.801			

Table 2 shows the gender difference of Performance orientation. It verifies that no significant difference found between male and female on the variable of Performance Orientation

Discussion

The study aimed to find out gender difference in academic performance in co-education. It also intended to investigate whether female academic motivation is performance oriented, and is therefore better than males.

The result of the first hypothesis which targets gender difference in academic performance is significant, which means that female performance is better than males and confirms the hypothesis. These findings are consistent with previous findings i.e. Female students are more regular and precise in doing assignments and attending classes (Dayioglu & Turut-Asik, 2007), Whereas males follow "non-traditional attendance patterns (Ewert, 2012, p.22). In patriarchal societies the parental authority and guidance is strong and autonomy is less for girls which results in female students securing better GPA (Brandt 1999 cited by Filip 2013). The study by Filip (2013) concludes that female students at University of New York in Tirana outperform male students and are engaged in conscientious academic behavior. In Patriarchal and traditional structures of society like in Pakistan, female participation in outdoor activities is strongly discouraged. It leaves them with fewer distractions and with more time and energies spent on studies. Girls in Pakistan in higher education are completely focused on academic activities

The second hypothesis suggests that female academic motivation is performance oriented, and is therefore better than males. Performance orientation is introjected extrinsic motivation and proves to be an important factor for academic achievements. The result of the study showed no significant difference in gender performance orientation. Literature suggests that females have lower controlled or extrinsic motivation and higher autonomous or intrinsic motivation than males (Kusurkar, Croiset, & Cate, 2012; Buddeberg-Fischer et al. 2003). Women consider examination performance as by product of learning and personal development, where as men treat examination as the target of learning (Christine Mann, 2001). According to Bardar (1996) males definitely have the tendency towards performance orientation. Results of a study in Pakistan showed that both male and female are equal in their performance orientation (Tariq, S. 2011). Psychologist's researches confirm that it is important to internalize rationality of the goal (Ryan, 1995). In Patriarchal society's girls suffer from low esteem, while men feel more confident. Therefore they cannot internalise the goal of outperforming males. Performance orientation as introjected regulation according to psychologists causes anxiety and poorer coping with failure (Ryan and Connell, 1989). Girls develop a fear of failure and suffer from a lot of stress and put in a lot of hard work (Mann, 2003). In traditional cultures like Pakistan their success can be attributed to this hard work which is caused by stress rather than to outperform boys.

There are some limitations of the study. This survey was conducted during summer session when the student enrollment is much less than the Fall and Spring semesters. Therefore a small sample could be selected. The study also covers only institutes from Karachi. Karachi is a metropolitan city, however the study can be extended to include private business schools in two or three more provincial cities for future researches. The survey can be conducted during Fall or Spring semesters to widen the base of population and sample. To make this study more comprehensive it can also take into account teacher's inputs towards student motivation for academic performance and performance orientation.

The implications of this study are that the academic performance of girls is better than males in coeducation institutions given the same environment yet no difference was found in both gender's performance orientation. Implication of this study is for university teachers to promote motivation factors for both genders. The findings of this study are also a resource material for, higher education policy makers, for teachers in the class rooms, for parents at home base and counselors, who are concerned with academic progress of both genders. Since students of today are going to be pace setters for the future direction of society, it is imperative for both genders to exert equal motivation towards their performance.

Conclusion

To conclude, the findings of the study illustrate that in coeducation environment girls perform better than boys at the undergraduate level. However the study rejected the second hypothesis, that girl's academic performance is to outperform boys and is therefore better than boys.

References

Ames, C. (1978). Children's achievement attributions and self-reinforcement; effects of self-concept and competitive reward structure, Journal of Educational Psychology, 70(3), 345-355.

Bang,E. and Baker,D. (2013) Gender differences in Korean high school students science achievements and attitudes towards science in three different school settings, *Mevlana International Journal of Education (MIJE),* 3(2), 27-42. Doi: 10.13054/mije.13.11.3.2

Bardar, I., M., R. & Loncaric, D. (2006), Goal Orientation, Coping with School Failure and School Achievement, *European Journal of Psychology of Education*,21(1), 53- 70. Retrieved from *http*/ www.*aiaer.net/ejournal/vol21209/10.%20Shelly.pdfý*

Dweck, 1986, & Ames. (1992) *Cognitive theories*, Module 16: Retrieved from http://highered.mcgrawhill.com/sites/dl/free/007337850x/611332/boh7850x_CL5Mod16.pdf

Deci, E. L., Vallerand, R. J., Pelletier, L. G., & Ryan, R. M. (1991). Motivation and education: The self-determination perspective. *Educational psychologist,26* (3-4), 325-346. Lawrence Erlbaum Associates, Inc.

Deci, E. L. & Ryan, R.M.(1985) Self-Determination Theory Of Motivation: Retrieved FROM *http:// principlesoflearning.wordpress.com.*

Dan,K. , Thompson,M. (2000). Raising Cain: Protecting the Emotional Life of Boys. Ballantine Books, Random House, Inc, New York: http://www.amazon.ca/Raising-Cain-Protecting-Emotional-Life/dp/0345434854

Dayioglu and Türüt-Asik (2007). Gender Differences in Academic Performance in a Large Public University in Turkey, *Higher Education,* (HIGH EDUC)53,(2), 255-277.publisher: Springer Verlag . DOI:10.1007/s10734-005-2464-6

Ewert, S. (2012). Fewer diplomas for men: The influence of college experiences on the gender gap in college graduation.*The Journal of Higher Education*, *83*(6), 575-597. Retrieved from http://www.ebscohost.com

Filip,K. 2013. Are Female Students outperforming Male Students at University of New York at Tirana UNYT http://www.academia.edu/3744385/

Fortier, M.S., Vallerand, R.J., & Guay, F. (1995). Academic motivation and school performance: Toward a structural model. *Contemporary Educational Psychology*, 20, 257-274. doi: 10.1006/ceps.1995.1017

Hacker, A. (2003) Mismatch: The Growing Gulf between Women and Men, New York, Scribner, Simonn and Schuster, 1230Avenue of the Americas New York,

Hanson, J. M. (2013) Understanding graduate school aspirations: The effect of good teaching practices, University of Iowa. Theses and Dissertations, Iowa Research Online, http://ir.uiowa.edu/etd/2513/

Hegarty, N. (2012) Application of the Academic Motivation Scale to Graduate School Students ,St.John’sUniversity,USA.Retrievedfrom*hraljournal.com/Page/6%20Niall%20Hegarty.pdfý*

Hutchsion and Mikulski (2012) A Right to Choose Single-Sex Public Education, *The Wall Street Journal*, p.A17.http://www.singlesexschools.org/Copyright 2012 U. S. Senator Kay Bailey Hutchison

Jabbar, M. Aziz, M. A., Zeb, S. (2011) Effect of Demographic factors on the Achievement of Secondary School Students in the Panjab, Pakistan, *International Journal of Academic Research in Business and Social Sciences, ,1,(1).* Published by *HRMARS, Pakistan* http://www.hrmars.com/admin/pics/13.pdf

Kimmel, Michael S. (1999-2000). What About the Boys?. what the current debate tell us. *Michigan Feminist Studies volume. 14. Issue title: Masculinities .Study Mode.com*. Retrieved

07, 2011 from http://hdl.handle.net/2027/spo.ark5583.0014.001 and at quod.lib.umich.edu/

Kirner, M. (2013), Single Sex Education, State Education Resource Center Published by: *SERC, 25 Industrial Park Road, Middletown, CT 06457-1516 - (860) 632-1485* - Retrieved from www.ctserc.org

Komarraju, M., Karau, S. J., & Schmeck, R. R. (2009). Role of the Big Five personality traits in predicting college students' academic motivation and achievement, Learning and Individual Differences, 19, 47-52. doi: 10.1016/ j.lindif.2008.07.001

Kusurkar, R.A. Cate,T. Vos , C. Westers,G. Croiset (2012) How motivation affects academic performance: a structural equation modelling analysis published with open access at *Springerlink.com*

Mann, C. (2003) Indicators Of Academic Performance, *Cambridge University Repoter, report 5913, CXXXIII, 18, Cambridge. h*ttp://www.admin.cam.ac.uk/reporter/2002-03/weekly/5913/ 6.html

Nicholls, J. G. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. *Psychological Review,* 91, 328–346. doi: 10.1037/0033-295X.91.3.*328*

Pascarella, E.T. and Terenzini, P.T. (2005). How College Affects Students, 2, : a third decade of research, published by John Wiley, San Francisco, USA.

Ryan, R. M. (1982). Control and information in the intrapersonal sphere: An extension of cognitive evaluation theory. *Journal of Personality and Social Psychology*, 43, 450–46.10022-3514/ 82/4303-0450500.75

Ryan, R. M., & Connell, J. P. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. *Journal of Personality and Social Psychology*, 57, 749-761. doi: 10.1037/0022-3514.57.5.749

Ryan , R. M. (1995). Psychological Needs and the Facilitation of Integrative Processes. . University of Rochester. *Copyright 2000 by the American Psychological Association, Inc.* 55, (1) , 68–78.

