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Corporate Governance Performance Relationship and the Role of Institutions and Culture: New Evidence from Asian Microfinance Institutions

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ABSTRACT

Purpose: In a globalized world today, Microfinance Institutions (MFIs) are concerned about their corporate governance mechanism to enhance financial and social performance. However, it largely depends on the existing institutional, cultural and economic factors. This paper furthers the debate on the impact of corporate governance on the financial and social performance of Microfinance Institutions (MFIs) in Asian Context.

Design/Methodology/Approach: The paper utilizes a panel cross-country data set comprised of 183 MFIs in 18 Asian countries over the period of 2010-2018. For empirical analysis, it applies GMM regression technique to control for the endogeneity issue.

Findings: The results show that generally corporate governance mechanism contributes more towards social performance of MFIs than the financial performance and a conducive institutional environment enhances both financial and social performance. However, good cultural and economic values contribute only towards the social performance of MFIs.

Implications/Originality/Value: Since majority of MFIs irrespective of their status are socially oriented. Therefore, good corporate governance mechanism is more effective in enhancing social performance in particular. Progress towards human development contributes to both financial and social performance of MFIs.

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Introduction
Microfinance institutions (MFIs) provide both financial and non-financial services to relatively marginalized section of the society (Mersland and Strom 2013; World Bank 2006). Corporate governance (CG) plays a very important role for structuring and protecting the objective of the organizations and help to achieve these objectives. “It is a process through which stakeholders guide the MFI to define and protect the mission and the institutions assets” Campion et al. (2008). The fact that corporate governance mechanisms affect firm’s performance has been substantiated by ample literature (Zagorchev et al. 2015; Bozec et al. 2012; Fooladi et al. 2011; De Jong et al. 2002; Mitton 2002). In the microfinance context, recently CG performance relationship is empirically investigated in many studies (Nawaz et al., 2018; Thrikawala et al. 2013; Galema et al. 2012; Hartarska and Mersland, 2012; Tehuingoua 2010; Bassem 2009; Manderlier et al. 2009; Mersland and Strom, 2008; 2009; Coleman and Osei 2008; Polanco 2005).

However, the literature suggests that corporate governance-performance nexus is affected by various country specific economic, cultural and institutional factors which are investigated in few studies in the context of conventional firms (Strese et al. 2016; Li, J et al. 2016; Griffin et al. 2015; Handley et al. 2015). The controversy surrounds about the role of country level factors, whether they as external governance mechanisms which constrain managerial discretion within firms (e.g., investor protection, disclosure regimes, market for corporate control) or they should capture the national context and the outcomes of the quality of national governance systems. Kaufmann et al. (2011) argues that governance research would benefit from finer distinction between rules-based and outcome-based indicators of national governance. Whereas rules-based indicators measure if countries have adequate anticorruption legislation or agencies and outcome-based indicators capture if anticorruption laws are actually enforced. Schiehl and Martins (2016) highlights the contextual factors to distinguish between the country and firm specific governance mechanisms. Which act as external mechanisms by reducing managerial through highlighting the agency conflicts within the firm. Besides cultural effects vary across countries in ethical context because of the difference in sensitivity (Simga-Mugan et al. 2005), value system (Ford et al. 2005), judgments (Whipple and Swords 1992), decision making (Smka 2004), and perception (Vitell and Paolillo 2004) among others. Therefore, the corporate governance-performance relationship at cross country level controlling for institutional, cultural and economic factors is an area worth investigating.

In this backdrop, this paper aims to find out “to what extent cultural, institutional and economic factor affect the relationship between corporate governance-performance relationship. And more specifically “Do cultural, institutional and economic factors affect the relationship between corporate governance and MFIs financial and social performance in Asia?” The paper is organized as follows. Section II discusses the relevant literature followed by research methodology presented in section III. The descriptive and empirical analysis is presented in section IV. Finally, we conclude in section V.

Literature Review
The essence of corporate governance is to enhance the welfare gains in a society and one way of achieving this is to increase the performance of firms (Mersland and Strom 2010; Labie 2001). However, considering the agency theory, suggesting a conflict between the managers and owners, a permanent conflict exists between managers and owners, the corporate governance practices come handy in minimizing these conflicts through various internal and external corporate controls, competition in the market, regulations regulating the institutional structures and financial markets (Jensen, 1993). The literature provides conclusive evidence of the effectiveness of good CG controls in increasing the firms performance (Liu et al. 2015; Black and Kim, 2012) which eventually leads to decision making strategically devised to increase the firms revenues through strict monitoring and controls (Salim et al. 2016; Rock et al. 1998). The optimum value of board size is one of many other effective control mechanisms, for which the literature provides ample evidence. As
suggested by Jensen (1993), the optimal number of Bods (Board of Directors) is around seven or eight members, beyond which the performance of board starts diminishing. Whereas the Lipton and Lorsch (1992) suggested this optimal number to be ten members, beyond which it is difficult to summarize the opinions of all members. In social performance perspective, Hartarska and Mersland (2012) finds this optimal board size to be of nine members.

Along with the board size, the literature highlights other effective corporate control mechanisms which are the presence of international directors on board (Herrera et al. 2016; Beislandet al. 2014; Mersland et al. 2009) qualification of board members (Manderlier et al. 2009), and gender diversity (Thrikawala et al. 2013; Bassem 2009). Chen (2015) finds a strong relationship between board structure and firm characteristics. Board diversity affects the decision-making processes (Varhegyi, 2016; Rao & Tilt 2015). Female representatives on board leads to increased firm performance (Tremblay 2016; Thrikawala et al. 2013; Bassem 2009). MFIs can generate incentives and mechanisms to improve their social performance by intentionally choosing board members with more social oriented profiles (Mori et al. 2015). The experience and knowledge of board member in the field of microfinance also increase efficiency (Manderlier et al. 2009). Another corporate governance indicator which is highly used in literature is CEO duality (Duru et al. 2016; Tang 2016; Van Damme et al. 2016; Walthoff-Born 2015; Beisland et al. 2014 Thrikawala et al., 2013). Agency theory advocates that in firm having separate CEO & chairman, the conflict between management and board tends to be minimized which increases firm performance (Coleman and Osei 2008). On the other hand, once the role of CEO and chairman of the board is combined, the CEO is likely to have greater control and liberty in decision making which leads to riskier decisions (Galema et al. 2012; Hartarska et al. 2012; Mersland et al. 2009). MFIs performance is also affected by its ownership status. Nonprofit organizations (NPOs) focus more on the social welfare of the society while for-profit shareholder firms are more profit oriented (Gebremichael et al. 2016; Salustri, et al. 2015). NPOs are more prone to agency conflicts as compared to SHFs, because of their weak governance and monitoring structure (Galema et al. 2012). Regulation in SHFs, in addition to decreased agency conflicts, also provide some indirect benefits which ultimately increase the outreach of MFIs (Tchuigoua 2010; Lauer 2008; Mersland et al. 2008; 2009; Hartarska and Nadolnyak, 2007). Majority of NPOs, on the other hand, lend primarily to women particularly in Asia. Presence of female CEO in such MFIs contributes towards social performance (Strom et al. 2016; Périlleux et al. 2015; RØ Strøm et al. 2014; Mersland and strom 2009; Welbourne, 1999). At cross-country level, the heterogeneity exists in cultural, institutional and economic conditions cause variation in corporate governance mechanism and its relationship with firm’s performance (Hahn and Kühnen, 2013; Baughn et al. 2007; Welford, 2004, 2005; Maignan and Ralston, 2002; Howell, 2001). The absence of religious and military leaders from politics, lower levels of religious and ethnic tensions, and minimal levels of armed conflict are also related to institutional stability (Ramady, 2014). Chen and Hao (2011) argue that institutional institutions can affect the country’s information environment and thus shareholders’ ability to monitor firms. Similarly, Piotroski et al. (2010) claim that the benefits of transparency in many developing countries are masked by high levels of ownership concentration, politicized institutions, and corruption. Inclusive institutions contribute towards overall economic development of countries and in this process firms too are better regulated leading towards better performance (e.g., Roe and Siegel, 2009, 2011; Keefer, 2008; Rajan and Zingales, 2003). Glaeser et al. (2004) and Qi et al. (2010) argue that institutional institutions should reflect the ex-ante view of restrictions on government behavior rather than the ex post government performance. Culture also affects the relationship of corporate governance and performance. “It consists of the unwritten rules of the social game and is the mutual programming of the mind that differentiates the members of one group or category of people from others” (Hofstede et al., 2010). Heterogeneous societies divided among the cultural lines have greater element of mistrust among the society member unlike homogeneous societies (Strese et al, 2016; Li et al 2016; Engelen et al. 2014; Malik & Zhao, 2013;
Trompenaars & Hampden-Turner (1998; Sales & Mirvis, 1984). No wonder that prevailing national culture strongly affects the corporate governance and eventually firm’s performance (Schneider & Meyer, 1991; Langlois & Schlegelmilch, 1990). Cross-country evidence shows that there exists minimum connection between firm-level corporate governance practices and firm value in individualism societies. However, societies which avoid uncertainties have fond to have strong relationship between firm level corporate governance and performance (Dale Griffin et al., 2015).

Methodology
Data and Sample
Data from 183 MFIs in 18 Asian countries has been collected for the period of nine years from 2010 to 2018. Only 4 diamond rated and above MFIs listed on the mix market website are included in the sample. Overall the population comprised of 1684 MFIs located in 18 countries of Asia. The final sample included in the study is 183 MFIs having 4 diamond rating. Data for the financial and social performance indicators is taken from the MIX market website. Whereas, data related to the construction of CGI index is collected from various sources including rating reports of various agencies. The summary statistics of all independent and dependent variables and their definitions are presented in Table 3.1. The maximum value of CGI is 7 and the lowest is 2. The average values of ROA and OSS are positive and majority of MFIs lend to women.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Definition</th>
<th>Mean</th>
<th>Std.Dev</th>
<th>Min</th>
<th>Max</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate governance Index (CGI)</td>
<td>Self-constructed at shown in table 3.2</td>
<td>4.062</td>
<td>1.028</td>
<td>2</td>
<td>7</td>
<td>4.09</td>
</tr>
<tr>
<td>Return on assets (%) (ROA)</td>
<td>Net income after taxes and before donations/average assets</td>
<td>0.082</td>
<td>0.533</td>
<td>-2.78</td>
<td>7.6</td>
<td>0.03</td>
</tr>
<tr>
<td>Operational self-sufficiency (%) (OSS)</td>
<td>Financial revenues / (financial expenses + loan Expenses loan loss expenses + operating expenses)</td>
<td>1.166</td>
<td>0.468</td>
<td>-0.12</td>
<td>11.4</td>
<td>1.15</td>
</tr>
<tr>
<td>Women to total borrowers (%) (WTB)</td>
<td>Percentage of women clients/ total clients</td>
<td>0.709</td>
<td>0.308</td>
<td>0</td>
<td>1.1</td>
<td>0.81</td>
</tr>
<tr>
<td>Average loan size (%)</td>
<td>Outstanding loans/ no. of borrowers</td>
<td>0.386</td>
<td>0.596</td>
<td>-0.78</td>
<td>6.13</td>
<td>0.19</td>
</tr>
<tr>
<td>Human development index (HDI)</td>
<td>Three dimensions: Income, Health and Education</td>
<td>0.621</td>
<td>0.095</td>
<td>0.44</td>
<td>0.91</td>
<td>0.607</td>
</tr>
<tr>
<td>Domestic credit (DC)</td>
<td>Ratio of Domestic credit to private sector</td>
<td>41.692</td>
<td>17.363</td>
<td>13.18</td>
<td>99.93</td>
<td>41.79</td>
</tr>
<tr>
<td>Globalization index (GI)</td>
<td>KOF index of Globalization</td>
<td>52.232</td>
<td>7.885</td>
<td>34.5</td>
<td>75.51</td>
<td>51.36</td>
</tr>
<tr>
<td>Inflation (%)</td>
<td>Taken from Worldbank data set</td>
<td>7.629</td>
<td>8.412</td>
<td>-0.94</td>
<td>247</td>
<td>6.91</td>
</tr>
<tr>
<td>Democracy index (DI)</td>
<td>Taken from the Polity IV data set</td>
<td>0.338</td>
<td>1.190</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Corruption perception index (CPI)</td>
<td>Taken from the Worldbank governance index</td>
<td>30.005</td>
<td>7.462</td>
<td>18</td>
<td>53</td>
<td>28</td>
</tr>
<tr>
<td>Hofstede index (HI)</td>
<td>Taken from Hofstede Index website <a href="https://geert-hofstede.com/countries.html">https://geert-hofstede.com/countries.html</a></td>
<td>46.738</td>
<td>5.969</td>
<td>35</td>
<td>61</td>
<td>47.67</td>
</tr>
</tbody>
</table>

Corporate Governance Index
This paper has extended the corporate governance index originally devised by Nawaz et al (2018). The selection of variables in the construction of CGI index is based on the existing literature among which, the board size (Salim et al; 2016; Jensen .1993), female CEO (Périelleux et al.2015; Mersland and Strom, 2009; Strom et al.2016), board qualification (Manderlier et al. 2009), international
directors (Mersland et al. 2009), CEO/Chairman duality (Thrikawala et al. 2013; Duru et al. 2016; Tang, 2016), and ownership type (Salustri, et al. 2015) are extensively used.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board size</td>
<td>Dummy equals 1 if the board size is greater than equals to mean value and less than equals to 9, 0 otherwise.</td>
</tr>
<tr>
<td>Female directors</td>
<td>Dummy with value 1 if MFI has female presence in board, 0 otherwise.</td>
</tr>
<tr>
<td>Board qualification</td>
<td>Dummy with value equals 1 if board has enough experience and knowledge in microfinance, 0 otherwise.</td>
</tr>
<tr>
<td>International directors</td>
<td>Dummy with value equals 1 if board has no international directors, 0 otherwise.</td>
</tr>
<tr>
<td>CEO/Chairman duality</td>
<td>Dummy with value equals 1 if CEO and chairman roles are separated, 0 otherwise.</td>
</tr>
<tr>
<td>Ownership type</td>
<td>Dummy with value 1 if MFI is a SHF, 0 otherwise.</td>
</tr>
<tr>
<td>Female CEO</td>
<td>Dummy indicating value 1 if MFI’s CEO is female, otherwise 0.</td>
</tr>
</tbody>
</table>

Source: Nawaz et. al (2018)

The Method

Dynamic Panel Generalised Method of Moment (GMM) Estimation

In the conventional finance literature, the relationship between CG and firm performance has been thoroughly investigated. However, there exist potential sources of endogeneity leading towards biased results and only few recent studies have taken up this issue. However due to the complexity in identifying the exogenous factor in corporate governance, the researchers followed different approached to tackle the endogeneity in this context fixed and random approach and conventional instrumental approach lack dealing with dynamic endogeneity which arises when the CG–firm performance relationship is influenced by past performance. The dynamic nature of this relationship is hardly been investigated in microfinance context (Mersland & Ström, 2009; Bassem, 2009; Hartarska, 2005.;). As proposed by (Thrikawala et al. 2017) this paper applies the dynamic panel generalized method of moments (GMM) technique to provide robust results.

Based on GMM technique originally proposed by Hansen (1982) various studies (Holtz- Eakin, Newey, and Rosen (1988), Arellano and Bond (1991), Arellano and Bover (1995) and (Blundell & Bond, 1998) further refined this technique in dynamic panel data models. GMM technique results in unbiased consistent and efficient estimators through non-parametric approach and it further control for possible co-relations among independent variables (Schultz et al., 2010; Baltagi, 2008). Therefore, the problems of heteroscedasticity, simultaneity and dynamic endogeneity is accounted for.

This paper follows the model proposed by Wintoki et al. (2012), where CG has a dynamic relationship with firm performance and is a function of past performance and other firm characteristics. Thus, the dynamic model for CG is as follows:

\[ X_{it} = f(Y_{i, t-1}, Y_{i, t-2}, ..., Y_{i, t-p}, Z_{i, t}, \mu_{it}, \epsilon_t) \]  

Where, \( X \) represents the board governance of firm \( ith \) in year \( tth \); \( Y \) represents the firm performance (social and financial); \( Z \) represents the other control variables, \( \mu \) denotes the unobserved time-invariant firm effects, \( \epsilon \) represents the random error term and \( p \) is the number of lags of firm performance.
Based on the above equation 1, the estimations of the effect of CG on firm performance can be expressed as follows:

\[ Y_{it} = f(Y_{i,t-1}, Y_{i,t-2}, \ldots Y_{i,t-p}, X_{i,t}, Z_{i,t}, \mu_i, \epsilon_{it}) \] ................. 2

The key assumptions in this model are the use of lags as instrumental variables (IVs) (Wintoki et al., 2012). The benefit of using lag variables is that they control for potential simultaneity and reverse causality. This method is only designed for situations where there are “short T, large N” panels, which means a panel with few time periods and many individual firms (Roodman, 2009). As our data set comprise of 183 MFIs over the span of nine years, this method is very appropriate, using the instrument based on the lag of the independent variables.

In this paper, system GMM approach as developed by Blundell and Bond (1998), is used because it reduces the small sample biased unlike the differences GMM approach. Further as advocated by (Nguyen, Locke, & Reddy, 2015a) it is suitable for dealing with consistent values of corporate governance in the model.

**Results and Discussion**

<table>
<thead>
<tr>
<th>Table 4.1: CGI and Financial performance</th>
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<td>ROA (1) a (1) b</td>
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<td>-------------------------------</td>
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<td>LROA</td>
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* *, ** & *** denote significance level at 10, 5 & 1 % respectively

Table 4.1 presents the results of impact of corporate governance on financial performance using GMM analysis. Considering the dynamic nature of this relationship the analysis indicates the persistence of financial performance where the past financial performance significance determine the variation in the current performance. Therefore, to control for this dynamic endogeneity two year lag financial performance variable included as explanatory variables in all (1b-6b) equations. Overall the results confirm insignificance impact of corporate governance on financial performance even controlling for endogeneity. Through, in particular corporate governance has significant negative impact on financial performance when proxies by OSS. In economic variables the human development and domestic credit contributes to financial performance.
whereas per capita GDP, globalization index and inflation reduces it. Further, evidence found that size of MFI has inclusive impact on financial performance. Further, MFIs which are regulated having bank status financially perform better. Further, some evidence has been found that the institutional variables of having more democratic values and less perception about corruption prevailing in the society leads to better financial performance (eq 3-4). Furthermore, little evidence has found that cultural values undermine the financial performance (eq 5-6).

### Table 4.2: CGI and Social performance

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*, ** & *** denote significance level at 10, 5 & 1% respectively

Evidence related to the impact of corporate governance on social performance is present in table 4.2. Like the financial performance analysis, the significant co-efficient of lagged social performance proxy depict the persistence nature of social performance variable where the past social performance effects the present social performance. Therefore, two year lagged social performance variable is included as explanatory variables in all equations (1b-6b). Overall the evidence suggests that unlike corporate governance-financial performance relationship, the good corporate governance significantly increases the social performance as proxies by women borrowers and average loan size of MFIs controlling for economic, institutional and cultural variables. Considering economic variables, per capita income enhances the social performance whereas surprisingly human development undermines the social performance. The result suggests that MFIs better serve their social agenda in areas having low level of human development.

Similarly, the results suggest that globalization reduces the social performance through less focus on female clients. Moreover, increase inflation also causes MFIs to focus on poor clients. The evidence further suggests that increase in domestic credit do significantly increase the social performance. The evidence related to institutional variable proxies by democracy index and CPI provides mixed evidence. This suggests that more democratic values lead to decrease in social performance through targeting less female clients. Whereas, lower level of corruption perception in the society contribute towards social performance. Interesting the un-linearity of experience of an
MFIs with its social performance is empirically established which suggests that mature MFIs tend to more focus on social performance unlike the young MFIs. The evidence related to culture variable suggests that good culture values promote the social performance. Considering the categorical variables MFIs having bank status have individual lending methodology and those who are regulated have lower social performance.

Conclusion
This paper investigates the relationship of corporate governance and performance of microfinance institutions controlling for institutional, cultural and economic factors by utilizing a panel data set comprised of 183 MFIs in Asia from 2010 to 2018. It employs in addition to OLS, the GMM method to take care of the issue of endogeneity. A comprehensive CGI comprised of seven dimensions has been constructed. Comparing the CGI and performance relationship our results suggests that good corporate governance practices significantly increase the social performance of MFIs. Whereas some evidence has found that it undermines the financial performance. The result is robust even after controlling for economic, institutional and cultural factors. In the backdrop of agency theory and resource dependence theory we conclude that presence of international directors, board diversity and their qualification, female representation in the board and non-profit ownership structure results in more lending to female clients and targeting relatively less well off. Microfinance sector is increasingly becoming regulated and they are compelling to put in place the corporate governance mechanism. Since majority of MFIs irrespective of their status are socially oriented. Therefore, good corporate governance mechanism is more effective in enhancing social performance in particular. Progress towards human development contributes to both financial and social performance of MFIs. Interestingly we conclude that increase in globalization and domestic credit make MFIs more socially oriented. Further we conclude that inflation though undermines MFIs financial performance but at the same time increases its social performance as it compels MFI to reach to the poor. Furthermore, democratic regimes are conducive for the performance of MFIs and people perception of less corruption enhances the social performance of MFIs. We further conclude that MFIs in long run tend to be more social oriented. Furthermore, MFIs having non-profit status, credit union having those lend to the group tend to be more socially oriented.

References
Group to Assist the Poor.


An Analysis of Sovereign Credit Ratings Impact on Financial Development in South Africa

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JEL Classification
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ABSTRACT

Purpose: The study analyses the effects of sovereign credit ratings on financial development in South Africa. This became important considering that the country has been receiving negative ratings of late.

Design/Methodology/Approach: Quarterly data for the period 1994-2017 was analysed using the Auto-Regressive Distributed Lag (ARDL) cointegration model and its associated statistics. The Error Correction Model (ECM) was implemented to augment the results of ARDL analysing the short run dynamics. The model was chosen given the order of integration of the variables. Financial development was selected since it influences financial conditions and financial sector stability.

Findings: The statistical results revealed that sovereign ratings positively influence financial variables that is in other words higher ratings are found to contribute positively to the growth of the financial development sector. Negative ratings are likely to affect the financial system as due to low access to external funding and exodus of investors, financial development is halted or decreased.

Implications/Originality/Value: The results suggest that authorities need to consider the factors which are targeted by rating agencies and ensure that they perform as expected. Governments should focus on raising sovereign ratings and avoiding downgrades to boost financial development.

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Introduction
The role of finance on the development process is an area which has attracted academic attention even though conclusions vary. The literature available on the role of finance illustrates the importance of a-
developed financial sector in the economic growth cycle, some of this literature includes Greenwood and Jovanovic (1990); Levine (1997); Levine and Zervos (1998); Rajan and Zingales (1998); Beck et al. (2000); Carlin and Mayer (2003); Claessens and Laeven (2003); Fisman and Love (2004); Ndikumana (2005). Suk-Joong and Wu (2007) highlight that a well-developed financial sector plays a crucial role in mobilising and allocating capital towards the profitable and generative sectors of the economy, which subsequently promotes economic growth.

Suk-Joong and Wu (2007) also highlight that there are a number of issues which have hampered the capabilities of the financial system in executing its role. These factors include unstable macroeconomic factors and transparency of the government concerning policies on attracting investors. This has caused the financial sector to fail in mobilising adequate financial resources for development, resulting in the country relying on international finance.

