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SMIU Journal of
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FACTORS CONTRIBUTING TO CONSUMER ATTITUDES TOWARDS ONLINE ADVERTISING IN EMERGING MARKETS

Farheen Khalid*  Taha Jamal **  Aamir Shamsi ***  Bilal Ali Zafar ****

ABSTRACT
The trend of globalization that has been seen in the past decade or so in advertising and trade channels throughout emerging economies has unlocked the potential to create significant brand awareness. The idea is that brands stand & fall with their marketing activities since immense exposure is received by ads. The primary objective of this research was to explore the impacts of and emotional appeal type for advertisements within the Pakistani consumer & brand relationship structure. We have taken our sample size majority of University Students Graduate Program who are able to purchase according to their need. Data is being collected by survey through our adopted questionnaire & did the regression analysis. Two hundred (200) students from different educational institutions were chosen to participate in the study. The study concluded that credibility, pleasure, information, involvement and self-referencing when it comes to advertisements has a positive effect when we talk about a consumers’ attitude towards online advertising. We can easily say that the findings of this study will help online advertisers better assess which elements have an impact on the consumer’s attitude towards a certain type of element within their marketing campaign. The results are extremely consistent within Pakistan as compared to other studies conducted for developed economies. One of the limitations in this study is that the only medium used to gauge consumer attitude is the domain of electronic media.

Keywords: Online advertising, consumer perception, digital advertisements, consumer attitudes, brands.

JEL Classification: M37

1. INTRODUCTION
In the most recent decades, a noteworthy worry for the researchers was to comprehend and decide the effect of advertising on customers’ state of mind towards marketed brands. The thought behind this was the favourable or unfavourable evaluation of an advertisement is related with the promoted brand. There is, in this manner, a potential for an immediate connection between the attitude of the consumer toward a notice and disposition and perception toward a brand that is been promoted or publicized.

On the premise of our research, we found that the key variables like entertainment or joy, believability and item reliability or credibility indicate solid association with purchasers’ state of mind towards adverts and their esteem is subject to these elements1. Distinguishes that the elements of entertainment or excitement and Information provision

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Sandra Soroa-Koury and Kenneth CC Yang, Factors Affecting Consumers’ Responses to Mobile Advertising from a Social Norm Theoretical Perspective, (Telematics and Informatics) 27, no. 1 (2010): 103–113
Chung-Chuan Yang, Taiwanese Students’ Attitudes towards and Beliefs about Advertising, (Journal of Marketing Communications 6), no. 3 (2000): 171–183
toward promotions and their buying goals and habits. In our research we have built up a conceptual framework which demonstrates the connections between the factors that have been set up and talked about in detail in the literature section review section.

The focal point of this research is to discover, the link between impact of credibility, entertainment/pleasure, validity and other imperative factors which are talked about in definite in the Literature review section, on the shopper mentality towards web based promotions.

2. LITERATURE REVIEW

Shoppers’ Attitude towards advertising has been studied before in past studies. The critical viewpoint is to concentrate the consumers’ demeanour towards online promotion; which depends on the advertisements’ message and distinctive vital elements. The substance of advertising messages incorporates entertainment value, realism, data provided, the item’s contribution and validity which have a noteworthy association with the customer disposition towards advertising. Researchers, during their research to prove these impacts on customer disposition, likewise found that the impact of these variables changes with changing demographic factors as well.

While breaking down the impacts of both advertising convictions and individual values on Neoteric-inheritors' state of mind and attitudes towards advertisements is approved by key elements like item or product information provided, being useful for the economy, role and/or image in the social context, honesty or reliability and not being materialistic while communicating the brand. It's been observed that distinctive advertising channels have diverse impacts on consumers which is the reason for their reactions are often dictated by their attitudes towards a brand or its advertisement.

Attitudes towards ads are straight forwardly reliant on its perceived value and saw levels of stimulation (entertainment), Information provision, and aggravation (irritation). And furthermore different components like

4 Hiram Ting, Ernest Cyril de Run, and Ramayah Thurasamy, Young Adults’ Attitude towards Advertising: A Multi-Group Analysis by Ethnicity, (Revista Brasileira de Gestão de Negócios 17), no. 54 (2015): 769.
6 Ducoffe, Advertising Value and Advertising on the Web; Ernest F. Larkin, Consumer Perceptions of the Media and Their Advertising Content, (Journal of Advertising 8), no. 2 (1979): 5–7
useful for economy and realism shows a solid association with buyers’ attitude toward advertisements. A few researchers believe that the believability of the source, in a majority of the circumstances, point towards the validity of the endorser, representative or the individual who has appeared in the advertisement, while the endorser can be a client, representative, VIP, worker or any individual and attitude is the educated propensity of the people. Demonstrated in their findings that validity or credibility is essential when the emotional appeal approach is utilized to make the advertisement more tenable in light of the fact that the believability of the source is an essential variable that adds to viewers’ attitude.

Likewise clarified a similar idea of attitude that it is the individual appraisal of any consumer and their propensity to act in any way towards the advertisement or stimuli as governed by their thoughts and/or perceptions. A few researchers had a solid sentiment that daily paper is more valid medium than the TV and that is the reason the data given in the daily paper will be more dependable and acceptable as contrast with its partner.

2.1. The Conceptual Framework

In view of the past researches and studies that have been done and the gaps that have been identified in the first part of this report, we have built up a Conceptual framework, which is delineated in Figure 1. In the accompanying section, at first the dependent variable is examined trailed by discussion on the individual constructs of the independent variables that have been marked in the conceptual framework given in figure 2.1.

2.1.1 Consumer Attitude towards Online Advertisements

Dispositions and attitudes towards advertisements are characterized as "an educated inclination to react in a reliably positive or negative way toward publicizing when all is said by the advertiser". The attitude of the viewer is thought

---

7 Yang, Taiwanese Students’ Attitudes towards and Beliefs about Advertising.”
to be a key imperative variable that can anticipate the shopper acknowledgment of an Advertisement and numerous specialists like measured the general consensus towards the advertisement among those with the will and means to consume, while the analysts additionally examined the attitudes amongst the younger consumers. However, the impact of the attitudes towards internet promotions in light of a specific advertisement was less usually considered.

2.1.2 Credibility and Attitude towards Online Advertising

Validity in advertising is being characterized as a measurement of shoppers' observation about the realness and honesty of promoting a brand through advertisements. These are the advertisements that are convincible. This prompts higher believability for the shoppers and help in forming an uplifting disposition towards an advertising campaign.

Images additionally have an imperative influence in advertising as they are utilized as a part of promotions to persuade the customers with respect to the thought behind item utilization. Message that sounds credible, then it will make an effect on buyers, and in result the advertisement will be viewed as more sound.

Furthermore, found that believability (credibility) is straightforwardly connected to both advertising attitudes and incentive towards promoting. 

References:


13 Larkin, *Consumer Perceptions of the Media and Their Advertising Content*


2.1.3 Information and Attitude towards Online Advertising

Advertisements of any kind are an essential source of item information. Customers can match the data with their necessities and needs making a constructive picture of that item being promoted. Information being given to buyers through notices can shape the individual convictions of buyers and furthermore assumes an essential part in changing the conduct and demeanour of customers\(^22\).

Another review on youthful purchasers was directed by\(^23\). He established that buyers like internet advertisements since it is an extremely efficient source of providing information and data however it was less viable for conveying brand image. In a later review by\(^24\), additionally found that believability contributes towards consumers’ perceptions, which additionally impacts web advertisements utilization for information gathering purposes. One of the research discoveries propose that buyers take after brands on Twitter due to four essential inspirations: motivator chasing, social-communication chasing, mark use, and data chasing\(^25\).

Attached to the impact of media, advertising has been given religious zest by researchers because of its exact focus on consumer centric messages\(^26\). Promoting pictures and messages always offer a fundamental basis for reality of foundation\(^27\). Similarly, repeated expose to the items in television programs encourages customers to have both negative and uplifting demeanour towards the product situation and permit certain behavioral outcomes\(^28\). As \(^29\)found


\(^{26}\) Hong-Youl Ha et al., The Effects of Advertising Spending on Brand Loyalty in Services, (European Journal of Marketing 45), no. 4 (2011): 673–691.


that media messages and pictures have the immense impact on customers. The outcomes from the previously mentioned diverse specialists affirm that the quality, believability, handiness and wealth of information, needs of data and attitude towards data are the key variables of online networking that impact buyers’ purchase intentions. 

2.1.4 Pleasure/Entertainment and Attitude towards Online Advertising

Entertainment is characterized as the capacity to satisfy a group of people requirements for engaging happiness, fun, or passionate Amusement. It is the capacity that fulfils cravings of the buyers for leisure activity, engaging pleasure, deviation or emotive happiness. What's more, the incautious way of telephone based excitement underpins this develop, as particularly youngster’s utilization of communication administrations for entertainment only and pleasure. Proposes that buyers take after brands on Twitter as a result of four essential inspirations: motivation chasing, social-collaboration chasing, mark utilization/affability, and data chasing.

2.1.5 Advertisement Involvement and Attitude towards Online Advertising

Rastogi and Khan Study uncovered that client's trust in eco-label and eco-brand and their impression of eco-brand show positive and critical effect on their real perception towards advertisements and advertising. Our outcomes uncover, like other research, that inclusion apply positive impacts on aims to get promoting, particularly among the individuals who as of now have availability of the Internet.

2.1.6 Materialism and Attitude towards Online Advertising

Materialistic purchasers have a tendency to appreciate the life in the public eye by flaunting unreasonably expensive and lavish merchandise and having predominantly branded items. Such sort of materialistic branded items pulls in the general public and the ads advancing materialism are energized as they may lead shoppers to purchase intentions and

34 Boateng and Okoe, *Consumers’ Attitude towards Social Media Advertising and Their Behavioural Response*.
are profoundly believable. Web clients' convictions about realism that, lie/no sense and esteem defilement related contrarily to their mentalities towards Web publicizing.

2.1.7 Self-Referencing and Attitude towards Online Advertising

Findings show that entertainment, irritation and usefulness are key drivers of teenagers' attitude toward mobile advertising. Moreover, perceived usefulness reduces irritation. Measured shopper reaction whether psychological or emotional through intuitiveness, association and trust that buyers have towards internet advertising and advertisements. Shoppers trust that intuitiveness happens when online clients are eagerly exposed to the web based advertising and advertisements. Explored the connections between buyers' conviction toward web based advertising and advertisements, dispositions toward web based advertising and advertisements and shopper behavioral in China, Romania and U.S. In their examination, they found that every one of the five conviction components which incorporate data, stimulation, economy, validity and esteem defilement were critical indicators of state of mind toward web based advertising and advertisements.

2.2 Research Hypotheses

H1: Consumers' attitude towards Online Advertising is positively affected by Perceived Entertainment Value
H2: Consumers' attitude towards Online Advertising is positively affected by Perceived Credibility
H3: Consumers' attitude towards Online Advertising is positively affected by Perceived Involvement
H4: Consumers' attitude towards Online Advertising is positively affected by Perceived Information Value
H5: Consumers' attitude towards Online Advertising is positively affected by Perceived Self-Referencing
H6: Consumers' attitude towards Online Advertising is positively affected by Perceived Materialism

3. METHODOLOGY

The methodology contains a discussion on the parameters of testing the developed model. Based on epistemological perspective the scope of this research is to find out the attitudes that consumers have towards online advertising in emerging markets, specifically Pakistan, and the factors that contribute towards it.

3.1. Scale and Measure

The six variables and the constructs that are being used in this study had four questions each all based on seven point Likert scale. The source, which study they were adopted from and no. of scale items are represented in table 3.1. In the instrument a 7-point scale (Likert) has been used where 1 indicates the highest level of disagreement and 7 means that they strongly agree. The instrument is divided into a number of sections which are dependent upon the variables: Credibility, Information, Pleasure / Entertainment, Materialism, Self-Referencing, Involvement and attitude towards advertising.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Adopted from</th>
<th>Source</th>
<th>Scale Items</th>
</tr>
</thead>
</table>

3.2. Population and Sample size

Population is defined as a group of people who fit a certain criteria, however it is large and not all of them can be reached for responses therefore a sample of representatives is usually taken from the larger population which has the same characteristics of the population for the collection of data.\(^{40}\)

The population that has been chosen for the study are university students in their Graduate Degree Programs and higher (MBA, MPhil, PhD). The reason for choosing a population of this demographic was to understand the perception of the population who not only had knowledge of the product/advertisement, but also the ability to purchase. Our sample size was 200 respondents, out of which only 186 have been considered as they fall within the defined population.

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3.3. Sampling Technique

We have to apply purposive and convenience sampling techniques to collect the data. The sampling technique that has been used is Non-Probability convenience sampling technique which we used for the acquisition of responses for the research from the population of the demographic that has been defined earlier.

4. DATA ANALYSIS

Data analysis was done on the basis of Quantitative research methods. We used SPSS 17 to analyze the data that was collected. Our analysis included checking the reliability of our variables, their validity. Exploratory Factor Analysis (EFA), their correlation, finding out discriminant validity and finally multiple regression analysis. Our analysis based on the techniques mentioned above is discussed in the following section.

5. RESULTS

5.1. Profile of the respondents

Out of the 200 responses that were collected, 186 are being used as the rest did not fulfil the requirements as initially set. With respect to gender 101 are female (54.3%) and 85 are male (45.7%). Based on age 138 respondents were between the age of 21-30, 41 were between the ages of 31-40, and 7 were 41 and above. In terms of profession, mostly all of them are employed. 70 have done their graduation, 69 were or are doing their Masters, 30 MPhil/MS students and 18 were Doctoral candidates.

5.2. Descriptive Statistics

To ascertain the normality of the data and to check out the univariate validity, we have generated the descriptive statistic in SPSS 17, which is summarized in table 3.2.

<table>
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<th>Table 4.1: Descriptive Statistics</th>
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<tr>
<td></td>
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<tr>
<td>Attitude</td>
</tr>
<tr>
<td>Credibility</td>
</tr>
<tr>
<td>Information</td>
</tr>
<tr>
<td>Pleasure</td>
</tr>
<tr>
<td>Materialism</td>
</tr>
<tr>
<td>Involvement</td>
</tr>
<tr>
<td>Self-Referencing</td>
</tr>
</tbody>
</table>

Table 2 shows that construct Involvement (Mean=5.21, SD= 0.53) has the lowest skewness (0.138), and Information (Mean = 5.55, SD=0.49) has the highest skewness (0.78). The Kurtosis for only one item is negative while all the other items have a positive kurtosis, the highest for Credibility (Mean=5.24, SD=0.56) is 2.49 and the lowest kurtosis is for Materialism which is (Mean=5.45, SD= 0.44) is 0.25. Since all the construct are within the range of ±3.5 therefore it can be assumed that the data has a normal tendency (Hair Jr. et al, 2010).

5.3. Reliability of the constructs

The instrument used in this research study contained constructs which were previously used and tested therefore the reliabilities and validities were previously established. However, the reliabilities were re-established in context with the current research and the current respondents. Table 3 contains the summarized results of the tests.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Cronbach’s Alpha</th>
<th>Cronbach’s Alpha on standardized item</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credibility</td>
<td>0.806</td>
<td>0.808</td>
<td>5.243</td>
<td>.55655</td>
</tr>
<tr>
<td>Information</td>
<td>0.579</td>
<td>0.580</td>
<td>5.553</td>
<td>.49024</td>
</tr>
<tr>
<td>Pleasure</td>
<td>0.743</td>
<td>0.748</td>
<td>5.372</td>
<td>.52456</td>
</tr>
<tr>
<td>Materialism</td>
<td>0.501</td>
<td>0.503</td>
<td>5.448</td>
<td>.44351</td>
</tr>
<tr>
<td>Involvement</td>
<td>0.728</td>
<td>0.726</td>
<td>5.209</td>
<td>.52927</td>
</tr>
<tr>
<td>Self-Referencing</td>
<td>0.730</td>
<td>0.731</td>
<td>5.228</td>
<td>.50825</td>
</tr>
<tr>
<td>Attitude</td>
<td>0.834</td>
<td>0.836</td>
<td>5.450</td>
<td>.52999</td>
</tr>
<tr>
<td>Overall</td>
<td>0.913</td>
<td>0.913</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above Table 3 shows that the reliability of Consumer attitude towards Online advertising is the highest ($\alpha=.83.4$, M=5.45, SD=0.53) while the reliability for Information is the lowest ($\alpha=.58$, M=5.55, SD=0.49). The overall Cronbach’s alpha for the instrument including dependent and all the independent variables is 0.75.

5.4. Exploratory Factor Analysis (EFA)

Exploratory factor analysis was applied to reveal the latent variables and their relationships with the constructs. Table 4 contains the summarized results of the test.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Original items</th>
<th>KMO</th>
<th>Barlett’s Test</th>
<th>Cumulative Factor Loading</th>
<th>Items Retained</th>
</tr>
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<tbody>
<tr>
<td>Credibility</td>
<td>4</td>
<td>0.738</td>
<td>256.054</td>
<td>63.635</td>
<td>4</td>
</tr>
<tr>
<td>Information</td>
<td>4</td>
<td>0.600</td>
<td>74.563</td>
<td>44.554</td>
<td>4</td>
</tr>
<tr>
<td>Pleasure</td>
<td>4</td>
<td>0.741</td>
<td>167.555</td>
<td>57.128</td>
<td>4</td>
</tr>
<tr>
<td>Materialism</td>
<td>4</td>
<td>0.629</td>
<td>45.270</td>
<td>40.656</td>
<td>4</td>
</tr>
<tr>
<td>Involvement</td>
<td>4</td>
<td>0.637</td>
<td>173.184</td>
<td>55.299</td>
<td>4</td>
</tr>
<tr>
<td>Self-Referencing</td>
<td>4</td>
<td>0.668</td>
<td>186.447</td>
<td>56.105</td>
<td>4</td>
</tr>
<tr>
<td>Attitude</td>
<td>6</td>
<td>0.801</td>
<td>419.785</td>
<td>55.272</td>
<td>4</td>
</tr>
</tbody>
</table>
Principal Factor Analysis was applied on the constructs with Varimax rotation. All the assumptions of moderate correlations, independent sampling and linear relationships were met. Kaiser-Meyer-Olkin (KMO) for all the constructs except which is greater than 0.6 which is acceptable (Hair J., Black, Babin, Anderson, & Tatham, 2006). The Barley Test of Spehercity for all the constructs was found to be significant $P < .05$.

### 5.5. Correlation Analysis

Correlation analysis is done in order to check the relationship between the variables and to see whether multi-co linearity exists amongst the variables or not (Bryman & Bell, 2005). For regression analysis checking of correlation is a requirement; Bryman further highlights that the correlation amongst the constructs should be between 0.20-0.90. If the correlation is less than 0.20 then the item is supposed to be dropped. Similarly, if correlation value of two items is $> 0.90$ then it either needs to be dropped or merged (Bryman & Bell, 2005). The results are summarized in Table 5.

<table>
<thead>
<tr>
<th></th>
<th>Cred</th>
<th>Info</th>
<th>Plea</th>
<th>Mate</th>
<th>Invo</th>
<th>Self</th>
<th>Att</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credibility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Information</td>
<td>.521**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pleasure</td>
<td>.456**</td>
<td>.229**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materialism</td>
<td>.415**</td>
<td>.502**</td>
<td>.303**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involvement</td>
<td>.302**</td>
<td>.396**</td>
<td>.387**</td>
<td>.489*</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Referencing</td>
<td>.263**</td>
<td>.414**</td>
<td>.358**</td>
<td>.428*</td>
<td>.532**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>.584**</td>
<td>.610**</td>
<td>.405**</td>
<td>.575*</td>
<td>.687**</td>
<td>.489**</td>
<td>1</td>
</tr>
</tbody>
</table>

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

The above Table 5 shows all the relationships were significant at a level of 0.01 (2-tailed). The correlation of Involvement ($M = 5.21$, $SD = 0.53$, $N = 186$) with $r (186) = 0.687$, $p = 0.0 < 0.01$, was strongest while the weakest was with Pleasure ($M = 5.37$, $SD = 0.53$, $N = 186$) with $r (186) = 0.35$, $p = 0.0 < 0.1$. Additionally, correlation tells that the variables are unique and distinguishing (Hair Jr. et al, 2010).

### 5.6. Construct Validity

Construct validity is necessary if the constructs adopted from one culture and is administered in the other culture. Since all the constructs used in this research were developed in western world therefore it was necessary to ascertain its validity with the present set of data. According to Fornell (2010) the construct validity could be ascertained through convergent validity and discriminant validity.
The variance explained for each construct was greater than .40 (refers to Table 6, which confirms that the data converges or fulfil convergent validity requirement (Cline, 2010, Hair Jr., 2008)).

5.7. Discriminant Validity

Discriminant validity was ascertained to ascertain the uniqueness and distinctiveness of each variable (Hair, Black, Babin, & Anderson, 2010). According to Fornell (2010) the square root of variant explained should be greater than the square of each pairs of correlation. The data thus fulfils the discriminant validity requirement.

5.8. Overall Model Regression Test

Table 7 contains the summarized results of regression for the overall model of the research study. The hypothesis that the characteristics of the factor of the advertisement (Credibility, Information, Pleasure, Materialism, Involvement, Self-Referencing) and the influence of consumer’s attitude towards advertising positively was tested here through Regression analysis.

Table 4.5: Convergent Validity

<table>
<thead>
<tr>
<th>Construct</th>
<th>Mean</th>
<th>Std. Dev</th>
<th>Reliability</th>
<th>Variance Exp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credibility</td>
<td>5.2433</td>
<td>.55655</td>
<td>0.806</td>
<td>63.635</td>
</tr>
<tr>
<td>Information</td>
<td>5.5538</td>
<td>.49024</td>
<td>0.579</td>
<td>44.554</td>
</tr>
<tr>
<td>Pleasure</td>
<td>5.3723</td>
<td>.52456</td>
<td>0.743</td>
<td>57.128</td>
</tr>
<tr>
<td>Materialism</td>
<td>5.4489</td>
<td>.44351</td>
<td>0.501</td>
<td>40.656</td>
</tr>
<tr>
<td>Involvement</td>
<td>5.2097</td>
<td>.52927</td>
<td>0.728</td>
<td>55.299</td>
</tr>
<tr>
<td>Self-Referencing</td>
<td>5.2285</td>
<td>.50825</td>
<td>0.730</td>
<td>56.105</td>
</tr>
<tr>
<td>Attitude</td>
<td>5.4507</td>
<td>.52999</td>
<td>0.834</td>
<td>55.272</td>
</tr>
</tbody>
</table>

Table 4.6: Summarized Regression Table

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>-.541</td>
<td>.342</td>
<td></td>
<td>-1.584</td>
</tr>
<tr>
<td>Credibility</td>
<td>.262</td>
<td>.052</td>
<td>.275</td>
<td>5.031</td>
</tr>
<tr>
<td>Information</td>
<td>.233</td>
<td>.060</td>
<td>.215</td>
<td>3.888</td>
</tr>
<tr>
<td>Pleasure</td>
<td>.012</td>
<td>.051</td>
<td>.011</td>
<td>.225</td>
</tr>
<tr>
<td>Materialism</td>
<td>.142</td>
<td>.064</td>
<td>.119</td>
<td>2.219</td>
</tr>
<tr>
<td>Involvement</td>
<td>.435</td>
<td>.054</td>
<td>.435</td>
<td>8.014</td>
</tr>
<tr>
<td>Self-Referencing</td>
<td>.042</td>
<td>.055</td>
<td>.041</td>
<td>.769</td>
</tr>
</tbody>
</table>
The results of the regression analysis for the overall model indicates that the predictors Credibility, Information, Pleasure, Materialism, Involvement and Self-Referencing match up with the consumer attitude towards online advertising explain 67.2% of the variance ($R^2=0.672$, $F(7,186)=64.46$, $p<0.01$), which according to Cohen(1998) is a large effect.

5.8.1. **Credibility and Consumers Attitude**

The hypothesis that Credibility has a positive relationship with customer’s attitude towards online advertising tested through Regression analysis. The results of the regression indicates that perceived Credibility characteristics explains 33.7% of the variance ($R^2=0.337$, $F(1,390)=95.113$, $p<.01$), the effect $\beta=0.45$, which according to Cohen(1998) is a large effect and we have failed to reject the hypothesis.

5.8.2. **Information and Consumer Attitude**

The hypothesis that Information has a positive relationship with customer’s attitude towards online advertising tested through Regression analysis. The results of the regression indicates that perceived Information characteristics explains 36.9% of the variance ($R^2=0.369$, Adjusted $R^2=0.421$, $P<0.01$, $F(1,186)=109.100$, $p<.01$), the effect $\beta=0.660$ shows that information has a significant affect on consumer attitudes towards online advertisements therefore we have failed to reject the hypothesis.

5.8.3. **Entertainment and Consumer Attitude**

The hypothesis that Pleasure has a positive relationship with customer’s attitude towards online advertising tested through Regression analysis. The results of the regression indicates that perceived Pleasure characteristics explains 23.9% of the variance ($R^2=0.239$, Adjusted $R^2=0.235$, $P<0.01$, $F(1,186)=57.677$, $p<.01$), the effect $\beta=0.509$ shows that Pleasure significantly affects Attitudes therefore we have failed to reject the hypothesis.

5.8.4. **Involvement and Consumer Attitude**

The hypothesis that Involvement has a positive relationship with customer’s attitude towards online advertising tested through Regression analysis. The results of the regression indicates that perceived Credibility characteristics explains 47.3% of the variance ($R^2=0.473$, Adjusted $R^2=0.470$, $P<0.01$, $F(1,186)=164.833$, $p<.01$), the effect $\beta=0.687$ shows that Involvement significantly affects Attitudes therefore we have failed to reject the hypothesis.
5.8.5. Self-Referencing and Consumer Attitude

The hypothesis that Self-Referencing has a positive relationship with customer’s attitude towards online advertising tested through Regression analysis. The results of the regression indicates that perceived Self-Referencing characteristics explains 23.9% of the variance (R²=0.239, Adjusted R²= 0.235, P<0.01, F(1,186) = 57.677, p<.01), the effect β= 0.489 shows that Self-Referencing significantly affects Attitudes therefore we have failed to reject the hypothesis.