Reeve, J., Deci, E.L., & Ryan, R. M. (2004). “Self-determination theory: A dialectical framework for understanding socio-cultural influences on student motivation”. In D. M. McInerney & S. Van Etten (Eds.), *Big theories revisited* (pp. 31-60). Greenwich, CT: Information Age Press.

Runge,J. (2003, May 22) Threats to college-diversity programs pose risks. *usatoday30. Retrieved from usatoday.com/news/ opinion/.../2003-05-22-edit_x.htm*ý

Ryan, R. M. and Deci, E. L(1999). Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions *University of Rochester, Contemporary Educational Psychology 25, 54–67 (2000)* doi: 10.006 /ceps..1020, Meliora 492, Rochester, NY 14627, available online at http://www.idealibrary.com

Ryan, R. Deci, E. (2000) Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being. *American Psychological Association, Inc.* Volume 55, 68–78. Department of Clinical and Social Sciences in Psychology, University of Rochester

Shia Regina, M. (1998). *Academic intrinsic and extrinsic motivation and metacognition. Assessing academic intrinsic motivation: A look at student goals and personal strategy*. Wheeling Jesuit University. Retrieved on April 4, 2014, from: http:// www.cet.edu/research/pdf/motivation.pdf.

Tariq, S (2011) Relationship Between Intrinsic Motivation and Goal Orientation among College Students In Pakistani Context Journal of Education and Practice ISSN 2222-1735 (Paper) ISSN 2222-288X , 2, (10) , 11. (Online) www.iiste.org

Tompson, M. & Kindlon, D. (2000). Raising Cain: Protecting the Emotional Life of Boys. Ballantine Books, Random House

Publishing Group, Random House Inc, New York. http://www.amazon.ca/Raising-Cain-Protecting-Emotional-Life/dp/0345434854

UNESCO *Global Education Digest* Report of UNESCO institute for Statistics 2009. Retreived from *ww.uis.unesco.org/Library/Documents/ged09-en.pdfý*

Vallerand , J. , Fortier, M.S. ,Guay,(1997) Self-Determination and Persistence in a Real-Life Setting *Journal of Personality and Social Psychology* Copyright 1997 by the American Psychological Association, Inc. 72, (5), 1161-1176 0022-3514/97.

Vallerand, R. J., & Bissonnette, R. (1992). Intrinsic, extrinsic, and amotivational styles as predictors of behavior: A prospective study. *Journal of Personality,* 60, (3) 599–620. DOI: 10.1111/j.1467-6494.1992.tb00922.x

Vexter (2011). Should Schools Be Co-Education. Retrieved from http://www.studymode.com/essays/Should-Schools-Be-Co-education-739110.html

Whitmire,R and Bailey,S.M. (2013) :Gender Gap, Are boys being shortchanged in K–12 schooling*? The Journal Education next- Summer, 13, (3) http://educationnext.org/journal/*

QUALITY OF LIFE, SPIRITUAL WELLNESS AND DELINQUENT TENDENCIES AMONG ADOLESCENTS

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Abstract

The present study aimed at examining the role of quality of life and spiritual wellness in the prediction of delinquent tendencies among adolescents. WHO-Quality of Life Questionnaire, Spiritual Wellness Inventory, and Self-Reported Delinquency Scale were used to collect the information from participants. Purposive convenient sampling technique was applied for data collection. Sample of the present study comprised of 313 adolescents. Multiple Regression analysis was applied to test the hypotheses. The findings indicated that quality of life and spiritual wellness has negatively predicted delinquent tendencies among adolescents. Finally, limitations, suggestions, and implications were discussed.

Keywords: Quality of life, spiritual wellness, delinquent tendencies
JEL Classification: Z 000

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Introduction

Quality of life is studied as a wide ranging construct making survival possible. It encompasses numerous dimensions including physical, psychological, social, disease symptomatology and treatment related aspects (Coons & Kaplan, 1992; Taylor, 2003). Human physical and psychological states and its ties with the environment are the features covered under the umbrella of quality of life (WHOQoL Group, 1995). Quality of life ensures superior psychological, social, and occupational functioning and facilitates in the recovery from diseases (Taylor, 2003). Beyond the physical aspects like food and shelter, it is related to the feelings of self-completion and happiness (Hornquist, 1982). This indicates that quality of life operates less at physical level and more at perceptual level. The feelings of quality of life are adjacent to spirituality and culture (Collinge, Rudell, & Bhui, 2002; Marshall, 1990). Quality of life is influential in determining spiritual well-being (Efficace & Marrone, 2002; Ferrell, Grant, Funk, Otis-Green, & Garcia, 1998; Horton, 2002). Ferrans and Powers (1992) found that quality of life is correlated with healthy psychological and spiritual functioning. Efficace and Morrone (2002) illustrate that mind, body and spirit are three dimensions of human personality and these dimensions are subjective aspects of the quality of life.

When appropriate level of quality of life is not perceived, adolescents are more vulnerable for delinquency and related crimes. Theories of early delinquencies during adolescence are attributed to physiological and psychological factor not being fulfilled appropriately. The proceeding perspectives on delinquency trace the causes of developing delinquent tendencies and criminal behaviors in the social and environmental factors (Gutierrez & Shoemaker, 2008). The physical, social, psychological, and environmental factors combine to shape quality of life (WHOQoL Group, 1995). This indicates that in the absence of the quality of life and its various elements, adolescents are at a risk of delinquency. Just like quality of life, the recent advancement of spiritual wellness plays a vital role in connecting people with other people, nature and sources that ensure healthy existence (Ingersoll, 2000).

Religion is a path to spiritual experience and spiritual wellness is the unquestionable reality of human existence (O'Brien, 2001). This is why more people preferred to be known as spiritual rather than religious (Gallup, 1993). Spirituality has broad applications in every aspect of human life and its outcomes are observed in real life scenarios in the society (Ingersoll, 2000). Spiritual wellness creates purpose and meaning in life and in the absence of these meaning, people are vulnerable for unhealthy activities (Myers, 1999). Spiritually well individuals have hopeful and optimistic spirit which prevents them from deviances and delinquencies (Mapels, 2002). Wellness is the road to optimal health with an integrated mind, body and spirit that ensures a fully function life (Myres, Sweeney, & Witmer, 2000; Sweeney & Witmer, 1999).Shoemaker (2000) discovered that Church attendance was negatively linked with delinquency among the adolescents and absenteeism was positively linked with delinquent tendencies among adolescents. This indicates that connectedness with religion and spiritual activities prevents from opting delinquent behaviors (Shoemaker, 2009). Spiritual wellness develops a sense of belongingness, safeness, freedom, hope and optimism in life (Ingersoll, 2000).

A good deal of research (Benda & Corwyn, 1997; Furrow, King, & White, 2004; Larson & Johnson, 1998) suggests that spirituality supports a positive developmental route in adolescence in part by creating a sanctuary where moral values are maintained and transmitted. Higher rates of religiousness are associated with lower rates of delinquency (Johnson, Li, Larson, &McCullough, 2000). Adolescence is a time of developmental flow across and through biopsycho-social-spiritual system (Curtis & Cicchetti, 2003). Development theories of religion, spirituality, and faith describe adolescence as a time of major questioning, rediscovery, and recommitment. According to Oser and Gmunder (1991), the adolescent transition presents a major shock which negates the previous patterns of reasoning and simultaneously initiates the acceptance of new elements and dimensions" (p. 73). In early adolescence, a youth "must try living without God, without a supernatural being" (p. 73). This is equally true of changes in moral judgment development in adolescence (Gregg, Gibbs, & Basinger, 1994; Hamil-Luker, Land, & Blau, 2004).

Spirituality plays a vital role in regulating most of human functions from the deep inner needs of human nature. Like many other important behaviors, spirituality plays a vital role in moderating delinquent tendencies among adolescents. Spirituality is an aspect of religiosity and research indicates that religiosity is inversely proportional to delinquency (Johnson et al., 2000). In the same manner, a good deal of research is evident that spirituality plays a key role in protecting (Johnson et al., 2000) youth who are at risk for delinquency and substance abuse. In the same manner, most of the research on quality of life focused on clinical population and individuals with medical diseases like diabetic patients (Mir, 2008) and breast cancer. With these variables, a limited number of studied targeted normal populations, but not a single investigation is available which targeted delinquents as far as the scholarly knowledge and internet access in Pakistan is concerned. In this regard, the present research is an attempt to bridge this gap. Spirituality and spiritual wellbeing is well research in the past literature, however spiritual wellness is a recent creation. In this regard, the present study is an initiative which aims to examine the role of quality of life and spiritual wellness in the prediction of delinquent tendencies among adolescents.

H1. Quality of life would negatively predict delinquent tendencies among adolescents.

H2. Spiritual wellness would negatively predict delinquent tendencies among adolescents.