There is also several empirical literature which have researched the determinants of financial sector development. These studies include Beck et al. (2000); Stulz and Williamson (2003); Chinn and Ito (2006). These studies indicate that the state of institutions in the domestic economy, state of the economy, political and legal domains do play a role in financial sector development.

Suk-Joong and Wu (2007) adds to this by stating that the impact of sovereign ratings on the domestic economy is another important factor which has not received sufficient attention when it comes to the analysis of the determinants of financial sector growth. The authors highlight that sovereign ratings influences developments within the domestic front as well as the potential of the country to obtain foreign capital. Suk-Joong and Wu (2007:14) further emphasize the extent to which sovereign credit or debt ratings have an influence on the domestic economy and is of importance because it shows “the relationships between the development of financial intermediation and a country’s perceived willingness and ability to repay its debts, on which financial stability depends. This is important not only because international lenders often look to sovereigns to provide implicit payment guarantees to private borrowers and the sovereigns, financial positions in both local and foreign currencies play a crucial role in this regard. Also, private debt issuers’ credit rating relies on the country’s sovereign ratings”.

Sovereign ratings simply indicate the government's ability and capacity to contractually repay its debt in a timely manner (Takawira & Mwamba, 2020; and Canuto, Santos, Pabl, Pereira Dos & Porto, 2012). The better the rating, the more likely a state can keep up with its debt repayments and vice versa. These ratings also provide an indicator of the degree of risk associated with investors’ bond investments in the government. Sovereign ratings influence the fixed income markets for securities such as bonds (Takawira & Mwamba, 2021; Charlin & Cifuentes, 2015). At present, Fitch Ratings, Moody's and Standard & Poor are the top credit rating agencies (CRA) that issue such ratings to different countries (Takawira & Mwamba, 2020). It was only in 1975 that the Securities and Exchange Commissions recognized rating agencies on a national level (Berglund & Fransson, 2012). Rating agencies have evolved since then, but their role for providing investors with information regarding the ability for an entity or state to repay debt still stands.

In 2017, South Africa was relegated to sub-investment grade (Takawira & Mwamba, 2020). Consequently, the cost of debt for both corporations and the government increased as the probability of default risk also increased.

This, according to Alexander Forbes would mean that South Africa will be removed from the Citi World Bond Index, which will see investors selling off an estimated US$5 billion in bonds (Takawira, 2020). This poses a major threat to South Africa’s financial system and stability. It also has a considerable impact on the ability of the country’s financial system to mobilise finance, as investors will view the country as risk.
Problem Statement
Ntswane (2014) highlights that sovereign ratings are noted as one of the biggest pain points facing the South African economy. Given that the country’s bonds are regarded as risky, this has reduced the appetite externally for South African bonds. However, these downgrades have happened during a time where the country was faced with numerous challenges. Firstly, South Africa has low and insufficient national savings. Abedian (2016) highlights that for the year 2016, the South African internal savings rate was estimated at 15% of GDP while investment needed to achieve 3% growth per year for the country was around 30% of GDP. This shows that the funds, which companies raise, and the state through the bond market plays a huge part in promoting domestic economic advancement.

Secondly, the domestic economy is plagued by various socio-economic problems such as high unemployment rates, high poverty rates and rising inequality (Abedian, 2016). These issues could be addressed if the economy had enough savings to aid in the growth of the economy as per the economic theory, which argues that growth is the solution to the triple evils mentioned above.

Lastly, given the downgrades, it means that it is now expensive to borrow externally (Takawira, 2020). The two options, which may be at the discretion of the government, will be to borrow from other governments or intergovernmental organisations, those include the International Monetary Fund and the World Bank. Abedian (2016) further highlights that such a move is criticised in that the country may lose its sovereignty.

This study focuses on analysing the effects of sovereign ratings on South Africa's financial sector development. The specific objective of the research is to econometrically test the relationship between sovereign ratings and financial sector development in South Africa. It aims to answer the question: Do sovereign credit ratings affect financial development?

Abedian (2016) highlighted that sovereign ratings have an essential function in mobilising financial resources, particularly in emerging economies. This paper will thus contribute to the existing literature through analysing how sovereign ratings affect financial development in South Africa.

Literature Review
Theoretical Literature
There are a number of theories that have been brought forth to clarify how sovereign credit ratings can have an impact on the development of the financial sector. Sovereign rates simply reflect the State’s capacity and desire to service its maturing obligations. (Takawira & Mwamba, 2020; Canuto, Santos, Pabl, Pereira Dos & Porto, 2012). The better the rating, the more likely a state can keep up with its debt repayments and vice versa.

Rating agencies have evolved and have, over the years, found themselves under scrutiny for the information they provide together with how they derive this information (Takawira & Mwamba, 2021). Needless to say, they still are depended upon by many market participants for information of different governments. CGFS (2011) report shows that sovereign ratings affect the banks’ ability to raise finance. Higher sovereign risk pushed up costs for banks (Takawira & Mwamba, 2021).

Channels Through which Sovereign Risk Affects Banking Sector
The CGFS (2011) shows how sovereign risk affects the financial sector development, specifically the banking sector along with bank funding. This report shows that sovereign credit affects the financial system through government securities which are traded by financial intermediaries. There are four ways in which this is likely to be felt.

Firstly, “losses on holdings of government debt weakens banks’ balance sheets, increasing their riskiness and making funding to be more costly and difficult to obtain” CGFS (2011:5). Secondly, greater sovereign volatility also decreases the value of funding banks that can be used to collect wholesale
financing as well as the capital requirements of the central bank. Lastly, it is argued that when there is a down
grade, this also flows to the domestic commercial banks. This will increase the wholesale funding costs. This again will have serious effects on the ability of the bank to access the market. Finally, CGFS (2011) also shows that sovereign credit downgrades reduce the financing incentives which banks may gain from sovereign guarantees.

The CGFS (2011) shows that in addition to the four channels discussed above, there are eight additional
channels through which sovereign credit rating may influence financial sector development through its
effect on the banking sector. These channels are discussed in table I below.

<table>
<thead>
<tr>
<th>The Transmission Channels</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset Holding Channel</td>
<td>The CGFS (2011) report shows that when a country’s sovereign status is revised down, that may affect the commercial banks by its possession of government debt. Losses which are likely to be experienced will weaken the banks’ balance sheets. This will also increase their riskiness, which might influence the cost and availability of funding.</td>
</tr>
<tr>
<td>The Collateral/Liquidity Channel</td>
<td>The CGFS (2011) report also indicates that banks typically use sovereign securities as assurance to acquire central bank wholesale funding. These are also used in securing funding in the private repo market, when issuing covered bonds as well as when trading derivatives in the informal market (over the counter). A sovereign credit rating downgrades reduce the securities which can be used as collateral. This therefore reduces the banks’ funding capacity.</td>
</tr>
<tr>
<td>Sovereign ratings and bank ratings</td>
<td>CGFS (2011) shows also that sovereign credit ratings affect domestic banks rating. A downgrade will usually be associated with a downgrade of the domestic banks. Falzon (2013:4) which shows that “sovereign ratings generally represent a ceiling for the ratings of domestic banks”.</td>
</tr>
<tr>
<td>Effect of government guarantees on bank funding</td>
<td>There are studies such as Alessandri and Haldane (2009), Panetta et al. (2009) and Gropp et al. (2010) show that governments guarantee bank funding. Alessandri and Haldane (2009) show that following the collapse of the Lehman Brother, several developed countries provided support to their banks. In the event of a worsening fiscal position, this could therefore have huge effects on the government providing any guarantee.</td>
</tr>
<tr>
<td>International spill overs</td>
<td>The CGFS (2011) report shows that there are close links among financial markets of developed countries. The CGFS (2011:25) argued that “contagion may also be induced by banks’ claims on non-bank private entities in countries hit by sovereign tensions.”</td>
</tr>
<tr>
<td>Risk aversion channel</td>
<td>The CGFS (2011) report shows that as investors become more risk averse, they may demand a high premium on banks’ securities. This will have a huge effect on funds available for the bank as it becomes expensive to borrow. This could also affect bank’s profit as it may result in a decline in asset prices.</td>
</tr>
<tr>
<td>Impact on bank’s non-interest income</td>
<td>The CGFS (2011) report shows that a sovereign debt downgrade may affect a banks’ fee as well as trading income. A downgrade will significantly influence the market value of investments which are managed by banks on behalf of customers. This will squeeze the profits available to the bank. Investors may also rebalance their portfolios to lower risk securities which is likely to influence fees which the bank may collect and hence its profitability.</td>
</tr>
<tr>
<td>Crowding-out effect on debt issued by banks</td>
<td>The CGFS (2011) shows also that a sovereign debt downgrade may also result in crowding out of private debt which is issued as it increases the costs. This may also be through a reduction in the funds available to banks. This arises as the government will be borrowing in the domestic economy given the challenges which comes with borrowing externally.</td>
</tr>
</tbody>
</table>

Source: Authors’ Compilation
The discussion above shows that sovereign ratings affect the financial sector through its effect on the banking sector. Thus, sovereign ratings have far-reaching consequences apart from affecting government borrowing only.

**Empirical Literature**

Kim and Wu (2008) examined the effect of credit ratings on financial development through capital flows. The authors focused on sovereign ratings by Standard and Poor’s rating agency in the case of 51 emerging markets using panel data. The study found that sovereign ratings influence financial development. They further found that sovereign credit rating is a major component in attracting capital flows.

Rosenius and Sharafuddin (2013) examined the effect of Moody’s sovereign credit rating of the stock markets from 2008 to 2012. The study made use of price series data taken from 11 European countries that have 80% GDP ratio and above. Using ordinary least squares (OLS), the study found that Moody’s announcement changes have no impact on stock markets. Aman, Jain and Malik (2018) indicated that equity markets react due to capital outflows, and that sovereign credit rating information by rating agencies reduces asymmetric information – thereafter both global and domestic investors will reallocate their capital.

Kim and Wu (2008) indicate that in assessing the extent to which sovereign ratings influence financial sector development, it is important to first understand the role of the financial system in the economy. It is argued that the financial sector as highlighted earlier plays a role of matching savers and borrowers. Kim and Wu (2008:6) also suggest that “the hallmarks of a developed financial system include an effective legal system that enforces the protection for property rights and financial contracting; transparent accounting and disclosure systems; a good reputation for sound policy making and macroeconomic management; and adequate regulatory infrastructure and institutional quality”.

The authors further show that “a good reputation” for sound policymaking’ is essential in supporting the whole financial system and enhancing its development. Kim and Wu (2008) further show that given that credit ratings encompass aspects of financial sector development, there are high chances that they will influence financial decisions. The authors also show that there are high chances that sovereign credit ratings have an influence on the role of the financial sector in mobilising and allocating financial resources to productive sectors of the economy.

Li, Pervaiz, Khan, Rehman and Olah (2019), shows that sovereign credit rating serves two main purposes. Firstly, it is argued that it verifies the financial conditions of a country. Secondly, credit ratings signal changes to the prevailing financial conditions in a country. There are several studies which have been carried out to examine how downgrades and upgrades influences the financing conditions within a country.

While on other hand Luitel and Vanpee (2018) lauded the importance of sovereign credit rating in improving financial development in emerging economies. They indicated that a sovereign rating influences the structure of bank assets. In the case of a positive rating, that leads to growth in bank assets. Regarding the government, it helps the government in being less reliant on bank financing and to encourage international bond markets. Therefore, a positive sovereign rating is likely to attract foreign investment in the form of FDI and portfolio investments.

A study by Cooke and Bailey (2015) was carried out on the impact of sovereign credit rating and international bond price in the case of Jamaica between November 2008 and June 2015. The study mainly focused on sovereign credit rating by Moody’s and S&P. Using the event study technique, the study found that the market reacted to both downgrades and upgrades. With credit rating relative to Moody’s, the study further indicated that the market is more responsive to S&P sovereign and investors
are more sensitive to downgrades than upgrades. There are several studies in South Africa which have been carried out to examine the effect of sovereign credit rating on the economy. These studies include Mugobo and Mutize (2018), Wortmann (2010), Ntsalaze and Boako (2016), Naeem (2012) and De Haan (2017) and Venkatraman (2015). These studies utilised different models and results are varied. However, the majority of these studies have largely focused on analysing the effect of sovereign credit rating on the country’s capital inflows and outflows.

Starting with the work done by Mugobo and Mutize (2018), the authors examined how a sovereign rating downgrade affect foreign direct investment in South Africa between 2004 and 2014 utilising an event study. The empirical results revealed that the effect of the downgrades from the three major rating agencies in South Africa do not have the same effect on capital inflows into the country. The effect of a Moody’s downgrade was found to be more pronounced as compared to what is experienced from other rating agencies.

However, this was found to be contrary to the finding of Wortmann (2010), who established that a sovereign rating by S&P affected foreign portfolio inflows into South Africa. This was found to be consistent with Bayar and Kalic (2014) who further showed that Moody’s had a second large effect and finally Fitch.

In another study, Ntsalaze and Boako (2016) studied the impact of sovereign credit ratings on legal entities in South Africa, with particular emphasis on the extent to which the sovereign credit rating reduces the amount of capital inflows into the country. The authors focused on credit allocation to legal entities operating in the domestic economy. The findings revealed that a negative rating limits the amount of capital which the firm could attract. These results were found to be consistent with Naeem (2012) and De Haan (2017). These authors argue that sovereign credit rating indeed influence private firms access to external credit.

Venkatraman (2015) employing an event study for 364 sovereign credit rating announcements for the period 1 January 2005 to 31 December 2013, also examined the extent to which the Johannesburg Securities Exchange share prices react to credit rating notices. The empirical results revealed that the JSE share prices are not responsive to new information related to sovereign credit rating announcements.

Ntswane (2014) conducted a study into the link between rating agencies long-term foreign sovereign ratings and the various forms of capital flows to Africa. The study utilised a comprehensive data set for 28 African countries for the period from 1994 to 2011. The study utilised both a panel regression model and event study. The empirical results revealed that changes in sovereign ratings have an influence FDI, FPI and bank credit. The event studies result also demonstrated that rating announcements influence the stock market.

It was also found out that at empirical level the extent to which sovereign credit ratings affects financial variables differs according to the rating agents. There were contradictions on the relationship between sovereign ratings and stock market as some mentioned that sovereign rates do not affect stock markets.

**Research Methodology**

This section is carried out to provide an outline of the methodology that was used in ensuring that the objectives stated above were met. This analysis therefore thoroughly utilized the quantitative research framework to assess, measure and explain the impact of sovereign credit ratings on South African financial development.

This measure has enabled a constructive evaluation of the research topic and a cognitive development of the interest variables regarding South Africa. This research therefore gathered secondary data from organizations responsible for publishing relevant data.
The research used quarterly data for the time frame between 1994 to 2017. This is the time span during which the South African economy had also gone through a series of rankings by the respective rating agencies. The data utilized in this analysis was derived from rating firms, the World Bank and the Reserve Bank of South Africa.

**Model specification**

The study follows the work of Kim and Wu (2008). The authors estimated two equations which were used to examine how sovereign credit ratings affect financial development.

The models were adopted and amended to incorporate variables, which are country specific. The models are estimated as follows:

\[ FINDEV_t = a + a_1 FINDEV_{t-1} + a_2 SCR_t + a_3 X_t + u_t \]  

Where FINDEV measures financial sector development, SCR is Sovereign credit rating, X captures several control variables which include GDP, internal investment which is represented by Gross Fixed capital Formation (GFCF), Inflation, and interest rate.

The sovereign credit ratings utilised in the study is by Standard and Poors (S&P). The S&P rating includes long-term ratings as well as their outlook for a period of six months. The long-term rating rank begins at AAA that represents the top credit quality, and goes down to the least quality represented by D/SD. In this case D/SD stands for default/selective default. The rating BBB- are considered to be investment grade rating, whilst BB+ are considered to be speculative. Kim and Wu (2008) show that short-term ratings can be anything from A-1 to D/SD. Also, the investment grade is A-3 and above. Also, the ratings are attached with rating outlooks which varies “Credit Watch-Positive” to “Credit Watch-Negative”.

The study followed the work of Kim and Wu (2008) as well as Gande and Parsley (2005) where S&P ratings were sequentially converted into time series data. As per Kim and Wu (2008) and Gande and Parsley (2005), numerical values were assigned for every grade ranking, scaling from 0 for default to 20 for AAA for the ratings that span over the long term. The long-term ratings have also been modified to integrate the outlook for each ranking. For example, where a rating specific to a period is AA (18), with a corresponding positive outlook of (0.25), the total long-term rating was captured as 18.25.

As a proxy for the financial development, this study utilised domestic credit to the private sector (DCP). This is consistent with Kim and Wu (2008), Beck, Demirguc-Kunt and Levine (2000) and Kapingura and Alagidede (2016). Kapingura and Alagidede (2016) indicate that there are different views regarding the function of the financial sector development within the economy.

The first view suggests that financial development improves resource mobilisation, resulting in enhanced savings. This view is also supported by Sahoo and Dash (2013). This will therefore result in improved financial conditions. The second line of thought highlights that financial development has the capacity to make access to finance easy. This is likely to boost consumption (Nair, 2006). According to this view, financial sector development may not really result in enhanced savings, therefore it might not improve the financial conditions within the country. Given the two different views, in line with Ang (2008) and Adenutsi (2010), for this paper, a positive relationship is expected between sovereign ratings and financial development. In other words a higher rating is expected to result in financial development in the domestic economy.

This is also supported by Kim and Wu (2008). These authors argue that the government plays a very important role in the early stages of financial market development. The authors also show that the “government can also play a very important role of providing financial and non-financial safety nets to companies that are considered to be of some national significance. As such, government’s fiscal position would then be seen as one of the indicators of financial market development potential.” (Kim & Wu,
2008:12). It also assumes that financial development promotes investment instead of consumption.

With regards to the control variables, their relationship with the dependent variable depends on what is measured at a time. GDP, GFCF and interest rates are expected to have a positive relationship with financial sector development. Higher rates of growth and investment are likely to result in higher demand for financial resources, which in turn results in improved financial sector development, as it tries to match the demand of resources.

At the same time, higher interest rates may result in higher savings, as investors try to take advantage of the higher returns. Also, inflation is expected to influence financial sector development positively. Higher inflation rates may force people to prefer investing on the stock market as compared to keeping and saving cash. This therefore results in more funds flowing into the stock market.

**Estimation Techniques**

As pointed out by Brooks (2008), the data was all tested for stationarity so as to determine the time series properties of the data. This is very important as it determines the techniques, which should be used in the study. Apart from informal checks which involve graphical analysis, formal tests were also carried out so as to determine the order of integration of the data. The formal tests carried out are the Augmented Dickey Fuller model (ADF) and Phillips Peron (PP) tests.

**Cointegration Tests**

Given that the variables of interest were found to be integrated of different orders, that is level series and first difference, appropriate cointegration tests were therefore conducted. After establishing the level at which the data is stationary, the second step focused on finding the lag length which is appropriate. There are various avenues to deal with the problem of lag length selection. Khim-SenLiew (2004) shows that the standard approach is to rely on the different information criterions. The author shows that these information criterions include “Aikake’s information criterion (AIC), Schwarz information criterion (SIC) and Hannan-Quinn criterion (HQC)”. With regard to these criteria, Khim-SenLiew (2004) shows that the AIC has been traditionally endorsed in economic studies.

Having chosen the correct lag length, the next step was to choose the appropriate method of cointegration. There are different approaches to cointegration. These include the Engle Granger (EG) two step approach, the Johansen approach and the Auto-Regressive Distributed Lag (ARDL) model. The EG model has been criticised in that it requires one to specify a variable as endogenous and another as an exogenous variable. However, the Johansen test to cointegration takes this problem into account as it is a multivariate model. It is also important to consider that all the tests can be employed provided that the data is integrated of order 1. However, in the event that the data is integrated of different order, the ARDL model becomes the best technique.

In the event that the data to be used in analysis is integrated of order 1, that is I(1), then all the methods are compatible. However, in the event that the date is mixed, the ARDL model becomes more superior. The data utilized in the study was found to be integrated of different orders. Therefore, the ARDL model to cointegration was chosen in analysing the variables of interest.

The ARDL approach is more efficient on the long run parameter estimates and is often more heterogeneous, given that it enables the estimated standard errors to be unbiased. More of the ARDL parameters can be freely estimated and the error correction coefficient requires restriction far less frequently than is the case with the Engle Granger approach. According to Pesaran and Pesaran (1997) the ARDL also has advantages over other approaches because it fixes the endogenous regressors and autocorrelation problem at once.

It is believed that the approach is flexible because it can be employed even if the variables are of
different order, while other approaches, like Johansen approach, requires the variables to be of the same order (Pesaran & Pesaran, 1997).

ARDL estimates and t-tests sizes are assumed to be reliable and effective, compared to other approaches. Lastly, the approach takes preference due to the exceptional estimates power, being found reliable and more efficient in small samples compared to that of the Johansen technique.

The technique requires the estimation of an error correction model of the form:
\[
\Delta FINDEV_t = a + \sum_{i=1}^{p} a_i FINDEV_{t-1} + \sum_{i=1}^{p} \varphi_i SCR_t + \vartheta_2 X_t + \vartheta_2 t + u_t \]

The model 2 show how the lagged dependent variable, explanatory variables and their lagged components affect financial sector development in a single model.

After established cointegration, the Error Correction Model (ECM) was carried out so as to analyse what happens in the short run. The ECM model will describe all the dynamics of disequilibrium of variables in the short run. The ARDL model can also be used to drive the ECM by using a simple linear transformation that integrates long run equilibrium and short run adjustments without losing long run information.

**Granger Causality**

The Granger causality test was also used in the study to investigate the causality among variables of interest. The CGFS (2011) indicated that there can be a two-way relationship between financial sector development, especially the banking variable and sovereign credit ratings. Thus, issues in the banking sector may result in sovereign rating movements (Takawira and Mwamba, 2021). At the same time sovereign ratings may affect the banking sector. This therefore suggests that the two variables affect each other. The Granger causality test model was therefore utilized to analyse this type of relationship.

The Granger causality test model was therefore utilized to analyse this type of relationship. The model suggests that one variable maybe in a position to predict another variable. The idea of the test is to test if variable X causes Y or if variable Y causes X (Engle and Granger, 1987).

The Granger causality hypothesis that there is causality between two variables and, if the probability figure is less than 5%, a null hypothesis will be rejected in favour alternative hypothesis and that will mean that there is a bidirectional relationship between the two variables, which means variable X causes Y and Y causes X in return.

Diagnostic tests were carried out on the results obtained. The diagnostic tests entail testing if the model is fit to be used for analysis (goodness of fit), particularly by analysing misspecification, serial correlation, and heteroscedasticity linked to the specified model (Brooks, 2008). To test for normality, the study adopted the Jarque-Bera test.

Several diagnostic tests were also carried out to examine the adequacy of the model. These tests include normality, homoscedasticity, autocorrelation and stability tests.

**Presentation of Empirical Results**

The chapter presents results of the models, which were estimated in previous section. The study seeks to examine the effect of sovereign ratings on financial development. In this regard, financial development is measured by DCP.

**Lag Length Selection (Financial Sector Model)**

Choosing the appropriate lag length is of importance in any regression. Asteriou and Hull (2011) shows that this is of importance to obtain Gaussian error terms. In other words, this will ensure that the model is adequate. Asteriou and Hull (2011:383) also show that this aspect to regression analysis is important as “setting the value of the lag length is affected by the omission of variables that might affect only the
short-run behaviour of the model. This is because omitted variables instantly become part of the error term”. The lag length employed was determined through the Akaike information criteria. As per Figure I, top 20 models are presented. The best model chosen is ARDL (2,1,0,2,1,0). The ARDL model was therefore estimated based on this lag length.

