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Editorial Note

The increasing integration of economies around the world has instigated rapid globalization and has expanded multitudinous prospects for nations to prosper. Due to Globalization; increase in world population; and transpiring technological advancements, the economies of the world are getting closer, regional boundaries have faded, markets have become more accessible, and businesses are more risk evasive. All these changes have resulted in more knowledgeable customers and risen demands. To meet the innovation and creativity competitiveness – the markets, especially in the developing economies, need to think proactively towards the emerging world demands and prepare themselves for future challenges, to thrive in the emerging technological global world.

In the globalized world, the fast pace nations are integrating their business resources with technology to foster their capabilities and grab higher market gains. These countries are adopting the technological competencies to excel in business systems. One of the deficient segment of developing nations observed is their incompetency or lack of technical shrewdness. Thus, developing countries must amalgamate their traditional resources with new the technological apparatus, for efficient use of the available resources and save them from deterioration.

As the world is driving towards massive technological advancements, the new progressions have also brought some severe sustainability concerns over the globalized world. With a pro-active and pro-defense approach, it is imperative that the world economies devise strategies to combat the sustainability threats surfacing due to the technological upheaval.

Green markets, greener world economies, sustainable growth, ecological concerns and efficient utilization of resources for the betterment of the people and the planet are the essential fragments of business and economies today. To sustain their businesses for a more extended period, people in the industry should take a closer look at these matters and initiate business practices in harmony to these new world phenomena and stay in the race of global competence.

Keeping in view the new world challenges, Journal of Business Strategies (JBS) has also advanced to adopt digitalized tools for research data. We have partnered with CrossRef to assign digital object identifiers to our data, Indexed the data with databases like RePEc and Google Scholar. We also vitalize our Journal Management System and implement the Open Journal System (OJS) for further sophistication and transparency in our journal management system.

In the end, I congratulate the JBS team for their continuous support and devotion to strengthen the JBS profile and their contribution to foster the knowledge sharing experience in academia. I thank the JBS editorial board and the reviewers for sparing their valuable time for reviewing the research papers and especially thank all the contributors and reviewers for their patience and persistency through the rigorous revise and resubmit process. I also acknowledge the technical support and guidance of team CrossRef, OJS, and RePEc in all the concerned matters.

The next issue of the Journal of Business Strategies will be focused on Sustainable Business and Innovations theme. Greenwich University is organizing an international conference on the said subject in December 2017 and we expect quality research contributions from a diverse group of academic and corporate researchers. Research papers and reviews based on sustainability and innovative business approach are hence invited for publication in the next JBS issue.

Sadia Khurram
Editor
Journal of Business Strategies

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INFLUENCE OF PSYCHOLOGICAL CAPITAL ON KNOWLEDGE SHARING BEHAVIOUR IN RESEARCH FELLOWS OF PUBLIC SECTOR UNIVERSITIES

Ayaz Ali Maitlo, Dr. Salman Bashir Memon, and Dr. Sumaiya Syed

ABSTRACT

Knowledge sharing in the universities is a crucial practice. The Universities are the 'knowledge chambers' for researchers in which psychological capital contributes positively to the academic performance of graduate students. This is confirmed by the literature that there is a positive and significant relationship between psychological empowerment and knowledge sharing. The fundamental aim of this study is to determine the influence of Psychological Capital (PsyCap) on Knowledge Sharing Behavior (KSB) in public-sector Universities. Data were collected from research fellows registered in varied MS/MPhil and PhD programs in three public sector universities. The researcher employed Structural Equation Model (SEM) to test the hypothesized model that demonstrates the connection between four PsyCap traits and KSB. Results show that PsyCap efficacy and PsyCap hope, PsyCap resilience, and PsyCap optimism are associated with the knowledge sharing behavior of the research-fellows in the context of the public-sector universities. The paper's findings imply that the research fellows should keep updated about essential research projects information through personal discussion while analyzing a long-term problem to find a solution.

Keywords: *Psychological Capital, Knowledge Sharing Behavior, Public Sector Universities, Structural Equation Model.*

INTRODUCTION

In a knowledge economy; globalization and increasing competition have complicated the situation for an organization, to get a potential competitive advantage over other similar organizations. Most organizations are utilizing various resources to face this challenge. The deployment of human capital as a resource and considering this as an asset has received much of the

organizational concentration in recent years. In this connection, the disposition of four PsyCap dimensions, i.e., self-efficacy/confidence, optimism, hope, and resiliency are being consumed to meet the current and future challenges.

In the field of positive psychology, PsyCap is one of the emerging concepts which is contended in developing lives of the people (Seligman, 1998). More specifically, PsyCap is a positive psychological development of individuals in organizations and is characterized by four constructs such as, 'hope,' 'efficacy,' 'resilience,' and 'optimism' (Kersting, 2003). The hope represents perseverance to achieve goals with patience, efficacy and controls the confidence level to take necessary actions to achieve a challenging task, resilience is used to sustain efforts on the repeated trail, and optimism positively contributes in the present and future achievements (Luthans, Youssef, & Avolio, 2007). In an organizational context, the PsyCap is established through investing in 'psychic resources' that enhance the chances of the likelihood of positive results.

To be competitive, knowledge sharing is a powerful tool, and it is one of the vital processes of knowledge management. Literature indicates a positive (significant) relationship between psychological empowerment and knowledge sharing (Amiri, Pourkiani, & Pourrashidi, 2014). Also, the positive effect of PsyCap has been noted on innovative performance of employees with a mediating role of knowledge sharing. Empirically, it has been found that synergy is created with knowledge sharing and utilization through various channels among external and internal employees of organizations (Qiu, Yan, & Lv, 2015). Although the employees' willingness to knowledge sharing is linked with psychological capital, knowledge sharing is directly and positively influenced by human behaviour as relationship between all aspects of PsyCap (i.e., hope, efficacy, resilience, optimism) and the knowledge sharing has found to be highly correlated (Ghazinour, Sharafi, Mahabadi, Forouhar, & Riahi, 2014). Knowledge sharing in educational institutions is crucial. The Universities are the 'knowledge chambers' for researchers in which psychological capital contributes positively to the academic performance of graduate students. Therefore, this study investigates the PsyCap on knowledge sharing behavior in public sector universities.

RESEARCH OBJECTIVES

The objective of this study is to investigate the influence of psychological capital traits on knowledge sharing behavior in research fellows of public sector universities. Although the related literature supports the relationship between PsyCap and knowledge sharing, the available evidence is limited regarding the psychological matters that can lead knowledge sharing

behavior. Following this line, the PsyCap positively influences the academic performance of students and their knowledge sharing behavior (Riolli, Savicki, & Richards, 2012; Shoemaker, 2014).

LITERATURE REVIEW

Psychological Capital (PsyCap)

In the literature, the PsyCap has been defined as the positive psychological state of development in individuals, and it is the growth in knowledge, skills, technical abilities, and experience (Luthans, Youssef, & Avolio, 2007). Apart from traditional capital, e.g., financial, technological and physical, organizations are focusing on PsyCap to achieve competitive advantage.

Recently, PsyCap has been considered in the literature of organizational behaviour and it is termed as a "process of positive subjective experience, positive institutions, and positive individual traits, which promises to increase the quality of life and prevent the pathologies that arise when life is fruitless and worthless" (Seligman & Csikszentmihalyi, 2000). In other words, positive psychology is a science of 'human psychology' in a positive direction (Luthans & Youssef, 2004). However, the 'positive organizational behavior' (POB) defined as the "study and application of positively oriented human resource strengths and psychological capabilities which can be measured, developed, and effectively managed for performance improvements in a working environment" (Luthans, 2002, p.59). Empirically, the relationship of PsyCap is found positive with job satisfaction, organizational commitment, organizational citizenship behavior, job enthusiasm, and job performance. However, the employee's intention to leave the organization, workplace absenteeism, counterproductive behavior, and pessimism is found negatively correlated with PsyCap dimensions (Sridevi & Srinivasan, 2012). More specifically, the PsyCap has a positive influence on the people's perception due to the positive impact on the organizations, as it has been studied thoroughly by researchers (Ghazinour, Sharafi, Mahabadi, Forouhar, & Riahi, 2014).

The literature characterizes the PsyCap through four dimensions namely: self-efficacy, hope, optimism, and resilience (Avey, Reichard, Luthans, & Mhatre, 2011; Jafri, 2012; Luthans, Youssef, & Avolio, 2007). **Self-efficacy** is the ability of an individual to use his strengths to achieve challenges. It can be best described as the motivation to choose and welcome challenges and use of strengths and skills for the achievement

of those challenges (Luthans, Youssef, & Avolio, 2007). For example, it inculcates energy and encouragement with the proper investment of the time and hard work to achieve desired outcomes instead of obstacles pulling someone to give up. This can be developed when an individual overcomes fear and resistance to change. Self-efficacy beliefs are multi-dimensional instead of single disposition that differs in different modes of working (Zimmerman, 2000). The second PsyCap dimension **hope** refers to the state where prevailing beliefs are expected to be accomplished (Snyder, Irwing, & Anderson, 1991). For instance, people having high hope usually find alternative ways to overwhelm obstacles as they tend to be obstinate to attain goals. However, the individuals with less hope are usually less obstinate towards goals, and they fail to find alternatives and fail to achieve objectives (Peterson, & Luthans, 2003).

The third PsyCap dimension is **optimism**. In positive psychology, optimism mainly refers to an explanatory method and the way in which people habitually unfold events in their own lives (Seligman, 1998). In this way, Seligman (1998), has connected the thought of optimism to attribution theory. According to this, individuals are optimistic when they attribute the problems they have handled in their own lives to be specific, temporary, and because of external reasons as opposed to those who think the problems negatively and point them to being pervasive, permanent, and internal. As a PsyCap attribute, optimism refers to positive thinking for attaining goals. Optimistic peoples are always getting credit for success because of their anticipations and expectations to become successful in the future (Luthans, Youssef, & Avolio, 2007). Further, optimism is an explanatory style that contributes positively to the personal, permanent and pervasive causes and interprets adverse events regarding external and temporary, situation (Seligman, 1998). The positive PsyCap potentially affect employees' behavior through positive emotional and passionate arousal to enhance employee commitment, motivation, and performance.

However, the **resilience** is an individual's ability, i.e., psychological strength to handle the failure and its implications along with survival to success. This particular word 'resilient' has been derived from the Latin word "resilient" which means to leap. In other words, there are quite a few individuals with this kind of strength called resilience (Masten, 2001). Individuals who possess resilience typically be characterized by diverse qualities chiefly: i) they are accepting reality with deep belief; ii) they held to warrant something; iii) they have the capability to improve and adopt

significant changes; iv) along with ability to overwhelmed and adopt more resourceful way when facing variety and scarcity of resource shortage and other challenges in daily operations (Masten, Cutuli, Herbers, & Reed, 2009). The individuals with the resilience tend to be more flexible and cooperative. Resiliency comes from everyday life experiences, it is magic of ordinary, normative human potential/resources in the minds, brains, and bodies of individuals, in their families and relationships, and in their communities, further, it could not come from rare and unique qualities (Benard, 2004).

Knowledge Sharing Behaviour (KSB)

Knowledge is awareness of something. Defining knowledge as the information, understanding, or skill that one gets from education or experience (Merriam Webster, 2015), which means knowledge is whatever we know about anything and we have learned in our life from education and experience. It is also condemned that knowledge sharing is unnatural because people hide their knowledge due to its value and importance. Furthermore, the individual's attitude of knowledge sharing is influenced positively by expected associations and expected contribution, while it is negatively influenced by expected rewards. However, the economic exchange theory supports that rewards motivate individuals (Bock, & Kim, 2001). Arguably, the effect of incentives sufficiency dominates the knowledge sharing, regardless of monetary incentives. Also, the monetary incentives influence more as compared to recognition based incentives among peers (Wolfe & Loraas, 2008). The style of leadership along with knowledge sharing also plays a vital role in an individual's performance, such as the transformational leaders have a positive influence in comparison to transactional leaders who have negative influence on performance, but the indirect and the positive effect of knowledge sharing along with leadership styles have resulted in increased performance, the findings suggest that knowledge sharing is positively related to both leadership style, i.e., transformational and transactional while the laissez-fair leadership has no effect on knowledge sharing activities (Tombul, 2011).

CONCEPTUAL FRAMEWORK

The Influence of Psychological Capital on Knowledge Sharing Behaviour (PsyCap ® KSB)

The PsyCap creates a state of responsibility for a particular target in the organization. It is described as a state in which an individual feel as though the target of ownership. More specifically, it represents a bond between individuals and the organization, because individuals feel possessiveness

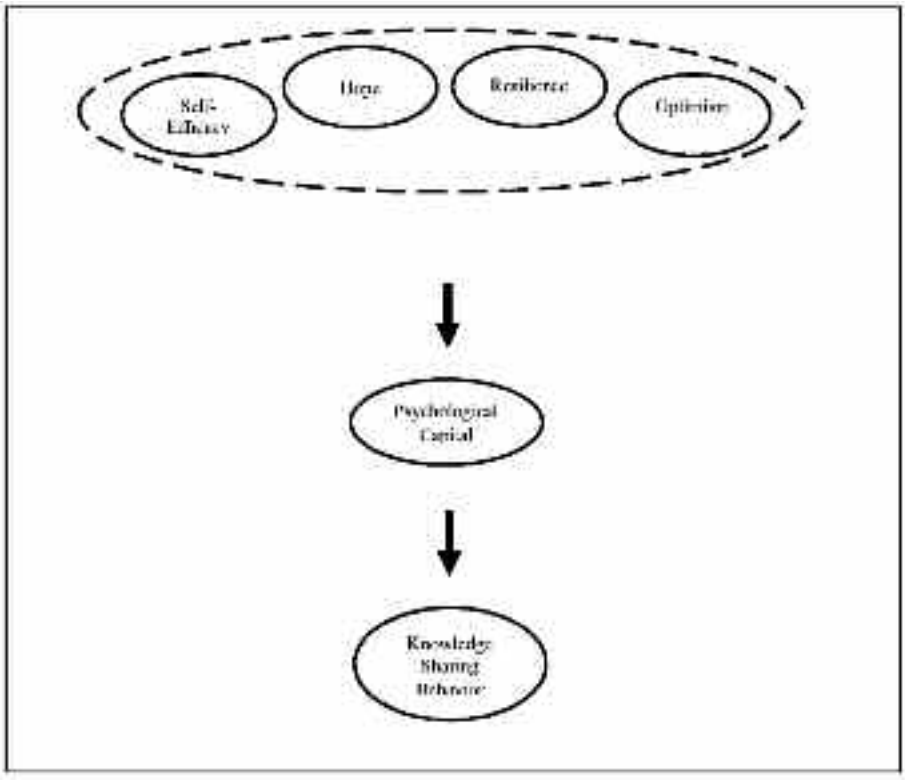
towards the target of ownership instead no legal claim exists, because of this individual have emotions of "our organization" (Vandewalle, Van Dyne, & Kostova, 1995). In this connection, the PsyCap has a positive influence on the individual's mind as demonstrated during training with psychological capital interventions (Luthans, Avey, Avolio, & Peterson, 2010). The results support that little intervention not only sustains the psychological development but also pay for improvements in job performance of an individual. For instance, the PsyCap positively influence the learning of an individual and indeed results in the increased output.

The conceptual framework of PsyCap and knowledge sharing behavior is shown in Figure 1. It illustrates the relationship between the dependent variable knowledge sharing behavior and independent variable PsyCap. The PsyCap is further bifurcated into four sub-variables namely: efficacy, hope, resilience, and optimism. In previous studies, relationship between PsyCap and positive psychology (Larson, Norman, Hughes, & Avey, 2013), relationship of psychological contract and knowledge sharing (Abdullah, Hamzah, Arshad, Isa, & Ghani, 2011), and role of PsyCap and knowledge sharing in an organizational context (Ghazinour, Sharafi, Mahabadi, Forouhar, & Riahi, 2014) has been studied with variables of positive psychology, knowledge sharing and PsyCap respectively. In particular, a human has been considered as a leading source of knowledge sharing, considering this, we measure the relationship between PsyCap and knowledge sharing behavior.

The direction of the relationship has been considered in an educational context, particularly research education because it will help us to create stronger relationships after evaluation of existing relationship amongst the research fellows. The direct relationship between the dependent variable and the independent variable has shown by an arrow, and the relationship of sub-variables has also been studied individually with knowledge sharing behavior. By considering the above-cited studies, the researcher has designed a framework for the evaluation of the relationship between both variables and sub-variables. For example, the positive relationship exists with variables as studied in previous researches in a different context and with different dependent or independent variable such as the relationship between PsyCap and positive psychology, the relationship between psychological contract and knowledge sharing, the relationship of PsyCap and knowledge sharing within an organizational context, and so forth. Therefore, the first and foremost research hypothesis can be drawn as:

H1: PsyCap has a significant influence on knowledge sharing behavior.

Figure 1. Conceptual Framework based on the Influence of PsyCap on Knowledge Sharing Behavior



The Influence of Self-efficacy on Knowledge Sharing Behaviour (EFC ® KSB)

In the educational career, the domain of self-efficacy not only satisfies the educational requirements and occupational roles, but also expand an interest of individuals to prepare themselves for challenging educational and occupational career (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001). Additionally, past researches from two decades have validated the self-efficacy as a predictor of students learning and motivation (Zimmerman, 2000). This implies that the student's self-belief about the academic capabilities plays an essential role in their motivation to achieve. As discussed in the literature, self-efficacy is self-confidence, the ability of an individual to achieve. The positive and significant correlation between self-efficacy and knowledge sharing has been observed along with the predictive power effect of efficacy on knowledge sharing in regression analysis (Ghazinour, Sharafi, Mahabadi, Forouhar, & Riahi, 2014). Also, knowledge sharing is enhanced by self-efficacy (Endres, Endres, Chowdhury, & Alam, 2007). Moreover, positive, and significant relationship has been observed

between efficacy and innovation because of knowledge sharing (Ziyae, Mobaraki, & Saeediyoun, 2015). The knowledge 'self-efficacy' found significantly associated with knowledge sharing intentions and attitudes in organizations (Lin, 2007). Therefore, the second research hypothesis can be drawn as:

H2: Efficacy has a significant influence on knowledge sharing behavior.

The Influence of Hope on Knowledge Sharing Behaviour (HOP ® KSB)

The hope discussed in the literature as an individual's willpower to achieve the goals. The study results declare confident, significant, and direct relationship of hope and knowledge sharing within the organization (Ghazinour, Sharafi, Mahabadi, Forouhar, & Riahi, 2014). The literature further supports the significant connection between hope and knowledge sharing (Ziyae, Mobaraki, & Saeediyoun, 2015). The evidence is also realized that people share knowledge because they hope for recognition and appreciation of their knowledge (Hendriks, 1999). Thus, the third research hypothesis can be drawn as:

H3: Hope has a significant effect on knowledge sharing behavior.

The Influence of Resilience on Knowledge Sharing Behaviour (RES ® KSB)

Referring the previous discussion on resilience, it has been observed that a steadfast individual is not defeated by failures. The positive effect of resilience has been observed with innovative knowledge sharing in innovation perspective (Ziyae, Mobaraki, & Saeediyoun, 2015). In the literature, direct and significant correlation was found between resilience (flexibility) and knowledge sharing. For instance, it appeared that the resilience has the most predictive power of knowledge sharing (Ghazinour, et.al., 2014). Therefore, the fourth research hypothesis can be drawn as:

H4: Resilience has a significant influence on knowledge sharing behavior.

The Influence of Optimism on Knowledge Sharing Behaviour (OPM ® KSB)

Following the supporting literature, individuals are optimistic when they attribute the problems they hold in their own lives. A positive and significant relationship has been evaluated between optimism and knowledge sharing for innovation (Ziyae, Mobaraki, & Saeediyoun, 2015). Also, a significant, direct, and positive relationship has been found between optimism and knowledge sharing within organizational boundaries (Ghazinour, et.al., 2014). Therefore, the fifth research hypothesis can be drawn as:

H5: Optimism has a significant influence on knowledge sharing behavior.

RESEARCH METHODOLOGY

The underlying aim of this study is to determine the causal influence of psychological capital on knowledge sharing behavior. For this purpose, the structural equation model (SEM) technique was used for the hypothesis testing that shows a connection between four psychological capital traits and knowledge sharing behavior. The researcher used the educational intuitions as a platform for data collection. Although the surrounding literature provides support regarding the relationship between PsyCap and knowledge sharing, the available evidence is limited and few in numbers. For example, PsyCap has contributed positively to the academic performance of graduate students (Riolli, Savicki, & Richards, 2012), and knowledge sharing behavior with motivation due to rewards (Shoemaker, 2014). Therefore, following the previous study on psychological contract and knowledge sharing behavior conducted in the educational institutions, for challenges in quality improvements of public educational institutions, this particular study considered PsyCap and knowledge sharing behavior in public sector universities (Abdullah, Hamzah, Arshad, Isa, & Ghani, 2011). The final data was collected through an electronic and self-administered questionnaire survey of 213 research fellow students enrolled across the MS/M.Phil. Moreover, PhD degree programs in three public sector universities. The respondents were selected on the basis of Cochran formula and through random sampling technique.

The questionnaire survey was based on a previously established scale of PsyCap and knowledge sharing behavior theories. In total, the questionnaire survey contained 32 items. The PsyCap scale was based on the empirically validated scale by Luthans, Youssef, and Avolio (2007), while; the questionnaire on knowledge sharing behavior was borrowed from Yi (2009), to collect primary data of this study. Specifically, the items within both scales were administered and adjusted as per the need of the research in educational institutions and the profile of the respondents. For instance, an initial pilot study feedback of 27 respondents who enrolled across the MS/M.Phil. and PhD degree programs in the public-sector universities was integrated into the final survey to improve the survey's face and content validity, length, and layout. Additionally, the research has lagged the advice of Podsakoff, MacKenzie, Lee, and Podsakoff, (2003) for lessening the 'common-method bias by guaranteeing the respondents' vis-à-vis the confidentiality of their answers.

DATA ANALYSIS

Respondents Profile

The data provided in Table 1 represents the personal and categorical information of the respondents. The survey consists of total 213 respondents

from three public universities. The descriptive statistics results show that out of 213 respondents, 75.5% were male respondents and 24.4% were female respondents. According to the results, the completed surveys were obtained from 80.2% MS/MPhil research students and 19.7% PhD research students. The age of 52.5% respondents was between 25-35 years, 33.8% respondents belong to 36-45 age group. However, the age of remaining 13.6% respondents was 46-55 year. Also, the 21.1% respondents were currently enrolled in the first year of their research degree, the 45.8% were in the second year, 15.4% were in the third year, and 9.3% were in the fourth year. As shown in Table 1. a total of 213 respondents currently relate to fourteen different areas of specializations namely the energy & environment, computer science, marketing, and finance, etc.

Table 1. Personal and Categorical Information

Category	Profile	Total Number	(%)
Gender	Male	161	75.5
	Female	52	24.4
	25 - 35	112	52.5
Age	36 - 45	72	33.8
	46 – 55	29	13.6
Educational Level	MS / MPhil	171	80.2
	PhD	42	19.7
	1	45	21.1
	2	106	45.8
Year of Enrolment in the Research Degree	3	33	15.4
	4	20	9.3
	5 or above	9	4.2
	Energy & Environment	6	2.8
	Computer Science	31	14.5
	Communication & English	6	2.8
	Mathematics	4	1.8
	Mechanical Engineering	12	5.6
	Electrical Engineering	6	2.8
Area of Specialization	Marketing	39	18.3
	Finance	19	8.9
	Control System	1	0.4
	Civil Engineering	13	6.1
	Management	34	15.9
	Geography	2	0.9
	Human Resource	36	16.9
	Chemistry	4	1.8

Reliability and Validity Analysis

To measure the internal consistency of the measure, three widely used techniques: i) Cronbach's Alpha (a); ii) Composite Reliability (CR) and iii) Average Variance Extracted (AVE) were employed. The results illustrated in Table 3 presented the three internally consistent reliability results. For example, the Cronbach's Alpha was calculated using standardized item scores. All latent variables had Alpha scores above the standard threshold of 0.70 except for the resilience and optimism which have alpha values of 0.69 and 0.66 respectively (Nunnally & Bernstein, 1994).

Table 2. Results Based on Descriptive Analysis

Dimension	Frequency	Minimum	Maximum	Mean	Standard Deviation
Efficacy	213	1.67	6.00	4.4	0.9
Hope	213	1.17	6.00	4.7	0.9
Resilience	213	1.50	6.00	5.1	1.1
Optimism	213	1.50	6.00	4.7	2.2
Knowledge Sharing Behaviour	213	1.63	6.00	4.74	1.19

In addition, Table 2 also include the descriptive statistics of the responses such as mean and standard deviation of the variables used in this study. For example, in a case of optimism, the score of the mean value is 4.7, and the standard deviation is 1.19. Further, Table 2 shows the minimum and maximum criterion scores of the indicators by individuals' scores of a particular indicator. The composite reliability test indicates the adequacy of the latent variables. In case of this study, the composite reliability (CR) statistics of each latent variable were calculated with a sum of variance of the error terms of variables and squared sum of individual standardized loading divided by squaring sum of standardized loading (Fornell, & Larcker, 1981). As shown in Table 3, the CR values are more significant than the suggested benchmark of 0.70 that indicates the adequacy of the latent variables used in this study.

Table 3. Results of Cronbach Alpha, Composite Reliability, Average Variance Extracted (AVE)

Dimensions	Cronbach - a	Composite Reliability (CR)	Average Variance Extracted (AVE)
Threshold Limit	**≥ 0.7**	**≥ 0.7**	**≥ 0.5**
Efficacy	0.78	0.82	0.63
Hope	0.83	0.84	0.68
Resilience	0.85	0.87	0.71

Optimism	0.76	0.85	0.68
Knowledge Sharing Behaviour	0.88	0.87	0.73

Furthermore, the average variance extracted (AVE) was also calculated. AVE measures the variance retained by amount with latent construct relative to variance remaining from measurement error. It is calculated by the sum of squared individual standardized loadings divided by the sum of variance of error terms and squared sum of individually standardized loadings. Statistically, the AVE value higher than 0.50 indicates the adequate convergent validity, and this result shows that the latent variables capture the significant portion of available variance (Fornell & Larcker, 1981). The results summarized in Table 3 indicate the satisfactory convergent validity by all latent variables.

Table 4. Results of the Pearson Correlation Coefficients (r)

Dimension	Frequency	Correlation Coefficient (r)	Sig Level
PsyCap and KSB	213	0.543	0.001
EFC and KSB	213	0.433	0.000
HOP and KSB	213	0.520	0.003
RES and KSB	213	0.551	0.000
OPM and KSB	213	0.465	0.002

Table 5. Hypothesis Testing Results based on H1, H2 . . . . H5

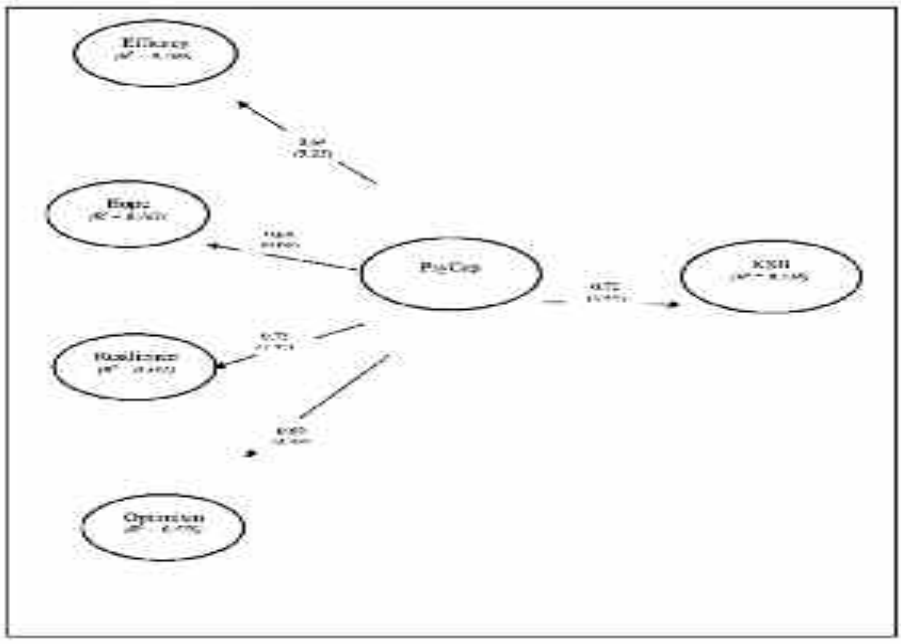
Hypothesis	Path	*g	**t-value	***p-value	Result
H1	KSB ¬ PsyCap	0.72	3.55	0.02	Supported
H2	KSB ¬ EFC	0.77	11.437	0.01	
H3	KSB ¬ HOP	0.69	8.964	0.03	
H4	KSB ¬ RES	0.79	10.543	0.004	
H5	KSB ¬ OPM	0.82	7.862	0.01	

* Gamma (g) ** $t \geq 1.96$ *** $p \leq 0.05$

The Structural Equation Model (SEM)

The Structural Equation Model (SEM) analysis was performed by IBM-SPSS AMOS. The AMOS facilitates researchers to identify, evaluate, and represent hypothesized relations between variables through the graphical and non-graphical paths in the model. SEM considered as a linear, cross-sectional statistical analysis method yield model fit with normally distributed data. The path analysis and regression in this study are distinctive features of the SEM analysis, and it is feasible that we can use it with least sample size for measurement scale and residual distribution (Hair, Sarstedt, Ringle, & Mena, 2012).