Method

Participants: The present study was based on cross-sectional survey research design. Sample of the present study consisted of 313 adolescents with age ranged from 16 to 24 years. The sampling criteria for late adolescence was decided by keeping in view the age range suggested by life span researcher Newman and Newman (1987).Participants were selected from different educational levels including college and university students. Purposive convenient sampling technique was used to collect the information. Sample was collected from different public and private sector universities and colleges of Rawalpindi and Islamabad.

Measures: World Health Organization Quality of Life Questionnaire was developed by WHOQoL Group (1995).The questionnaire consists of 26 items and 4 subscales. The questionnaire is a 5-point ranting scale. The response categories include strongly agree = 5 agree = 4, neutral = 3, disagree = 2 and strongly disagree = 1. There is no cut off scores in the scale therefore high scores indicate high quality of life and vice versa. Spiritual Wellness Inventory was developed by Ingersoll (1998). It comprises of 65 items and 13 subscales. Odd items are negatively scored whereas even items are positively scored. The scale is based on Likert-type 4-point rating scale. The response categories include strongly agree = 4, agree = 3, disagree = 2, and strongly disagree = 1. There is no cut off scores in the scale therefore high scores indicate high spiritual wellness and vice versa. Self-Reported Delinquency Scale developed by Naqvi (2007). It comprises of 27 items and 13 subscales. This is a five point Likert scale with 27 items and 8 subscales. All items are positively stated. The questionnaire is a 5-point ranting scale. The response categories include never = 0, once = 1, 2-4 times = 2, 5-10 times = 3, and 10 or more times = 4. There is no cut off scores in the scale therefore high scores indicate high delinquency and vice versa.

Procedure: In the present study, adolescents were selected from different colleges and universities of Rawalpindi and Islamabad. Adolescent students were approached in their respective institutions to collect the information. Students were informed about the purpose, significance, and implications of the study. They were ensured to be confidant as the information will be kept highly confidential and will only be used for research purpose. Informed consent was obtained before administering the questionnaires. Detailed instructions were provide that how to complete the scales. Questionnaires were administered during the working hours in order. The researcher effectively handled the queries of the participants before, during and after the study. In the end, the participants were thanked for their valuable corporation in the research.

Results

Descriptive statistics were computed for all study variables followed by Alpha reliability coefficients and Pearson correlation. Multiple Regression analysis was applied to test the hypotheses.

Table 1:*Descriptive statistics, Alpha reliability coefficients and zero-order correlations for all study variables (N = 313)*

Study variables	*M*	*SD*	*α*	1	2	3
1. Quality of Life Questionnaire	184.59	12.76	.74	-	.50**	-.19*
2. Spiritual Wellness Inventory	88.32	12.11	.82		-	-.19*
3. Self-Reported Delinquency Scale	15.36	12.47	.88			-

*$p< .01$, **$p< .001$

Table 1 shows descriptive statistics, Alpha reliability coefficients and zero-order correlations for all study variables. The reliability coefficients range from .71 for Spiritual Wellness Inventory to .88 for Self-Reported Delinquency Scale. All the scales have satisfactory internal consistency. The results indicate that spiritual wellness has significant positive correlation with quality of life (r = .51, p < .001) and significant negative correlation with self-reported delinquency (r = -.19, p< .01). Quality of life has significant negative correlation with self-reported delinquency (r = -.19, p< .01). However, quality of life and spiritual wellness exhibited week correlations with delinquency.

Table 2:*Multiple Regression Analysis showing the effect of quality of life and spiritual wellness on the prediction of self-reported delinquency (N = 313)*

Variables	β	ΔR^2	F
Quality of life	-.13*	.043	8.02**
Spiritual wellness	-.13*		

*p< .05, **p< .001

Multiple Regression analysis is computed with quality of life and spiritual wellness as predictor variables and self-reported delinquency as outcome variable. The "R^2value of .043 indicates that 4.3% variance in the dependent variable can be accounted for, by the predictors with F (2,310) = 8.02, p < .001. The results indicate that quality of life (β= -.13, p < .05) and spiritual wellness (β= -.13, p < .05) are significant predictors of self-reported delinquency among adolescents.

Discussion

Adolescent behaviour plays a vital role in practicing appropriate and inappropriate behaviors in adulthood. Thus adults criminal with a background of delinquency are at a greater proportion, indicating the delinquent tendencies in the early ages lead to criminology in the adulthood. Besides this, the complex interaction of psychological, social, economic causes shapes delinquent behaviors (The Columbia Encyclopedia, 2008). In this regard, the present study focused on the role of quality of life and spiritual wellness in delinquent tendencies among adolescents. Quality of life and spiritual wellness explained 4.3% variance in self-reported delinquency among adolescents.

The first hypothesis "quality of life would negatively predict delinquent tendencies among adolescents" was supported in the current investigation. The findings indicated that quality of life has significant negative effect on delinquent tendencies among adolescents. The absence of quality is considered as deviance (Becker, 1973). During adolescence when biological and psychological needs are not fulfilled and physical and psychological quality of life is lacking, the risk for delinquency is greater. Early theorists stressed on the role of biological and psychological characteristics as determinants of delinquency among in the collectivist society of Philippines. Pakistan is also a collectivist culture. However the later theories led the attention toward social and environmental factors in shaping delinquent tendencies among adolescents (Gutierrez & Shoemaker, 2008).

Besides quality of life, spiritual wellness is also an important predictor of delinquent tendencies. Only in the last 20 years spirituality become equally important in the world of counseling, psychology, and medicine (Ingersoll, 1994; Lawrence, 2002; Richard& Bergin, 1997). The second hypothesis "spiritual wellness would negatively predict delinquent tendencies among adolescents" was supported in the present study. The results showed that spiritual wellness has significant negative effect on delinquent tendencies among students. The current findings are in line with the prior research (Johnson et al., 2000) indicating that spiritual wellness serves as a protecting factor for adolescents at the greater risk of delinquency.

Spirituality makes healthy life possible by guiding the real life tasks and preventing from maladapted deviations and delinquencies (Helminiak, 2001). Spiritual wellness helps in assigning meanings to life, organizes the realities of life, and establishes a sense of connectedness with the real life scenarios (Purdy & Dupey, 2003). Delinquencies, the antisocial behaviors, are the result of meaninglessness in life (Farrell, Kung, White, & Valois, 2000) that results due to the inability and incompetence with adopting the social expectations and moral standards. Spiritual wellness makes healthy adaptations possible by promoting a sense that life is not useless instead it is pretty meaningful and worth living (Ingersoll, 2000).

The present study consisted of three potential limitations. First, in the present study, quality of life, spiritual wellness, and delinquent tendencies were measured through self-report measures which may result in single source bias. It would be more appropriate in the future research to cross-rate the scales by the peers, teachers, and parents of the adolescents. Second, the study was limited to the educated participants from colleges and universities, it would be more appropriate in the future research to consider illiterate adolescents. Third, the present study was limited to the adolescent students of Rawalpindi and Islamabad where educational institutions are better than rural areas of the country. Thus in order to make the findings more generalizable, rural areas of the country should also be considered.

Conclusion

The present study is pretty insightful in understanding the role of quality of life and spiritual wellness among adolescents. The findings of the present research were in line with the hypotheses. The study has applied significance. In the light of the findings, improving quality of life can facilitate in overcoming delinquent tendencies among adolescent students. Beside quality of life related initiatives, ensuring spiritual wellness can also serve as a protecting factor against delinquent tendencies.

References

Becker, K. M. (1973). *Outsiders*. New York: Free Press.

Benda, B. B., &Crowny, R. F. (1997). A test of a model with reciprocal effects between religiosity and various forms of delinquency using 2-stage least squares regression. *Journal of Social Service Research, 22,* 27-52.

Collinge, A., Rudell, K., Bhui, K. (2002). Quality of life assessment in non-western cultures. *International Review of Psychiatry, 14,* 212–218. doi:10.1080/095402 60220144984

Coons, S. J., & Kaplan, R. M. (1992). Assessing health related quality of life: Application of drug therapy. *Clinical Therapeutics, 14,* 850-858. Retrieved from http://www.hq10.com/content/ 1/1/69/ref.

Curtis, J. W., & Cicchetti, D. (2003). Moving research on the resilience into the 21st century: theoretical and methodological considerations in examining the biological contributors to resilience. *Development and Psychopathology, 15*, 773-810.

Efficace, F., Marrone, R. (2002). Spiritual issues and quality of life assessment in cancer care. *Death Studies, 26*, 743–756.doi:10.1080/07481180290106526

Farrell, A. D., Kung, E. M., White, K. S., & Valois, R. F. (2000).The structure of self-reported aggression, drug use, and delinquent behaviors during early adolescence. *Journal of Clinical Child Psychology, 29,* 282-292.

Ferrans, C., Powers, M. (1992). Psychometric assessment of the quality of life index. *Research in Nursing & Health, 15*, 29–38.