**Figure 1: Lag length Selection**

Akaike Information Criteria (top 20 models)

![Graph showing Akaike Information Criteria for the top 20 models]

Source: Authors using Eviews 11

**Co-integration Results**

Having determined the lag length, bounds test for cointegration was estimated. The results are presented in table II. The results show that the calculated F statistic is 28.84. This statistic is greater than the upper bound. This suggests a long-term association between the independent variables and dependent variables. This shows that all the variables estimated in the model in the long run move together.

Thus, financial sector development as measured by domestic credit to the private sector, foreign direct investment, gross domestic product, gross fixed capital formation, repo rate, cpi and sovereign rating all move together over time. Any change to these variables will significantly influence financial sector development in South Africa. This becomes important considering the role the financial sector plays generating development finance in the domestic economy. So, in other words, the findings in this section shows that financial conditions and sovereign ratings have a long-term relationship.

**Table 2: ARDL Long-run Bounds Tests Results**

<table>
<thead>
<tr>
<th>F-Bounds Test Test Statistic</th>
<th>Value</th>
<th>Significance</th>
<th>Null Hypothesis: No Levels relationship Integrated at Order Zero I(0)</th>
<th>Integrated at Order One I(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
<td>28.84885</td>
<td>10%</td>
<td>2.08 (Asymptotic: n=1000)</td>
<td>3</td>
</tr>
<tr>
<td>K</td>
<td>5</td>
<td>5%</td>
<td>2.39</td>
<td>3.38</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.5%</td>
<td>2.7</td>
<td>3.73</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1%</td>
<td>3.06</td>
<td>3.73</td>
</tr>
<tr>
<td>Actual Sample Size</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>2.331</td>
<td>3.417</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5%</td>
<td>2.804</td>
<td>4.013</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1%</td>
<td>3.9</td>
<td>5.419</td>
</tr>
</tbody>
</table>
**Long run Model - Financial Development regression**

Having established cointegration, the long run and short-run models were further estimated. These results are presented in Table III and IV.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCR</td>
<td>0.2271***</td>
<td>0.104546</td>
<td>2.1732</td>
<td>0.0056</td>
</tr>
<tr>
<td>LFDI</td>
<td>0.1333**</td>
<td>0.006233</td>
<td>21.395</td>
<td>0.0297</td>
</tr>
<tr>
<td>LGDP</td>
<td>2.9392**</td>
<td>0.119289</td>
<td>24.639</td>
<td>0.0258</td>
</tr>
<tr>
<td>LGFCF</td>
<td>0.2739***</td>
<td>0.048612</td>
<td>5.6350</td>
<td>0.0018</td>
</tr>
<tr>
<td>REPO</td>
<td>-0.0259**</td>
<td>0.001214</td>
<td>-21.416</td>
<td>0.0297</td>
</tr>
<tr>
<td>CPI</td>
<td>-0.0283**</td>
<td>0.001524</td>
<td>-18.575</td>
<td>0.0342</td>
</tr>
<tr>
<td>C</td>
<td>-34.64799**</td>
<td>1.098359</td>
<td>-31.545</td>
<td>0.0202</td>
</tr>
</tbody>
</table>

*** = 0.01 level of significance; ** = 0.05 level of significance; * = 0.1 level of significance  
Source: Authors using Eviews 11

The empirical results as presented in Table III shows that the coefficient for sovereign rating is positive and statistically significant at 1% level. This result is consistent with the apriori expectation and theory in which a higher rating is expected to result in financial sector development improving. This is supported by Kim and Wu (2008), CGFS (2011) and Luitel and Vanpee (2018). These authors show that having a higher credit rating plays a huge role in reducing financial fragility.

Boot et al. (2005) shows that this is achieved in two ways. Firstly, the ability of the rating agencies to keep an eye on the ability of the country’s credibility lower monitoring costs. Secondly, this plays a critical role in the decisions regarding the investment allocation of institutional investors such as pension fund managers who are restricted by regulatory constraints. Kim and Wu (2011) also show that in the event that a country is rated positively domestic banks may also access capital from the foreign interbank market at a lower cost. This also is in line with Luitel and Vanpee (2018) who highlight that funding costs for banks are related to sovereign ratings. The results thus suggest that sovereign ratings do have an effect on financial conditions in the country.

The empirical results also revealed that FDI, GFCF and GDP have positive coefficients and are highly significant. These results are in line with theory as well as apriori expectations. This result is also in line with the demand null hypothesis of Robinson (1952) in which demand of economic activities is what drives the growth of the financial sector. This result is also consistent with Odhiambo (2004), Thangagavelu and Jim (2004), Hondyian and Lolos (2005) and Shahnoushi et al. (2008). These authors argue that growth of the economy, which might manifest through increase in investment activities, is
what drives the demand for financial services. Therefore, financial development is positively influenced by growth related activities.

The results also show that the relationship between inflation as measured by CPI and financial sector development in South Africa is negative. This agrees with the apriori expectation. These results were also found to be consistent with Boyd et al. (2001), Khan et al. (2006) and Gruyter (2017). These authors argue that lower levels of inflation are preferable. When inflation is high it has an effect on savings. Economic agents would prefer to purchase real assets instead of keeping cash. This will result therefore in a reduction in funds available to be allocated to generative areas of the economy. Thus, this impedes on the efficiency of the financial system. Khan et al. (2006) also shows that high levels of inflation may impede the flow of information, resulting in credit rationing to the private sector. This may exacerbate gaps in credit markets.

The empirical results also reveal that the interest rate has a negative effect on financial sector development. The coefficient is negative and statistically significant. These results are consistent with the apriori expectation. Even though there is limited literature that examines this phenomenon, higher interest rates may mean higher returns on investment, however this depends on the culture of saving in a country. South African savings are very low, indicating that higher interest rates may not translate to higher deposits. This may therefore be hard on the financial system as people struggle to service their debt. This may have an effect on financial stability.

**Error Correction Model - Financial Sector Development Regression**

The Error Correction model analysing the short-term relationship between all the variables of interest is presented on table IV.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>D(LDCP(-1))</td>
<td>0.032040</td>
<td>0.006522</td>
<td>4.912759</td>
<td>0.1278</td>
</tr>
<tr>
<td>D(SCR)</td>
<td>0.113749</td>
<td>0.002356</td>
<td>48.29019</td>
<td>0.0132</td>
</tr>
<tr>
<td>D(LFDI)</td>
<td>0.054256</td>
<td>0.001453</td>
<td>37.35055</td>
<td>0.0170</td>
</tr>
<tr>
<td>D(LGDP)</td>
<td>2.612949</td>
<td>0.020064</td>
<td>130.2292</td>
<td>0.0049</td>
</tr>
<tr>
<td>D(LGFCF)</td>
<td>0.069511</td>
<td>0.009606</td>
<td>7.236489</td>
<td>0.0874</td>
</tr>
<tr>
<td>D(REPO)</td>
<td>0.009899</td>
<td>0.000124</td>
<td>79.54999</td>
<td>0.0080</td>
</tr>
<tr>
<td>D(CPI)</td>
<td>-0.028033</td>
<td>0.000176</td>
<td>-158.9458</td>
<td>0.0040</td>
</tr>
<tr>
<td>D(CPI(-1))</td>
<td>-0.007081</td>
<td>0.000121</td>
<td>-58.53906</td>
<td>0.0109</td>
</tr>
<tr>
<td>CointEq(-1)*</td>
<td>-0.535259</td>
<td>0.112117</td>
<td>4.7743</td>
<td>0.0050</td>
</tr>
</tbody>
</table>

R-squared: 0.999939, Adjusted R-squared: 0.999840, S.E. of regression: 0.000721

*** = 0.01 level of significance; ** = 0.05 level of significance; * = 0.1 level of significance

Source: Authors using Eviews 11

The short-run relationships between financial sector development and other independent variables is consistent with the long-run results as shown in the presented earlier. Also of importance is the ECM term which is negative (-0.5352) and significant at 1% level showing that if the variables move apart in the short run, they will move back together over time. This suggest that about 54% of the disequilibrium is corrected within a year. The next section presents the financial flows model results.
Causality Test Results
Table V. presents the granger causality tests results.

<table>
<thead>
<tr>
<th>Dependent variable: D(LDCP)</th>
<th>Excluded</th>
<th>Chi-sq</th>
<th>df</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>D(SCR)</td>
<td></td>
<td>7.512376</td>
<td>2</td>
<td>0.0234</td>
</tr>
<tr>
<td>All</td>
<td></td>
<td>7.512376</td>
<td>2</td>
<td>0.0234</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dependent variable: D(SCR)</th>
<th>Excluded</th>
<th>Chi-sq</th>
<th>df</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>D(LDCP)</td>
<td></td>
<td>1.319797</td>
<td>2</td>
<td>0.5169</td>
</tr>
<tr>
<td>All</td>
<td></td>
<td>1.319797</td>
<td>2</td>
<td>0.5169</td>
</tr>
</tbody>
</table>

*** = 0.01 level of significance; ** = 0.05 level of significance; * = 0.1 level of significance
Source: Authors using Eviews 11

The results in Table V shows that the null hypothesis of no causal relationship could not be rejected from SCR to financial sector development at 5% level of significance. This result suggests that whenever a country’s sovereign rating is downgraded; this has a significant effect on financial sector development of a country. This result is consistent with the prior findings as well as the CGFS (2011) findings. However, there is no evidence of a uni-directional causality from financial sector development to sovereign rating.

Diagnostic Tests for Financial development regression
Several diagnostic tests were ran to check the adequacy of the models estimated. The results are reported on Table VI.

<table>
<thead>
<tr>
<th>Test</th>
<th>H0</th>
<th>Test Statistic</th>
<th>p-value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jarque-Bera</td>
<td>Residuals are</td>
<td>JB = 2.7555</td>
<td>0.2521</td>
<td>Residuals are</td>
</tr>
<tr>
<td></td>
<td>normally distributed</td>
<td></td>
<td></td>
<td>normally distributed</td>
</tr>
<tr>
<td>Breusch-Godfrey</td>
<td>No autocorrelation</td>
<td>nR²(2) = 4.714047</td>
<td>0.8434</td>
<td>No autocorrelation in the residuals</td>
</tr>
<tr>
<td>Breusch-Pagan-Godfrey</td>
<td>Residuals are</td>
<td>nR²(2) = 14.36930</td>
<td>0.3484</td>
<td>Residuals are</td>
</tr>
<tr>
<td></td>
<td>homoscedastic</td>
<td></td>
<td></td>
<td>homoscedastic</td>
</tr>
</tbody>
</table>

*** = 0.01 level of significance
** = 0.05 level of significance
* = 0.1 level of significance
Source: Authors using Eviews 11

The results of diagnostic tests shows that the residuals are normally distributed, homoscedastic and do not have the problem of autocorrelation. The same also applies to the financial flows model.

Stability tests were also performed. The results are reported on Figure II and III. The results indicate that both the CUSUM and CUSUM Squares are stable. This therefore confirms that the model estimated is correctly specified.
The data was found to be integrated of order 1 and I (0). The Bounds tests were estimated for both the financial sector development variable. The results showed that there is evidence of cointegration. The long run as well as short-run models for both regressions were estimated. The results demonstrated that sovereign ratings have a positive effect on financial sector development as well as financial flows in South Africa. The ECM Models were estimated to check the short-run relationships. The results demonstrated if there is disequilibrium, the variables will again cointegrate after some time.
Conclusion

Based on the estimated models, a positive relationship exists in South Africa between financial development and the sovereign credit ratings. In other words, all the various financial development indicators employed were found to be significantly affected by sovereign ratings. This therefore suggests that higher ratings are associated with well-developed financial systems.

This result was found to be consistent with Boot et al. (2005), Kim and Wu (2008), CGFS (2011), Luitel, and Vanpee (2018). These authors show that having a higher credit rating plays a huge role in reducing financial fragility. This will therefore ensure financial stability and hence improve the financial sector development within the country. The literature on the subject also demonstrated that a positive sovereign rating affects domestic banks.

Another important observation from the analysis is the evidence of the supply-leading hypothesis looking at investment and GDP. These showed that they determine the growth of the financial system also. Thus, demand for financial resources was found to influence the expansion of the financial sector.

The positive relation between financial sector development and sovereign ratings suggests that countries which receive higher ratings are likely to have stable financial systems which can play the role of mobilising and allocating capital to the productive industries of the economy efficiently.

Thus, authorities should pursue policies which ensure that the country has stable macroeconomic variables as well as from the political sphere to ensure that the country receives a positive rating. Governments should focus on raising sovereign ratings and avoiding downgrades to boost financial development. There may be a need to deal with the issues which were raised by the rating agencies so as to ensure that in future the country is rated positively.

References


Employee’s Performance as a Consequence of Effective Communication and Working Environment: The Moderating Role of Organizational Learning Culture

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<table>
<thead>
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<th>Keywords</th>
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<td>Effective communication, Work Environment, Employee’s Performance, Organizational Learning Culture, FMCG sector.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>JEL Classification</th>
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<tbody>
<tr>
<td>M0, M1</td>
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</tbody>
</table>

**ABSTRACT**

**Purpose:** FMCG (Fast Moving Consumer Goods) sector has a significant role in the economic development of Pakistan. According to Pakistan Bureau of Statistics, the retail sector contributes 18.6% to the GDP of Pakistan. This sector can use effective communication with a learning work environment as a tool to increase their productivity and at the same time can build customer relations. This is because communication is an essential element used to deal with customers and employees. Whereas, at the same time comfortable work environment is helpful to boost the performance of this sector. The present study aims to examine the influence of effective communication and working environment on employee’s performance with the moderating role of organizational learning culture in FMCG sector of South Punjab Region.

**Design/Methodology/Approach:** For the said purpose structured questionnaires were developed by using online google forms for collecting data. The sample population was selected from the FMCG sector of Pakistan. Then the collected data was analyzed by using regression analysis and Pearson Correlation via SPSS whilst Structural Equation Modeling (SEM) via Smart PLS.

**Findings:** The results indicates that effective communication and work environment has a significant influence on employee’s performance and organizational learning culture plays a moderating role between effective communication and work environment.

**Implications/Value:** This research has used FMCG sector specifically to examine the impact of effective communication hence, further research can be done by using other sectors i.e., Education, Agriculture, IT etc. In addition to that this study is based on the impact of effective communication and working environment on the employee’s performance through the
moderating role of organizational culture further research can be made on the ways or methods improve working conditions of this sector.

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**Introduction**

**Background**

This study has been conducted to highlight the importance of effective communication and work environment in order to improve the performance of employees. According to Alvesson & Karreman, 2016, many external as well as internal factors are important for the success of a Fast-Moving Consumer Goods (FMCG) sector. But human resource is considered to be the most important internal factor except all other factors which helps an organization to work efficiently and effectively (Brewster, 2017). The quality of work, investment and human resource, gives a competitive edge to FMCG sector (Obeidat et al., 2018). In order to retain valuable human resource of an organization it is important to ensure their commitment by providing them learning environment and by communicating effectively (Yousef, 2017).

Work environment is known as the working condition in an organization (Deem, Barnes, Segal & Preziosi, 2000). This can be physical (lights, furniture, and provision of facilities) or social (relations, motivation, security, effective communication). The provision of healthy physical and social environment can enhance the productivity of employees. Poor working environment, poor communication and physical environment makes employees dissatisfied and unmotivated which had an impact on the performance of an organization.

Communication is simply defined as a process of sending or receiving messages verbally and non-verbally. Effective communication is another important factor which is used to increase performance of employees by building proper coordination between employee and employer. Effective communication helps to increase the performance of an organization, improve employee’s coordination, productivity and ultimately helps to increase the performance of a particular sector. Managers must have the skills to understand verbal and non-verbal messages in order to maintain effective communication. Communication is used in business for the purpose of transmitting and receiving information. It also helps in coordinating employee and to build teamwork which increase performance of an organization. Effective communication helps to build confidence level of employees whereas weak communication losses the confidence of employees. Therefore, effective communication has an impact on the performance of employees.

Many researches has been conducted to highlight the role of organizational culture in the development of an organization (Hofstede, 1980; Ouchi, 1981; Hofstede & Bond, 1988; Kotter and Heskett, 1992; Magee, 2002). Human resource is an expensive asset therefore it is important to retain employees in today’s competitive world. The working environment has a positive as well as negative effect on employee’s performance. In this regards work environment can be used as an instrument to ensure long term commitment to employees. According to Ritchie (2000) organizational culture can be used as a motivational tool to enhance the performance of employees (Ritchie, 2000).

There is a direct link between the performance of employees, effective communication and the work environment. Such environment helps to motivate an employee in order to generate maximum output. Healthy work environment also helps to make an employee mentally healthy and in work-life balance (Chandrasekar, 2011). In addition to that work environment helps to reduce absentees and boost the
performance of employees (Boles et al. 2004).

Significance of the Study
This research has been based on FMCG sector of South Punjab region in Pakistan. Consumers use these goods on daily basis and communicate with employees. Such goods include salt, soap, cooking oil etc. The demand of FMCG has increasing day by day in Pakistan. The middle class of Pakistan is increasing and therefore resulting in the increasing sale of FMCG consumer products (Haq, 2018).

The results of this study will help the FMCG sector of south Punjab to improve their organizational culture by changing current practices and adopting new ones. This will also help the scholars to further study the influence of effective communication and work environment in a broader sense. It will make employees aware about the influence of effective communication and work environment in their work performance and how they can increase their performance by maintaining a learning environment and by communication effectively with each other.

Statement of the Research Problem
There is a need to highlight the influence of effective communication and work environment on employee’s performance. According to Noble (2009) there is a need to maintain learning environment in order to ensure employees commitment towards an organization.

Literature Review

Employee Performance
Employee performance is the efficiency of an employee to generate maximum output from the given input and resources. There are many factors that affect employee’s performance, some of them are; employees’ honesty, level of satisfaction and commitment towards an institution. (Dyrbye et al., 2019). As per Afshan et al. (2012) the performance of employee performance is a specific task performed in an organization by the efforts of an employee. Such can be measured by the stated accuracy, completeness, cost and speed or measured against identified criteria. There are many indicators used by the company to measure performance which enhances the performance of an institution. The effectiveness, quality and efficiency of work can be used as indicators to measure performance (Ahuja, 2006).

Wood and Sangster (2002) and Nasaji (2013), recommends that employee’s performance can be determine by the ability of an institution to produce maximum output from the available input. The efficiency is the ability of an employee to achieve maximum result from minimum objectives in order to increase productivity of an organization (Stoner, 1996). Whereas the ratio of input over output in terms of results is known as productivity (Stoner et al., 1995; Lipsey, 1989).

According to Hawthorne studies, satisfied workers are more likely to have better employment returns than others who are dissatisfied with their job (Pieper et al., 2019).

Effective Communication and Employee’s Performance
According to Otoo, F. (2016), it is important for managers to understand different aspects of communication and their impact on employee performance. In addition to knowledge, effective communication must also be considered an important element to enhance the performance of employees and to increase long run productivity. Effective communication can be used as a valuable tool by the employees in order to fulfill their job requirements (Odine, M. 2015). For this, managers must enable free flow of communication in an organization in order to increase performance. According to Jiang, et al. (2020) effective communication can be used as a bridge between management and employees to increase the performance. Because this will help employees to perform in the best interest of an organization simultaneously helps management to effectively monitor the performance of that employee. In order to achieve objectives of an organization, it is necessary to enable effective flow of information Otoo, F. (2016).
H1: Positive relationship exists between effective communication and employee’s performance.

**Work Environment**

Work environment is known as the working conditions in which an employee works. Smrita et al. (2010) states that a good working environment has an effect on the level of motivation of employees. According to Opperman (2002) work environment is a composition of three factors or environments: human environment, organizational and the technical environment. Technical environment includes equipment, furniture, temperature, physical environment etc. It enables employees to perform their duties and responsibilities. Human environment includes team, co-workers, coordination issues, management with whom an employee has to work. Such environment helps to share knowledge and information informally in an organization in order to enhance mutual coordination and increasing productivity. The ability to share knowledge in an organization depends upon the work environment of that organization (Brenner (2004). At last, organizational environment is the values, norms, beliefs and systems that is under control of management. Such environment by allowing free flow of effective communication can be used as a tool to motivate employees for producing better results. In the views of Mokaya et al. (2013) working environment plays an important role in order to increase job satisfaction of employees. In order to develop good working environment, it is important to have good leadership, management, coordination, effective communication, learning culture and transparency in an organization which will leads an organization towards high productivity. Goudswaard (2012).

H2: Positive relationship exists between work environment and employee’s performance

**Moderating Role of Organizational Learning Culture**

Organizational learning culture is a source of competitive advantage for most of the organizations as it increases job commitment, and level of satisfaction Aycan et al. (1999). In addition to that Pettigrew (1979), states that an employee makes decisions in an organization culture that affects the performance of an organization. The findings of Ogbonna and Harris (2000) indicates a positive relationship between organizational learning culture and the performance of an organization. In addition to that Shahzad et al. (2013), reveals that organizational learning culture can be used as a key for performance excellence and in the productivity of an organization. Whereas, according to Kozlowski and Klein (2000), organizational culture must be based on true values in order to have high productivity and growth.

H3: Organizational Learning Culture moderates between effective communication and employee’s performance.

H4: Organizational Learning Culture moderates between work environment and employee’s performance.

**Conceptual Framework**

This portion highlighted the relationship between effective communication and work environment and the influence of effective communication and job environment on the performance of employees through the moderating role of organizational learning culture. In addition to that hypothesis were made on the basis of literature and framework which helps to assess the relationship of these variables.
Research Framework

![Research Framework](image)

Figure 1: Research Framework

Research Methodology

This research has been conducted to examine the influence of effective communication and work environment on employee’s performance. For the said purpose, effective communication and work environment has been used as an independent variable whereas organizational performance has been used as a dependent variable. The sample population was the employees of FMCG sector of Punjab region. Creswell (2009) states that the population used by the researcher to explore some phenomenon is known as selected population. A number of 215 questionnaires were circulated through online google forms for the purpose of data collection. In order to save time and budget a sample has been made drawn from the population. Primary and secondary data was used for this study. Convenient sampling has been used in this research. The collected data was analyzed by using Statistical package for Social Science SPSS. Pearson correlation and regression analysis, ANOVA, Cronbach’s Alpha was performed in order to reveal the influence of effective communication and work environment on employee’s performance.

Result & Discussion

In this chapter the analysis of collected data was performed. The study used qualitative approach to collect data from FMCG sector of Punjab, Pakistan. Descriptive analysis was performed to analyze frequency of demographic segment i.e. age, gender. After this, confirmatory factor analysis was done through KMO and Bartlett’s test of sphericity. Then the reliability of factor is assessed by reliability test. Further Pearson correlation and Regression analysis was performed to examine the impact and relationship among variables. In the last step, PLS regression was used to find the significance and relationship between effective communication, working environment and employee performance with moderating role of training & development. Below is the detail of the results obtained:

Demographic study

A total number of 215 questionnaire were circulated and the response rate was 100%. sample participants were aged between 25 years to 50 years comprising 57% males and 42% females. (See Table 5.2). This information has been compiled through descriptive statistics which highlights the information about gender and age of the participants.