Figure 2. Measurement Model Results based on Main Hypothesis H1



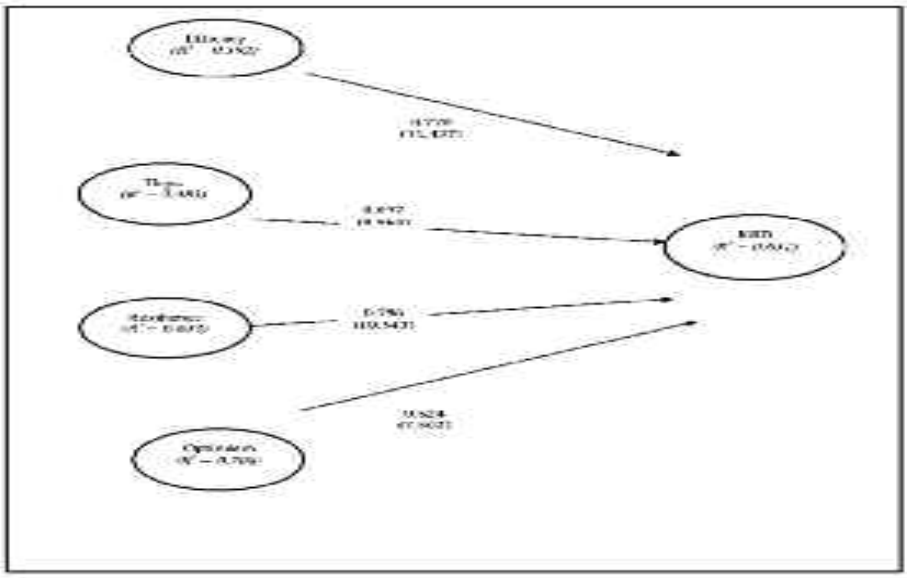
Fit Indices Result: **c**2 = 324, **c**2 / df = 1.59, CFI = 0.91, TLI = 0.94, IFI = 0.91, NFI = 0.90, RMSEA = 0.074

Measurement Model Results

In this study, a total of six latent variables and 32 individualized items were consumed to construct the hypothesized model. Figure 1 represents the measurement model results based on the main research hypothesis H1. According to the result, the structural relationship between PsyCap and knowledge sharing behavior is significant at p-value < 0.05. The chi-square (c2) value provided a good fit so that the H0 could not be accepted. The influence of PsyCap on knowledge sharing behaviour i.e. KSB ¬ PsyCap: g = 0.72, t = 3.55, p-value = 0.02 found to be significant. These results, however, entails that the PsyCap had a significant impact on knowledge sharing behavior.

To assess the model fit, various indices such as, chi-square (c2), CFI (comparative fit index), TLI (Tucker–Lewis index), IFI (incremental fit index), NFI (normed fit index), and RMSEA (root-mean-square error of approximation) were used. The measurement portion indicates that the c2 = 324, c2 / df = 324 / 201 = 1.61, CFI = 0.91, TLI = 0.94, IFI = 0.91, NFI = 0.90, RMSEA = 0.074 are better than the recommended threshold edges i.e. c2 = as low as possible, c2 / df 2 ≤ 1, GFI ≥ 0.90, RMSEA ≤ 0.08, NFI ≥ 0.90, and CFI ≥ 0.90.

Figure 3. Measurement Model Results based on Hypothesis H1, H2, H3, H4 and H5



Fit Indices Result: c2 = 272, c2 / df = 1.59, CFI = 0.91, TLI = 0.92, IFI = 0.95, NFI = 0.88, RMSEA = 0.083

Hypothesis Testing Results

To establish the hypothesized relationship (i.e., H2, H3 …. H5) between variables and to examine the overall model fitness of the recommended conceptual model (see Figure 1), 'multivariate analysis' method, particularly the 'path analysis' was utilized. According to the result, the structural relationship between four PsyCap factors and knowledge sharing behavior is significant at p-value < 0.05. The chi-square (c2) value provided a good fit so that the H0 could not be accepted. The influence of four PsyCap factors on knowledge sharing behaviour (EFC ¬ PsyCap: g = 0.770, t = 11.437, p-value = 0.01); (HOP ¬ PsyCap: g = 0.697, t = 8.964, p-value = 0.03); (RES ¬ PsyCap: g = 0.796, t = 10.543, p-value = 0.004) and (OPM ¬ PsyCap: g = 0.824, t = 7.862, p-value = 0.02) found to be significant. These results, however, entail that the hypothesized relationship between efficacy, hope, resilience, and optimism have a significant impact on knowledge sharing behavior. The positive and significant result, however, implies that that psychological capital and its dimensions increase due to the knowledge sharing behavior in the research fellows of various public-sector universities. For analyzing

the model fit, a total of six indices used in the structural model. The SEM result indicates that the c2 = 272, c2 / df = 272/179 = 1.59, CFI = 0.91, TLI = 0.92, IFI = 0.95, NFI = 0.88, and RMSEA = 0.068 represents a better fit than the recommended threshold edges.

DISCUSSION AND CONCLUSION

The purpose of this study is to explain the relationship between PsyCap and knowledge sharing behavior from the perspective of intangible capital. Regarding four psychological capital indexes (i.e., self-efficacy, hope, resilience, optimism) and knowledge sharing behavior. The empirical relationship between PsyCap and knowledge sharing behavior found to be positive and significant. It is clear from hypothesis testing during structural equation model (SEM) results that the significance (i.e., ≤ .000) level is less than the error level. Thus all suggested hypothesis can be accepted. Further, on the confidence level of 95% and above, hypothesis H1, H2, H3, H4, and H5 are accepted. Even though, in the initial finding of correlation, a robust positive correlation is observed among all variables. These results are also supported by the previous literature. For example, it has been noted that there is an existence of a significant relationship between PsyCap (human factors) and knowledge sharing behavior (Ghazinour, Sharafi, Mahabadi, Forouhar, & Riahi, 2014). Similar evidences found that employees with self-efficacy and optimism are more willing to share their knowledge and expertise with others. Even it is also found that employees with more PsyCap are more willing to share their integrated knowledge and expertise (Qiu, Yan, & Lv, 2015). From the perspective of innovation, the effect of PsyCap factors were found positive and significant, the overall combined and synergetic effect of PsyCap factors were positive and significant on innovation (Ziyae, Mobaraki, & Saeediyoun, 2015).

The analysis of this study found, an overall positive and significant effect of PsyCap on knowledge sharing behavior. Referring result of each factor individually on knowledge sharing behaviour, we found that the effect of self-efficacy is significant (0.01) and positive (0.433) on knowledge sharing, effect of hope is significant (0.03) and positive (0.520) on knowledge sharing, effect of resilience is significant (0.004) and positive (0.551) on knowledge sharing and effect of optimism is significant (0.01) and (0.465) on knowledge sharing.

This intangible capital (PsyCap) has a positive role in research enhancement because if there is enough mental development of research fellows, the knowledge sharing will efficiently and positively be

contributed. Thus, more the PsyCap more will exist due to the knowledge sharing behavior in the organizations and institutes.

The hypothesis testing result of the relationship between self-efficacy and knowledge sharing behavior further envisaged that the confident researchers are always showing a willingness to analyze the long-term problem and find a solution for other research fellows, and feel no hesitation to contribute in discussions on research work. From the results derived from the hypothesis H2 (i.e., optimism has a significant influence on knowledge sharing behavior), it can be concluded that hopeful researchers are willing to search alternative ways for goal achievement. This finding gets support from Seligman (1998), that the PsyCap hope is a personal property based on personal resources to develop the individual's achievement in the workplace.

The result generated during SEM analysis further indicated that the respondents usually manage difficulties and handle many different things at a time during research work. This finding is, however, same as the findings which indicate that the resilience has the more predictive power of knowledge sharing in managing stressful things (Ghazinour, Sharafi, Mahabadi, Forouhar, & Riahi, 2014). However, the hypothesis testing result on the relationship between optimism and knowledge sharing behavior show the optimism on what will happen, usually help researcher on important research project information through personal discussion with other research fellows.

LIMITATIONS OF THE STUDY

Apart from the time and resources, data collection from three public sector universities located in one province, is, however, a significant limitation of this study. The use of convenience (non-probability) sampling for easy access to the survey also upturns the potential limitation that can be circumvented in future studies.

FUTURE RECOMMENDATIONS

The influence of PsyCap on knowledge sharing behavior with the moderating effect of motivation can be observed in future. Though the relationship of PsyCap and knowledge sharing behavior can be researched with work distribution as mediating or intervening variable. The relationship of PsyCap and knowledge sharing behavior can also be applied in any other context, such as employees, students, and innovation.

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APPLICABILITY OF CAPM: EVIDENCE FROM PAKISTAN STOCK EXCHANGE (PSX)

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ABSTRACT

The Capital Asset Pricing Model (CAPM) has been extensively used in the world of finance, for computing the expected return of securities. This study examines whether Capital Asset Pricing Model (CAPM) is a useful technique for evaluating the return on the securities of cement sector companies listed on Pakistan Stock Exchange (PSX). Further, this research also tests the applicability and validity of model on cement sector companies. The inferences taken from this study through data analysis, reveal a weak correlation of expected return and realized excess returns on securities; hence, CAPM is an empirically weak model to be used in the market for accurate forecasting of returns.

Keywords: *Asset Pricing Theory, Capital Asset Pricing Model (CAPM), Pakistan Stock Exchange (PSX), Return on Securities*

INTRODUCTION

The zeal of financial experts has always been focused on expediting the intellectual capacity of determining the valuation of uncertain inflows and outflows of cash outlay made by the investor. In fact, there is a rule of thumb that financier always undertakes a higher return for funds invested in more uncertain projects or securities, than funds invested in less uncertain securities and projects. However, the exact valuation of risky projects and accurate determination of the price of risk is blurred in the finance literature.

In many cases, the returns of stock-markets, in all over the world, are bewildering. Therefore, the financial experts advocate investors to prioritize the formation of effective portfolio so that the diversifiable risk or systematic risk of securities can be adequately evaluated. The financial investors are always counseled to take their financial decisions assuming that prices of securities are reflecting all publicly available information.

Markowitz (1952), was working on his doctoral thesis, and fashioned an amazing mechanism of inclusion or exclusion of stocks in the portfolio, on the grounds of having high returns on bearing a certain risk. His new conceptualization was acknowledged by a lot of researchers, professionals, and experts around the world.

One of the most significant advancement available finance literature, finance under the Modern Capital Theory, is CAPM (Capital Asset Pricing Model). The CAPM of Schlumberger Ltd. (SLB), have formulated a method for researchers and experts to have a look at risk and return (Black, 1972; Lintner, 1965; Sharpe, 1964). The primary purpose of CAPM is to estimate beta of security to explain that how much security is aligned or sensitive to the movement or changes in the market returns. This SLB model can estimate the equity cost and the level of hedging contracts to sell hedging equity portfolios. It can measure abnormal returns on assets and the performance of the diversified portfolio.

However, the CAP Model is persisted as a principal model in empirical researches over the last many decades, it is still generally accepted and extensively used in practice. Either it is an estimation of the cost of the capital of the firms or evaluation of the performance of the managed portfolio, CAPM remained a centerpiece of the analysis. The magnetism of this model is that it proposes influential and instinctively agreeable forecasts about risk measurement and the risk-return relationship. Unluckily, the empirical record of CAPM is too weak to undermine the way it is used in practice.

Numerous studies have shown the reservations and distrust on the capability to forecast the actual return behavior. A lot of practitioners and scholars has put serious concerns and criticisms on the CAPM application. Contrary, many researchers have relied expansively on CAPM to foreknow the expected returns. CAP Model has accomplished the satisfactory outcomes which pertain to actual returns.

Accordingly, there is an essential requirement to inspect the validity and rationality of CAPM in overall world. Many researchers studied the same research question in different parts of the world for different periods of time. Different studies have been conducted in markets like Pakistan, India, Malaysia, China, Belgium, United States of America, United Kingdom, Egypt, and Greek, etc. As this study is conducted in Pakistan,

the validity of CAPM is also studied a lot in different stock exchanges of Pakistan. The study sample is segregated to one of the major sectors of Pakistan Stock Exchange (PSX), and investigation on the validity of one of the prime and widely debated models is attempted, which has remained as a bone of contention for researchers.

LITERATURE REVIEW

It is extensively acknowledged phenomena that the financiers always demand a higher premium for funds invested in risky projects or securities. Several other models are used by the financial experts and financiers to foreknow the riskiness of any fundamental security. Capital Asset Pricing Model (CAPM) has been used extensively by all the experts, analysts, and financiers. It is also been observed that capital asset pricing model is advantageous for the investments done for a more extended period of time (Jagannathan & Wang, 1993).

This Model is used over and over again by the financial managers, financial analysts and financial investors, for risk evaluation of uncertain cash flows and for knowing the appropriate discounting factors for proper valuation of any investment, project or security. As per properties of this CAP Model, the risk-return relationship is linear, and the factor of risk is measured by the beta of uncertain cash flows coming through the return of the market portfolio.

In CAPM model, beta is a measure of systematic risk only, which can be avoided by adequate management and diversification of the portfolio. However, diversification of any portfolio cannot be fortified by the systematic risk. The impact of an increase in systematic risk will be an increase in the foreknown return on the investment by the investor (Lau, Quay, & Ramsey, 1974).

Many research studies have been done to assess the worth of CAPM model that either it can explain the returns of securities, or if the relationship of risk and return of stocks is positive and linear. Breeden (1979), studied that "the intercepts were larger than existing risk-free rates and the coefficients of systematic risk were not significant." (Sharpe & Guy, 1972), discovered and concluded that risk and return relationship is positive between New York Stock Exchange common stocks through 1931-1967, but linearity was not there.

A study of the relationship of risk and return of portfolios steered by Black, Jensen and Scholes (1972), concluded that there is a positive and linear relationship between the portfolio of beta, and excess return of stocks, though the expected value of intercept was below the level. Research study investigated by Black (1972), used the monthly return on securities, listed on NYSE (New York Stock Exchange), for the period from 1931 to 1965 and formed ten portfolios on the basis of beta. In each portfolio, the investor decides on the basis of their risk preferences. If the investor is risk averse he will select low beta portfolios and if the investor is risk seeker he will select high beta portfolios. Black found that portfolios with low risk have positive alpha and high-risk portfolios have lower or negative alphas. In this way, three out of ten portfolios statistically, significantly violated the zero intercept hypotheses in time-series tests.

Another study (Basu, 1983), found that earning to price ratio also explain the variation in the expected return of security, and returns will be higher than predicted by finding another factor which is the size of the firm measured by Market capitalization (Share price times share outstanding). It is said that the stocks having low market capitalization show higher expected returns as compared to those with high market capitalization.

Fletcher (1997), conducted a study and found that there is no effect of firm-size on UK security returns and concludes that only market risk (beta) is valid to explain cross-sectional variation in security returns. In contrast, Basu (1983), found that firms having higher earning to price ratio with high E/P earn higher returns which are risk-adjusted than firms with lower earnings to price ratio, and size effect evaporates when risk and earning price ratio difference is adjusted and controlled for the return of security.

Lakonishok and Shapiro, (1986), asserted that neither market risk (beta) nor deviation of market returns could explain the cross-sectional variation in security's returns, size is the only factor that plays an important role in explaining the returns. Ritter and Chopra (1989), conducted a research study and concluded that there are no cross-sectional relations between market risk and return.

Chan and Chui (1996), and Strong and Xu (1997), following the Fama and French (1992), approach found a weaker relationship between market

risk and returns. Fama and French opposed the CAPM model in their studies of 1992, 1993 and 1996. They found in their studies that security returns cannot be explained only by beta. CAPM is an incorrect estimator of securities' return. They argued that securities with lower market risk are exceptionally underpredicted and securities with higher market risk are immensely overpredicted.

Several other studies also contradicted the CAPM theory and criticized its wide application. Roll (1983), concluded that it is empirically impossible to diversify the portfolio of securities perfectly. Therefore it is impossible for CAPM to model the proper evaluation of a portfolio of securities. Fletcher (1997), conducted a study and found that there is no effect of firm-size on UK security returns and concludes that the only market risk (beta) is valid to illuminate cross-sectional variation in the returns on securities.

Fama and French (2004), exposed the work done on Capital Asset Pricing Model since 1970s. Evidence suggests that cross-sectional variation in stock returns is not associated with its risk measure (beta). Yang, Xu, and Hellström (2006), studied the validity of CAPM on Chinese stock market. They studied one hundred companies listed on Shanghai stock exchange from the period of 2000 to 2005. They found that linearity of risk-return relationship persists in the sample period, but the intercepts were not equal to zero. Hence the statistical results showed that the hypothesis of CAPM that intercepts should equal to zero was not supported and another hypothesis of CAPM that slopes should equal to risk premium was also not supported by the statistical results.

Another study was conducted on 100 listed companies of Athens Stock exchange for the period of 1998 to 2002 by Michailidis, Tsopoglou, and Papanastasiou (2006). They disproved the CAPM's prediction of stock returns. This test rejected the hypothesis of CAPM that intercepts must equal zero and slopes must equal to an average risk premium. They rejected the CAPM in their context. Jegadeesh and Titman (1993), studied the relationship between price and average return and discovered that the relationship is flat even after the inclusion of beta as the independent variable. They further concluded that firm characteristics like BE/ME (Book to Market equity) and firm-size could better clarify cross-sectional variation in the returns of assets.

Further Morelli (2003), found that Capital asset pricing model is valid only for the specific period of time and risk premium provided by SLB model is insignificant in regression model based on cross-sectional data. CAPM model assumes that there is only a systematic risk which is a market risk which should be priced in the market and investors should be compensated for bearing that risk.

In Pakistani Context Raza, Jawaid, Arif and Qazi (2011), have conducted a test on the validity of CAPM in PSX (Pakistan Stock Exchange), and they found that the CAPM is valid and is accurately predicting the returns of securities and stocks of short-term investment comparing with long-term investment. Another study on "A test of CAPM on PSX (Pakistan Stock Exchange)" conducted by Iqbal and Brooks (2007), found that there is a nonlinear relationship of risk and return intensively in recent period because of the performance of market supported by intensive trading activity and high level of liquidity.

Furthermore, another study conducted in Pakistan by Javid and Ahmed (2008), explored the risk-return relationship of 49 companies listed on PSX from July of 1993 to December of 2004. They found that CAPM does not explain the return variation in equity market of Pakistan. They also found that the residual risk also helps in explaining the cross-sectional variation of returns.

Above discussion of studies, conducted empirically, on Capital Asset Pricing Model have brought forth the varied results and findings, mainly indicative of inappropriateness of CAPM in its novel form. Conversely, the studies support the primary ingredient of risk and return fundamental to CAPM theory. As a result, this study will test the validity of Capital Asset Pricing model on companies of cement sector listed on the Pakistan Stock Exchange.

RESEARCH METHODOLOGY

This study apprehends the stocks or securities of companies listed on Pakistan Stock Exchange and categorized in one of the vital sectors that is Cement sector of Pakistan. It is one of the largest sectors listed on Pakistan Stock Exchange. This analysis is conducted on the time period of June 2004 to December 2012 on the monthly returns of selected companies of cement sector listed on Pakistan Stock Exchange.

This study has extended the previous studies conducted in Pakistan and used the two formal procedures to check the validity of Capital asset pricing model. One way is the Robust Least Square Regression Analysis

to check the validity and applicability of CAPM using Eviews software for analysis. Another method used for this analysis is (Fama & MacBeth, 1973) Regression Analysis.

The historical data was collected for constructs under study, which are monthly returns on stocks (R_j), monthly return on the market (R_m) and risk-free monthly rate (R_f). The closing prices of stocks were collected from the website of the Business recorder and Pakistan Stock Exchange. These closing prices were used to calculate the monthly returns of the stocks or securities of companies under study. The KSE-100 index was used as a proxy for the market, and the monthly index of Karachi Stock Exchange (KSE-100) was collected from the website of Pakistan Stock Exchange, and index points were used to calculate the monthly return on the market (R_m). The data of three months T-bills was taken from the website of State Bank of Pakistan and converted in the risk-free monthly rate. The below-mentioned equation of Capital Asset Pricing Model was well-thought-out through Robust Least Square Estimation Procedure to evaluate the required returns on the stocks or securities:

$$(R_j - R_f) = b(R_m - R_f)$$

Where

R_j = Required return of stock or security

R_f = Risk-free rate prevailing in market

b = Systematic or non-diversifiable uncertainty or risk associated with the stock, and

R_m = Return on market

Return on Stock *(R_j)*

The expected return of a stock is the rate required by financier or investor on the investment which he/she made in any risky security or stock. It is calculated from closing prices of the stocks, through the following formula:

$$R_j = (\text{endingprice} / \text{beginningprice}) - 1$$

The effect of dividend and bonus announcements was taken into account while analyzing the stock returns.

Return on Stock (R_m)

It is the return on stock market denoted by Rm. As mentioned above KSE-100 index was considered a proxy for the market. Monthly index points were used to calculate the return on the market to use in the

analysis. The market return is measured by the following formula:

$$R_m = (\text{Index}_{\text{ending}} / \text{Index}_{\text{beginning}}) - 1$$

This market return is calculated in the same way as returns on stocks are calculated.

Beta (b)

Beta is a degree of the undiversifiable or systematic risk of any security or stock. It is defined as the degree by which the return of security (R_j) is correlated with the market return (R_m). Beta is calculated through Robust Least Square regression by the following formula:

$$b = Cov(R_m, R_j) / Var(R_m)$$

Risk-Free Rate (R_f)

Risk-free rate (R_f) is the payment expected by the financier or investor for investing in any asset which gives virtually assured nominal return. It can be inferred that the standard deviation or risk is zero in that investment. The securities of government have a particular return, that return is considered as a proxy for these types of investments. In this study, the three months t bill rate is used as expected or requires a return on zero risk investment.

The principal purpose of this research study is to determine the applicability and validity or expounding power of the Capital Asset Pricing Model in forecasting the returns of stocks or securities of companies of Cement sector listed in the Pakistan Stock Exchange. To attain the mentioned purpose, the realized returns of stocks were calculated by the following formula of CAPM.

$$(R_j - R_f) = a + b(R_m - R_f)$$

Where the intercept term should be zero in the CAPM world. The rationality of the CAPM is confirmed by evaluating whether the intercept term (alpha) of security or stock is significantly different from zero. The Regression equation was run in Eviews software through Robust Least Square Estimation procedure to analyze the results.

Another Method for testing the applicability of CAPM is through Fama and Macbeth Regression. For Application of (Fama & MacBeth, 1973), Regression the excess returns of stocks of companies were sorted on a

monthly basis from June of 2004 to December of 2012. The Fama and MacBeth Regression procedure is applied in two steps. In the first step we run the time series regression to find beta through following regression equation:

$$E(R_{jt} - R_{ft}) = a_j + b_j(R_{mt} - R_{ft}) + e_{it}$$

We get series of betas for each company under analysis. So, we have one beta for each company. In second and final step we run a cross-sectional regression to regress returns on estimated betas to find the risk premium. The formula presented is below:

$$E(R_j - R_f) = b_{j1}(R_{mt} - R_{ft}) + e_{it}$$

Here we assume that the intercept is zero in excess of the risk-free rate. In this method, we will not compute the variances of estimated parameters at each period. Instead, we calculate the variance of the average of estimated coefficients using time series of the estimates. This method is used to take the benefit of easy accommodation of unbalanced panels. The premium of returns is not dependent upon the number of stocks under consideration, which can vary over time. This procedure also flexible for betas varies with time. As Fama & French (1992) reported that the moving average betas does not provide the different results. It also leads to the autocorrelation in returns which are accounted by Newey West Errors for accurate estimation of results.

The following hypothesis was tested:

Ho: a=0 (alpha is equal to zero) against the alternative that Ha: a≠0 (Alpha is not equal to zero).

The T-test is applied to the regression equation of the CAPM. If the T-statistic is more than 2 or intercept is more than two, standard error from zero then we reject the null hypothesis of intercept is equal to zero. Hence, we can reject the theory of CAPM that the intercept or alpha is not equal to zero and significantly different from zero. So, the Capital asset pricing model validity is tested or evaluated on the cement sector of Pakistan Stock Exchange.

This research study is restricted to check the rationality of SLB model that is Capital Asset Pricing Model in predicting or forecasting the results of cement sector companies listed on Pakistan Stock Exchange for a time

period of June 2004 to December 2012. This study can be extended for overall sectors of Pakistan Stock Exchange, and the CAPM validity can be tested for pre and the post financial crisis period analysis that either CAPM is valid for pre-financial crisis period or for post-financial crisis period.

RESULTS

In this study, a probable justification and description on behalf of the financial theory of Capital Asset Pricing is reviewed and presented, to elucidate and explain the findings proven empirically.

Table 1. Regression Results (Capital Asset Pricing Model)

Dependent Variable: AVERAGE				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	-0.116338	0.03199	-3.636693	0.000400
RM	0.863834	0.036536	23.64339	0.000000
R-squared	0.846972	Mean dependent var		-0.837165
Adjusted R-squared	0.845457	S.D. dependent var		0.250139
S.E. of regression	0.098335	Akaike info criterion		-1.781652
Sum squared residual	0.976643	Schwarz criterion		-1.730492
Log-likelihood	93.75506	Hannan-Quinn criteria.		-1.76093
F-statistic	559.0097	Durbin-Watson stat		1.786085
Prob. (F-statistic)	0.000000			

The calculated t- statistics show the level of significance of 1% at which the value of intercept is very high, meaning that the intercept value computed from the regression analysis of CAPM is significantly different from zero. The R-Squared value is 0.8469, interpreted as the 84.68% of the variation in excess returns of stocks or securities of companies is explicated by the Capital Asset Pricing Model Theory. The F-Statistics value (F=559.007, p=0.0000) is significant at 1% level of significance. The Durbin Watson (DW) statistics depicts that there is no autocorrelation problem in this model. The applicability of the model is also tested through the Fama and Macbeth (1973), regression procedure.

Level of standard deviation shows that there is a high standard deviation in the excess returns of stocks meaning that the prices of stocks are not consistent and the performance of companies underneath the cement sector listed on Pakistan Stock Exchange is not consistent enough. It depicts that the Capital Asset Pricing Model is not holding on the cement sector companies listed on PSX. This model does not explain the

variations in the excess returns. Maybe the inefficiency and instability in the emerging market of Pakistan is the cause of this behavior.

CONCLUSION

The study above interrogates the abundance of evidence to bury beta. There is always an inconclusive debate on the Capital Asset Pricing Model. According to Chan and Lakonishok (1993), we cannot take any conclusive stance on this issue. We have studied the validity of this widely debated topic of Capital Asset Pricing Model. The analysis of data depicts that there is virtually no correlation between realized excess returns with the returns provided and foreknown by CAPM. The domino effect of analysis is in line with the other studies already conducted on Pakistan Stock Exchange like (Bhatti & Hanif, 2010). Apart from Pakistan, the study results are also in line with the studies conducted in other countries like (Choudhary & Choudhary, 2010; Diwani & Asgharian, 2010, in India; Fraser, Hamelink, Hoesli, & Macgregor, 2004, in the UK; Sharifzadeh, 2010, in the USA). On the basis of these results and supporting studies, we concluded that the CAPM is not a reliable tool to foresee the expected returns of stocks of cement sector of Pakistan and may result in the inaccurate risk and return association. The opposing justifications and uncertainties surrounding the evidence of CAPM proposed that game is not over for CAPM. It is even one of the reasons behind the long-lasting survival of this model, and despite having a lot of unrealistic axioms, it is still most preferred model in the world of finance. Conversely, one must be familiar with the limitations while using it.

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THE RELATIONSHIP OF PERCEIVED LEADERSHIP STYLES OF DEPARTMENT HEADS TO JOB SATISFACTION AND JOB PERFORMANCE OF FACULTY MEMBERS

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ABSTRACT

This study aims at examining the relationship among faculty members' perceptions of their department heads' leadership styles and faculty job satisfaction and job performance. Working within a quantitative research paradigm, the data were collected from 207 faculty members of a sizeable public-sector university of Pakistan, through a questionnaire survey method. The descriptive and inferential analyses were conducted through SPSS version-20. This study determined that the frequent practice of transformational leadership style by the department heads could positively influence faculty job satisfaction and job performance. Whereas, the transactional and laissez-fair leadership styles practiced by the department heads could varyingly influence faculty job satisfaction and job performance. Primarily, this study offers empirical evidence pertinent to understand the nexus between perceived leadership styles/approaches of department heads and faculty job satisfaction and job performance in an academic setting. The significance of this research is embedded in examining the transformational leadership theory in the context of the higher education.

Keywords: *Transformational Leadership, Transactional Leadership, Job Satisfaction, Job Performance, Effective Leadership*

INTRODUCTION

Over the past two decades, the higher education sector is working under a dynamic scenario, surrounded by multiple challenges regarding rapid technological changes, increase demand, diffusion of knowledge, increased focus on quality, competitiveness, changing funding mechanism,

regulations, and internationalization (Asaari, 2012). Overall, these various challenges are pressing higher education institutions to adapt to the changing nature of the global educational environment (Joseph & Winston, 2005), through redefining and reformulating leadership within academic settings (Fullwood, Rowley, & Delbridge,2013). Notably, in developing countries, these various challenges have emerged more prominent, which entail effective leadership as a cornerstone to meet future challenges (Al-Husseini & Elbeltagi, 2014). In this regard, to empirically examine the leadership practices, from a developing country context, this study focuses on one of the largest public universities of Pakistan, located in the province of Sindh.

Pakistan with an estimated population of 191 million people is ranked as world's sixth most populous country (Pakistan Economic Survey, 2014-15). Although, currently 163 (91 public and 72 private) universities/degree awarding institutions are established in Pakistan (HEC, 2015), however, the standard of higher education in Pakistan is not up to the international standards (Shah, 2010). This is evident from the fact that currently only one Pakistani University is ranked among top 500 universities in the world (Quacquarelli Symond, 2015). On the whole, although the Higher Education Commission of Pakistan, as a focal body, is undertaking multiple endeavours to develop an equitable system of higher education, through fostering quality learning, to build-up knowledge-based economy, however, there is paucity of empirical research highlighting those issues that could positively contribute towards overall performance of the academic institutions.