Ferrell, B., Grant, M., Funk, B., Otis-Green, S., & Garcia, N. (1998). Quality of life in breast cancer. Part II: psychological and spiritual well-being. *Cancer Nursing, 21*(1), 1-9. Retrieved from http://journals.Lww.com/cancernursingonline/pages/ articleviewer.aspx? year=1998&issue=02000&article=00001&type=abstract

Furrow, J. L., King, P. E., & White, K. (2004). Religion and positive youth development: Identity, meaning, and pro-social concerns. *Applied Development Science, 8*(1), 17-26.

Gallup, G. (1993).*Religion in American*. Princeton. NJ: Princeton Religion and Research Center.

Gregg, K. W., Gibbs, J. C., & Basinger, K. (1994).Patterns of developmental delay in moral judgement by male and female delinquents.*Merrill-Palmer Quarterly, 40,* 538-553.

Gutierrez, F. & Shoemaker, L. (2008).*Intersections of gender and social status: Exploring records and documents on criminality in the Philippines*. Unpublished doctoral dissertation, University of the Philippines, Diliman, Quezon City.

Hamil-Luker, J., Land, D. C., & Blau, J. (2004).Diverse trajectories of cocaine use through early adulthood among rebellious and socially conforming youth. *Social Science Research, 33,* 300-321.

Helminiak, D. A. (2001).Treating spiritual issues in secular psychotherapy. *Counselingand Values, 45,* 163-190.

Hornquist, J. O. (1982). The concept of quality of life. *Scandinavian Journal of Social Medicine, 10,* 57-61. Retrieved from http: //Journal.diabetes.org/diabetts spectrum /oov 13n1/pg24.htm

Horton, R. (2002). Differences in assessment of symptoms and quality of life between patients with advanced cancer and their specialist palliative care nurses in a home care setting. *Palliative Medicine, 16,* 488–494. Retrieved from http://pmj.Sagepub.com/content/16/6/488

Ingersoll, R. E. (1994). Spirituality, religion, and counseling: Dimensions and relationships. *Counseling and Values, 38,* 98-111.

Ingersoll, R. E. (1998). Refining dimensions of spiritual wellness: A cross-traditional approach. *Counseling and Values, 42,* 156–165.

Ingersoll, R. E. (2000). PPC spirituality as a counseling resource for adolescents. Retrieved from http://rds.yahoo.com/csuohio.edu%2fcasal%2Fspirsy1.htm.

Ingersoll, R. E. (2002). An integral approach for teaching and practicing diagnosis.*The Journal of Transpersonal psychology, 34*, 115-127.

Johnson, B. R., Li, S. D., Larson, D. B., & McCullough, M. (2000). A systematic review of the religiosity and delinquency literature. *Journal of Contemporary Criminal Justice, 16,* 32-52.

Larson, D. B., & Johnson, B. R. (1998). *Religion: The forgotten factor in cutting youth crime and saving at-risk urban youth*. New York: Manhattan Institute of Policy Research. Lawrence, K. (2002).*Repairing the World: Introducing Jewish Spirituality*. Retrieved from www.waterstones.com/ waterstonesweb/pr... - Cached - Similar

Mapels, M. (2002).*Holistic Adult Development: A spiritual perspective*. Paper presented at convention of the Association for Counselor Education and Supervision, San Antonio, TX.

Marshall, P. (1990). Cultural influences on perceived quality of life. *Seminars in Oncology Nursing, 6*(4), 278–284. Retrieved from http://www.scopus.com/record/ display.url?eid=2-s2.0-

Mir, A. (2008). *Health related quality of life in diabetic patients.* Unpublished M.Sc Dissertation. National Institute of Psychology, Quaid-e-Azam University. Islamabad, Pakistan.

Myers, B. K. (1999).*Young Children and Spirituality*. New York: Routledge.

Myres, J. E., Sweeney, T. J., & Witmer, J. M. (2000). The wheel of wellness counseling for wellness: A holistic model for treatment planning. *Journal of Counseling & Development, 78*(3), 251-266.

Naqvi, I. (2007).*Patterns of delinquency and personality traits of adolescents in child labor.* Unpublished M.Phill Dissertation. National Institute of Psychology, Quaid-e-Azam University, Islamabad.

Newman, B. M., & Newman, P. (2009).*Development Through Life: psychosocial approach* (10th ed.). New York: Wardsworth Publishers.

O'Brien, M. E. (2001). Religious faith and adjustment to long-term hemodylysis. *Journal of Religion and Health, 21*, 68-80

Oser, F., & Gmunder, P. (1991). *Religion and Judgment: A developmental approach*. Birmingham, AL: Religious Education Press.

Purdy, M., & Dupey, P. (2003). Holistic flow model of spiritual wellness. *Counseling and Values*, *49*(2), 95-106. Retrieved from http// www.fbi.gov/ucr/cius2006/ index.html.

Richard, P. S., & Bergin, A. E. (1997).*A spiritual strategy for counseling and psychotherapy*. Washington, DC: American Psychological Association.

Shoemaker, D. J. (2000).*Theories of delinquency* (4th ed.). New York: Oxford University Press.

Shoemaker, D. J. (2009).*Juvenile delinquency*. New York: Rowman & Littlefield.

Sweeney, T. J., & Witmer, J. M. (1999). The factor structure of wellness: reexamining theoretical and empirical models underlying the Wellness Education of Lifestyle and the Five Factor Wel. Retrieved from http//www.highbeam.ciom/doc/1g1-115562441.html

Taylor, E. S. (2003). *Health Psychology* (5th ed.). California: McGraw-Hill.

The Columbia Encyclopedia. (2008). Retrieved from http://www.Encyclopedia.com/ Columbia+Encyclopedia…/ publications.aspx?...-Cached-Similar.

WHOQOL Group. (1995). The World Health Organization quality of life assessment: Position paper from the world health organization. *Social Science and Medicine, 14*(10), 1403-1409.

THE KULLBACK–LEIBLER RATIONALE

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Abstract

A new rationale can be suggested intended for approximating the normal distribution with a logistic distribution by using a scaling constant dependant on minimizing the particular Kullback–Leibler (KL) facts. The new constant 1.749, computed assuming that the normal distribution is true, produces an approximation that may be a noticeable difference throughout in the tails in the distribution in comparison with the minimax constant of just 1.702, widely used throughout item response theory (IRT). The actual minimax constant can be marginally better throughout it's all round maximum error. It can be suggested which of the KL constant is more statistically appropriate for use within IRT.

Keywords: IRT, logistic approximation, Kullback-Leibler information**.**
JEL Classification: Z 000

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1.Introduction:

In item response theory (IRT), the probability of endorsing an item as a function of the latent trait level is usually described by either the logistic or the normal ogive. A different rationale exists for each choice. The logistic ogive has the advantage of having a closed form and can be justified by viewing IRT models as a special case of generalized linear latent variable models (Bartholomew & Knott, 1999). The normal ogive can be justified by assuming that there is an underlying continuous variable behind every dichotomous response, such that if we were able to directly observe the underlying continuous responses, the correct model for the data would be the standard one-factor model with normally distributed errors (Lord & Novick, 1974). The rationale behind the normal ogive is appealing to many IRT theorists, yet this model is more difficult to work with mathematically. In practice, because the logistic and normal distributions appear similar (in that both are symmetric distributions defined on the whole real line), the logistic ogive that closely approximates the normal ogive is often used. Several such approximations are possible; in this paper, an approximation based on the Kulback–Leibler (KL) information is proposed.

2.Methods:

2.a. The Logistic and the Normal Ogive Rationales in IRT Models

First, two common rationales behind the models based on the logistic and the normal ogives are reviewed. It should be noted that other derivations exist as well (Baker & Kim, 2004). Let $\boldsymbol{x} = (\boldsymbol{x}_1, \ldots\ldots\ldots, \boldsymbol{x}_p)$ be a vector of binary observations for a person, and let **θ** be the normally distributed latent trait with density $\boldsymbol{h}\,(\theta)$**.** In the first approach, referred to as the general linear latent variable model approach (Bartholomew & Knott, 1999), the density of *x* is represented as

$$f\ (x)\ =\int h(\theta)\ \Pi g_i\ (x_i\ |\theta)\ d\theta$$

where $g_i(x_i|\theta)\ \ f_i(x_i)g_i(y_i)\ exp(y_iu(x_i))$ and $y_i\ =\ \alpha_i+\beta_i\theta,\qquad 1\le i\le p.$

That is, it is assumed that the observations x_i and x_j for any $i\ \neq\ j$ are independent conditional on **θ** and that the conditional distribution of *xi* belongs to the regular exponential family, where the canonical parameter y_i is a linear function of **θ.** Because each x_i is binary, the conditional distribution of can be written as

$$g(x_i|\theta) = \pi_i^{x_i}\ (1-\pi_i)^{1-x_i}$$

where π_i is the probability of endorsing the item given **θ**. Rewriting this as

$$g(x_i|\theta)\ =\ (1\ -\ \pi_i)\ exp(x_i logit\ \pi_i\ )$$

it follows that $y_i\ =\alpha_i+\beta_i\theta=\ logit\ \pi_i$, and therefore

$$\pi_i\ =\ P(x_i\ =\ 1|\theta)\ =\ 1/(1\ +\ exp(-(\alpha_i\ +\ \beta_i\theta))),$$

which is the familiar logistic ogive. This equation is also a cumulative distribution function for the logistic distribution.