5.8.6 Materialism and Consumer Attitude

The hypothesis that Materialism has a positive relationship with customer’s attitude towards online advertising tested through Regression analysis. The results of the regression indicates that perceived Materialism characteristics explains 33.0% of the variance (R²=0.330, Adjusted R²= 0.327, P<0.01, F(1,186) = 90.731, p<.01), the effect β= 0.575 shows that Materialism significantly affects Attitudes therefore we have failed to reject the hypothesis.

6. DISCUSSION AND CONCLUSION

In past reviews, numerous Researchers have discovered the impacts and the connections of Entertainment, Information, validity, involvement and self-referencing with the purchaser attitudes and perceptions towards online advertisements. Researchers in their reviews proposed about similar factors that they have a critical association with attitudes and perceptions toward advertisements. In addition, one researcher investigated that ‘useful for economy’ affects purchasers’ attitude towards advertising and online advertisements. Every one of the theories were reliable and relate with the past reviews done aside from one i.e. Data which was not observed to be measurably huge in our outcomes.

The speculation on the impact of Information in the advertisements message, on the consumer perception towards Online advertising and online advertisements was substantiated therefore the hypothesis cannot be rejected. The past reviews determined a noteworthy and solid connection amongst data and the attitudes and perceptions towards advertising and online advertisements. In this review it was also observed to be essentially related.

The theory that credibility has a positive impact on the customer attitudes and perceptions towards online advertising and online advertisements was substantiated and failed to reject the hypothesis. In addition to this, other studies like Tsang, Ho, and Liang (2004) also conclude that credibility has positive influence on the attitude of consumers towards advertising. The theory that entertainment has a positive impact on the customer attitudes and perceptions towards online advertising and online advertisements was substantiated and failed to reject the hypothesis. The theory that
self-referencing has a positive impact on the customer attitudes and perceptions towards online advertising and online advertisements was substantiated and failed to reject the hypothesis. The theory that materialism has a positive impact on the customer attitudes and perceptions towards online advertising and online advertisements was substantiated and failed to reject the hypothesis.

6.1. Implication for Managers and Policy Makers

This study found entertainment, information and creditability positively affect attitude towards Online Advertising. Thus, marketers while communicating their value proposition may consider incorporating these variables in their advertisements. Although in most of the cases, the makers must not incorporate this aspect, however, if attention and retention are the desired objective then irritation factor could be used in advertisements. This study and earlier studies found that entertainment aspect positively affects attitude towards advertising, however focusing too much on this aspect may confuse the consumer on the intended message.

6.2. Limitation and Future Research

This research was centered around the graduates and higher of Karachi. Future reviews could extend their degree to other statistic gatherings. Moreover, near reviews as far as ethnicity will bring further understanding on the issue. Factors, for example, indiscretion and habitualness could likewise be included future research. This paper is confined to online base advertising and advertisements. Future papers could be relative studies on Online and print topic promoting.

References


IMPACT OF ORGANIZATIONAL SUPPORT ON EXPERIENTIAL LEARNING AT PHARMACEUTICAL INDUSTRY OF PAKISTAN

Muhammad Sajjad Ahmed*  Rafique Ahmed Khan**  Asif Rehman***

ABSTRACT
The purpose of this research paper was to find out the impact of organizational support on experiential learning in pharmaceutical industry of Pakistan. It is believed that there is a lack of encouragement in providing experiential learning opportunities in third world countries including Pakistan. This could be due to lack of rational comprehension of managers about this rich learning phenomenon or it may be due to prevailing culture. The research is an explanatory in nature in which deductive approach was used. The primary data were collected with the help of a well-structured questionnaire. Systematic random sampling technique was used to approach 300 respondents from various companies. One sample t-test was applied for analyzing the data. In order to ascertain the general perception of respondents, mean and inferential analysis were applied. Degree of relationship of selected variables was checked through Pearson’s correlation test and impact of few independent variables on experiential learning was tested through regression analysis. Findings of the study have revealed that the organizational environment, role of line managers and HRD professionals’ support are not conducive to the learning on job. However two variables i.e. performance feedback and individual employee’s willingness to learn have been found to have significant impact on experiential learning whereas effect of remaining three variables was found insignificant. The findings of this research will help the organizations to understand importance of experiential learning. In addition, it will provide knowledge about various determinants which have varying degree of influence and have positively contributed towards experiential learning.

Keywords: Experiential Learning, Line Manager’s Support, HRD professionals’ Support, Performance Feedback, Employee Willingness

JEL Classification: M1, O15

1. INTRODUCTION
In the present business environment, knowledge based economy is the preferred approach that demands organizations to develop capacity to become learning organizations. Gaining such a learning capability is essential for economic growth and organizational prosperity. Researchers and academicians have always emphasized on improvement of competency gaps of human resource through imparting rational efforts in provisioning of organizational interventions in the true letter and spirit.¹ However, it has been observed by many researchers that most of the organizations, both public as well as private have distinct flaws in provision of experiential learning. The scenario becomes more adverse

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in case of developing countries where business organizations pay least attention toward the on job learning. One major reason behind it may be the lack of rational comprehension of managers about this rich learning determinant on account of social customs. Other determinants like lack of employees attention towards learning, unwillingness of line managers to train subordinates, cultural problems, proper assignment of HRD professionals, emphasis on outputs, unfavorable environment etc. have also been viewed in the literature. Highlighting importance of experiential learning, Armstrong mentioned that owing to experiential learning, employees learn while working which subsequently proves to be beneficial for the individual employees as well as the organization. Therefore, acknowledging the importance of highlighted aspects related to experiential learning and understanding its need with particular reference to Pakistan, this study is rationally needed to be conducted.

1.1 Problem Statement

Keeping competent workforce is dream of every organization. Training and development are the tools to keep employees’ skills up to date. Experiential learning is considered to be an effective tool to enhance employee skills. However, despite a lot of emphasis on experiential learning, many organizations fail to provide requisite support to their employees for getting hands-on experience. According to opinion of Lee, paying due attention towards experiential learning leads to improve capacity, practical skills and overall ability of employees to perform better. Through this study, an effort was made to identify the impact of organizational support on experiential learning at Pharmaceutical Industry of Pakistan.

1.2 Research Questions

Following questions have been answered in order to meet the objectives of study:

1. Whether the line managers contribute in imparting ‘on the job’ learning?
2. Do the HRD professionals provide support in affording experiential learning?

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3. Whether individual employees are willing for experimental learning?
4. Do organizations realize the importance of experimental learning?

1.3 Research Objectives

The aim of study was to evaluate whether experiential learning was being undertaken in the pharmaceutical industry of Pakistan or otherwise. Following were the main objectives of this study:

- To evaluate the environment of the industry in order to find out the extent to which it is supportive to the experiential learning.
- To determine the role of line managers in ‘on-the-job’ learning.
- To examine the influence of HRD professionals’ services, including coaching, mentoring, and performance feedback, on experiential learning.
- To assess the level of individual willingness to learn at the workplace.

2. LITERATURE REVIEW

2.1 Significance of Experiential Learning

Literature provides ample support in favor of adopting experiential learning. According to Bauer, experiential learning is referred to anything that is crucial for learning at workplace and which benefits individual learners and also the organization by improving its overall performance.7 He further mentioned that line managers’ guidance helps in managing employees’ perception and upgradation of their knowledge about job execution and career progression. It is worth mentioning that effectiveness of learning during ongoing work characteristically involves identification of compulsory support needed by the employees and taking into view the process that ensures the development of employees to cope up with the objectives of the organization and synchronize it to the individual.8 The role of line managers is so special that it is an effective way of providing a quality and affordable learning intervention to the subordinates.9 As mentioned by Mumford, flow of quality education through the line manager results in enhanced

performance of employees while having a system of evaluation of employees and accordingly making developmental plans which adequately improve the desired results and also prove helpful in creating a learning culture in the organization.\textsuperscript{10} Work ability of employee increases due to support of line manager in experiential learning which leads to their job satisfaction.\textsuperscript{11}

As emphasized by Prest, management should always display supportive attitude towards learning at workplace and pay attention to impart all necessary HRD interventions. In this regard timely feedback also has specific significance.\textsuperscript{12} Environment of inquiry is more useful for learning at workplace. As people freely talk to each other, feel happy and eager to ask questions and play with their own ideas, they achieve better results. So it is imperative for organizations to provide environment which is conducive to the experiential learning.\textsuperscript{13} Coaching is more important intervention for supporting employees’ learning. Supervisors and employees work with one another and discuss various problems. Coaching should occur on ‘need’ basis throughout the year and may be initiated by either the supervisor or the employee.\textsuperscript{14} They must understand that discussion on various issues leads to improvement in the overall learning process.\textsuperscript{15}

\subsection{Identification of Training and Development Needs}

According to Burke, training needs assessment provides a clear idea about the precise training requirement and readiness of organization and employees.\textsuperscript{16} The purpose of a training needs assessment is to recognize the gap between desired and the actual competencies of employees. It also determines the type of training that may help in filling the highlighted gap. At the same time, organization analysis provides evidences that to which extent and what type of

\begin{thebibliography}{100}
\item Prest, A, \textit{Training And Development}, (Unit 3: Msc and PG diploma in HRM & D), Institute for Development Policy and Management, University of Manchester, External Program. (2005), 83-94.
\item Seyed Mehd & Gholamreza, \textit{Quality of work life (QWL) and its Relationship with Performance}, (University of Firouzkouh Branch, Tehran), (2010), 563-584.
\item Burke, R. J, \textit{Nursing staff attitude following restructuring: the role of perceived organizational support, restructuring processes & stressors}. (International Journal of Sociology and Social Policy), 23(8-9), (2003), 129-157.
\end{thebibliography}
training for the individuals as well as groups of individual are required. Cautiously analyzing the key aspects of HR, the need for training can be evaluated.\textsuperscript{17} These critiques provide answer to following questions:

- Where are training and development needs?
- To be more productive, what knowledge is required for an employee to learn?
- Who will be responsible to impart desired training?

In this regard it could be feasible to make comprehensive assessment about the current status of company that how it runs the key operations and also the abilities of its employees to execute their assignments and tasks. This analysis is very significant as it sets standard against identification of competency gaps. Managers should discuss the needs for training and development once a year at least as part of the performance review and planning process. According to McKnight, analysis of competency gaps ought to focus on the total organization and point out the gray areas where training is genuinely needed. Based on the job activities, the training descriptions must go into the details about how the job is executed on task-by-task basis.\textsuperscript{18} The individual employees can only be evaluated by making comparison between their current performance as well as skill levels to the set standards of organization's performance and anticipated needs. Any inconsistency between actual and predictable skill echelon identify a need for training.\textsuperscript{19}

2.3 On–the–Job Training

On-the-job training is offered to employees while they perform their regular jobs. This serves a pro-time purpose, as there is no time loss while learning is in progress.\textsuperscript{20} After a plan is developed on what should be taught, employees should be informed of the details. A schedule should be mapped out, with periodic evaluations to keep employees updated on their state of progress. On-the-job training techniques include orientations, job instruction, apprenticeship, internship and assistantship, job rotation and coaching.\textsuperscript{21}

\textsuperscript{17} Jackson, D.W. and Sirianni N.J, \textit{Building the bottom line by developing the frontline: Career development for service employees}, (Business Horizons), Vol. 5, 279-287.

\textsuperscript{18} McKnight, M. A, \textit{Organizational support for training: The development and validation of the organizational training support inventory} (Doctoral dissertation, Southern Illinois University, (2005), 463-469.

\textsuperscript{19} Sabuncuoglu, E.T, \textit{Analyzing of the relationship between training, organizational commitment and intend to leave}, (Ege Academic Review), Vol. 7 No. 2, 613-628.


2.4 Significant Constituents of Experiential Learning

From the review of relevant literature, distinct constituents of experiential learning have been emerged, which need to be further discussed at length. The same are explained in a model given figure 1 and details are discussed in the ensuing paragraphs.

2.4.1 Organizational Environment

Experiential learning depends both on the individual employees and workplace scenario. Individuals should be given adequate freedom for self-organization of their own work and they may be provided supervision during ‘on the job’ training for better grooming.\(^{22}\) The learning of employees may not be beneficial if forcefully implemented. Hence enabling culture and environment of the workplace must be set in such a manner that it could be helpful to employees in fulfilling their desired learning objectives. It is significant to understand the reasons about establishing organizational traditions within an industry which facilitate or inhibit learning at the workplace.\(^{23}\)


According to Eisenberger, an effective experiential learning needs specific organizational environment owing to which opportunity is afforded for ‘on the job’ learning. Without enabling environment, it is not possible to ensure learning at workplace. Learning at workplace cannot be context free, rather it progresses in a real world scenario. On the job learning is the environment of discussion and inquiry. In such an environment, people feel free to share information with each other and display enthusiasm to ask questions.

The findings of Saks also endorsed the requirement for favorable workplace environment. He highlighted that experiential learning can be considered as a transaction between the learner and the environment that is why it gets progress in a favorable environment. Owing to the opportunity for employees to become more satisfied, environment will influence the experiential learning. Higher-order skills achievement requires risk-taking outlook, which is supportive for learning while doing day to day business at the workplace. Mumford pointed out that from a development perspective, flexibility at the workplace is genuine issue that must be tolerated for the progress of experiential learning in true letter and spirit. According to Fuller, adoptive environment and culture set up is significant challenge for organizations to groom the employees at the workplace which is useful in this regard.

2.4.2 Line Manager’s Support

Experiential learning, being a formal HRD tool, is influenced by a key factor, the line manager’s attitude and approach towards the development of the subordinates. Line manager, being a resource person, plays a key role in the learning process of subordinate employees. Line managers always pay attention towards achievement of production targets and have always least priority to groom the subordinates. This perception also creates hindrance in flow of knowledge.

from supervisor to subordinate. The jobs are overload with work, short-term deadlines, inadequate instruction skills, intrinsic conflict between managing and coaching supplementary make the learning critical. When attitude of the management gives priority to outputs and learning could be a by-product, then supervisors emphasize on the work not learning. First order and the second order choices related to management help explain the limits and distribution of the opportunities for sake of learning at the workplace. Managers also sense fear of their employment security if they are freely engaged with their subordinates in learning and development. According to Bakker, there are psych-social variables which determine the attitude of line managers and supervisors and the nature of the participating workforce that is richly associated with the learning at workplace. However, when suitably motivated, line managers can play a critical role in affording opportunity to subordinates for ‘on the job’ learning which is obviously in the best interest of organization.

2.4.3 HRD Professionals’ Support

According to changing architecture of organizations in the present era, a new approach to ‘on the job’ learning has emerged, hence the role of HRD experts in facilitation of the workplace learning has increased. Training professionals’ needs have shifted the employee grooming role from training to learning and they have focused promoting, guiding, enabling and supporting learning. HRD professionals have emerged as playing role from direct training to the broad based internal consultancy and they are also facilitating in problem-identification, making solutions and providing complete framework. Owing to decentralization and devolution of the learning and development responsibilities to line managers, the role of HRD professionals have become significant. A trainer being development facilitator needs to learn and pay focused attention on the process of learning and providing help to the managers in their learning

situations. It is necessary for the HRD professionals to be well versed with knowledge of working practices of management. They must know what in reality happens in the management and such knowledge is acquired through formal education. However, the HRD professionals can get a general know-how of the specific line functions. Hence the role of HRD professionals is quite different from the line managers. 

Having observed line managers in this perspective, it appears that most of them are not personnel experts; rather they need to get practical and professional support by the HRD professionals for better doing their job. Hence, a very important element of learning remains missing and owing to fear of losing their status in the organization, the HRD professionals are unable to play their due role in promotion of coaching employees in true letter and spirit.

2.4.4 Performance Feedback

Performance feedback is significant in evaluating employees’ efforts and learning. The periodic conduct of performance reviews from both line supervisors and employees provide true comprehension about learning needs and individual being a rational learner pays attention to improve the learning deficiencies. According to Mann, shared the same perspective and highlighted that due to the provision of feedback, coaching and mentoring services, the individual employee not only improves performance to execute day to day jobs but also takes rational decisions to learn to meet the futuristic assignments at higher positions. Timely receipt of feedback about employees’ performance, coaching to fill the competency gaps is not undertaken by the managers; this leads to lack of decision to select the desired way of learning, be it ‘on the job’ or ‘off the job.’

2.4.5 Individual Employee’s Willingness to Learn

With reference to experiential learning, self-development is very much linked to the individual employee. An individual can find better growth opportunities if he/ she is hungry to learn at the workplace and displays a matching

41 Prest, A, Training And Development, (Unit 3: Msc And Pgdiip In Hrm& D, Institute For Development Policy and Management), University Of Manchester, External Program, (2005), 83-94.
quest. However, when individual learner exercises self-control, his/ her learning is likely to be more effective. Malcolm pointed out that for the sake of effective ‘on the job’ learning, it is crucial that individual himself diagnoses learning needs, formulates learning goals, identifies resources for learning, chooses and implements appropriate learning strategies and evaluates learning outcomes. Allen, supported this point of view by highlighting that self-directed learning is not difficult for the employees. When learners set realistic learning goals for themselves, they can deal with any ambiguity involved in learning process. Better use of experiential learning is only feasible when learner is proactive, reflective and creative and has understanding about the learning opportunity. Self-directed attitude towards learning gathers more commitment than imposed by the organization. Taking initiative in designing ‘on the job’ learning and diagnosing learning needs bring the true commitment of the individual learner. Thus, learners make efforts to locate the true resources and evaluate the learning themselves. It is necessary that learners get confidence, motivation, and capability have sense of recognizing learning opportunities at workplace. This perspective has been supported by Aube, who mentioned that every individual is not capable to understand and execute learning needs. Thus organization ought to play its role in ensuring effectiveness of learning.

2.5 Theoretical Frame Work

The whole research study has been conducted on the basis of following theoretical frame work:

Fig. 2.2: Theoretical Framework

Research Hypotheses

$H_01$  There is no relationship between organizational environment and experiential learning.

$H_{a1}$  There is a positive relationship between organizational environment and experiential learning.

$H_{02}$  Line managers do not support the experiential learning.

$H_{a2}$  Line managers support the experiential learning.

$H_{03}$  HRD professionals’ support is not provided to employees for experiential learning.

$H_{a3}$  HRD professionals’ support is provided to employees for experiential learning.

$H_{04}$  Performance feedback is not conducive for experiential learning.

$H_{a4}$  Performance feedback is conducive for experiential learning.

$H_{05}$  Individual employee’s willingness has no relationship with experiential learning.

$H_{a5}$  Individual employee’s willingness has positive relationship with experiential learning.

3. RESEARCH METHODOLOGY

3.1 The Nature of Study

This study was descriptive in nature for which deductive approach was adopted. Descriptive study approach started with review of literature and all relevant variables interacting with the situation were extracted from the work of other researchers and academicians. Afterwards, the theoretical frame work was formulated in accordance with the literature insights. The entire study was dependent upon the theoretical framework. Then, hypotheses in lines with literature study, were made and afterwards the data was collected and analyzed.

3.2 The Target Population

The target population of this research study constituted all managerial level employees working in five selected companies of pharmaceutical industry. Total number of employees of target population was around 1850.

3.3 Sample Size and Sampling Technique

A sample of 300 respondents from five selected companies was chosen for data collection. As all pharmaceutical companies are operating at Karachi, the sample was collected from the said metropolis only. Owing to large number of employees working in the pharmaceutical industry, systematic random sampling technique was adopted. First, an exhaustive list of respondents was created, followed by selection of a beginning number. Later, an interval was estimated by using the given formula (population size of potential respondents / sample size) and finally developed a list based on the interval number.
SI = PS/ss

Where
“SI” is the sampling interval or skip,
“ss” is the sample size, and
“PS” is the population size.

3.4 Research Instrument

The research instrument used to collect quantitative data from the sample of respondents was a well-structured questionnaire. Hence using statistical tools, descriptive as well as inferential statistics have been conducted to reach at some conclusive understanding.

3.5 Questionnaire Design

Questionnaire consisted of two main parts - the ‘Demographic Part’ and ‘Questions Part’. First part provided profile of respondents whereas the second part contained question statements relevant to different variables. Option was given to answer each question by ticking on either of the five options, strongly agree, agree, neutral, disagree and strongly disagree.

3.6 Data Integration

The acquired quantitative data was integrated using SPSS software version 22. Tables have been drawn to display demographic/ inferential information. Whereas, one sample t-test has been conducted to test the difference between observed and expected proportion. In order to ascertain the general perception of respondents, mean analyses have also been made. Similarly, Regression analysis and Pearson Correlation tool were used to test the hypotheses.

4. DATA ANALYSIS

4.1 Demographic Results

Data collected from the respondents indicates that all 300 respondents replied to the questionnaire. There were 250 male respondents and 50 were females. Out of these, 35% were undergraduates and 65 % respondents were graduates.

Table 4.1: Respondents Profile

<table>
<thead>
<tr>
<th>Gender</th>
<th>Male</th>
<th>250</th>
<th>83%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>50</td>
<td>17%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education</th>
<th>Undergrads</th>
<th>195</th>
<th>65%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Graduates</td>
<td>105</td>
<td>35%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tenure (years)</th>
<th>&lt;10</th>
<th>180</th>
<th>60%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10 – 18</td>
<td>75</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;18</td>
<td>45</td>
<td>15%</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.1 shows that most of the respondents (83%) are male employees and majority of them are undergraduates. This is consistent as we have covered both upper level management and middle level management. Moreover tenure of majority of respondents of selected organizations is less than 10 years.

Table 4.2: One-Sample t-Test-Mean Analysis

<table>
<thead>
<tr>
<th>One-Sample Statistics</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Environment</td>
<td>300</td>
<td>2.9167</td>
<td>1.54413</td>
<td>.08915</td>
</tr>
<tr>
<td>Line Manager Support</td>
<td>300</td>
<td>2.8933</td>
<td>1.70047</td>
<td>.09818</td>
</tr>
<tr>
<td>HRD Professional Support</td>
<td>300</td>
<td>2.9300</td>
<td>1.54912</td>
<td>.08944</td>
</tr>
<tr>
<td>Performance Feedback</td>
<td>300</td>
<td>3.2267</td>
<td>1.36437</td>
<td>.07877</td>
</tr>
<tr>
<td>Individual Employee’s Willingness to Learn</td>
<td>300</td>
<td>3.2467</td>
<td>1.01781</td>
<td>.05876</td>
</tr>
<tr>
<td>Experiential Learning</td>
<td>300</td>
<td>2.8500</td>
<td>2.25784</td>
<td>.13036</td>
</tr>
</tbody>
</table>

In accordance with table 4.2 above, we can witness the general perception of employees who responded to the questionnaire. The data shows that four, out of six, variables come in the disagreement zone. Since, most (four) of the respondents opined in favor of the null hypothesis and rest (two) for the alternative hypothesis, it shows that respondents view organizational environment, role of line managers, experiential learning and HRD professionals’ support as not conducive to the learning on the job. The reason of this response (mistrust) could be the organization culture that prevails in the third world countries where there are a lot of hindrances present in the overall system; however two variables i.e. performance feedback and individual employee’s willingness to learn have been viewed as agreed by the respondents. Hence in this case, the null hypothesis is being rejected by the employees’ general opinion and alternative hypothesis is accepted. Here, we have classified the variables into two zones, the acceptance zone above the mean value 3 and the disagreement zone below the mean value of 3.

Table 4.3: One-Sample t-Test; Inferential Analysis

<table>
<thead>
<tr>
<th>One-Sample Test</th>
<th>Test Value = 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>t</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational Environment</td>
<td>- .935</td>
</tr>
<tr>
<td>Line Manager Support</td>
<td>-1.086</td>
</tr>
<tr>
<td>HRD Professional Support</td>
<td>-.783</td>
</tr>
<tr>
<td>Performance Feedback</td>
<td>2.878</td>
</tr>
<tr>
<td>Employee’s Willingness to Learn</td>
<td>4.198</td>
</tr>
<tr>
<td>Experiential Learning</td>
<td>-1.151</td>
</tr>
</tbody>
</table>
One sample t-test was run using the SPSS 22 software to make the inferential statistics regarding the data collected from the respondents. Table 4.3 shows test value of 3 which indicates that population mean response is indifferent. The results of the test as given in the table indicate that since p-values of the hypotheses H₄ and H₅ are 0.004 and 0.000 which are less than the p value of 0.05, it means that alternative hypotheses of both the variables are accepted. Hence, in case of these two variables respondent’s response is significantly different from the population mean value of three. Also since the mean response value of the two variables i.e. performance feedback and Employee’s Willingness to learn is positive and more than three, indicating that respondents believe that Performance feedback and Employee’s willingness to Learn have significant impact over experiential learning.

The table also shows that at 95% confidence interval population mean value (3) assumed here will be in the range of between 3.0716 and 3.3623 for “performance feedback” while the other variable “Employee’s willingness to learn” will range from at least 3.1310 to at most 3.3623. At 95% confidence levels all the remaining hypotheses are rejected.

As can be seen in Table 4.4, all the independent variables are not highly correlated with each other; it indicates absence of multicolinearity. The table also shows that four independent variables organizational environment, line manager support, HRD professional support and individual employee’s willingness to learn have weak positive correlation with experiential learning whereas performance feedback has weak negative correlation with experiential learning. It indicates that association between performance feedback and experiential learning is negative but significant.
4.4 Regression Test

Model summary in table 4.5 indicates that the value of $R^2$ is 0.025 which indicates that the regression line between the dependent and independent variables is not so strong and not integrated truly with the correlation points.