About enhancing the quality of higher education in Pakistan, currently, HEC is urging faculty members to play a more active role through adopting innovative and performance oriented approaches in teaching, research, and consultancy, publication of books and journal articles, developing entrepreneurial activities and community involvement. Accordingly, the effective leadership within academic settings is predominately conceptualized by assessing leader behavior about enhancing faculty members' positive contributions towards the success of an organizational mission (Key & Key, 2000; Yukl, 2013). Mainly, this effective leadership conceptualization is underpinned by a notion that the quality of leader-faculty relationship and leader behavior are likely to contribute to significant variance in faculty members' job satisfaction and

job performance (Simkins, 2005). Moreover, with regard to manifesting effective leadership, although it has been asserted that the department heads within higher education settings represent the first tier of the leadership, in terms of establishing the direct and frequent interactions with the faculty members, and monitoring the core functions of teaching and research. However, there is a little attention paid to identify that how this leadership position is practiced within academic settings (Al-Husseini & Elbeltagi, 2014, Smothers, Absher, & White, 2012).

Overall, this research is intended to contribute to the repertoire of knowledge within the domain of educational leadership in three distinctive ways. Firstly, this study has its focus within the academic setting from a non-western developing countrys' context, as most of the prior research is embedded in academic settings from a developed world (Khalifa & Ayoubi, 2015). Secondly, this study focuses on departmental leadership and aims to respond to growing calls from the relevant literature pertinent to extend the empirical research concerning this leadership position (Bryman & Lilley, 2009; Mushtaq & Akhtar, 2014; Smothers, Absher, & White, 2012).

RESEARCH OBJECTIVES

This study is intended to investigate that how perceived leadership styles of department heads could influence faculty job satisfaction and job performance. Drawn from the research issues and identified in the discussion above, the present study is aimed at achieving the following research objectives.

1. To analyze the nexus between perceived leadership styles of the department heads and faculty members' job satisfaction.

2. To analyze the nexus between perceived leadership styles of the department heads and faculty members' self-perceived job performance.

The following two research questions were formulated and attempted to achieve the above mentioned two research objectives.

Q1: What are the relationships of department heads' leadership styles/behaviors to faculty members' intrinsic, extrinsic, and overall job satisfaction?

Q2: What is the relationship between department heads' leadership styles/ behaviors and faculty members' self-perceived job performance?

LITERATURE REVIEW

Leadership

In the extant literature, the notion of leadership draws characterization from multiple dimensions, ranging from individual perceptions to a particular aspect of the phenomenon of interest, which leads toward the emergence of various theoretical frameworks, relating to leadership (Northouse, 2013; Yukl, 2013). Primarily, this study draws theoretical impetus from Full Range Leadership (FRL) model, conceived by Bass and Avolio (2004). This leadership model gains conceptual impetus from Bass (1985) conceptualization of transformational and transactional leadership behaviors, inspired from earlier leadership characterization of Burns (1978), pertinent to offering a comprehensive understanding concerning the leadership phenomenon (Gill, 2011). Although initially, Burns (1978), characterized a leader as transformational or transactional in his/her approach, later, Bass (1985) refuted this dichotomy and characterized transformational and transactional leadership behaviors as unique but complementary to each other, rather than in contradiction to each other. Based on Bass (1985) conceptualization, the Full Range Leadership (FRL) model incorporates nine dimensions, embracing transformational along with transactional and laissez-faire leadership styles and has been widely used in the leadership research (Avolio, 2011).

Overall, the transformational leadership reflects those leadership behaviors, which are described as an idealized influence, inspirational motivation, intellectual stimulation and the individualized consideration (Nguni, Sleegers, & Denessen, 2006). Leader behavior concerning the idealized influence has been described regarding attribution and behavior dimensions. Mainly, the idealized influence (attributed and behavior) involves displaying personal charisma regarding a future vision and mission, boosting a collective pride, and receiving respect and admiration from the followers (Bass, 1985). Inspirational motivation behavior entails inculcating a compelling vision, reinforced by words, symbols, and optimistic view of the future (Bass, 1985). Whereas, through exercising intellectual stimulation behavior, the leader encourages followers towards utilizing their intuition and innovative ideas, intellectual risk-taking, challenging assumptions, and sharing their views to identify alternative approaches to execute the underlying task (Winkler, 2009). Moreover, the individualized consideration behavior relates to promoting a strong bond with followers, through paying individual attention to them, pertinent to

boost their desire for self-development, self-actualization, and self-efficacy (Jung, Wu, & Chow, 2008).

The transactional leadership, however, reflects those leadership behaviors, which are described as a contingent reward, and management-by-exception regarding its active and passive dimensions (Bass, 1985). Although, there is a debate considering the passive dimension of management-by-exception among transactional leadership behaviors due to its non-leadership orientation (Avolio, Bass, & Jung, 1999). However, this study by following Bass's (1985) initial leadership model, which is also endorsed by current leadership literature (Abuorabl, 2012; Northouse, 2013), conceptualizes transactional leadership in respect of contingent reward, and both dimensions of management-by-exception (active and passive). Contingent reward reflects a traditional aspect of the transactional leadership, entailing pre-defined targets and goals, monitoring followers' performance and communicating reward availability (monetary as well as non-monetary) on achieving expected performance (Winkler, 2009).

Active management-by-exception behavior is aimed at paying close attention to the execution of the task through identifying any deviations or complaints that might arise, giving negative feedback, communicating corrective measures, and providing instructions (Northouse, 2013). Contrary to the above behavior, a leader who practices passive aspect of management-by-exception behavior waits and takes no steps unless an issue arises and provides no guidance to subordinates concerning task completion (Kirkbride, 2006). This reflects that this approach does not offer any leadership during normal operating activities. Furthermore, the laissez-faire leadership behavior merely represents the non-existence of leadership, due to relinquishing responsibilities, avoiding decision making, lacking feedback, ignoring followers' needs, and remaining less responsive to critical individual and organizational matters (Northouse, 2013).On the whole, the utility of FRL model has been acknowledged in relation to its more comprehensive approach, to cover multiple leadership behaviours, in terms of incorporating non-leadership approach (laissez-faire) to a more transformational approach (idealised influence), instead of placing sole focus on single or uniform approach of leadership (Kirkbride, 2006).

Job Satisfaction

Primarily, job satisfaction has drawn its conceptualization from different dimensions by different scholars (Armstrong, 2009; Kreitner &

Kinicki, 2013; Locke, 1976). For example, Locke (1976), defines job satisfaction in respect of an emotional response that might be experienced through self-examination mechanism, about pleasurable or positive emotional state which develops from the appraisal of one's job or job experience. One of the prominent theoretical perspectives concerning job satisfaction is embedded in Herzberg' Motivator-Hygiene theory (Herzberg, Mausner, & Snyderman, 1959). According to Herzberg, motivator factors could act as a source of job satisfaction, reflect intrinsic aspects of the job itself and might include personal development, recognition, and challenging task, whereas, hygiene factors although, do not influence job satisfaction, however, their absence could cause job dissatisfaction, they relate to extrinsic aspects of the work itself and might include salary/wages, management practices, and company policies.

Job Performance

Since the job performance measurement has been conceptualized from two methods, i.e. subjective and objective methods of appraisal, therefore, researchers frequently select one of these methods (Viswesvaran, 2001). About these two methods of appraisal, the subjective method indicates soft criteria, such as a colleague, self, or supervisory ratings, whereas, the objective method includes indices of productivity, such as the quantity of output produced in an hour (Kessler, 2007). Overall, faculty members' job performance could be measured through different dimensions, such as teaching (Smeenk, Teelken, Eisinga, & Doorewaard, 2008), research (Mamiseishvili & Rosser, 2012) supervision (Hardré, Beesley, Miller, & Pace, 2011), consultancy (Cater-Steel, Hine, & Grant, 2010), civic engagement and community outreach participation (Hollander & Saltmarsh, 2000), and publishing books and journal articles (Sukirno & Siengthia, 2011).

Linking Leadership Styles to Job Satisfaction

Academics**,** researchers, and practitioners from multiple fields and diverse contexts, endeavored to identify factors affecting job satisfaction. In this regard, heads' leadership style has emerged as one of the key factors affecting faculty job satisfaction (Al-Omari, 2008; Grosso, 2008). Regarding FRLM, commonly, the transformational leadership style due to its wider approach, in terms of visualising leader role as more interactive, visionary and supportive in relation to promoting faculty members' creativity, expanding their vision and enhancing their achievement level to lead academic institutions toward a bright future, has been positively linked to faculty job satisfaction (Abuorabl, 2012; Pihie, Sadeghi, & Elias,

2011). Notably, although, all aspects of the transformational leadership have gained consistent support due to their positive contribution toward faculty job satisfaction. However, different aspects of transactional leadership have attracted considerable debate about their varied influences on faculty job satisfaction (Abuorabl, 2012). Moreover, the laissez-faire leadership style due to its passive approach, making no efforts to establish positive interaction with the faculty members and ignoring the critical individual and institutional issues, has been negatively linked to faculty job satisfaction (Amin, Shah, & Tatlah, 2013).

Linking Leadership Styles to Job Performance

Although, the intriguing association between leadership style and job performance has been debated in the prior research studies (Bass, Avolio, Jung, & Berson, 2003; Fernandez, 2008; Wong & Laschinger, 2013), but little empirical research is conducted within academic settings (Braun, Peus, Weisweiler, & Frey, 2013). Studies conducted within non-academic contexts have consistently endorsed the positive contributions of transformational leadership style towards followers' job performance. However, transactional leadership style have attracted several findings concerning followers' job performance (Rahman, Ferdausy, & Bhattacharjee, 2014). Particularly, with regard to faculty job performance, the significance of transformational leadership has been highlighted in terms of encouraging faculty members in designing innovative research ideas and undertaking challenging research tasks, ensuring their success through coaching and mentoring offers, and acting as a role model for faculty members to hold them in the academic career (Braun et al., 2013; Camps & Rodriguez, 2011; Woods, 2007). About transactional leadership style, the leader behavior aims at communicating explicit reward and work methods, reflecting contingent reward aspect of the transactional leadership also draws positive association with the followers' job performance (Bass et al., 2003).

Overall, the findings drawn from the prior literature highlighted that the different attributes of transformational, transactional leadership as well as laissez-faire leadership style, which collectively form FRL model, could influence job satisfaction and job performance of academic staff. However, the contextualized nature of the leadership (Bryman & Lilley, 2009) raises a need to explore the nexus between FRL model and job satisfaction and job performance from under-studied contexts (such as Pakistan academic settings), to offer a more empirical evidence validate these relationships. The conceptual framework of this study is presented in Figure 1.

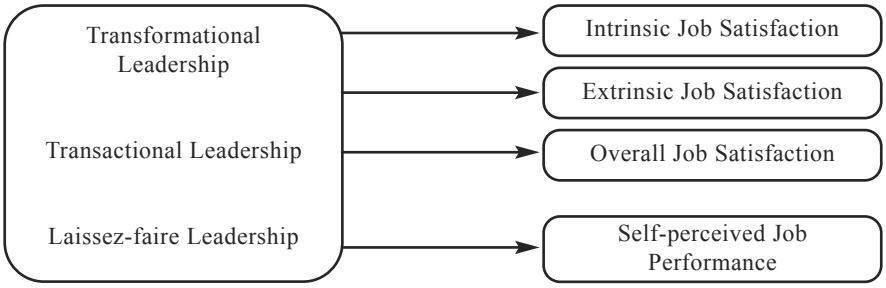

Figure 1. Conceptual Framework

RESEARCH METHODOLOGY

Drawn from quantitative research paradigm, this research used deductive approach and data were collected from participants at one point. Therefore, this study is cross-sectional in nature.

Study Sample

This research study was carried out in a larg public university of Pakistan, located in the province of Sindh. By the study objectives, the targeted population comprised all 637 full-time faculty members working at the university under study. Krejcie and Morgan's (1970) sampling approach was used, and through adopting a random sampling strategy, the survey questionnaires were handed over to 250 faculty members. A total of 207 completed questionnaires were collected, yielding a response rate of 82.8%. The demographic details of the study participants are encapsulated in Table 1.

Table 1. Demographic data

Variable	Categories	Frequency	Percent
Gender	Male	116	56.0
	Female	91	44.0
	Total	**207**	**100.0**
Age	21-30 years	56	27.1
	31- 40 years	80	38.6
	41-50 years	50	24.2
	Above 50 years	21	10.1
	Total	**207**	**100.0**
Employment Experience	1-5 years	68	32.9
	6-10 years	52	25.1
	11-15 years	57	27.5
	Above 15 years	30	14.5
	Total	**207**	**100.0**
Employment Rank	Lecturer	80	38.6
	Assistant Professor	74	35.7
	Associate Professor	29	14.0
	Professor	24	11.6
	Total	**207**	**100.0**

Study Variables Measurement

A four-section questionnaire was employed to collate the primary data. In this regard, the first section of the questionnaire was aimed at seeking information concerning participants' demographic details related to gender, age, employment experience and academic rank. The second, third, and fourth sections of the questionnaire were aimed at seeking participants' perceptions concerning their department heads' leadership styles, their self-perceived job satisfaction, and job performance, which are elaborated below.

Leadership Styles

The perceptions of faculty members concerning their department head leadership styles were evaluated by employing 36 items from Multifactor Leadership Questionnaire- (MLQ-5X- Short), developed by Bass and Avolio (2004). The transformational leadership style was measured regarding its five dimensions, whereas, the transactional leadership style was assessed by its three dimensions, as described above. Mainly, each dimension of the transformational and transactional leadership attribute constitutes of four items. Moreover, the laissez-faire leadership style also embraces four items. About each item, faculty members were required to rate how frequently each statement applied to their department heads, employing a Likert scale representing 0 to 4 values (0 = not at all, 4= frequently, if not always). Aggregate dimension values were computed by averaging the item ratings. To check the reliability of scales, all study scales achieved alpha value more than .7 and were considered reliable (DeVellis, 2003). In this regard, alpha values of .77 and .74 were computed for the composite scales of transformational and transactional leadership respectively. Whereas, the alpha value for the laissez-faire leadership style was obtained at .76.

Job Satisfaction

The perceptions of faculty members pertinent to their intrinsic, extrinsic, and overall job satisfaction were measured by using eight items from Mohrman et al. (1977), Mohrman-Cook-Mohrman Job Satisfaction Scale. Each of the intrinsic and extrinsic job satisfaction scales comprises of four items, and overall job satisfaction was assessed by averaging both scales ratings. For each item, faculty members were asked to rate the extent of each statement that applies to them, employing a Likert scale indicating 1 to 5 values (1= very low, 5 = very high). A Cronbach alpha value of .88 was computed for the intrinsic satisfaction scale and .89 for the extrinsic satisfaction scale.

Job Performance

The faculty members' perceptions concerning their performance across various dimensions of their job were measured by five items from Smeenk et al.'s (2008) job performance scale. For each item, faculty members were asked to rate the extent of each statement that applied to them, employing a Likert scale indicating 1 to 5 values (1= very low, 5 = very high). A Cronbach alpha value of.89 was computed for this self-perceived job performance scale.

DATA ANALYSIS

To analyze the data, the descriptive and inferential statistical techniques were employed with the support of Statistical Package for Social Sciences (SPSS)-version 20.0. The descriptive and inferential statistics were used to summarize the value of study variables and examin the nexus between them. Concerning descriptive statistics, mean and standard deviation values were computed, as reported in Table 2. Whereas, the inferential analyses were conducted through standard multiple regression techniques. Primarily, the standard multiple regression techniques was employed to assess the variance in the dependent variable predicted by the independent variables, when all independent variables are entered in the model simultaneously (Pallant, 2013). In this study, four multiple regression models were developed. In each model, the transformational, transactional, and laissez-faire leadership styles were entered as independent (predictor) variables. Whereas, intrinsic, extrinsic, and overall job satisfaction, and self-perceived job performance, were treated as a dependent (criterion) variable individually, in four regression models (Model 1a, 1b, 1c, and Model 2) respectively. The basic descriptions of these four regression models are presented in Table 3.

Table 2. Descriptive Statistics

	Mean	SD	N
Transformational leadership style	2.44	.56	207
Transactional leadership style	2.28	.63	207
Laissez-faire leadership style	2.05	.81	207
Intrinsic aspect of job satisfaction	4.07	.74	207
Extrinsic aspect of job satisfaction	3.90	.82	207
Overall job satisfaction	3.98	.76	207
Self-perceived job performance	3.71	.76	207

Table 3. Regression Matrix on Faculty Members' Job Satisfaction and Self-Perceived Job Performance

		RQ (1)		RQ (2)
	Model 1a	**Model 1b**	**Model 1c**	**Model 2**
R^2	0.34	0.39	0.38	0.35
F	35.72*	43.73*	43.37*	37.73*
Beta (β)				
Transforlead	0.46	0.36	0.42	0.55
Transactlead	-0.17	-0.13	-0.15	-0.03
Laissflead	-0.28	-0.40	-0.36	-0.08
T-test statistics *(t)*				
Transforlead	4.43*	3.57*	4.17*	5.36*
Transactlead	-1.98*	-1.53	-1.83	-0.33
Laissflead	-3.35*	-4.88*	-4.33*	-0.99

Notes: $^{*}p <$. 05. All regression models used transformational (Transforlead), transactional (Transactlead) and laissez-faire (Laissflead) leadership styles as independent (predictor) variables, whereas, dependent (criterion) variables are: Model 1a = intrinsic job satisfaction, Model 1b = extrinsic job satisfaction, Model 1c = overall job satisfaction and Model 2 = self-perceived job performance respectively. Four regression models are stated as:

Model 1a = (IntJS)' = A+ β_{tfl}(transforlead)$_+$ β_{tnl}(transactlead)$_+$ β_{lf} (laissflead)
Model 1b = (ExtJS)' = A+ β_{tfl}(transforlead)$_+$ β_{tnl}(transactlead)$_+$ β_{lf}(laissflead)
Model 1c = (OvalJS)' = A+β_{tfl}(transformed)$_+$ β_{tnl}(transactlead)$_+$ β_{lf}(laissflead)
} RQ 1
Model 2 = (OvalJP)'= A+β_{tfl}(Transforlead)$_+$ β_{tnl}(Transactlead)$_+$ β_{lf}(Laissflead) → RQ 2

RESULTS AND DISCUSSION

The findings are drawn from three multiple regression models (Model 1a, 1b, and 1c) concerning research question one, pertinent to exploring the nexus between department heads leadership styles, as perceived by the faculty members. Faculty members' intrinsic, extrinsic, and overall job satisfaction are summarised in Table 3.

Primarily, to investigate the nexus between department heads' leadership style, and intrinsic job satisfaction of academic staff, the findings are drawn from multiple regression Model 1a, as reported in Table 3, reveal that together three independent variables account for 34% (R square. 34) of the variance in the dependent variable. Since *F*=35.72, is significant, this suggests that one or more of the independent variables are important predictors of faculty members' intrinsic job satisfaction. Notably, as

reported in Table 3, the Beta (β) values of three independent variables were computed in comparison to each other, rather than individually. Hence, in comparison to each other, the transformational leadership style appeared as the most significant predictor of faculty members' intrinsic job satisfaction (β = 0.46, *t* = 4.43, p <.05). Whereas, the transactional leadership style, as reported in Table 3, reveal a negative association with intrinsic job satisfaction of academic staff (β = - 0.17, t = -1.98, p <. 05). Similarly, the laissez-faire leadership style, as reported in Table 3, also reveals a negative association with intrinsic job satisfaction of academic staff (β = - 0.28, t = -3.35, p <.05).

Moreover, to explore the nexus between department heads' leadership style and extrinsic job satisfaction of academic staff, the findings drawn from multiple regression Model 1b, as reported in Table 3, indicate that together three independent variables account for 39% (R square. 39) of the variance in the dependent variable. Since *F*=43.73, is significant, this suggests that any one or more of the independent variables are important predictors of extrinsic job satisfaction of academic staff. Moreover, Beta (β) values of three independent variables, reveal that in comparison to each other, the transformational leadership style indicates a significant positive association with extrinsic job satisfaction of faculty staff (β = 0.36, *t* = 3.57, p < .05). Whereas, the transactional leadership style, as reported in Table 3, indicates a statistically non-significant association with extrinsic job satisfaction of academic staff (β = - 0.13, t = -1.53, p >. 05). Moreover, the laissez-faire leadership style, as reported in Table 3, indicate significant negative association with extrinsic job satisfaction of academic staff (β = - 0.40, t = - 4.88, p< .05).

Furthermore, to explore the nexus between department heads' leadership style and overall job satisfaction of the academic staff, the findings drawn from multiple regressions Model 1c, as reported in Table 3, indicate that three independent variables, collectively account for 38% (R square. 38) of the variance in the dependent variable. Since *F*= 43.37, is significant, this suggests that one or more of the independent variables are important predictors of the faculty members' overall job satisfaction. Moreover, Beta (β) values of three independent variables exhibit that relative to each other, the transformational leadership style indicates a significant positive association with faculty members' overall job satisfaction (β = 0.42, *t* = 4.17, p <.05). Whereas, the transactional leadership style, as reported in Table 3, reveal a statistically non-significant association with overall job

satisfaction of academic staff (β = -0.15, t = -1.83, p >.05). Moreover, the laissez-faire leadership style, as reported in Table 3, indicates a significant negative association with overall job satisfaction of faculty members (β = - 0.40, t = - 4.88, p< .05).

In the similar vein, to explore the nexus between department heads' leadership style and faculty members' self-perceived job performance, the findings drawn from the regression Model 2, as reported in Table 3, indicate that together three independent variables account for 35% (R square. 35) of the variance in the dependent variable. Since F = 37.73, is significant, this suggests that one or more of the independent variables are important predictors of the self-perceived job performance of academic staff. Moreover, Beta (β) values of three independent variables, as reported in Table 3, indicate that in comparison to each other, the transformational leadership style reports a significant positive relationship with faculty members' self-perceived job performance (β = 0.55, t = 5.36, p <.05). Whereas, the transactional leadership style, as reported in Table 3, reveals a statistically non-significant association with the self-perceived job performance of academic staff (β = -0.03, t = -0.33, p >.05). The laissez-faire leadership style also indicate non-significant association with self-perceived job performance of academic staff (β = - 0.08, t = - 0.99, p> .05).

Overall, to determine the relationship among perceived leadership styles of department heads and faculty members' intrinsic, extrinsic and overall job satisfaction, the findings drawn from three multiple regression models (Model1a, 1b, and 1c), as presented in Table 3, demonstrate that collectively, transformational, transactional, and laissez-faire leadership behaviours/ styles, practiced by the department heads could significantly predict faculty members' job satisfaction. It is notable, that overall perceived leadership styles of department heads reported relatively same degree of strong relationships with both extrinsic and overall job satisfaction than intrinsic job satisfaction. On the whole, these findings corroborate prior research highlighting that since intrinsic job satisfaction relates to the internally motivated factors (Al-Omari, 2008), which develop within the individual himself/herself, therefore, the leadership style being an external factor could have less influence on faculty members' intrinsic job satisfaction, than extrinsic job satisfaction (Amin, Shah, & Tatlah, 2013).

Primarily, the prior literature has consistently supported the practice of transformational leadership, due to its positive association with faculty job satisfaction (Abuorabl, 2012), however, the nexus between transactional leadership and job satisfaction of academic staff, has been debated in diverse manner (Abuorabl, 2012; Pihie, Sadeghi, & Elias, 2011). Moreover, the extant literature (Stumpf, 2003; Pihie, Sadeghi, & Elias, 2011), document a negative association between laissez-faire leadership style and job satisfaction of academic staff. The transformational leadership has been appreciated regarding promoting autonomy, mutual trust, and challenging work, through encouraging subordinates' creativity, enhancing their self-esteem and upholding collaboration to increase follower 'job satisfaction (Bass & Riggio, 2006).

Concerning the transactional leadership, varied relationships of this leadership style to faculty job satisfaction could be attributed to the multiple interpretations of transactional leadership style across different socio-cultural contexts, regarding followers' preference for financial/non-financial reward, and desire for close monitoring of work (Hofstede, 2000).Although, the leadership literature highlights a growing debate about the nexus between leadership and culture, however, the detailed discussion concerning cultural aspects is beyond the scope of this research study. Moreover, this study found that the delayed decision making and non-responsive attitude of the department heads could adversely affect faculty job satisfaction. This suggests to enhance job satisfaction of academic staff, department heads need to practice those leadership behaviors, which promote appropriate strategies to address essential issues timely and systematically.

Furthermore, the findings are drawn from multiple regressions Model 2, related to the second reseach question, reported in Table 3, corroborate that the collectively, transformational, transactional, as well as laissez-faire leadership styles, practiced by the department heads, could predict faculty members' self-perceived job performance. However, in comparison to each other, the transformational leadership style reported a strong, positive and statistically significant relationship with faculty members' self-perceived job performance. Whereas, the transactional, as well as laissez-faire leadership styles, reported non-significant relationships with faculty members' self-perceived job performance.

Consistent with these study findings, the prior research speaks in favor of the transformational leadership style related to faculty job performance

(Braun et al., 2013; Camps & Rodriguez, 2011; Woods, 2007). In this regard, Al-Husseini and Elbeltagi (2014) claim that the transformational leadership style could encourage faculty members' involvement in multiple activities, through developing their skills, strengthening their capacity to achieve high, and equipping them with required knowledge and resources, for doing their job in the best possible manner. This suggests that the department heads through establishing direct and frequent interaction with the faculty members could frequently demonstrate different aspects of the transformational leadership behaviors in order to promote the faculty members' daily work engagement, through providing them constructive feedback and making them more flexible in adjusting their efforts to perform well at every opportunity.

In general, this study findings report no linkage between transactional leadership style and faculty members' self-perceived job performance are in line with Bryman's (2007) argument, who asserts that the traditional leadership approache, which entail close supervision of the task (such as active and passive management-by-exception), as compared to other occupational groups, are less likely to be relevant for some professionals, such as faculty members, due to the intrinsic nature of their job. It is also relevant to mention that, because salary and other monetary rewards are not commonly determined at the department level within the university settings, therefore, the transactional leadership behavior related to offering monetary reward could have limited effect on faculty job performance.

Furthermore, related to no relationship between department heads' laissez-faire leadership style and faculty job performance, it could be inferred that the faculty member's job performance might predominately determine by their self-orientation concerning academic teaching, research, and self-development. Mainly, this perspective could be interpreted in the light of Bryman's (2007) views, who supports the notion of "substitute for leadership" within academic settings and endorses argument that, in terms of acknowledging that some organisations and individuals who work in them, have some unique attributes, in relation to having higher professional orientation and desire for independence, which could neutralise the effects of immediate leadership. Notably, because, these both aspects are closely aligned with academic settings, therefore, it could be implied that the distinctive status of academic staff regarding intrinsically satisfying nature of their job, could neutralize the effects of immediate leadership.

CONCLUSION

Practicing effective leadership practices, the department heads could nurture positive changes within the departments, by advancing conducive working environment and improving quality of teaching and research (Smothers, Absher, & White, 2012). Moreover, department heads could promote faculty members' positive contributions towards overall institutional goals that could lead towards uplifting the quality of higher education in educational institute.

LIMITATIONS AND FUTURE RECOMMENDATIONS

While interpreting the findings of this research work, some limitations need to be borne in mind. Firstly, this study is only focused on the one public university of Pakistan; therefore, to extend the empirical evidence, further research needs to be conducted with a larger sample, drawn from both public and private universities across Pakistan. Secondly, as this study focuses on the faculty members' perceptions only, therefore, future studies might also incorporate department heads' views, to cross-validate the study findings. Thirdly, this study has employed a subjective measure of faculty job performance through faculty members' self-perceived job performance. Whereas, the future studies might incorporate the objective measurement of the faculty job performance, such as some scholarly articles produced or might use the combination of both subjective and objective measures of faculty job performance. Moreover, this research used a quantitative approach. Therefore, future studies may use qualitative research methods to gain more in-depth data.

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IMPACT OF DIVIDEND POLICY ON MARKET PRICES OF SHARES: EVIDENCE FROM PAKISTAN

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ABSTRACT

This research intends to observe the impact of dividend policy on market prices of firms' stocks of the non-financial sectors of Pakistan during the time period from 2006 to 2015, after controlling some other variables. Data is taken from sixty seven non-financial firms listed in KSE (PSX). The outcome of fixed effect Regression model exposed that there is the significant negative impact of dividend yield and significant positive impact of dividend payout on stocks market prices. The result of control variables showed that growth in assets, growth in earnings, growth in sales and size have a significant positive impact on stock market prices while liquidity, leverage and profit after tax have no significant impact on stock market prices during our study period. Therefore, all outcomes of this research signify that the dividend policy has a significant impact on market prices of stocks in Pakistan.

Keywords: *Dividend Policy, Stock Prices, Karachi Stock Exchange, Non-Financial Firms*

INTRODUCTION

Management science is different from the natural science in the sense that it has multiple views on particular subject or point because individual judgments, perceptions, and observations vary from one person to another. Dividend policy is one of the topics which is much debated for many decades, but some circumstances and facts have entangled the topic. Black (1976), argued that dividend policy is like a puzzle with pieces that don't fit together, the more we look into it more we get confused (Brealey & Myers, 2003). Describe that dividend policy is top ten difficult unsolved issues of financial economics. When companies earn a profit, they have two options, either to pay the dividend or to retain the amount for their future project needs. Now the puzzle is, whether to pay the dividend or

not? If yes, then how much dividend is to be paid? Companies pay a dividend for the purpose to satisfy the shareholders, but at the same time, they have to borrow money from outside to fulfill their future projects' needs. Dividend policy also has a severe impact on other decisions like investment and financing, so the optimum dividend policy will expand the abundance of shareholders who are keen to get dividend and capital gain at the same time.

The choice to pay the dividend is also affected by the accessibility of profit in the organization and the capacity of the organization to gain extra income later. Lintner (1956), and Gordon (1959), believed that shareholder prefer immediate gain (dividend) as compare to future gain or capital gain (increase in the prices of shares) to minimize the risk, because one thing which is received immediately would be better than the two things received in future. Contrary to this, dividend irrelevance theory was given by Miller & Modigliani in 1961. Theory of MM present that firms' dividend has no significant effect on its' share prices, but it depends on its riskless investment and future earning capacity. Much work has been done on this topic, but in the absence of consistent results, it opens the door for future researchers, especially in country like Pakistan, where limited research is available on corporate dividend policy arises a need for further research on the subject matter. Developing economy like Pakistan has different nature, characteristics, and efficiency as compared to other developed nations.