The model based on the normal ogive can be developed as follows. It is assumed that underlying each binary indicator xi is a continuous variable ζ_i , such that for some constant τ_i , called the threshold,$x_i\ =\ 1\ if\ \zeta_i\ \ge\ \tau_i$, and $x_i\ =\ 0$ otherwise.

Further, it is assumed that $\zeta_i\ \ =\ \mu_i+\lambda_i\theta\ +\ \varepsilon,$ where ε is normally distributed. That is, had been observed, a standard factor analytic model would have fit the data. Then, if we again define as the probability of endorsing the item given **θ**,

$$\pi_i = P(x_i = 1|\theta) = P(\zeta_i \geq \tau_i|\theta) = P(\varepsilon \leq \mu_i - \tau_i + \lambda_i\theta) = (\alpha_i + \beta_i\theta),$$

where is the cumulative density function for the standard normal distribution, $\alpha_i = \mu_i - \tau_i$, and $\beta_i = \lambda_i$. Thus, π_i as a function of $\boldsymbol{\theta}$ is described by the cumulative density function of ε. This approach can also yield the logistic model if the errors are assumed to have a logistic distribution. Any other distribution can also be used.

The normal ogive model has the appealing advantage of assuming an underlying continuous variable behind every dichotomous response, an assumption that seems not at all unreasonable (Lord & Novick, 1974). In doing so, it links IRT with factor analysis, viewing IRT models as extensions of factor analytic models to cases where the indicators of the underlying factor are themselves only partially observed. However, working with the cumulative normal distribution can be difficult because it does not have a closed form. For this reason, a common approach is to assume that the normal model is true, but to use the logistic model as an approximation (Baker & Kim, 2004; Lord & Novick, 1974). To do this, a logistic curve that is closest to the standard normal must be chosen. Existing approximations are briefly reviewed below, and a new one based on the KL information is proposed.

2.b. Approximating the Standard Normal Distribution with a Logistic Distribution

The standard normal density is given by $g(x) = (1/\sqrt{2\pi})\, exp(-x^2/2)$, and the logistic density is given by $f(x) = k\, exp(-kx)/(1 + exp(-kx))^2, x \in, k > 0$. The task is to find the value of the scaling constant k for which these curves are most indistinguishable. The plot of two curves when k = 1 is given in Figure 1. This plot suggests that one simple solution is to choose the value of k that would equate the variances of the two distributions (Cox, 1970). The variance of the logistic distribution is $\pi^2/3k^2$, and setting it equal to one yields $k = \pi/\sqrt{3} \approx 1.814$. This solution is plotted in Figure 2. This approach may be good enough for many purposes, and the approximation $logit(u) \approx (\pi/\sqrt{3})\phi^{-1}(u)$ is often given in the literature (e.g., Bartholomew & Knott, 1999).

A more refined approach is to minimize the maximum distance between the two cumulative density functions (Haley, 1952). That is

$$k = \min_k \max_x \left[\phi(x) - \psi(x, k)\right]$$

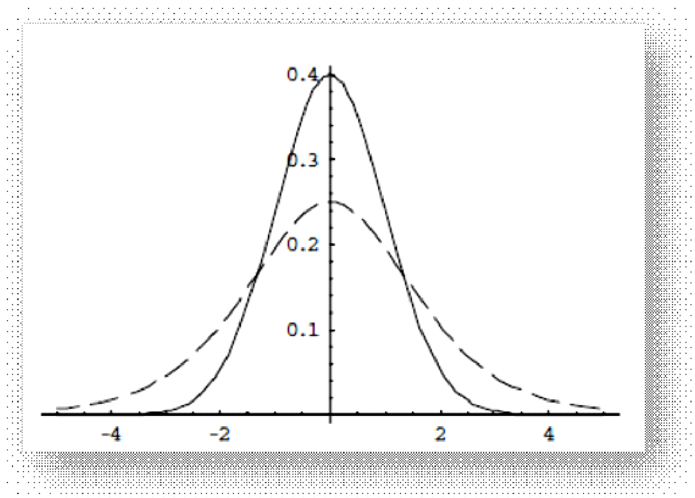
Where

$$\phi(x) = \int_{-\infty}^{x} g(t)\, dt \quad \text{and} \quad \psi(x, k) = 1/(1 + \exp(-kx))$$

The minimax solution is k = 1.702 (see Camilli, 1994, for details of the derivation), which is the scaling constant most often used in IRT (Baker & Kim, 2004) [1].1 As will be seen shortly, this solution yields an approximation under which the maximum difference between the two cumulative density functions never exceeds 0.01 in absolute value. Other approximations have also been used. For example, Amemiya (1981) chose

1 The value of the minimax constant to five decimal places is 1.70174 (see Camilli, 1994). In some sources (e.g., Mcdonald, 1999) it is incorrectly rounded to 1.701.

FIGURE 1
The logistics distribution with k=1 and standard normal (solid Line)



The logistic distribution with $k = 1$ and the standard normal (solid line). $k = 1.6$ simply by computing tables for representative values of the density function for different values of k.

2.c. The Kullback–Leibler Solution

An approximation based on minimizing the KL information (Kullback & Leibler, 1951) is now proposed. KL information or relative entropy is defined as

$$K(g, f) = Eg[\ln g(x)/f(x)] = \int \ln(g(x)/f(x))g(x)\,dx$$

and is a measure of the ability of the likelihood ratio (LR) to discriminate against $f(x)$ when $g(x)$ is true (Ferguson, 1996). That is, given a sample X and two hypotheses

$H_0: X \sim g$

$H_1: X \sim f$

$K(g, f)$ is the average or expected amount of information in the sample X for distinguishing between H_0 and H_1, when H_1 is true. As is clear from this definition, $K(g, f) \neq K(f, g)$ and this is not a true distance function, although it is often called so in the literature.

In this approach, $k = min_k\ K(g, f)$, where $g(x)$ is the standard normal density and is the logistic density as defined above. That is, the normal model is assumed to be the true model, and a logistic approximation is sought that would produce a sample that is most indistinguishable from that produced by a normal distribution. The concept

$$f(x) = k\, exp(-kx)/(1 + exp(-kx))^2$$

FIGURE 2.

The logistic distribution with k = 1.8 and the standard normal (solid line).

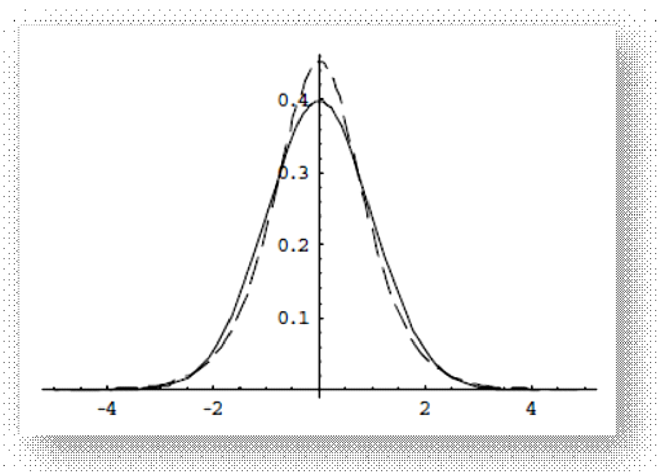
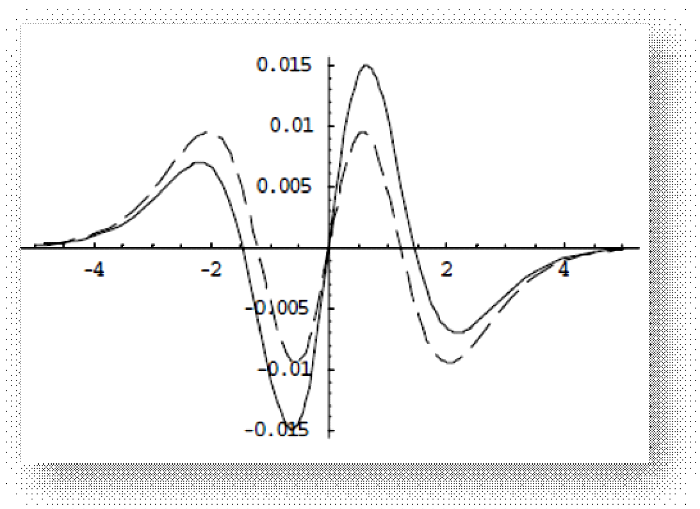


FIGURE 3.

Difference between the cumulative distribution functions of the minimax solution and the standard normal (dashed line), and of the KL solution and the standard normal (solid line).



of "observed" information can be similarly defined by dropping the expectation, and in this case is given by

$$ln\ g/f\ =\ -12\,x^2\ +\ kx - ln\sqrt{2\pi k}\ +\ 2\,ln(1\ +\ exp(-kx)).$$

The KL information is then

$$K(g,f\,)\ =\ Eg(ln\,g/f\,)\ =\ -12 -\ ln\sqrt{2\pi k}\ +\ 2Eg(ln(1\ +\ exp(-kx)))$$

Because $Eg(x^2) = 1$ and $Eg(x) = 0$ The improper integral involved cannot be written in closed form.