<table>
<thead>
<tr>
<th>Table 5.1: Statistical Analysis of Participant’s Demographic Study</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N</strong></td>
</tr>
<tr>
<td>Valid</td>
</tr>
<tr>
<td>Missing</td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>Std. Error of Mean</td>
</tr>
</tbody>
</table>
Gender

In this study there were both male and female respondents. About one hundred and twenty three or 57% of the respondents were male whereas ninety two or 42 percent of the respondents were female.

Table 5.2: Frequency distribution of the gender

<table>
<thead>
<tr>
<th>Gender</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>Female</td>
<td>91</td>
<td>42.5</td>
<td>42.5</td>
<td>42.5</td>
</tr>
<tr>
<td>Male</td>
<td>123</td>
<td>57.5</td>
<td>57.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>214</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Fig 5.1: Graphical Representation of Gender of the participants

Age of the Participants

Below mentioned frequency analysis shows the age of the participants which lies from twenty five to fifty years. Out of which six percent were under the age 25-30 years, sixty percent were under the age of 30-35, twenty four percent were under the age of 35-40, seven percent were under 40-45 and point five percent was under 45-50 years.

Table 5.3. Age of the Participants

<table>
<thead>
<tr>
<th>Age</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>25-30</td>
<td>14</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
</tr>
<tr>
<td>30-35</td>
<td>130</td>
<td>60.7</td>
<td>60.7</td>
<td>67.3</td>
</tr>
<tr>
<td>35-40</td>
<td>52</td>
<td>24.3</td>
<td>24.3</td>
<td>91.6</td>
</tr>
<tr>
<td>40-45</td>
<td>17</td>
<td>7.9</td>
<td>7.9</td>
<td>99.5</td>
</tr>
<tr>
<td>45-50</td>
<td>1</td>
<td>.5</td>
<td>.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>214</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) is a statistical technique that has been used by most of the researchers. CFA focuses on modeling the relationship between manifest (i.e., observed) indicators and underlying latent variables (factors).

KMO & Bartlett’s Test of Sphericity

KMO & Bartlett’s Test of Sphericity is one of the aspect of confirmatory factor analysis. This test is used to check the adequacy level of sampling and the case to variable ratio of the analysis. The accepted index of KMO is over 0.6.

Table 5.6. KMO & Bartlett’s Test of Sphericity

<table>
<thead>
<tr>
<th></th>
<th>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</th>
<th>Bartlett's Test of Sphericity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.483</td>
<td>Approx. Chi-Square: 632.138</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Df: 190</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.: &lt;.001</td>
</tr>
</tbody>
</table>

In this study the value of KMO is greater than 0.6 which means that the selected sample of the study is adequate and is according to the findings of Pallant 2007.

Table 5.7 Total Variance Explained (n=215)

<table>
<thead>
<tr>
<th>Componen  t</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Rotation Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
<td>Cumulative %</td>
</tr>
<tr>
<td>3</td>
<td>1.679</td>
<td>8.396</td>
<td>27.808</td>
</tr>
<tr>
<td>4</td>
<td>1.628</td>
<td>8.142</td>
<td>35.951</td>
</tr>
<tr>
<td>5</td>
<td>1.532</td>
<td>7.658</td>
<td>43.608</td>
</tr>
<tr>
<td>6</td>
<td>1.466</td>
<td>7.329</td>
<td>50.937</td>
</tr>
<tr>
<td>7</td>
<td>1.308</td>
<td>6.538</td>
<td>57.475</td>
</tr>
<tr>
<td>8</td>
<td>1.211</td>
<td>6.053</td>
<td>63.528</td>
</tr>
<tr>
<td>9</td>
<td>1.077</td>
<td>5.386</td>
<td>68.914</td>
</tr>
<tr>
<td>10</td>
<td>.922</td>
<td>4.608</td>
<td>73.523</td>
</tr>
<tr>
<td>11</td>
<td>.864</td>
<td>4.322</td>
<td>77.845</td>
</tr>
<tr>
<td>12</td>
<td>.669</td>
<td>3.346</td>
<td>81.191</td>
</tr>
</tbody>
</table>
In order to measure the reliability of the factors Cronbach’s Alpha test has been conducted. The value of Cronbach’s Alpha is greater than 0.7 which indicated the adequacy of the factors in line with the findings of Hair et.al., 2010.

Table 5.9: Reliability Statistics

<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>.764</td>
<td>.684</td>
<td>24</td>
</tr>
</tbody>
</table>

Pearson Correlation

The relationship between Effective Communication, Working environment, and Employee Performance with moderating role of Organizational culture was assessed through Pearson Correlation in SPSS27. The results of the Pearson Correlation analysis indicates a positive relationship among these variables.
Regression Analysis
Regression analysis was performed to analyze the impact of Effective Communication, Working environment on Employee Performance with moderating role of Organizational culture. However, regression analysis confirms that there is a positive and significant relationship between these variables.

<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>.302*</td>
<td>.091</td>
<td>.078</td>
<td>.85568</td>
</tr>
</tbody>
</table>

Table 5.12: ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>14.882</td>
<td>3</td>
<td>4.961</td>
<td>6.775</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>148.635</td>
<td>203</td>
<td>.732</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>163.517</td>
<td>206</td>
<td></td>
<td></td>
<td></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>1</td>
<td>(Constant)</td>
<td>0.596</td>
<td>.788</td>
<td>6.835</td>
</tr>
<tr>
<td></td>
<td>Total_EC</td>
<td>.134</td>
<td>.081</td>
<td>.116</td>
</tr>
<tr>
<td></td>
<td>Total_WE</td>
<td>.164</td>
<td>.066</td>
<td>.174</td>
</tr>
<tr>
<td></td>
<td>Total_OC</td>
<td>.134</td>
<td>.067</td>
<td>.140</td>
</tr>
</tbody>
</table>

Hence, the above mentioned analysis shows a positive impact of Effective Communication, Working environment, and Employee Performance with moderating role of Organizational culture. The value of slope coefficient if 0.116; the value of t is 2.835 which indicates a positive relationship between Effective Communication, Working environment, and Employee Performance with moderating role of Organizational culture. On the other hand, the value of coefficient is 0.596; the value of t is 6.835.
PLS model includes the composite reliability, average variance extracted, Cronbach’s Alpha and communality in order to evaluate internal consistency of the variables.

**Average Variance Extracted (AVE)**
In this study the AVE of Effective communication was 0.653, Working Environment (0.720), Organizational Learning Culture (0.753) and employee performance was (0.690)

**Composite Reliability**
Composite reliability is the measure of internal consistency. According to Hair et al., 2010, the value of reliability coefficient must exceed than 0.70. However, the values as low as 0.50 are acceptable at initial construct development (Nunnally 1967). In this study the composite reliability was concluded as Effective communication (0.741), Working Environment (0.702), Employee Performance (0.654), Organizational Learning Culture (0.620)

**R Square**
In order to evaluate a structural model R² (coefficient determination) is used. This is used to measure predictive accuracy of the model and is calculated as a squared correlation between actual and observed values. In this study R² values of Employee Performance was calculated as (0.331) while of Organizational Learning Culture is (0.343).

**Cronbach’s Alpha**
According to Hair et.al., 2010, the values more than 0.6 are acceptable. In this study, cronbach alpha is more than 0.6 which clearly indicates that the variables of this study are reliable.
Summary of the Results
In this study the relationship of dependent (employee performance) and independent (effective communication, working environment) variables was examined by the role of moderator (organizational learning culture). For the purpose of data collect a number of two hundred and fifteen employees was selected from FMCG sector of Punjab, Pakistan. Analysis of the collected data was performed with the help of statistical package for social sciences. Reliability and validity were tested by using factor analysis and cronbach’s alpha. Then the significance was further analyzed by using regression and correlation analysis. The factor analysis confirmed the significance of the variables. The results of cronbach alpha were greater than 0.7 which confirms the reliability of the variables.

In addition to that, correlation analysis confirms that all the variables i.e., effective communication, working environment, organizational culture and employee performance are significant and correlated.

Conclusion
In this part, the findings and results of previous areas are discussed. Further suggestions are also given on the basis of previous chapters and results. In the last section of this chapter further research for future researchers is discussed which gives suggestions to future researchers for further research.

On the basis of interpretations, results and discussions it has been concluded that:
1. Effective communication helps to increase the performance of an organization, improve employee’s coordination, productivity and ultimately helps to increase the performance of a particular sector (Obeidat et al., 2018).
2. Effective communication helps to build confidence level of employees whereas weak communication losses the confidence of employees. Therefore, effective communication has an impact on the performance of employees.
3. Working environment helps to share knowledge and information informally in an organization in order to enhance mutual coordination and increasing productivity. The ability to share knowledge in an organization depends upon the work environment of that organization (Brenner (2004).
4. Such environment by allowing free flow of effective communication can be used as a tool to motivate employees for producing better results. In the views of Mokaya et al. (2013) working environment plays an important role in order to increase job satisfaction of employees.
5. Organizational learning culture is a source of competitive advantage for most of the organizations as it increase job commitment, and level of satisfaction Aycan et al. (1999).
6. An employee makes decisions in an organization culture that affects the performance of an organization Pettigrew (1979). That’s why working environment had a direct impact on the performance of employees.

7. In a nutshell, effective communication, working environment, is of utmost importance for FMCG sector. This works in the best interest of an employee and an institution. An employee gets comfortable environment and get innovative ideas and more knowledge through effective communication an institution performs well and achieve organizational objectives which leads higher institutions towards more output and success.

**Future Recommendations**

On the basis of above mentioned results the management of FMCG sector of Punjab, Pakistan is suggested to use effective communication technique and make sure the provision of more comfortable working environment through organizational learning culture to employees in order to enhance productivity.

The present study reveals that effective communication and working environment plays an important role in FMCG sector of Punjab, Pakistan. It suggests that the performance of employees can be increased by providing comfortable working environment and treating them in a more effective way. By following below mentioned ways FMCG sector can enhance employee’s performance.

Firstly, management of this sector must set some standards and policies to behave in a certain way within an organization and with the customers simultaneously. In this way employees communicate with each other and with customers effectively.

Secondly, managers must interact with the subordinates on weekly or monthly basis in the form of meetings or seminars for the purpose of communicating the pros and corns of effective communication and working environment. This will help this sector to adopt changes in their present ways of dealing with each other.

Finally, by setting rules and policies and by providing awareness to employees FMCG sector would be in a position to use effective communication and improve their working environment by having organizational learning culture in this sector.

**Limitations of the research**

Shortage of time is the limitations of this research. Further, this research has been conducted in Punjab. More research can be done in throughout the world. This research has used FMCG sector specifically to examine the impact of effective communication hence, further research can be done by using other sectors i.e. Education, Agriculture, IT etc.

In addition to that this study is based on the impact of effective communication and working environment on the employee’s performance through the moderating role of organizational culture further research can be made on the ways or methods improve working conditions of this sector.

**References**


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Work Environment and its impact on Employees Performance: A study on women employees in BSNL.
Empirical Analysis of the Macroeconomic impact of Foreign Aid on Pakistan Economy (1972-2014)

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ARTICLE DETAILS

ABSTRACT

Purpose: Although Pakistan receives large quantity of foreign aid, like other developing countries, but it remains more dependent on foreign assistance for economic development since independence. This situation has commenced a vigorous discussion on aid-growth effectiveness.

Methodology: This research work evaluates the macroeconomic impact of foreign aid on Pakistan economy by using secondary data. The empirical analysis is based on ARDL cointegration approach after testing for unit root, using the data for the period 1972-2014.

Findings: The findings suggest there is no long run relationship between Foreign aid and Economic Growth. However, there exists negative short run relation between Foreign aid and Economic Growth of Pakistan.

Implications: Based on the study findings, the study recommends that government of Pakistan should find alternate sources of financing as the relation between foreign aid and economic growth is found negative and insignificant. The in depth analysis of the study made it evident that allocation of aid to those sectors of the economy which really needs development, is more productive, provided that the country should use aid funds in the right direction, as corruption less economy prosper more rapidly.

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Introduction

In developing economies, the level of investment and saving is very low or inadequate. The capital market is imperfect due to low level of capital mobilization. Low per capita income is the main problem in under developed countries. The domestic investment is not undertaken due to lack of savings or in other words the subsistence level is lowest. Public revenue in the under developed and developing country is not enough for coping the needs of the investment in the country and to make the subsistence
level high. The need of foreign aid arises because of inadequate export earnings needed to import capital goods for rapid industrialization. So, in order to cope up with the problems of low saving or investment level and low export earnings, the developing country is compelled to depend on the foreign resources or aid coming in the form of grants, loans, credits, remittances or foreign direct investment. This represents the conventional “two gap” model, as stated by Chenery and Strout (1966), in which foreign aid is assumed to fill the gap between saving and investment and import and exports for the economic development in the developing country. Foreign aid usually transferred in the form of loans and grants from the rich countries of the world to the poor. Aid in the form of grants require no repayment of the amount granted to the recipient country while, aid in the form of concessional loans demands repayment of the amount loaned with low market rate of interest.

Due to huge aid inflows, developing economy flourish economically. And the aid flows make it possible for the developing country to grow faster both in the capital and physical capital accumulation and their level of welfare may enhance. The developmental aid has increased up to 6.1%, the net ODA from the DAC and other members has reached US$134.8 billion in 2013, the highest level ever recorded. The main aid giving institutions: World Bank, United Nations, and International Monetary Fund gained much dominance with the passage of time in the world economic affairs. The main objectives of the donors are political, economic, geographical and humanitarian interest in the recipient country.

Foreign aid also considered as Official Development Assistance (ODA) comprises of the grants and loans that are shifted from the Developed countries to the developing countries or in other words ODA comprises of the loans and grants which are made available on concessional rate by the members of Development Assistance Committee and other developed countries, for the disbursement in the developing countries in order to achieve long run economic growth and welfare. The term ODA is created by Development Assistance Committee of the Organization for Economic Co-operation and Development (OECD) in order to measure aid. The total aid package consists of loans and at least 25 percent of grants. The main purpose of ODA is to eradicate poverty from the developing or under developed countries. The proportion of ODA that comes from governmental sources comprises 80-85% while the remaining 15-20% comes from nongovernmental organizations.

Foreign aid has two forms, one is called bilateral aid, which, flows from one government to the other government directly. The other form, is called multilateral aid, is supposed to be provided by the group of developed countries to international organizations or institutions like IMF, World Bank USAID etc so as to give to one or more recipient countries. On the other hand, the effect of aid flows on recipient country’s economy is also detrimental if the recipient government is indulged in corruption, or the politicians use it inappropriately on non developmental projects. Moreover poorly enforced regulations, corruption, domestic macroeconomic policy weaknesses and high dependency on foreign aid can boost unsustainable resource utilization patterns. The inflow of foreign aid in large amount can also leads to the overvaluation of the exchange rate, which results in less export earnings in the recipient country.

The impact of aid inflows would be positive, if it is utilized for developmental purpose such as human or infrastructure development. But if it is used to crowd out private investment, its effect would be negative. The total effect of aid on the recipient’s economy counts on which effect is dominating. Since the beginning of independence, Pakistan has been depending on foreign aid for self sustaining economic growth by financing major portion of imports and investments. Foreign aid flows from Development Assistance Committee (DAC) to the developing country like Pakistan since 1947. Pakistan received 972 million US in 1980-81 which reached to 2156 million US dollars in 1990-91. The ODA has reached over at the highest level of US$120 billion in 2010. The GDP growth rate of Pakistan as indicated by International Monetary Fund (IMF) was 8.526 in 1980 which decreased to 4.459 in 1990. The GDP growth rate has further declined to 2.581 in 2010 but recently it has increased to 3.696 in 2013. The dependency of Pakistan on foreign assistance has increased since independence in 1947. But despite of the huge inflow of foreign aid, Pakistan still stand in the place which is considered as developing
country from the economic point of view. Large amount of aid is used for the repayment of the loaned amount. Pakistan has pay off $45.05 billion out of the total amount of $77.78 billion to the donors during the period 1961-2009. The Asian Developed Bank has given $ 237 million as aid to Pakistan in 2011-12. The other multilateral donors like World Bank released $229 million. Japan and China contributed $101 million and $323 million to Pakistan, respectively. The Australian government declared $19 million aid to the Pakistan for the military and natural disasters in 2015. Moreover, since 2005, Kuwait has given $108 million, South Korea $18 million to the Pakistan.

**Literature review**

This section of my research work presents a review of different research findings of major studies that includes the macroeconomic impact of inflation, corruption perception index, real exchange rate, private domestic investment on developing economies.

Durbary et al. (1998) assessed the relationship of foreign aid on the economic growth of many developing countries by analyzing the data from 1970-1993. For the data estimation, Fischer-Easterly type model was used by using panel as well as cross sectional data techniques. The result suggested that foreign aid has significant and positive impact on the economic growth of different developing countries, provided that good policy environment prevails in the country. Ataullah et al. (2002) examined the relationship between foreign aid and foreign private investment on Pakistan economy for the time period of 1970 to 2000 by analyzing data using different kinds of chart. The estimates of the study indicated that the impact of foreign aid, foreign private investment and foreign capital is not significant because of the low progress of the national institutions, human capital and local private enterprises. Alesia (2002) tried to find the answer to the question as to whether foreign aid has any relation with corruption. The data has been obtained from the different sectors of 74 countries’. The result of the paper indicated no support of the question, and explored that foreign aid exerts no influence on the intensity of the corruption in any country. The study concluded that large amount of foreign assistance is given to highly corrupt governments. Moreover, it is found that corruption cannot be reduced with high inflow of foreign assistance. The study did not find any evidence of negative impact of foreign aid on corruption. Furthermore the researcher investigated that foreign aid donors behaved differently towards their recipients. Tavares (2002) conducted a study on the effects of foreign aid on corruption on non OECD countries, as aid recipients and had taken the non OECD countries as instrumental variables. The data of developing countries has been analyzed by using cross sectional data.

The causality of the foreign aid has been analyzed by assessing it through the geographical and cultural distances of the aid donor countries. The result showed statistical significance of the different controls and indicated that foreign aid decreases corruption due to terms and conditions of the donor countries thus restricting the government of the recipient countries to proper utilization of it and secondly as foreign aid curb the revenue raising problem of the recipient countries, it may, therefore, decrease corruption. So foreign aid is reported to have a positive impact on the developing countries’ economies. Ouattara et al. (2004) examined the impact of foreign aid inflows on real exchange rate. The study was conducted by using data of real exchange rate of 12 countries of the CFA Franc zone, Africa. The study period was from 1980 to 2000. The dynamic panel analysis technique was used for data analysis. In the study appreciation in the real exchange rate by the inflows of foreign aid was tested and the result indicated that foreign aid did not cause the Dutch disease and could not appreciate the currency instead it depreciate the franc. Arshid et al. (2007) conducted a study to explore the impact of foreign aid on different macroeconomic variables in Pakistani economy. The time period of the study was 1972-2006. The data has been analyzed by using ADRL cointegration approach in order to examine the effect of aid on different macroeconomic variables. The model was based on the neo classical production function. The estimate of the study has indicated that foreign aid has no impact on economic growth both at aggregate and disaggregate level. Furthermore, it was concluded that economic growths is positively and

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1 The OECD Development Assistance Committee became part of the OECD by Ministerial Resolution on 23 July 1961. It is a unique international forum of many of the largest funders of aid, including 29 DAC Members. The World Bank, IMF and UNDP participate as observers.
significantly affected by domestic investment both at aggregate and disaggregate level. Uneze et al. (2012) examined the impact of foreign aid on private investment by analyzing unbalanced panel data from 1975-2008 in West Africa. The researcher used fixed estimation technique for data analysis. For the purpose of research, foreign aid is analysed by disaggregating total aid into bilateral and multilateral aid. The findings of the study show that private domestic investment is positively affected by foreign aid. On the other hand, bilateral aid is not much affected by private investment. Grimm et al. (2012) analyzed the impact of foreign aid on private investment both exogenously and endogenously using cointegration analysis and causality techniques for the period of 30 years i.e. from 1970-1991 for 18 different developing countries. The result indicated the negative and significant impact of aid on private investment. Moreover, It is found that the causality relationship between foreign aid and private investment works in both directions, as high amount of aid result in the low level of private investment and low amount of aid results in the high level of private investment. Bhavan (2013) conducted a research on aid effectiveness in achieving steady economic growth, the indicators and policies affecting to it in Sri Lanka during the year 1980 to 2008. The data was tested by using single equation instrumental variable method. The study also taken into account the other macroeconomic variables affecting economic growth including; aid inflation term, aid openness term, and aid budget deficit term as well. The results of the study indicated that aid impact positively economic growth when related with trade openness and budget deficit, whereas it affects negatively on the economy when aid inflation term is analyzed. The result of the aid and trade openness term was found positive on the economy while, aid and budget deficit was found to have negative impact on the economy.

Justification of the Study
In order to improve economic, social, environmental and political situation, the developing countries are given foreign aid by the governments of developed economies and other foreign agencies. The importance of foreign aid cannot be overlooked in the economic development of the less developed countries. However, the rich countries have put so many conditions on aid that it has reduced aid effectiveness. The main objective of foreign aids i.e. the crucial role of foreign aid for faster economic has yet to discover. Keeping in view the importance of this issue, the following research work is executed on the macroeconomic impact of aid effectiveness on the economic growth of Pakistan. Pakistan being a developing country needs foreign aid for its developmental needs. But, a little development has been taken place after half a century of transporting theses resources to the developing countries like Pakistan. The situation is even worse because there is high level of unemployment, indebtedness, low level of investment and poverty prevails. In this situation there is a need to evaluate the impact of foreign aid on Pakistan economy so that the public as well as the government realize the impact of foreign aid on Pakistan economy. On this ground, this research work is carried out to serve as the medium for the government of Pakistan to have a look on its economic growth and make better policies to make foreign aid more effective. This study will also serve as a basis for future research.

Objectives of the Study
To study the effectiveness of foreign aid in terms of economic growth of Pakistan 1972 to 2014.