PROBLEM STATEMENT

Firms of non-financial sectors of Pakistan are confronted with the issue of whether to pay a significant, little or zero rate of their earning as a dividend or retain their earning for future financing ventures. This issue is persistant, because financial managers also want to fulfill the needs of shareholders to satisfy them. As we know that shareholders are the part owners of the company, so it is crucial for managers to take such steps which satisfy the shareholders. Some shareholders need money on a continuous basis, so they prefer a dividend; while others are interested in following payments and would favor capital gain. Because of the reality of dealing with contending interests of different shareholders and the sort of dividend policies, companies embrace either immediate positive or negative consequences for the share prices of the organizations. Consequently, managers are not able to conjecture with assurance at what degree the strategy will influence the share prices of the organizations.

This study would help the managers of the firms of non-financial sectors of Pakistan to formulate their policies regarding dividend issuance.

RESEARCH OBJECTIVES

There are numerous reasons to study dividend policy in Pakistan. Much work has been done so far around the world, but the theoretical work is done in Pakistan regarding dividend policy is unsubstantial, thus, consequently need arises of a comprehensive evaluation of the impact of dividend policy on the share prices in Pakistan. According to Federal Board of Revenue (FBR), up to 2010, there was tax immunity on capital gain in Pakistan, even though firms announced a dividend. So the question arises why they announced dividend if there was tax immunity on the capital gain. This invites us to investigate further on dividend policy in Pakistan's perspective. Most of the firms of these sectors continuously announce a dividend, so it is to investigate the factors which influence these sectors to announce dividend continuously. This research intends to observe the impact of dividend policy, dividend payout and dividend yield, on market price of shares of the non-financial firms during 2006 to 2015. The impact is examined after controlling some variables such as growth in assets, growth in earning, growth in sales, leverage, liquidity, profit after tax, and the size of the firm.

In the perspective of this study, the following research questions are formulated:

Q1: Is there any significant association between the market price of shares and dividend yield?

Q2: Is there any significant association between the market price of shares and dividend payout?

LITERATURE REVIEW

In past, many studies have been conducted in corporate finance literature to explain the positive, negative or no relation between dividend policy and stock prices. In this section, we would discuss reasonable evidence conducted by the researchers across the world.

Dividend Irrelevance Theory

In 1961 the new debate started after MM theory. A new perspective was presented regarding dividend policy which assets that the stock price of the company does not depend on its dividend announcements, but it only

depends upon its earning ability and future activities. According to the theory, under certain conditions, a shareholder can make their dividend policy by purchasing and selling shares.

Bird in Hand Theory

Gordon (1963), and Lintner (1964), proposed a theory which has an opposite perspective of Miller and Modigliani irrelevance theory. They have a view that shareholder would prefer dividend payments as compared to capital gain.

Tax Preference Theory

This theory was given by Litzenberger and Ramaswamy, (1979), in which they viewed that investors would like those firms who pay lower dividends which is due to tax evasion purpose. It is evident that when companies earn profit it has two options, whether to announce a dividend or retain this amount for future investments. When companies pay dividends, the shareholders in return have to pay taxes at two levels, first at the dividend income level and second in the shape of income tax. In this theory, the researchers assumed that investor prefer those companies which have low payouts in the shape of the dividends because in dividend share the investors have to pay taxes twicw. When investors receive the benefit of profit in the shape of capital gain they pay less tax. Additionally, taxes on capital gain are not paid until shares have been sold by the investors. In this sense, an investor can control the taxes paid on capital gain but cannot control taxes paid on dividends.

Agency Theory

This theory state that if the managers want to please the shareholders, they should pay high dividend payouts to minimize the agency problem, otherwise shareholders may think that their money may be wasted on unnecessary project and compensation for the management.

Clientele Effect Theory

According to this theory a company should make such dividend policies which may attract maximum investor (clientele). The theory postulates that the company stock prices change according to the demand and goals of the investors, in a reaction to company's dividend policies, tax policies or any other related policies. This theory thus assumes that shareholders are attracted towards the company policy and make the investments accordingly. When a company changes their policy, shareholder also

changes its stock, and hold stock which would satisfy their needs. As a result of these changes, the stock price fluctuates in the market.

Dividend Signaling Theory

Management of organization has more information about company policy and future performance of the company as compared to the investors and other market players. This creates the problem of information asymmetry. Through dividend payouts, the organization may send positive signals to the shareholders, and market assumes that the firm is performing well, because it's obvious that dividends are paid out from profits earned. Therefore, more payouts mean more positive signals and less or no signals generate negative signals towards the firm performance.

Catering Theory of Dividend

This theory was given by Baker & Wurgler in 2004, which emphasis to meet the requirement of investor dividends. This theory states that Companies' stock prices would increase with the dividend requirement of the investor. According to this theory, the manager would announce dividend if they see investor is paying the high price of shares to dividend-paying companies and if not, then they may not pay the dividends.

Transaction Cost Theory

When companies pay a low dividend or no dividend, then shareholders have two options, whether to sell their stock to satisfy their money requirements or hold it for next periodic dividend. When shareholders go to sell their stocks in the market, they must pay a transaction cost, which makes the selling of stock more expensive, thus the income from capital gain cannot fully replaced by the dividend income. Therefore, the shareholders want a higher payout of the dividend to reduce transactional cost which arises from capital gains (Alli, Khan, & Ramirez, 1993).

Life Cycle Theory of Dividend

This theory was established by DeAngelo, DeAngelo, and Stulz in 2006. The theory stated that the firm's decision to pay or not to pay a dividend depends on different life cycles of the firm. According to the theory young and, growing firms pay no dividend whereas old and stable firms pay a significant portion of the retained earnings as a dividend. It means that older the and stable the firm is, more it pays the dividend.

Impact of Dividend Policy on Stock Returns

To analyze the data of 198 banks were taken by Mukherjee & Austin (1980). Their results reveal that dividend policy was not affected by bank size during their research tenure. Their result also revealed that except dividend payout all other factors affect share prices. In another study, data of 160 Pakistani companies were taken by Nishat and Irfan (2004). A significant positive relation was identified between dividend policy and share prices (Nishat & Irfan, 2004). They also found that some control variables like size of the firm and leverage have a strong and positive effect on overall stock prices.

Data of 500 Indians' firms were taken by Pani (2008). Their results presented that stock prices were significantly affected by the dividend retention ratio; size and debt to equity ratio. In another study, data of 73 firms were taken by Nazir, Abdullah and Nawaz (2012). A strong relation was proved between dividend policy and prices of stock in Pakistan by the researchers. Data of United kingdom firms were taken by Hussainey, Oscar Mgbame, and Chijoke-Mgbame in 2011. A positive result was identified between dividend payout and dividend yield whereas, a negative result was identified between dividend payout and stock prices in their study. Their results also proved that stock prices were also affected by firm size, earning and debt ratio. Asghar, Shah, Hamid, and Suleman (2011), studied on five sectors. Their findings disclosed that stock price and firm size are significantly and positively affected by dividend payout and yield. Data of 29 firms were taken by Khan (2012), from 2001 to 2010. Results of the study revealed that the dividend, EPS, and PAT had a positive impact on share prices, whereas RR and ROE had negative insignificance impact on stock prices. Data of Zimbabwe's firms were taken by Jakata and Nyamugure (2012), their results revealed that there is no significant change in share price due to dividend announcement and the earnings per share also had no impact on stock prices. Thus , their findings support dividend irrelevance theory. Data of Kenyan firms were taken by Kenyoru, Kundu, and Kibiwott (2013). Their results showed that there was a substantial relation of stock price volatility and dividend policy in Kenya. Furthermore, data of 17 banks were taken by Nazir, Ali, and Sabir (2014). Their research outcomes confirmed that there was a definite relationship between stock prices and dividend policy in Pakistan. Their findings also revealed that there was a negative relationship between dividend payout and share prices. Moreover, there was a positive relation

between asset growth, and stock prices and no significant effect was identified between earning, leverage, and size with share price volatility. Data of 11 firms was taken by Abrar-ul-haq, Akram, and Imdad Ullah in 2015. According to their research no significant impact of dividend announcement on share prices in Pakistan was found. Further, Data of 45 non-financial firms were taken by Adnan, Jan, and Sharif in 2015. Their research findings showed that share price was positively affected by dividend payout ratio which supports bird in hand theory and rejects the dividend irrelevance theory in case of Pakistan. They further revealed that the share price is insignificantly affected by profit after tax, retention ratio, and dividend per share, whereas, positively affected by Earning per share and negatively affected by return on equity. In another study, data of 50 firms were taken by Shah and Noreen in 2016. Their findings reveal that there was significant negative association of stock price volatility and dividend policy, whereas stock price volatility was positively affected by asset growth and Earnings per share.

RESEARCH METHODOLOGY

A sample of 67 non-financial firms of 6 sectors is taken from Karachi Stock Exchange for the period of ten years from 2006 to 2015. Only those firms were selected which at least paid three dividend payments during the research period. State bank of Pakistan divide the non-financial firms into 14 sectors out of which six sectors were selected for this study. As per our observation, these six sectors cover almost 87.5 percent of average dividend amount paid during the study period. Selected sectors of this study are: 1) fuel and energy sector, 2) oil and refined petroleum products, 3) chemicals, chemical products, and Pharmaceuticals, 4) Other food products, 5) Information, Comm. and Transport Services, 6) Motor Vehicles, Trailers & Auto parts. Data is secondary in nature, which has been collected from the FSA of (non-financial) firms listed in KSE by the State Bank of Pakistan from 2006 to 2015. Market prices of shares have been collected from KSE website. As a result, our sample consists of 67 cross sections balanced panel for ten years with 670 observations. To observe the association between dependent and independent variables, multiple regression analysis was used. Cross-section Fixed effect model or cross-sectional random effect model was employed after Hausman test result. Unit root test, F statistics, descriptive statistics, Pearson correlation and Granger Causality Test, is also used to analyze the data.

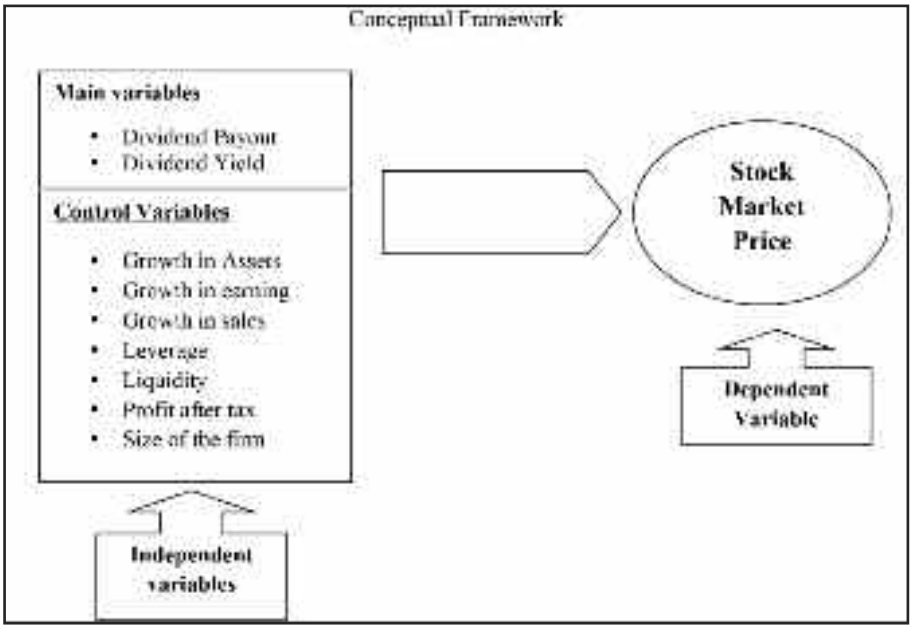
Econometric Model

To answer our primary research questions, regression model is developed as follows.

SMP = a1 + b 1D_Yj + b 2D_Pj +ej (1)

But as here are some other control variables which may impact both stock market price as well as dividend policy, so the regression model modified as:

SMP = a1 + b1D_Yj + b2D_Pj + b3G_Aj + b4G_Ej + b5G_Sj + b6Lj + b7LIQj + b8PATj + b9SZj + ej (2)



Measurement of Variables

Stock Market Price. Previous studies have taken stock price volatility as the dependent variable, but this study has taken stock market price as the dependent variable. Masum (2014), also took stock market price as the dependent variable. This is calculated by taking an average of annual opening price and the closing price of the stock, and after taking its log 10.

Dividend Yield. Dividend yield is the primary independent variable of study. This variable is calculated by the total paid amount of cash dividend divided by the average market price of the shares.

Dividend Payout. Dividend payout is one of the two primary variables of

this study. This could be obtained by dividing dividends per share to earnings per share.

Growth in Assets. Growth in sales is also a control variable of this study, which is the ratio of total assets ending to total assets beginning.

Growth in Earnings. Growth in Earnings: Growth in earning as a control variable, is the ratio of net profit after tax of current year to shareholders equity.

Growth in Sales. Growth in sales is a control variable, and is calculated by current sales minus previous sales then divided by previous sales.

Leverage. This control variable is obtained by dividing debt (long-term plus short-term liabilities) to owners' equity.

Liquidity. Liquidity is calculated by taking the ratio of current assets to current liabilities.

Profit after Tax. The profit after tax as a control variable is calculated by taking net profit of current year minus taxes for the year.

Size of the Firm. Size of the firm is calculated by total ordinary shares multiplied by the average market price of the stock and then taking its log10.

RESULTS AND DISCUSSION

The data analysis signifies that the SMP, G_A, PAT and S have mean value of (2.11), (1.14), (5.45), (6.82) with standard deviation of (0.57), (0.35), (1.62), (0.84) respectively. Which means that SMP, G_A, PAT, S remained low volatile during the period while D_P, D_Y, G_E, G_S, L, and LIQ remained highly volatile during the research period. Liquidity is recorded as a highest volatile variable of the study.

Table 1. Descriptive Statistics

	D_P	D_Y	G_A	G_E	G_S	L	LIQ	PAT	S	SMP
Mean	0.49	0.05	1.14	0.20	0.22	1.83	2.40	5.45	6.82	2.11
Median	0.34	0.04	1.11	0.18	0.12	1.04	1.51	5.73	6.88	2.10
Max:	10.17	0.94	5.94	3.75	36.11	58.26	138.52	8.08	9.45	4.01
Min:	-6.55	-0.14	-0.23	-2.60	-0.98	0.01	0.22	0.00	4.84	0.55
Std. Dev:	0.91	0.06	0.35	0.32	1.53	3.94	7.16	1.62	0.84	0.57
Sum	325.60	34.16	759.34	135.53	147.48	1219.98	1602.03	3641.28	4555.06	1409.58
Sum Sq. Dev.	548.30	2.37	80.96	68.18	1551.77	10366.19	34186.42	1750.39	472.29	213.84

Before conducting the regression analysis, the stationary of the variables is scrutinized. To evaluate the stationary of the variables, unit root test is conducted. For this reason, two methods of unit root test are used, i.e., Levin, Lin, and Chu test (for the standard unit root) and Philips – Prawn Fisher test (for cross-section unit root).

The results of table 2 & 3 of unit root tests show that the probability of all variables is 0.00 which is less than 0.05. It means that all variables are stationary and could be used for further analysis.

Table 2. Unit Root Test Summary

Variables	Method	Statistics	Probability
Stock Market Price	Levin, Lin, and Chu test	-11.52	0.00
Dividend Yield		-40.28	0.00
Dividend Payout		-70.63	0.00
Growth in Assets		-24.31	0.00
Growth in Earnings		-44.84	0.00
Growth in Sales		-25.28	0.00
Leverage		-9.63	0.00
Liquidity		-6.58	0.00
Net Profit after Tax		-19.08	0.00
Size of the firm		-16.20	0.00

Table 3. Unit Root Test Summary

Variables	Method	Statistics	Probability
Stock Market Price	PP - Fisher	208.87	0.00
Dividend Yield		236.59	0.00
Dividend Payout		307.16	0.00
Growth in Assets		525.23	0.00
Growth in Earnings		231.31	0.00
Growth in Sales		459.35	0.00
Leverage		195.92	0.00
Liquidity		198.05	0.00
Net Profit after Tax		476.86	0.00
Size of the firm		295.69	0.00

In addition, F statistics test are conducted to see if the independent variables jointly affect the dependent variable. The result of the table no 5 showed that the probability of F-statistics is 0.00 which is less than 0.05 % which indicates that the independent and control variables have joint impact on the dependent variable.

Table 5. F-Statistics Test

F-Statistics	163.75
Prob (F-statistics)	0.00

Furthermore, the Hausman test is used to find best fit model for the study among the fixed effect or Random effect. The guideline for Hausman test directs that if probability value is less than 0.05 it means that cross-sectional fixed effect model is fit but if probability value is higher than 0.05 than cross-sectional random effect model is suitable for the study. According to Table 6 the probability value of Hausman test is 0.00, which means that cross-sectional fixed effect model is better for the study analysis.

Table 6. Random Effects-Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	48.44	9	0.00

Table 7 shows the result of multiple regression analysis of fixed effect model. The R Square value revealed that 95.4 % of the stock market price variation could be explained by the model. The Durbin-Watson value is 2.24, which show that the errors are not correlated. Since the p values of Dividend Payout and Dividend Yield is less than 0.05, it indicates that dividend policy has a significant effect on stock market price in Pakistan. T- Statistics show that the Dividend Payout has positive, while the dividend yield has a negative impact on stock market price. Growth in Assets, growth in earnings, growth in sales and size have a significant positive impact on stock market prices, while the Leverage, Liquidity, and profit after tax have no impact on stock market prices.

Table 7. Result of cross-sectional fixed effect model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.5839	0.1289	-20.0428	0.0000
D_P	0.0271	0.0072	3.7742	0.0002
D_Y	-0.5904	0.1194	-4.9451	0.0000
G_A	0.0720	0.0196	3.6665	0.0003
G_E	0.1045	0.0255	4.0999	0.0000
G_S	0.0164	0.0042	3.9367	0.0001
L	0.0012	0.0018	0.6341	0.5263
LIQ	0.0000	0.0008	0.0196	0.9844
PAT	0.0045	0.0053	0.8490	0.3962
S	0.6796	0.0185	36.6501	0.0000

Effects Specification			
Cross-section fixed (dummy variables)			
R-squared	0.9540	**Mean dependent var:**	2.1102
Adjusted R-squared	0.9482	**S.D. dependent var**	0.5662
S.E. of regression	0.1289	**Akaike info criterion**	-1.1530
Sum squared resid	9.8339	**Schwarz criterion**	-0.6406
Log-likelihood	461.1106	**Hannan-Quinn criteria.**	-0.9545
F-statistic	163.7494	**Durbin-Watson stat**	2.2428
Prob(F-statistic)	0.0000		

To analyze the short-term impact of primary independent variables of dividend policy on stock market price, a pair-wise Granger causality test was carried out. Table 8 indicates the short-term relationship between stock market price and dividend yield. Since the p-values of the first direction are greater than 0.05 but p-value of the second direction is less than 0.05 which means that dividend yield has a short-term impact on stock market price but the stock market does not have a short-term impact on dividend yield.

Table 8. Granger causality test between stock market price and dividend yield

Null Hypothesis:	F-Statistic	Prob.
SMP does not Granger Cause D_Y	12.9380	3.00E-06
D_Y does not Granger Cause SMP	8.97814	0.0001

Table 9 shows the short-term relationship between stock market price and dividend payout. According to the result of Granger causality test, the P value of both directions is less than 0.05, which means that stock market price has a short-term positive impact on dividend payout, while dividend payout also has a short-term positive impact on stock market price.

Table 9. Granger causality test between stock market price and dividend payout

Null Hypothesis:	F-Statistic	Prob.
SMP does not Granger Cause D_P	5.90485	0.0029
D_P does not Granger Cause SMP	7.78877	0.0005

CONCLUSION

This research intends to observe the impact of dividend policy on market prices of stocks. For this, nine questions including two primary and seven secondary questions were developed. Firstly, two primary questions were related to the relationship of dividend policy and stock market price, and other seven questions were related to the relationship of control variables with the stock market prices. After the empirical result findings, it is concluded that two proxies of dividend policy (dividend

yield and dividend payout) have a significant impact on stock market prices in Pakistan during the study period. Granger Causality test between stock market price and dividend policy was also conducted, which indicated that proxies of dividend policy (dividend payout, dividend yield) have also short-term impact on stock market price. The results of control variables demonstrated that growth in assets, growth in earnings, growth in sales and size of the firms have a significant positive impact on stock market price while liquidity, leverage, profit after tax have no significant impact on stock market prices.

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TASK PROCRASTINATION: OVERCOMING THROUGH RE-ESTABLISHMENT OF PSYCHOLOGICAL ASSOCIATION

Asmat Nawaz Khattak and Dr. Muhammad Ilyas

ABSTRACT

Delaying job responsibilities is one of the major workplace issues. The reasons and causes of delay are however manifold and discouraging. The behavior of task procrastination negatively affects the productivity of employees. The current research work has explored the leading causes of work and task procrastination behavior of employees through the lens of social exchange theory (SET). The Interpretative Phenomenological Analysis (IPA) research method is used, and the qualitative data was gathered through semi-structured interviews. Data was analyzed by the purposive sampling technique and thematic analysis were conducted to capture the various themes. Findings show that unethical practices, low psychological association, contractual employment system, lack of interest & desire, low self-esteem and complex jobs are the leading causes of task procrastination.

Keywords: *Procrastination, Employee Behavior, Employee Performance, Task Performance*

INTRODUCTION

The current organizational workplaces have become complicated due to increasing global diversity. Organizations today need motivated employees to compete with the global market leaders. Globalization and management principles have significantly affected business organizations in Pakistan as elsewhere in the world. Organizations have thus developed many strategies to obtain desired work behavior of employees. Procrastination is still a major behavioral issue that is continually affecting the performance of employees. Procrastination is a self-handicapping, and dysfunctional psychological behavior in which employees put things off, and such type of behavioral state prevent them from doing things timely. Research studies show that procrastination affects every employee (Aziz & Tariq; 2013; Bhutto, Mohsin & Niazi, 2011; Chu & Choi, 2005; Hunter & Thatcher, 2007; Irfan, Khizar, Murtaza, & Iftakhar, 2015; Naveed & Ishtiaq, 2015).

The delaying behavior of job responsibilities and tasks is a major organizational behavioral problem. Procrastination of duties causes poor performance and high employee turnover. Research studies have reported that procrastination is a complicated process having behavioral components that could negatively affect the organizational performance (Abbasi & Alghamd, 2015; Aziz & Tariq; 2013; Bhutto et al., 2011; Ferrari & Diaz-Morales, 2014; Gupta, Hershey, & Gaur, 2012; Irfan et al., 2015; Naveed & Ishtiaq, 2015; Skowronski & Mirowska, 2013). Procrastination behavior of employees at the workplace is harmful, and researchers are still interested in investigating the causes, and issues related to this behavior. Researchers have linked the procrastinating behavior with corporate and social issues (Steel, 2007). Task procrastination has been a business dilemma for corporate planners and a topic of interest for researchers in Pakistani context, because it affects both employees and organizational performance which causes a highly alarming situation (Bhutto et al., 2011). The current research study has used the SET framework and explored the leading causes, contributors, and remedies of procrastination behavior of employees at the workplace. The findings of the study have valuable theoretical and practical implications.

RESEARCH OBJECTIVES

Previous research studies have highlighted the negative aspects and impacts of job procrastinating behavior of employees. However, such research studies are rare in the Pakistani context. This research study has explored the causes and work-related procrastination behavior of employees and incorporated the practical experience of senior executives working in business organizations of Pakistan. Following questions were developed to examine and investigate the causes of job procrastination behavior.

Question 01: What are the significant reasons for task procrastination?
Question 02: What strategies do you recommend avoiding task procrastination?

THEORETICAL FRAMEWORK

Task Procrastination

Employees usually delay job-related responsibilities. This behavior is called tasks procrastination. This unique behavior has negatively affected the corporate productivity. Research studies have investigated the various and typical dimensions of procrastinating behavior. Researchers have concluded that the procrastinating conduct of employees provides limited and short-term relief. However, other adverse consequences of procrastination are stress, high costs, illness and poor work quality (Gupta et al., 2012).

Paulitzki (2010), says that the role of task characteristic is essential and that the employees usually avoid unpleasant tasks. Procrastination is a severe work-related problem because it negatively influences the performance and well-being. Habitual procrastination of tasks weakens the effect of sound intentions to perform and execute unpleasant tasks and the avoidance patterns, and regulatory capacities are equally essential to understand the procrastination behavior. Laschke, Hassenzahl, Brechmann, Lenz, and Digel (2013) have highlighted procrastination as a widespread phenomenon and its reasons manifold, like task characteristics, the unpleasantness of the task, benefits, as individual interest differences, self-efficacy, and self-esteem. White-collar workers show the higher degree of procrastination as compared to the low-level and unskilled employees. Many job aspects like fear of failure, anxiety, and self-efficacy accelerate and develop procrastinating behavior (Abbasi & Alghamdi, 2015; Steel, 2007).

Corporate culture and a challenging work environment accelerates positive organizational behavior (Ismat, Bashir, & Mahmood, 2011). Various positive behavioral forces develop a conducive and dynamic workplace (Parakash, 2015). Employees are a unique asset of an organizational. This uniqueness is due to the diversified aspects of their behavior. Research studies have reported that employees play a significant role in organization development process (Arshad, Asif, & Baloch, 2012) and the success of any organization is positively related to motivated employees (Bushra, 2012; Farooq, 2015; Mariam, Shoaib, & Shoaib, 2015; Moon, Habib, & Attiq, 2015). Ismat et al. (2011) have analyzed the determinants of culture in business organizations and indicated that business organizations face difficulties to establish strong cultural values in the current global business environment, creating critical workforce diversity as a significant issue. They further highlighted the role of task procrastination in organizational culture and recommended that business organizations should establish and maintain strong and values-based culture to contribute towards goals and objectives of the organizations. The study is built on the theoretical framework of Social Exchange Theory (SET), which has the potential to explain organizational behavior (Cropanzano & Mitchel, 2005). SET emphasizes on positive interactions and psychological association among persons who are interdependent, and they are responsible for yielding quality relationships. Rousseau (1995), has explained the changing psychological contracts in employment.

Theories of Procrastination

Research studies show that many theories are associated with procrastination behavior of people in different organizations. Siaputra (2010), has explained

procrastination through Temporal Motivation Theory. Steel and Konig (2006), and other old approaches explain psychoanalytic and psychodynamic, behaviorist and cognitive theory. Bhutto et al. (2011), have determined the relation between impulsiveness and procrastination behavior and concluded that the two factors affect each other. Impulsiveness is a quick and inappropriate reaction to the situation, and it is a personality trait.

Psychoanalytic and Psychodynamic Theory

Siaputra (2010) cited that task procrastination is due to the existence of potential threat posed by a task. Psychodynamic theorists have related the task procrastination to the childhood problems. The role of parents is vital in personality development process. The behavior of a child and a person is more dependent and rooted in parenting.

Behaviorist Theory

Previous studies show that behavior development is an ongoing process and that many personal factors also accelerate and affect this process. Siaputra (2010), reported that certain procrastination behavior is developed if a person succeed in exercising a specific conduct.

Cognitive Theory

Many research studies have explained task procrastination through cognitive theory in which irrational beliefs, vulnerable self-esteem, and the inability to take decisions causes procrastination (Fatima, Atif, Saqib, & Haider, 2012; Siaputra, 2010). People believe in and are rewarded on quality work. Siaputra (2010), assets that doing quality and good work as an irrational belief affects a person performance negatively if fail to do the work optimaly. People also use procrastination strategy to protect self-esteem and delay tasks having no ability to take appropriate decisions.

Temporal Motivation Theory (TMT)

Siaputra (2010), has reported that people delay tasks when they think the utility of doing the task is not high. Siaputra (2010), has rated TMT as the best theory to explain procrastination. Steel and Konig (2006), have formulated and initiated the temporal motivational theory (TMT). TMT provides a common framework to explain the human behavior as to prioritize the work according to his utility.

Construal Level Theory

McCrea, Liberman, Trope, and Sherman (2008), have presented their additional perspective and reported that the representation and

understanding of a task influence the completion period and time. The illustration and knowledge of a task are more critical, and it affects the procrastination behavior and the performance of participants increase when the task is presented more concretely (McCrea et al., 2008).

RESEARCH METHODOLOGY

As discussed, task procrastinating behavior of employees is a complex behavioral problem. The causes of this behavioral dilemma were explored and investigated while using the Interpretative Phenomenological Analysis (IPA), qualitative research approach. Interpretative Phenomenological Analysis is a methodological approach used to examine the personal perceptions and experiences of participants in life and associated cognitions (Brocki & Wearden, 2006; Goulding, 2005). Many research studies have used the Interpretative Phenomenological Analysis approach to explore the social and business phenomena (French, Maissi, & Marteau, 2005; Griffiths, 2009).

This research has employed the semi-structured interviews (Bryman & Bell, 2007), as a data collection tool which maintains the aim of Interpretative Phenomenological Analysis (Griffiths, 2009). Following questions were developed to explore and investigate the causes of procrastination behavior.

Question 01: What are the significant reasons for task procrastination?
Question 02: What strategies do you recommend to avoid task procrastination?

Semi-structured interviews (Annexure 01) with thirty managers were conducted to gather the qualitative data. The purposive sampling method was used to collect data from various industrial units in Pakistan. A selected sample of 30 industrial units is drawn from the list of industries registered with Security and Exchange Commission of Pakistan (SECP). The inclusion criteria was to incorporate, in the study, all the major industries located near Lahore, Pakistan. Thematic analysis was conducted to analyze the noted data. The emerging themes were extracted and captured, and a final statement of the connected themes was prepared. Braun and Clarke (2006), have suggested that thematic analysis is a suitable qualitative data analysis technique. The technique helps to analyze a qualitative data and to capture themes and ideas within data. The social exchange theory supported to explore the major causes of task procrastination.