**Table 4.5: Coefficients**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>2.812</td>
<td>.645</td>
<td>4.360</td>
<td>.000</td>
</tr>
<tr>
<td>Organizational Environment (X1)</td>
<td>.130</td>
<td>.086</td>
<td>.089</td>
<td>1.514</td>
</tr>
<tr>
<td>Line Manager Support (X2)</td>
<td>.031</td>
<td>.077</td>
<td>.023</td>
<td>.396</td>
</tr>
<tr>
<td>HRD Professional Support (X3)</td>
<td>.035</td>
<td>.086</td>
<td>.024</td>
<td>.412</td>
</tr>
<tr>
<td>Performance Feedback, Coaching &amp; Mentoring (X4)</td>
<td>.205</td>
<td>.096</td>
<td>.124</td>
<td>2.124</td>
</tr>
<tr>
<td>Individual Employee’s Willingness to Learn (X5)</td>
<td>.039</td>
<td>.130</td>
<td>.018</td>
<td>.304</td>
</tr>
</tbody>
</table>

**Table 4.6: Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.158*</td>
<td>0.025</td>
<td>0.008</td>
<td>2.24830</td>
</tr>
</tbody>
</table>

*Dependent Variable: Experiential Learning

4.5 Regression Model

The regression equation emerged in table 4.6 indicates that one unit of first independent variable $X_1$ is contributing 0.13 to dependent variable the experiential learning, one unit of second independent variables $X_2$ is contributing in the model to experiential learning 0.031, $X_3$, one unit of the third independent variable is contributing 0.035 to dependent variable, one unit of $X_4$ independent variable is sharing 0.205 to experiential learning and one unit of $X_5$ independent variable is contributing 0.039 to experiential learning. Hence, using this model we can find out what will the amount of dependent variable at any amount/ units of any independent variable.

$$Y = 2.812 + 0.13X_1 + 0.031X_2 + 0.035X_3 + 0.205X_4 + 0.039X_5$$

Where,

$Y = $ Experiential Learning (Dependent variable)

$X_1 = $ Organizational Environment (Independent variable1)

$X_2 = $ Line Managers’ Support (Independent variable2)

$X_3 = $ HRD Professional Support (Independent variable3)

$X_4 = $ Performance Feedback, Coaching & Mentoring (Independent variable4)

$X_5 = $ Individual Employee’s Willingness to Learn (Independent variable5)
5. DISCUSSION

Test of significance revealed that respondent’s in the pharmaceutical industry do not believe that the organizational environment has any significant impact on experiential learning. In other words it is clear that respondents have shared that experiential learning is not being prevailed due to organizational favorable environment. The literature suggests that experiential learning gets progress when there is favorable environment in an organization while this result of the study is very much in contradiction with the view of the researchers.

In case of ‘line manager support’, p-values of all tests indicate that relationship between the line manager support and experiential learning is not significant. Literature, reveals that line managers play gatekeeper role and when this support is not provided in the true letter and spirit, subordinate lacks in getting valuable knowledge. The same case is here, it proved from the data critiques that line managers are not playing their role to groom the subordinates. According to (Mann 1992), in respect of the provision of learning line manager role is always seen as gatekeeper. When the line managers are committed towards the learning of subordinates, learning prevails at the workplace in the true letter and spirit. Conversely, the traditional negate role of line managers create hindrance in progressing on the job learning. Line managers mostly play negative role and keep the gate shut for learning (Walton 1999) which is the richest opportunity for experiential learning from the work opportunities. And learners mostly get de-motivated. Sometimes line managers have traditional attitude and they think that when they have never been supported by the line managers for learning why they take responsibility to groom their subordinates. Here the result is too much synonymous to this perspective. The line managers are not supporting their subordinates for experiential learning and this missing role of line managers in the pharmaceutical industry is a great question mark for the policy makers/management.

The p-value is greater than acceptance region of 0.05. The data has failed to reject the null hypothesis. Thus the alternative hypothesis is not accepted. It is obvious here that most of the respondents have opined that there is no HRD professionals support for promotion of experiential learning in the pharmaceutical industry of Pakistan. The literature study reveal that HRD professional being resource people can play significant role in grooming the employee at the workplace. When the role of these professionals is missing the experiential learning cannot be taken place in the true spirit and most of the time this new element witnessed missing in many industries. Literature study further states that line manager are not personnel experts, rather they are in need to get practical and professional support by the HRD professional and hence do their job well. The focus of experiential learning in the recent era through doing
threatens the traditional trainers, the line managers. Hence owing to fear of losing their status in the organization the HRD people are unable to play their due role in the promotion of coaching the employees in the true letter and spirit. The result is very much similar to the literature in this study too.

The p-value of significant test indicates that performance feedback present in the industry has a significant impact on experiential learning. Owing to 0.004 p value the null hypothesis has been rejected and the alternative hypothesis has been agreed on. It means most of the respondents have viewed that experiential learning is being influenced by performance feedback. The result is in line with the findings of the previous research in this area. Deficiencies of learning need to be continuously upgraded in order to cater the routine as well as related to changing needs of the organization. It appears that even sometimes organizations give feedback to employee for the sake of performance upgradation which becomes beneficial for them to learn at workplace also. In this study the presence of this variable advocates that there is a significant relationship between performance feedback, coaching and mentoring and experiential learning. Hence the result is in accordance with literature perspective.

All the tests conducted to establish association or relationship between individual employee’s willingness to learn and experimental learning show positive significant results, while result of T-test reveals that the respondents have mostly accepted that individual employees are willing to learn during execution of their job activities. Researchers have highlighted that individual willingness is significant in learning process. Hence the presence of individual willingness in the pharmaceutical industry is a great strength.

The overall scenario of experiential learning in the industry is not satisfactory, but still the individuals are willing to learn at the workplace. From the test of other workplace affordances it is obvious that organizational side is weak in provision of suitable environment, line managers’ support and also the HRD professionals. Therefore the management and decision makers must pay attention towards the weak areas. Hence the individual willingness to learn may also prove more beneficial for experiential learning.

6. **CONCLUSION**

The outcome of the study does not paint a rosy picture regarding the experiential learning at the pharmaceutical industry of Pakistan. Five independent variables were empirically tested to ascertain whether they are being undertaken in the true letter and spirit for promotion of experiential learning or otherwise. The result revealed that three variables are not contributing significantly towards the ‘on the job’ learning of employees whereas two variables have significant relationship with the dependent variable. Organizational environment, line managers’ role and HRD
professionals’ support are key workplace affordances which are provided by the organization for promotion of experiential learning among the employees. All these variables witnessed as insignificant from this study. Performance feedback, coaching & mentoring which is mostly related to the performance enhancement, however, proves to be significant. Similarly, individual employee’s willingness to learn is also significant which indicate the positive commitment of the employees towards learning at the workplace.

7. **RECOMMENDATIONS**

On the basis of weaknesses observed during analysis, following are the recommendations:

- Pharmaceutical industry must pay attention to create such environment which is conducive to the learning at workplace.
- For the promotion of experiential learning in the pharmaceutical industry, top management must pay attention to improve the line managers’ role to a greater extent.
- HRD professionals should also play their significant role in improvement of experiential learning of employees and provide all out support to the employees.

8. **SUGGESTIONS FOR FUTURE RESEARCH**

Instead of making replication of variables in any industry merely on the basis of literature review of experiential learning area, both quantitative as well as qualitative approaches may be utilized simultaneously in further research. In this way it may be feasible to further explore the determinants of experiential learning that may be playing significant role in the Pakistani context. It may be explored in a further research study that why experiential learning is not being given importance in pharmaceutical industry, despite the fact that it has significant role in grooming employees. A similar research may be undertaken for other industries.

**References:**


MACROECONOMIC VARIABLES AND STOCK MARKET LIQUIDITY: THE CASE OF PAKISTAN STOCK EXCHANGE

Kiran Jameel*  Sadaf Abdul Hayee**

ABSTRACT
Stock markets are significant channel for escalating economic growth and a flourishing financial sector of a country. Numerous research studies have been investigated on the causal relationship between macro-economic indicators and stock market Liquidity. But with reference in Pakistan, only few studies can be traced in literature. The aim of this research study is to scrutinize the causal relationship between macro-economic indicators and stock market liquidity in Pakistan. The 26 years’ Time series data from 1990 to 2016 have been used to investigate the relationship between various macro-economic indicators and stock market liquidity in Pakistan. The, exchange rate, inflation, Interest rate and industrial production growth rate represent Macro-economic indicators whereas the stock market liquidity have been signified by the Stock Market turnover of the Pakistan Stock Exchange. The result has been found through E-view 9 statistical software. There are statistical techniques; Augmented Dickey Fuller test, Johansen’s co-integration and Granger’s causality test employed to check either the data is stationary or non-stationary and to find relationship between these macro-economic variables on Stock Market liquidity position in Pakistan. This study concluded that only industrial production growth rate and Interest Rate have co-integration with stock liquidity at 5% level of significance. However, exchange rate and inflation rate are shown no co-integrated with stock market liquidity in Pakistan. Hence, the two macroeconomic indicators namely IPGR and INT have a long run association with Stock market liquidity in Pakistan While, the other macroeconomic indicators INF and EX have no long run association with Stock liquidity.

Keywords: Financial Markets, Stock Market Liquidity, Macroeconomics and Time Series Data.
JEL Classification: E43, E44, C22, C58.

1. INTRODUCTION

Financial sector is a pivotal growth enhancing channel for a country and stock exchange is an essential ingredient of a financial sector. Stock markets can act as an important catalyst for promoting economic growth of a country. An efficient stock market is crucial for economic growth. Development of stock markets significantly affect the economic growth of Pakistan.¹ A well-developed stock market can enhance the economic growth in long run.²

Three stock exchanges are functioning in Pakistan, namely: Karachi, Islamabad and Lahore Stock exchange. Karachi stock exchange is the biggest of three and is escalating the economy by providing investment opportunities for local as well as for the foreign investors. Hence, stock exchange can push the economy by acting as a source of capital formation.³

For trading systems and stock exchanges, liquidity is important. Liquidity is essential for attracting order flow and listings. A market is considered as liquid, if the traders can buy or sell shares quickly in large amount without influencing the price.4

Stock market liquidity is mainly an evidence of its efficiency. Illiquidity in markets is a symptom of inadequate market functioning which can lead to a financial crisis. Measurement of liquidity is an important question need to be answered. Four dimensions are important in this respect. (1) Trading Time – the ability of executing a transaction immediately at prevailing price. (2) Tightness – buying or selling an asset at same time and same price. (3) Depth – the ability of buying and selling a certain amount of an asset without influencing the quoted price. (4) Resiliency – The ability of buying and selling a certain amount of an asset with least effect on quoted price.

Performance of stock markets in Pakistan is affected by political, economic and legal factors. Policies of central bank influence the liquidity of stock markets. Macroeconomic policies may also affect the stock exchanges in Pakistan. Studies suggest that macroeconomic indicators are responsible for stock market movements.

The purpose of this paper is to explore the impact of macroeconomic variables on stock exchange liquidity in Pakistan. The paper is organized in six sections. Section 1 consist of Introduction or Background of this research study. Section 2 is described the performance of Karachi stock Exchange. Section 3 comprises of literature review. Section 4 contains methodology and modeling framework. Results and conclusion are represented in Section 5 and 6 respectively.

1.1 Research Question

How dynamics of stock market liquidity can be inquired by macroeconomic determinants?

1.2 Research Objective

The aim of this research study is to scrutinize the causal relationship between macro-economic indicators and stock market liquidity in Pakistan. The 26 years’ Time series data from 1990 to 2016 have been used to investigate the relationship between various macro-economic indicators and stock market liquidity in Pakistan. The, exchange rate, inflation, Interest rate and industrial production growth rate represent Macro-economic indicators whereas the stock market liquidity have been signified by the Stock Market turnover of the Pakistan Stock Exchange.

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2. PERFORMANCE OF KARACHI STOCK EXCHANGE

There are three stock markets namely Karachi stock exchange, Lahore stock exchange and Islamabad stock exchange operated in Pakistan. KSE is the largest stock market among them according to market capitalization and share price.

Karachi stock exchange is the largest and most liquid exchange of Pakistan established on September 18, 1949. It has been declared as the “Best performing Stock market of the world” in 2002 by Business Week. There are 602 companies listed on KSE with a market capitalization of Rs.5.22 trillion.5

Foreign interest in KSE was very active till 2007. Fluctuations were seen from beginning of 2007. Karachi stock exchange has shown a rapid growth in last two decades. In 2015, The KSE was listed Among 10 Best stock Markets in the World in the year of 2015.6 According to the Bloomberg, The KSE was the Third Best Performer Market since 2009.7 In January 2016, the all three Stock markets in Pakistan ware integrated as Pakistan Stock Exchange. Now, January 26, 2016, there are 558 companies listed in PSX and the total market capitalization is $95billion.8

3. LITERATURE REVIEW

Several studies have taken place previously to explore different aspects of stock markets. The research studies of have discussed the casual relationship between stock liquidity and macroeconomic indicators regarding Pakistan.9 10 11 Though these studies have also found dissimilar results. This study consists of most recent data to analyze the casual association between Stock liquidity and macro-economic indicators in Pakistan.

The study of investigated the impact of stock market development on economic growth for Pakistan and Bangladesh. They found that the stock exchanges of both countries have positive significant effect on economic growth.12 Market capitalization is also having strong influence on Pakistan’s economic growth. The examined the influence of stock market

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6 Hourdel, Katharine. 10 April 2013.
7 Bloomberg. 2015. "What’s Next For Asia’s Best-Performing Stock Market?"
development on economic growth of Nigeria.\textsuperscript{13} The findings showed that stock market liquidity influence the economic growth positively. The results further reflected that the size of market is not significant for the economic growth.

The research of studied the macroeconomic determinants of stock market performance in Pakistan.\textsuperscript{14} The results reflect positive effects of FDI and value-added trade on stock market performance. Banking sector development was found insignificant. The study of examined the macroeconomic and institutional determinants of stock markets. The study analyzed a panel data of 42 emerging economies.\textsuperscript{15} The findings suggest law & order, political risk and bureaucratic quality as important determinants of stock market development.

The impact of macroeconomic variables on stock exchange of Amman and found positive significant influence of money supply, total value traded, gross capital formation, CPI and credit to private sector.\textsuperscript{16} They found negative impact of Nominal Gross Domestic Product and Net Remittances on stock market development.

The research of investigating the impact of domestic macroeconomic variables and world stock market on the domestic financial markets of ASEAN nations.\textsuperscript{17} The results reflect that economic growth, interest rate and exchange rates affect the domestic financial markets of these countries significantly influence the domestic financial markets.

Studying the situation of liquidity at Karachi stock exchange.\textsuperscript{18} By using liquidity analysis, turnover ratio and size of market as liquidity determinants they concluded that stock market was less liquid during 1985 – 2006. Karachi stock market is still lagging in liquidity and hence isn’t efficient enough to attract investors.

Furthermore, the impact of macroeconomic variables on stock exchange prices, oil prices, terms of trade, rate of interest, industrial production index and money supply were co-integrated with stock exchange of USA, Japan and China.\textsuperscript{19} The findings suggest that interest rate, industrial production index and money supply are positively related to stock exchange of China and USA both in long and short run. Money supply in Japan has positive impact in long run while in


\textsuperscript{14} Zafar, Mehwish. 2013. "Determinants of Stock market performance in Pakistan." \textit{IJC\textsuperscript{R}B Vol. 4, No. 9, 2013}.


short run it has negative effect on stock exchange. Interest rate in Japan positively and highly significant in long run and industrial production index has insignificant but positive relation with stock exchange prices.

Moreover, the stock prices and exchange rate relationship on India, Pakistan, Bangladesh and Sri Lanka. It concluded that there exists no long run relationship between stock prices and exchange rate for India and Pakistan while bi-directional relation exists in Srilanka and Bangladesh. No short run relation was found in short run in all four South Asian countries. A Research investigated the impact of inflation on Egyptian stock market performance. The results reflect significant impact of inflation on stock market performance both in long and short run.

The relation between stock market volatility and real, nominal macroeconomic volatility, financial leverage and economic activity was also analyzed that stock exchange was highly volatile during Great Depression. Significant correlation between leverage and stock exchange volatility was found.

4. METHODOLOGY

The Core purpose of this study is to analysis the effects of Macro-economic indicators on Stock market liquidity in Pakistan. This study acquires annul secondary data from the Statistical Bulletins of State Bank of Pakistan and Economic Surveys. The study Covered a period of 26 years of data ranging from 1990 to 2015. Exchange rate, Industrial Production Growth rate, Interest rate and inflation are taken as Macro-economic indicators. To measure the stock liquidity, Stock Turnover of Karachi Stock Exchange are taken as Proxy.

4.1. Research Techniques:

To achieve research objective of this study, Firstly Descriptive statistics was conducted to check the descriptive analysis of these variables. After that Unit Root Test (Augmented Dickey Fuller test) was applied to check either the data was stationary or non-stationary. Granger Causality test and Johansen’s Co-integration techniques are used to measure the impact of above mentioned explanatory variables on Stock Market Liquidity in Pakistan. Furthermore, to check the co-integration between the variables, The Johnsen’s co-integration technique was used. In the end, the Granger Causality test

was used to scrutinize the contributing relationship between the Macro-economic indicators and stock market liquidity in Pakistan stock Exchange. All the statistical analysis for this study is occupied from E-Views Software 9.

4.2 Model Estimation

Where:

\( SLQ = \text{Stock Market Liquidity} \)
\( EX = \text{Exchange rate} \)
\( INT = \text{Interest Rate} \)
\( INF = \text{Inflation} \)
\( IPGR = \text{Industrial Production Growth Rate} \)

5. RESULT ESTIMATION

5.1 Descriptive Analysis

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>SLQ</th>
<th>EX</th>
<th>IPGR</th>
<th>INT</th>
<th>INF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>6475.98</td>
<td>57.41</td>
<td>4.47</td>
<td>6.16</td>
<td>244.06</td>
</tr>
<tr>
<td>Median</td>
<td>3353.30</td>
<td>58.46</td>
<td>3.55</td>
<td>6.38</td>
<td>234.20</td>
</tr>
<tr>
<td>Maximum</td>
<td>40194.80</td>
<td>102.85</td>
<td>13.10</td>
<td>10.66</td>
<td>439.43</td>
</tr>
<tr>
<td>Minimum</td>
<td>742.56</td>
<td>21.44</td>
<td>-1.90</td>
<td>1.32</td>
<td>100.00</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>9454.85</td>
<td>25.28</td>
<td>3.11</td>
<td>2.31</td>
<td>104.72</td>
</tr>
<tr>
<td>Skewness</td>
<td>2.405</td>
<td>0.29</td>
<td>0.85</td>
<td>-0.48</td>
<td>0.214</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>8.128</td>
<td>2.03</td>
<td>4.12</td>
<td>2.69</td>
<td>1.80</td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>53.55</td>
<td>1.37</td>
<td>4.51</td>
<td>1.13</td>
<td>1.753</td>
</tr>
<tr>
<td>Probability</td>
<td>0.00</td>
<td>0.50</td>
<td>0.10</td>
<td>0.566</td>
<td>0.41</td>
</tr>
<tr>
<td>Sum</td>
<td>168375.6</td>
<td>1492.86</td>
<td>116.30</td>
<td>160.38</td>
<td>6345.78</td>
</tr>
<tr>
<td>Sum Sq.Dev.</td>
<td>2.23E15980.13</td>
<td>242.45</td>
<td>133.67</td>
<td>274199.2</td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>26</td>
<td>26</td>
<td>26</td>
<td>26</td>
<td>26</td>
</tr>
</tbody>
</table>

The above-mentioned Table I represent the result of descriptive statistical analysis of specific explanatory and response variables in this study. The result quantified that stock liquidity has the mean of Rs. 6,476. During the study period, the range of Stock liquidity in Pakistan was Rs. 742 to 40,195 with standard deviation of Rs. 9454. The Exchange Rate has mean Rs. 57.4. The range was between Rs. 21.4 to Rs. 102.8 with standard deviation 25.2. Furthermore, Industrial production growth rate has mean 4.4% was Rs. 742 to 40,195 with standard deviation of Rs. 9454. The Exchange Rate has mean Rs. 57.4. The range was between -1.90% to 13.1% with standard deviation 3.1%. The mean of inflation and interest rate were Rs. 244 and 6.1% with standard deviation Rs. 104.7 and 2.3% respectively.
5.2 Augmented Dicky Fuller Test

To investigate the stationarity of this time series data set, the Augmented Dickey Fuller test was applied. The given below Table II showed the result of ADF test which is originated from E-View Software. According to result, the all variables are stationary at 1st difference level with intercept test equation. The Critical value are restrained at 5% level of confidence.

![Table 5.3: Stationarity Table (ADF Test)]

<table>
<thead>
<tr>
<th>Variables</th>
<th>Critical Value At 5%</th>
<th>ADF Test Statistics</th>
<th>Probability</th>
<th>Result</th>
<th>Critical Value Less than 5%</th>
<th>ADF Test Statistics</th>
<th>Probability</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLQ</td>
<td>-2.98</td>
<td>-2.33</td>
<td>0.17</td>
<td>Non-Stationary</td>
<td>-2.99</td>
<td>-5.22</td>
<td>0.003</td>
<td>Stationary</td>
</tr>
<tr>
<td>EX</td>
<td>-2.98</td>
<td>0.35</td>
<td>0.97</td>
<td>Non-Stationary</td>
<td>-2.99</td>
<td>-4.10</td>
<td>0.004</td>
<td>Stationary</td>
</tr>
<tr>
<td>IPGR</td>
<td>-2.98</td>
<td>-2.46</td>
<td>0.13</td>
<td>Non-Stationary</td>
<td>-2.99</td>
<td>-6.30</td>
<td>0.000</td>
<td>Stationary</td>
</tr>
<tr>
<td>INT</td>
<td>-2.99</td>
<td>-1.2</td>
<td>0.62</td>
<td>Non-Stationary</td>
<td>-2.99</td>
<td>-4.10</td>
<td>0.004</td>
<td>Stationary</td>
</tr>
<tr>
<td>INF</td>
<td>-2.98</td>
<td>-1.6</td>
<td>0.45</td>
<td>Non-Stationary</td>
<td>-2.99</td>
<td>-4.6</td>
<td>0.0011</td>
<td>Stationary</td>
</tr>
</tbody>
</table>

![Table 5.3: Johansen CO-Integration Test]

<table>
<thead>
<tr>
<th>Variables</th>
<th>Eigen Value</th>
<th>Trace Statistics</th>
<th>Critical Value 5%</th>
<th>Probability</th>
<th>Hypothesized No. of CE(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPGR</td>
<td>0.851</td>
<td>98.05</td>
<td>69.8</td>
<td>0.001</td>
<td>None*</td>
</tr>
<tr>
<td>INT</td>
<td>0.696</td>
<td>52.31</td>
<td>47.8</td>
<td>1.018</td>
<td>At most 1*</td>
</tr>
<tr>
<td>INF</td>
<td>0.467</td>
<td>23.72</td>
<td>29.79</td>
<td>0.212</td>
<td>At most 2</td>
</tr>
<tr>
<td>EX</td>
<td>0.301</td>
<td>8.61</td>
<td>15.49</td>
<td>0.402</td>
<td>At most 3</td>
</tr>
<tr>
<td>SLQ</td>
<td>7.57</td>
<td>0.0018</td>
<td>3.8</td>
<td>0.963</td>
<td>At most 4</td>
</tr>
</tbody>
</table>

* Means rejection of Null hypothesis at 5% level of significance

5.3 Johansen CO-Integration Analysis

The above-mentioned literature suggests that if the times series data is stationary at 1st difference level, the researcher ought to analyze result with Co-integration analysis. The Co-integration analysis basically used to gauge the connection between the variables at long run. According to the research methodology of this paper, the Johansen approach is appropriate because it is an approach to measure the long run relationship between more than two variables. Thus, this study has been used Johansen Co-integration technique. According to result of this test the researcher found that only industrial production growth rate and Interest Rate have co-integration with stock liquidity at 5% level of significance.
However, exchange rate and inflation rate are shown no co-integrated with stock market liquidity in Pakistan. Hence, the two macroeconomic indicators namely IPGR and INT have a long run association with Stock market liquidity in Pakistan. While, the other macroeconomic indicators INF and EX have no long run association with Stock liquidity. Although the study of found in their study that inflation has also positively co-integrated with stock market liquidity. 23

5.4 Granger Causality Test

The Granger causality model is basically examined the causativeness between the two variables in time series data. This model is estimated by Clive Granger in 1969. The Regression analysis simply scrutinize the Correlation among the variables but this model, has capacity to forecast the future value of one-time series by using previous value of other time series. 24

The Table IV in this study represent the analysis of Granger Causality Test. The probability result between both is 0.0006. This result suggested that there is a Granger Causality between Stock liquidity and Exchange rate in Pakistan. There is no Granger Causality between Stock liquidity and Inflation rate. Furthermore, there is no Granger causality between Stock liquidity and Interest rate in Pakistan. Moreover, there is Granger Causality occur in Stock liquidity and Industrial Production Growth Rate in Pakistan. The study investigated causal relationship between macro-economic variables and stock market price during the period of 2005-2008. 25 The study was concluded that Exchange rate and Industrial production growth rate have Causal association with stock market in Pakistan during the period of 2005-2008. The difference between these findings is that during the period of 2003-2008, the stock market capitalization, share price and 100 index volumes were at peak as it is before. The economic indicators were not showed significant improvements as camper to the stock market boom. And the industrial growth was also stagnant at that time. The study of also conclude the same results. 26

Table 5.4: Granger Causality Test

<table>
<thead>
<tr>
<th>Pairwise Granger Causality Tests</th>
<th>Date: 03/30/17  Time: 18:16</th>
<th>Sample: 1990 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Null Hypothesis:</td>
<td>Obs.</td>
<td>F-Statistic</td>
</tr>
<tr>
<td>SLQ does not Granger Cause EX</td>
<td>24</td>
<td>11.3391</td>
</tr>
<tr>
<td>EX does not Granger Cause SLQ</td>
<td>0.7306</td>
<td>0.4935</td>
</tr>
<tr>
<td>SLQ does not Granger Cause INF</td>
<td>24</td>
<td>0.10403</td>
</tr>
<tr>
<td>INF does not Granger Cause SLQ</td>
<td>0.82560</td>
<td>0.4531</td>
</tr>
<tr>
<td>SLQ does not Granger Cause INT</td>
<td>24</td>
<td>2.84867</td>
</tr>
<tr>
<td>INT does not Granger Cause SLQ</td>
<td>6.05686</td>
<td>0.0092</td>
</tr>
<tr>
<td>SLQ does not Granger Cause IPGR</td>
<td>24</td>
<td>8.39854</td>
</tr>
</tbody>
</table>

6. CONCLUSION AND IMPLICATIONS

The aim of this research study is to scrutinize the causal relationship between macro-economic indicators and stock market liquidity in Pakistan. The 26 years’ Time series data from 1990 to 2016 have been used to investigate the relationship between various macro-economic indicators and stock market liquidity in Pakistan. The, exchange rate, inflation, Interest rate and industrial production growth rate represent Macro-economic indicators whereas the stock market liquidity have been signified by the Stock Market turnover of the Pakistan Stock Exchange. There are statistical techniques; Augmented Dickey Fuller test, Johansen’s co-integration and Granger’s causality test employed to check either the data is stationary or non-stationary and to find relationship between these macro-economic variables on Stock Market liquidity position in Pakistan. This study concluded that only industrial production growth rate and Interest Rate have co-integration with stock liquidity at 5% level of significance. However, exchange rate and inflation rate are shown no co-integrated with stock market liquidity in Pakistan. Hence, the two macroeconomic indicators namely IPGR and INT have a long run association with Stock market liquidity in Pakistan While, the other macroeconomic indicators INF and EX have no long run association with Stock liquidity.