Hypothesis of the study
H0: The overall impact of Foreign aid on economic growth is not significant;

Research Methodology
This research is designed to investigate the macroeconomic impact of foreign aid on economic growth of Pakistan. Real Economic growth (GDP), foreign aid, real exchange rate, inflation, private domestic investment and corruption percentage index for the years 1972 to 2014 are the variables to be included in this study. The analysis starts with the thorough collection and analysis of data from 1972 to 2014. The study is based on secondary data. The quantitative data is analyzed by using econometric time series ARDL model and Microfit 5.01 software has been used for data analysis. The sources of data are the World Bank, Federal Bureau of Statistics and Economic Survey of Pakistan, OECD, IMF etc.
Econometric Model
Autoregressive Distributive Lag (ARDL)

A more general model for large numbers of lagged terms
Let the two variables be $Y_t$ and $X_t$ ARDL:

$$ Y_t = \mu + \sum_{i=1}^n a_i Y_{t-i} + \sum_{i=0}^m y_i X_{t-i} + \mu_t $$

$$ Y_t = \mu + \alpha_1 Y_{t-1} + \cdots + \alpha_n Y_{t-n} + \gamma_0 X_{t} + \gamma_1 X_{t-1} + \cdots + \gamma_m X_{t-m} + \mu $$

The solution for the long run model, i.e., to establish a point where $Y_t$ and $X_t$ settle down to constant steady-state levels $Y^*$ and $X^*$, or precisely when:

$$ Y^* = \beta_0 + \beta_1 X^* $$

And again assume $X^*$ is constant

$$ Y^* = X_{t-1} = \cdots = X_{t-m} $$

So, applying the above mentioned condition into Equation (1), the solution for the long run is as:

$$ Y^* = \frac{\mu}{1-\Sigma a_i} + \frac{\Sigma y_i}{1-\Sigma a_i} X^* $$

Or:

$$ Y^* = B_0 + B_1 X^* $$

Which means we can $Y^*$ conditional on a constant value of $X$ at time $t$ as:

$$ Y^* = B_0 + B_1 X_t $$

Now, equilibrium error $e_t$ is defined as:

$$ e_t = Y_t - Y^* = Y_t - B_0 - B_1 X_t $$

So, the estimation of the parameters $B_0$ and $B_1$ is needed to be calculated. Obviously, the estimation of parameters $B_0$ and $B_1$ is done by deriving it from equation (1) by the OLS and then estimating $A=\mu/ (1-\Sigma a_i)$ and $B=\Sigma y_i/ (1-\Sigma a_i)$. Nevertheless, the transparent results cannot be attained by this method and the standard errors are very difficult to calculate by this method. Therefore, all these difficulties have been overcome by the ECM specification. Consider the following model, by rearranging Equation (1):

$$ \Delta Y_t = \mu + \sum_{i=1}^n a_i \Delta Y_{t-i} + \sum_{i=0}^m y_i \Delta X_{t-i} + \theta_1 Y_{t-1} + \theta_2 X_{t-1} + \mu $$

Note for $n=1$ the second term on the left hand side of equation (2) disappears. So, by using the technique of mathematics, the equation becomes,

$$ \theta_2 = \sum_{i=1}^m y_i $$

Which represents number of long run parameter, $\beta_2$, and that:

$$ \theta_2 = \sum_{i=1}^m Y_i $$

So the long run parameter $\beta_0 = 1/\theta_1$ and the long run parameter $\beta_1 = -\theta_2/\theta_1$. Therefore the level terms of $Y_t$ and $X_t$ in the ECM tell us exclusively about the long run parameters. Therefore, the most helpful way to write the ECM is as follows:

$$ \Delta Y_t = \mu + \sum_{i=1}^{n-1} a_i \Delta Y_{t-i} - i + \sum_{i=0}^{m-1} y_i \Delta X_{t-i} - i + \theta_1 \left( Y_{t-1} - \frac{1}{\theta_1} \theta_2 X_{t-1} - 1 \right) + \mu $$

$$ \Delta Y_t = \mu + \sum_{i=1}^{n-1} a_i \Delta Y_{t-i} - i + \sum_{i=0}^{m-1} y_i \Delta X_{t-i} - i + \theta_1 \left( Y_{t-1} - \beta_0 - \beta_1 X_{t-1} - 1 \right) + \mu $$

Where $\theta_1 = 0$. Furthermore knowing that $Y_{t-1} - \beta_0 - \beta_1 X_{t-1} - 1 = e_t$, our equilibrium error, we can rewrite equation as

$$ \Delta Y_t = \sum_{i=1}^{n-1} a_i \Delta Y_{t-i} - i + \sum_{i=0}^{m-1} y_i \Delta X_{t-i} - i - \pi e_t - 1 + \epsilon_t $$

Here, $\pi$ is adjustment coefficient and it shows how much of the equilibrium takes place in each period.

Where: $X$ represents independent variables, and $Y$ represents dependent variable.

GDP = Real GDP

EXCHR = Real Exchange rate
INF = Inflation Rate  
FRAID = Foreign aid  
INV = Private Domestic Investment  
CPI = Corruption Perception Index  

Consider the following cases  
If π=1 than 100% of the adjustment take place within given period, or the adjustment is instantaneous and full.  
If π=0.5 then 50% of adjustment take place in each period.  
If π=0 then there is no adjustment, and to clam that Y*<sub>t</sub> is the long run part of Y<sub>t</sub> no longer makes sense.  
We need to connect this with the concept of cointegration. Because of cointegration, e<sub>t-1</sub> is I(0). Thus, in equation, which is the ECM representation, we have a regression that contains only I(0) variables and allows us to use both long run information and short run disequilibrium dynamics, which is the most important feature of the ECM.  

Results and Discussions  
ARDL model is used to analyse the effectiveness of foreign aid in terms of economic growth of Pakistan by using Microfit 5.0.  

Unit Root Test  
Before proceeding to the variance decomposition test, it is essential to make the data stationary.  
Therefore, to confirm the unit root properties of the variables and in order to avoid spurious regression, Augmented Dickey-Fuller (ADF) test is used. The test results are shown in Table 1.  

Table No.1 Augmented Dickey Fuller test  

<table>
<thead>
<tr>
<th>Variables</th>
<th>ADF</th>
<th>P Values</th>
<th>Level of Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRAID</td>
<td>-6.539166</td>
<td>0.0000*</td>
<td>I(0)</td>
</tr>
<tr>
<td>EXCHR</td>
<td>-4.348787</td>
<td>0.0068*</td>
<td>I(1)</td>
</tr>
<tr>
<td>INV</td>
<td>-3.435718</td>
<td>0.0152*</td>
<td>I(0)</td>
</tr>
<tr>
<td>INF</td>
<td>-3.291288</td>
<td>0.0216*</td>
<td>I(0)</td>
</tr>
<tr>
<td>CPI</td>
<td>-8.635815</td>
<td>0.0000*</td>
<td>I(1)</td>
</tr>
</tbody>
</table>

* indicates 5% level of significance. FRAID= official Development Assistance, EXCHR= real exchange rate, INV= gross domestic investment, INF= inflation rate, CPI= corruption perception index.  
The Table shows that the variables Foreign aid, Private Domestic Investment and Inflation are stationary at level I(0). Whereas, Real Exchange Rate and Corruption Perception Index are stationary at first difference I(1).  

The Autoregressive Distributive Lag (ARDL) MODEL  
The estimation of ARDL approach is based on the assumption that the variables must be stationary at level I(1) or first difference I(1). And none of the variables is integrated of order two I(2). According to Pesaran et al. (2001), the dependent variable must be I(1) variable, but independent variables can be either I(0) or I(1). The Augmented Dickey Fuller results shown, that dependent variable i.e. Real Economic Growth (GDP) is stationary at first difference while among the independent variables, Foreign Aid, Private Domestic Investment and Inflation are stationary at level and Real Exchange Rate and Corruption Perception Index are stationary at first difference. The result therefore justifies using ARDL approach for analyzing the long run and short run relationship among the variables under study.  

Diagnostic Tests  
The Diagnostic test for the existence of autocorrelation, functional form, normality and heteroscedasticity shows that all the variables satisfy the residual properties i.e. the model has the correct functional form, serially uncorrelated, homoscedastic and are normally distributed.  

Table. 2 Diagnostic Tests  

592
Error Correction Model (ECM)

The error correction model of ARDL shows short run relationship among dependent and independent variables. It shows that Real Exchange Rate is statistically insignificant at 5% level of significance and is negatively related with Real Economic Growth (GDP). According to the theory, higher real exchange rate leads to higher economic growth. An increase in real exchange rate (depreciation of the local currency) leads to increase in exports which in turn increase balance of trade and as a result the economic growth of a developing country improves. The result is consistent with the economic theory.

Table. 3 Error Correction Representation
ARDL(1,1,1,1,0,0) selected based on Schwarz Bayesian Criterion

<table>
<thead>
<tr>
<th>Regressor</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>T-Ratio</th>
<th>Prob</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>dEXCHR</td>
<td>-.14040</td>
<td>.070260</td>
<td>-1.9983</td>
<td>.067</td>
<td></td>
</tr>
<tr>
<td>dFRAID</td>
<td>-.0083955</td>
<td>.0069195</td>
<td>-1.2133</td>
<td>.247</td>
<td></td>
</tr>
<tr>
<td>dINF</td>
<td>-.24128</td>
<td>.092259</td>
<td>-2.6152</td>
<td>.021</td>
<td></td>
</tr>
<tr>
<td>dINV</td>
<td>-.039517</td>
<td>.15076</td>
<td>-2.6213</td>
<td>.027</td>
<td></td>
</tr>
<tr>
<td>dCPI</td>
<td>-.14582</td>
<td>.066536</td>
<td>-2.1916</td>
<td>.047</td>
<td></td>
</tr>
<tr>
<td>ecm(-1)</td>
<td>-.53998</td>
<td>.22081</td>
<td>-2.4455</td>
<td>.029</td>
<td></td>
</tr>
</tbody>
</table>

R-Squared .79276
F-Stat. F(5,13) 7.6508[.001]
DW-statistic 2.5903

Foreign Aid is also insignificant and it negatively affecting the dependent variable i.e. GDP. The result suggests that the contribution of foreign aid (in aggregate form) to the economic growth of Pakistan is negligible. The finding of this result is supported by Javid et al., (2011), Khan and Rahim (1993), Ishfaq and Ahmed (2005) and Khan and Ahmed (2007). According to their results there is negative relation between foreign aid and economic growth of Pakistan. The reason behind this impact of foreign aid may be the deterioration of economic policies [Ishfaq and Ahmed (2005)]. Moreover, according to Khan and Ahmed (2007), foreign aid fails to contribute to the economic growth of Pakistan may be due to the following hurdles: harsh conditionalities of donors, inefficient governance, tied aid and poor performance of institutions of State. Inflation is statistically significant and is negatively related to the dependent variable. The reason may be that higher inflation rate leads to reduce economic growth by reducing the level of investment in the country. The high rate of inflation may lessen the level of investment due to macroeconomic instability. According to Montiel and Serven (2004) other things remaining the same, macroeconomic stability and low level of inflation has an encouraging impact on the income level of the people. Private Domestic Investment is statistically insignificant and is negatively associated with GDP. The expected sign of the Private Domestic Investment to GDP is positive. The result does not support the theory in this case. The reason behind this may be the different unforeseen events and deteriorating macroeconomic variables. High uncertainty, natural disasters, law
and order problems, war on terror, energy crisis and international economic recession may be the causes of inverse relation between investment and growth. Corruption Perception Index is weakly significant at 10% level of significance and is negatively affecting GDP. Output may not get affected by corruption directly, but various transmission networks are studied comprehensively through which corruption leaves its negative impacts on production. The level of output and growth are indirectly affected by corruption. Private investment is the transmission network that is taken into consideration for extensive studies; corruption throws negative impact on investment profitability, it also increases the uncertainty, and thus the whole situation dampens the business investment level. This applies a fortiori to the sub-category of foreign direct investment; it serves as the main source through which the transfer of technology is performed. The ultimate result of these impacts will discourage the attraction of entrepreneurship; the entrepreneurial skills will get diverted towards activities that are not more productive, thus the speed of innovation will be reduced leading to slow economic growth.

The value of R-square shows that 79% of variation in the dependent variable is explained by the independent variables, so the model is good fit. The value of F-statistic shows that the overall model is significant. After checking diagnostic tests (Table.2) it is cleared that the model has no autocorrelation. The value of ECM is negative and significant and showing that speed of adjustment towards long run equilibrium is 5.4%.

**Long run Estimates**
The long run estimates of ARDL indicate long run relationship between the dependent and independent variables. All the variables are statistically insignificant indicating no long run relation exists between dependent and independent variables. This is further confirmed by the Bound test below. The positive sign of the coefficient of Real Exchange Rate is not consistent with the economic theory. The reason may be that the major exports of Pakistan comprises of agricultural products, while it imports heavy machinery, oil and high tech goods. In term of quality the demand for Pakistani goods is low in international market, which further leads to negative trade balance of Pakistan, as a result the economic growth is declined [(Arslan Ahmad, Najid Ahmad, Sharafat Ali (2013)]. The justification of other variables’ has been mentioned in the interpretation of ECM above.

<table>
<thead>
<tr>
<th>Table. 4 Long Run Coefficients using the ARDL Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARDL(1,1,1,1,0,0) selected based on Schwarz Bayesian Criterion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Regressor</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>T-Ratio(Prob)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXCHR</td>
<td>.14605</td>
<td>.086037</td>
<td>1.6975 [.120]</td>
</tr>
<tr>
<td>FRAID</td>
<td>-.042503</td>
<td>.024372</td>
<td>-1.7439 [.112]</td>
</tr>
<tr>
<td>INF</td>
<td>-.13101</td>
<td>.15344</td>
<td>-.85387 [.413]</td>
</tr>
<tr>
<td>INV</td>
<td>-.073183</td>
<td>.29811</td>
<td>-.24549 [.811]</td>
</tr>
<tr>
<td>CPI</td>
<td>-.27006</td>
<td>.16143</td>
<td>-1.6729 [.125]</td>
</tr>
</tbody>
</table>

**The Bound Test**
In Table 5 the results of the bound co-integration test illustrate that the null hypothesis of no cointegration against its alternative is accepted at the 5% significance level. The computed F-statistic of 2.02 is lower than the lower critical bound value of 2.93, thus signifying no long run relationship exists among Real GDP, Real Exchange Rate, Foreign Aid, Private Domestic Investment, Inflation and Corruption Perception Index.
The finding of the study shows that there is no long run relationship between Foreign aid and Economic Growth. However, there exist negative short run relation between Foreign aid and Economic Growth of Pakistan.

Conclusions

Due to the problems of low saving or investment level and low export earnings, Pakistan is compelled to depend on the foreign resources or aid coming in the form of grants, loans, credits, remittances or foreign direct investment. It receives a major part of its foreign economic aid from consortium, non consortium and Islamic countries. The study concludes that the Impact of foreign aid on Pakistan economy is less due to the negative relationship shown by the variables under study to economic growth of Pakistan. In net shell there is no long run relationship between Foreign aid and Economic Growth. However, there exists negative short run relation between Foreign aid and Economic Growth of Pakistan. The findings of the study shows that government should not rely solely on foreign assistance for increasing the economic growth, instead it should give incentives to the domestic investors by lowering interest rate to invest in the domestic market. The study suggests that fair system should be prevailed for the aid disbursement in the country, so that corruption, the most important factor affecting the utilization of foreign aid fruitfully in different sectors of the economy, can be reduced.

References


\[
\begin{array}{cccc}
2.0258 & 2.9373 & 4.6514 & 2.3032 \\
95\% \text{ Lower Bound} & 95\% \text{ Upper Bound} & 90\% \text{ Lower Bound} & 90\% \text{ Upper Bound} \\
12.1547 & 17.6239 & 27.9086 & 13.8193 & 22.362
\end{array}
\]
Trade, Environment, Human Capital and Services Sector in Developing Countries: A Panel Data Analysis

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Fatima Farooq, School of Economics, Bahauddin Zakariya University, Multan, Pakistan
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ARTICLE DETAILS

Objective: This study aims to examine the influence of Trade Liberalization, Environmental Quality (CO2 Emission) on Services Sector Growth in some selected developing countries.

Methodology: The estimation of the study considers panel data unit root and panel data ARDL approach. The environmental quality is represented by Carbon Dioxide Emission and trade liberalization is by trade openness.

Findings: The results of Panel Unit Root test summarize that Panel ARDL is the most appropriate method of estimation for having Panel Coefficient values due to mixed order of integration for developing countries.

Implications: The empirical findings of model, in Developing Countries, Labor Force, Capital Stock, Trade Openness, Money Supply, Government Expenditure and Human Capital exert upward pressure on Services Value Addition while Carbon Dioxide Emission and Price Level is putting downward pressure on Services Value Addition.

Introduction

Services sector is the third main sector of the economy that captures an important place in the economy and its growth and development. When growth and development happens then it leads to bring the structural changes. So therefore a growing economy also changes the percentage of basic sectors mainly agriculture, industry and services with the coordination of other sectors such as rural and urban, public and private, domestic and foreign sectors. The structure of an economy is defined by comparing its
distribution of share among three main sectors named as agriculture, industry and services in output and employment opportunities of an economy. Although the agriculture sector capture the most important place in the developing economy but by the time passes the phenomena is changed.

After losing the prominence of agriculture sector, two sectors come forward to contribute in economy’s per capita growth. Two sectors are industry and services sector. This happens due to wage differentiation in different sectors. Initially the sectoral shift has started towards the industrial sector and then it moves towards services sector. Three sectors are linked together in such a way that integration of them is key path to growth for any economy. As industrial growth take place in a developing economy, things become centralized. The centralization of various services also allows to grow the services that mainly consist of transportation, information and communication sector, energy sector and business and banking sector. Most of the researcher limit the services sector to the higher education services sector or office jobs. However, the services sector is vast term and defined at large-scale.

After the consecutive shifts of industrialization and post industrialization or deindustrialization, services sector starts to develop. All developing nations experience the stages that are existed due to structural changes in consumer demand and relative labor demand and productivity in three main sectors of the economy. The services sector is a cluster of various services like;

- Trade in the economy to introduce the economy to rest of the world for the betterment of the economy and to increase the well-being of the economy
- Hotels and Restaurants business to flourish the job opportunities
- Transportation of all kind in the economy
- Tourist Assistance Activities to entertain the tourists
- Travel Agencies and Tour Operators a source of guidance for the people who want to go out of the country either for a visit, tour or immigration
- Storage and Warehouses to facilitate the firms and production sector to store their stocks
- Information and Communication Technologies to help people to make their life easy by reducing the physical efforts and to increase the different job options
- Banking and Insurance Sector being an intermediary between people who save for the future and for the financial institute who use their saving through the investors
- Real Estate and Residence Ownership to facilitate the buying and selling of the piece of land for residential purposes or for the business fixed investment
- Business and Management Consultancy to guide how to start a business with basic knowledge of it
- Accounting sector to maintain the balance of assets and liabilities
- The software is developed for various functions that allow the consumers and producers to communicate with each other
- Data Processing Services
- Architecture and Engineering Sector to build a house or a mall these services are available to all at low cost
- Technical Consultancy
- Advertisement services to introduce your business to the people and to the world.
- Public Administration to provide basic needs of the society
- Defense Services to protect the nation internally as well as externally
- Formal and vocational Education Services helps in the human capital formation and providing the educated and efficient workers with technical knowledge
- Health Services to provide the basic health services to the people publically or privately
- Religious and other Community Services to allow the citizens of the nation to perform their religious activities
Trade liberalization reforms such as tariff and non-tariff obstacles faced by developing countries is very essential conditions for increasing the level of exports in the economy and this just a necessary condition not a sufficient one because developing countries have to face the issues of poor infrastructure. There are many hurdles in the way to the development for a developing economy like availability of efficient ports, adequate road maps, proper and reliable electricity and means of communications. There is lack of necessary technological requirements and technical knowhow to meet the international standard of products. The product standards that are dominating in the high valued markets are difficult to meet where the products are of nature of standardized products like sanitary measures, technical restrictions, certifications and copy rights issues. In addition, there is lack of highly needed institutions to provide stable and clear regulations to allow enjoying the gains from the global trade amalgamation.

Rwanda, among EAC countries region, is determined to become a service-oriented cluster to serve the region to be out of its interior nature. The step towards globalization of services sector is very speedy and therefore this sector is imagined a road for economic renovation (Mann, 2004). The Rwanda service sector is superset of two sectors based on categories of trade and transportation. These services consist of maintenance and wear and tear of auto vehicles, wholesales and retailer trade plus transportation services. These basic two services are integrated with other services like information and communication, real estate activities such as professional, scientific and technical activities, administrative and supported services and many more.

It is necessary to know the role of the sector on the financial health of the nation. Numerous studies are responsible for providing the empirics on this issue that services sector is seem to be a healthy sector for the whole economy as compare to agriculture and industrial sector. Same situation is also witnessed in neighboring countries where in recent decade the services sector is performing much better and with the reference of standard literature, this sector is responsible for bringing speed in economic growth only after a value addition of agriculture and then industrial development.

Indian economy largely dependent on the services sector in terms of potential employment opportunities and contribution to gross Domestic Product. This sector accommodate a wide range of economic activities come from the complicated fields of information and communication technology. Informal sector workers like hawkers, rickshaw drivers, pursue this sector fruit sellers etc. because these group activities are also considered as a part of services sector. Therefore, the major comparison analysis of these states can be done by using employment services by considering main workers. The prosperous growth of services sector in India suggested the issue of sustainability in a broader way. Empirical studies showed interdependence of different sectors either an input-output framework used (Hansda, 2001) or through econometric modelling (Sastry et al, 2003). In the literature, Bhattacharya et al (2012) had studied the e-services sector growth in India. All these studies done already worked by assuming the economy a closed one, and therefore commodity producing sector of the country has no role in determining a state’s services performance.

Now services sector is also growing in Pakistan and contributing more than 50% (Pakistan Bureau of Statistic) of the Gross Domestic Product of Pakistan. The evidences came from the past trends of services sector contribution in Pakistan’s overall economic growth are increasing over the time-period. Same as other developing countries, this increase in services sector share substitute the share of agriculture sector in the economy. Agriculture losing its significant shares in the Gross Domestic Product of Pakistan because this sector fails to generate the required level of employment opportunities.
and income as well. A large number of populations have shifted from agriculture sector to the industry, services sectors as these two sectors are creating more employment, and wages are high here as compared to agriculture.

However, when the services sector is flourishing very rapidly then it may face the issue of labor shortage in social service activities that should be highlighted and identified with some new basic measurements for the value of social services. Here any economy cannot forget the role of women that is intensively visible in the world of today is happening. A woman is facing the tread every province of the activities with self-belief and proven competence. Her entry into male oriented of executive role in management affairs is a significant success under the light if many constraints. Services sector increases the income level of the peoples of the society, they are affording more other services, and able to spend on quality services like education, health, better means of transportation. Small and medium enterprises can help to meets the need of the people for more and more services with growth of the income levels and basic standard of living.

The share of the services sector is the maximum one out of three sectors and the resources are income elasticity of demand, open policies and reforms, growth of communication services, business, banking and trade services. However, these services will be better by innovation based on knowledge-intensive services, close-customer relation, network-based services, information and technology networking, supplier dominant services.

The trade liberalization leaves its impact overall economy specially the sectorial growth of any economy. Each of the sub-sector plays a vital role in any economy by influencing living standard of people, unemployment, poverty and inequality. These are themselves influenced by the trade. That means trade indirectly via each sector of the economy impacts the overall economy. In so far as main objective is to study the effectiveness of Trade Liberalization and Environmental Quality on Sectoral Growth of Developing Countries.

The present study is different and significant as this study is filling the research gap by providing empirical relationship of environmental quality on services sector of the economy as there is no literature available to show such effect. The research question of the study is how is empirical relationship of environmental quality on services sector can be measured without any literature support?

**Literature Review**

This section covers all the research work done by research investigators from all over the world based on the relationship between trade liberalization that is mainly represented by trade policies of restrictions or subsidies and services sector growth.

World Bank data from 1976 till 2014 was used by Ajmair (2017) to study the structural changes done in 1950’s in Pakistan that resulted in GDP growth. Conclusions of the paper depicted a strong negative impact between CPI and GDP from services sector but net FDI had a direct impact. He recommended increase in foreign direct investment, gross national expenditures and external debt to accomplish Longrun economic growth.

Another study was done by Ajmairet al. (2016) studied the factors resulting in increased growth of services sector in Pakistan using time series data from 1975 to 2014. They used ARDL approach to show that variables like population growth rate, growth in market size, increase in exports as well as government expenditures were major factor to influence this sector. They recommended increasing growth of services sector in order to increase the overall economic growth in Pakistan.

Morrar and Gallouj (2016) explored the gap between productivity of services and manufacturing sector in Palestine along with the exploring the heterogeneity between different sectors within the country.
They further studied the impact of services sector growth on overall productivity of the economy including political factor. The paper focused on the challenges faced by the Palestine economy that were firstly the highly dependent on Israeli economy, secondly the restrictions imposed by the Israel, and lastly, the lack of finances. The results on the basis of 234 sub-sectors over 1995 to 2009 pointed out that growth in intermediate consumption did not mean strong production of that sub-sector. But the sub-sectors were number of firms increased did show increase in labor productivity. They suggested increasing labor productivity in services sector by absorbing numerous unskilled, unemployed workers. Furthermore, they recommended in adopting tradition policies in order to increase employment level in services sector.