DATA ANALYSIS

Demographics of participants are presented in Table 1 Participants were experienced and highly professionals in their fields, and they shared their experiences in detail.

Table 1. Demographics of the participants

Participants	Age Group	Experience	Qualification	Industry
P1	50-55	25	B.Sc. Chemical Engineering	Chemical Manufacturing
P2	50-55	25	B.Sc. Chemical Engineering	Chemical Manufacturing
P3	45-50	25	M.Sc. Chemistry	Pharmaceutical
P4	45-50	21	B.Sc. Textile Engineering	Textile
P5	50-55	22	B.Sc. Chemical Engineering	Chemical Manufacturing
P6	50-55	28	B.Sc. Textile Engineering	Textile
P7	45-50	26	B.Sc. Chemical Engineering	Pharmaceutical
P8	55-60	30	M.Sc. Chemistry	Pharmaceutical
P9	45-50	21	B.Sc. Mechanical Engineering	Home Appliances
P10	45-50	23	M.A Political Science	Chemical Manufacturing
P11	50-55	31	B.Sc. Chemical Engineering	Cement
P12	55-60	25	M.Sc. Chemistry	Cement
P13	55-60	33	B.Sc. Mechanical Engineering	Automobile
P14	55-60	30	M.Sc. Chemistry	Beau rages
P15	40-45	18	M.Sc. Chemistry	Pharmaceutical
P16	55-60	32	MBA Marketing	Home Appliances
P17	40-45	24	B.Sc. Chemical Engineering	Chemical Manufacturing
P18	40-45	21	MBA Human Resource	Pharmaceutical
P19	55-60	33	M.Sc. Physics	Home Appliances
P20	55-60	20	Master in Computer Science	Hotel
P21	55-60	19	B.Sc. Chemical Engineering	Chemical Manufacturing
P22	55-60	34	ACCA	Cement
P23	45-50	27	B.Sc. Chemical Engineering	Textile
P24	60-65	37	MBBS	Pharmaceutical
P25	45-50	22	ACMA	Textile
P26	60-65	36	MBA Finance	Construction
P27	60-65	20	PhD	Education
P28	40-45	18	B.Sc. Civil Engineering	Education
P29	40-45	20	MBA Marketing	Insurance
P30	60-65	35	B-Pharmacy	Health Care

***Legend**: B.Sc.: Bachelor of Science, M.Sc.: Master of Science, M.A: Master of Arts, MBA: Master of Business Administration, ACCA: Association of Chartered Certified Accountants, MBBS: Bachelor of Medicine and Bachelor of Surgery, ACMA: Association of Cost and Management Accountants, B. Pharmacy: Bachelor of Pharmacy, PhD: Doctor of Philosophy*

Reasons for Task Procrastination

Analyses were conducted to explore and investigate the answers to the research questions. Participants shared their experiences that the procrastinating behavior of employees is a major hurdle in the achievement of organizational objectives.

Anxiety is one of the reasons for procrastination at workplace……P2, P9, P10, P12, and P15

Anxiety disturbs future expectations, and a person believes that things cannot be controlled. Majority of the participants reported that one primary reason for anxiety is uncertainty in our social and business life. Majority of the population is disturbed and anxious due to the uncertain and polarized behavior of the corporate managers. Policies, rules, and regulation are manipulated in their own interest. People are being cheated. Ordinary people have no access to the facilities. This behavior has significantly affected the culture of the business organizations. Knaus (2010), has stated that reasons for procrastination behavior vary from person to person. Everybody procrastinate tasks, but it has been identified that 20 percent of people procrastinate chronically. Knaus (2010), has further explained that anxiety is a major reason for the procrastination.

Employees procrastinate things due to the unethical and polarized behavior of corporate managers. Employees lose thrust when they are treated unethically and when there is injustice in organizational policies……P2 and P4

Participants reported that the image of the collapsed society has negatively affected the business organizations in Pakistan. The loyalty of employees changes when their expectations do not meet, and employees think that the organization is not favorable place for working. This factor increases the frustration and anxiety of employees due to which do not complete tasks timely.

Participants further stated that one reason for procrastination is employee-organization disassociation tendency, because employers disown employees and many contractual systems are implemented to avoid legal issues. Organizations need to develop and enforce employees-oriented policies to firmly bind the employees with the organizations. Moreover, substantial hiring and retention strategies should be implemented to improve the association behavior of employees.

Employees procrastinate tasks due to the weak psychological association with the organization. Contractual system of employment is also a primary cause of weak association…… ...P8

Unfair implementation of contractual employment system is a problem of motivation and self-esteem and employees have a negative perception of their employment status in their organizations. Unfair employment system creates frustration, anxiety, depression, and helplessness among employees and establishes a weak association. Participants believe that long-term poor psychological association of employees with the organization create a contrary evolution of behavior and cause a loss motivation and personal productivity. Participants shared that the current organizational environment in Pakistan is utterly hostile, and it decreases the performance of the individual and corporate productivity. The cure for this type of procrastination is the re-establishment of psychological association between employee and employer.

A strong predictor of task procrastination is also the manipulated contractual employment system in organizations in Pakistan and self-esteem……. P10 and P12

Participants shared that organizations have manipulated the current employment system in their favor and interests and employees do not receive even their legal rights. Employees perceive that they are not being considered in organizational matters. Organizations are cheating employees and in return employees are defrauding the organizations which are a significant cause of chronic procrastination. To fight procrastination due to the manipulated contractual system, participants suggested employees' oriented and beneficial employment strategies. The regulatory bodies are not playing their role to correct the shaped employment system. This system has development impulsive, irresponsible, lethargic behavior and feeling of discomfort among employees even in this critical unemployment state.

One primary reason is the unfair treatment of employees…….P13

The current workforce is now more mature and aware of the employment rights and knows employment laws and regulations. Unfair treatment of employees at workplace causes the development of insecurity, discrimination, and isolation. Isolation and polarization of employees develop the culture of procrastination. Participants shared their experiences that there is a perception un-protection among employees. Employment laws are not implemented in the real sprite. The main reasons given by participants for unfair treatment at work are the policies, procedures, and systems of the employers and corporate managers. Fairness in working develops the behavior, mood, attitude, and performance of employees. Justice also enhances trust and respect within an organization.

Employees procrastinate due to a non-autonomous form of organizational policies and lack of interest and desire ..... P27 and 28

Participants shared their work life experiences and stated that employees procrastinate job responsibilities because they do not want to do the job due to lack of interest and desire. A delegation of duties to right persons is a critical management tool, and supervisors should be careful in delegating the functions. The natural interest and psychological association of employees is an essential job aspect. The stimulation of inherent interest in a job is mandatory to achieve the desired performance. So, employees voluntarily delay a task to a later date, and it causes loss of production.

Work and role complexity is also a primary cause of procrastination..... P18 and P15

Participants reported that some jobs are more complicated than others. Employees face hurdles to complete the cumbersome and unclear job thus results in frustration, stress, and anxiety at the workplace. Job complexity is the duties, the degree of autonomy and the scope of job responsibilities at the workplace. They further stated that human resource department and job supervisors should determine the capacity level of an employee before assigning the job for the best match. A complex role beyond the capability cause job-related stress and dissatisfaction (Pathak, 2011).

Employees expect more from the current organizational environment. Procrastination is due to low employees' self-esteem within organization…….. P10

Organization policies develop the culture of low self-esteem. Beheshtifar and Hashemi-Nasab (2012), have stated that employees in organizations with high self-esteem believe that they are essential. Self-esteem is a valuable aspect of organization development process.

DISCUSSION

This research was conducted to investigate and understand the causes of task procrastination and the social exchange relationships at workplace. Social exchange association is a mutual and reciprocal process. The concepts of SET is applicable when deciding on employer-employee work relationships. Participants reported that procrastination at the workplace is due to the unethical and polarized behavior of corporate managers. Actions of corporate managers that do not conform to the acceptable standards create poor organizational culture. Exploitation and lying to employees are unethical practices. Business and management ethics are guidelines for organizations. McIntire and Miller (2007), have also

reported that ethical standards are essential at workplaces. Tonus and Oruc (2012), have investigated that unethical behavior causes substantial loss to organizations at each level. Parakash (2015), has stated that organizations should develop effective management and organizational strategies to promote productive culture to control the unethical behavior of employees. Moreover, organizations should create a culture in which there is a clear understanding of the ethical and the immoral conduct.

One reason for procrastination is the employee-employer poor psychological association due to the contractual employment system in organizations. The psychological contract is an essential aspect of workplace relationships. It defines the mutual expectations and feelings of employees (Bibi, Karim, & Din, 2013). Waiganjo (2012), have explored that a psychological contract explains the employment relationship and expectations that exist between employees and their employers. Psychological association establishes perceptions, expectations and workplace relationships (Guest, 2007). Similarly, unfair contractual employment system creates frustration, anxiety, and depression among employees and cause poor workplace association. Laschke et al. (2013), have explored that re-mind is an excellent approach to change the behavior and this study has added the concept of re-establishment with re-mind to change the behavior of both employees and employer at the workplace. The re-establishment of psychological association can help to overcome procrastination.

Organizational policies and lack of interest and desire is a major reason for task procrastination. Performance cannot be achieved without motivation, and the lack of interest and willingness show that employees are not motivated. Studies reveal that motivation gives rise to a period of sustained intellectual, physical effort. Motivation is an important aspect of a job. Motivation provides employees the direction and line of action. Negative and non-supportive business and organizational environment destroy motivation and willingness. The role of motivation, performance, and procrastination has been investigated in organizations in Pakistan. The results of previous research studies show that employees are one of the important components of any work environment. (Ashraf & Khan, 2013; Baloch, 2010; Bukhari et al., 2009; Bushra, 2012; Hussain & Yousaf, 2011; Ihsan-ul-Haq, Shah, Jaffari, Aziz, Ejaz, & Raza, 2011; Irshad & Toor, 2008; Manzoor, Khattak, & Hassan, 2015; Moon et al., 2015;Raza & Nawaz, 2011; Saeed, Shakeel, & Lodhi, 2013)

Employee-employer, employment contract is primarily a psychological contract. An employment contract is an agreement between an employee

and employer. Organizations have changed the current employment system in their interest. The current employment system has development impulsive, irresponsible and feeling of discomfort and developed procrastination behavior among employees.

During the data collection participants shared their life experiences that task procrastination cause stress and low organizational based self-esteem. Research studies also mentioned that task procrastination held negative consequences for low organizational self-esteem and increased stress (Iskender, 2011; Paulitzki, 2010). Siaputra (2010), has investigated the rationality of quality and good work. People use procrastination strategy to protect self-esteem and delay tasks as they have no ability to take appropriate decisions. According to Beheshtifar and Hashemi-Nasab (2012), employees with high self-esteem believe that they are valuable assets to their organizations.

Participants reported that complicated and unclear job contents accelerate the pace of task procrastination. Employees avoid completing the complex jobs or jobs involve possible confrontation. Employees face hurdles to complete the complex jobs. People are critical to organizational success and organizations cannot achieve their goals and objectives without a productive and efficient workforce. An unclear job affects the motivational level of an employee. Also the structure and contents of a job play a mediating role for employees' performance. Research studies show that procrastination is a pervasive problem. Anderson (2001), has stated that complex tasks or tasks that are unappealing and uninteresting are delayed.

CONCLUSION

The study has found many reasons for procrastination. Social Exchange Theory (SET) explain the inputs of positive behavior. Organizations provide a framework for social exchange relationships. Organizations should reinforce the employer-employee social association to achieve the desired behavior. Cultural inputs develop the behavior. The procrastination is associated with the social exchange process. Employees procrastinate due to the unethical and polarized behavior of seniors. The contractual employment system is a major cause of the procrastination behavior. Contractual employment develops frustration, anxiety, and depression. Non-supportive organizational culture and poorly defined policies and procedures cause de-motivation. Complicated and unclear jobs also cause procrastination. The study suggests the intense feeling of psychological association between employer and employee to achieve positive behavior.

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FISCAL IMPACTS OF TRADE LIBERALIZATION IN PAKISTAN - AN APPLICATION OF SMART MODEL

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ABSTRACT

Many underdeveloped countries have experienced trade liberalization under the umbrella of international organizations in the past years. However, diverse economies have different experiences of trade liberalization. To analyze the experience of Pakistan trade liberalization, a Software for Market Analysis and Restriction (SMART) model, proposed by the United Nations Conference on Trade and Development (*UNCTAD*) *and the World Bank is utilized for the data from 1995 to 2013. Pakistan trade liberalization has increased the overall trade and welfare of consumers but has reduced the international trade significantly. Trade liberalization policies also have significantly affected international trade tax revenue. Therefore, policymakers should follow the impacts of the policies in both long and short run.*

Keywords*: Developing Economies, International Trade, Trade liberalization, Trade, Welfare.*

INTRODUCTION

The process of trade liberalization started after the second world war when different trade agreements were signed among different nations. It is believed that liberalization of trade has its own benefits and costs. Different levels of international taxes from developed and developing countries is one of the main hitches when it comes to liberalizing trade process. General Agreement on Trade and Tariff (GATT) has put efforts to overcome different types of trade barriers in the world. World Bank and IMF started Poverty Reduction Strategy Papers (PRSP) program and Structural Adjustment Program (SAP) in late 1980's, for decreasing the trade restrictions among developing and developed countries. GATT was replaced by World Trade Organization (WTO) in 1985, to continue to liberalize international trade for poverty reduction and income equality around the world.

There are some internal and external costs of trade liberalization attached along with its benefits. The loss of tariff revenues due to trade liberalization is one of the critical problems of developing economies as they have less domestic sources for revenue collection. The empirics reveal that around 10 to 20 percent of revenues of the developing countries depend upon tariff collection (Yasmin & Jehan, 2006). Trade liberalization tends to increase the prices of domestic products and lower the prices of foreign products (Prichett & Sethi, 1994).

Pakistan has reduced its average tariff to 45 percent in 1996-97, from a stunning 225 percent in 1990-91. In 2013-14 this tariff was further reduced to only 25 percent (MoF, 2014). This study presents the relationship of trade liberalization and fiscal balance in case of Pakistan over the period of 1995 to 2013.

A partial equilibrium SMART model and static methods have been used for empirical analysis of this study. The World Bank and United Nation Conference on Trade and Development (UNCTAD) have developed the Software for Market Analysis and Restriction (SMART). Following the present socio-economic and political scenario, there are some fiscal implications of trade openness suggested in case of Pakistan. Moreover, this study gives a proper understanding of the structural relationship between revenue collection and trade liberalization of Pakistan economy.

LITERATURE REVIEW

In the beginning of trade liberalization, under the instructions of world trade organization (WTO), many developing nations were attracted to adopt this process as they considered it an easy step towards industrialization and a platform to compete with the developed nations. Although in the first stage, trade liberalization provide the developing countries a number of benefits; but the fiscal implication of trade openness was entirely ignored in this concern. This study provides in-depth insight on the fiscal implications of trade liberalization in the economy. In literature, some studies related to Pakistan's economy have however highlighted the some issues related to trade liberalization and its impacts on the economy. Further, studies have also been conducted to highlight the issues of revenue losses and the expected budget deficit problems, but no study has presented a detailed analysis or explicitly touched the policy concerns and recovery of the revenue losses borne by the government, because of the liberalizing process.

In previous literature, a staff paper of IMF (2001), has examined the relationship of tax structure and trade liberalization in case of developing countries. The study mentioned that liberalization of trade has an insignificant relationship with tax structure of developing nations. Trade liberalization through low tariff rate changed the composition of taxes in developing countries, and these countries implemented more extensive amount of domestic taxes. In another study, Kassim (2015), argued that openness of trade is positively linked to domestic tax revenues and negatively related to tariff tax collection. Moreover, a rise in urbanization increase domestic tax collections, but low domestic tax is attached to a higher inflation rate. Ebeke, Mansour, and Rota Graziosi (2016), also revealed that, trade liberalization due to its evolving role, has been at the center of economies in recent years. Against government finances of emerging and developing countries, it acts as a tool to develop alternative sources of revenue. The study thus proclaims that more tax revenue accompanies more trade liberalization. The GDP growth rate, the share of agriculture over GDP, official exchange rate, urbanization, and democracy are all enlisted variables for statistically significant influence on tax revenue. Therefore, the study suggests a comprehensive macroeconomic framework is necessary for enhancing government revenues through taxes under the regime of trade liberalization. Cagé and Gadenne (2012), analyzed the domestic fiscal loss due to trade liberalization by using data from 103 developing nations from 1945 to 2006. Trade liberalization leads to lower tax revenue. However, revenue can be increased from trade openness by investing in tax capacity, because countries which are trapped in high tax capacity have experienced positive effect of trade openness on tax revenue. Glenday and Shukla (2006) in an IMF paper, examined that many developing nations faced difficulties in revenue collection domestically in the presence of trade liberalization, but on the other hand, the case is entirely different for developed nations.

Previous literature has different case studies on the subject and share variable results of these economies. Epaphra (2015), in his case study of Tanzania, highlighted that duty on import as a share of GDP has a positive relationship with tariff rates. The estimated results show that decreasing the rate of tariff reduces the number of government revenues. The estimates also suggested that removing barriers on imports increases the share of import in GDP, which further increases the total revenue of imports as a share of GDP. Being a developing nation, for maintaining

fiscal stability, Tanzania should try to change its domestic tax structure and collect more taxes as revenues instead of rising tariffs and other barriers to trade. Castro and Camarillo (2014), analyzed OECD countries regarding the impact of liberalization of trade on the domestic structure of taxes. The study used different methods of trade openness and found that civil liberalities, industrial growth and GDP per capita have a positive relationship with tax revenues, but physical capital, foreign direct investment, and agricultural growth have a negative relationship with tax revenues. By using time series data, Basirat, Aboodi, and Ahangari (2014), studied the case of Iran. Findings show that the exchange rate, imports, value added by agriculture, and the industry sector had a significant effect on tax collection during 1974-2011. Velaj and Prendi (2014), provided the evidence on factors that determine taxes in Albania during 1993-2013. Findings demonstrate that inflation, GDP, and imports increase tax collection. The coefficient of GDP explains that with 1 percent rise in GDP, the taxes grow by 0.62%, while unemployment has a negative effect on tax revenue. Further Karagöz (2013), discussed the case of Turkey. A time series data from 1970 to 2010 was used for examining the determinants of tax revenue. Results show that variables that significantly affect tax revenue include agricultural and industrial sector share, monetization, foreign debt, and urbanization. Agriculture share has an adverse effect while trade openness was found to be an insignificant variable among all variables. Ghatak (1995), also conducted a study on Turkey and used the data from 1950 to 1990. The results of the study show a long run association among physical capital, human capital, trade liberalization index and real per capita GDP in case of Turkey. Ahmed (2000), used data from 1974 to 1996 in case of Bangladesh. The results reveal that there existed endogenous growth, theory presented by Lucas (1988), and observed a positive relationship between industrial growth and trade liberalization in case of Bangladesh over the selected period.

In case of Pakistan, Shahbaz, Loganathan, Mujahid, Ali, and Nawaz (2016), analyzed the trade openness effects on the tax collection and consumer prices. The study analyzed the data of variables including imports, exports, tax revenue and consumer prices before and after trade liberalization. The results reveal that the negative impacts on these variables are not only the cause of trade openness but also due to other country's internal problems. The problems include energy crises which affect the total production in a country profoundly, the political instability

and lack of internal security which lowers the foreign direct investment (FDI). Jaffri, Tabassum, and Asjed (2015), analyzed the empirical association between tax revenue and trade liberalization in Pakistan for the period of 1982-2013. Estimation results based on ARDL model showed that there existed a positive association between total tax revenue and trade liberalization in Pakistan over this study period. Sound and stable trade policy along with favorable environment are needed to promote import of raw material, capital and intermediate goods, which enhances trade in the country leading to enhancement of tax collection. Policy implications based on empirical evidence of the study proves that government should take steps to reduce the trade restrictions in order to enhance trade, so that maximum gains in tax revenue could be achieved.

Mahmood and Chaudhary (2013), analyzed the effect of FDI on tax collection in Pakistan by using data from 1972 to 2010. Findings show that FDI and GDP per person have a positive effect on tax revenue. Zaman, Khan, and Ahmed (2012) have empirically investigated determinants of trade and aggregate tax revenue in Pakistan for the period 1975 to 2010, and observed that GDP, population growth, trade openness and urbanization significantly affect total taxes. Exchange rate, GDP, population, and urbanization are significant determinants of trade taxes. Mushtaq, Bakhsh, and Hassan (2012), examined the effects of different factors on tariff collections and domestic tax collection in Pakistan. Results revealed that the rate of exchange and growth of population had a negative relationship with domestic tax collection, whereas liberalization of trade and trade as a percent to GDP had a positive relationship with domestic tax collection. The results also discovered that urbanization had a positive and significant relationship with domestic tax collection. So, it is ascertained that the combination of fiscal and monetary policies would help in getting the potential results of trade liberalization. Chaudhry and Munir (2010), investigated the factors responsible for low domestic tax collection in case of Pakistan from 1973 to 2009. Results show that social, external, and economic policies affect tax to GDP ratio. External debt, exchange rate, trade openness, foreign aid, broad money, and political environment are the most crucial determinant of tax efforts in case of Pakistan. Remittances, inflation, agriculture, industry, and services share have an insignificant effect on tax revenue. In literature, no study used the SMART model on Pakistan economy to analyze the impact of trade liberalization. This study, therefore, applied the SMART model on Pakistan's economy by using the data from 1995 - 2013.

RESEARCH METHODOLOGY

The partial equilibrium SMART and static methods are used for empirical analysis of this study. Software for Market Analysis and Restriction (SMART) is used which is developed by World Bank and Conference on Trade and Development (UNCTAD). SMART is used to examine the impacts of multilateral and bilateral negotiations on trade creation, tariff reduction and overall revenue collection in case of Pakistan.

Laird and Yeats (1986), established the model of World Integrated Trade Solution (WITS) / Software for Market Analysis and Restriction SMART. They have distributed their model in such a way that it explains revenue welfare effects, trade expansion, and trade volume. SMART can be used under the conditions of ceteris paribus. This methodology gives a comprehensive summary about a reduction in tariff and adjustment of the fiscal structure. The dynamic process, which can impact on other changes is not taken into consideration under SMART methodology (McIntyre, 2005).

This study uses the methodology of SMART due to its immense advantages while examining the tariff impact on a single market following any product line. This methodology can enable the policymakers to examine the impacts of reforms in trade policy under the environment of imperfect substitutes. As compared to homogenous product model, this model can examine the preferences of tariff by avoiding its corner solutions. Although SMART was developed by World Bank and UNCTAD, firstly this methodology was introduced by Laird and Yeats, in 1986.

Software for Market Analysis and Restriction (SMART) is confined by the World Integrating Trade System (WITS). It is based on product trade statistics of Consolidated Tariff Schedules (CTs), Integrated Data Base (IDB), Common Format for Transient Data Exchange (COMTRADE), Trade Analysis Information systems (TRAINs) and other databases which examine the tariff reduction impacts. With the help of SMART, the effects of trade policy changes can be identified, such as tariff reductions in a single market. The primarily targeted variables in this method are welfare effects, tariff collection variations, net trade impacts and trade diversion, and creation. The central six assumptions of SMART are: the elasticity of import substitution is around 1.5; imperfect substitution exists among products of different nations; HS – 6-digit level is taken for measuring import demand elasticities; – the assumptions of Armington are applied; infinite export elasticities exist (which means, perfectly elastic exports are

supplied); and in the presence of non-tariff and tariff barriers, price structure is completely changed. One of the main demerits of SMART is that it fails overview interactions and sectoral linkage of the economy and it ignores macro level impacts. Laird and Yeats (1986), concluded that methodology of this model is started with simple export supply and import demand functions and provides partial equilibrium point.

To use this model in this case study, the notations alter for the study are: The Pakistan's jth function of import demand (M) for i^{th} (all products of Pakistan Custom Tariff (PTC) Code to whom Tariff has been reduced during the particular period as compared to the last year applied rate) good manufactured in k^{th} partner state (k = All trading Partner Annex "A" is expressed in Eq. (1).

$$M\ ijk = F(Y\ j\ ,\ P\ ij\ ,\ P\ ik) \qquad (1)$$

The function of k's export supply a country for i commodity is presented as:

$$X\ ijk = F(P\ ikj) \qquad (2)$$

(1) and (2) expressions are associated with the following identity:

$$M\ ijk = X\ ikj \qquad (3)$$

$$P\ ijk = P\ ikj\ (I + t\ ijk) \qquad (4)$$

Now it is clear that revenues through exports by k are:

$$R\ ikj = X\ ikj\ .P\ ikj \qquad (5)$$

The study develops the SMART model for the case study of Pakistan as importing country, and the j as all trading partners of Pakistan as exporting countries and takes commodities from which the tariff is reduced during the specified year, i.e., financial year.

where

i = All commodities tariff gain has been reduced during the financial year

K = Pakistan as importing country, i.e., domestic country

J = All the trading partners of Pakistan as exporting countries

The results in Table 1 reveal that over the time, there is an increasing trend in net trade effect across product lines. There is an overall increase in trade due to liberalization which is partly due to trade creation and trade diversion. Since 1995-1998, the overall increase in trade amounting to

$1.39 billion is due to an average 30% reduction of overall tariff (Liberalized) during the period, and in the next episode it was increased to $ 3.84 billion per month, an average 34% reduction of overall tariff during 1999-2001. A positive trade effect in Pakistan's economy was observed during the full period of 1995-2013 which was US$12.85 billion, but during 2003, 2008, 2010 and 2012 it was recommendable and had significant positive impacts on the economy with amounts as US$ 2 billion in each year.

Table 1. Impact of Trade Liberalization During 1995-2013 - Using Wits SMART Model (In $ 1000)

YEAR	Revenue Effect	Trade Effect	Welfare Effect	LIBERALISED (%)
1995-98	-204,706	1,394,120	89,703	-30.25
1999-01	-2,060,867	3,837,692	1,126,483	-34.06
2002	-64,834	214,486	52,299	-7.67
2003	-441,268	1,550,165	969,590	-5.55
2004	-2,367	140,721	18,458	-7.4
2005	-186,331	67,241	512,475	-9.12
2006	-4,328	9,328	332	-5.17
2007	-16,865	25,912	12,666	-4.42
2008	-629,520	1,512,961	158,696	-7.68
2009	-136,634	512,082	58,644	-3.75
2010	-695,630	1,939,204	141,036	-5.5
2011	-42,551	61,298	66,904	-10.37
2012	-591,458	1,588,372	92,790	-4.8
2013	-54	46	10	-4.95
1995-2013	**-5,077,413**	**12,853,628**	**3,300,085**	**-10.05**

Source: SMART simulations based on author's computations

Because most of the economists believe in the positive impact of trade liberalization on Pakistan's economy, it can be more vigorously analyzed commodity wise and year wise. There should be policy options applied for trade improvements, due to the fact of reduction in tariffs. The above figure shows the primary five commodities; Oil, Machinery, Chemicals, Chemical Products and Electric Equipment with their impact on each

commodity individually. Oil, the major imports of the country, showed US $ 2.8 billion loss of revenue due to this liberalizing policy. Although due to the high import of electricity, 6.89 on an average during the whole period, the 11 percent reduction tariff, i.e., liberalizing process, depict a US $ 7.3 billion increase in imports of Oil. Similarly, Machinery and Mechanical appliances show US $ 542 million loss of revenue on import during the full period of 1995-2013 which was US $12.85 billion, but during 2003, 2008, 2010 and 2012, it was recommendable and had significant positive impacts on the economy with amounts around US $ 2 billion in each year.

Table 2. Impact of Trade Liberalization During 1995-2013

Using Wits Smart Model

HS CODE	DESCRIPTION	Average Import Demand Elasticity	Revenue Effect ($ Million)	Trade Effect ($ Million)	Welfare Effect ($ Million)	Average Applied Rate	Average New Rate	Liberalised (%)
CH 27	MINERAL FUELS, OILS	6.89	-2896	7312	1168	9	19	-11
CH 84	MACHINERY & MECHANICAL APPLIANCES, COMPUTERS	2.13	-542	1580	311	14	21	-9
CH 29	ORGANIC CHEMICALS	1.48	-433	996	322	8	16	-9
CH 38	MISCELLANEOUS CHEMICAL PRODUCTS	1.52	-389	277	120	15	26	-13
CH 85	ELECT. MACHINERY & EQUIP. & PARTS, TELECOMMUNICATION EQUIP.	6.05	-332	322	119	37	61	-24
CH 88	AIRCRAFT, SPACECRAFT, & PARTS THEREOF	0.89	-197	112	24	8	27	-18
CH 12	OIL SEEDS/MISC. GRAINS/MED. PLANTS	2.05	-143	78	18	3	12	-9
CH 89	SHIPS, BOATS, & FLOATING STRUCTURES	20.00	-136	358	103	12	30	-17
CH 87	VEHICLES	2.86	-122	239	104	22	33	-14
CH 48	PULP OF WOOD, WASTE & SCRAP OF PAPER	1.69	-121	240	103	17	30	-15
CH 72	PEARLS, STONES, PREC. METALS, IMITATION JEWELRY, COINS	2.96	-116	112	36	15	24	-13
CH 30	PHARMACEUTICAL PRODUCTS	1.37	-98	145	17	18	21	-12

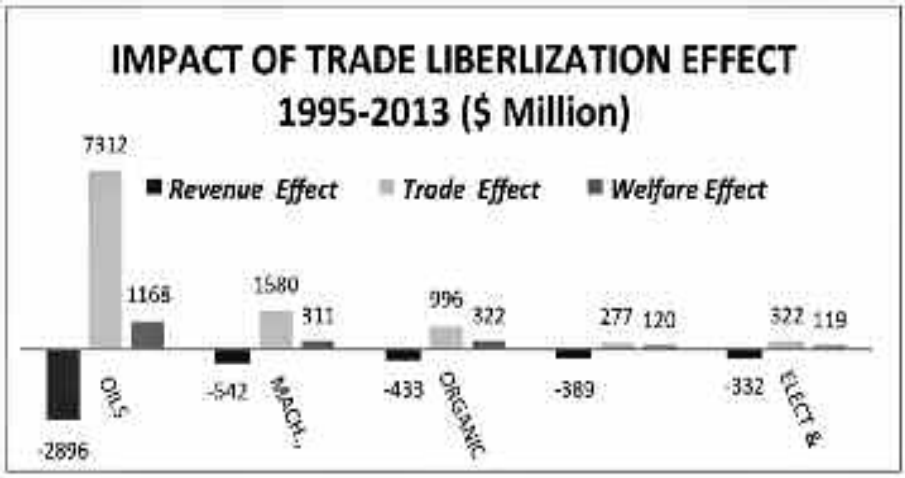

Figure 1. TRADE LIBERALIZATION IMPACT
Source: Own computation, 1995-2013

Trade Effects

WITS/SMART model calculated the total value of trade with the combination of creation and trade diversion. The results calculated through the model, for the period of 1995-2013, for the economy of Pakistan, with the above narrated liberalized process, are reflected below in the figure and above in Table 1 & 2. The five items also showed in the figure below indicate the positive impacts of trade liberalization on the international trade.