The research study concluded that there is no Granger Causality between Stock liquidity and Inflation rate. Furthermore, there is no Granger causality between Stock liquidity and Interest rate in Pakistan. Moreover, there is Granger Causality occur in Stock liquidity and Industrial Production Growth Rate in Pakistan.

Although the study of Ali (2010) found in their study that inflation has also positively co-integrated with stock market liquidity. Based on result findings, the study conclude that Pakistan Stock Exchange liquidity position do not have causal
associated with all macro-economic indicators. Hence, there are others market indicators like market efficiency, economic condition of the country, low lending rate and well-organized recovery of outstanding loans of financial sector, payment of foreign debts, positive FDI inflows and favorable policies for investment environment in the country laid positive impact on Stock market liquidity in Pakistan.

References

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Houreld, Katharine. 10 April 2013.
IMPACT OF TANGIBLE AND INTANGIBLE REWARDS ON EMPLOYEES’ JOB SATISFACTION

Zahid Ali Channar*  Fayza Shah**

ABSTRACT
The purpose of this research is to assess the level of tangible and intangible rewards in public and private sector banks and then to find the impact of those rewards on employee job satisfaction. The primary data was collected through structured questionnaire. Stratified sampling method of probability sampling technique is used to collect data from 240 samples. Samples were divided into three groups: top management, middle and lower management of the banks. The aspects measured are: Tangible Rewards, Intangible rewards, and employee satisfaction. Data was analyzed through Independent Sample T-test, Correlation & Two-way ANOVA. Findings showed that Intangible rewards increase job satisfaction more than the tangible rewards. Females are provided more tangible and intangible rewards as compared to males in the public-sector banks of the Hyderabad District. Males are provided more tangible and intangible rewards as compared to females in the private sector banks of the Hyderabad District. Females are more satisfied in the public-sector banks as compared to males. Males are more satisfied in the private sector banks as compared to females. This research disinters the knowledge on the impact of tangible & intangible rewards on employees’ job satisfaction.

Keywords: Tangible rewards, Intangible rewards, Job Satisfaction.
JEL Classification: J28

1. INTRODUCTION

Human resource is the most important resource among all the resources that the company has. Employee satisfaction is one of the most important aspects of human resource management.1 Employee commitment and their motivation is very essential for a company to be successful. The workers who are highly motivated work more efficiently towards the accomplishment of the organizational goals and objectives.2 So, a company needs to be well aware of what motivates and satisfies their employees in order to make most out of them and to get better results. A satisfied worker will be highly motivated to perform and will put more of his endeavors in order to achieve the goals, however it is not necessary that what motivates one employee will motivate the other employee as well.3 The organizations today have realized the importance of keeping a balance between the employee’s contribution to the organization and the organization’s contribution to the employee. Today the organizations have realized the importance of job satisfaction and they know that

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the employees should be given respect if they want to make most out of them. Motivation, satisfaction and employee commitment are the prime aspects of all the organizations today. The reward system plays a vital role in motivating the employees and improving their performance. Motivation can either be extrinsic and intrinsic. Intrinsic motivation is the one that you get from the work itself for example; recognition, status, opportunities for career growth and development, trainings etc. Extrinsic motivation is the tangible motivation that motivates the employees such as; pay, bonuses, rewards, incentives, promotion etc. Intrinsic motivation has a long term impact whereas the case is totally opposite in extrinsic motivation. Motivation consists of different variables that play a huge impact on employee job satisfaction. These variables are divided into three categories namely; Characteristics of the individual, job characteristics, and work environment characteristics.

2. THEORETICAL BACKGROUND

Pratheepkanth conducted research on “Reward system and its impact on employee motivation in commercial bank of Srilanka Plc, in Jaffna District”. The basic purpose of this research is to find out whether rewards and recognition have an impact on employee motivation. A questionnaire was administered to respondents. The results also revealed that staff and employees from non-white racial backgrounds experienced lower levels of rewards.

A research was conducted on “The impact of reward and recognition on job satisfaction and motivation: An empirical study from Pakistan”. This study is based on to find out the major factors that motivate employees and it tells about the relationship between reward, recognition and motivation while working in an organization. The data were collected from employees working in different types of organizations. Two hundred and fifty self-administered questionnaires were given to different employees working in different sectors and they returned 220 completed questionnaires with the response rate of 88%. The results showed that different dimensions of work motivation and satisfaction are correlated and rewards play

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a significant role in motivating the employees. However, the research is very important in building the relationship between the employee and the employer.

A research was conducted on “The impact of a reward system on employee motivation in Motonet-Espoo”. The study aims at finding out which aspects of the reward system functions well and which aspects could be improved in order to increase employee motivation and satisfaction. Quantitative research method has been used to conduct research. The data was gathered using a questionnaire and with the help of two interviews. The results showed that how Motonet-Espoo can develop their reward system by including the employees in the decision-making process. With the more developed reward system strategy the organization will have more satisfied workforce. It helped to know which rewards system is more preferred & what other rewards motivate employees. So, the factors that affect work motivation include personal growth, work environment, salary, recognition and achievement.

Another research conducted on “Employee satisfaction and work motivation”. The study is conducted to find out the level of employee satisfaction and motivation in supermarket Prisma In Mikkei. This study has several concepts of job satisfaction, motivation, leadership etc. Questionnaire was made and had questions regarding work environment and expectations of the employee. The research findings show that the level of employee satisfaction is high. Communication and relationship between the employees and the managers are found to be one of the greatest strengths of the company. The workers of the company don’t seem to be happy with the reward strategy. The jobs that the Prisma supermarket offers its employees satisfy their expectations except for the possibility for the promotion. The work environment of the company is good and the workers there are highly satisfied from the working conditions.

3. HYPOTHESES

H1: Tangible rewards increase the job satisfaction of the employees.

H2: Intangible rewards increase the job satisfaction of the employees.

H3: Males get more tangible rewards as compared to females.

H4: Impact of organization is different for males & females on tangible rewards.

H5: Impact of organization is different for males & females on intangible rewards.

4. METHODS

In this research, stratified method of probability sampling is used for collecting data. Total sample size for this study was 240. Sample size of 60 males and 60 females was collected from public banks and 60 males and 60 females from private banks. Instrument used for measuring tangible rewards was designed by the researcher. Reliability of Tangible reward scale, having six questions, was measured by cronbach's alpha through SPSS. Cronbach's alpha value was 0.76—shown in table 4.1 which is more than the required one i.e., 0.70. Hence this scale was reliable.

Table 4.1: Reliability of Tangible rewards

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>Cronbach's Alpha Based on Standardized Items</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.900</td>
<td>.900</td>
<td>8</td>
</tr>
</tbody>
</table>

Intangible reward scale was also measured by the instrument designed by the researcher. Reliability of the scale was measured through Croanbach Alpha using SPSS. Reliability of Intangible rewards scale, having fifteen questions, was 0.82 (table 4.2), which was more than the required one i.e., 0.70. Hence this scale was also reliable.

Table 4.2: Reliability of Intangible rewards

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>Cronbach's Alpha Based on Standardized Items</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.923</td>
<td>.923</td>
<td>12</td>
</tr>
</tbody>
</table>

Employee satisfaction and Motivation was measured by the instrument designed by Nick Foster (1999), the reliability of this scale is 0.81. Normality test was also conducted for Tangible rewards, Intangible Rewards & Job Satisfaction (shown in tables 4.3, 4.4 and 4.5).

Table 4.3: Reliability of Intangible rewards

<table>
<thead>
<tr>
<th></th>
<th>Kolmogorov-Smirnov&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>df</td>
</tr>
<tr>
<td>tangiblerewards</td>
<td>.106</td>
<td>240</td>
</tr>
</tbody>
</table>

<sup>a</sup>Lilliefors Significance Correction

Table 4.4: Tests of Normality for Intangible Rewards

<table>
<thead>
<tr>
<th></th>
<th>Kolmogorov-Smirnov&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>df</td>
</tr>
<tr>
<td>tangiblerewards</td>
<td>.106</td>
<td>240</td>
</tr>
</tbody>
</table>

<sup>a</sup>Lilliefors Significance Correction
Table 4.5: Tests of Normality for Employees’ Job Satisfaction

<table>
<thead>
<tr>
<th>Kolmogorov-Smirnov</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistic</td>
<td>df</td>
</tr>
<tr>
<td>tangiblerewards</td>
<td>.106</td>
</tr>
</tbody>
</table>

*Lilliefors Significance Correction

As the value of Kolmogorov Significant was more than .05 therefore data for all the three variables was normally distributed. As data was normally distributed therefore parametric tests of statistics were applied for analyses.

5. RESULTS

5.1. Analyzing Impact of tangible rewards on job satisfaction of the employees

Analyzing impact of tangible rewards on job satisfaction of the employees was assessed through correlation. Two continuous variables were used here which are: Tangible rewards and employee job satisfaction. The correlation between the two continuous variables is 0.604, p=0.000 (table 5.6). Both variables are significantly positively related with a moderate strength of 0.60. Therefore, we accept the alternative hypothesis and reject the null hypothesis.

Table 5.6: Correlations for tangible rewards and employees’ job satisfaction.

<table>
<thead>
<tr>
<th>Tangible Rewards</th>
<th>Pearson Correlation</th>
<th>Employee Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sig. (2 tailed)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>240</td>
</tr>
<tr>
<td></td>
<td>0.604**</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>0.000</td>
<td>240</td>
</tr>
</tbody>
</table>

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

5.2. Analyzing Impact of intangible rewards on job satisfaction of the employees

Analyzing impact of intangible rewards on job satisfaction of the employees was assessed through correlation. Two continuous variables were used here which are: Intangible rewards and employee job satisfaction. The correlation between the two continuous variables is 0.67, p=0.000 (table 5.7). Both variables are significantly positively related with a moderate strength of 0.67. Therefore, we accept the alternative hypothesis and reject the null hypothesis.

Table 5.7: Correlations for intangible rewards and employees’ job satisfaction.

<table>
<thead>
<tr>
<th>Intangible Rewards</th>
<th>Pearson Correlation</th>
<th>Employee Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sig. (2 tailed)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>240</td>
</tr>
<tr>
<td></td>
<td>0.675**</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>0.000</td>
<td>240</td>
</tr>
<tr>
<td>Employee Satisfaction</td>
<td>Pearson Correlation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2 tailed)</td>
<td>0.675**</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>240</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>240</td>
</tr>
</tbody>
</table>
5.3. Analyzing tangible rewards for male and female employees

The tangible rewards for male & female employees were assessed through Independent-samples t-test. Two variables were used for this test, one categorical and other continuous. For this research, categorical variable used is gender (male and female) and continuous variable used is Tangible rewards.

Here the number of male and female employees is 119 and 121 respectively. The significant level for Levene’s test is .012 (table 8), which is larger than the cut-off of .05. This means that the assumption of equal variance has not been violated; therefore, we used the t-value provided in the equal variance assumed line. As the value of Sig (2-tailed) is less than .05(.000), this means that there was significant difference in the mean scores for males (M= 24.9664, SD= 3.2727) and females (M=26.4050, SD= 5.30185); P=.000 (two-tailed). Hence females are provided more tangible rewards as compared to males. Therefore, we accept the alternative hypothesis and reject the null hypothesis.

Table 5.8: Independent samples Test for Impact of tangible rewards on employees’ job satisfaction

<table>
<thead>
<tr>
<th>Tangible Rewards</th>
<th>Leven’s test for equality of variances</th>
<th>T-test for equality of means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal variance assumed</td>
<td>F 6.623</td>
<td>Sig. .000</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>F 2.534</td>
<td>Sig. .406</td>
</tr>
</tbody>
</table>

5.4. Analyzing impact of organization on both genders on tangible rewards

It was assessed through Two-Way ANOVA test. Two variables are used for this test, two categorical and one continuous. For this research, categorical variables used were gender and organization and continuous variable used was tangible rewards. The analysis showed that the females were getting more tangible rewards which is equal to 29.35 as compared to males which is equal to 24.71 in the public-sector banks of the Hyderabad District and the males were getting more tangible rewards which is equal to 25.22 as compared to females which is equal to 23.50 in the private sector banks of the
Hyderabad District. The significance level is .000 (tables 5.9 & 5.10), which is less than .05 hence the difference is significant. Therefore, we accept the alternative hypothesis and reject the null hypothesis.

**Table 5.9: Descriptive Statistics for Tangible Rewards**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Organization</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>Public</td>
<td>24.7167</td>
<td>2.88239</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>25.2203</td>
<td>3.63445</td>
<td>59</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>24.9664</td>
<td>3.27272</td>
<td>119</td>
</tr>
<tr>
<td>Female</td>
<td>Public</td>
<td>29.3500</td>
<td>3.85247</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>23.5082</td>
<td>4.94174</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>26.4050</td>
<td>5.30185</td>
<td>121</td>
</tr>
<tr>
<td>Total</td>
<td>Public</td>
<td>27.0333</td>
<td>4.10970</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>24.3500</td>
<td>4.41474</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>25.6917</td>
<td>4.4632</td>
<td>240</td>
</tr>
</tbody>
</table>

**Table 5.10: Test of between subject effect for tangible rewards**

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected</td>
<td>1163.969</td>
<td>3</td>
<td>387.990</td>
<td>25.455</td>
<td>.000</td>
<td>.244</td>
</tr>
<tr>
<td>Intercept</td>
<td>158480.787</td>
<td>1</td>
<td>158480.787</td>
<td>1.040E4</td>
<td>.000</td>
<td>.978</td>
</tr>
<tr>
<td>Gender</td>
<td>127.983</td>
<td>1</td>
<td>127.983</td>
<td>8.396</td>
<td>.004</td>
<td>.034</td>
</tr>
<tr>
<td>Organization</td>
<td>427.375</td>
<td>1</td>
<td>427.375</td>
<td>28.039</td>
<td>.000</td>
<td>.106</td>
</tr>
<tr>
<td>Gender * Organization</td>
<td>603.892</td>
<td>1</td>
<td>603.892</td>
<td>36.619</td>
<td>.000</td>
<td>.144</td>
</tr>
<tr>
<td>Error</td>
<td>3597.215</td>
<td>236</td>
<td>15.242</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>163176.000</td>
<td>240</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>4761.183</td>
<td>239</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.5. Analyzing impact of organization on both genders on intangible rewards

It was assessed through Two-Way ANOVA test. Two variables are used for this test, two categorical and one continuous. For this research, categorical variables used were gender and organization and continuous variable used was intangible rewards.

The analysis showed that the females were getting more intangible rewards which is equal to 41.866 as compared to males which is equal to 34.966 in the public-sector banks of the Hyderabad District and the males were getting more intangible rewards which is equal to 36.59 as compared to females which is equal to 34.098 in the private sector banks of the Hyderabad District. The significance level is .000 (tables 5.11 & 5.12), which is less than .05 hence the difference is significant. Therefore, we accept the alternative hypothesis and reject the null hypothesis.

**Table 5.11: Descriptive Statistics for Intangible Rewards**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Organization</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>Public</td>
<td>34.9667</td>
<td>4.65766</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>36.5932</td>
<td>5.78678</td>
<td>59</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>35.7731</td>
<td>5.28900</td>
<td>119</td>
</tr>
<tr>
<td>Female</td>
<td>Public</td>
<td>41.8667</td>
<td>4.96928</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>34.0984</td>
<td>7.14541</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>37.8504</td>
<td>7.27192</td>
<td>121</td>
</tr>
<tr>
<td>Total</td>
<td>Public</td>
<td>38.4167</td>
<td>5.91620</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>35.3250</td>
<td>6.60553</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>36.8708</td>
<td>6.44611</td>
<td>240</td>
</tr>
</tbody>
</table>

**Figure 5.2: Estimated Means of Intangible Rewards**

![Estimated Means of Intangible Rewards](image)
**Table 5.12: Test of between subject effect for Intangible rewards**

Dependent Variable: Intangible Rewards

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected</td>
<td>2188.428</td>
<td>3</td>
<td>729.494</td>
<td>22.236</td>
<td>.000</td>
<td>.220</td>
</tr>
<tr>
<td>Intercept</td>
<td>326408.658</td>
<td>1</td>
<td>326408.658</td>
<td>9.949E3</td>
<td>.000</td>
<td>.977</td>
</tr>
<tr>
<td>Gender</td>
<td>291.038</td>
<td>1</td>
<td>291.038</td>
<td>8.871</td>
<td>.003</td>
<td>.036</td>
</tr>
<tr>
<td>Organization</td>
<td>565.738</td>
<td>1</td>
<td>565.738</td>
<td>17.244</td>
<td>.000</td>
<td>.068</td>
</tr>
<tr>
<td>Gender * Organization</td>
<td>1323.767</td>
<td>1</td>
<td>1323.767</td>
<td>40.350</td>
<td>.000</td>
<td>.146</td>
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<tr>
<td>Error</td>
<td>7742.514</td>
<td>236</td>
<td>32.807</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>336301.000</td>
<td>240</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>9930.996</td>
<td>239</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

R Squared = .220 (Adjusted R Squared = .210)

6. **CONCLUSIONS & DISCUSSIONS**

From the statistical analysis presented in the above section, the study identifies the following as the most significant conclusions. Females are provided more tangible (Salary, Bonuses, Cash incentives, Pension facilities, Pay raise etc.) and intangible (certificates, thank you letter, coaching, promotions etc.) rewards as compared to males in the public sector banks of the Hyderabad District. Males are provided more tangible (Salary, Bonuses, Cash incentives, Pension facilities, Pay raise etc.) and intangible (certificates, thank you letter, coaching, promotions etc.) rewards as compared to females in the private sector banks of the Hyderabad District. Females are more satisfied in the public-sector banks as compared to males. Males are more satisfied in the private sector banks as compared to females. Intangible rewards increase job satisfaction more than the tangible rewards.

7. **SUGGESTIONS**

Tangible & Intangible rewards should be provided to both genders in equivalence in both organizations. Organizations should also focus on intangible rewards, because they increase job satisfaction more than tangible rewards. Females should be provided more tangible and intangible rewards in the private sector banks. Males should be provided more tangible and intangible rewards in the public-sector banks.

8. **CONTRIBUTION TO KNOWLEDGE**

The under considered study provides a unique blend of research knowledge in the fields of tangible and intangible rewards, Social sciences, and organizational behavior. This research has assessed and examined the impact of tangible and intangible rewards on employees’ job satisfaction. This thesis disinters the knowledge to the employees, managers, officers and non-officers. The findings of the study provide knowledge on the importance of the intangible rewards in the banking sector which increases the job satisfaction of the employees more as compared to the tangible rewards.
References


IMPACT OF WORK LIFE BALANCE ON JOB SATISFACTION OF FEMALE FACULTY MEMBERS OF BUSINESS SCHOOLS OF KARACHI

Ayesha Murtaza*  Rafique Ahmed Khan**

ABSTRACT
The purpose of this paper was to examine the relationship of work life balance on job satisfaction among female faculty members of business schools of Karachi. Flexible working hours, amount of daily workload and organizational facilities provided to female faculty members for their work life balance were taken in order to identify the impact of work life balance on job satisfaction among female faculty members of business schools of Karachi. Following deductive approach, an explanatory research was undertaken in order to determine the influence of work life balance on job satisfaction among female faculty members. Primary quantitative data were collected from 103 female faculty members of different business schools of Karachi using a self-administered questionnaire as the research instrument. Statistical technique applied included regression analysis to identify the relationship and examine impact of work life balance on job satisfaction. The results of the study yield that work life balance significantly influences job satisfaction among female faculty members because a significant positive relationship between flexible working hours and organizational facilities with job satisfaction was found. A significant negative relationship between daily amount of workload and job satisfaction was found which indicates that increase in workload leads to job dissatisfaction among female faculty. It was suggested that business schools should focus on these important aspects related to work life balance that significantly influence job satisfaction among female faculty members.

Keywords: Work life balance, job satisfaction, flexible working hours, workload, and organizational facilities.

JEL Classification:

1. INTRODUCTION

In the present competitive world, maintaining a balance between work life and personal life of employees is increasingly getting attention at both national and international level because it seems to have an effect on job satisfaction, which ultimately affects employee job performance. The traditional trend of gender roles has been shifted in which women were previously confined for their responsibilities of housework. Work life balance can be defined as a state in which personal life and professional life demands are equal. It is one of the extrinsic factor that determines job satisfaction and it is very important for every organization to have satisfied work force in order to deliver outstanding performance and enhance productivity, which ultimately leads to overall organization’s profitability. Job satisfaction is the most crucial factor needs to be carefully investigated because it leads to improving organizational performance, well-being and

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competitiveness. It helps to investigate how employees feel about their jobs and how happy they are with their current jobs.3

In Pakistani culture, women are generally responsible for their household work, while men are responsible for occupational job responsibilities in order to fulfill their necessities of life. However, this trend has been modified due to reduction of cultural barriers, which allowed women to enter into various professions including educational sector and build their careers, by working for less hours at their jobs as compared to other professions and devoting remaining hours in fulfilling their households and children responsibilities. The working sphere of women in Pakistan is continuously increasing day by day because of changing family patterns and life styles, changed perception of new generation for working women, reduction of cultural barriers, to increase level of income, modern and innovative technology. These factors play an important role in the life of women and can create serious anxiety among them many times if they belong to families where women and their husbands both work, and have children of growing age and old age parents. On the other hand, there are variety of factors on the job, which positively and negatively affect women’s perception about the job. Factors, which contribute to negative and positive perceptions about the job, can have a significant impact on work life balance. All these unmanageable mental stresses can lead to developing physical and psychological disorders among working women which ultimately results in work life conflict leading to job dissatisfaction. Such job dissatisfaction can result in serious problems at workplace such as absenteeism, reduced productivity, poor performance, and increased stress, damaged family and social relationships. All these consequences ultimately affect organization’s overall performance and profitability.4

Work life balance among faculty members is increasingly becoming an utmost challenge because the amount of work load that business schools put on their faculty members is increasingly becoming non-manageable especially for female faculty who have the passion for developing their careers as well as responsibilities for their households and families. The amount of work load which business schools demand from their faculty members is not only limited to their institutions but it is extended to their homes in order to prepare themselves for the next day. They need to devote extra hours in their

institutions so that they can be promoted and be more productive and efficient in their professions. Mostly, people prefer to work in organizations and are much more satisfied and committed to organizations that support work life balance and offer work life balance programs and practices. However, there is a difference between men and women job satisfaction. Men believe in satisfaction with their career related rewards, advancements and what they actually achieve on their jobs. On the other hand, work and family are considered equally by women which determine their satisfaction. They usually become stressful when their work demands exceed and do not allow women to take care of their children, elderly parents, and family and fulfill household responsibilities as a result of which they become discontented, irritated and less satisfied with their jobs.

Business education is increasingly getting importance in Pakistan in last couple of years due to which number of business schools is continuously increasing, many of which demand quality education to differentiate themselves from other business schools. Quality of education, which any business school provides is largely depends upon its quality of workforce. Employees perform better only when they are well satisfied with their jobs. Work life balance is one of the most crucial factors, which determines job satisfaction of employees. Faculty satisfaction plays a vital role in success of any business school because the quality of education, which they are imparting to their future generations, is dependent upon their satisfaction with the business schools, which have a significant impact on students’ career.

Today, improved employment opportunities in educational institutes set the new world for women but at the same time, her role, as home keeper has not much changed. They still face different demands of their personal and professional life. Due to increased pressure and different demands of workplace and home, the work life balance is at stake. Long term success, performance and survival of any business school largely depends upon its faculty members’ satisfaction because satisfied and motivated faculty members are more likely to perform better and this satisfaction level can be achieved by realizing the importance of work life balance which is directly linked to their faculty satisfaction and adopting work life balance practices in order to provide them a balance between their family and work life.

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1.1. Problem statement

Today, every woman wants to contribute equal responsibility in earning for the betterment of her family even after marriage. Married working women have more responsibilities towards their home in taking care of their children and family as compared to men while fulfilling their work demands as well. The concept of work life balance has gained much recognition in the west as many organizations have successfully realized its importance and implemented policies to ensure that their employees have balance between their personal and professional life because of its miraculous effects on employee job satisfaction, but it is relatively new in the east. There is a growing need for all organizations in Pakistan, especially modern business schools to realize the importance of work life balance for their female employees. Work life balance is very crucial for business schools because it produces satisfied faculty members, which influences the quality of future generation and their education. There is a need for business schools to focus on developing the quality of its work force because faculty members of these business schools need to be well satisfied with their jobs so that they can provide quality education to their students. Hence, this paper focused on examining influence of work life balance on the level of job satisfaction among female faculty members of business schools of Karachi.