Uwitonze and Heshmati (2016) analyzed services sector of Rwanda in order to explore the determinants of that sectorial growth. This study deduced that training given to the professionals, increase in labor force participation rate, and increased access to finance, information and communication technologies applications, and tax systems drove the services sectors in Rwanda. Access to finance that had grown over the time put a positive impact on dependent variable. Some other variables like acquisition of fixed assets, capital used by the firms, turnover of firms providing services were also responsible for increase in innovations. Furthermore, they recommended gender sensitive policies to give equal change to women in the relevant fields, expand the ICT applications, regulate the monetary policy in the favor of financial assistance, and create space for the foreign trade policy to promote existing economic integration.

Das and Raut (2014) studied the pattern of growth in services sector in India along with the impact this growth created in overall development in the country. They utilized the data set from various sources ranging from 1999 till 2012. The research was based on the secondary data from 1990 to 2012 from different sources. They found out that the services sector in India was diverse and this resulted in innovations and development support in other sectors of the country.

Lashmi and Kumar (2012) presented the efforts that had been made to study the growth of Indian services sector and its impact on other sectors like industry and agriculture. For this they used secondary data from 1999 till 2010. They found that growth of this sector as compared to other two sectors was much more and thus made it the fastest growing and most contributing sector in India to her GDP. They put the responsibility of this fast growth on increased need of services and high income elasticity of this services demand in India. They further, pointed out that there is still room for growth in services sector in India.

Chakravarty (2006) studied using data from India to understand the determinants of growth in services sector. The yearly time series data had been collected from 1980 to 2003 on output and employment with some supporting variables. The empirical findings showed that services sector growth during the time of study was a common experience of all states in India, with varied experiences by all. They recommended achieving extraordinary growth rate in addition to diversification in services sector in order to reach desired prosperity level.

Data and Methodology

Data and Methods

For the Panel data of 63 developing countries, the interval of time from 1990 to 2018 is decided in this study. World Bank Organization developed World Development Indicators and its data was provided on its website & Penn World Table 9.1 is developed by Groningen Growth and Development Centre which is one of the Departments of University of Groningen, Netherlands are major sources of data collection in this research. This study follows Panel Unit Root test and Panel ARDL Test to obtain the empirics of the study. Fresh upcoming writings advocate that unit root tests for panel sets have higher power than individual time series’ unit root tests. E-Views can run the computation of one of the following five panel unit root tests that are (LLC) abbreviated as Levin, Lin and Chu (2002), the Breitung (2000), IPS
(Im, Pesaran and Shin) (2003), Fishers’ tests that are based on using ADF augmented Dicky Fuller test and PP (Phillips and Perron) tests.

**Econometric Methodology**

The econometric model is specified to show the impact of trade, environment and human capital on services sector output for Developing Countries as given below:

\[
SRVL = d_{0i} + d_{1i}LBFRC_{it} + d_{2i}CPSTK_{it} + d_{3i}TRDOPN_{it} + d_{4i}CREM_{it} + d_{5i}GDPDF_{it} + d_{6i}HMCP_{it} + d_{7i}BMN_{it} + d_{8i}GVEX_{it} + e_{it}
\]

Where,

- SRVL = Services Value Addition
- LBFRC = Labor Force
- CPSTK = Capital Stock
- TRDOPN = Trade Openness
- CREM = Carbon Dioxide Emission
- GDPDF = GDP Deflator
- HMCP = Human Capital Index
- BMN = Broad Money
- GVEX = Government Final Consumption Expenditure

Error term is denoted by \( e_i \), country is shown by ‘i’ and years are mentioned here by ‘t’.

**Results and Discussions**

**Panel Unit Root Results in Developing Countries**

There are so many methods to check order of integration or to check problem of unit root in panel data variables and one of those methods is Im, Pesaran and Shin W test. In table 1, probability values of Carbon Dioxide Emission, Capital Stock, Trade Openness, Broad Money, Government Expenditure, GDP Deflator and Human Capital are less than 0.10 at Level by including Intercept or Trend & Intercept and it may be concluded that Carbon Dioxide Emission, Capital Stock, Trade Openness, Broad Money, Government Expenditure, GDP Deflator and Human Capital are stationary at Level. On the other side, if Intercept and Intercept & Trend are added Level, so probability values of Services Value Addition and Total Labor Force are greater than 0.10 demonstrating Unit Root problem in these variables. Services Value Addition and Total Labor Force are checked at 1st Difference by including Intercept and Trend & Intercept and observed probability values are less than 0.10 which may lead towards the rejection of Null Hypothesis of Unit Root Problem at 1st difference so it may be concluded that Services Value Addition and Total Labor Force integrated of order 1 if Intercept and Trend & Intercept are added.

**Table 1: Im, Pesaran & Shin W Test – Developing Countries**

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Intercept Test Statistics</th>
<th>P – Value</th>
<th>Trend and Intercept Test Statistics</th>
<th>P – Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LEVEL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Services Value Addition</td>
<td>11.30</td>
<td>1.00</td>
<td>-0.14</td>
<td>0.44</td>
</tr>
<tr>
<td>Total Labor Force</td>
<td>2.26</td>
<td>0.98</td>
<td>-1.24</td>
<td>0.10</td>
</tr>
<tr>
<td>Capital Stock</td>
<td>4.49</td>
<td>1.00</td>
<td>-4.96</td>
<td>0.00</td>
</tr>
<tr>
<td>Trade Openness/Trade Liberalization</td>
<td>-4.45</td>
<td>0.00</td>
<td>-6.38</td>
<td>0.00</td>
</tr>
<tr>
<td>Carbon Dioxide Emission/Environmental Quality</td>
<td>2.60</td>
<td>0.99</td>
<td>-8.25</td>
<td>0.00</td>
</tr>
<tr>
<td>Government Expenditure</td>
<td>8.27</td>
<td>1.00</td>
<td>-7.40</td>
<td>0.00</td>
</tr>
<tr>
<td>Broad Money</td>
<td>6.05</td>
<td>1.00</td>
<td>-2.31</td>
<td>0.01</td>
</tr>
<tr>
<td>GDP Deflator</td>
<td>-19.63</td>
<td>0.00</td>
<td>-11.24</td>
<td>0.00</td>
</tr>
<tr>
<td>Human Capital</td>
<td>0.79</td>
<td>0.78</td>
<td>-3.41</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>1ST DIFFERENCE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Services Value Addition</td>
<td>-21.87</td>
<td>0.00</td>
<td>-18.15</td>
<td>0.00</td>
</tr>
<tr>
<td>Total Labor Force</td>
<td>-13.39</td>
<td>0.00</td>
<td>-12.54</td>
<td>0.00</td>
</tr>
</tbody>
</table>
Trade, Environment and Services Value Addition

The influence of trade liberalization and environmental quality with Services value addition in Developing countries is observed and the results are reported in table 2.

According to the expectation, semi-skilled or unskilled labor force of DCs’ may have positive effect on Services Value Addition because of weak services sector of DCs’. The empirics are validating that labor force of developing countries may have positive impression on Services value addition due to availability of Highly Skilled Labor and much improved services sector that is consistent with the results of Edeme et al. (2016), that is also concluded that labor force participation also positively impacts the economic growth of the ECOWAS region. Approximately, labor force has positive prediction by 0.21 percent in Services value addition in all developing countries in longer period of time with statistically significant probability values.

As regards to Capital stock which is included in this study to show the effect of Capital, it shows that higher capital stock to boost services sector in developing countries may increase services value addition in developing countries, the value of coefficient respectively is 0.08. It shows that Capital Stock is found as a source of higher Services Value Addition in the longer period of time that is supported by Gilbert et al. (2013) for economic growth. Services Value Added has positively predicted by Capital Stock in the long-run due to existence of co-integration and it is augmented in developing countries by 0.08 percent approximately empirically.

Carbon Dioxide Emission is a representative of Environmental Quality in Developing Countries. If environmental quality is improved so it shows that there would be clean environment and hence high quality of life and productivity may increase in return. It shows the presence of pollution in the environment in current scenario which may be due to intensive use of machinery for luxury purpose like Air Conditioners, Power Generators etc. DCs’. Intensive use of machinery for luxury purpose may be harmful for Services Value Addition DCs’. The value of coefficient is 0.11 with significant probability value denoting that one percent more carbon dioxide emission may decrease services sector by 0.11 percent in DCs’ in longer period.

Trade Liberalization is the vital factor for services value addition in case of overall developing countries there is positive sign attached with Trade in case of these countries. Services sector would be expanded in the long run if these developing countries are concentrating and improving their export sector in terms of semi-furnished or fully furnished goods and services or increasing trade with overall world. Trade openness is having statistically significant coefficient value with services value addition in the long run and it may be interpreted as one percent increase in trade liberalization may result in 0.001 percent higher services value addition approximately in developing countries.

For tracing the effect of Monetary Policy, Broad Money is taken in this study as explanatory variable. Monetary Policy is one of the goals of Macroeconomics to get higher Economic Growth and Higher Services Value Addition in the longer period of time. Its value of coefficient is positive in situation of Developing Countries that is 0.06 percent. It may be due to the fact that these countries are already having shortage of funds so excess funds may create inflation which may reduce Services Value Addition in the longer period of time.

Taking Price Stability, the study takes GDP Deflator which is supposed to be negatively related with Services Value Added supported by Uremadu and Onyele (2016) and Faridi (2012). It is quite natural that increase in price level will reduce the purchasing power of the people and in response demand for goods and services will reduce and it will give negative impression on services value addition. In Developing Countries, increase in GDP Deflator by one percent will reduce services value addition by 0.009.
Fiscal Policy is a key policy for the government for achieving higher growth rates in the long run by the developing economies. Due to expansionary fiscal policy, there would be higher level of expenditure by the government in the economy which would enhance developmental and non-development projects in the economy. Due to these developmental projects, services value addition would ultimately increase in the long run. Similar to this, the econometric results of this study also provides positive contribution of Government Final Consumption Expenditure towards Services Value Addition in case of Developing Countries like the study of Mehrara and Baghdanpour (2016) for 34 developing countries. Services Value Added has positively predicted by Government Expenditure in the long-run due to existence of co-integration and it is augmented in developing countries by 0.09 percent approximately empirically.

Human Capital is the most important factor for Services Sector Development in Developing Countries in the long run. Its coefficient is measured as 1.61 in Overall Developing Countries showing more elastic effect on Services Value Addition with statistically significant in developing countries only. Human Capital is obtained as positive with Services Value Addition in Developing Countries in the longer period of time denoting that Improved Technical Skills and Educational Skills to the people related to Services Sector may enable workers to get higher production levels in the Services Sector in the longer period of time.

Short run results are also calculated for Developing Countries, are given in lower portions of the tables with Short Run Equation in which COINTEQ01 is the Speed of Adjustment term/Co-integrating Term/(ECT) Error Correction Term. The term is measured is -0.18 with statistically coefficient value. The value illustrates that convergence would be occurred in the direction of long run equilibrium due to any short run disturbance and on average estimated time would be approximately 4.5 years in developing countries.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>t-Statistic</th>
<th>Probability</th>
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<tr>
<td>Labor Force</td>
<td>0.309086</td>
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<td><strong>Short Run Equation</strong></td>
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<tr>
<td>COINTEQ01</td>
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<tr>
<td>D(LSERVALCON(2))</td>
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<td>0.032880</td>
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<tr>
<td>D(LLABFORCE)</td>
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<td>D(LCAPSTOCK)</td>
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<td>D(LCO2EM)</td>
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<td>D(TRADOPEN)</td>
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<td>D(LBRMN)</td>
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**Conclusion**
The objective of the study is to study the effectiveness of Trade Liberalization and Environmental Quality on Sectoral Growth of Developing Countries. For the Panel data of developing countries, the interval of time from 1990 to 2018 is decided in this study. World Bank Organization developed World
Development Indicators Penn World Table 9.1 are major sources of data collection in this research. The estimation in this study considers Im, Pesaran and Shin W Test (IPS) as Unit Root Test, Panel ARDL Long run Analysis for calculations of Elasticities. In the results of Services Value Addition models, in DCs’-Developing Countries, Labor Force, Capital Stock, Trade Openness, Money Supply, Government Expenditure and Human Capital are exerting a pushing upward impact on Services Value Addition while Carbon Dioxide Emission and Price Level are putting download pressure on Services Value Addition.

Carbon Dioxide Emission positively correlates with services sector value needs to reduce the carbon emission with efficient and modernized machinery side by side taxation should be used to monitor the environmental quality properly in developing countries. The positive and very low effect of Trade Openness can be improved by producing more quality products that can compete in the international market. Therefore, it is suggested to meet the challenges in the national and international markets; the quality products must be increased so that the exports become an encouraging factor to increase the services productivity developing nations. Human Capital is boosting Services Value Addition suggesting that more trained and educated human resources will enable the developing countries to get the optimal level of output from services sector units.

References


How Does the Accounting Conservatism Affect the Stock Price Crash Risk in Pakistan: The Complementary Role of Managerial and Institutional Ownership?

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**ARTICLE DETAILS**

**ABSTRACT**

**Purpose:** The conservatism of accounting and robustness of accounting information disclosure may restrain the irrational behavior of investors and help to reduce the risk of stock price crashes. This study aims to explore this in the context of developing country Pakistan. More specifically, this study investigates the effect of accounting conservatism on stock price crash risk. We also examine the complementary role of managerial and institutional ownership in strengthening this effect.

**Design/Methodology/Approach:** This study conducts the panel data analysis of 155 nonfinancial firms listed in PSX from 2007 to 2019. This study calculates the C-Score to measure accounting conservatism. This study measures the firm’s stock price crash risk by calculating the DUVOL of weekly share prices.

**Findings:** This study finds that there is a significant negative effect of accounting conservatism on firms’ stock price crash risk. This study also finds that managerial ownership enhances the stock price crash risk of the sample firms significantly as a moderator while there is no significant moderating influence of institutional ownership.

**Implications/Originality/Value:** The competent authorities of Pakistan should consider agency conflicts. They should direct the firms’ management to share equal information in time regardless of whether the information is good or bad for stock prices.

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**Introduction**

Accounting conservatism is an indispensable attribute of financial reporting quality to improve the
reliability of firms’ financial statements (Mohammed et al., 2010). Financial statements are made by business enterprises to share earning information. Earning information communicates the financial performance of the companies. Earning information is one of the key concerns in financial disclosure (Alhayati, 2013). The earning information should be disclosed according to the principles of accounting. The accounting principle that primarily relates to ensuring disclosure quality of reported earning information is the conservatism principle of accounting (Ruch & Taylor, 2015).

The accounting conservatism principle deals with economic uncertainties and circumstances to delay in anticipation of good information than bad information. The accounting conservatism principle affects the figures of financial statements because cost and loss are recognized better than revenue and profit (Hajawiyah et al., 2020).

Firms’ management opportunistic behavior and agency conflicts between firms’ shareholders and managers because of asymmetric information lead to making an inefficient investment by choosing that projects having negative worth rather than selecting that investment projects having positive net present value (Verdi, 2006). Furthermore, according to Wang et al., (2020) firms’ management tries to hide the negative information because of agency conflicts and asymmetric information but when such information is shared then results in the firms’ stock price crash.

Lafond & Watts (2008) find that accounting conservatism minimizes the risk of the stock price crash with the help of disclosure quality of information. Kim & Zhang, (2016) confirm that possibility of firms’ stock price collapse risk is reduced with accounting conservatism. Accounting conservatism is applied to avoid the opportunistic behavior of the management to control the agency cost (Stein, 2003).

Accounting conservatism controls the agency cost and has benefits for corporate governance in several ways. First, conservatism limits the over-payments by management to parties with loss recognition in time rather than profit’s recognition (Watts, 2003). Second, conservatism controls the manager’s opportunistic behavior to invest in negative net present worth projects (Osama & Penalva, 2009). Third, firms’ management tries to escape from negative investment projects under accounting conservatism because it causes economic loss that can be timely anticipated (Watts, 2003). Fourth, conservatism-based disclosure of information predicts the sustainability of firms’ future earnings, investors’ behaviors and, minimizes the stock price crash risk (Wang et al., 2020).

The agency problem is more serious because of the centralized ownership structure in Pakistan. The agency problem can be resolved with the help of the transparency of information. The transparency of information is possible with the help of audit and disclosure quality. The audit and disclosure quality are possible when firms try to catch the interest of the shareholders by making an efficient investment. An efficient investment helps to ensure that investors have trust in managers’ decisions and there is no conflict among them. The interest and trust of the shareholders lead to reduce stock price crash risk. The stock price crash risk is possible when the firms anticipate the Bad-News in time rather than anticipate the Good-News (Basu, 1997).

Mitton, (2002); Lemons & Lins (2003) summarize those crashes in stock prices of the firms because of a weak corporate governance system and ignorance of Bad-News are more if we compare with such firms that have a good corporate governance mechanism to anticipate the losses more quickly or in time as compared to their profits or Good-News.

If Bad-News does not anticipate in time and withholds by the firms’ managers for an extended time, then Bad-News is likely to be stockpiled within firms. However, when the accumulated Bad-News reaches a certain threshold and if releases at once that leads to the risk of stock prices collapse. This step is also considered as bad governance because of no use of the accounting principle of conservatism (Hutton et al., 2009; Jin & Myers, 2006).
The prior research literature on developed economies has documented that overall good corporate governance mechanism with its attributes relate to accounting conservatism (Lafond & Roychowdhury, 2008; Ahmed & Duellman, 2007; Beekes et al., 2004). However, the ownership structure in Pakistan is slightly different from the USA, UK, China, and other emerging global economies. The ownership structure is centralized in the hands of political shareholders. The government officials are shareholders with a majority in business firms. The legal system of Pakistan is weak, even no rule of law and, no enforcement of legal regulations that lead to an ineffective corporate governance system.

But this issue can be resolved by addressing the policy guidelines of IFRS that demands firms to disclose quality information regardless of whether the Bad-News or Good-News. IFRS motivates firms to good corporate governance attributes that lead to follow the conservatism principle of accounting (Latif et al., 2020).

Prior research studies have been conducted in such relevance but the context of developed economies with a limited scope and sample size like (Kim & Zhang, 2016) conduct a research study to check the impact of conditional accounting conservatism on stock price crash risk by picking sample firms from the USA from 1962-2007. This study considers these two variables only by leaving a research gap for the future.

Similarly (Hunjra et al., 2020) try to fulfill the research gap by checking the impact of accounting conservatism and corporate governance on stock crash price only for the manufacturing sectors of Pakistan and India from 2010-2018 by considering 355 manufacturing firms as a sample for their research. They measure the corporate governance with limited attributes rather than considering the overall corporate governance index for cross-country measurement. This research has a gap to consider all sectors especially non-financial sectors of the Pakistan stock exchange.

The ownership structure of Pakistan has been centralized. Horse-trading is a priority. The firm’s management has its benefits. The managers hide useful information from the investors. There are conflicts of interest between the managerial owners and institutional owners. Unfortunately, no such research study has been found in an Asian context that considers managerial ownership and institutional ownership as a moderating variable to measure the consequences of conservatism on stock price crash risk in developing economies like Pakistan by considering all non-financial sectors in one study.

Therefore, this study fulfills the above-mentioned research gap and is helpful for investors, stakeholders, management, and policymakers of non-financial sectors of South Asia, especially in Pakistan.

**Literature Review and Hypothesis Development**

**Research on Stock Price Crash Risk**

Kim et al. (2011) define the stock price risk by stating that “the negative deviation degree of weekly stock returns after stock market adjustments” and Xu et al. (2013) classify the stock price crash risk by using a dummy variable. Further, they define stock risk as “the difference of stock volatility between rising and fall of stock prices in the stock markets”.

Xu et al. (2012) find in their research that there is a significant positive relationship among optimistic biases of stock analysts and stock price crash risk at present and in the future after adjustments made by listed firms according to stock markets adjustments because of conflict of interest of institutional investors for refinancing commission etc.

Yang et al. (2018) find that stock prices of firms have a certain degree of deviation that has a high level of goodwill in stock markets that enhances the stock price crash risk. Further, (Chen & Zhou, 2016) state that high-quality auditing and many institutional investors play an effective role in the betterment of the corporate governance mechanism of the firm to improve the transparent disclosure of information about
firms’ cash-flows. Thus, by this stock price crash risk of the listed firms can be controlled and minimized.

**Research on Accounting Conservatism and Stock Price Crash Risk**

Lafond & Watts, (2008) find that accounting conservatism can reduce the risk of stock price collapse by improving information transparency. Kim & Zhang, (2016) confirm that accounting conservatism can reduce the company’s future stock price plunging. Hu et al. (2014) confirm that accounting conservatism can promote the transfer of enterprise-specific information to external personnel and improve the quality of the information disclosure.


Quan & Xiao (2016) analyze and test the transmission path of “Corporate Responsibility Information Disclosure – Accounting Conservatism – Stock Price Crash Risk” in China’s Capital Market. Based on this argument, many researchers have empirically proved that there exists a negative relationship between a firm’s stock price crash risk and accounting conservatism.

The “asymmetric disclosure behavior” of the firm’s manager causes that such a firm must face negative news and must accumulate bad information respectively. But when such information is disclosed thus the stock prices of such firm collapse faster than other. Firms try to anticipate the negative news more than the good news to control such collapse with the help of conservatism (Watts, 2003).

**H1: There is a significant negative effect of accounting conservatism on stock price crash risk.**

**Research on Accounting Conservatism, Stock Price Crash Risk, and Managerial Ownership**

Ding et al. (2007) report that the owners manage earnings in the upward direction. Young et al. (2008) empirically prove that ownership structure is negatively related to conservatism. Kung et al. (2010) examine listed companies in China and report that firms with concentrated owners deploy less conservatism in reporting accounting information. The reason is that the owners can solve conflicts of interest personally hence reduced conflict of interests means reduced agency conflict and hence decreased conservatism.

Lafond & Roychowdhury (2008) set forth the evidence of the existence of a negative association between conservatism and management ownership. Their argument is simple. They say that if the managerial interest is not aligned with that of shareholders, the demand for conservatism is increased.

Mohammed et al. (2017) argue that the greater the number of shares held by the managers in the firm, the lower is the demand for conservatism. The reason is simple. The managers are more informed about the resources as well as the position of the firm. They can use this information to gain personal benefits through the inefficient allocation of scarce resources available to the firms. Hence, they demand less conservatism.

Jin & Myers (2006) state that managers try to hide the bad news when a firm’s cash flows are less than the expectations of the firm’s investors. But when the accumulated bad news crosses the tipping point and is released by the management then stock prices crash (An & Zang, 2013).

Another viewpoint is that in the case of more managerial ownership the agency conflict is less thus there is no need of using conservatism. Based on this argument many researchers have empirically proved that there exists a negative relationship between managerial ownership and accounting conservatism that increases the firm’s stock price crash risk.
**H2: Managerial ownership moderates the effect of accounting conservatism on stock price crash risk.**

**Research on Accounting Conservatism, Stock Price Crash Risk, and Institutional Ownership**  
Kim & Jung (2007) argue that if the ownership of the firm is not dispersed among outsiders, this reduces the quality of financial reporting which in turn has adverse effects on the firm's efficiency and performance. Lin et al. (2014) and later Mohammed et al. (2017) while addressing the role of ownership concerning the level of conservatism in listed firms, argue that the greater the number of shares held by the outsiders (i.e., by institutions, foreign investors, etc.), greater is the demand for quality in financial reporting.