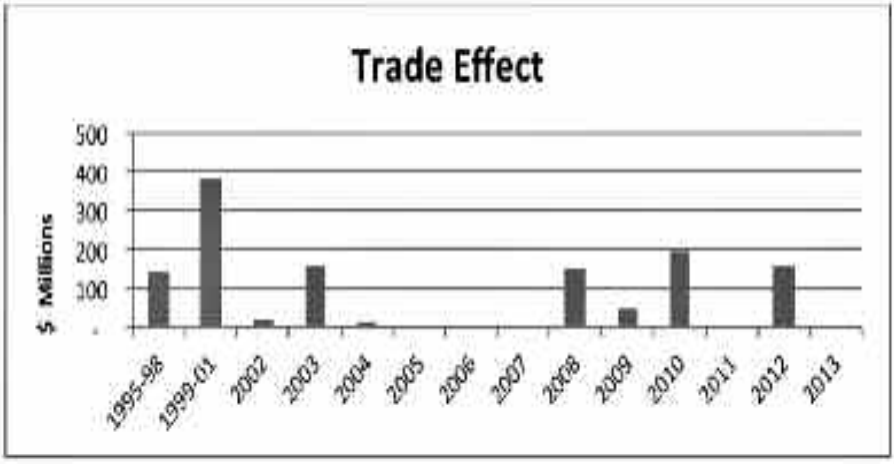

Figure 2. TRADE EFFECT OF TRADE LIBERALIZATION

Revenue Effects

The results in Table 2 specify that due to the reduction of tariff during 1995 - 2013, the revenue effect was calculated around US$ 5.08 billion.

Figure 3. REVENUE EFFECT OF TRADE LIBERALIZATION
Source: Own computation, 1995-2013

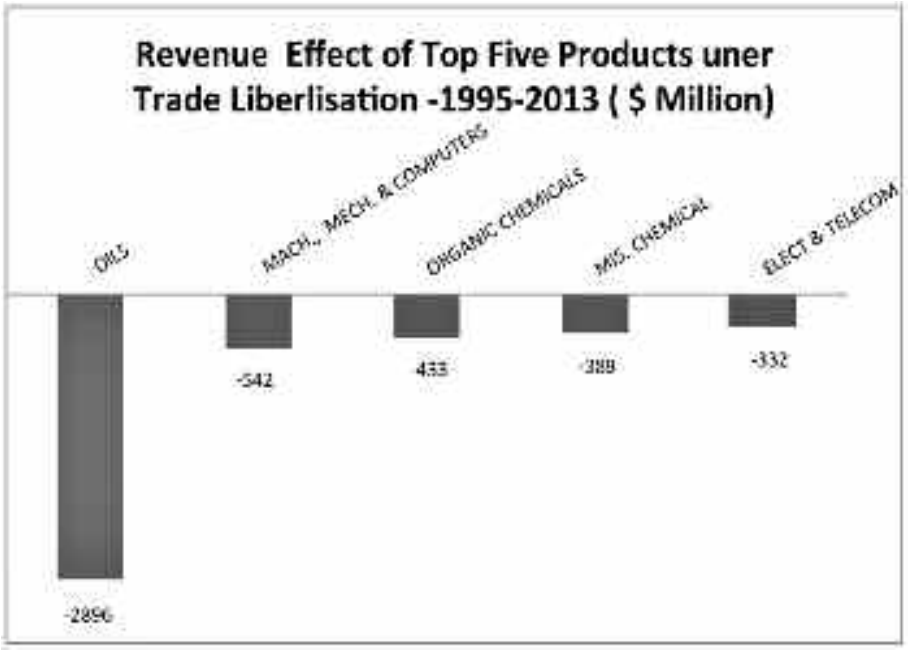

Figure 4. REVENUE EFFECT OF TRADE LIBERALIZATION
Source: SMART simulations based on author's computations

During 1999-2001, revenue effect was maximum at US $ 2.06 billion due to 34% reduction of tariff (liberalizing trade), which was overall at maximum during the three decades. Later the losses of revenue, US $ 629 million occurred during the year 2008 and continued during 2009 to reach

US $ 695 million and US $ 591 during 2012. The results of the WITS / SMART model estimated the overall loss of US $ 5.08 billion over the period of 1995-2013 around 18 years of span. Thus highlighting the objective of the study, that how the government of Pakistan can bridge the loss of revenue for a developing economy like Pakistan. Although there is a more significant encouragement of the rise in trade of the economy i.e. around US$ 12.85 billion, but the loss of US $ 5.08 billion is also another fact. In the figure four, out of major five items show the quantum of impacts on the major item, i.e., Oil and others.

Welfare Effects

The results in the Table 2 specify that the substantial welfare improvement is witnessed in consumer surplus during the selected period as a reduction in tariff happened. It was calculated to US$ 3.30 billion, adding up consumer surplus during 1995-2013 due to the fact of improved trade and availability of more varieties of products at lower prices.

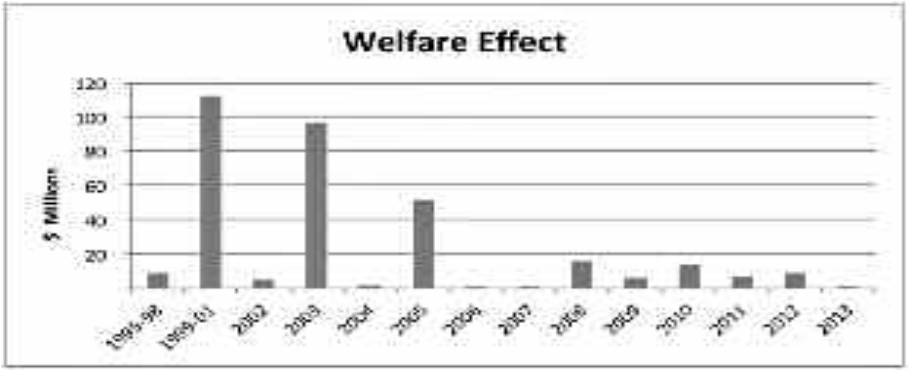

Figure 5. WELFARE EFFECT OF TRADE LIBERALIZATION

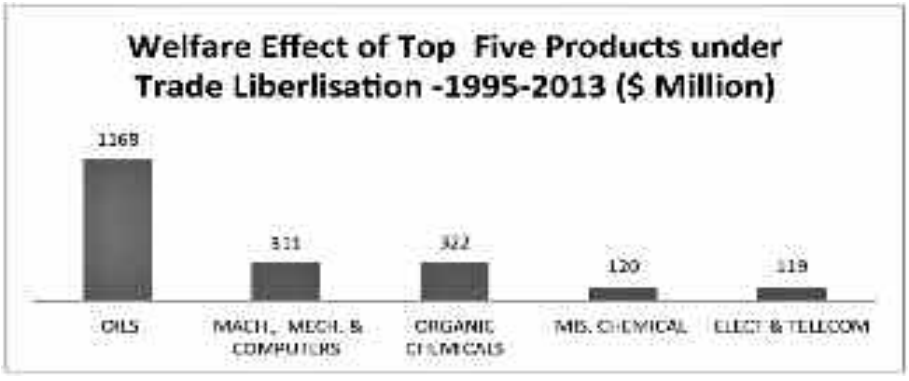

Figure 6. TRADE LIBERALIZATION OF WELFARE EFFECT
Source: Own computation, 1995-13

The above analysis show that there is an overall increase in trade due to liberalization which is partly due to trade diversion and trade creation. The positive trade effects in Pakistan's economy were observed in overall period of 1995-2013. It is commendable and proves to have a significant positive impact on the economy i.e. around US$ 2 billion in each year and observed a positive impact of trade liberalization on Pakistan's economy. Earlier studies on trade liberalization in Pakistan highlighted the issues of revenue losses and expected budget deficit problems, but did not present detailed analysis with explicitly touching the policy and recovery of loss of the government revenues due of the liberalizing process. Gadenne (2012), analyzed the fiscal loss due to trade openness using data of 103 developing nations from 1945 to 2006 including Pakistan, and emphasized an increase in the investment in Tax capacity to improve tax revenues. In different case studies, Epaphra (2015) of Tanzania; Basirat, Aboodi, & Ahangari (2014) in case study of Iran; and Karagöz (2013) of Turkey, used the time series data from 1970 to 2010 and Ahmed (2000), in study of Bangladesh economy tried to determine the factors and listed down the factors affecting the trade tax revenue and impacts of trade liberalization.

The current study involves significant commodity wise analysis,and show US$ 542 million loss of revenue on the import during the period 1995-2013. Other significant ten items are measured with the help of WITS/ SMART. The calculation of trade effect in the model shows positive impact of trade liberalization on the international trade. Similarly, revenue effect was calculated at around US $ 5.08 billion. The results of this WITS/ SMART model estimated the overall loss of US $ 5.08 billion over the period of 1995-2013, for around 18 years of span. The welfare results of the studies were calculated as US$ 3.30 billion, adding up consumer surplus during 1995-2013, due to the fact of improved trade and availability of more varieties of products at lower prices.

In the literature, different case studies of Pakistan worked on the subject in a different manner, Ali and Abdullah (2015), listed down the variables to see the impact of trade liberalization; Jaffri, Tabassum, and Asjed (2015), used the ARDL model; and Mahmood and Chaudhary (2013), analyzed the effect of FDI on tax revenue in Pakistan. Mushtaq, Bakhsh, and Hassan (2012), empirically investigated determinants of trade and aggregate tax revenue and tried to examine the effects of different elements on tax revenue and trade taxes in Pakistan. However, this study

attempted to analyze more vigorously the commodity wise and year wise data in a different way than other previous studies and conclude that policy options should be applied for the trade improvements due to fact of reduction in tariffs.

DISCUSSION AND CONCLUSION

The endeavour to unravel the ambiguity between the relationship of total tax revenue and trade liberalization in the economy of Pakistan has been undertaken in this study, using the Software for Market Analysis and Restriction (SMART) model developed by the United Nations Conference on Trade and Development (UNCTD) and the World Bank taking data from the period of 1995 to 2013. It is assumed that the trade openness, fewer restrictions and reduction in tariff rates bring revenue problems in case of developing nations like Pakistan. This study on Pakistan's economy for the period of 1995 – 2013 also concluded, that the trade liberalization in the form of tariff reforms has increased the overall trade and welfare of consumers but reduced the trade tax revenue significantly. This implies that liberalization policies have been able to significantly affect international trade tax revenue in short as well as in the long run. Therefore, policy measures should follow the impacts of the policy in the long term and in short term as well. Macroeconomic policies of Pakistan during the observed period supported the assumption, that the prevailing macroeconomic environment can significantly facilitate successful trade liberalization with improvement in trade volume and consumer surplus. Therefore, a sound macroeconomic policy environment can significantly facilitate successful trade liberalization.

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THE EXCHANGE RATE AS SIGNIFICANT PREDICTOR OF MOVEMENT IN STOCK MARKET INDICES IN SOUTH ASIAN COUNTRIES: AN ECONOMETRIC ANALYSIS

Sarfraz Nawaz Khatri, Dr. Muhammad Kashif, and Abdul Samad Shaikh

ABSTRACT

This research investigates the relationship between exchange rate and stock market prices in Asian Economies. The study relates to the comparative analysis of four South Asian countries, i.e., India, Sri Lanka, Bangladesh, and Pakistan. The study demonstrates the empirical findings on both of the variables regarding short and long-run analysis. The Exchange rate is considered as Independent variable, and the Stock Market returns as the dependent variable. Quantitative research is conducted based on Post Positivism research paradigm with flow-orientated model given by Dornbusch and Fisher (1980). The monthly frequency data starting from July 2006 to June 2016 is taken from Thomson Reuter's data sources. Econometric models like Johnsen Co-integration test, Granger causality test for Long run, and Vector Error Correction Model (VECM) is applied for short-term analysis. The empirical test results revealed that there is no long-term relationship as no co-integration for any of the stated states was found except causality witnessed for India. VECM illustrated a significant negative relationship in short run for Sri Lanka and Bangladesh. However, Exchange rates do not have a predictor tool to change the direction of stock market prices and indices in these four South Asian countries because the economic sentiments are almost same for each country.

Keywords: *Exchange Rate, Stock Indices, South Asian Countries, Co-Integration and VECM.*

INTRODUCTION

Exchange rates and stock price markets were an integral part for researchers in the early 1990s, because the world was moving towards

globalization. For this selected area, Branson (1983), was the first researcher who studied a topic on the impact of exchange rate on stock prices, but he did not achieve any satisfactory results. Zhao (2010), pointed out various reasons for the hike in exchange rate-stock prices which include dividend yield rate, economic growth rate, interest rate, level of employment and others as key drivers for economic prosperity. In addition to this, movement of the exchange rate has an impact on share prices, and it is recognized as a symbol of international competitiveness. There are two theoretical approaches for constructing a relationship between exchange rate and stock prices; i) They are 'flow oriented model approach,' and ii) They are 'Stock oriented model approach or Portfolio balance approach.' The later model also has its own importance, and several authors like Frankel (1983), and Branson (1983), have used this model for their studies.

Phylaktis and Ravazzolo (2005), in particular, have cited a considerable amount of literature and endorsed that, exchange rate and stock prices have a significant relationship. The relationship between exchange rate and stock markets are so much correlated that world trade enhances and increases productivity in the global capital markets due to changes in these variables and it has also proved to be a positive symbol for promoting the relationship among the countries (Ajayi, Friedman, & Mehdian, 1998).

RESEARCH PROBLEM

The relationship of the exchange rate and its impact on stock prices has become an increasingly important research topic, especially for evaluating the South Asian markets, as high volatility is seen in stock prices in these markets due to change in exchange rates. The exchange rate can affect stock prices not only for multinational and export-oriented firms but also for the domestic companies. The portfolio balance approach suggests that if the currency depreciation occurs in the local country, then it will enhance the demand for the money supply by both domestic and foreign investors. Our problem is to find the relationship between exchange rate and stock prices in Asian countries, especially in the short run, while the data is available on the long run only. The previously researchers however, do not have the mutual consensus regarding exchange rate impacts on stock prices as they think it applies only to the advanced countries.

RESEARCH OBJECTIVES

The core objective of this study is to analyze the exchange rate impact on stock prices focusing the South Asian countries. Another purpose of

this study is to find out the extent at which exchange rates change the dynamics of a country. The primary objectives of the research are presented as follows:

- To measure the impact of exchange rate on stock prices movement in South Asian Countries including Pakistan, India, Srilanka, and Bangladesh.
- To examine the long-term relationship of exchange rates on stock market returns movement in the selected four countries.
- To investigate the short-term relationship effects of Exchange rate on stock prices movement in the selected four countries..
- To determine if there is any difference in short-run and long-run effects of exchange rates on stock market indices.

LITERATURE REVIEW

Measuring the impact of exchange rate changes on stock market returns is an important research area investigated by many authors in the past (Aydemir, & Demirhanm, 2017; Huang, An, Gao, Wen, & Hao, 2017; Chkili, & Nguyenm 2014; & Ma & Kao,1990). Previously some research has been done on developed countries (Andersen, Bollerslev, Diebold, & Vega, 2007; Ajayi, Friedman, & Mehdian, 1998), however, very few studies have considered the emerging markets (Bailey, & Chung, 1995; Abdalla, & Murinde,1997). Above all, an inadequate work has been conducted in South Asian countries, in this regard. Frank and Young (1972), were the first researchers who described the relationship between exchange rate and stock prices and considered six different countries' currencies, revealing the results that the relationship between these two variables is meager. The literature indicates that some of the authors believe that these two variables have a negative relationship, and some do consider that there is no influence of one over the other. However, the exchange rate is not the only determinant, which gives the accurate information regarding stock prices (Kurihara, 2006).

Chiang, Jeon, and Li (2007), performed a study on nine advanced countries including the USA, UK, Japan, Netherlands, Germany, Belgium, Switzerland, Canada, and France. The study specified three core variables such as exchange rate, inflationary pressure, and interest rate, and extracted the country wise monthly data on stock prices for the

investigation. The empirical results demonstrated that the depreciation in the exchange rate had a positive but a very insignificant influence on the stock market, furthermore, there was no evidence for interest rates and inflationary pressure regarding stock prices.

Smyth and Nandha (2003), explained that economic factors follow ceteris paribus rule, i.e., other factors remain constant for determining the causal relations between economic factors. There is no link to check the relationship of one variable to the other unless rest of the variables are held constant. Otherwise, the result would be dissimilar for each study and the exact causal relation between exchange rates and stock prices could not be achieved. Smyth and Nandha (2003), further added that exchange rate is dependent on several factors including government policies regarding exchange control parity, treasury bills rates by the central bank, inflation factor, public sentiments and investors behavior which leads to change the direction of stock prices. Therefore, it is concluded that exchange rate does not influence only on stock prices, as other factors cannot be held constant while examining the causal relationship between exchange rates and stock prices (Kim, 2003).

Bautista (2006), performed his study on London Stock Exchange (LSE), where he considered FTSE 100 index and only measured 18 sample companies. His empirical findings were based on linear regression model and his conclusions documented that causation of exchange rate movement had an impact on stock market prices. For this study, lagged value test was applied, and it was reported that stock prices positively relate to a daily closing price of FTSE-100 index for the selected 18 companies. Referring to the research work by Kurihara (2006), for his study on Japanese and USA stock prices, he considered the exchange rates and interest rates as independent variables and investigated the importance of the above-stated markets. Results indicated that Japanese stock prices did not have any significant influence while considering the domestic market interest rates. However, USA stock prices and exchange rate performed a cardinal role in Japanese stock prices. In short, 2001 quantitative easing policy, which was introduced by Japan, has performed a pivotal role to influence its stock prices.

Zhao (2010), studied on Korea where they recognized that the exchange rates-stock prices were complementary with each other. They documented the data on a daily basis where Generalized Autoregressive Conditional

Heteroskedasticity Model (GARCH-M) was applied on daily data source ranged from January 3, 1997, to December 21, 2000. They described in their results that Korean currency changes the Korean stock market in three different ways. The first approach indicated that two variables have an antagonistic relationship but depreciation in the Korean currency rate had a positive momentum and increased the returns on the share prices, and lastly, stock market volatility is just because of the instability in the Korean currency rates. If two or three more macroeconomic variables would have been included, like money supply, circulation and interest rate then the results will be entirely different, and it might have given a sound output for investors to make a rational judgment for the stock market investment.

Another study was undertaken by (Zhao, 2010), on Vietnamese stock exchange (VSE), by considering the macroeconomic variables not limited to domestic but extended internationally. They used the same variables for both countries and analyzed the impression with the help of regression model and investigated that how macroeconomic variables for instance. CPI, interest rate, industrial production index and T-bills for the long run, change the direction of the stock market indices in VSE. They also examined the relationship for USA stock market of S&P 500 index and considering the same variables for USA economy. Their empirical investigation reached to the conclusion that industrial production index of Vietnam had a significant influence on the stock prices whereas interest rates for short-term or government T-bills for long-term did not have any impact on VSE market. USA results of empirical investigation also suggested that when USA real production occurs then, it indeed leads to enhance the VSE market.

Moore (2007), investigated on G-7 countries to check association between exchange rates and stock prices. Johansen's co-integration and Engle-Granger Causality test was applied and found that there is no relationship between these two variables in the long run for each G-7 country but for very few times the relationship was significant in the short run but not for every country.

Kim (2003), examined the impact of macroeconomic variables on Turkish stock market. The key variables for this study were, change in money supply, interest rates, manufacturing, industrial production sector, exchange rates, oil price rate and Morgan Stanley Capital International

(MSCI) equity index. The coverage of data was July 1997 to June 2005, and the analysis were checked for portfolio approach rather than single equity stock. The empirical results indicated that the exchange rate, MSCI and interest rate had a significant influence on Turkish stock market index, but three portfolios were witnessed out of twelve that emphasized that the inflation have a substantial role, whereas no influence from money supply, industrial production, and oil prices was witnessed. Walid, Chaker, Masood and Fry (2011), indicated the two variables relation among the emerging countries and their results were based on 1988 to 1998-time period, considering the causes of Asian Financial Crises before 1997. They reached to the conclusion that causality of exchange rates-stock prices happened due to Asian crises, the countries, which were severely affected, were Taiwan, Japan, Singapore, Thailand, and Hong Kong. They pointed out that due to this crisis the economies were affected adversely in the emerging countries.

Qayyum and Kemal (2006), examined the relationship between exchange rates and stock prices and they empirically proved that one thing affects the other. Results revealed that the exchange rate had a significant influence on stock prices and provided good returns to the investors whether the investors were domestic or international.

Wang and Moore (2008), performed research on India, Bangladesh, and Pakistan, considering two chaotic variables, i.e., exchange rates and stock prices and proved empirically that no causal relationship between these two variables was found in the selected countries.

Moore (2007), documented the work for four South Asian countries such as India, Sri Lanka, Bangladesh, and Pakistan and covered daily data from 1995 to 2001. Their focus was on exchange rates influences on the stock prices. The results revealed that there was no relationship between exchange rates and stock prices. Muktadir-al-Mukit (2012), investigated the significance of exchange rates on stock prices of Bangladesh and reached to the conclusion that relationship between exchange rates and stock prices was bi-directional.

Exchange rates criteria were also noticed in Pakistan's economy where exchange rate was taken as a dependent variable, whereas interest rates, foreign exchange reserves, the balance of trade and changes in CPI were taken as the independent variables. The examination of the data performed

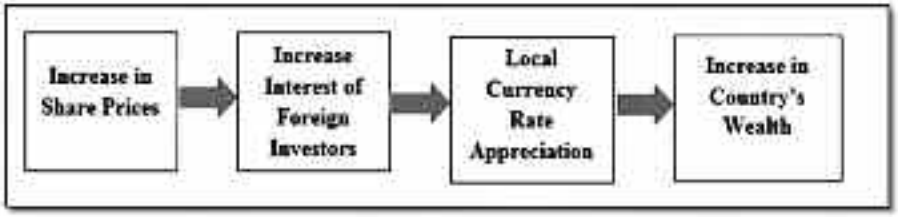
the result that the nominal and real exchange rates were significant for the above variables (Baxter, 1994).

Summing up from the above literature and the findings of different authors we conclude that, researchers did not have unanimously mutual consensus between the exchange rates and stock prices relationship. Some do believe that the influence of two variables has a significant impact on the economy, but some do realize that two variables do not influence each other. Some studies prove the relationship as causal, whereas some consider it as unidirectional or bi-directional (Lin, 2012). In this research paper, the author intends to find the relationship between exchange rates and stock prices in selected South Asian countries and investigates the exchange rate as a significant tool to cause changes in the stock market prices and indices (Kanas, 2000).

THEORETICAL FRAMEWORK

Two theoretical approaches were selected for this paper, Flow oriented model and stock oriented model. Most of the researchers have no mutual consensus on any existing theory regarding the relationship between exchange rate and stock prices. The first model that is a flow-oriented model (Frankel, 1983; Branson, 1983) is presented for exchange rate purposes. The ultimate target is to define the stock prices movement as it is believed that if the change in exchange rate occurs then it also changes the direction of the stock prices movements.

Figure 1. Flow Oriented Model

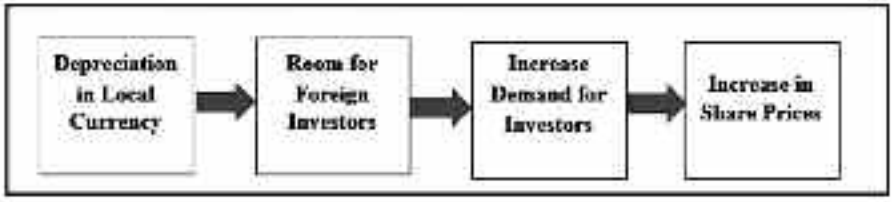


Source: Adapted from Frankel, 1983; & Branson, 1983

The second approach is the stock-oriented approach (Dornbusch & Fisher, 1980). It is based on portfolio approach and indicates the relationship of exchange rate and stock prices. This method is conceptualized through demand and supply function of money or diversified portfolio by means of international competitiveness. If the local investors face losses in shares values which ultimately led to reducing the

wealth of the investors, they would not have any intention to invest in the domestic market.

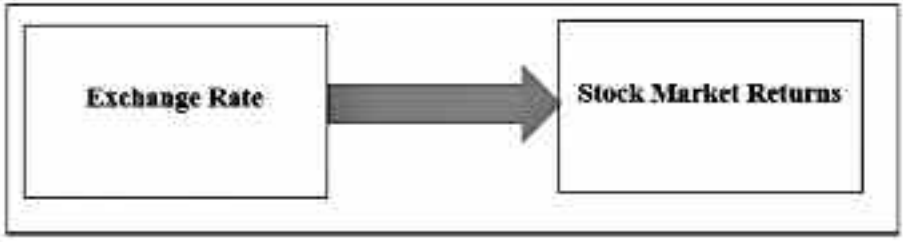
Figure 2. Stock Oriented Model



CONCEPTUAL FRAMEWORK

From the theoretical framework it is understood that exchange rate and stock prices are correlated with each other and for that two theories have been built which are described earlier (i) flow oriented model approach and (ii) portfolio balance approach model. Branson (1983), and Frankel (1983), explained portfolio balance approach model, and he expressed the relationship between stock prices and exchange rate by this portfolio theory.

Figure 3. Conceptual Framework



Source: Adapted from Smyth, & Nandha (2003) and Lin (2012).

The Conceptual framework is adapted based on various empirical researches conducted in developing economies to predict the Impact of Exchange rate on Stock Market Indices. Smyth and Nandha conducted a similar study in India. Based on comparative analysis Lin conducted study in Asia in Japan comparing the Exchange rate impact in various economies. This research also evaluates the effect of Exchange rate on Stock Market returns in Pakistan, India, Bangladesh, and India based on the time series data.

RESEARCH METHODOLOGY

Research Design

This is an empirical research, based on selected secondary data. The study follows a panel research approach to identify the relationship of

exchange rate and stock prices on four Asian countries. The data is extracted from Thomson Reuters software. The whole research covers the range bound of one decade, which commences from July 2006 to June 2016 and the results are investigated on a monthly basis where the causal relationship is checked on an econometric model.

This research pertains to Archival strategy as the data is stored in the secondary source and empirical testing is done in the order of investigating the research questions and test the causality between exchange rate on stock prices. For proving the research questions, the hypotheses should be built, and it should be analyzed with the help of empirical findings. Thus the archival research strategy is more appropriate for this research study. Data collection for stock prices indices are arranged as for India, Bombay Stock Exchange (BSE) 200 index; for Sri Lanka, Colombo Stock Exchange (CSE)-All Share Index, for Bangladesh, Chittagong Stock Exchange (CHSE_ All) and for Pakistan, Pakistan Stock Exchange (PSX) KSE-100 index is presumed.

Econometric Model for Data Analysis

Primarily, the Augmented Dickey-Fuller (ADF) test, Phillips-Perron Test (PPT) and Kwiatkowski-Phillips Schmidt-Shin test (KPSS) and LM-Statistics are used to find the integration level between the variables. The relationship between the variables is checked based on Johansen's (1988), co-integration test. After the selection of the lag order criterion, Johansen's co-integration test is applied. This study is also expended to VECM to overcome the causation issue in the co-integration test; the Granger Causality test could be administered, provided that co-integration not be there in the long run. If the co-integration is proved on these two variables such as exchange rates and stock prices, then VECM could be applied by using the following mathematical formula and equation.

$$\Delta Y_t = \alpha_0 + \beta_0 Z_{t-1} + \sum \gamma_{0i} \Delta Y_{t-i} + \sum \delta_{0i} \Delta X_{t-i} + \varepsilon_{0t}$$
$$\Delta X_t = \alpha_1 + \beta_1 Z_{t-1} + \sum \gamma_{1i} \Delta X_{t-i} + \sum \delta_{1i} \Delta Y_{t-i} + \varepsilon_{1t}$$

Δ is used as a difference that is which consists of s and Yt-1 as the earlier sign represents the current terminal price and later indicates the current price minus the one period before on which date the share has been bought

$$Y_t = a_0 + b_0 X_t + Z_t \quad (1.1)$$
$$X_t = a_1 + b_1 Y_t + Z^*_t \quad (1.2)$$

This VECM approach can be used to identify the causality between the

variables as the first equation showed X causing Y and b0 is significant even in the long run d0i showed causality for short run. Granger (1988), indicated that the significance betas of b0 and b1 are long run bi-directional. Relating to this econometric model if b0 = b1= 0, then there is a chance of no relationship between the stated variables in the long run and the chances of using Granger Causality test is also low.

Hypothesis Testing

H1: There is a significant impact of exchange rate on stock prices movement as per the market indices on selected countries.

H2: There is a long run relationship of the exchange rate and stock prices in South Asian countries.

H3: There are different effects on a short and long run of the exchange rate and stock prices.