1.2. Research Question

What is the impact of work life balance on the level of job satisfaction among female faculty members of business schools of Karachi?

2. LITERATURE REVIEW

2.1 Employee job satisfaction

Mihelic analyzed impact of work family conflict and family work conflict on job satisfaction and turnover intentions in Slovenia. Data was collected form 388 employees of different organizations of Slovenia through questionnaires. For this purpose, variables used in the study were job satisfaction, work family conflict, family work conflict and turnover intentions. Data was analyzed by using method structural equation modeling. It was found that job satisfaction increases when work family conflict reduces and a little or no impact of job satisfaction on family work conflict was observed. It

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was suggested that employers should focus on improving skills of employees to deal with these conflicts in order to improve their job satisfaction.\textsuperscript{9}

The effect of job demand on family life of a person and the effects of family problem on work life among female employees of two Israeli hospitals were investigated. For this purpose, data was collected from 168 female respondents. Job satisfaction, work family conflict and family work conflict were the variables considered in the study. For the analysis of data, correlation analysis and regression analysis were used. It was found that a strong relationship between job satisfaction, work family conflict and family work conflict exist. Job satisfaction was found to be higher with lower work family conflict and family work conflict. It was suggested that in order to reduce both type of conflicts it is important to create positive employee attitudes in terms of their job and work setting.\textsuperscript{10}

The study was conducted regarding the impact of work family conflict, emotional exhaustion and intrinsic motivation on job satisfaction, job performance and affective organizational commitment among the front-line employees of retail banks in Turkey. For this purpose, the sample size considered in the study was 363 respondents. Tool considered in the study for collecting data was questionnaires. Variables considered in the study are work family conflict, emotional exhaustion, intrinsic motivation, job satisfaction, job performance and affective organizational commitment. Method used for the analysis of data was lisrel analysis. The result of the study revealed that work family conflict has a greater impact on job satisfaction thus lowering satisfaction of employees. It was suggested that training should be provided to front line employees that could help them manage and reduce their work family conflict ultimately leading to increased job satisfaction.\textsuperscript{11}

### 2.2 Importance of work life balance

The impact of work life balance on job satisfaction and organizational commitment among faculty of Gujrat University was studied. Data was gathered through questionnaires from 171 employees by applying stratified random sampling technique and was analyzed by using correlation analysis. The results of the study revealed that work life balance is

\textsuperscript{9} Mihelic, K. K, \textit{Work-family interface, job satisfaction and turnover intention}, (Baltic Journal of Management), Vol. 9 (4), (2014), 446
positively related with job satisfaction among the faculty. The study further revealed that work life balance is positively related with organizational commitment also among the university faculty.  

Another study was conducted in banking sector of Karachi that investigated work life balance affecting job satisfaction of an employee. The variables used in the study were job satisfaction, work life balance, flexible working conditions, work life balance programs, change of job, workload and long working hours. Data was collected from 273 respondents by using questionnaires. Snowball sampling technique was used to analyze the data. Primary and secondary sources were used to collect data. For the analysis of data, statistical technique applied was correlation. It was found that work life balance has a very little impact on employee job satisfaction among those employees.  

The significant relationship between work life balance and job satisfaction was explored in order to find out the varying perception of work life balance using social demographic variables. Questionnaires were used to gather data from 286 teachers in Italy. It was found that job satisfaction increases when work family conflict and family work conflict decreases because employees are able to focus more on their jobs and perform better in their organizations.  

The study was conducted aimed at exploring the factors that lead to work and family life imbalances among male and female university faculty. Data was collected through questionnaires from 146 male and female faculties of public and private sector universities of Pakistan. The variables used in the study were work life balance, partner support, colleague support, childcare responsibilities, elder dependency, job resources and unfair criticism. The statistical technique applied was t-test. The study concluded a positive relationship between colleague support, partner support, job resources and work life balance and found a negatively associated relationship between work life balance and unfair criticism.  

Study on faculty career development was conducted in order to explore a relationship between work life and family life of faculty members. Data was gathered from 112 faculty members through questionnaires and interviews. Statistical technique applied was regression analysis, which revealed that work satisfaction is associated with work and family life  

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of employees. The results also revealed that life satisfaction is linked with work and life away from work and it is indirectly affected by work and non-work conditions and activities.\(^{16}\)

Investigation on the major influencing factors of work life balance of employees both male and female working in their organizations in banking sector of India was conducted. Data was collected from 300 employees of all levels working in different banks of India. Statistical technique applied was factor analysis to find out the most impacting factors of work life balance. Six most influencing factors were revealed after conducting this study which include working conditions, organizational facilities, performance, family/spouse and management support, independence and satisfaction.\(^{17}\)

An attempt was made to highlight the issues associated with work life integration problems of female school teachers in India. Data was collected through questionnaire from 250 female teachers working in English medium private schools. Statistical technique applied was z-test, which revealed that integration of work life is significantly impacted by the nature of job of female teachers. The study further identified that overall performance of employees working in their organizations is significantly influenced by the integration of work and life.\(^{18}\)

### 2.3 Flexible working hours

The study was conducted investigating the flexible working hours affecting employees’ motivation for creating a balance of work and family life of employees in order to motivate them to perform better in their organizations. Data was analyzed using inferential and descriptive statistics and was collected from 38 respondents through questionnaires. The variables used in the study were flexible working hours and employee motivation. The result of the study concluded that flexible working hours play a positive role on employees’ motivation and enable them to work more efficiently in the organization.\(^{19}\)

A research was conducted to find out the relationship between flexible working schedules and employees’ life quality with respect to Pakistani living and working conditions conducted on the business school faculty. 42 faculty members were selected to gather data. The statistical techniques used were descriptive and correlation analysis. The study revealed

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that after implementing flexible working hours, there existed a relationship between marital status, gender and quality of work life.  

2.4 Workload

An investigation was done regarding the impact of workload on job satisfaction based on the duration of workweek among the faculty members of different universities. The sample taken for the study consists of 10,116 full time faculty members as this research was based on the previous research which was conducted in 1998. For the analysis of data, the method used in the study was regression analysis. The result of the study concluded that workload plays an important role in satisfaction of employees and many faculty members were found to have greater dissatisfaction with the workload. The result also revealed that long working hours create problems for people who want to give time to their families too. It was suggested that considering the challenges faced by faculty members of universities, policies should be designed to help the faculty balance their work and family life.

The study was conducted to determine the impact of organizational justice on employee workload and job satisfaction in educational sector of Pakistan. Data was collected from 100 teachers of private and public schools of Lahore. Data was collected through questionnaire, which was prepared for determining teacher’s workload and job satisfaction. Statistical techniques applied were frequency, t-test, ANOVA. Public school teachers were found to be more satisfied and flexible as compared to private school teachers due to their low workload and less working hours. It was suggested that incentives and appreciation should be provided to successful teachers for extra workload in order to increase their job satisfaction and performance.

The study was conducted indicating that how faculty workloads influence employee job satisfaction in public universities of Malaysia by collecting data from 320 faculty members through questionnaires. Descriptive analysis and Pearson product moment correlation were applied as statistical techniques. After the analysis of data, results concluded that a negative relationship was found between daily faculty workload and employee job satisfaction. It was suggested that considerable importance should be given to these important variables in order to enhance job satisfaction among faculty.

members to enable them to perform better at their positions. It was further recommended that amount of workload of faculty members should be taken seriously by educational institutes in order to sustain their quality performance.

2.5 Organizational facilities

The relationship was identified between prevailing practices of work life balance and employee job satisfaction in Pakistan. Sample was collected from 450 respondents currently working in two organizations in Pakistan. The main organizational facilities for work life balance include sick and educational leaves, part time work, flexi time, onsite childcare, onsite medical care, transport for staff, social support, fitness center and lunch breaks were taken. Regression and ANOVA analysis were used to analyze the data. Stratified sampling technique was used to analyze the data. An important link between the variables was found according to the result which indicated a significant impact of these facilities with reference to work life balance on job satisfaction. In addition, work life balance and job satisfaction was found to be almost similar among all the levels of management. The study also suggested to realize the important of such facilities related to work life balance and equal implementation of such facilities among all levels of management in order to increase employee job satisfaction.

The study was conducted to find out the impact of work life balance practices on employee productivity in a banking sector of Pakistan. Work life balance practices considered in the study were flexible working hours, job sharing, telecommuting, onsite daycare facilities, compressed workweek and family leave program. Data was collected through structured questionnaire from employees. Regression analysis was applied to identify the impact of independent variables on dependent variable. The study revealed a significant positive relationship between work life balance practices and employee job satisfaction and their productivity. The study also found that happy and satisfied employees who have balance between their work and family life were more self-driven to work and perform better at their jobs as compared to those who were still striving to balance their work and family life.

2.6 Conceptual framework

The conceptual framework of the study is shown below. In this study, the independent variable is work life balance, which has been split into flexible working hours, workload and organizational facilities to determine their impact with reference to work life balance on job satisfaction which is a dependent variable.

Figure 2.1: Conceptual Framework

2.7 Research hypotheses

H₁: There is a positive impact of work life balance on employee job satisfaction.
H₂: There is positive impact of flexible working hours on employee job satisfaction.
H₃: There is positive impact of workload on employee job satisfaction.
H₄: There is positive impact of organizational facilities on employee job satisfaction.

3. RESEARCH METHODOLOGY

3.1 Nature of the research

The nature of this research is explanatory because the variables are already known. It is explanatory research because each phenomenon can be more specifically tested in order to know possible reasons of occurrence of that phenomenon and also the cause and effect relationship exists between independent and dependent variables.

3.2 Type of the research

The type of this research is quantitative as it focuses on studying the sample of interest from the population and then applying the results driven from the sample on the whole population. Overall reliability of the sample is determined before the results are applied to the entire population, which generate opportunities for more appropriate results. Quantitative approach used in this study involves using proper statistical tools and models in order to get accurate results, which help decision makers to make decisions on the basis of appropriate statistical analysis and derive more accurate results. Non-probability sampling is used in the study because the entire population is not numbered and unable to reach. The sampling
technique considered in the study is convenience sampling because it depends on the convenience of collecting data from female faculty members of business schools of Karachi and it is time saving also.

3.3 Sample size and Sampling Technique

The sample size taken in the study is 103 respondents as the total population consists of 140 female respondents from the selected business schools, which includes Bahria University, Iqra University and SZABIST. The population was determined through the list of faculty members for each business school from their websites. The sample size was determined through the sample size-determining table devised by Krejcie and Morgan (1970) by keeping 95% confidence interval and 5% margin of error. The population considered in the study is limited to Karachi.

3.4 Data collection method

Data was collected from 103 female respondents by using a self-administered questionnaire. The questionnaire was designed to investigate the impact of work life balance on the level of job satisfaction among female faculty members of business schools of Karachi. Research questionnaire was designed by considering all the variables taken for the study. 5 points likert scale was used in the research questionnaire in order to collect the responses of female respondents starting from 1 (strongly disagree) to 5 (strongly agree) for all variables considered in the study.

Likert scale collects respondent’s agreements and disagreements regarding the given statement. Initially, pilot study has been conducted among selected number of female faculty members. After pilot study, feedback has been incorporated in order to improve the research questionnaire so that data can be collected from the required sample size.

3.6 Methods of data integration

Data was analyzed using the software SPSS 22 which was collected through self-administered questionnaire from the representative sample of about 103 female faculty members of business schools of Karachi. Different tests were applied by using the software in order to determine the possible results of the study by incorporating the data in tabular form.

4. DATA ANALYSIS

The data was analyzed with the help of statistical tool ‘Regression analysis’ using software SPSS 22. Each hypothesis was tested by applying relevant tests in order to determine appropriate relationships between independent and dependent variables.

4.1 Descriptive statistics

The descriptive statistics shows the demographic profile of the respondents, which includes marital status, age and length of service of female faculty members. The demographics of respondents are illustrated through bar charts.
Table 4.1: Marital status

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>19</td>
<td>12.3</td>
<td>18.4</td>
<td>18.4</td>
</tr>
<tr>
<td>Single</td>
<td>35</td>
<td>22.7</td>
<td>34.0</td>
<td>52.4</td>
</tr>
<tr>
<td>Children</td>
<td>42</td>
<td>27.3</td>
<td>40.8</td>
<td>93.2</td>
</tr>
<tr>
<td>Other dependent</td>
<td>7</td>
<td>4.5</td>
<td>6.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>103</td>
<td>66.9</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Missing</td>
<td>System</td>
<td>51</td>
<td>33.1</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>154</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Graph 4.1: Marital status

The above illustration shows that the sample taken in the study consisted of female faculty members, among them, 12.3% were married female faculty members, 22.7% female faculty members were single, 27.3% female faculty members were married and have children and 4.5% female faculty members have other dependents in their families.

Table 4.2: Age

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-35</td>
<td>38</td>
<td>24.7</td>
<td>36.9</td>
<td>36.9</td>
</tr>
<tr>
<td>36-45</td>
<td>41</td>
<td>26.6</td>
<td>39.8</td>
<td>76.7</td>
</tr>
<tr>
<td>Above 45</td>
<td>24</td>
<td>15.6</td>
<td>23.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>103</td>
<td>66.9</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Missing</td>
<td>System</td>
<td>51</td>
<td>33.1</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>154</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The above illustration shows that the sample taken in the study consisted of female faculty members, among them, 24.7% were those female faculty members who were between 25-35 years, 26.6% were those female faculty members who were between 36-45 years and 15.6% were those female faculty members who were above 45 years of ages.

**Table 4.3: Length of service**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Less than 1 year</td>
<td>17</td>
<td>11.0</td>
<td>16.5</td>
<td>16.5</td>
</tr>
<tr>
<td>1-5 years</td>
<td>28</td>
<td>18.2</td>
<td>27.2</td>
<td>43.7</td>
</tr>
<tr>
<td>6-10 years</td>
<td>49</td>
<td>31.8</td>
<td>47.6</td>
<td>91.3</td>
</tr>
<tr>
<td>More than 10 years</td>
<td>9</td>
<td>5.8</td>
<td>8.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>103</td>
<td>66.9</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Missing System</td>
<td>51</td>
<td>33.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>154</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Graph 4.2: Age**

**Graph 4.3: Length of service**
The above illustration shows that the sample taken in the study consisted of female faculty members, among them, 11% were those who were working in their organization for less than 1 year, 18.2% were those who were working in their organization from 1 to 5 years, 31.8% were those who were working in their organization from 6 to 10 years and 5.8% were those who were working in their organization for more than 10 years.

4.2 Reliability test

In order to determine the reliability of data, reliability test was applied which determined the overall reliability as well as the reliability of each construct. Number of questions taken in the questionnaire for this study is 13 based on each dependent and independent variables. For reliability test, SPSS software was used.

<table>
<thead>
<tr>
<th>Variables</th>
<th>No. Of Items</th>
<th>Cronbach's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexible Working Hours</td>
<td>3</td>
<td>0.810</td>
</tr>
<tr>
<td>Workload</td>
<td>3</td>
<td>0.904</td>
</tr>
<tr>
<td>Organizational Facilities</td>
<td>5</td>
<td>0.901</td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>2</td>
<td>0.832</td>
</tr>
<tr>
<td>Overall</td>
<td>13</td>
<td>0.751</td>
</tr>
</tbody>
</table>

The above table shows the reliability of each construct as well as the overall reliability of data and instrument used. According to many researches, Cronbach’s Alpha should exceed 0.6 or 60% for an acceptable range of reliability of instrument and data. In the above table, the value of Cronbach’s Alpha for each variable is above 0.6 or 60%. It can be seen from the table that the value of Cronbach’s Alpha for flexible working hours is 81% with 3 number of items, the value of Cronbach’s Alpha for workload is 90.4% with 3 number of items, the value of Cronbach’s Alpha for organizational facilities is 90.1% with 5 number of items and the value of Cronbach’s Alpha for job satisfaction is 83.2% with 2 number of items. For this study, the overall value of Cronbach’s Alpha is 75.1% with 13 number of items which is also more than 60%. Therefore, the data, which was collected from female faculty members, is reliable.

4.3 Regression analysis

Regression analysis was applied to determine the impact of work life balance on the level of job satisfaction among female faculty members of business schools of Karachi. The results of regression analysis are as follows:

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.616*</td>
<td>.380</td>
<td>.361</td>
<td>.73343</td>
</tr>
</tbody>
</table>

*Predictors (Constant), Organizational Facilities, Work Load and Flexible Working Hours
Capability of independent variables to predict dependent variable is shown by Adjusted R Square. In this model, dependent variable (employee job satisfaction) is 36.1% predicted by independent variables (flexible working hours, workload and organizational facilities).

Table 4.6: Coefficients*

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>.480</td>
<td>.517</td>
<td>.929</td>
<td>.355</td>
</tr>
<tr>
<td>Flexible_Working_Hours</td>
<td>.225</td>
<td>.093</td>
<td>.198</td>
<td>2.411</td>
</tr>
<tr>
<td>Work_Load</td>
<td>-.177</td>
<td>.073</td>
<td>-.193</td>
<td>-2.412</td>
</tr>
<tr>
<td>Organizational_Facilities</td>
<td>.596</td>
<td>.079</td>
<td>.613</td>
<td>7.542</td>
</tr>
</tbody>
</table>

*Dependent Variable: Job_Satisfaction

The above table shows results of the analyzed data, which includes probability and coefficient values. Coefficient values represent positive or negative impact of independent variables on dependent variable. Level of significance of variables is shown by P value. All independent variables (flexible working hours, workload and organizational facilities) have values less than 0.05 showing significant impact on employee job satisfaction.

**H1: There is a significant impact of flexible working hours on employee job satisfaction.**

The above table shows that the P value is 0.018, which is less than 0.05 significance level. Therefore, null hypothesis is rejected and alternative hypothesis is accepted. There is significant impact of flexible working hours on employee job satisfaction. According to the above table, a positive relationship between flexible working hours and employee job satisfaction exists which means that if flexible working hours increase, employee job satisfaction will increase and if flexible working hours decrease, employee job satisfaction will decrease while other things remain constant.

**H2: There is a significant impact of workload on employee job satisfaction.**

The above table shows that the P value is 0.018, which is less than 0.05 significance level. Therefore, null hypothesis is rejected and alternative hypothesis is accepted. There is significant impact of workload on employee job satisfaction. According to the above table, a negative relationship between workload and employee job satisfaction exists which means that if workload increase, employee job satisfaction will decrease and if workload decrease, employee job satisfaction will increase while other things remain constant.

**H3: There is a significant impact of organizational facilities on employee job satisfaction.**

The above table shows that the P value is 0.000, which is less than 0.05 significance level. Therefore, null hypothesis is rejected and alternative hypothesis is accepted. There is significant impact of organizational facilities on employee job satisfaction.
satisfaction. According to the above table, a positive relationship between organizational facilities and employee job satisfaction exists which means that if organizational facilities increase, employee job satisfaction will increase and if organizational facilities decrease, employee job satisfaction will decrease while other things remain constant.

5. DISCUSSION

Overall, it can be established that work life balance significantly influences job satisfaction among female faculty members of business schools of Karachi. Balancing the demands of work and personal life among female faculty members seems to have a significant impact on their job satisfaction level, which ultimately leads to improving their job performance and consequently overall organizational performance and its competitiveness. The concept of work life balance highlight the values, beliefs and attitudes of working women which enable them to work in organizations and balance their personal and professional life. It involves mutual support and efforts of number of partners including the employer, the organization, the family, and the society.

According to the results of this study, flexible working hours significantly impacts job satisfaction among female faculty members of business schools of Karachi. The results of this study indicates a positive significant relationship of flexible working hours with employee job satisfaction. The findings of this study are also supported by the research conducted by Ahmad et al. (2013) related to flexible working hours and job satisfaction who found that flexible working hours help to achieve a balance between job and family responsibilities at home among working women, especially for working mothers. Flexible working hours leads to more job satisfaction among employees as it increases employee wellbeing and help employees to fulfill their responsibilities outside of their work. They also investigated the advantages of implementing flexible working hours among female staff and found that flexible working hours contributed in creating a balance between the responsibilities of personal and professional life of employees. It was found that flexible working hours enable employees to have more suitable time to fulfill their household responsibilities without any stress. Therefore, flexible working hours increase job satisfaction among employees.

The findings of this study are also supported by another research conducted by Shagvaliyeva and Yazdanifard (2014) related to flexible working hours, job satisfaction and work life balance who found that flexible working hours contributed to benefits for both employees and employers. Flexible working hours leads to employee job satisfaction by providing employees flexibility in performing their job duties and fulfilling their roles outside of their work as well and helps in balancing their work and family life. Inverse significant relationship between workload and employee job satisfaction is found which means that if workload increase, employee job satisfaction will decrease and if workload decrease, employee
job satisfaction will increase. A research conducted by Mustafa and Ghee (2013) also supports the findings of this study who investigated the influence of daily workload on job satisfaction and found an inverse significant correlation between faculty workload and their job satisfaction. Therefore, the hypothesis of this study is supported by the research.

The results of this study are parallel with the results of the research conducted by Awang and Ahmad (2010) who found the similar inverse significant relationship between workload and job satisfaction among faculty members. It was also found that faculty members who felt more satisfaction with their jobs were those who had a good balance between their work and family life.

According to the results of this study, organizational facilities significantly impacts job satisfaction among female faculty members of business schools of Karachi. The results of this study indicate a positive significant relationship of organizational facilities with employee job satisfaction. The results of this study are also supported by the research conducted by Ansari et al. (2015) who also found a significant positive correlation between organizational facilities provided to employees for their work life balance and employee job satisfaction among female employees because happy and satisfied employees who have balance between their work and family life were more self-driven to work and perform better at their jobs as compared to those who were still striving to balance their work and family life. The results of this study are also parallel with the results of the research conducted by Saif et al. (2011) who found a significant impact of organizational facilities provided for work life balance on job satisfaction of employees.

From the results of this study, it is also found that most female faculty members desire to have some onsite facilities provided by the organization, which can enable them to manage their hectic working schedule and positively influence their work and family life, which ultimately leads to increased job satisfaction.

6. CONCLUSION AND RECOMMENDATIONS

The main purpose of this study was to find out the impact of work life balance on job satisfaction level of business schools of Karachi. It can be concluded that work life balance significantly influences job satisfaction among female faculty members of business schools of Karachi as it is measured through flexible working hours, daily amount of workload and organizational facilities. Therefore, the alternative hypothesis is accepted. A significant inverse relationship is found between daily amount of faculty workload and employee job satisfaction among female faculty members. The research findings show a positive significant impact of flexible working hours on employee job satisfaction among female faculty members. The research findings show a positive significant impact of organizational facilities on employee job satisfaction among female faculty members.
Therefore, it proves that female faculty members will be more satisfied if they are provided with flexible working hours and more on site organizational facilities, but they will be dissatisfied with their jobs if they are provided with excessive amount of workload, which they feel difficult to handle on the job while balancing their personal and professional life. They should be provided with flexible working hours so that they can better manage their responsibilities at home as well as their job demands. They should be provided with manageable amount of workload because overloaded faculty leads to poor performance and job dissatisfaction. More onsite organizational facilities should be provided to them as most female faculty members desire to have some onsite facilities provided by the organization, which can enable them to manage their hectic working schedule and positively influence their work and family life, which ultimately leads to increased job satisfaction. Policies and practices of work life balance should be formulated for faculty members, especially for female faculty members who have more responsibility towards their home and family while meeting job demands. Onsite day care facility should be provided as many female faculty members are married and have young children, that can take care of them during their working hours so that they can focus more on their work and perform efficiently.

They should have access to other facilities like transport facility for staff, health care and fitness facility at their workplaces so that they can save their time to visit a doctor or fitness center after a working day and finding a public transport or waiting for their personal transport to go home. These facilities will help them to achieve a balance between their work and family life, which will increase their job satisfaction level. There should be a comfortable working environment and a support for the implementation of policies and practices of work life balance, which leads to job satisfaction because satisfied workforce is considered as the most valuable asset for every organization. There is a need for educational institutes in Pakistan to provide their employees with work life balance facilities because of its miraculous effects on job satisfaction, which is a crucial factor for every organization’s success. A supportive management is required to minimize the conflict between work and family life among female faculty. Therefore, the top management should realize the importance of work life balance and its miraculous effects on job satisfaction.

7. PROSPECTS OF FURTHER RESEARCH

Future research can be conducted by taking other sectors and organizations as this research is conducted by taking educational sector only. Future research can be conducted by taking other regions of Pakistan for more authenticity as this study is limited to Karachi only. The future research can be conducted by considering other variables of work life balance that have significant impact on job satisfaction of employees. Similarly, in future research can be conducted by including male faculty members also as this study is limited to female faculty members only.
References


CPEC: IMPACT OF CHINA-PAKISTAN ECONOMIC CORRIDOR (CPEC) ON CHINA’S IMPORT AND EXPORT IN TERMS OF TRANSIT TIME AND SHIPPING COST

Bilal Ameen* Asif Kamran**

ABSTRACT
In current era many of countries including developed or developing are making economic strategies and alliances as well to enhance their trade volume with saving cost and transit. This paper will analyze the impact of China-Pakistan Economic Corridor on China’s trade with the projection of shipping cost and transit time including compare the current route and proposed route (CPEC). The methodology has been used qualitative and descriptive approach. In this study focused on three ports of Middle East for energy need basis (Jeddah, Kuwait and Oman) and European ports for mega trade volume base (Hamburg, Le Havre and Rotterdam). We have worked on this paper into three parts in first part the variables (Transit time and Shipping cost) of 40-foot Container is calculated in current route and same calculation has done for proposed (CPEC) route. (CPEC) is still in progress so it is difficult for us to get exact information that’s why its average values has been taken and in third part compare both current route and proposed route as well. The Result in which we can say that the shipping cost and transit time will reduce drastically if CPEC route followed, the shipping cost and transit time for European ports 45% to 60% and 11 to 13 days respectively, Approximate 50% to 70% for Middle east ports shipping cost will reduce including 11 to 18 days transit time as well, which means China Pakistan Economic Corridor will affect positively on china’s import and export to enhance its business volume with Middle East & Europe.