Before obtaining the solution to the equation $\partial/\partial k) K(g, f) = 0$, it is first necessary to establish that $K(g, f)$ is finite for all k e" 0 (an outline of proof is given in the Appendix). Then, setting

$$\left(\frac{\partial}{\partial k}\right) K(g, f) = -1k + 2Eg\left(\frac{\partial}{\partial k}\right) ln\left(1 + exp(-kx)\right) = 0 \; yields - - 2Eg[x/\, 1 + exp(kx))] = 0.$$

The numerical solution to this equation is k H" 1.749, which was obtained with the aid of *Mathematica 5*. The minimax and the KL solutions are now compared. In Figure 3, the differences of the minimax and the KL cumulative distribution functions from the standard normal cumulative distribution function are plotted. It should be noted that the graph of the minimax solution is expected to look better overall because the value of the scaling constant is obtained by using a more visually obvious criterion: the maximum vertical distance between the cumulative distribution functions is minimized. As is often stated (e.g., Baker & Kim, 2004), the error made by the minimax solution is never greater than 0.01 in absolute value. The KL solution never does worse than about 0.015.

Further, while the minimax solution does better at approximating the middle of the curve, the KL solution does better in the tails of the normal distribution.

3.Conclusion

When using the logistic ogive to approximate normal ogive in IRT creates the problem regarding finding a logistic density that is certainly most indistinguishable in the standard normal. A new solution to this issue, based on minimizing KL facts, has been proposed. The new scaling constant 1.75 is comparable to the particular widely used minimax alternative 1.70. The particular KL qualifying measure is perhaps really the only gauge used to review densities inside statistical data. The particular KL alternative really does much better on approximating the particular tails of the distribution.

References

Amemiya, T. (1981). Qualitative response models: A survey. *Journal of Economic Literature*, *19*, 1483–1536.

Baker, F.B. & Kim, S.-H. (2004). *Item response theory: Parameter estimation techniques.* New York: Marcel Dekker.

Bartholomew, D.J. & Knott, M. (1999). *Latent variable models and factor analysis.* New York: Oxford University Press.

Camilli, G. (1994). Origin of the scaling constant $d = 1.7$ in item response theory. *Journal of Educational and Behavioral Statistics*, *19*, 379–388.

Cox, D.R. (1970). *The analysis of binary data.* London: Methuen.

Ferguson, T.S. (1996). *A course in large sample theory.* Boca Raton, FL: Chapman & Hall.

Haley, D.C. (1952). *Estimation of the dosage mortality relationship when the dose is subject to error.* Technical Report 15 (Office of Naval Research Contract No. 25140, NR-342-022). Stanford University: Applied Mathematics and Statistics Laboratory.

Johnson, N.L., Kotz, S. & Balakrishnan, N. (1995). *Continuous univariate distributions* (Vol. 2). New York: Wiley.

Kullback, S. & Leibler, R.A. (1951). On information and sufficiency. *Annals of Mathematical Statistics*, *22*, 79–86.

Lord, F.M. & Novick, M.R. (1974). *Statistical theories of mental test scores.* Reading, MA: Addison-Wesley.

McDonald, R.P. (1999). *Test theory: A unified treatment.* Mahwah, NJ: Lawrence Erlbaum. Footnotes

Appendix

Claim 1. *$K(g, f)$ is finite for all* $k \geq 0$.

Outline of Proof. Let $h(x) = ln\left(1 + exp(-kx)\right). h(x)$ is a continuous function of k.
For all k e" 0,
$limx \rightarrow \infty\ h(x) = 0$, and
$limx \rightarrow -\infty h(x) - kx = limx \rightarrow -\infty 11 + exp(kx) = 1$
so that $h(x)$ H" "kx for large negative values of x. That is, the global behavior of this function is at worst linear for all k, and therefore $Eg(h(x))$d d, as the standard normal density has finite moments of all order.

Claim 2. *A solution to the differential equation "$K (g, f)$/"k* = 0 exists and is unique.
Outline of Proof. Since

$$\frac{\partial^2 K(g,f)}{\partial k^2} = \frac{1}{k^2} + 2E_g\left(\frac{x^2 exp\,(kx)}{1 + exp\,(kx)^2}\right) \quad \geq 0 \text{ for all } k \geq 0,$$

$$\frac{\partial K(g,f)}{\partial k} = -\frac{1}{k} - 2E_g\left(\frac{x}{1 + exp(kx)}\right)$$

is an increasing function of k, and thus a solution is unique, if it exists. To show existence, consider
$\lim\ k \rightarrow 0 + \ \partial K(g, f)/\partial k = -\infty$

and

$limk \rightarrow \infty\ \partial K(g, f)/\partial k = 1/\sqrt{2\pi}$.

Thus, there exists a unique solution.

BENEFITS OF DATA DECISION SUPPORT SYSTEM FOR EDUCATIONAL INSTITUTIONS

Rabab Naqvi[1], Aqil Burney[2] & Shelina Bhamani[3]

Introduction

The world is changing so drastically that even the field of education is left with no other choice to adopt the changes. Educational institutes and educationists need to be more flexible to cope with this ever changing dynamics of the world. As environment is changing therefore conditions are also changing so as the demands of educationists and parents. Intangible teaching methodologies like intuition, personal experience and teaching philosophy no more seems to be adequate. Conditions are getting tougher and tougher each day from delivering a lecture to resource allocation and to teachers' performance assessment.

Academic decision making is a vital part of school and university administration. Precise, appropriate and timely information is of immense importance for informed decision making. Usually decision makers doesn't get the information in a useful structure or the data has not been assessed correctly so that they could dig out the useful and prime information from available data. In order to take decisions, educationist's needs to carefully analyze the different factors involved in dispersion of quality education. However few academic decisions end up in the change or review of current academic policies and necessitate episodic assessment for the establishment of the outcome of change.

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There is a requirement for educational institutions in the current era to meet the competitive edge and demands of their various participants (Laudon and Laudon, 2002). The rise of technological softwares, devices and systems has made a significant paradigm shift in educational planning and execution. The schools and educational institutions with traditional approaches is not sufficient for the learner of 21st century and hence these institutions require to adapt to flexible strategies and bring change in their teaching and learning methods, learning environment, and modes operandi to meet the requirement of the learner of today while balancing the work pressure of the human resource (Chen, 2000). The desire to bring positive changes demands educational managers not only to be proficient but to manage their budgetary implications as well (Marakas, 2003). To deal with these concurring quality concern issues of data support systems, a technology that allows planning, management, execution and monitoring of strategic organizational development, is a deific tool for them to manage data, information, and knowledge of any intervention and development (Burke and Kendall, 2005).

Concept of Decision Support Systems

People are getting more familiar with decision support systems as they are gaining an enlarged attractiveness in a variety of domains, including education, medicine, business, engineering and the military. Decision support systems are characteristically used for strategic and tactical business decisions. Situations in which ample amount of information is outrageous for the intuition of singlehandedly human decision maker and where exactness and correctness are of importance, decision support system plays a vital role (Irtishad Ahmad, 2004). It assists humans in there cognitive deficiencies by incorporating information from disparate sources, providing quick access to appropriate information, and helps in taking structured decisions. Decision making tools, if applied appropriately, increases efficiency, effectiveness and productivity of a business by allowing them to make best choices for their technical processes, planning routine tasks, supply chain or financial investments.

DSS have three fundamental components (Flynn, 2002).

- *Database management system (DBMS)*. It stores huge amount of data pertinent to the problem for which the DSS has been designed and also provides a platform for logical data structure with which the users interact.

- *Model-base management system (MBMS)*. The prime function of a MBMS is to convert data from the database into information which helps in making decisions.

- *Dialog generation and management system (DGMS)*. DGMS responsibility is to boost the user experience while using DSS and enables them to utilize it as much as possible and provides user-friendly interface.

Data Decision Support Systems in Multidisciplinary Fields

The use of data decision support system has been found in wide range of fields which is not limited to information sciences. In health, from the last decade, information systems are extensively used in health care to improve patient care (Aydina2, 1997). Decision support systems, especially designed for health care, helps practitioners and administrators with decision tasks as information retrieval, data analysis, diagnosis and test, treatment procedure further recommendations as critical factors dependent on information technologies transforming medical care (Bose, 2003). In engineering and construction sciences, DSS is helping construction and land developing companies in making swift and vital decisions during the critical decisions of site selection process. Builders deals with bulk of data containing valuable information about development projects, land characteristics, sales/buying records. Decision makers analyze this bulk information to generate hidden patterns and correlation within data. Upon this evaluation, builders take the decision of site selection skipping several other factors like regulations, demographics, zoning, etc (Irtishad Ahmada, 2004). Designing of a product and carrying its manufacturing process simultaneously, features of product, manufacturing process demands and customer requirements must be processed parallel to product design. Due to the huge investment in the designing and manufacturing processes, it is of extreme importance to make correct decisions at the time of designing and development of the prototyped model which involves many complex analysis and decision-making tasks (Lida Xua, 2007).