Hutton et al. (2009) state that institutional owners are mostly within the management of the firm. They are controlling a major part of the useful information. A major portion of the firm’s shares is held by them. They know bad news but when such accumulated bad news is released by them or accumulated bad news is come out in the stock market with different circumstances that lead towards the collapse of stock prices. Then investors monitor bad news hoarding by expecting that institutional ownership influences the stock prices negatively.

This demand compels the managers to go for conservative accounting estimates. Based on this argument many researchers have empirically proved that there exists a negative association between institutional ownership and accounting conservatism that enhances the firm’s stock price crash risk.

**H3: Institutional ownership moderates the effect of accounting conservatism on stock price crash risk.**

**Research Framework**

![Research Framework Diagram](image)

**Research Methodology**  
**Sample Size and Data Collection**  
The sample of this study consists of listed firms in the Pakistan Stock Exchange (PSX) from 2007 to 2019. Financial firms and insurance companies are excluded. This study considers only 155 non-financial firms. The reason is that to collect data only from the non-financial sector because there are significant structural and reporting differences. Secondary data is extracted from PSX, financial reports of the sample firms, and online sources for the estimation.
Estimation of Accounting Conservatism

For the estimation of accounting conservatism C-Score model by expending the Basu model (Basu, 1997) is applied in this study. Researchers (Zheng & Liu, 2014) believe that for the estimation of good-news G-Score while for the estimation of bad-news C-Score can be applied (Khan & Watts, 2009) with the help of the firm’s size (SIZE), market to book ratio (MTB), and debt to equity ratio (LEV).

\[ G = \mu_0 + \mu_1 \text{SIZE}_{it} + \mu_2 \text{MTB}_{it} + \mu_3 \text{LEV}_{it} \quad (1) \]
\[ C = \lambda_0 + \lambda_1 \text{SIZE}_{it} + \lambda_2 \text{MTB}_{it} + \lambda_3 \text{LEV}_{it} \quad (2) \]

SIZE is earning per share; \( P_{it} - 1 \) is the closing prices of the firm at the end of year \( t-1 \); \( R_{it} \) is the market-adjusted stock return of the sample firm \( i \) and year \( t \); \( D_{it} \) is the dummy variable by donating 1 if \( R_{it} < 0 \) otherwise 0 if \( R_{it} > 0 \) by estimating G-Score in place of \( \beta_2 \) and C-Score in place of \( \beta_3 \) according to the Basu (1997) model.

\[ \frac{\text{EPS}_{it}}{P_{it-1}} = \beta_0 + \beta_1 D_{it} + \beta_2 R_{it} + \beta_3 D_{it} \times R_{it} + \epsilon_{it} \quad (3) \]

EPS is earning per share; \( P_{it} \) is the price of the firm at the end of year \( t \); \( R_{it} \) is the market-adjusted stock return of the sample firm \( i \) and year \( t \); \( D_{it} \) is the dummy variable by donating 1 if \( R_{it} < 0 \) otherwise 0 if \( R_{it} > 0 \) by estimating G-Score in place of \( \beta_2 \) and C-Score in place of \( \beta_3 \) according to the Basu (1997) model.

\[ \frac{\text{EPS}_{it}}{P_{it-1}} = \beta_0 + \beta_1 D_{it} + \text{R}_{it}(\mu_0 + \mu_1 \text{SIZE}_{it} + \mu_2 \text{MTB}_{it} + \mu_3 \text{LEV}_{it}) + D_{it} \times \text{R}_{it}(\lambda_0 + \lambda_1 \text{SIZE}_{it} + \lambda_2 \text{MTB}_{it} + \lambda_3 \text{LEV}_{it}) + \epsilon_{it} \quad (4) \]

While the above equation is regressed by the annual cross-section and by putting obtained coefficients in \( \beta_0 \), \( \lambda_0 \), \( \lambda_1 \), \( \lambda_2 \), \( \lambda_3 \) in equation (2) to obtain an annual index of accounting conservatism.

Estimation of Stock Price Crash Risk

According to (Xu et al., 2012) the ups and downs volatility ratio (DUVOL) is the proxy variable to measure the risk of the stock price crash. The calculation process is as follows: Firstly, we must remove the effect of market influences on specific stock returns and calculate the specific return (Wit) of stock \( i \) in the \( t \) week, as Wit = ln (1 + \( \text{R}_{it} \)), that is the residual term of the model. The related values of stock price crash risk are measured according to the specific weekly return rate according to equation (5).

\[ \text{R}_{it} = \alpha_0 + \beta_1 \text{R}_{mt-2} + \beta_2 \text{R}_{mt-1} + \beta_3 \text{R}_{mt} + \beta_4 \text{R}_{mt+1} + \beta_5 \text{R}_{mt+2} + \epsilon_{it} \quad (5) \]

While \( \text{R}_{it} \) is the return rate of stock \( i \) in the \( t \) week without cash dividend, and \( \text{R}_{mt} \) is the return rate of market index points in the \( t \) week of the market. \( \text{R}_{mt-2} \) and \( \text{R}_{mt-1} \) are the 2\text{nd} and 1\text{st} lag series of the \( \text{R}_{mt} \) while \( \text{R}_{mt+1} \) and \( \text{R}_{mt+2} \) are the 1\text{st} and 2\text{nd} lead series of the \( \text{R}_{mt} \). Then, according to Wit, we construct an index to measure crash risk. The estimation process is as follows: First, all the weeks of the company \( i \) in a certain year \( t \) are divided into two categories. When the weekly-specific yield \( \text{Wit} \) is lower than the average of the weekly-specific yield \( \text{Wi} \) in that year, which is recorded as (Down-Week) \( n_{down} \). But when the week-specific rate of return \( \text{Wit} \) of the company \( i \) is higher than the average rate of return \( \text{Wi} \) in that year, which is recorded as (Up-Week) \( n_{up} \). The calculation formula is as follows: Simply, the standard deviation of down-week is divided by the standard deviation of up-week. Then DUVOL is measured by taking the log of obtained answers according to the below-mentioned equation (6).

\[ \text{DUVOL} = \log \left[ \frac{(\sum_{down} \text{W}_{it}^2) / (n_{down} - 1)}{(\sum_{up} \text{W}_{it}^2) / (n_{up} - 1)} \right] \quad (6) \]

Estimation of Managerial Ownership and Institutional Ownership

This study considers managerial ownership structure as an attribute of the corporate governance mechanism that can be measured in two ways. The first one is managerial ownership that can be measured by obtaining the ratio of shares held by firm management and total shares of the firms. The second one is institutional ownership that can also be measured by obtaining the ratio of shares held by the different institutions’ owners and total shares of the firm (Hajawiyah et al., 2020).

Estimation of Control Variables

This study considers the firm’s profitability and firm’s leverage as control variables. First, the firm’s
profitability ratio is measured as return on asset (ROA). Second, leverage (LEV) is measured by dividing the debt by to equity of the firm (Saeed & Saeed, 2018).

Regression Models
To test the developed hypothesis, the following regression models as A, B, and C in Eq7, Eq8, and Eq9 accordingly have been developed in this study.

Model(A): \[ \text{SPCR}_t = \beta_0 + \beta_1 \text{ACC}_t + \beta_2 \text{ROA}_t + \beta_3 \text{LEV}_t + \varepsilon_t \] (7)

Model(B): \[ \text{SPCR}_t = \beta_0 + \beta_1 \text{ACC}_t + \beta_2 \text{MO}_t + \beta_3 \text{ACC}_t \cdot \text{MO}_t + \beta_4 \text{ROA}_t + \beta_5 \text{LEV}_t + \varepsilon_t \] (8)

Model(C): \[ \text{SPCR}_t = \beta_0 + \beta_1 \text{ACC}_t + \beta_2 \text{IO}_t + \beta_3 \text{ACC}_t \cdot \text{IO}_t + \beta_4 \text{ROA}_t + \beta_5 \text{LEV}_t + \varepsilon_t \] (9)

Multicollinearity Test
This study makes sure that sample data is independent. The observations of sample variables are not correlated with each other. For this Variance Inflation Factor (VIF) and Tolerance tests are performed to detect the issue of multicollinearity among sample variables of this study. The VIF should be less than a score of 10. The tolerance value should be less than 1. This is the benchmark set by the researchers (Hajawiyah et al., 2020).

Table 1: Variance Inflation Factor (VIF) and Tolerance Test:

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<th>Uncentered VIF</th>
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<td>1.3053</td>
<td>1.0951</td>
<td>0.9131</td>
</tr>
<tr>
<td>MO</td>
<td>3.28E-06</td>
<td>1.0128</td>
<td>1.0012</td>
<td>0.9988</td>
</tr>
<tr>
<td>IO</td>
<td>3.80E-06</td>
<td>1.0654</td>
<td>1.0042</td>
<td>0.9958</td>
</tr>
<tr>
<td>ROA</td>
<td>0.001917</td>
<td>1.2525</td>
<td>1.0227</td>
<td>0.9778</td>
</tr>
<tr>
<td>LEV</td>
<td>6.97E-07</td>
<td>1.1069</td>
<td>1.1069</td>
<td>0.9034</td>
</tr>
</tbody>
</table>

Table 1 presents the result of the VIF test. As we can see that the VIF score is less than 10. There is no issue of multicollinearity among the sample variables of this study. Furthermore, for this study, the tolerance score of each variable is obtained as one divided by the value of centered VIF that is less than 1 which shows also that multicollinearity does not exist among sample variables of this study.

Selection of an Appropriate Model
For the selection of an appropriate model for panel data analysis from the Fixed Effect Model and Random Effect Model. This study performs the Hausman test, F test, and LR test methods. These methods are recommended for the selection of an appropriate model based on these null and alternate hypotheses (Wang et al., 2020).

\[ H_0: \text{Random effect model is appropriate for panel data analysis.} \]
\[ H_1: \text{Fixed effect model is appropriate for panel data analysis.} \]

<table>
<thead>
<tr>
<th>Effect Test</th>
<th>Statistic</th>
<th>d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-Section F</td>
<td>1.635223</td>
<td>(154,1855)</td>
<td>0.0000</td>
</tr>
<tr>
<td>Cross-Section Chi-Square</td>
<td>256.503630</td>
<td>154</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Table 2 probability values of the F test and LR test are 0.0000 and 0.0000 respectively, which are less than the significant level of 0.01. Hausman's test value is also observed during the regression analysis at less than 0.01. From the test results, we can accept the H1 that means Fixed Effect Model is an
appropriate model for panel data analysis for this study.

**Empirical Results**

**Descriptive Statistics**

Table 3 indicates the total number of observations (N), mean, and median value of the sample variables of this study. The table of descriptive statistics shows the minimum and maximum values of the sample data of this study. This table also states the standard deviation (S.D.) along with the probability (P) value of the data set that describes the sample variables at their significant level.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
<th>S.D.</th>
<th>N</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPCR</td>
<td>0.0344</td>
<td>0.0114</td>
<td>-0.6332</td>
<td>1.2580</td>
<td>0.2010</td>
<td>2015</td>
<td>0.0000</td>
</tr>
<tr>
<td>ACC</td>
<td>0.7730</td>
<td>0.4679</td>
<td>-4.2490</td>
<td>6.5474</td>
<td>6.3313</td>
<td>2015</td>
<td>0.0000</td>
</tr>
<tr>
<td>MO</td>
<td>0.0266</td>
<td>0.0625</td>
<td>0.0000</td>
<td>0.8682</td>
<td>0.4710</td>
<td>2015</td>
<td>0.0000</td>
</tr>
<tr>
<td>IO</td>
<td>0.0567</td>
<td>0.5410</td>
<td>0.0000</td>
<td>0.8331</td>
<td>0.3021</td>
<td>2015</td>
<td>0.0000</td>
</tr>
<tr>
<td>ROA</td>
<td>0.0489</td>
<td>0.0425</td>
<td>-0.6308</td>
<td>0.6696</td>
<td>0.1034</td>
<td>2015</td>
<td>0.0000</td>
</tr>
<tr>
<td>LEV</td>
<td>0.0065</td>
<td>0.0218</td>
<td>0.0000</td>
<td>1.4064</td>
<td>0.1368</td>
<td>2015</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

**Correlation Analysis**

Table 4 presents the result of the correlation matrix. By correlation matrix, researchers try to analyze “a phenomenon in which two or more independent variables are correlated with each other in multiple regression and if reported values are less than 0.5 thus, no multicollinearity exists among independent variables” (Latif et al., 2020).

<table>
<thead>
<tr>
<th>Variable</th>
<th>SPCR</th>
<th>ACC</th>
<th>MO</th>
<th>IO</th>
<th>ROA</th>
<th>LEV</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPCR</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACC</td>
<td>-0.0105</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MO</td>
<td>0.0132</td>
<td>-0.0116</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IO</td>
<td>-0.0332</td>
<td>0.0042</td>
<td>-0.0086</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>0.0066</td>
<td>0.0062</td>
<td>-0.0183</td>
<td>0.0573</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>LEV</td>
<td>-0.0041</td>
<td>-0.0631</td>
<td>0.0035</td>
<td>0.0062</td>
<td>0.0314</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

The correlation matrix indicates a value of -0.0105 which shows there is a negative correlation between SPCR and ACC that supports to H1 of this study. There is a positive correlation between SPCR and MO but there is a negative correlation between ACC and MO as per reported figures by +0.0132 and -0.0116 respectively because these values indicate the strength of the complementary role of MO as per its influence according to H2 of this study. But a negative correlation has been found for SPCR and IO with a value of -0.0332 and on the other hand, there is a positive correlation between ACC and IO (0.0042) that also shows the moderating influence of ACC and IO on SPCR in support of H3 of this study.

Further, Table 4 shows that there is a positive correlation of ROA with SPCR (0.0066), ACC (0.0062), and IO (0.0573), but its negative strength has been reported with MO by -0.0183 respectively. At the end of correlation analysis, the correlation strength of LEV has been analyzed as 2nd control variable of this study which indicates its negative correlation with SPCR and ACC because its reported figures are -0.0041 and -0.0631 accordingly. While values of MO (0.0035), IO (0.0062), and ROA (0.0314) state that there is a positive strength of LEV by respective correlation with them.

**Regression Results**

To test hypothesis 1 (H1), this study examines the effect of accounting conservatism (ACC) on a firm’s stock price crash risk (SPCR) by adding return on asset (ROA) and debt to equity ratio (LEV) as control variables to model (A) by regression analysis of equation (7).
Table 6 shows the results of the fixed effect model with the help of the Hausman test. The F-statistics is also significant that indicates that the model is fit. As per this table, the coefficient between ACC and SPCR is -0.0333 which is significantly negatively correlated with probability (P-value) of 0.0001 at less than 0.01. This significant negative correlation between shows that sample firms of Pakistan are choosing effective accounting policies such as the conservatism principle of accounting to control the firm’s stock price crash risk. This shows that H1 of this study is true according to the research study of (Lafond & Watts, 2008).

Furthermore, as per Table 6 coefficient value of ROA is negative (-0.0176) but not significant because its P-value is greater than 0.05. The correlation coefficient between LEV and SPCR is -0.0100 at a significant negative relationship because its P-value (0.0001) is less than 0.01. This indicates that the firm’s debt to equity ratio is favorable regarding SPCR.

To test hypothesis 2 (H2), this study examines the moderating effect of managerial ownership (MO) on the significant negative effect of accounting conservatism (ACC) on a firm’s stock price crash risk (SPCR) by adding return on asset (ROA) and debt to equity ratio (LEV) as control variables to model (B) by regression analysis of equation (8).

Table 7 shows the results of the fixed effect model with the help of the Hausman test. The value of F-statistics is significant that indicates that this model is fit. As per the results of this table, there is a significant negative correlation between ACC and SPCR with -0.0398 as coefficient value and 0.0000 as P-value at less than 0.01.

Furthermore, Table 7 shows the moderating effect of managerial ownership (ACC*MO) on the significant negative relationship between ACC and SPCR with 0.0304 as coefficient value and 0.0000 as P-value at less than 0.01. This indicates that a firm’s managerial ownership applies the principle of accounting conservatism to anticipate bad news than good news for their benefit. This also shows that the firm’s management in Pakistan tries to hide the bad news that enhances the firms’ stock price crash. This confirms that H2 of this study is true.
according to the research study of (Jin & Myers, 2006) and (An & Zang, 2013).

To test hypothesis 3 (H3), this study examines the moderating effect of institutional ownership (IO) on the significant negative effect of accounting conservatism (ACC) on a firm’s stock price crash risk (SPCR) by adding return on asset (ROA) and debt to equity ratio (LEV) as control variables to model (C) by regression analysis of equation (9).

Table 8 shows the results of the fixed effect model with the help of the Hausman test. F-statistics is also significant that shows model is fit. As per the results of this table, there is a significant negative correlation between ACC and SPCR with -0.0350 as coefficient value and 0.0001 as P-value at less than 0.01.

Furthermore, Table 8 shows the moderating effect of managerial ownership (ACC*IO) on the significant negative relationship between ACC and SPCR is positively insignificant because the coefficient value of ACC*IO is 0.0028 and its P-value is 0.6324 which is greater than 0.05. This indicates that the firm’s institutional ownership does not have access to the information. This is because of the weak governance system of Pakistan. This also shows that the ownership structure is centralized in Pakistan. This is confirmation of the wrongness of H3 of this study according to the point of view of (Wang et al., 2020). The management of the firm applies conservatism to anticipate bad news for their benefits because of agency conflict among the firms’ investors and managers according to agency theory (Stein, 2003).

Discussion
This study shows that there is a significant negative effect of accounting conservatism on the stock price crash risk of the firm. This states that the application of accounting conservatism by the firm management is helpful to control the risk associated with stock prices. This also indicates that firm management chooses the best accounting measures to minimize the risk of stock prices by identification of crash news (bad news). This indication is in line with positive accounting theory (PAT). PAT tries to explain the actions of the firm management. PAT is applied for the selection of accounting measures (Watts & Zimmerman, 1986).

The positive accounting theory is correlated with the conservatism principle of accounting. PAT also discusses the reasons, why the firm’s management adopt this principle? The research conducted by (Wang et al., 2020) and (Lafond & Watts, 2008) answer this question. The acceptance of the first assumption of this study also supports their answer. The result of this study is according to the results of their studies that indicate that conservatism reduces the stock price crash risk of the firm.

This study shows the significant negative effect of managerial ownership on the reduction of stock price crash risk of the firm. This indicates that the firm’s management considers its interest rather than the interest of the investors of stocks. This is because of a conflict of interest. This result is in the line of
agency theory (Jensen & Meckling, 1976). The agency conflict comes into consideration when management thinks about the maximization of the firm’s profit for self-interest.

Further, the study shows the significant positive moderating effect of managerial ownership with an application of conservatism on the stock price crash risk of the firm. This result is in the line of positive accounting theory and agency theory. The firm’s management chooses the conservatism principle as an accounting measure for the indication of bad news for the self-interest and inside trading of stocks. The firm’s managers hide bad information that controls the collapse risk for temporary but when this information comes into the stock market then prices of stock collapse and risk associated with stock prices increase. The result of this study is according to the arguments of (Jin & Myers, 2006) and (An & Zang, 2013). The second assumption of this study has been accepted in support of their research’s results that state that managerial ownership increases the crash risk with the application of conservatism to hide the bad news for self-interest rather than to protect the interest of the investors (Lafond & Watts, 2008) and (Lafond & Roychowdhury, 2008).

This shows that there is an insignificant negative effect of institutional ownership on stock price crash risk. This result is not in the line of agency theory. This is because of the interest of institutional investors. The institutional investors do not support the conflicting interest and inside trading of stock by the management for self-interest. This result is in the line of resource dependency theory (RDT). The firm’s management needs useful resources to run the operations of the firm. These resources are held by different institutions. Every institution and resource provider have an interest. They demand proper accounting records and purpose guidelines in the decision-making process. They keep eye on the actions of the firms’ managers (Pfeffer & Salanic, 1978).

Further, this study shows an insignificant positive moderating effect of institutional ownership with the adoption of the conservatism principle of accounting on the stock price crash risk. This result is in the line of positive accounting theory because a firm’s management chooses conservatism as an accounting measure (Watts & Zimmerman, 1990) and (Watts & Zimmerman, 2003). This result supports the theory of resource dependency theory but does not according to the agency theory because resource providers have a keen interest in the performance of the managers. They need every type of information (good and bad news). They suggest applying conservatism for the identification of good and bad signals about the stock prices and their crash with associated risk. Thus, managers do not have a chance to hide the bad news for self-interest (Pfeffer and Salanic, 1978) and (Stein, 2003). The third assumption of this study has been rejected based on such issues and theoretical arguments.

**Conclusion**

This study investigates the answers to questions related to the effect of accounting conservatism on a firm’s stock price crash risk with the moderating role of managerial ownership and institutional ownership in the context of Pakistan for 155 nonfinancial firms listed in the Pakistan Stock Exchange (PSX). This study applies the VIF test to indicate the issue of multicollinearity and the Hausman test for appropriate model selection for regression analysis of 2015 observations for 13 years (2007-2019).

This study finds that accounting conservatism reduces the stock price crash risk which is a favorable aspect of the principle of accounting conservatism to control risk factors at a possible level for the firms’ management as well as investors of the firms. This study also finds that managerial ownership with accounting conservatism enhances the stock price crash risk which is unfavorable for both the management and investors of the firms. But management tries to escape from such issues with the help of conservatism by hiding bad news for personal benefits. Further, this study finds that there is no influence of institutional owners on the stock price crash risk of the firm in the association of conservatism. This is because of the weak governance system of Pakistan while as we know that the ownership structure is centralized in Pakistan. There is a conflict of interest among managers and investors. There is an element of Horse-Trading, agency conflicts, and corrupt practices by brokers,
investors, and managers. This is all about weak rule of law because no proper enforcement of rules and regulations in Pakistan to control such issues. After all, the results of this study have been summarized in Table 9.

The findings of this study are in the line of agency theory that indicates that a weak governance system does not demand a high level of conservatism for bad news anticipation to control the stock price crash risk. The regulatory bodies of developing countries with the support of policymakers should construct an effective accounting system according to the results of this study that provides equal information to all regardless of the bad news and the good news.

Table 9: Hypotheses Testing Summary:

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistics</th>
<th>Prob.</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>-0.0333</td>
<td>0.0086</td>
<td>-3.8738</td>
<td>0.0001***</td>
<td>ACCEPTED</td>
</tr>
<tr>
<td>H2</td>
<td>0.0304</td>
<td>0.0147</td>
<td>2.0577</td>
<td>0.0398**</td>
<td>ACCEPTED</td>
</tr>
<tr>
<td>H3</td>
<td>0.0028</td>
<td>0.0058</td>
<td>0.4783</td>
<td>0.6324</td>
<td>REJECTED</td>
</tr>
</tbody>
</table>

***, **, *, Statically Significant at 0.01, 0.05, 0.1 respectively.

This study is limited to the developing economy. This study is limited to Pakistan. This study is limited to the nonfinancial sector. This study is limited to sample size. This study is limited to attributes of the good corporate governance system. This study is limited to measures of conservatism and stock price crash risk.

For future research, this study can be replicated with the introduction of a developed economy like the USA or China, etc. This study can be replicated with an introduction of another developing country like India or Bangladesh etc. This study may also be conducted with the addition of other attributes of the corporate governance mechanism like board size or audit committee independence, etc. This study can be enhanced to measure the accounting conservatism other than C-score. This study may be conducted by measuring a firm’s stock price crash risk other than DUVOL.