Key Words: China-Pakistan Economic Corridor (CPEC), Supply Chain Management (SCM), Transit time, Middle East and North Africa (MENA), Cost Reduction (Shipping Cost), Transit time.

JEL Classification: F15, F36, G02.

1. INTRODUCTION
In current globalization scenario every country wants to enhance their economic capacities to get special status in the world economy frame. We can say that sustainable growth and development in china during last three to four decades has assigned the country a special status in the frame of world economy which show its strength in the financial crisis of 2007-08 in which china economy emerged as a new economic power and also enhance its role in global governance. Every emerging economy also required more energy to fulfill their requirement on time with limited (short route) including cost reduction, these all requirements of this emerging economic power can be full fill by its “all-weather” friend Pakistan, through the China-Pakistan Economic Corridor (CPEC) Project.

Pakistan’s geographically location is very important for the world trade, because Pakistan is the main gateway of middle east and central Asia as well, It can be helpful to china in the sense of route because through Pakistan china get shortest access to middle east and Europe as well. That’s why china has interest in China-Pakistan Economic Corridor (CPEC),

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**Associate Dean, Management Science Department, Institute of Business & Technology, Karachi
because this route will be safe for China goods and it will be work as time and cost reduction route to make China’s economy more strengthened.

The basic aim of China-Pakistan economic corridor (CPEC) is to connect Gwadar Port (Baluchistan, Province of Pakistan) and Kashgar port which is major trading hub in (western China). China’s mega economy has mega energy requirement in the form of oil which is approximate 70% to 80% fulfilled by using Indian Ocean route. This route passes from Strait of Malacca, which patrolled by US and Indian navies to protect the cargo ships from pirates, this energy supply of China can be cut if any conflict arises which will be create most difficult situation for China. As compare to China’s current route China-Pakistan Economic Corridor (CPEC) is more safe including time and cost reduction as well.

According to the China’s perspective, China Pakistan Economic Corridor (CPEC) is strategically part of its ambitious one belt, one road (OBOR) project that attempts to provide regional connectivity, it is expected to save $2 Billion annually on its oil supplies from the gulf countries while for non-oil trade, China-Pakistan Economic Corridor (CPEC) would be providing a cost saving trade route from China’s western and central regions to its export market Middle East and North Africa (MENA).

2. REVIEW OF LITERATURE

Argue that Higher cost and longest transit duration are the main hurdle to make more efficient international trade in the frame of global logistics, all the organization want to enhancement in their profits for this they are searching alternative route to minimize their cost and transit time as well that’s why many of the logistics main companies using third party logistics to move on positively¹.

Explain in his articles regarding China-Pakistan Economic Corridor (CPEC) importance for China and regional integration and argue that due to this projects China exports will increase 86 percent through sea and the CPEC would bring a shift in the modes of transportation. A substantial fraction of trade with China will be diverted to the land route following the completion of the project. While sea transport is relatively cheap, road transport is the cheapest².

Argue that China-Pakistan Economic Corridor has turned a new leaf in Sino-Pak Relations and gives easier and cheaper access China to Middle East and Regional Countries by connecting Pakistan’s Seaport, Gwadar to western China. With

this development Pakistan's crippling economy will also be boost up. In this study it is also investigated that the Indian media shape its public opinion through dominant media frames by presenting an organized stereotyping project of CPEC³. China – Pakistan Economic Corridor (CPEC) is not only the connectivity of China and Pakistan but also has the potential of integrating other sub-regions of Asia and could play a key role in improving economic and strategically environment⁴. Argue Economic and Trade bilateral relations of china-Pakistan boosting and growing a constant level. The economic policies should be further reviewed to reduce the existing unbalancing between two countries, as china is the largest trade partner of Pakistan while the Pakistan is the second largest trade partner of china in the south Asian Region. Their relations are also moving from government sectors to private sector such as energy and telecom sector. Pakistan’s law and order situation also a reluctant for Chinese and foreign investor’s as well, hopefully this situation will be control soon and Pakistan’s economy will move on fast track⁵.

Islamabad and Beijing have bilateral economic cooperation in the form of Joint Economic Commission, Economic cooperation Group, Joint Investment Company and joint working group, in addition to other mechanism. Pakistan is the only country in south Asia with the free trade agreement and a currency swap agreement (CSA) with china; in this study it has also argue that the trade imbalance also the concerns of Islamabad’s and measures to lessen the gap are frequently discussed and calculated efforts are being made to raise the exports to china⁶.

Focus on time delivery, he explain its paper that logistic provider have the core responsibility to move and deliver goods on time to its customer because to move further in logistic business need higher delivery must be on time⁷.

2.1 Statement of Problem

This paper will analyze the multi-dimensional relationship between transit time duration and shipping cost via current route and proposed route of China-Pakistan Economic Corridor (CPEC).

2.2 **Significance of the Study**

China want to become a super power in economic globalization with the increasing of trade that’s why, China’s main vision is focusing on the one belt One Road (OBOR) for making shortest route to access the Middle East and European countries, China-Pakistan Economic Corridor (CPEC) is just part of this broad vision. This study will elaborate the china’s decision that China-Pakistan Economic Corridor (CPEC) has the capacity to fulfill China’s mega energy requirement with shortest and save route including saving trade/shipping costing (Import & Export ) with the comparison of current route as well.

2.3 **Theoretical Framework**

Due to the importance of this project its design/frame work has been modified with the detailed information of data and its sources as well. To get sound result Qualitative and descriptive approach has been a part of it to answer the research questions in the broad and calculated way.

2.4 **Hypothesis**

Is China-Pakistan Economic Corridor (CPEC) will impact positively or negatively on supply chain network of China especially in terms of Import and export (International Trade) including cost reduction and transit duration?

2.5 **Material**

As per requirement of this paper the data has been collected from both of the main sources like primary and secondary source as well.

2.6 **Primary Data**

Primary data has been gathered from different shipping companies directly to cross check the relationship between transit time and cost reduction between current and proposed routes.

2.6 **Secondary Data**

Secondary data has been also collected from the research articles, internet, business magazines and newspapers to analyze the importance of logistics in the network of supply chain.

2.7 **Variables**

In below given figure its paper variables are mention which are relate to independent (Shipping Cost and Transit Time) and dependent variable as International trade in terms of Import and export as well.
3. THE CHINA – PAKISTAN ECONOMIC CORRIDOR (CPEC)

China – Pakistan Economic Corridor (CPEC) is one of the milestone between these “truly iron brothers “which has a potential to bring regional economic integration and cooperation, it’s a win – win situation between both China and Pakistan as they are the primary beneficiaries of the project. The movement was created by Chinese Premier Li Keqiang in 2013, when he visited Pakistan and proposed China – Pakistan Economic Corridor (CPEC) and in 2015, when President Xi Jinping made a historic visit to Pakistan and signed 51 Memoranda of understanding (MoUs) of $46 billion dollars.

Table 3.2: CPEC investment Tree to elaborate distribution of Investment as per project importance.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Project</th>
<th>Cost in US$ Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Energy</td>
<td>33,793.00</td>
</tr>
<tr>
<td>2</td>
<td>Roads</td>
<td>6,100.00</td>
</tr>
<tr>
<td>3</td>
<td>Rail Network</td>
<td>3,690.00</td>
</tr>
<tr>
<td>4</td>
<td>Mass Transit in Lahore</td>
<td>1,600.00</td>
</tr>
<tr>
<td>5</td>
<td>Gwadar port</td>
<td>786.00</td>
</tr>
<tr>
<td>6</td>
<td>Others</td>
<td>44.00</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>46,013.00</td>
</tr>
</tbody>
</table>

China-Pakistan economic corridor (CPEC) is a long term plan having a time frame of 2014-2030. There are five main segments relate to this project.

1. Investment in terms of Industrial cooperation like Gwadar as a free zone.
2. Mega projects of infrastructure in terms of Rail Transport, Road and Aviation.

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4. Gwadar port in which its region socio-economics development on the way.

5. Mutually interest relate to other projects.

3.1 Pakistan’s Energy sectors

In China-Pakistan Economic Corridor core focus has been done on energy sector, maximum investment approximate of $33 billion – or approximate 70% to 72% of total proposed $46 billion investment relate to it to electricity generation through natural resources such a coal. Further $2.5 billion is also dedicated towards the construction of pipelines for transporting liquefied natural (LNGs) from Iran to the cities of Nawab shah (Sindh, Province) and Gwadar (Baluchistan, Province).

3.2 Infrastructure of Transport

It is the second largest component for the whole project in Pakistan’s transportation Network. Approximate $12 billion is invested in it which is 24% of the whole investment of this mega project to enhance Pakistan’s transportation infrastructure including, highways and Railway networks, In which 1,100 KM motorway connecting the coastal city of Karachi (Sindh, Province) with Lahore (Punjab, Province) which will move Pakistan’s economy in the positive way including internal connectivity as well.

3.3 Economic Zones and Development Projects in Gwadar

China-Pakistan Economic Corridor is based on One Belt One Road (OBOR), it has an importance due to the connectivity of Eurasian continent. Due to its importance Special Economic Zones SEZs has been played a key role to make financial centers. A primary example of such facilitation investment based on Gwadar Port in Baluchistan, which approximate 380Km from the sultanate of Oman it is a conduit for china to access Middle East. The establishment of free trade zones at the port of Gwadar similar to the FTZs in Hong Kong and Shanghai which is projection of Market Oriented scenario in presence, China’s top economic planner want to make the Gwadar Hub of Market – Oriented Growth in the economic aspects.
Project is still in beginning stages and many of its deliverable result are underworking. Its implementation depends on various factors that required further deliberation and discussion. There are many of challenges still on the way including security threats and political challenges it could face, other factor including china’s strategic policies, USA and India examined this process in the broad way that what it could be effective for both Pakistan and its neighboring countries.

3.4 China-Pakistan Economic Corridor (CPEC) Route with the projection of Supply Chain Management

Pakistan’s geological importance is much important due to the gate way for central Asia and offer central Asia states (Afghanistan, Uzbekistan, Kazakhstan, Kyrgyzstan and Turkmenistan) a shortest route of 2500 to 2600 Kilometers as compare to Iran 4500KM and Turkey 5000 KM.

Actually China-Pakistan Economic Corridor (CPEC) is a part of silk route belt that was proposed by Chinese President Xi Jinping in 2013, aimed relate to economic integration of Asia, Africa and Europe. China-Pakistan Economic Corridor (CPEC) emerged as a game changer in Asia because its importance can be evaluate like; it has mega Projects of infrastructure, railway, Highways and pipeline linking Kashgar dry port of China to Pakistan Gwadar Port with shortest route as well.

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9 Daniel S Markey and James West, Behind China’s Gambit in Pakistan (2017)
The current distance between Kashgar (Dry Port) China to Shanghai Sea Port China is approximate 5153 Kilometer and proposed distance between Kashgar to Gwadar is about 2800 to 3000 Kilometers which is almost half of the current route distance.

*Figure 3.2: CPEC proposed three routes Gwadar to Khunjerab National* \(^{10}\)

### 4. RESEARCH METHODOLOGY

According to this paper we are focusing on the transit time duration with shipping cost, because if we focus those organization who are dependent maximum of their import and export they were try to select the route in which they can save their time including transit cost savings.

To make more clarity we have to make this papers calculations most relevant that’s why in this paper we analyze the cost and transit time period of 40-foot containers. In this study we also focused on three ports of Middle East for energy need basis (Jeddah, Kuwait and Oman) and European ports for mega trade volume base (Hamburg, Le Havre and Rotterdam). We have used research methodology into three different parts as below to make more reliable result:

1. Calculations for shipping cost and time duration of current route.

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\(^{10}\) National Highway Authority, 2017
2. Calculations for shipping cost and time duration of Future Route (CPEC).

3. Analyzing of the both calculations; Current Route and Proposed Route (CPEC) as well.

4.1 Calculations for shipping cost and time duration of current route.

To move further in this regard we have selected three different destination countries from Europe and Middle East in which china’s mega volume of import and export business is going on after this, we have divide this portion into two parts one is relate to evaluate the import and export route with trade volume of destination countries on second portion we have calculated shipping cost and transit time as well, for 40-foot container based.

4.2 Evaluation of Export and Import Route with Trade Volume

4.2.1 Current Export Route

China currently doing business in mega level which evidence is that only china export was $2.37 Trillion in 2015, and the route which china follows currently to export their goods to destination countries can be elaborated in below sketch easily.

Figure 4.1: Representation of current route for export

The above mention sketch has shown that if china want to export their goods western china (Kashgar) it must be first dispatched from Kashgar by china road to shanghai (sea port) after it will be loaded to shipped destination port.

4.2.2 Export Volume

China always try to enhance their business volume with different countries main destination countries or ports with export volume will more clearly with below table.

Table 4.1: Export volume to selected destination countries \(^{11}\)

<table>
<thead>
<tr>
<th>Destination Countries</th>
<th>Total % of China Export</th>
<th>Export in $ Billions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>4.10%</td>
<td>92.50</td>
</tr>
<tr>
<td>France</td>
<td>2.10%</td>
<td>48.90</td>
</tr>
<tr>
<td>Netherland</td>
<td>1.70%</td>
<td>41.20</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>0.99%</td>
<td>23.40</td>
</tr>
<tr>
<td>Kuwait</td>
<td>0.17%</td>
<td>3.85</td>
</tr>
<tr>
<td>Oman</td>
<td>0.12%</td>
<td>1.21</td>
</tr>
<tr>
<td>Total</td>
<td>9.18%</td>
<td>211.06</td>
</tr>
</tbody>
</table>

The above mention chart clearly shows that Germany with $92.50 billion is in top importers of China products and with $1.21 billion Oman on the less importer of China’s products as well.

4.2.3 Current Import Route:

Every country currently making bilateral trading relation to each other or other regional powers to enhance their export and volume as well. If China want to import goods from destination port than China currently using below chart

*Figure 4.2: Representation of current route for Imports.*

The above charts clearly shows that’s for importing China used two ways one from destination ports and secondly from China roads as well. The relevant shipping cost gathered from freight forwarder and shipping time duration is available on shipping lines live.

4.2.4 Import Volume

China’s economy growing day by day that why it has also need to import some necessary goods to fulfill their industry requirements due to largest economy in the world China is stand on 2nd position, in 2015 China imports $1.27 Trillion

*Table 4.2: Import volume from selected destination countries*  

<table>
<thead>
<tr>
<th>Destination Countries</th>
<th>Total % of China Imports</th>
<th>Imports in $ Billions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>6.20%</td>
<td>78.60</td>
</tr>
<tr>
<td>France</td>
<td>1.60%</td>
<td>20.70</td>
</tr>
<tr>
<td>Netherland</td>
<td>0.72%</td>
<td>9.20</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>2.10%</td>
<td>26.70</td>
</tr>
<tr>
<td>Kuwait</td>
<td>0.55%</td>
<td>6.94</td>
</tr>
<tr>
<td>Oman</td>
<td>1.20%</td>
<td>14.70</td>
</tr>
<tr>
<td>Total</td>
<td>12.37%</td>
<td>156.84</td>
</tr>
</tbody>
</table>

The above mention chart shows that China maximum importing from Germany $78.60 Billions and less importing from Kuwait $6.94 Billion.

______________________________

4.3 Shipping Cost and Transit Time Calculation

In this portion we will first calculate the shipment cost from Kashgar (Western china) to seaport of shanghai and from shanghai to destination port as well, after this I have calculated the transit time as per same for exporting point of view. On the other hand for importing point of view same calculations have done to import from destination ports to shanghai port.

4.4 China Road Cost (Kashgar to Shanghai)

To make calculations of inland haulage charges from Kashgar to shanghai, we have multiply the total distance by the average per kilometer truck or rail cost as well. The total distance has taken from the Google map in which total distance has mention 5153 KM. The average per kilometer that is retrieved from AW Logistics, (LOGISTICS 2017) cost is $0.40 per kilometer. The reason is to taken average cost is that there is different local transport varies so average cost has been utilized. In below mention relevant calculation has been given.

Table 3.3: China Road Cost (Kashgar to Shanghai)

<table>
<thead>
<tr>
<th>Description</th>
<th>Distance in KM (Kashgar to Shanghai)</th>
<th>Per Kilometer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inland haulage charges</td>
<td>5153</td>
<td>$0.40</td>
</tr>
</tbody>
</table>

The above mention calculation shows that the cost will be approximate $2100 from kashgar dry port to shanghai sea port.

4.5 Current Route Shipping Cost including (Shanghai Port to Destination port)

The below mention chart has been calculated as below in which China Sea route (Shanghai Port to destination port has been taken from live vessel schedule of CMA lines. 

Current Route Shipping cost = China Road Cost (Kashgar to Shanghai port) + Shanghai sea Port to Destination port Cost

Table 4.4: Current Route shipping cost from Kashgar to destination ports

<table>
<thead>
<tr>
<th>Origin Port</th>
<th>Destination Port</th>
<th>Freight (Kashgar to Shanghai) in $</th>
<th>Sea Port (Shanghai to Destination Port) $</th>
<th>Total Freight in $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kashgar</td>
<td>Hamburg</td>
<td>2100 - 2200</td>
<td>1900 - 2000</td>
<td>4000 - 4200</td>
</tr>
<tr>
<td></td>
<td>Le Havre</td>
<td>2100 - 2200</td>
<td>1900 - 2000</td>
<td>4000 - 4200</td>
</tr>
<tr>
<td></td>
<td>Rotterdam</td>
<td>2100 - 2200</td>
<td>1900 - 2000</td>
<td>4000 - 4200</td>
</tr>
<tr>
<td></td>
<td>Jeddah</td>
<td>2100 - 2200</td>
<td>1300 - 1400</td>
<td>3400 - 3600</td>
</tr>
<tr>
<td></td>
<td>Kuwait</td>
<td>2100 - 2200</td>
<td>1300 - 1400</td>
<td>3400 - 3600</td>
</tr>
<tr>
<td></td>
<td>Oman</td>
<td>2100 - 2200</td>
<td>1200 - 1300</td>
<td>3300 - 3500</td>
</tr>
</tbody>
</table>

4.6 China Road (Kashgar to Shanghai) Transit Time

Regarding this portion transit time calculated by dividing total distance of kashgar to shanghai port by average truck or rail portion speed in this region. Truck or rail average speed 40 Kph has been taken from local transporters such as AW logistics.\(^{14}\)

*Table 4.5: Transit time from Kashgar to Shanghai Port*

<table>
<thead>
<tr>
<th>Description</th>
<th>Distance in KM (Kashgar to Shanghai)</th>
<th>Average Truck or Rail speed</th>
<th>Average delayed</th>
</tr>
</thead>
<tbody>
<tr>
<td>China Road Transit Time</td>
<td>5135</td>
<td>40 KPH</td>
<td>24 Hours</td>
</tr>
<tr>
<td>China Road Transit Time</td>
<td>128.37 Hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Time in Transit</td>
<td>152.37 Hours ( OR ) 6.3 Approximate 7 Days</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In above mention chart average time duration of 40-foot container has calculated including delayed time period of some issues like; strikes, weathers, Law and order situations, Traffic jams etc. That’s why assumption of 24 hours’ time delayed add in this time period.

4.6 Current Route Shipping Transit Period including (Shanghai Port to Destination port)

The below mention chart also is calculated as below:

**Current Route Shipping Duration = China Road Period (Kashgar to Shanghai port) + Shanghai sea Port to Destination port Transit Period**

*Table 4.6: Transit time from Kashgar to Destination Ports*

<table>
<thead>
<tr>
<th>Origion Port</th>
<th>Destination Port</th>
<th>(Kashgar to Shanghai) Transit Time</th>
<th>Sea Port (Shanghai to Destination Port) Transit Time</th>
<th>Total Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kashgar</td>
<td>Hamburg</td>
<td>7 - 8 Days</td>
<td>30 - 35 Days</td>
<td>37 - 43 Days</td>
</tr>
<tr>
<td></td>
<td>Le Havre</td>
<td>7 - 8 Days</td>
<td>30 - 35 Days</td>
<td>37 - 43 Days</td>
</tr>
<tr>
<td></td>
<td>Rotterdam</td>
<td>7 - 8 Days</td>
<td>30 - 35 Days</td>
<td>37 - 43 Days</td>
</tr>
<tr>
<td></td>
<td>Jeddah</td>
<td>7 - 8 Days</td>
<td>15 - 18 Days</td>
<td>22 - 26 Days</td>
</tr>
<tr>
<td></td>
<td>Kuwait</td>
<td>7 - 8 Days</td>
<td>15 - 18 Days</td>
<td>22 - 26 Days</td>
</tr>
<tr>
<td></td>
<td>Oman</td>
<td>7 - 8 Days</td>
<td>12 - 14 days</td>
<td>19 - 22 Days</td>
</tr>
</tbody>
</table>

4.7 Calculations for shipping cost and time duration of Future Route (CPEC)

**Table 4.7: Shipping Cost Kashgar to Gwadar (CPEC) Route**

<table>
<thead>
<tr>
<th>Description</th>
<th>Distance in KM (Kashgar to Gwadar)</th>
<th>* Per Kilo Meter Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pakistan Road Transit Time</td>
<td>2800</td>
<td>$0.25</td>
</tr>
<tr>
<td>Pakistan Road Inland haulage charges</td>
<td></td>
<td>$700.00</td>
</tr>
</tbody>
</table>

**Table 4.8: CPEC Route through Kashgar to Gwadar Transit Time**

<table>
<thead>
<tr>
<th>Description</th>
<th>Distance in KM (Kashgar to Gwadar)</th>
<th>Average Truck or Rail speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pakistan Road Transit Time</td>
<td>2800</td>
<td>40 KPH</td>
</tr>
<tr>
<td>Pakistan Road Transit Time</td>
<td>70 Hours</td>
<td></td>
</tr>
<tr>
<td>Total Time in Transit</td>
<td>94 Hours ( OR ) Approximate 4 Days</td>
<td></td>
</tr>
</tbody>
</table>

**Table 4.9: Total Transit time duration of CPEC route to destination ports**

<table>
<thead>
<tr>
<th>Origin Port</th>
<th>Destination Port</th>
<th>(Kashgar to Gwadar) Transit Time</th>
<th>Sea Port (Gwadar to Destination Port) Transit Time</th>
<th>Total Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kashgar China</td>
<td>Hamburg</td>
<td>3 - 4 Days</td>
<td>22 - 26 Days</td>
<td>26 - 30 Days</td>
</tr>
<tr>
<td></td>
<td>Le Havre</td>
<td>3 - 4 Days</td>
<td>22 - 26 Days</td>
<td>26 - 30 Days</td>
</tr>
<tr>
<td></td>
<td>Rotterdam</td>
<td>3 - 4 Days</td>
<td>22 - 26 Days</td>
<td>26 - 30 Days</td>
</tr>
<tr>
<td></td>
<td>Jeddah</td>
<td>3 - 4 Days</td>
<td>07 - 09 Days</td>
<td>10 - 13 Days</td>
</tr>
<tr>
<td></td>
<td>Kuwait</td>
<td>3 - 4 Days</td>
<td>02 - 04 Days</td>
<td>05 - 08 Days</td>
</tr>
<tr>
<td></td>
<td>Oman</td>
<td>3 - 4 Days</td>
<td>04 - 07 days</td>
<td>07 - 12 Days</td>
</tr>
</tbody>
</table>

**Table 4.10: Total Shipping Cost of CPEC route to destination ports**

<table>
<thead>
<tr>
<th>Origin Port</th>
<th>Destination Port</th>
<th>Freight (Kashgar to Gwadar) in $</th>
<th>Sea Port (Gwadar to Destination Port) In $</th>
<th>Total Freight in $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kashgar China</td>
<td>Hamburg</td>
<td>700 - 800</td>
<td>1800 - 1900</td>
<td>2500 - 2700</td>
</tr>
<tr>
<td></td>
<td>Le Havre</td>
<td>700 - 800</td>
<td>1800 - 1900</td>
<td>2500 - 2700</td>
</tr>
<tr>
<td></td>
<td>Rotterdam</td>
<td>700 - 800</td>
<td>1800 - 1900</td>
<td>2500 - 2700</td>
</tr>
<tr>
<td></td>
<td>Jeddah</td>
<td>700 - 800</td>
<td>900 - 1000</td>
<td>1600 - 1800</td>
</tr>
<tr>
<td></td>
<td>Kuwait</td>
<td>700 - 800</td>
<td>900 - 1000</td>
<td>1600 - 1800</td>
</tr>
<tr>
<td></td>
<td>Oman</td>
<td>700 - 800</td>
<td>300 - 400</td>
<td>1000 - 1200</td>
</tr>
</tbody>
</table>
4.8 Analyzing of the both calculations; Current Route and Proposed Route (CPEC) as well.

Table 4.11: Analyzing of Current and Proposed (CPEC) Route Shipping Cost

<table>
<thead>
<tr>
<th>Origin Port</th>
<th>Destination Port</th>
<th>Current Route Shipping Cost in $ (Taken from Table#05)</th>
<th>Proposed CPEC Route Shipping Cost in $ (Taken from Table#11)</th>
<th>Difference in $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kashgar China</td>
<td>Hamburg</td>
<td>4000 - 4200</td>
<td>2500 - 2700</td>
<td>1400 - 1500</td>
</tr>
<tr>
<td></td>
<td>Le Havre</td>
<td>4000 - 4200</td>
<td>2500 - 2700</td>
<td>1400 - 1500</td>
</tr>
<tr>
<td></td>
<td>Rotterdam</td>
<td>4000 - 4200</td>
<td>2500 - 2700</td>
<td>1400 - 1500</td>
</tr>
<tr>
<td></td>
<td>Jeddah</td>
<td>3400 - 3600</td>
<td>1600 - 1800</td>
<td>1800</td>
</tr>
<tr>
<td></td>
<td>Kuwait</td>
<td>3400 - 3600</td>
<td>1600 - 1800</td>
<td>1800</td>
</tr>
<tr>
<td></td>
<td>Oman</td>
<td>3300 - 3500</td>
<td>1000 - 1200</td>
<td>2300</td>
</tr>
</tbody>
</table>

Table 4.12: Analyzing of Current and Proposed (CPEC) Route Transit time duration.