In business management it helps organizations in taking best decisions and improved efficiency. It assists management in taking decisions regarding all business processes like budgeting, marketing, manufacturing, and technical solutions in order to accomplish the company's goal in a more efficient way (NEDELCU, 2013). Currently, in the educational setups the data decision making and warehouses are only used to operate administrative, admissions and financial purposes and is only limited to data keeping and data repository management. However, with the increasing demands of quality assurance agencies, parents and accreditation boards; educational intuitions are asked to provide reports pertinent to educational activities, processes of organizational development, data on student achievement and progress, teaching quality reports, parental satisfaction reports, and engagement in community work (Collins, 2009). This demand for quality controls has given a pressure to educational institution to introduce and improvise data decision making support systems in their settings (Sharkey and Murnane, 2003).

Decision Support System in Educational Settings

The decision support system in educational settings has an imperative role in organizational and quality development (Thorn C. A., 2002). Data decision support enables an institution to transform the raw data into meaningful information that is well informed and deliberated by the teams. It is used by administrators, managers and leaders to integrate the information in their planning and execution of mission (Thorn C. A., 2003). Several studies have reported the positive impact of data decision support by acknowledging its contribution in assessing how various factors influence teaching and learning at the schools and universities; by identifying the risk factors attached with students and accordingly inform the financial planning and execution of change; access and make use of data for organizational development; provide key information and scenarios to the stakeholders; and monitor and continuously improve performance (Visscher, 2001).

Data driven decision making helps educational institutions in wide range of tasks. Like the most important stakeholders of any educational institutions are students. Data decision support facilitates student management in various ways (Herman and Gribbons, 2001). It allows the educational institutions to keep a record of student enrollment, drop-out and passing out ratios, keeps a check on student progression, student satisfaction, their attendance and their extra-curricular achievement (Connolly and Begg, 2002). Various researchers regard this as one of the most efficient tools in students' performance management since it reproduces statistical student performance and enrolment graphs in a segregated form desire by the educational managers.

Various studies have reported implications of data decision making support systems for reporting key features of the school standards and goal; a tool that helps monitor and improve teaching quality by incorporating student , parent and peer evaluation of teachers and quality of curriculum delivery; it provides facilitation to the institute to make data accessible to the key stakeholders by making various forums and communicating key news and information and it helps maintains a data repository chronological to inform the state level wise statistics (Nake, 2001; Burke and Kendall, 2005; Chen, 2000; Collins, 2009; Laudon and Laudon, 2002; Nake, 2001).

Apart from managerial and quality assurance support, data decision making support also offers ease for students and parents to access curricula and syllabi and it's horizontal and vertical progression over the years; orient themselves with the faculty and their profile; be aware of the key requirements of the institutions; evaluate the performance of the educational institution just by a click (Wild, Smith, and Walker, 2001). In addition to this, due to the very nature of the academic institutions, greater part of the resources related with instructional programs are allocated to personnel expenses- i.e. to salaries and other benefit programs for faculty and other non teaching staff (Henry, 2001). With the help of DSS one could compare and evaluate the consumption of various resources over short time intervals less than the full duration of an activity and on that basis, could allocate resources very efficiently (James Gantt, 1987).

Practices of Data Decisions In Pakistan's Educational Settings

Ministry of education under the government of Pakistan, besides the provincial government, has managed and administered the education of Pakistan. However the federal government is mainly engaged in curriculum development, accreditation, and funding of research projects. According to the article 25-A of constitution of Pakistan, seeking quality education is the right of every child and state should be responsible for that. Pakistan's educational system is classified into five standards: primary, middle, high school, intermediate, and undergraduate and graduate programs.

Consistent, precise and complete data is mandatory before planning for any task. Before carrying out proper planning and management of education system, complete information is required pertinent to all educational levels (standards) of Pakistan. For this reason a National Education Census was conducted in 2005 for the very first time to collect data across the Pakistan. The prime objective of this consensus was to assist in decision making, policy designing, educational reforms and improved quality of education in contrast with the regional settings so that the right policies should be designed in the right direction. That census helped stakeholders in designing a data bank for education which facilitate in making of policies which targeted the deprived areas (Pakistan Bureau of Statistics).

A comparative study research is carried out by (Dr. Bibi Asia Naz, 2013), in which they compare the decision making practices between public and private sector universities and concluded that there exists no difference in public and private sector universities in making decision practices, there exists a difference between public and private universities in which decisions are dictated by chair, in both public and private sectors decision are taken by majority vote and government institutions are more affected by political pressures in making decisions in comparison with private sector.

Decision making in universities of Pakistan are influenced by number of factors including biasness, political pressures, assessing the situation wrongly and having less or no knowledge of the system. Research study carried out by (Anwar, 2008) stated that there exist no set criteria in making decision in universities of Pakistan. Most of the policy decisions affected politically and teachers were not involved in decision making process.

Decision support systems are not involved in educational settings of Pakistan due to unavoidable reasons and therefore there exists no autonomy of decision making practices. It is in extreme favor of Pakistan's educational reform to have an expert system which will wholly and solely rely on the data bank of collected data regarding educational settings and therefore helps in taking right decisions at right time regarding educational policies and management.

Conclusion

Several researchers have also talked about its limitation in educational settings. Firstly, it is considered to be very tedious and requires a whole set of expertise to operate information based data decision support system (Burke and Kendall, 2005; Collins, 2009; Salpeter, 2004). The process requires data gathering, data management and data analysis and in the later part data decision making (Thorn, 2001). Secondly, decision making is considered to be highly complex activity that might not necessary always be informed by the data and would need circumstantial analysis beyond the apparent facts and so there is always a question of reliability and benefit of doubt for each decision that is made. Information systems are highly technologically oriented and have a huge data set, a flaw in technology could lead to an unreliable decision and result in a chaos (Salpeter, 2004).

References

Aydina2, J. G. (1997). Evaluating the Impact of Health Care Information Systems. *International Journal of Technology Assessment in Health Care, 13*(2), 380-393.

Anwar, M. N. (2008). Decision Making Practices. *Journal of Diversity Management, 3*(4), 19-26.

Bose, R. (2003). Knowledge management-enabled health care management. *Expert Systems with Applications, 24*, 59-71.

Burke, and Kendall. (2005). *Search Methodologies Introductory Tutorials in Optimization and Decision Support Techniques.* Springer Science.

Chen, Z. (2000). *Computational intelligence for decision support.* LLC: CRP Press.

Collins, A. (2009). *Effective program implementation practices: Bringing research knowledge to practitioners of out-of-school time programs.* Washington, DC: Child Trends.

Condon, K. D. (2007). Integrated Sensing and. *LINCOLN LABORATORY JOURNAL, 16*(2), 237-243.

Connolly, T., and Begg, C. (2002). *Database Systems: A practical approach to design, implementation and management.* M.A.: Addison-Wesley.

Dejan Zilli, N. T.-Š. (2009). DSS for academic workload management. *Int. J. Management in Education, 3*(2), 179-187.

Dervis Z. Deniz, I. E. (2001). USING AN ACADEMIC DSS FOR STUDENT, COURSE AND PROGRAM ASSESSMENT., (pp. 12-17). Oslo.

Dr. Bibi Asia Naz, D. A. (2013, July). Decision Making Practices in the Universities of Pakistan (A Comparative Study). *International Journal of Business and Social Science, 4*(7), 274-278.

Flynn, M. J. (2002). Decision Support Systems. In *Encyclopedia of Library and Information Science, Second Edition.* Marcel Dekker, Inc.

Henry, C. A. (2001, June). Developing performance-oriented models for university resource allocation. *Research in Higher education, 42*(3), 353-376.

Herman, J., and Gribbons, B. (2001). *Lessons learned in using data to support school inquiry and continuous improvement.* Los Angeles, C.A.: : Final report to the Stuart Foundation. Center for the Study of Evaluation.

Irtishad Ahmad, S. A. (2004, July). Development of a decision support system using data warehousing to assist builders/developers in site selection. *Automation in Construction, 13*(4), 525-542.

Irtishad Ahmada, S. A. (2004). Development of a decision support system using data warehousing. *Automation in construction, 13*, 525-542.

James Gantt, D. Y. (1987). Decision Support Systems for Resource Allocation. *Decision Support Systems: Theory and Application, 31*, 373-389.

Laudon, K., and Laudon, J. P. (2002). *Management information systems: managing the digital firm.* Englewood Cliffs, NJ: Prentice-Hall.

Lida Xua, b. C.-m. (2007, January). A decision support system for product design in concurrent engineering. *Decision Support Systems, 42*(4), 2029-2042.

Marakas, G. M. (2003). *Modern Data Warehousing, Mining, and Visualization - Core Concepts, Upper Saddle* . New Jersy: Pearson.