Empirical Analysis

This paper relates to an empirical investigation of exchange rate on stock market indices. For this purpose, ten-year data has been considered, which starts from the year of July 2006 to June 2016. This research is based on time series analysis where four countries data is extracted.

Stationary Testing of Data

Before checking the nexus of exchange rate and stock indices in terms of the co-integration test, it was necessary to check the stationery of the all data. In this regard, Augmented Dickey-Fuller (ADF), Phillips-Perron and Kwiatkowski-Phillips Schmidt-Shin tests are being employed to identify the unit root test.

H0 = There is a unit root at level in the series.
HA = There is no unit root at level in the series.

Table 1. Testing of Unit Root at Level and Level One

Country	Variable	Order of Integration	ADF P-value	Phillips-Perron Test (PPT)	(KPSS) LM-Stat.
India	INR	Level	0.94	0.93	1.15
		1st Difference	0.00	0.00	0.18
	BSE	Level	0.72	0.68	1.00
		1st Difference	0.00	0.00	0.05
Sri Lanka	LLKR	Level	0.93	0.87	1.18
		1st Difference	0.00	0.00	0.10
	COSE	Level	0.66	0.60	1.01
		1st Difference	0.00	0.00	0.10

Bangladesh	LBDT	Level	0.78	0.78	1.03
		1st Difference	0.00	0.00	0.11
	CHSE	Level	0.2364	0.24	0.61
		1st Difference	0.00	0.00	0.21
Pakistan	LPKR	Level	0.44	0.49	1.18
		1st Difference	0.00	0.00	0.13
	KSE-100	Level	1.00	1.00	1.04
		1st Difference	0.00	0.00	0.46

As the above table depicts the meaning which has hypothesized assumption that unit root cannot be rejected at level one and it is rejected at level one due to stationary of the data. All of the countries have a unit root at level one, by testing ADF and PPT and for the co-integration test, the stationary should be checked on level one, so the researcher has applied the co-integration test for every country and reviewed the significance of relationship of exchange rate on stock indices in the long run.

Selection of Lag Length Criterion by using Vector Auto Regression (VAR)

Lag length criterion is selected based on Schwarz information criterion (SC) and Hannan-Quinn information criterion (HQ), because both of these criterions are selected on lag order one for all of the four countries. The other's criteria are not having the same lag order for every country like as Akaike information criterion (AIC).

Table 2. Selection of Lag Order

Country	Variable	Order of Integration	Schwarz information criterion (SC)	Hannan-Quinn information criterion (HQ)
India	DBSE_200	Level	22.34113	22.31211
		1st Difference	`16.06463*	15.97759*
Srilanka	DCSE_ALL	Level	25.34585	25.31683
		1st Difference	18.14487*	18.05783*
Bangladesh	DCHSE_ALL	Level	25.40607	25.37705
		1st Difference	19.23167*	19.14463*
Pakistan	DKSE_100	Level	28.59519	28.56617
		1st Difference	20.24704*	20.15999*

* *indicates lag order selected by the criterion* ***Source: Author's Work***

Co-Integration Test Analysis Part

After selecting the lag order, the Johansen co-integration test is applied to check the long run relationship between exchange rate and stock prices

for each country. If the long run relationship exists between the variables, then Vector Error Correction Model (VECM) is applied for testing the short-run relationship between exchange rate-stock indices. The hypothesis for this co-integration test is as under:

H0 = Trace test indicates no co-integration at 0.05 level.
HA = Trace test indicates co-integration at 0.05 level.

Table 3. Significant Results of Johansen Co-Integration Test

Country	Variables	Trace Statistics	Critical Value at 5%	P-Values	Results
India	DBSE_200	9.895440	15.49471	0.2889	Accept H0
Sri Lanka	DCSE_ALL	2.380296	15.49471	0.9880	Accept H0
Bangladesh	DCHSE_ALL	9.689815	15.49471	0.3054	Accept H0
Pakistan	DKSE_100	5.764456	15.49471	0.7232	Accept H0

Source: Author's Work

The table explains the co-integration test, and it denotes the idea that exchange rate and stock prices or indices do not have a long-run relationship with any country. Trace statistic test is selected because it gives more robustness to identify skewers and kurtosis of the tail. As Trace statistics value is lower than critical value at 5% meanwhile, it identifies the P-value, which is higher than 0.05 so Ho cannot be rejected. The results were also checked by using Max-Eigen statistic, but the result remains the same regarding accepting the null hypothesis. So, there is no long-run relationship between exchange rate and stock prices in the selected countries because the economic factors are almost same in each country but if a well-developed country is included in the study, then exchange rate is the real predictor of stock prices movement both in the short and long run market.

Granger Causality Test

This test is used for ascertaining whether causation occurs between the variables or not. The empirical testing of co-integration, in the end, investigated that nexus of exchange rate-stock prices is not there. Now, it is proved by using other tests like VECM and Granger causality test that VECM is not feasible when the long run relationship is not found, therefore it is understood that any short-run relationship is also not there. Causality test results are shown in the following table, but before switching to this table, hypothesis assumption is as follows:

Ho: There is no Granger causality among the variables.
HA: There is Granger causality among the variables.

Table 4. Granger Causality Test Significant Results

Country	Variables	Observations	F-Statistic	P-Values	Results
India	DLUSD_INR ⇨ DBSE_200	118	6.12989	0.0147	Reject H0
	DBSE_200 ⇨ DLUSD_INR	118	3.62425	0.0594	Accept H0
Sri Lanka	DLUSD_LKR ⇨ DCSE_ALL	118	0.35110	0.5547	Accept H0
	DCSE_ALL ⇨ DLUSD_LKR	118	0.42723	0.5147	Accept H0
Bangladesh	DLUSD_BDT ⇨ DCHSE_ALL	118	0.61213	0.4356	Accept H0
	DCHSE_ALL ⇨ DLUSD_BDT	118	4.10142	0.0452	Reject H0
Pakistan	DLUSD_PKR ⇨ DKSE_100	118	3.47086	0.0650	Accept H0
	DKSE_100 ⇨ DLUSD_PKR	118	0.05474	0.8154	Accept H0

Source: Author's Work

The exchange rate does not lead to stock indices for any of the countries after India, but in stock indices, Granger caused to change exchange rate only for Bangladesh, where Ho is rejected due to reverse unidirectional causation. Subsequently, stock indices do not affect exchange rate on any other country.

VECM Model Application and Analysis

For VECM, following Hypothesis are derived:

Ho: The Series has a short run relationship.
H1: The Series has no short-run relationship.

Table 5. VECM Test and its Results

Country	Variables	Critical Value at 5%	Calculated Value at 5%	Results
India	DBSE	±1.96	-2.75	Accept H0
Sri Lanka	DCSE	±1.96	-1.29	Reject H0
Bangladesh	DCHSE	±1.96	-1.89	Reject H0
Pakistan	DKSE	±1.96	-2.0	Accept Ho

Source: Author's Work

The above table depicts the idea that there is no short run relationship between the studied variables, in Pakistan and India. Besides this, it indicates that relationship is positive for Sri Lanka and Bangladesh stock market for a shorter term. Nieh and Lee (2002), empirically found the

same opinion for VECM, and they had the same consent for these four South Asian countries. Meanwhile, the hypotheses test results intimated that calculated values of T-statistics are not significant and the null hypothesis for India and Pakistan do not fall in the rejected region; however for Sri Lanka and Bangladesh, the results are negatively significant, so the null hypothesis is rejected.

CONCLUSION

The research findings indicate that Stock prices and Exchange rates have no long-run relationship in the stated countries. Furthermore, alternative hypotheses do not show its acceptance regarding the long-run relationship of impact on the exchange rate on stock prices, and also there is no short-run effect in the stock market. Several tests were applied empirically to this concern like as descriptive analysis, unit root test, lag length criterion, Johansen co-integration test, Granger causality test, but no satisfactory results have been established. Neither exchange rate leads any impact on stock indices, nor stock indices have a leading position to show the effect on the exchange rate. Relating to Granger causality test only in India, exchange rate caused the change in stock indices otherwise, for rest of the countries null hypothesis was accepted. Whereas in Bangladesh, it was found that causation occurs due to stock indices of CHSE impact on exchange rate. Furthermore, this research follows the flow-oriented model where the depreciation in the home currency changes the direction of stock prices, but it is not possible in less developed countries. Thus, it is concluded that there are several reasons for not having any attraction for the foreign portfolio investments. These factors include political instability, law and order situation, high inflation rates, and other related factors.

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CORPORATE GOVERNANCE AND FIRM PERFORMANCE: AUTOMOBILE ASSEMBLERS LISTED IN PAKISTAN STOCK EXCHANGE (PSX)

Babar Ansari, Kanwal Gul and Nawaz Ahmad

ABSTRACT

The purpose of this study is to analyze the relationship between (PM and ROE) and the corporate governance mechanisms (BS, AC, CEOD, AGM) on automobile listed firms in Pakistan Stock Exchange. Data has been examined from 2010 to 2016. Multiple Regression analysis and t-test have been applied to examine the impact of corporate governance on firm performance. The results show that Board size, Audit Committee Size and number of meetings are much adequate to show positive impact on firm performance; whereas near to 70%, CEOs hold dual positions in automobile organizations; which gives a negative sign on firm performance. Regression analysis show a positive relationship with the dependent variables (PM, ROE) and also on independent variables (BS, AC, CEOD, AGM). Results also conclude a negative relationship between performance measures (PM and ROE) with corporate Governance Mechanisms (BS, AC, CEOD, AGM). The proposition of the results states that CEO dual status should not be used; single position should be held by an individual especially for the top-level positions like CEO.

Keywords: *Corporate Governance, Performance Management (PM), CEO Duality, Annual General Meeting (AGM), Return on Equity (ROE)*

INTRODUCTION

Effective Corporate Governance practices make an organization constructive to contribute positively towards sustainable economic development, by addressing the internal organizational issues and delivering outside capital access. In emerging markets like Pakistan, corporate governance plays a vital role as a part of the public policy. Due to China Pakistan Economic Corridor, a huge revival has been witnessed in the automobile assemblers in Pakistan; which makes this sector worthy to study. Companies like Ghandhara Industries and Hino Motors have

observed drastic growth results since CPEC announcements. Some companies turned out in profits which were in losses for many years. Pakistan at present is in the list of emerging markets, which makes corporate governance an essential aspect for organizations in this conutry to reap maximum benefits out of the emerging opportunities. As Firm's performance is also dependent on corporate governance practices. This paper thus attempts to analyze the automobile sector performance in Pakistan, which is measured by the profit margin (PM) and return on equity (ROE). Further, the impact of the practical execution of corporate governance practices is tested on firm performance.

LITERATURE REVIEW

Governance

Governance can be defined as the framework and procedures that are strategized to safeguard "accountability, transparency, responsiveness, the rule of law, equity and inclusiveness, empowerment, and broad-based participation." Further Governance also signifies "norms, values, and rules of the game" through which a State or an organization can manage its affairs in a better transparent manner.

"Dynamic interaction between people, structures, processes and traditions that support the exercise of legitimate authority in provision of sound leadership, direction, oversight, and control of an entity in order to ensure that its purpose is achieved, and that there is proper accounting for the (ethical) conduct of its affairs, the (efficient) use of its resources, and the results of its activities" is defined as Governance (Gill, Vijay, & Jha, 2009). International Organizations such as World Bank, UNDP term Governance as an authority to fare a state`s fiscal, radical and organizational affairs.

Corporate Governance

International Finance Corporation has defined Corporate Governance as, "the structures and processes for the direction and control of companies. Corporate Governance concerns the relationship among the management, board of directors, controlling stakeholders, minority shareholders and other stakeholders" Good CG practices make an organization more profitable, reduces risk, smoothens operations efficiently and can help to secure from external shocks as well. Also, having best corporate practices can make an organization more accountable and can help to present a clear picture of the companys`

performance to their shareholders (IFC, 2013).

Corporate Governance is further defined as the power of an organization to take care of all of the organizational resources with the intention to maximize shareholders` value. Elaborating it further, that proper legal, institutional and economic environment is to be maintained to nurture human resource development and forebenefiting shareholders` long-term values and the society as a whole (Lubale, 2012). Lubale further contributed to corporate governance by justifying it with following five pillars:

1. Accountability: *Leaders should come up to have accountability on them.*
2. Efficiency and Effectiveness: *Leaders to contribute to the effective and efficient process to achieve organizational targets.*
3. Integrity and Fairness: *Leaders should be honest, truthful, obedient and should follow and act on the rule of law.*
4. Responsibility: *Leaders should be capable to take full responsibility on their shoulders*.
5. Transparent and Open Leadership: *Leaders should ensure timely disclosure of correct, accurate information without any favor* (Lubale, 2012).

Corporate Governance Failures

To observe the Corporate governance practices and its impact on organizational performance different studies have been carried out in different industries. A recent research study has been conducted to review the impact of corporate governance failure on financial reporting on Malaysian organizations. Organizational cases like Perwaja Steel, Technology Resource Industries, Megan, Malaysian Airlines System, WorldCom and other few organizations have been studied in this aspect. The results of the analysis of organizations, which failed to implement the corporate governance structure, revealed that poor monitoring and low enforcement mechanisms are treated as the primary hurdles in implementation of good corporate governance practices. The study suggested implementation of some transparency measures in financial reporting to instigate best CG practices.

In 2002, a study was conducted by Shaikh and Wang, to investigate the relationship of corporate governance characteristics and financial characteristics of financially distressed firms. 2690 firms who faced financial distress from 1988 to 1996 were selected as sample and the

survival analysis techniques to judge financial distress relationship was applied. Result concluded that firms that changed their CEOs with outsiders had increased, twice the chances to experience bankruptcy. The study also suggested that insider ownership and block holders have a significantly positive relationship with organization`s survival.

Holmstrom and Kaplan (2003), conducted a research on United States of America`s corporate governance failures, and the changes made in organizational CG practices, as a lesson of these failures. Corporate Governance failures of Enron, Tyco, WorldCom, Global Crossing and others were focused on the research study. Top Executives` remuneration has been criticized in the US by academicians, press and even by Federal Reserve officials. These failures brought legislative changes regarding Sarbanes Oxley Act 2002. Research studies have been conducted to answer whether the US corporate governance system has really performed poorly? Moreover, will the changes made in terms of the act and SOPs for NASDAQ and NYSE, will be sufficient? Researchers concluded that these current changes regarding Sarbanes Oxley Act and SOPs for NASDAQ and NYSE are likely to have a positive impact on future corporate governance practices and organizational performances. Due to these regulations, United States has faced troubles in corporate governance regarding over-regulation in recent years.

The USA 2001 financial crisis created a market bubble burst while leading to a more severe crisis in Europe. Concerning strict measures to curb frauds in the USA, a similar study was conducted in the context of different corporate governance system scandals. The research concluded that dispersed ownership systems of corporate governance cause earning management, that lead to corporate governance failure in the US.

Before 1990, the banking sector was entirely controlled by the state in Pakistan. In 1990, Government of Pakistan decided to privatize five major banks, and top three bids were placed before the Governor State Bank of Pakistan, but the contract was signed with the third bidder (National Group). The deceptive bidding is a prevalent practice in organizations leading to dishonesty and distrust. Studies have been conducted on the failure of corporate governance in terms of bidding fairness process (Siddiqui & Anjam, 2013; Lipton, & Rosenblum, 1991; Mitchell, 1990).

Khanani and Kalia International (KKI) also suffered from the corporate governance failure which led to violations of policies of State Bank and

Security Exchange Commission of Pakistan. KKI has used an illegal money transfer method known as Hundi or Hawala, which was banned internationally after 9/11 incident. Because of weak and expensive banking transfer payment system, traders used Hawala to transfer money in fast and cheaper way. By illegal means, KKI violated corporate governance principles of transparency; disclosure; accountability and responsibility. Thus, Khanani and Kalia group violated CG practices and was involved in illegal money transfer practices.

Since privatization boom in 1990, and uptil now, the Government of Pakistan has sold about 166 state enterprises with an overall amount of Rs. 476.5 billion. Privatization of PTCL has raised many questions regarding corporate governance practices. First, whether it can give a chance to other countries to have access to phone calls data. On the other hand PTCL has still not paid in total the ownership amount but has received 100% possession. PTCL privatization has led to corporate governance failure during business transfer to Etisalat.

Mehran Bank scandal is treated the most prominent single cash recovery amounting Rs.1.6 billion. NAB and senior army officials have recovered the amount and transferred state amount to intelligence fund as per official rules. Later Mehran bank went to bankruptcy, and the general public amount could not be recovered. After few years, it has been noticed that 39 individuals have been bribed to push down the case (Salman & Siddiqui, 2013).

Pakistan Railway, an East India Company gift to Pakistan was a trusted travel partner of the general public and reliable mode of goods transport and logistics. It mostly routes to the majority of cities. However, due to corrupt practices by the top managers, which led to poor management with the incapable human resource. These reasons led Pakistan Railways in corporate governance failure with heavy losses.

Corporate Governance in Pakistan

Study was conducted to find the relationship of corporate a governance with corporate valuation; ownership structure and need for external financing for KSE listed firms in the period of 2003-08. Governance factors such as board composition, ownership and its composition, disclosure, auditing and transparency have been used as variables the study. Researchers selected 80 listed non-financial firms. The research

concluded that organizations with best investment opportunities and with large size lead to the adoption of better corporate governance practices. Research also confirmed agency theory assumption that the family owners and foreign owners carry better governance practices in organizations, study also concluded that connection between ownership concentration and external financing has an inverse relationship with each other.

In another study the relationship between firm performance measure as ROE and PM, considering the corporate governance factors as the size of the board, board composition, CEO status, and Audit committee was conducted. A sample of 30 listed firms in Karachi Stock Exchange was selected during 2008-09. The research concluded a statistically significant relationship between selected corporate governance mechanisms and firm performance measures. However, CEO status relationship with performance measures such as ROE and PM have an insignificant negative relationship.

The relationship between corporate governance and capital structure of KSE listed 58 non-financial companies have also been gauged from 2002-05. Regression Analysis has been applied; CG factors as board size, board composition, and CEO status has been assessed in research. It concluded that board size and managerial shareholding is negatively correlated with debt to equity ratio. Research suggested that corporate governance selected variables play a vital role in regulating financial mix of organizations.

Similarly, a study on business groups and its impact on corporate governance in Pakistan have been studied. Karachi Stock Exchange listed firms from the period of 1998 to 2002 have been selected. Result concluded that group firms have more ability to pay short-term debts and lower financial leverage than non-group firms. Research further suggested that business groups are efficient financial arrangements that take place in effect outside the markets.

A research was conducted to measure the impact of corporate governance factors on capital structure choices of Pakistan based firms (Dar, Naseem, Rahman & Niazi, 2011). Corporate governance factors as outside directors, board size, ownership concentration, directors` remuneration, CEO's status and managerial ownership have been incorporated in the study. The sample for non-financial firms listed on Karachi Stock Exchange has been selected from the period of 2004-08.

Result concluded that ownership concentration, board size and outside directors have a positive relationship with total debt ratio and long-term debt ratio; but directors` remuneration is negatively correlated. Research suggested that corporate governance attributes in Pakistan, impact the financial behavior of Pakistani firms.

Corporate Governance Mechanisms

To assess corporate governance, researchers in the current study have used Board Size, Annual General Meeting (AGM), Audit Committee and CEO Duality. However, to measure the firm performance, the Profit Margin (PM) and Return on Equity (ROE) have been used.

Board Size

Previous studies demonstrate that the corporate governance system in the United States of America is not up to the mark. Problem is not with the Judiciary, regulations, and laws; but the problem is with an excess number of board of directors, which lead to failure of corporate governance mechanism. It has been noticed that most of the time; directors are out of time and mostly meet less than eight times a year. Other than that, directors spend less time on committee meetings, official gatherings, and pre and post board meetings. Lipton and Lorsch (1992), believed that standard maximum number of board size must be ten, having at least two independent directors. They further suggested that board of directors should meet at least twice a month including committee sessions and other meetings. Also, directors should spend at least 100 hours annually on each board of which they are part of.

Research has been carried out to measure the relationship between board size and its composition on banking efficiency of European banks operating during 2002-06. It has been found that board size is statistically insignificant with banks` efficiency in terms of cost and profit of selected banks. Average board of directors' size in Pakistan is 9, in Malaysia 7 and in Saudi Arabia is 11.

Annual General Meeting (AGM)

Annual General Meetings are treated as the most import part of corporate governance. Even though, it does not impact much on company's performance as compared to other corporate governance factors. Annual General Meetings are an important part of United Kingdom`s corporate governance practice. As it gives a platform where

all stakeholders (shareholders, directors, auditors, employees, suppliers, and others) can come and share their views and suggestions in front of the board and media. Annual General Meeting is claimed to achieve CG practice as it is considered as the most critical part of the report (Tesco, 2006). Apostolides researched corporate governance in 2010. Forty AGMs were attended to evaluate the best and worst CG practices and to build up a picture of successful AGM. Result concluded that a successful Annual General Meeting should consist of a balanced and independent set of skills including justified remuneration with rewards for the board of directors; awareness of corporate social responsibilities to the directors and giving importance to the shareholders.

Audit Committee

Previously, research has been conducted on the role of audit committee, executive committee and board of directors in earning management. 280 firm observations have been collected to analyze the impact of the audit committee, which compost of 15% of the affiliated directors and rest others. The research concluded that audit committee and board member with financial background are more inclined to those small firms who have a smaller number of current accruals. It is further concluded that members of the audit committee and board` financial classiness may play a key role in limiting the capacity of managers in earning management (Xie, Davidson, & DaDalt, 2003).

Overall interest in audit committee has been increased dramatically with reference to members` knowledge, independence, and their experience. Another study, on the effects of experience and financial reporting and audit knowledge on the members of the audit committee was conducted. Researchers selected 69 audit committee members to test their hypotheses. Result concluded that the higher the experience and audit knowledge of an audit committee member, greater be the support to an auditor who advocates "substance over form" in disagreement with client management. Researchers further concluded that audit committee should be composed of the total independent basis to select their directors.

CEO Duality

According to Agency theory, CEO Duality badly affects firm`s performance as it adjusts for control and monitory of the CEO. Whereas, Stewardship theory suggests that CEO duality may positively affect firm`s performance as it gives one person a unity of command. Previously,

research has been conducted on an archival database of organizational transitions. Researchers have included 403 listed firms and 1,202 company years in China. The research favored the stewardship theory and has called for a contingency perspective to review the factors which can influence CEO dualities such as resource scarcity, societal dynamics and others (Peng, Zhang, & Li, 2007).

A study on Egyptian listed firms was carried out to analyze whether corporate leadership structure affects organizational performance. The research concluded that on the econometric level, no impact of CEO duality had been found of organizational performance, but when researchers checked the industry wise impact, it has been found that CEO duality affects the organizational performance.

RESEARCH METHODOLOGY

Research Sample & Design

Automobile assemblers listed on Pakistan Stock Exchange (PSX) has been selected for the study, data of these 11 listed firms have been collected from their audited annual reports from the year 2010 to 2016. A total number of observations was 86, data of the companies were retrieved from their annual reports.

Model Specification

The model used in the research is:

$Y = a + bX + e$ **(Equation No. 1)**

In the above equation, Y is treated as the dependent variable, a is constant in the equation, b is the coefficient of the variables that are corporate governance mechanisms (board size, CEO duality, audit committee and board of directors) and e is the error term in the equation. By applying the equation No. 1, two new equations have been designed to fit the model for desired research demand that are:

$ROE = a + b_1 * AGM + b_3 * AC + b_4 * CEOD + e$ **(Equation No. 2)**

$PM = a + b_1 * AGM + b_2 * BS + b_3 * AC + B_4 CEOD + e$ **(Equation No. 3)**

Two types of variables have been used in all equations that are independent and dependent variables. Below is the description of the variables:

Table 1. Dependent Variables Justification

Dependent Variable	Formula
Return on Equity = (ROE)	$\frac{Net\ Profit}{TotalEquityShares}*100$
PM= Profit Margin	$\frac{EAT}{Turnover}*100$

Table 2. Independent Variables Justification

Independent Variable	Description
BS = Board Size	Number of Board of Directors
AGM = Annual General Meeting	Total Number of Meeting in a financial year
COED = CEO Duality	• Value Zero (0) has been assigned if the same person has more than one position at a time, i.e., CEO and GM. • Value One (1) has been assigned is CEO holds only one position at a time.
AC = Audit Committee	Number of Audit Committee Members

RESULTS AND DISCUSSION

Table 3. Frequency Distribution

	BS	AC	CEOD	AGM	PM	ROE
Mean	8.290698	4.197	0.290	4.581	1.474	2.734
Median	8.0	4.000	0.00	4.00	1.6783	3.0396
Mode	9.0	3.000	0.00	4.00	-1.320	2.965
Std. Deviation	1.1868	1.146	0.456	0.803	1.086	1.113
Skewness	1.185	0.6092	0.938	1.467	-0.783	-1.140
Kurtosis	4.872969	-0.7046	-1.146	1.836	0.4907	0.916
Range	8.00	4.00	1	3.00	5.3187	5.188
Maximum Value	14.00	7.00	1.00	7.00	4.00	4.433
Minimum Value	6.00	3.00	0.00	4.00	-1.32	-0.755

As the Table C shows that average board size is 8 in size, which explains a positive sign for the company`s performance. Audit Committee of automobile sector shows an average of 4 audit members, which shows a strong sign for the firm's strong performance. CEO Duality shows that almost 70% of the CEOs occupy two or more positions in the Automobile sector in Pakistan, who can be CEO, GM or MD of the company. Also, Number of board meeting shows an average of 5 meetings per year, which

also shows positivity towards firms` performance. Also, from the above table, we conclude that Profit Margin means for the automobile sector is 1.474 and Return on Equity are 2.734, which shows that for year`s turnover, profit earned by automobile sector is 1.474%.

Table 4. ANOVA-PM as a Dependent Variable

Model	Sum of Sq	Df	Mean Sq	F	Sig.
Regression	10.071	4	2.518	2.298	0.069
Residual	69.020	63	1.096		
Total	79.091	67			

Predictors: Board Size, Audit Committee, CEO Status, Board Meetings. Dependent Variable: Profit Margin (PM)

Table 5. ANOVA-ROE as a Dependent Variable

Model	Sum of Sq	Df	Mean Sq	F	Sig.
Regression	15.445	4	3.861	3.548	.011
Residual	75.096	69	1.088		
Total	90.541	73			

Predictors: Board Size, Audit Committee, CEO Status, Board Meetings. Dependent Variable: Return on Equity (ROE)

Table 4 and 5 show the variance analysis (ANOVA) with F-values of 2.298 (0.69 sig value) and 3.548 (0.11 sig value) for Profit Margin and Return on Equity as dependent variables. Results strongly support a positive relationship between dependent variables, i.e., profit margin and return on equity and independent variables as board size, audit committee, CEO duality and Board meetings at 1%, 5%, and 10% levels. A significance level for both PM and ROE are near to 5%, which makes them statistically significant.

CONCLUSION

There is no doubt that previously a large number of studies have been conducted on corporate governance practices and their impact on firm performance in Pakistan and the number continues to grow, but the results concluded from various studies are found mixed. This study is conducted to measure the relationship between firm performance indicators (PM and ROE) and Corporate Governance Mechanisms (Board Size, Audit Committee, CEO Duality and Board Meetings) in Automobile assemblers in Pakistan. To analyze the impact of corporate governance, authors selected 11 listed automobile companies in Pakistan Stock Exchange, taking data from 2010 to 2016. T-Test and Multiple Regression models

have been applied. The Results concluded that:

- There is a positive association between firm performance measures that are PM and ROE, whereas board size, audit committee, CEO duality and board meetings also have a positive relationship with them, but only board size and audit committee are statistically significant.
- There is a negative relationship between Profit Margin and BS, AC, CEOD and AGM.
- There is also a negative relationship between ROE and BS, AC, CEOD and AGM.

FUTURE RECOMMENDATIONS

Asia is treated as the next business hub for the whole world, and the role of Pakistan is very much strategic. Present status of Pakistan is being highlighted in bold letters with the CPEC impact. Lots of multinational organizations are coming to invest and run their businesses in Pakistan; in future which will give a tougher competition to local Pakistani industry to survive the fittest. Corporate Governance practices clarify that an organization is much stable to apply the global standards on it; which in turn gives the capability to compete in the global market. As the present research is done only in one Pakistan Stock Exchange-listed sector (automobile); there are lots of other sectors on which further study can be carried out regarding corporate governance. Also, a mixed study can be carried out to compare the local and international profitability by applying best corporate governance mechanisms.

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INTEGRATING CUSTOMER RELATIONSHIP MANAGEMENT WITH BIG DATA ANALYTICS IN RETAIL STORES: A CASE OF HYPER-STAR AND METRO

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ABSTRACT

Today, the world experiences an era of advanced technology, but organizations in Pakistan are still struggling with massive bundles of records especially in the retail sector, which is one of the largest industries in Pakistan, with respect to customers. It is a need of time to integrate Customer Relationship Management (CRM) and the Big Data System to solve the problems faced by retail stores and other organizations. This study investigates the prevalence of Big Data Analytics in retail stores of Pakistan, and analyzes the benefits of integrating CRM and Big Data. This study has used both the primary and the secondary sources for data collection. For primary source, a questionnaire was developed and a sample of forty-eight middle-level employees of Hyperstar and Metro was selected. Secondary sources have been used to explain the method through which the integration can take place between CRM and Big Data. This study found that the integration of Big Data and CRM in retail stores have manifold benfits, it can help handle data efficiently, increases sales, diversify business and creates better marketing impact.

Keywords: *Customer Relationship Management, Big Data Analytics, Retail Stores*

INTRODUCTION

In the current market-oriented era customers are considered as kings and organizations are always trying to find out the ways by which they can retain and attract more customers. In this connection, the software companies are also trying to find new and advanced solutions to meet the expectations of their customers i.e. services sector, operations

management, and supply chain management (Shaw, Subramaniam, Tan, & Welge, 2001). Most recently, their organization have introduced the concept of CRM which is referred to the practices and the technologies used by the organizations to manage, record and access the interactions of the customers with the organizations (Rai, Patnayakuni, & Seth, 2006). The data is increasing with technological speed and thus has created the concept of 'Big Data', which is used to extract value from vast bundles of data and capture velocity, discovery, and analysis (Shaw et al., 2001).