<table>
<thead>
<tr>
<th>Origin Port</th>
<th>Destination Port</th>
<th>Current Route Transit Time (Taken from Table#07)</th>
<th>CPEC Route Transit Time (Taken from Table#10)</th>
<th>Difference in Transit Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kashgar China</td>
<td>Hamburg</td>
<td>37 - 43Days</td>
<td>26 - 30 Days</td>
<td>11 - 13</td>
</tr>
<tr>
<td></td>
<td>Le Havre</td>
<td>37 - 43 Days</td>
<td>26 - 30 Days</td>
<td>11 - 13</td>
</tr>
<tr>
<td></td>
<td>Rotterdam</td>
<td>37 - 43Days</td>
<td>26 - 30 Days</td>
<td>11 - 13</td>
</tr>
<tr>
<td></td>
<td>Jeddah</td>
<td>22 - 26 Days</td>
<td>10 - 13 Days</td>
<td>12 - 13</td>
</tr>
<tr>
<td></td>
<td>Kuwait</td>
<td>22 - 26 Days</td>
<td>05 - 08 Days</td>
<td>17 - 18</td>
</tr>
<tr>
<td></td>
<td>Oman</td>
<td>19 - 22 Days</td>
<td>07 - 12 Days</td>
<td>10</td>
</tr>
</tbody>
</table>

5. CONCLUSION AND RECOMMENDATION

The basic concept of this paper is relate to find the impact of China-Pakistan Economic Corridor (CPEC) on Chinese import and export inters of shipping cost and transit duration as well. The result of that we have concluded from this paper is that china has world leading economy followed by export of $2.37 Trillion and imports is $ 1.27 Trillion (OEC 2017) which means China-Pakistan Economic Corridor (CPEC) will be impact positively on Chinese import and export as well. According to the proceeding’s calculation of this paper we can say that China can save about approximate $1400 to $1500 shipping cost on each 40-foot container from European destination ports, $1800 from Middle East countries ports (Jeddah, Kuwait) and approximate $2300 from Oman in terms of transit time savings, it has save from 11 to 13days from European ports 12 to 13 days from Jeddah and Kuwait will save approximate 17 to 18 days its ports and 10 days from Oman ports as well in the frame of supply chain process.

China has not only the benefits of reduction shipping cost and transit time but also china can get cheapest form of raw material from destination ports to make more enhancement of exporting because when china get raw material in cheapest cost as compare to current route than it would be an advantage to compete its product with international market with low price to make their trade volume more strengthened, that’s why we can say that China-Pakistan Economic Corridor
CPEC will impact positively for China’s import and export in terms of shipping cost and transit time as well, China-Pakistan economic corridor (CPEC) in not only for these both countries but it will be play a key role for the regional integration and Middle East access to enhance regional connectivity with volume of trade as well with other neighboring countries. Every economical connectivity with different countries will be play also a positive role to control the security issues because when all regional countries will be integrate in terms of trade than they all will move endeavor to maintain batter security conditions

- China-Pakistan Economic Corridor (CPEC) is not only for the Pakistan and China it would be game changer for this region.
- Future route (CPEC) would also be positive for those companies of the other countries which export the goods and services to China to save shipping and transit time.
- Pakistan need’s to promote supply chain tools.
- Need to enhancement of human resource network.
- Encourage to regional countries to take part in this project to make it successful.
- Pakistan need to encourage investors to invest in on-going CPEC projects.
- Make law and order in the smooth way to impact magnetically on foreign direct investment.
- Make more infrastructure batter to fulfill future requirement specially to make supply chain network strengthen.
- China and Pakistan need to commercialize these projects to enhance its importance in this region and other regions as well.
- China needs to shift its maximum supply chain network from current route to proposed Route China-Pakistan economic corridor (CPEC) to save its cost and transit time as well.

References


ANALYZING KNOWLEDGE, ATTITUDE AND PRACTICES OF HEALTHCARE PROFESSIONALS REGARDING HEALTHCARE WASTE MANAGEMENT IN PUBLIC AND PRIVATE HOSPITALS OF KARACHI

Summya Khatoon*  Wajiha Saghir**  Riaz Hussain Soomro***

ABSTRACT

The aim to study is to examine the knowledge, attitude and practices of healthcare professionals including doctors, nurses and paramedical staff. The study joins a point by point overview of the age, gender, education and experience. Likewise, the general target of this project is to play out a study on the present medical waste administration in public and private hospitals. This study helps to pinpoint the gaps between the current KAP among the health-care professionals involved in waste management and furthermore the future desired state that should be reached. A structured questionnaire was utilized to gather the information. Non-probability quota sampling has been chosen with a sample of 124 respondents was gathered to cover the quantitative and qualitative analysis. Further it is divided into 3 departments who are producing more toxic waste in both public and private hospital of Karachi. These three are surgical department, gynecology department and medical/general ward. The study highlighted that despite the existence of law enactment for proper management, implementation of hospital waste management and waste disposal, it is not yet correctly and carefully implemented by health-care professionals. It is also revealed that there is a gap between current knowledge of HCWM among health-care professionals and that HWM implementation policies demanded. There should be in-depth and proper training and educational programs regarding practices and awareness of waste disposal, with continuous monitoring at systematic intervals.

Keywords: Knowledge, Attitude, Practices, Healthcare Professionals, Healthcare Waste, Waste Management.

JEL Classification: M1, I11

1. INTRODUCTION

Hospitals waste has been recognized as a potential wellbeing and natural danger or environmental hazard.\(^1\) Healthcare waste (HCW) is a term utilized for all the waste emerging from Healthcare services foundations.\(^2\) Between 75 – 90% of HCW is non-hazard waste (paper, bundling, sustenance waste and so forth), practically identical to local waste. The remaining 10 – 25% (USA 15%, India 15 to 35%, and Pakistan 20%) of HCW is viewed as danger waste (infectious, pathological, sharps and so forth) and make an assortment of health hazard.\(^3\)\(^4\)

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***Associate Professor, Institute of Health Management, Dow University of Health Sciences, Karachi, Pakistan.

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1 Laabar, Siriwong and Robson, Hospital waste management: A study on knowledge, attitude, and practices among health staff and waste handlers in Jigme Dorji Wangchuk National Referral Hospital, Thimphu, Bhutan, (Journal of Health Research), 26 no. 5, (2012)

2 Muhammad Ilyas, Public Health and Community Medicine, 7th ed. Time Publisher.


As indicated by a WHO report in 2015 around 85% of the healthcare waste are really non-hazardous, 10% are infective pharmaceutical and radioactive (hence, hazardous), and the rest of the 5% are non-infectious yet risky/hazardous (substance). World Health Organization (WHO) evaluation in 2002 indicated that, there were around 22 nations which had around 64% Hospitals with no legitimate waste discarding methods. Hospitals in developing nations including Asia experience improper management of waste. In developing countries, Healthcare waste management (HCWM) is still a noteworthy challenge for healthcare facility and inappropriate Hospital Waste Management has genuine effect on our surroundings. In 2006, around 92,000 hospital beds were there in Pakistan and around 2 Kg of waste per bed created each day. Altogether around 0.8 million tons of waste is created each day.\textsuperscript{5} Evaluation by World Health Organization that every year there are around 2.3 to 4.7 million instances of Hepatitis C infection (HCV), 8 to 16 million new instances of Hepatitis B infection (HBV) also, 80,000 to 160,000 instances of human insusceptible lack infection (HIV) because of perilous infusions and for the most because of extremely poor waste administration frameworks.

At the present time taking care of disposal and transfer of Biomedical/Healthcare waste has risen as a significant issue in Pakistan. The insufficient disposal and handling of healthcare waste may prompt transmission of transmissible diseases. The present review is led to concentrate on the familiarity of specialists, attendants, medical lab technologists and housekeeping staff, with biomedical/healthcare waste administration. Globally, implementation of the HCWM practices at hospitals has been seriously considered. But, presently there is no accessible data that surveys the practice of handling the healthcare waste products of Hospitals of Pakistan (in general) and Karachi (specifically). Under the circumstances of this deficiency, this study was designed to collect data and to determine the knowledge, attitude and practices of healthcare workers regarding health care waste management in public and private hospitals. So, the research objectives of this study are;

1. To determine the knowledge of healthcare professionals regarding health care waste management in public and private hospitals.

2. To determine the attitude of healthcare professionals regarding health care waste management in public and private hospitals.

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3. To determine the practices of healthcare professionals regarding health care waste management in public and private hospitals.

4. To determine the association between practices of healthcare workers and various underlying factors (Age, Gender, Education, and Experience).

The main idea is to examine the knowledge, attitude and practices of healthcare staff i.e. Doctors (Bachelors/MBBS/Specialist), nurses (Certificate/Diploma) or paramedical staff, along with the factors i.e. Age, Gender, Education, Experience. This study will recognize the knowledge, attitude and practices of healthcare professionals and to evaluate understanding level towards healthcare waste management. Likewise, the general target of this project is to play out a study on the present medical waste administration in public and private hospitals and a key strength of this study is the analysis of KAP related to health-care waste management gave us a one of a kind chance to give data around a subject which is inadequate in our nation. It also helps to pinpoint the gaps between the current KAP among the health-care workers involved in waste management and furthermore the future desired state that should be reached.

1.1 Hypothesis

Null Hypothesis (Ho): Knowledge is not dependent of health care waste management in public and private hospitals.

Alternate Hypothesis (Hₐ): Knowledge is dependent of health care waste management in public and private hospitals.

Null Hypothesis (Ho): Attitude is not dependent of health care waste management in public and private hospitals.

Alternate Hypothesis (Hₐ): Attitude is dependent of health care waste management in public and private hospitals.

Null Hypothesis (Ho): Practice is not dependent of health care waste management in public and private hospitals.

Alternate Hypothesis (Hₐ): Practice is dependent of health care waste management in public and private hospitals.

1.2 Research Question

To examine whether there is association between practices of healthcare professionals and various underlying factors (Age, Gender, Education, and Experience) is present or not?

2. LITERATURE REVIEW

2.1 History

Despite the fact that there have been numerous investigations in seeking after their aims of decreasing health issues and disposing of potential dangers to individuals' health, healthcare services benefits yet it definitely creates waste that
may itself be perilous or risky to wellbeing. Over the span, healthcare waste has the potential for diseases and harm more than any other waste. Wherever waste is produced; protected and dependable techniques for its handling are therefore essential.

Insufficient and unseemly healthcare waste treatment may have noteworthy effect on the surrounding and have a genuine public health outcomes or results. Sound administration of healthcare waste is consequently a critical segment of ecological health security. A particular hazard for the environment poses by a medical waste that has the possibility of the pathogens and microorganisms it contains coming into contact with the surrounding and only partly used therapeutic products or the presence of expired products capable of having toxic effects. Waste from animal bodies, autopsies, and other waste things that have been immunized, infected, or in contact with very infectious operators. From infected objects, not only HIV and hepatitis transmitted, but also blood-borne pathogens i.e. Ebola, hemorrhagic and malaria fever viruses are transmitted.

Generally, somewhere around 75% and 90% of the waste delivered by healthcare services is non-hazard (non-contagious, non-hazardous) general waste, equivalent to local waste. Just a little section of healthcare waste is viewed as risky and may make health dangers. An evaluation of waste production rate information from around the globe demonstrates that around 0.5 kg for each bed every day is created in hospitals. Some waste created in hospitals is too perilous to possibly be dealt with carelessly and indiscretion in the administration of this waste may contaminate surrounding and spread diseases.

Healthcare waste (HCW) is considered as the second perilous or hazardous waste in the World that should be appropriately arranged via prepared healthcare staff. Great information, uplifting attitude and safe practices of healthcare staff is exceptionally basic while dealing with this infectious waste. Around the world, an expected

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7 Prüss, Giroult and Rushbrook. Safe management of wastes from health-care activities, World Health Organization
8 Bostoen and Kristof, Landfilling healthcare waste: sustainable method of disposal or threat to public health, WEDC, (1997)
billion infusions are managed each year, not all needles and syringes are discarded securely, making a danger of damage and contamination and open doors for reuse.\textsuperscript{12} Between 162 and 321, out of 300,000 cases of viral hepatitis B infection recorded annually that are resulting from HCW exposure in the USA.\textsuperscript{13} An occupational injury had reported the highest annual rate in waster handlers and cleaning personnel in the USA, 180 out of 1000 and as compared to that of housekeeping personnel and nurse, whose injury rate annually are ten to twenty per thousand workers.\textsuperscript{14}

Different reports have highlighted the risks of improper transfer of healthcare services waste. An orderly audit of healthcare waste administration in 40 low-and middle-income nations uncovered considerable issues in urban areas in Africa, Asia, and the Middle East exacerbated by expanding amounts of healthcare waste and disposal and improper treatment. The study noticed that notwithstanding the malicious health impacts of incinerator outflows and fiery remains, numerous incinerators were obsolete and broken and, as an outcome, infectious waste was openly burned or regularly disposed of with municipal waste.\textsuperscript{15} If the small amount of HCW is safely and carefully handled and segregated so it can be treated by a satisfactory treatment which shall be suitable and cost-effective sustainable operation in the local condition.\textsuperscript{16 17}

2.2 \hspace{1cm} Statistics

Absence of mindfulness about the health dangers or hazards identified with Health care waste, deficient training in appropriate waste administration, nonappearance of waste administration and disposal frameworks, lacking money related and HR and the low need given to the point are the most well-known issues associated with health care waste. Numerous nations either don't have suitable controls, or don't uphold them.

The disposal of medicinal waste in UK has turned out to be exceptionally costly and it is assessed that UK spends more than £125 million for the treatment of Health Care Waste.\textsuperscript{18} The idea of manageability is inadequate in the health care

\textsuperscript{12} WHO guideline on the use of safety-engineered syringes for intramuscular, intradermal and subcutaneous injections in health-care settings. World Health Organization.


\textsuperscript{14} Prüss, Giroult and Rushbrook, World Health Organization

\textsuperscript{15} Harhay, Halpern, and Olliaro, Tropical Medicine and International Health, 14 no. 11, (2009): 1414–1417.

\textsuperscript{16} Coad, Adrian and Jurg. How are we managing our health care wastes by SKAT. Swiss Centre for Development Cooperation in Technology and Management, (1999)

\textsuperscript{17} Prüss, Giroult and Rushbrook, World Health Organization.

frameworks in Britain.\textsuperscript{19} In UK there is an absence of examination and exact information about the generation patterns of healthcare waste all together to give a confirmation or evidence base to future basic leadership. The different reasons towards poor people waste administration rehearses far and wide are:

- The nonattendance of waste administration.
- Lack of mindfulness about the health risks.
- Poor control, HR and insufficient budgetary of waste disposal.
- Lack of strict and proper controls.
- The reasonable attribution of obligation of proper taking care of and waste disposal.

Northern part of Jordan average production rates of aggregate therapeutic waste in the hospitals were evaluated to be 5.62 kg/persistent/day (3.14 kg/bed/day), 6.10 kg/tolerant/day (3.49 kg/bed/day), and 4.02 kg/understanding/day (1.88 kg/bed/day) for maternity, public and private clinics, separately. For therapeutic research facilities, rates were observed to be in the scope of 0.053-0.065 kg/test-day for legislative labs, and 0.034-0.102 kg/test-day for private labs.\textsuperscript{20} There are strict enactments at the local, territorial and national levels which are outfitted towards the correct administration of unsafe and hazardous clinical waste produced in developing nations, said WHO. In developing nations, the aggregate sum of healthcare waste produced in chosen hospitals (Peru, Viet Nam, Metro Manila, Philippines) differed from 0.54 to 1.39 kg/bed-day. Then again, the reported measure of infectious (yellow bag, clinical) waste produced in these facilities changed from 0.30 to 0.34 kg/bed-day. The total amount of waste produced in a Portuguese hospital was accounted for to be around 3.9 kg/bed-day (1.9 kg/bed-day non-infectious and 2.0 kg/bed-day infectious).\textsuperscript{21}

On a typical around 520 kg of non-contagious and 101 kg of contagious waste is delivered each day (around 2.31 kg for every day per bed, net weight including both contagious and non-contagious waste).\textsuperscript{22} Only 27% sanitary staffs were seen to have a capacity of contingency of diseases through biomedical waste.\textsuperscript{23}

\textsuperscript{21} Risks and costs associated with the management of infectious wastes, WHO/WPRO, (2003).
\textsuperscript{22} Patil, Pokhrel, Waste Management, 25 no.6, (2005): 592–599.
\textsuperscript{23} Mathur, Dwivedi, Hassan and Misra, Knowledge, attitude, and practices about biomedical waste management among healthcare personnel: A cross-sectional study, 36 no. 2, (2011): 143-145.
Overuse of infusions (injections) is basic all in all medicinal practice in the developing nations, including Pakistan. All disposal restorative equipment and supplies including needles, syringes, plastic containers, trickles and infusion bags should be cut or broken and rendered non-reusable at the purpose of utilization by the individual in-control. Needle cutter utilized in 60% of hospitals. In Pakistan, 2.9kg/patient-day generates 4.1 kg/patient-day in Maternity homes. Clinics and dispensaries produces 0.06 kg/ patient-day infectious waste from 0.075 kg/patient-day and in basic health units produces 0.03 kg/patient-day infectious waste from 0.04kg/patient-day.

2.3 Medical Waste Treatment Technologies

Writing surveys on disposal of waste/waste treatment advancements are somewhat opposing. The absolute most basic innovations incorporate incinerators, sterilization or autoclave, irradiation, sterilization, chemical disinfection, microwave, concoction sterilization and secured landfill. As per past studies, around 49–60% of therapeutic waste is treated by different burnings, 20–37% via autoclave disinfection, and 4–5% by other techniques. Thermal energy is being utilize in Incineration to decay waste materials to non-combustible residue or fiery remains and fumes gasses. The Fly and base buildups created after therapeutic waste incineration contain high state of overwhelming metal like Pb, Cd, Ni, Cr, Cu and Zn. Therapeutic waste a High estimations of metal leachability preclude the area filling of these cinders as forced by EU mandates. The criteria utilized to assess mechanical alternative ought to consider health, ecological, what more, financial or economic variables is. Medicinal waste administration is a range which needs more research and study to equip it towards maintainability.

3. MATERIALS AND METHODS

The study was based on healthcare waste management among healthcare professionals working at public and private hospitals of Karachi. The study was done for a period of two months November & December 2016.

The study group of healthcare professionals were grouped into four subgroups as Doctors, Nursing staff, Paramedical staff and other workers. 63 doctors, nursing staff 33, paramedical staff 27 and 1 other worker.

Non-probability quota sampling has been chosen to cover the quantitative and qualitative analysis. A structured questionnaire was designed to assess the situation of healthcare waste management at public and private hospitals. It comprised of questions related to demography, perceptions and knowledge of healthcare professionals including doctors, nurses and paramedical staff. Demographics included information about the healthcare professionals’ age, gender, education, degree/ diploma, occupation and experience. The reliability of the questionnaire was assessed by applying reliability test that displays Cronbach alpha as 0.84.

**Knowledge:** Knowledge was defined as Adequate Knowledge and Inadequate Knowledge. There were total 10 numbers of knowledge related questions. Each correct answer contains 1 mark. If Healthcare worker scores 24 (70%) out of 34 (100%), it was considered as Adequate and if Healthcare worker scores less than 24 (70%), it was considered as Inadequate.

**Attitude:** An Attitude was defined as a positive or negative attitude. There were total 10 numbers of attitudes related questions. Each question contains 1 mark. If Healthcare worker scores 7 (70%) out of 10 (100%), it was considered as positive attitude and if Healthcare worker scores less than 7 (70%), it was considered as negative attitude.

**Practices:** Practice of the Healthcare worker was defined as Good Practice or Bad Practice. There were total 4 numbers of practice related questions. Each question contains 1 mark. If Healthcare worker scores 3 (75%) out of 4 (100%), it was considered as good practice and if Healthcare worker score less than 3 (75%), it was considered as bad practice.

4. DISCUSSIONS

In the study, out of total 124 healthcare workers, majority were doctors 63 followed by nurses’ 33, paramedical staff 27 and other 1 who took part in this study. Females were predominantly higher 79 as compared to males 4. Their knowledge, attitude and practice on with respect to healthcare waste management was evaluated by utilizing structured
questionnaire. The information was analyzed utilizing percentages and proportions. In tables 4.1, 4.2 and 4.3 details are displayed.

Table 4.1 presents that every one of the classifications of healthcare professionals have satisfactory or adequate knowledge about hospital waste (used syringes, used scalpers/ blades, swabs, waste blood, left over bandages) associated hazard diseases, waste disposal, needle injury, segregation and color coding, knows the risk and non-risk waste. It also demonstrates that laws of HCWM and sufficient knowledge provided by supervisor for HCWM are the two areas where knowledge is slightly lacking. Majority of healthcare professionals desired to have educational program regarding healthcare waste management, routine medical checkup and thinks that health care workers should wear personal protective equipment before handling healthcare waste.

Nearly 73% doctors and 67.2% nurses/paramedics wear PPE before handling any healthcare waste. 34.9% of the doctors and 44.3% nurses/paramedics do not undergo routine checkup. The small portion of study population that do not properly go for disposal of used needles and other sharps and do not follow color-coding for healthcare waste.

Healthcare professionals of all categories had adequate knowledge about hospital waste associated hazard diseases, needle injury concern, segregation and color coding and knows the risk and non-risk waste. As to issues confronted by doctors and nurses/paramedics, the Responses acquired were poor accessibility and understanding of needle destroyers, less strict principles, gloves and outfits and absence of sufficient information from supervisor for healthcare waste management. Proposal or suggestions delivered by doctors/nurses/paramedics that educational programs regarding healthcare waste management and guidelines should be executed and is required.

<table>
<thead>
<tr>
<th>S#</th>
<th>Questions regarding Knowledge on healthcare waste management</th>
<th>Correct Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Doctors</td>
</tr>
<tr>
<td>1</td>
<td>Know what healthcare waste management is</td>
<td>60 (95.2%)</td>
</tr>
<tr>
<td>2</td>
<td>Know about Laws regarding healthcare waste management</td>
<td>34 (54%)</td>
</tr>
<tr>
<td>3</td>
<td>Supervisor provided sufficient knowledge for healthcare waste management</td>
<td>31 (49.2%)</td>
</tr>
<tr>
<td>4</td>
<td>Used Syringes, used scalpers / blades, Used swabs, Waste blood, Left over bandages, Waste body parts are Hazardous healthcare waste or not?</td>
<td>63 (100%)</td>
</tr>
<tr>
<td>5</td>
<td>Know the difference b/w Risk waste and non-risk waste</td>
<td>48 (76.2%)</td>
</tr>
<tr>
<td>6</td>
<td>Know which color is used for separation of hospital waste infections</td>
<td>41 (65.1%)</td>
</tr>
<tr>
<td>7</td>
<td>Hazard diseases associated with hospital waste</td>
<td>61 (96.8%)</td>
</tr>
<tr>
<td>8</td>
<td>How the waste should be carried from waste to final disposal area</td>
<td>55 (87.3%)</td>
</tr>
<tr>
<td>9</td>
<td>How hospital waste should be disposed off</td>
<td>59 (93.7%)</td>
</tr>
<tr>
<td>10</td>
<td>Is needle injury a concern</td>
<td>63 (100%)</td>
</tr>
</tbody>
</table>
Table No 4.2: Attitude regarding healthcare waste management

<table>
<thead>
<tr>
<th>S#</th>
<th>Questions regarding attitude on biomedical waste management</th>
<th>Correct Answers</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Doctors</td>
<td>Nurses/Paramedics</td>
<td>N (N%)</td>
</tr>
<tr>
<td>1</td>
<td>Proper segregation and disposal of HCW is a part of your responsibility</td>
<td>55 (87.3%)</td>
<td>50 (82%)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Labelling of container before filling it with waste is of any clinical significance</td>
<td>55 (87.3%)</td>
<td>42 (70.5%)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Healthcare waste management is not an issue at all</td>
<td>61 (96.8%)</td>
<td>52 (85.2%)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>needle stick only a financial burden injury or any exposure to hazardous waste concern for you</td>
<td>55 (87.3%)</td>
<td>39 (63.9%)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Healthcare waste should be disposed of in an incinerator</td>
<td>53 (84.1%)</td>
<td>47 (77%)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Different type of waste should be separated near incinerator</td>
<td>39 (61.9%)</td>
<td>29 (47.5%)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Risk waste and non-risk waste should not throw together in a bin</td>
<td>42 (66.7%)</td>
<td>35 (57.4%)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>HC. workers should undergo routine medical checkup because of handling healthcare waste</td>
<td>60 (95.2%)</td>
<td>53 (86.9%)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Would you like to have some educational program for healthcare waste</td>
<td>62 (98.4%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>HC. workers should wear Personal protective equipment before handling healthcare waste</td>
<td>61 (96.8%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table No 4.3: Practice regarding healthcare waste management

<table>
<thead>
<tr>
<th>S#</th>
<th>Questions regarding practice on biomedical waste management</th>
<th>Correct Answers</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Doctors</td>
<td>Nurses/Paramedics</td>
<td>N (N%)</td>
</tr>
<tr>
<td>1</td>
<td>Do you wear PPE before handling healthcare waste</td>
<td>46 (73%)</td>
<td>41 (67.2%)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Do you follow color-coding for healthcare waste</td>
<td>26 (41.3%)</td>
<td>32 (52.5%)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Ever consult doctor for routine check-up</td>
<td>22 (34.9%)</td>
<td>27 (44.3%)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Properly go for disposal of used needles and sharps</td>
<td>56 (88.9%)</td>
<td>52 (85.2%)</td>
<td></td>
</tr>
</tbody>
</table>

Healthcare workers of all categories had adequate knowledge, positive attitude about hospital waste associated hazard diseases, needle injury concern, segregation and color coding and knows the risk and non-risk waste yet slightly bad practice had seen as the healthcare workers did not up to their routine check-up, color-coding of waste is not practiced as recommend and absence of sufficient information from supervisor for healthcare waste management. Hospitals waste has been recognized as a potential wellbeing and natural danger or environmental hazard. Healthcare waste (HCW) is a term utilized for all waste emerging from Healthcare services foundations. This study was conducted in public and private hospitals in Karachi among healthcare workers or professionals. There were 124 respondents in the study (63 doctors, nursing staff 33, paramedical staff 27 and 1 other worker).