Nake, F. (2001). Data information and knowledge. *Organizational Semiotics*, 41-50.

NEDELCU, B. (2013). Business Intelligence Systems. *Database Systems Jouranal, 4*(4), 12-20.

Pakistan Bureau of Statistics, G. o. (n.d.). *About us: Pakistan Bureau of Statistics*. Retrieved February 1, 2014, from Pakistan Bureau of Statistics: http://www.pbs.gov.pk/content/national-education-census-2005-pakistan

Salpeter, J. (2004). Data mining with mission, technology and learning. 30-37.

Sharkey, N., and Murnane, R. (2003). *Helping K-12 Educators Learn from Student Assessment Data*. Chicago: AERA.

Svetlana Vinnik, M. H. (2005). Efficient Decision Support for Academic Resource and Capacity Management. *International Federation for Information Processings. 3416*, pp. 235-246. Berlin: Springer Berlin Heidelberg.

Thorn, C. (2001). Knowledge management for educational information systems: What is the state in the field? *Educational Policy Analysis Archieves* , 9.

Thorn, C. A. (2002). *Data Use in the Classroom: The Challenges of Implementing Data-based Decision-making at the School Level*. New : American Education Research Association Convention.

Thorn, C. A. (2003). *Making Decision Support Systems Useful in the Classroom: Designing a Needs Assessment Process*. Amsterdam: Kluwer Academic Publishers.

Visscher, A. J. (2001). Computer-Assisted School Information Systems: The Concepts, Intended Benefits, and Stages of Development. *Research and Future Perspectives on Computer-Assisted School Information Systems*, 3-18.

Wild, P., Smith, D., and and Walker, J. (2001). Has a Decade of Computerization Made a Difference in School Management. *Pathways to Institutional Improvement with Information Technology in Educational Management*, 99-120.

WHAT SHOULD I DO? CONFRONTING DILEMMAS OF TEACHING IN URBAN SCHOOLS

Alefiyah Sheikh Ismail Hoshangabadwala[1]

Bibliographic Reference: Richert, A.E (2012). *What Should I Do? Confronting Dilemmas of Teaching in Urban Schools.* New York, NY: Teachers College Press.

What Should I Do? is a compact book, a paperback consisting of 127 pages of acid-free paper, and a "quick read" in terms of usability. It has been published by Teachers College Press, and is part of *the series on school reform.*

The book's cover page illustrates the urgency and the magnitude of the issue the title encapsulates. The main title is presented in bold typeface, outlined by fluorescent green, a color that pervades the cover: four neon Post It™ notes are overlapped and inscribed with a list of issues, or dilemmas, and a bright blue pencil is placed strategically across the cover.

Teaching in the urban setting is riddled with dilemmas-psychological states of being that put one at the crossroads in terms of decision- making. From Kansas City to Karachi, pressures of performing professionally with empathy have lasting ramifications for the personal and professional identities of teachers around the world. The book under review titled "What Should I Do? Confronting Dilemmas of Teaching in Urban Schools", is authored by Anna Ershler Richert. It juxtaposes these dilemmas with research-backed

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explanations that provide perspective to practitioners and managers in charge of the teaching- learning process with reference to the problems that are part of teaching in city schools. The author is a professor at the School of Education in Mills College, Oakland, California and has used two-decades rich material on the ethical concerns of her students learning to teach in urban schools to form the crux of her work under scrutiny.

The book is written in the form of commentary on narratives, or cases, that discuss the various dilemmas of teaching in urban schools of the United States of America. The author presents one case after another in a thematic thread, interspersing narratives with references from educational research that substantiate the moral and professional challenges faced in urban schools. Essays, novels and poems are referred to while introducing domains of difficulty or exploring the dynamics of the dilemmas being studied. With a mix of colloquial and academic language used throughout the book, the author has kept her tone conversational. She has based her dilemma categories on the four “teaching commonplaces” conceived by Schwab (1983): the teacher, the milieu, the content and the student. These categories consist of the dilemmas about professional identity; about dealing with student concerns; about content and pedagogy and about assessment in the urban school context respectively.

In Chapter 1, titled “What Should I Do? Managing Teaching Dilemmas”, the author begins to define teaching dilemmas as “situations that require teachers to make a decision for which there is no easy or ‘right’ answer.” (p.6), going on to quote Burbules (1997) who described teaching dilemmas as the acknowledgment of deep, intractable opposition between contrasting aims and values. In Managing Teaching Dilemmas, the author claims that working in the midst of ambiguous options is essential to the teaching profession and iterates Lampert’s (1985) suggestion for teachers to learn to manage instructional dilemmas instead of endeavouring to ‘solve’ them. Since education happens in the context of human relationships, care should be taken by teachers to react to the psychological and behavioral requirements of all stakeholders, mainly students, appropriately, which often presents contradicting values in terms of how to deal with situations. In The Dilemma Case narratives, the author explains how she went about organizing her writing, and why so rarely, if ever, does any dilemma discussed in the book offer any closure. In “Considering Context”, the author makes an addition to McDonald’s (1992) description of instruction happening in a “wild triangle of teachers, students and subjects”, (p.8) with the context within which the instruction takes place. The author asserts that urban schools are rich in terms of culture and the challenge lies in making them function in the best way possible for students, without them having to forfeit either their indigenous values or the values of the culture of power. However, there are challenges such as poverty, violence and racism that are detrimental to the learning experiences of urban school students. Issues closer to home that can be dilemmatic include lack of resources, poverty and language. Dilemmas more relevant to the Western context include immigration, legal citizenship and ethnicity.

In Chapter 2, titled “Who Am I as a Teacher? Dilemmas of Professional Identity Development”, the author, in the words of Ronfeldt & Grossman (2008), defines the dilemma in becoming a teacher: for novice teachers, the journey towards developing a professional identity is particularly challenging, since they have to ‘act the part’ before they have fully learned the ropes to their occupation. In “Professional Identity and the Urban Context”, the author touches upon the conflict caused by the experiences of teachers that are different in the learner phase and in the context of employment once they are qualified. One dilemma that is discussed in detail and explicated by the case of a teacher is standardization (Laura’s Dilemma, p.22); another is that of violence (Lucy’s Dilemma, p.18). For both the teachers, it was not just a question of what to do, but what they were supposed to do as teachers. Race and language, furthermore, prove problematic for teachers who want to provide culturally rich and relevant experiences to their students but are unsure of how to do so when their own racial and linguistic identities clash with those of their students. For all these cases, the author forwards La Boskey's (2004) assertion that limited and varied experiences and personal histories cull our concepts, attitudes and knowledge of teaching. The author repeatedly claims that learning to teach "involves constructing and reconstructing one's identity as a teacher".

In Chapter 3, title "How Do I Care for Other People's Children? Dilemmas About Students", the author makes an insightful observation about the real challenge in urban schools lying with the presumptions regarding these schools based on novice teachers' prior school experiences and limited rhetoric about urban schooling. In this chapter, a complex scenario of the use of poverty and violence by students, and the importance of sensing the authenticity of the effects of these problems is also mentioned. It is here that the author asks us to understand that empathizing with the effects of poverty is implausible without having experienced it, in light of a poem, from which it is evident for the author that "economical poverty does not mean emotional, spiritual or intellectual poverty."(p. 42)

In Chapter 4, titled "What Should I Teach and How? Curriculum and Instruction Dilemmas", the author introduces us to the challenges of curriculum, which in the "diverse context of the urban school typically involves a negotiation between a teacher and a student (p.62)." Often, the way in which students in this context engage with the curriculum presented start to make meaning out of it through their unique experiences, takes it away from what the teacher has initially planned. The author considers curriculum development to be central to good instruction and assumes a holistic curriculum is somehow necessary for students to lead productive and happy lives. In this chapter, diversity is the central issue, and race and racism make a comeback.

Assessment, the bane of every educator's existence, forms the matter for Chapter 5, titled "What Have My Students Learned and How Will I Know? Assessment Dilemmas". It is truly a matter of gravity when it is used as a gatekeeping device. Before considering the dilemmas of assessment in the urban context, the author discusses the sociocultural perspective of testing and the difference between assessment and evaluation. These issues, coupled with the questions of objectivity and subjectivity, are discussed in the light of case narratives of various teachers (Sylvia's Dilemma, p.83; Tanya's Dilemma, p.93; Luella's Dilemma, p.89)

In Chapter 6, titled "What will I Do", the author makes it clear that a commitment to act is imperative in each instance of dilemma, and that "just recognizing the difference between a teaching problem that can be solved and a dilemma that must be managed can begin to mitigate teaching's uncertain nature (p.104)" The author discusses the importance of learning from these and other dilemmas, and that of sharing them with others, as a conclusion to her work.

Although this book is set in the context of the American urban school, many novice and experienced teachers locally would find truths in these narratives that are nevertheless relevant. As such, it is a valuable addition for professional reading in all urban school contexts, particularly those where poor resources, crime, language disparity and poverty pose dilemmas for teachers. Graduate researchers and policy makers in the education sector stand to benefit from the rich academic groundwork of this book as well.

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