Metro, the one of the largest retail supermarkets in Pakistan, was founded in 2005. They were the first ones to introduce the concept of self-service retailing in Pakistan. They have strong cultural values through which they have become a part of the lives of their customers and have won their hearts. On the other hand, Hyperstar, a megastore that has been operating in Pakistan and serving customers since 2009. Over the years they have significantly expanded their business and now operate in diverse segments. They have committed to provide the best services to people and also have pledged to look after their unsaid needs too. So, both of these super markets focus primarily on maintaining good relations with the customers and the market community to deal with a pool of customers. This study attempts to analyze the benefits of CRM, and Big Data integration, brought to these retail supermarkets.

Organizations are struggling hard to keep up with the enormous bundles of records they gather on daily basis. Though they have CRM facility in their processes, the need of time is to introduce such a system in which management, especially retail supermarkets management, can extract the exact information they want from the large set of data. It is also a fact that CRM cannot administer large data instead, it can provide one to one solutions to customers in solving their product or service related issues (Papathanassiou, Arkoumani, & Kardaras, 2003). Previous research studies suggest that the survival of the organizations in this competitive world has become more challenging. Hence, the need to perform big data analytics in organizations has become vital. To dig in-depth information on big data analytics, this study set the following core objectives:

- To examine the prevalence of CRM in Pakistan's retail stores especially Hyperstar and Metro
- To evaluate the need for integrating CRM with Big Data in

Hyperstar and Metro supermarkets.

- To analyze the ways by which CRM can be integrated with Big Data in retail stores.

The current study mainly examines the effects of integration of Big Data analytics on CRM in the retail supermarkets. It will help in getting a comprehensive overview of the buying patterns of customers shopping habits. Moreover, it will bring value to the retail stores and will help them in predicting the patterns and decisions of the customers and thus maximize their profits. Retail supermarkets are an ever-growing business, and so are its customers, so there is a great need to handle and organize the whole bundle of data so that the retail stores can extract the exact information in the least time to cater the customers and business needs.

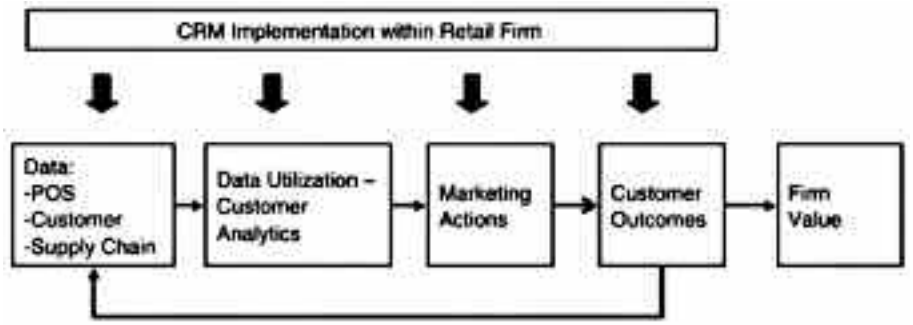
LITERATURE REVIEW

Customer Relationship Management (CRM)

The key purpose of CRM is to know how efficiently organizations administer the information which is directly associated with the customers. CRM system includes the name, phone number, address and date of birth of the customers (Kumar, 2010). Kumar explains that there are various methods through which the data is collected, and stored. Further, the information is stored in a database which is backed up by network technology. The data collected through various means, help organizations in managing reports, solving problems and in knowing the patterns of customer behavior (Anton, 1996).

The past researchers in favor of CRM have deduced that after the implementation of CRM in the processes of the organizations, the customer satisfaction can be increased (Anton, 1996). Through CRM, the organizations can customize the products and services according to the requirement of the customers individually (Verhoef, 2003). Verhoef asserts that all information regarding customers is saved in the network's databases. The organizations use that information to access the hidden buying pattern, and through that, they customize the product or services according to the separate needs of every individual. Buttle (2009), emphasizes that the customers' loyalty increase when they get desired products or services.

Fig 1. CRM Implementation within a Retail Firm



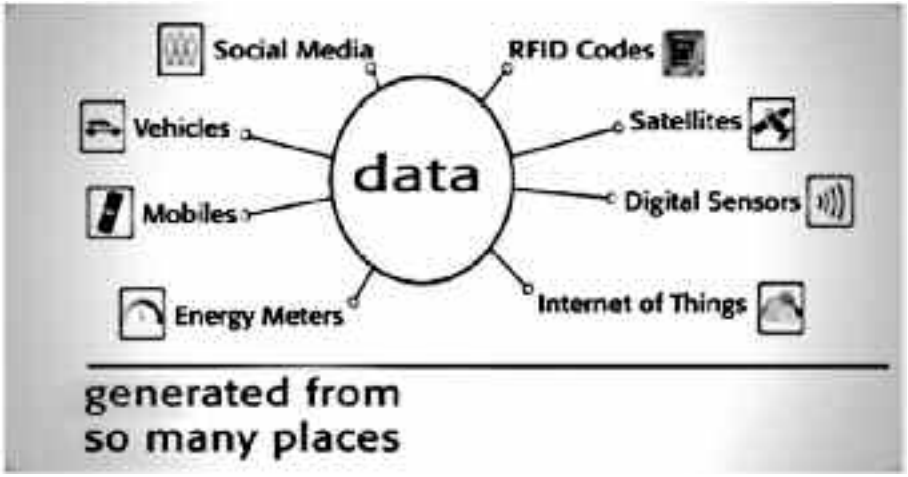
Source: *Verhoef et al., 2010*

The above figure 1 Shows, how CRM is implemented in the Retail Industry. First, the data is collected from various sources including the customers, point of sales and the supply chain. The data obtained from these sources is then utilized, and the patterns of customers buying behavior are developed, which tells the managers as to what steps for marketing they should choose to alter the product according to customers need. After the selection of the medium through which marketing activities are carried out, the customer responses are then observed. Whether the customer is satisfied? Did the retail store manage to identify the issue accurately? Whether the right market segment is selected? All these concerns are checked through the responses of the customers. The increase in the number of sales and the revenues will dictate the level of value the firm has generated through this procedure (Ngai, Xiu, & Chau, 2009).

Big Data

The flaws in the CRM processes became the reason for a revolution which could resolve the issues of CRM and efficiently manage the large volumes of data to process it smoothly. Eventually, the concept of big data evolved, but according to research studies, it is vital for the organizations to understand their current market and data handling situations and realize that how Big Data would help them in their business endeavors (Wang, Po Lo, Chi, & Yang, 2004). Big Data is all about managing the data and analyze the information provided to it. Big Data system is to collect large amounts of data from various resources which are then analyzed to formulate generalized results, which could help the organizations to know more about their customers and to enhance their revenue generation (Chen, Chiang, & Storey, 2012).

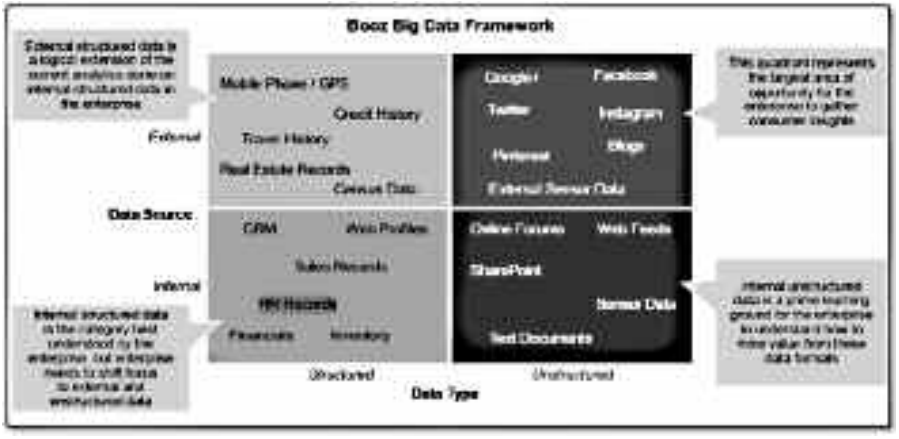
Fig 2. Big Data Information Sources



Source: *Lemon, White, & Winer, 2002.*

In the above figure 2 the authors show that Big Data gather information from a variety of sources including Images, RFID (Radio Frequency Identification) codes, satellites, digital sensors, social media, internet, and so forth. The data gathered from these sources is later analyzed and converted into meaningful graphs which can help organizations to gauge future demands. It also helps the organizations to create new and valuable opportunities to analyze the market and industry trends, as well. Big Data is observed to be ideal for a place or organizations where data flow is in excess, and the organizations have to deal with a diverse group of stakeholders including suppliers, customers, and (Russom, 2011).

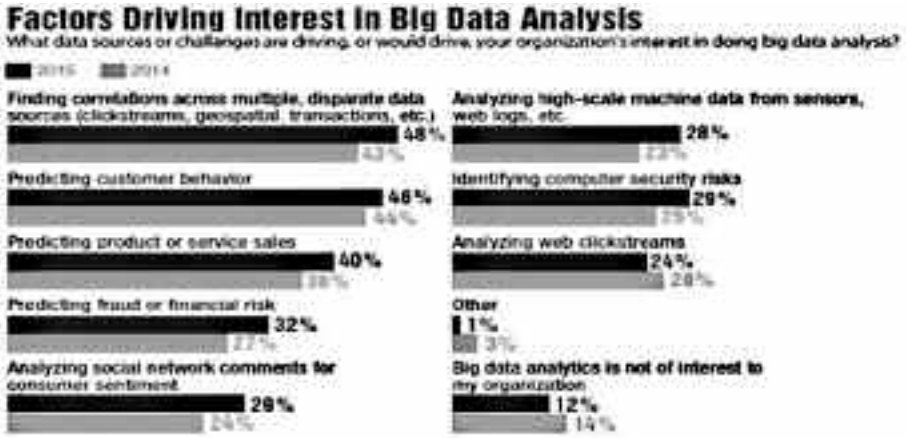
Fig 3. Booz Big Data Framework



Source: *Narayanan, 2012*

The above figure 3. shows the Booz Big Data Framework, which illustrates various sources from where the data could be collected. These include External and Internal data sources and collaborating them with two different data types, i.e., Structure and Un-Structured Data.

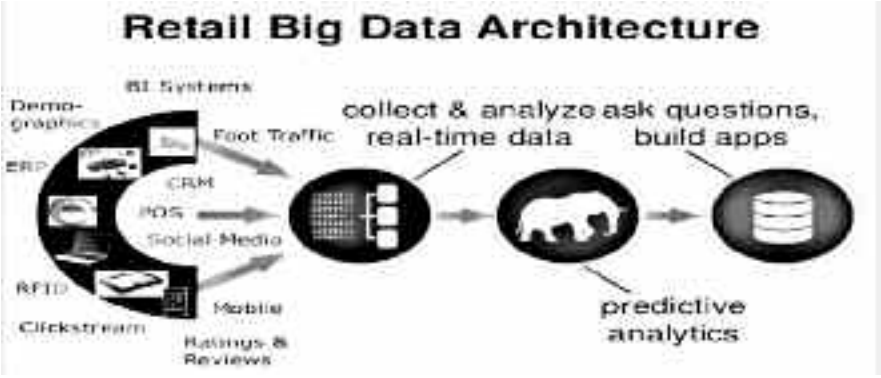
Fig 4. Drivers of Big Data Analysis



Source: Fisher, Deline, Czerwinski, & Drucker, 2012.

The above figure 4 shows the factors which drive the interest of organizations in the big Data Analysis. These factors include predicting of consumer behavior, prediction of financial risks, analyzing social networks, finding correlations and analyzing high scale machine data. Information Management Survey of Business Technology Professionals obtained these responses by analyzing the responses of 297 respondents, who were using the big data or were planning to use it in the near future.

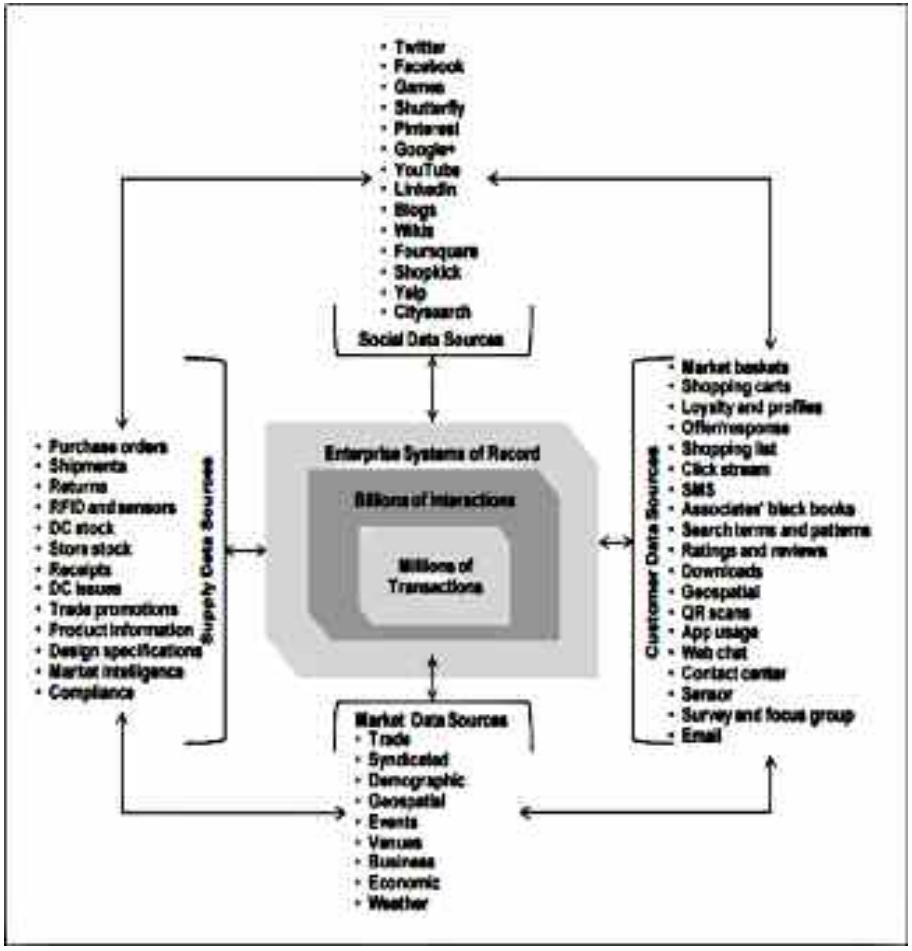
Fig 5. Retail Big Data Architecture



Source: Gupta, Gupta, & Mohania, 2012.

Figure 5 describes the big data and its implementation in the retail sector. The figure portrays that data is collected through various resources and then analyzed. The research has thrown light on the fact that big data is instrumental in retail sector because it helps the retail stores get an overview of the customers' behaviors and their buying preferences, whether they are involved in online or physical shopping (Zikopoulos & Eaton, 2011). The new system could be implemented in existing one by introducing technical tools which may help to efficiently analyze the customer's buying behavior, and enhance the sales volumes (Siemens & Long, 2011). The comments the customers give on the social media sites also give an insight of their thoughts and are recorded and interpreted by the Big Data in a way which is beneficial for the organizations (Sathi, 2012).

Fig 6. Retail Big Data Typology



Source: Narayanan, 2012

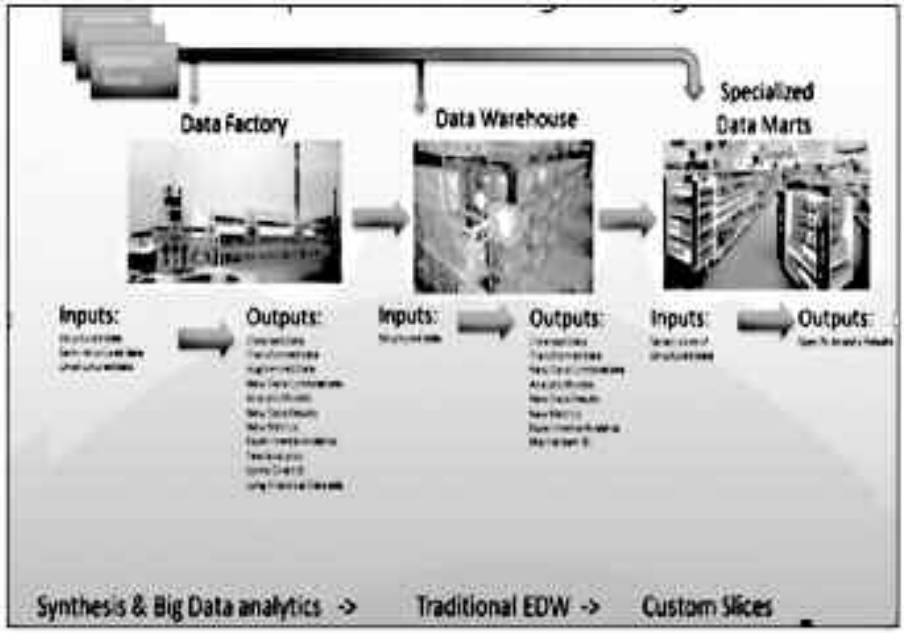
Figure 6 illustrates the topology of big data in the retail sector. It describes the sources from which the retail sector gets their data. The data sources include the supply data sources, the social network data sources, customer data sources and the market data sources. Moreover, all this data is stored in the system which later organizes the raw data into meaningful information.

Fig 7. The Big Data System

Source: Talia, 2013.

The collected data is in unstructured form, which is then extracted to separate the useful and waste data information. The data extracted is then converted into a structured form, which is then stored for using it at the time of need or query. The structured data is then analyzed and compared with the past practices of the retail stores. The structured data which is analyzed is mostly in the form of graphs and metrics. The retail stores thus note down the changes and act upon it accordingly. This is then delivered to the customers in the form of their required products.

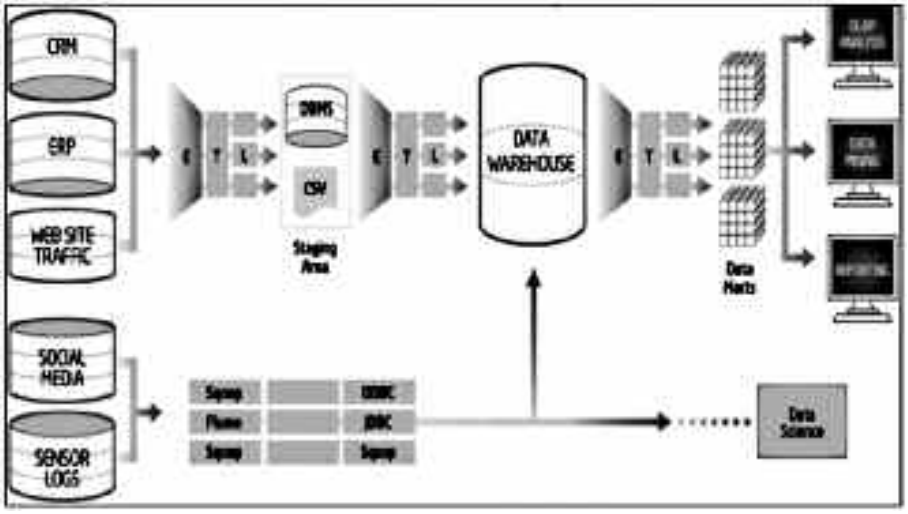
Figure 8. Integration of Big Data Analytics with CRM



Source: Business Analytics 3.0, 2012.

The above figure 8 describes the steps which are involved in the integration of CRM and Big Data. Moreover, it shows how data is collected, stored and how it changes the way retail stores deal with their customers. The past researchers have analyzed the needs of the retail sector and then suggested the integration of the Big Data and CRM. They were of the view that through the integration of CRM with Big Data, organizations, especially the retail stores would be able to perform better and can enhance all the stages of customer dealings as well as the other relevant processes (Kambatla, Kollias, Kumar, & Grama, 2014).

Figure 9. Offload ETL with Hadoop



Source: Cohen, Dolan, Dunlap, Hellerstein, & Welton, 2009.

Figure 9 is an Offload ETL with Hadoop. ETL is known as Extract Transform Load which extracts data from multiple sources, and then transforms it into structured data, to align them according to the needs of the retail stores. Which is further loaded into the warehouse for further analysis. The demand for Hadoop is increasing day by day because it is a useful initiative designed for capturing high volumes of data.

RESEARCH METHODOLOGY

This study has used cross-sectional hybrid research in which both qualitative and quantitative approaches have been used. The literature is reviewed, and a questionnaire-based survey is conducted, to access the impact of integration of CRM and Big Data Analytics. The data in this study was collected from the two top and largest retail stores in Pakistan,

i.e., Hyperstar and Metro. A questionnaire-based survey was conducted through which the responses of managers and middle-level employees were taken. The sample of this study is 48 retail managers who handle large data in retail stores in Hyperstar or Metro, Pakistan.

Research Instruments

Peppard (2000), has established a scale of 8 items to measure the importance of CRM. The same scale has been used in this research with a context modification on 5 points Likert scale. Cavoukian and Jonas (2012) indicated seven items through which Big Data Analytics and its integration can be checked which have been utilized for investigation in this study.

RESEARCH FINDINGS

The primary data in this study is collected from a questionnaire-based survey, and the secondary data is extracted from the past literature. The analysis was done in two phases: Phase I highlighted the importance of integration of CRM and Big Data which was construed through an extensive literature review on the subject matter; Phase II, however, analyzed the primary data findings from the questionnaire-based survey.

Phase I. Integration

Big data can alter the way organizations manage their relations with their customers by offering specific powerful tools, which can identify new sale opportunities, analyze responses of customers and combine the data from social networks. From the integration of Big Data and CRM, retail stores would be able to identify customer buying patterns and emerging market trends, which will help them to shape up their strategies accordingly, which would lead to generate higher revenues (Tene & Polonetsky, 2012). The top players of CRM that include Microsoft and Oracle have already started investing in Big Data so that more value can be brought into the lives of people (Chen, & Popovich, 2003).

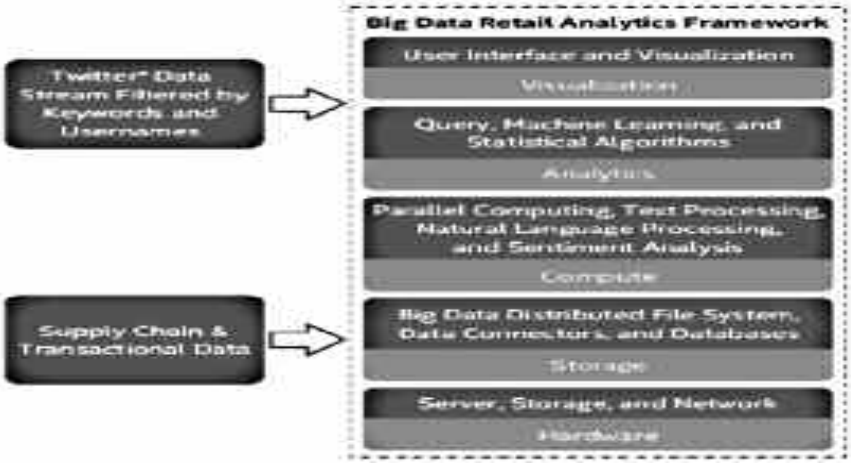
The most important aspect of the integration is that the predictive analysis could be carried with this integration, as it helps the retail stores to predict and forecast as to how the customers would respond in the future (Ghazal, Rabl, Hu, Raab, Poess, Crolotte, & Jacobsen, 2013). This prediction is based on the patterns of their past behaviors as well as their demographics. Moreover, it allows the retail stores; to measure the store's own performance as compared to its competitors. The areas, which can be benchmarked include, customer satisfaction, customer retention rate and the revenues of their own as well as the competitive stores.

Fig 10. Framework for Integration

Source: Gantz & Reinsel, 2012.

The above figure 10 explains the working of a secure cloud-based network. Nowadays, there are cloud-based networks which help in the measurement of the analytical solutions. This network helps in fetching the data from different websites including Facebook, Twitter, etc. (Moniruzzaman & Hossain, 2013). The studies assert that the cloud-based networks provide meaningful insights based on the received data, and through the usage of instrumental machines extract the data stream, keeping in focus the areas like security and costs. The practical usage of this data is to provide value to the customers and the retail stores.

Fig 11. Big Data Analytics Implementation



Source: Ames, Abbey, & Thompson, 2005

Figure 11 is a framework developed for the implementation of Big Data Analytics which uses the Cloudera Distribution for the platform of Hadoop. Through this framework, data can be processed in large volumes, with more considerable velocity, and consider numerous sources. According to this framework, the supply chain and social media channels are thoroughly examined, and the relevant data is extracted. Moreover, this framework also caters additional sources which include sensors, weather feeds and also IOT (Internet of Things). The first key to success in retail is to identify the relevant processes from marketing, sales, and e-commerce which can benefit the stores and provide more significant insights.

Phase II. Questionnaire based Survey

A questionnaire-based survey was conducted through which the responses of managers and middle-level employees were taken and analyzed. The sample of this study is 48 managers or middle-level employees who belonged to either Hyperstar or Metro.

Table 1. Correlation

		Big Data	CRM
big data	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	48	
CRM	Pearson Correlation	.774**	1
	Sig. (2-tailed)	.000	
	N	48	48

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

In the Table 1 correlation results illustrate that there exists a positive relationship between the CRM and Big Data integration. As the value of Pearson correlation is 0.774, it indicates that the integration process and sales have some alignment with each other and can affect each other in broader contexts.

Table 2. Regression Model Summary

Model	R	R Square	Adjusted Square	Std. Error of the Estimate
1	.774[a]	.600	.591	.71050

a. Predictors: (Constant), Big Data

Results suggest that regression results support the primary objective. The value of R square confirms the positive impact of CRM & Big Data integration in the retail stores of Pakistan. The table further reveals the value of R square as 0.60 which depicts that the integration of CRM & Big Data would be very beneficial for the retail stores.

Table 3. Regression ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	34.785	1	34.785	68.908	.000[b]
	Residual	23.221	46	.505		
	Total	58.006	47			

a. Dependent Variable: CRM

b. Predictors: (Constant), Big Data

The F value designates that Big Data and CRM are significantly correlated, and their integration would be very beneficial for retail stores which involves handling of a significant amount of data. Moreover, .000 is the value of significance which is less than 0.05, so it also supports the systems integration.

Table 4. Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.365	.328		1.111	.042
	Big Data	.819	.099	.774	8.301	.000

a. Dependent Variable: CRM

The beta values of research variables described in the results show the impact of CRM on Big Data. The beta value is 0.774, describing that integration of CRM with Big Data will improve retail stores' productivity by 77%. The table further explains that t value is more than two, so both CRM and Big Data are significantly correlated.

DISCUSSION AND CONCLUSION

The current research found that as the retail stores need to handle a massive bundle of data, the integration of Big Data with CRM will help organizations to handle data efficiently. Also, the retail stores would be able to increase their sales volumes, as through this integration, they can easily identify the unsaid needs of the customers, and target those needs effectively (Sun, Zhang, Chen, Zhang, & Liang, 2007). Due to this modification, they can increase the customer loyalty and retain them for a more extended period of time (Cohen, Dolan, Dunlap, Hellerstein, & Welton, 2009).

Examining the literature, it was construed that initially, the retail stores did not have right people to operate the system, but eventually, the need forced them to train their people accordingly. Literature supported the

findings of this study and indicated that more than 50% of the retailers are using Big Data analytics and are satisfied with its outcomes because the sales of the retail store have been increased due to it (Barton & Court, 2012). As Moore's Law describes that data doubles every year for retailers, thus retailer managers have to handle bundles of information and data of so many years (National Instruments, 2015). Big Data Analytics can combine the data coming from various resources and analyze it in such a way that would be useful for the retail stores (Raghupathi & Raghupathi, 2014).

This research found out that due to the integration of Big Data with CRM, the retail stores could have many benefits. Those benefits include long-lasting relationships with customers, increased sales volume, and revenues and better insight of the operations of the retail store. Moreover, the risk for the retail stores would also be minimized because the investments made would be according to the data collected from the customers, so the chances of errors will be least. This study defines that the customer's data reaches the retail store from many sources which they organize and give the shape of real-time data. The managers of retail stores who can get a better insight of their customers and base their strategic decisions on this information then interpret this data. Literature has described Big Data Analytics as a way of getting a competitive advantage over the competitors.

The purpose of this study was to check the prevalence and the integration of Big Data and CRM in retail stores of Pakistan. This study can be beneficial for Retail Stores in knowing how their services can be made better due to the adaption of Big Data Analytics. As Big Data is relatively a new term, yet many retail stores are not familiar with the benefits of it, but this study can be a guideline for them and can help to know the importance of integrating Big Data and CRM. Though CRM has been instilled in their system, but CRM lacks the capability of handling and organizations tons of data, thus the organizations dealing with vast bundles of data, Big Data Analytics would be the perfect solution (Mycustomer.com, 2014). The term Big Data is still new in Pakistani perspective, and many people are unaware of it. Even though the managers of Hyperstar and Metro responded to the questions appropriately, but they did not know much about Big Data. In most of the retail supermarkets, Big Data Analytics is conducted by IT department, but the management and working employees do not have any idea about

the clarity of this concept. Therefore, the true essence of this concept has not been achieved so far.

LIMITATIONS AND FUTURE RECOMMENDATIONS

The constraints of the present study can only be eliminated by having a lengthier duration to carry on the research so that it can be conducted in a broader perspective and to overcome its numerous limitations. As it is a new dimension that Big Data and its aspects need to be analyzed thoroughly. The primary data in this study is hand collected from two renowned retail stores of Pakistan, leaving scope for other researchers to conduct future researches on the other retail stores as well. This is a case study of Pakistan so further researchers can conduct the same research in other countries and sectors other than retail supermarkets. The concern of focus for selection of organizations for future study should have substantial involvement of data and its analysis.

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