The healthcare waste management is created by different sources. The significant sources are public and private hospitals, animal research centers and veterinary universities. The study highlighted how in a developing country such
as Pakistan, despite the existence of law enactment for proper management, implementation of hospital waste management and waste disposal is not yet correctly and carefully implemented by health-care professionals.

The study showed that more than 95% of the doctors had knowledge about HWM and the laws regarding to it. However, doctors (49.2%) and nurses/paramedics (59%) had not have sufficient knowledge that was supposed to be provided by supervisor. The study also revealed that doctors and nurses/paramedics were aware about the hazardous healthcare waste, knows the difference between non-risk and risk waste, how the waste should be disposed of and also had knowledge about needle stick injury.

Regarding attitude towards HCWM, majority felt that HCWM is an issue and Educational programs are necessary for healthcare workers along with this healthcare workers should undergo routine medical checkup. Bangladesh, Iran and Pakistan likewise have comparative discoveries, demonstrating lack of knowledge in few areas, insufficient usage and accessibility of personal protective equipment (PPE), inadequate separation of risky and non-risky waste and lastly, absence of laws and policy for waste management. Findings of our study is similar to some previous studies.\textsuperscript{31} \textsuperscript{32} \textsuperscript{33}

In Table 4.4, chi-square analysis shows P value - 0.001 that displays there is a significance of hospital (public/private) with knowledge, attitude and practices of medical/healthcare professionals which means knowledge, attitude and Practice are dependent of health care waste management in public and private hospitals.

\begin{table}[h]
\begin{center}
\begin{tabular}{|c|c|c|}
\hline
\textbf{Hospital} & \textbf{Knowledge, Attitude & Practices} & \textbf{p-value} \\
& \begin{tabular}{c}
Inadequate/Negative/Bad  \\
(n=46) n (\%)
\end{tabular} & \begin{tabular}{c}
Adequate/Positive/  \\
Good (n=78) n (\%)
\end{tabular} \\
\hline
Public & 33 (53.2) & 29 (46.8) \\
Private & 13 (21) & 49 (79) \\
\hline
\end{tabular}
\end{center}
\caption{Comparison of Knowledge, Attitude & Practices of the medical professionals with general characteristics \textit{(n=124)}}
\end{table}

Different reviews from Pakistan uncover comparable circumstance in major hospitals of the country. One study outlined that the greater part of the hospitals did not have disease control and waste administration groups set up.

\textsuperscript{31} Askarian, Vakili and Kabir, Hospital waste management status in university hospitals of the Fars province, Iran. (International Journal of Environmental Health Research), 14 no. 4, (2004): 295-305.
\textsuperscript{33} Kumar, Samrongthong and Shaikh, Knowledge, attitude and practices of health staff regarding infectious waste handling of tertiary care health facilities at metropolitan city of Pakistan. (J Ayub Med Coll Abbottabad), 25 no.1-2, (2013): 109-12.
Moreover just 50% of the hospitals had central and temporary capacity areas.\textsuperscript{34} Healthcare waste has by now been revealed to be unlawfully and irrationally reused or recycled which may have critical results to the animal and human health in the nearby environment.\textsuperscript{35}

5. **CONCLUSION**

Concluding up from the outcomes, in developing nations, the administration procedures of HCW require considerably more consideration than the present technologies for waste treatment. In any case, adequate care ought to be taken to pick economically and environmentally supportable technological and mechanical alternatives. All the healthcare workers are required to know about appropriate collection, segregation, and transport to the last disposal point. A solitary training period is not adequate or sufficient for complete and effective practice of healthcare administration. The significance of training with respect to healthcare waste administration can't be overemphasized; absence of complete and proper knowledge about healthcare waste administration impacts practices of proper waste transfer. There is likewise a requirement for educational programs to comprehend the hospital work and the best possible collection and transport of hospital waste. We suggest that strict supervision ought to be followed in everyday hospital waste management exercises. The whole waste management practices should be a piece of total hygiene practice of the general public as opposed to binding to hospital and health.

**References**


Coad, Adrian, and Jurg Christen. 1999. "How are we managing our health care wastes by SKAT." *Swiss Centre for Development Cooperation in Technology and Management, Vadianstrasse 42*.


DYNAMIC RELATIONSHIP AMONG SUSTAINABLE GROWTH RATE, PROFITABILITY AND LIQUIDITY OF FIRMS
A CASE STUDY FROM PHARMACEUTICAL SECTOR IN PAKISTAN

Muhammad Zubair Memon* Zahid Ali Channar** Shahid Obaid***

ABSTRACT
This paper aims to examine the relationship among profitability, liquidity and sustainable growth rate of pharmaceutical firms which are listed in the Pakistan stock exchange during 2007-2014. By using correlation analysis to examine the relationship among the sustainable growth rate and Return on Assets (ROA), Return on Equity (ROE,) Earnings per Share (EPS), Current and Acid test ratios. It is analyzed that there is significant relationship between sustainable growth rate and quick ratio, current ratio, return on asset and earnings per share while there is no evidence received from this study for relationship between the sustainable growth rate and firm size and return on equity.

Keywords: Sustainable Growth Rate, Financial ratio, Profitability ratio and Liquidity ratio
JEL Classification: G3

1. INTRODUCTION
As development requires comparable increment in resources for support without value issuance, any benefit increments must be financed with included liabilities or from held income. In this manner if money related arrangements are unaltered, the rate of shareholder value development will constrain deals development. The sustainable development rate is particularly significant on the grounds that it consolidates working (overall revenue and resource effectiveness) and monetary (capital structure and consistency standard) components into one far reaching measure.¹ Utilizing sustainable growth rate, directors and financial specialist can start to gage whether the firm’s future development arrangements are sensible in view of their present execution and approach or not.

Along these lines, Sustainable Growth Rate can give administrators and speculators understanding into the levers of corporate development.² The idea of Sustainable Growth Rate was initially created by C. Higgins. He showed that the money related approaches of numerous enterprises may be at difference with their development objective.

As a guide for setting perfect budgetary arrangements and development destinations. Supportable Growth Rate is the greatest rate at which organization deals can increment without consumption money related assets.³

² Nirali Pandit and Rachana Tejani, Sustainable Growth Rate of Textile and Apparel Segment of the Indian Retail Sector, 11 (2011) 6, 39-44

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***Lecturer, Department of Business Administration, Sindh Madressatul Islam University, Karachi.
The Sustainable Growth Rate of any organization is dictated by the accompanying four elements:

1. Overall revenue. An expansion in the overall revenue increment the association's capacity to create finances inside and in this way increment its economic development.

2. Net resource turnover. An expansion in the firm’s net resources turnover builds the deals produced for every rand in resources; this decline the firm’s requirement for resources as deals develop consequently increment the Sustainable Growth Rate.

3. Money related strategy. An expansion in the Debt/Equity proportion increment the firm “s money related use; and since this makes extra obligation financing accessible, it increment the SGR

4. Profit arrangement. A reduction in the rate of net benefit after assessment paid out as profits increment the maintenance proportion, thusly expanding inside produced value and hence expanding practical development.

The Sustainable Growth Rate equation is a profitable arranging device since it stresses the connection between the four elements portrayed above and Sustainable Growth Rate. It is additionally certain that if an organization does not have any desire to issue offers or change its benefit, resource turnover, money related adapting or profit approach; it has just a single Sustainable Growth Rate. A real development rate in deals not quite the same as manageable development rate is conflicting with a settled monetary arrangement and like it or not, organizations will be notable keep up money related focuses under this condition.

Profitability ratios are a class of financial metrics that are used to assess a business's ability to generate earnings compared to its expenses and other relevant costs incurred during a specific period of time. For most of these ratios, having a higher value relative to a competitor's ratio or relative to the same ratio from a previous period indicates that the company is doing well.

Liquidity ratios measure a company's ability to pay debt obligations and its margin of safety through the calculation of metrics including the current ratio, quick ratio and operating cash flow ratio. Current liabilities are analyzed in relation to liquid assets to evaluate the coverage of short-term debts in an emergency. Growth of a firm requires the monitory

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resources and liquidity that how quick a firm can liquidate its assets and these are determinants which are studied in this study.

2. **THEORETICAL FRAMEWORK**

Develop firms frequently have actual development rates that are not as much as sustainable growth rate. In these cases, administration's primary target is finding profitable utilizations for the trade streams that exist out overabundance of their needs. Alternatives accessible to entrepreneurs and administrators in such cases incorporate giving back the cash to shareholders through expanded profits or basic stock repurchases, lessening the association's obligation stack, or expanding ownership of lower procuring fluid resources. Over the past several years, various growth models have been defined.

These models can be categorized into two areas: traditional (debt /equity) determined and cash flow – determined models. Traditional growth rate model use the debt to equity or debt to total assets ratio as a limiting factor. The growth rates of capital intensive companies are best determined with a traditional model.5

2.1 **Zakon's model**

A well- known model is that of the Boston Consulting Group’s Model (BCG):

\[
SGR = \frac{D}{E} \cdot (R - i) \cdot p + R_p
\]

Where,
- \( SGR \) = Sustainable growth rate
- \( \frac{D}{E} \) = debt / equity ratio
- \( R = ROA \)
- \( i = \) interest rate (1- taxation rate) and
- \( p = \) retention ratio

When we investigations the parts of the equation , unmistakably the SGR is resolved as far as an organization's gainfulness, and also money related strategies in regards to budgetary adapting and profits.

2.2 **Van Horne’s Model of Sustainable Growth Rate**

Sustainable Growth Rate also defined as the maximum annual percentage increase in sales that can be achieved based on target operating, debt and dividend-payout ratios.6 Given this definition, a company can determine if their projected

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sales are a realistic goal. Van Horne’s sustainable growth rate model is the quantitative descriptive of the sustainable growth rate which is the variance of the sale income, i.e.

$$SGR = b \frac{(NP/S) (1+D/E)}{(A/S)} - b \frac{(NP/S)}{(1+D/E)}$$

Where,
- $A/S$ is the rate of the total assets and the sales,
- $NP/S$ is the net profit rate,
- $b$ is the retained profits ($1 - b$ is the dividends ratio),
- $D/E$ is the ratio of the debt and the equity,
- $S$ is the sales in the recent year, and
- $\Delta S$ is the absolute variance of the sales in the recent year.

This formula can be written in following way also.\(^7\)

$$SGR = \frac{ROE \cdot b}{1 - (ROE \cdot b)}$$

Where,
- $b$ is the Dividend Payout Ratio (dividends divided by earnings)
- $ROE$ is the Return on Equity (net income divided by shareholders’ equity).

### 2.3 Higgins’s Model of Sustainable Growth Rate

Higgins’s Model the model for computing SGR is\(^8\):

$$SGR = (P) \frac{(1-R) (1+L)}{A-(P) (1-R) (1+L)}$$

Where,
- $P=$ Profit Margin on Sales after Taxes
- $R= Percent of Profit Returned to Owners$
- $L = Debt to Equity Ratio$
- $A = Asset to Sales Ratio$

SGR is a measure that firms for different purposes, such as to evaluate the creditworthiness of companies. If the actual growth rate in the sales of a company is greater than the SGR, financial institutions are prepared to advance loans to the company or to assist in the issue of shares in order to provide the capital needed. If the actual growth rate of sales is consistently lower than the SGR, the cumulative cash surpluses would need to be invested and the financial institution may offer investment products to the company.\(^9\)

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\(^9\) JH De Wet, Growth sales and value creation terms of the financial strategy matrix, University of Pretoria ETD, (2004)
It can also be written as:

$$SGR = PRAT$$

Where,
- $P$ is the Profit Margin (net profit divided by revenue)
- $R$ is the Retention Rate (1 minus the dividend payout ratio)
- $A$ is the Asset Turnover Ratio (sales revenue divided by total assets)
- $T$ is the Assets-to-Equity Ratio (total assets divided by shareholders’ equity)

The growth rate in sales is limited by the growth we can obtain from the equity side of the Balance Sheet. Therefore, sustainability is a function of equity growth rates, not sales growth rates. The formula for calculating a sustainable growth rate (SGR) is:

$$SGR = \text{Margin} \times \text{Turnover} \times \text{Leverage} \times \text{Retention}$$

Margin = Net Income / Sales

Turnover = Sales / Assets

Leverage = Assets / Equity

Retention = % of Earnings Retained

Therefore, in the event that we need to keep up a steady level in overall profit margins, asset turnover, leverage, and retained earnings, than we ought to develop our deals by SGR (sustainable growth rate). Changing the reasonable development rate is an element of the four segments of economic development. For instance, disposing of negligible items can build the Margin segment or paying out less profits will expand the Retention segment. The trap is to deal with the four segments so that business development takes after the sustainable growth rate. As described the sustainable growth rate (SGR) concept by Robert C. Higgins is based on several assumptions such as constant profit
margin, constant debt to equity ratio or constant asset to sales ratio. Therefore, general applicability of SGR concept in cases where these parameters are not stable is limited.

2.4 Challenges of sustainable growth rate

Business experts argue that achieving sustainable growth is not possible without paying attention to two important aspects. Companies that fail to give adequate attention to one aspect or the other are doomed to fail in their efforts to establish practices of sustainable growth in the long run. Achieving the sustainable growth rate is the prime concern of managers of companies, whether small or big. But in a fast changing economic, political and competitive environment, achieving the sustainable growth rate is not an easy task, especially in the present highly complex global environment.

3. Development of hypothesis

According to Higgins, SGR depends upon the change in equity in a financial year divided by opening equity without any additional equity introduced during the year. Such a change is possible only through the retained earnings. thus, the funds generated through retained earnings increase the net worth of the firm and with the increase in the net worth, the firm can borrow more funds which would enables the firm to increase its asset base. The increase in assets results in increase in operation which ultimately results in increase in profit and thereby increases in retained earnings.

Following are the hypothesis which are needed to test:

H$_1$: There is significant relationship between the sustainable growth rate and current ratio.

H$_2$: There is significant relationship between the sustainable growth rate and Acid ratio.

H$_3$: There is significant relationship between the sustainable growth rate and Return on Assets (ROA).

H$_4$: There is significant relationship between the sustainable growth rate and return on equity (ROE).

H$_5$: There is significant relationship between the sustainable growth rate and earnings per share (EPS).

H$_6$: There is significant relationship between the sustainable growth rate and size of the firm (Log (TA)).


4. METHODOLOGY

4.1 Sample Selection

The statistical population is all pharmaceutical firms listed in Pakistan Stock Exchange. Out of ten, six companies are selected for the sample. Statistical sample of the research has been gained through applying following conditions:

1. Due to their having a nature of operation different from other corporate, investment and financial corporate have been omitted from sample of research.
2. Loss firms are excluded from our sample.
3. Required information such as financial statements and notes to financial statements, summary of decisions taken by regular general meeting having been published by stock exchange organization are available.

4.2 Research method

The correlation analysis is used in this study. Correlation researches are researches that researcher try to determine relationship between different variables using with correlation coefficient. In these researches, appointment coefficient is criterion that this criterion describes relationship between independent and dependent variables. Amount of this coefficient states what percentage of changes in dependent variable are described by independent variable. Also we used descriptive statistics such as central indexes as well as dispersion for data analyzing.

4.3 Variables Definition

The acid-test or quick ratio or liquidity ratio measures the ability of a company to use its near cash or quick assets to extinguish or retire its current liabilities immediately. Quick assets include those current assets that presumably can be quickly converted to cash at close to their book values.

The current ratio is a liquidity ratio that measures a company's ability to pay short-term and long-term obligations. To gauge this ability, the current ratio considers the current total assets of a company (both liquid and illiquid) relative to those company’s current total liabilities.

Return on assets (ROA) is a financial ratio that shows the percentage of profit a company earns in relation to its overall resources. It is commonly defined as net income divided by total assets. Net income is derived from the income statement of the company and is the profit after taxes. The formula of ROA is Return on Assets (ROA) = Net Income / Total Asset
Return on equity (ROE) is a measure of profitability that calculates how many dollars of profit a company generates with each dollar of shareholders' equity. The formula for ROE is: ROE = Net Income/Shareholders' Equity. ROE is sometimes called "return on net worth."

Earnings per share (EPS) are the portion of a company's profit allocated to each outstanding share of common stock. Earnings per share serve as an indicator of a company's profitability. However, data sources sometimes simplify the calculation by using the number of shares outstanding at the end of the period.

Firm size has become such a routine to use as a control variable in empirical corporate finance studies that it receives little to no discussion in most research papers even though not uncommonly it is among the most significant variables.

5. DATA ANALYSIS

5.1 Descriptive Analysis

Table 5.1 provides the descriptive statistics for all variables utilized in this study. The table reports the mean, minimum, maximum and standard deviation.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SGR</td>
<td>48</td>
<td>-7.95</td>
<td>52.19</td>
<td>10.9267</td>
<td>12.38900</td>
</tr>
<tr>
<td>QR</td>
<td>48</td>
<td>.08</td>
<td>2.57</td>
<td>0.8571</td>
<td>.68186</td>
</tr>
<tr>
<td>CR</td>
<td>48</td>
<td>.96</td>
<td>4.49</td>
<td>2.1769</td>
<td>.93856</td>
</tr>
<tr>
<td>FS</td>
<td>48</td>
<td>5.68</td>
<td>7.06</td>
<td>6.3998</td>
<td>.40149</td>
</tr>
<tr>
<td>ROE</td>
<td>48</td>
<td>.16</td>
<td>52.20</td>
<td>25.5444</td>
<td>12.65806</td>
</tr>
<tr>
<td>ROA</td>
<td>48</td>
<td>3.12</td>
<td>36.41</td>
<td>17.2444</td>
<td>9.32674</td>
</tr>
<tr>
<td>EPS</td>
<td>48</td>
<td>2.81</td>
<td>50.24</td>
<td>13.3356</td>
<td>9.60256</td>
</tr>
</tbody>
</table>

Based on table 1, the average percentage of Quick ratio, current ratio, firm size, return on equity, return on asset and earnings per share equal to 0.8571, 2.1769, 6.3998, 25.54, 17.24, and 13.3356 respectively. The table provides some information about SGR variable, which ranges from -7.95 to 52.19 and a standard deviation of 12.3890 with the mean value of 10.9267.

5.2 Correlation Analysis

Tables 5.2, 5.4, 5.6, 5.8, 5.10 and 5.12 reports Pearson Correlation Analysis and regression for all companies in the sample whereas tables 5.3, 5.5, 5.7, 5.9, 5.11 and 5.13 contain the results from the linear regression model used to test the respective hypotheses.
5.3 Results of H1

Table 5.2: Correlations

<table>
<thead>
<tr>
<th></th>
<th>SGR</th>
<th>QR</th>
</tr>
</thead>
<tbody>
<tr>
<td>SGR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.394**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.006</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>QR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.394**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.006</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>48</td>
<td>48</td>
</tr>
</tbody>
</table>

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

Table 5.3: Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>4.794</td>
<td>2.686</td>
<td>1.785</td>
</tr>
<tr>
<td></td>
<td>QR</td>
<td>7.156</td>
<td>2.462</td>
<td>.394</td>
</tr>
</tbody>
</table>

Dependent Variable: SGR

Results in table 5.2 shows that Correlation coefficient is 0.394 which means that there is a significant relationship between sustainable growth rate and the quick ratio.

5.4 Results of H2

Table 5.4: Correlations

<table>
<thead>
<tr>
<th></th>
<th>SGR</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>SGR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.328*</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.023</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>CR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.328*</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.023</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>48</td>
<td>48</td>
</tr>
</tbody>
</table>

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

Table 5.5: Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>1.494</td>
<td>4.351</td>
<td>.343</td>
</tr>
<tr>
<td></td>
<td>CR</td>
<td>4.333</td>
<td>1.838</td>
<td>.328</td>
</tr>
</tbody>
</table>

Dependent Variable: SGR
Results in table 5.4 have shown that Correlation coefficient is 0.328 in which means that there is a significant relationship between sustainable growth rate and the current ratio.

5.5 Results of H3

Table 5.6: Correlations

<table>
<thead>
<tr>
<th></th>
<th>SGR</th>
<th>FS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SGR</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>48</td>
</tr>
<tr>
<td>FS</td>
<td>Pearson Correlation</td>
<td>-0.399*</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>48</td>
</tr>
</tbody>
</table>

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

Table 5.7: Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>89.774</td>
<td>26.747</td>
<td>3.356</td>
</tr>
<tr>
<td>FS</td>
<td>-12.320</td>
<td>4.171</td>
<td>-0.399</td>
<td>-2.954</td>
</tr>
</tbody>
</table>

Dependent Variable: SGR

Results in table 5.6 Shows that Correlation coefficient is -0.399 which means that there is a no significant relationship between sustainable growth rate and the firm size.

5.6 Results of H4

Table 5.8: Correlations

<table>
<thead>
<tr>
<th></th>
<th>SGR</th>
<th>ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SGR</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>48</td>
</tr>
<tr>
<td>ROE</td>
<td>Pearson Correlation</td>
<td>.058</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>48</td>
</tr>
</tbody>
</table>

Table 5.9: Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>9.477</td>
<td>4.099</td>
<td>2.312</td>
</tr>
<tr>
<td>ROE</td>
<td>.057</td>
<td>.144</td>
<td>.058</td>
<td>.394</td>
</tr>
</tbody>
</table>

Results in table 5.8 shows that Correlation coefficient is 0.058 in the entire sample companies’ level. It means that there is a no significant relationship between sustainable growth rate and the return on equity.
5.7 Results of H5

Table 5.10: Correlations

<table>
<thead>
<tr>
<th></th>
<th>SGR</th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td>SGR</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.030</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>48</td>
</tr>
<tr>
<td>ROA</td>
<td>Pearson Correlation</td>
<td>.313*</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.030</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>48</td>
</tr>
</tbody>
</table>

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

Table 5.11: Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>3.758</td>
<td>3.638</td>
<td>1.033</td>
</tr>
<tr>
<td>ROA</td>
<td>.416</td>
<td>.186</td>
<td>.313</td>
<td>2.235</td>
</tr>
</tbody>
</table>

Results in table 5.10 shows that Correlation coefficient is 0.307 in the entire sample companies’ level. It means that there is a significant relationship between sustainable growth rate and the return on asset.

5.8 Results of H6

Table 5.12: Correlations

<table>
<thead>
<tr>
<th></th>
<th>SGR</th>
<th>EPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SGR</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.056</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>48</td>
</tr>
<tr>
<td>EPS</td>
<td>Pearson Correlation</td>
<td>.278</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.056</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>48</td>
</tr>
</tbody>
</table>

Table 5.13: Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>6.144</td>
<td>2.992</td>
<td>2.054</td>
</tr>
<tr>
<td>EPS</td>
<td>.359</td>
<td>.183</td>
<td>.278</td>
<td>1.963</td>
</tr>
</tbody>
</table>

Results in table 5.12 have shown that Correlation coefficient is 0.278 in the entire sample companies’ level. It means that there is a significant relationship between sustainable growth rate and the earning per share.
6. CONCLUSION

The results show that there is significant relationship among sustainable growth rate and quick ratio, current ratio, return on asset and earnings per share while there is no evidence for the relationship between the sustainable growth rate and firm size and return on equity. It is found that return of equity is a profitability ratio but it has no significant relationship with firm’s sustainable growth rate. Due to this, there is a room for further research on sustainable growth rate with other firms and sectors. Implication of this study is basically finding out that where a firm should must give its attention to get sustainability in their growth rate. Moreover it provides a route to new researches about sustainable growth rate of firms in different sectors and opens a door for the researcher to open out hidden truth. Future research should be conducted taking into some financial ratios such as the financial leverage and other profitability ratios. An additional research might also be directed towards the effect of deviation of actual growth rate from sustainable growth rate on liquidity and firm performance using larger samples and longer time series.

References

**Guidelines to Authors for Manuscript**

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Title, Abstract (not more than 250 words) and keywords (Max. 5) Introduction, Materials and Methods, Results, Discussions, Conclusions, and References

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- Margins: 2.5 cm (all four sides).
- Font style: Times New Roman.
- Font size: 10 for normal text; 10 (bold) for headings and 12 (bold) for title of the manuscript

**References:**
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Sindh Madressatul Islam University is a chartered University, duly recognized by the Higher Education Commission (HEC) of Pakistan. It is one of the oldest institutions in South Asia. The Founder of Pakistan, Quaid-e-Azam Mohammad Ali Jinnah, studied at this institution for about four and a half years from 1887-92.

Its campus is located in the commercial hub of Karachi, near I.I. Chundrigar Road (old McLeod Road) in vicinity of Habib Bank Plaza and MCB Tower. It is spread over more than eight acres of land and comprises some of the most beautiful colonial era buildings designed by architect James Strachan in 1880s. The Founder of Pakistan Quaid-e-Azam Mohammad Ali Jinnah studied at this institution for about four and a half year from 1887-92.

The SMI University has started with five departments, each offering graduate and undergraduate program. The departments are Media Studies, Computer Sciences, Business Administration, Environmental Sciences and Education.

The University has Jinnah Museum also, which contains the relics associated with the founder of the institution, Khan Bahadur Hassanally Effendi, as well as educational records of Quaid-e-Azam Mohammad Ali Jinnah and other alumni. It has recently established an archives section also, where important record is being preserved.

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Email: info@smiu.edu.pk, URL: www.smiu.edu.pk