References
Hunjra, A. I., Mehmood, R., & Tayachi, T. (2020). How Do Corporate Social Responsibility and


Analyzing the Moderating role of Board Structure in Relation between Tax Avoidance and Business Strategy: New Insight from Emerging Economy

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**ARTICLE**

**Purpose:** Taxation basically occupies an important place in the strategic decisions of companies, therefore, business are thinking to adopt a dynamic and active method for tax management. This study examine the moderating role of board independence, and board size in the relation between tax avoidance, and business strategy in developing economy of the Pakistan.

**Design/Methodology/Approach:** The sample of study consist of 125 non-financial companies listed on Pakistan stock exchange with time period of 5 years from 2013 to 2017 on annual basis. Study uses static (fixed effect, & random effect) and dynamic (GMM) panel data estimation techniques.

**Findings:** The result shows that increase in board size of a prospector firm will increase its trend to avoid taxes. The finding also reveals that an increase in the independent directors in prospector firms will decreases tax avoidance activities in emerging economies. Additionally, result shows that firm profitability and leverage are negatively related to tax payments while firm size show positive association with tax payments.

**Implications/Originality/Value:** Among others, this study suggests that tax authorities should advocate the prospector firms to increase the number of independent directors on board because there presence cause a reduction in tax avoidance activities and increase tax payments.

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**Introduction**
Taxation basically occupies an important place in the strategic decisions of companies, therefore, business are thinking to adopt a dynamic and active method for tax management (Anouar, 2017).
According to Hanlon & Heitzman, (2010) tax avoidance definition might imply ‘different things to different people’. Therefore, terms like tax management, tax sheltering, tax planning and tax aggressiveness are mostly used interchangeably to tax avoidance in literature (Chen et al., 2010; Minnick & Noga, 2010; Tang & Firth 2011). The activities of tax avoidance not only just cause a rise in cash flow but it also cause an increase in the accounting earnings in certain situations. The activities of corporate tax avoidance are considered as value enhancement activities to the companies (Yee et al., 2018; Higgins et al., 2011). An argument established by Slemrod (2016), that there should be present an optimal level of tax avoidance or tax planning for each firm that can balance the follow-on benefits and costs in such a manner as to maximize the value of shareholder. It was then further specified that for avoiding the reduction in distributable wealth of the company, tax avoidance strategies have turn out to be common practices (Annuar et al. 2014).

Tax aggressiveness can cause effect on shareholder’s return that are linked to investment decisions and can also affect managers who may get benefit from tax savings (Tang, 2016; Wilde &Wilson 2018; Philips, 2003). Therefore, for society, government, authorities and policymakers, tax avoidance become a source of concern (Chen et al., 2010). The public-private firms use tax planning more aggressively (Motta & Martinez, 2015). Tax avoidance is basically influenced and affected by many factors. Firm level characteristics like, size, economies of scale through foreign operations, capital intensity, leverage (Dyreng et al., 2010; Noor, Mastuki & Bardai, 2008) have key influence on tax avoidance.

Porter (2002) gives the definition of business strategy as these are made of a range of actions aimed to generate a position in a given situation. Miles et al. (1978) developed a typology consisting of 4 types of business firms that are prospectors, defenders, analyzers and reactors. Prospectors are flexible, risk takers and adaptive organizations and this enable them to respond the changing competitive landscapes and new opportunities quickly. In this way the technological flexibility permits the prospectors to respond to the changes rapidly. In order to coordinate and facilitate their multiple and diverse operations, the control in prospector firms is decentralized. Basically the prospector firms avoid long and lengthy commitments to single technological procedure by keeping the degree of routinization at low and by leveraging skills and knowledge of employees (Bentley et al., 2013 and Hsu et al., 2018). By following (Heggins et al., 2011; Bently et al., 2013; Hsu et al.,2018; Higgins et al.,2015), this study basically focus on the prospector type whose strategy continuum contain prospector at one end and defender that is opposite to prospector, on other end.

The influencing relation between business strategy and tax avoidance is of major interest. Corporate governance is vital in regulating various actors and planning processes. Theoretically, many studies (Desai & Dharampala, 2006; Hanlon & Slemrod, 2009; Chen et al., 2010; Lanis & Richardson, 2011) show that few governance mechanisms have a negative impact on tax evasion. Furthermore, Pratama (2017) found that many proxies of company characteristics like age, size, and profit have a significant impact on tax avoidance practises. CEOs and directors play an essential role in the selection of strategies related to tax management and they are accountable for resource allocation (Minnick and Noga, 2010). In this regard, Irawati et al. (2019) has also clarified that the board’s effectiveness in director’s functions could cause improvement in corporate governance. Minton et al. (2011) find that larger and more independent boards are associated with lower levels of risk taking. Therefore, the board expertise levels among independent directors are positively related to risks.

Many studies examine tax avoidance while considering agency roles, and some use global data to discover numerous dimensions of corporate governance as determinants (Chen et al. 2013; Minnick & Noga 2010). Several recent studies link tax evasion to executive compensation (Rego & Wilson 2012; Desai & Dharampala 2006), family firm status (Steijvers & Niskanen 2014; Moore et al. 2017), and institutional ownership (Khurrana & Moser 2013). Desai and Dharmapala (2006) argue that good governance systems can overcome tax avoidance systems. Many proxies that represent corporate governance includes entrenchment, board composition, board compensation and executive compensation.
(Minnick & Noga, 2010) use. In the same way, Wahab and Holland (2012) used ownership structure, board structure and the compensation structure as corporate governance proxies. Higgins et al. (2015) determine the association between tax avoidance and firm’s business strategy. Another study examine the impact of business strategy, profitability and leverage on tax avoidance while taking firm size as control variable (Lubis et al., 2017). Furthermore, the relationship between tax avoidance and business strategy is not found when corporate board structure is used as a moderator, indicating the need to expand the tax avoidance literature in emerging markets like Pakistan.

The objective of this study is to analyze the nexus between board structure, tax avoidance and the business strategy. Precisely, we examine the moderating role of board independence, and board size in the relation between tax avoidance, and business strategy in developing economy of the Pakistan. This study shed light on how governance mechanisms can moderate and influence tax avoidance decisions. The sample of this study consist of 125 non-financial companies listed on Pakistan stock exchange with time period of 5 years from 2013 to 2017 on annual basis. The results of the dynamic panel data estimation technique i.e. generalized method of moment (GMM) shows that increase in board size of a prospector firm will increase its trend to avoid taxes. The finding also reveal that that an increase in the independent directors in prospector firms will decreases tax avoidance activities in emerging economies.

This study adds to the literature in several ways. Firstly, it add to the organizational theory literature by examining the firm's business strategies in relation to tax avoidance and governance. Secondly, it add to the existing literature on the moderating role corporate governance mechanisms in relation between business strategy and tax avoidance. Prior studies used many attributes of governance for determining their effect on tax avoidance like compensation at several positions of management (Rego & Wilson, 2009), and other board characteristics (e.g., Armstrong et al. 2015; Richardson et al. 2013; Robinson et al. 2012; Lanis; Minnick & Noga, 2010). Also, Minnick and Noga, (2010) by using one of the feature of corporate governance characteristics - board size and number of independent directors - for determining their moderating effect on tax avoidance and business strategy. Also, we are extending the Anwar & Hasnu (2016) by using business strategy measurements effecting tax avoidance. Thirdly, this study also contributes by extending the literature on the relationship between tax avoidance, business strategies and corporate governance to the emerging economies. Therefore, it is the first in its type which examines the role of corporate governance characteristics as moderators in the relationship between tax avoidance and business strategy in the emerging equity market of Pakistan.

Next section discuss the hypothesis development of the study which is followed by the data and research methodology, then the subsequent section describes the empirical findings which is followed by the conclusion of the study.

Review of Related Literature
This section discusses the brief review of related literature.

Business Strategy and Tax Avoidance
Taxes are stated to be deducted from corporate cash flows (Khan, Anwar & Husnain, 2021). In this method, the owners strive to maximize wealth by avoiding taxes and distributing dividends. Martinez and Ferreira (2019) describe tax avoidance as affecting shareholder returns (Tang, 2016; Wilde & Wilson, 2018), and thus it is the general compensation of managers who profit from tax savings (Phillips, 2003). Most of the research on tax avoidance (Armstrong et al. 2009; Dyreng et al. 2009; Phillips 2003; Khan, Anwar & Husnain, 2021) have focused on business characteristics such size, capital intensity, the size of overseas activities, leverage and R&D expenses. Miles et al. (1998) show a link between tax preparation and lower effective tax rates (ETR).

Business strategies influence tax avoidance habits, and the costs and benefits of tax planning vary depending on the strategic type (Higgins et al., 2015). According to Dunbar and Phillips (2001),
prospectors will outsource more of their tax planning and compliance tasks. Prospector-type enterprises focus on innovation and development rather than cost reduction. In reality, defense is more likely to avoid the uncertainties and risks associated with aggressive tax planning. Otherwise, prospector firms are well prepared to deal with the risks that arise from aggressive tax evasion strategies (Sadjiarto et al., 2020). Prospectors are companies that focus on innovation and are seeking for new markets. They often have a higher effective tax rate (Hsu et al. 2014). The lower the ETR, the more tax avoidance. However, Novitaria and Santos (2013) discovered that the business strategies of enterprises have no substantial impact on the level of tax evasion. According to Higgins et al. (2013), business prospectors have a higher tax avoidance potential than defenders. The environment of emerging countries is characterized by a wide range of complications, which is due to a scarcity of resources and a lack of predictability, both of which are required for positive growth.

The unexpected and fractious environment in developing nations has formed a time horizon that ignores long-term planning and providence from a strategic standpoint. As a result, when the developed world promotes and practises long-term planning ideas, they confront numerous challenges when they are implemented in developing countries (Parnell et al., 2015; Zamani et al., 2013). According to Shah and Amjad (2011), Pakistan has a high power distance, strong masculinity, and low individualism, and these findings are consistent with Hofstede's (2010) findings in Pakistan, who also have no horizon for long-term planning and a high level of uncertainty avoidance. Because of Pakistan's growing young population, natural wealth, geostrategic and geopolitical relevance, and cultural characteristics, the experiments and difficulties for strategists in Pakistan are diverse. As a result, there is a chance that firm performance and strategic conduct, as well as the highlighted assumptions, will not hold true under some circumstances (Anwar & Hasnu, 2016). Because the literature suggests that there is a link between business strategy and tax avoidance, we can propose the following hypothesis:

\[ H_1: \text{There is significant impact of business strategy on tax avoidance.} \]

**Moderating Role of Board Size in the Relation between Business Strategy and tax Avoidance**

The level of tax avoidance can also be affected by governance but the magnitude and its direction of impact is still among the empirical questions (Martinez & Ferriera 2019). Primarily, the board size, board independence and board composition, the CEO duality, frequency of board meeting and contribution alongside the characteristics and features of directors of board have been examined empirically by numerous investigators in the literature of governance (Cho & Kim, 2007; Latif et al., 2013; Jermias & Gani, 2014 and Fauver et al., 2017). The optimum number of members of board of directors should be determine in a manner that it can ensure the presence of the sufficient independent directors. According to Mashaykhi and Seyedi (2015), when there are smaller number of board members on the board then they make it happen the discussion of problems and their solutions to resolve the problems of company and hence also increase efficiency of the company. Coles et al., (2008) find out that the boards differ with the company’s characteristics. They concluded that the complex firms used to have large boards with having more outsiders in board. The value of the complex companies increase with an increase in board size, but the value of simpler companies decrease as the board size increases.

Small boards might become more agile when they are making their decisions (Sarwar, Ming, Husnain & Naheed, 2018), like their decision of diverting the resources for the management of taxes (Minnick & Noga, 2010). The large size of board can cause a reduction in the functional effectiveness of the managers regarding different types of programs and different varieties of strategies (Richardson & Lanis, 2011). In this way, when the board size increase then the tax avoidance also increases.

It is predicted finely that composition and board size have influential impact on effectiveness of monitoring function. Hoseini et al. (2019) also state that an increase in the board of director’s size can further cause increase on tax avoidance. Although there present many conflicting opinions on the fact that how the board composition have impact on monitoring and as a result on the performance of the
firm. Previous papers on governance states that board composition which is composed of board size and the percentage of the insiders on the board is related to the agency problems degrees (Core et al., 1999; Yermack, 1996). In this respect Armstrong et al., (2013) and Desai & Dharmapala,( 2006) describe that tax avoidance gives the directors opportunity to get the incentives as this also provide more profits based on the contract with shareholders. Based on the above explanation this study can hypothesize about the moderating effect of board size as:

$H_2$: Board Size significantly moderates the relationship between business strategy and tax avoidance.

**Moderating Role of Number of Independent Directors on Board in the Relation between Business Strategy and tax Avoidance**

From an organization agency point of view, board address the essential inward system for controlling administrators’ astute conduct, which assists with adjusting investors' and supervisors' inclinations (Jensen, 1993). The literature have find that larger boards having inside directors in large amount are incline towards having more agency problem (Mengyun, Um-E-Habiba, Akbar, Memon, & Husnain, 2021) and the results shows that the accepted association is smaller, and the boards who have more independent directors have chances of improvement in performance with greater shareholder wealth (Minnick & Noga ,2010). According to Hu et al. (2010) the board independence usually provides protection to shareholders from rude behavior of management.

The independent directors can give more useful information and knowledge from their experience and from their own industry that can help in management of tax. These independent directors present in the boards can also have willingness in diverting the resources for management of tax as a method to certify good performance of company. The independent directors presence is also act as a balancing force in the corporate board and their presence can reinforced and strengthens the elements needed for good governance in the firm (Bhagat, 2008). Yeung, (2010) also concluded that a rise in the independence of the members of board may lead towards the reduction in the actual tax rates and also describe that the elements of good corporate governance can lead towards more strict tax policy for firm. The independent board members should maintain and support the owners’ interests and it can also stimulus the tax aggressiveness level (Ibrahim & Angelidis 1995). This literature tracks down that large boards with additional inside board directors will in general have more agency issues. It is the governance of the organization that coordinates which tax management system the firm pursues. Independent board members center their concentration more on the tax management related to foreign unfamiliar duty the executives, while the large boards focus more around overseeing the domestic taxes (Minnick & Noga, 2010). Following hypothesis could be constructed from above views.

$H_3$: Number of independent directors on board significantly moderate the relationship between business strategy and tax avoidance.

**Control Variables**

Many studies show that return on asset (ROA) as a proxy of profitability of a company has association with the ETR. When the company wants to avoid the taxes then it has positive link with tax avoidance (Surbakti, 2012). The firms with greater ROA (profitability) get an opportunity for positioning themselves in the tax planning which can decrease the amount of tax burden on them (Chen et al., 2010 ; Rinaldi & Cheisviyanny, 2015). The firm size also influences tax aggressiveness and is a significant determinant of good governance (Ettredge et al., 2011; Wahab et al.,2020). The firm size can be estimated from the complete resources claimed by the organization. This can be measured by transforming into normal (natural) logarithm of total assets (Benardi et al, 2008; Rinaldi & Cheisviyanny, 2015). If the values of leverage ratio is higher then the interest amount arising from debt and then this will also have an impact on the reduction of the firm’s burden of tax (Kurniasih & Sari, 2013). Therefore, it seems possible to decrease the indication of practices of tax avoidance. Hope, Ma, and Thomas (2013) clarified that the firms with more leverage seems to avoid the corporate taxes.
because in this way the firms may get benefit from financing by the means of debt. Therefore, this study uses profitability, firm size and leverage as control variables.

![Conceptual Framework of the Study](image)

**Data and Research Methodology**
This study used data from firms listed on the Pakistan stock exchange over five years (2013-2017), and all data gathered through annual reports, company websites, and the Pakistan stock exchange's website. This study excludes firms in the financial sector, as they have different requirements for capital structure and other firm policies; also, we omitted firms for which data was not available, resulting in a total of 625 observations used in the analysis.

**Table 1 Sample Selection**

<table>
<thead>
<tr>
<th>Details</th>
<th>Sample</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sample from non-financial listed firms</td>
<td>152</td>
<td>760</td>
</tr>
<tr>
<td>Excluded firms from sample (due to non-availability of data)</td>
<td>(27)</td>
<td>(135)</td>
</tr>
<tr>
<td>Total sample used for analysis</td>
<td>125</td>
<td>625</td>
</tr>
</tbody>
</table>

**Measurement of Variables**
This section explains the operational definition of the studied variables.

**Tax Avoidance**
In previous studies, the most commonly used and largely recognized statistic has been the effective tax rate (Dyreng et al., 2010; Hoi et al., 2013; Watson 2015). For this study, GAAP-ETR was used to calculate tax avoidance. Tax aggressiveness is measured by the percentage of tax expense divided by pre-tax book income (McClure, Lanis, Wells, & Govendir, 2018). This study used following formula for measuring GAAP_ETR as proxy of tax avoidance.
GAAP ETR = \frac{Total Tax Expense}{Income before tax}

Measurement of Business Strategy
We measure the business strategy by using the following three ratio which is consistent with the existing literature (Anwar & Hasnu, 2016; Higgins et al., 2015; Watson, 2015; Hsu et al., 2018).

Marketing expense ratio (MESR)
This is the proportion of marketing expenses to sales (Bentley et al., 2013; Thomas & Ramaswamy, 1996). The ratio reflects the firms' proclivity towards innovation. This percentage demonstrates the company's concentration on developing new products and services. It improves marketing efficiency and divides prospectors and defenders into two groups.

\[ MESR = \frac{Marketing\ Expenses}{Sales} \]

Cost of goods sold to sales ratio (COGSR)
The major goal of the cost-to-goods-sold-to-sales ratio is to determine how focused a company is on internal efficiency, which leads to production efficiency which is high for prospectors and low for defenders firms (Lin et al., 2014; Anwar & Hasnu, 2016).

\[ COGSR = \frac{Cost\ of\ Goods\ Sold}{Sales} \]

Annual Sales Growth Rate (ASGR)
ASGR is a historical rate of growth that reflects a company's strategic growth orientation. A high score indicates prospectors, while a low score indicates defenders (Anwar & Hasnu, 2016).

\[ CASGR = \frac{Ending\ value}{Beginning\ value} - 1 \]

Operationalization of Business Strategy
The strategic orientation is scored using three ratios: MESR, COGSR, and ASGR. A score of 3 is given to firms with the highest ratio points, 2 is given to firms with moderate ratio points, and 1 is given to firms with the lowest ratio points. Summated scores are 9 for maximum and 3 for minimum. This study uses BSSTRA as a dummy variable to measure business strategy, where 1 indicates prospector nature and 0 indicates defender nature which is consistent with the existing literature (Anwar & Hasnu, 2016; Hsu et al., 2018). Figure 2 shows a score continuum from 1 to 9. The continuum has two ends, one for 1 to 4 and the other for 5 to 9. Firms with a score of 6 to 9 are prospectors.

![Business Strategy Continuum](image)

Figure: 2 Business Strategy Continuum

Moderators
This study also uses the following two moderator variables.
Board Size
Board size can be measure as the number of the directors on the board. This measurement basically reflects the control that is exercised by member of board over the managers (Lanis & Richardson, 2011). In previous studies, the board size is measured by the number of directors in the firm (Fahriani & Priyadi, 2016). This study measured board size (BS) as follow (Huang et al., 2012; Wang, 2012);

\[ \text{Board Size} = \log (\text{Total number of directors (members) on the board}) \]

Board Independence
The independent directors of a company are outside directors and these directors have no link with the firm beside of being member of board of directors. Subsequently, the board independence can be measured by taking the percentage of independent directors on board which is consistent with the existing literature (Huang et al. 2012; Ahmed and Duellman, 2007);

\[ \text{Number of Independent Directors} = \frac{\text{Independent Directors on the Board}}{\text{Total Directors on the Board}} \]

Control Variables
This study also uses the following control variables.

Profitability
The profitability of any company is its capacity to generate the profits. The companies with higher ROA (profitability) tend to have the higher ETR (Dhamara & Violita, 2018; MengYun et al., 2021). ROA can be measured by dividing net income to total assets.

\[ \text{ROA} = \frac{\text{Net Income}}{\text{Total assets}} \]

Firm Size
Firm size of a company can be measured by the total assets that are owned by the company. Consistent with existing studies, we uses the natural logarithm of total assets of a company for the measurement of firm size (Sarwar, Ming, Husnain & Naheed, 2018)

\[ \text{Firm Size} = \text{LTA} = \ln(\text{Total Assets}) \]

Leverage
Leverage reduces the company’s gross income and increases the tax burden (Wahyuni et al., 2017). This factor affects a corporation and motivates them to carry out their tax planning (Cheng, Huang, Li & Stanfield, 2012). We utilized the following formula for firm leverage (Sarwar, Ming, Husnain & Naheed, 2018)

\[ \text{Leverage} = \text{DER} = \frac{\text{Debt}}{\text{Total Equity}} \]

Econometric Analysis - Generalized Method of Moment (GMM)
For testing the hypothesis of the moderating effect of board size (BS) in the relation between business strategy (BSRAT) and tax avoidance, this study formulate the following regression model:

\[ \text{Tax Avoidance} = \beta_0 + \beta_1 \text{Business Strategy} + \beta_2 \text{Interaction} + \beta_3 \text{Control} + \varepsilon_t \]

\[ \text{GAAP}_\text{ETR}_t = \beta_0 + \beta_1 \text{BSTRAT}_t + \beta_2 \text{BS}_t + \beta_3 \text{BSTRAT}_t \times \text{BS}_t + \beta_4 \text{LTA}_t + \beta_5 \text{ROA}_t + \beta_6 \text{DER}_t + \varepsilon_t \]  

\[ \text{(1)} \]

Where, GAAP_ETR shows the effective tax rate, BSTRAT shows the business strategy, BS shows the board size, BSTRAT*BS shows the interaction term between business strategy and board size, LTA shows the log of total asset, ROA shows the return on asset, and DER shows the debt to equity ratio. For testing the hypothesis of the moderating effect of board independence (NID) in the relation between
business strategy (BSRAT) and tax avoidance, this study formulate the following regression model:

\[
\text{GAAP}_{\text{ETR}}_t = \beta_0 + \beta_1 \text{BSRAT}_t + \beta_2 \text{NID}_t + \beta_3 \text{BSRAT}_t \times \text{NID}_t + \beta_4 \text{LTA}_t + \beta_5 \text{ROA}_t + \beta_6 \text{DER}_t + \varepsilon_t \quad \ldots \ldots (2)
\]

Here, \(\text{GAAP}_{\text{ETR}}\) shows the effective tax rate, \(\text{BSRAT}\) shows the business strategy, \(\text{NID}\) shows the number of independent directors in board, \(\text{BSRAT}\times\text{NID}\) shows the interaction term between business strategy and board independence, \(\text{LTA}\) shows the log of total asset, \(\text{ROA}\) shows the return on asset, and \(\text{DER}\) shows the debt to equity ratio.

Due to unobserved heterogeneity, endogeneity, and simultaneity baseness in panel data analysis, researchers apply the generalized method of moments – GMM – (Sarwar, Ming & Husnain, 2020; Sarwar, Kutan, Ming & Husnain, 2020) for the estimation of the above two equations.

**Empirical Results**

Results from the table 2 shows that average value of effective tax rate is 0.1632 with a standard deviation of 0.1625. The size of board of directors has average value 8.0231 and standard deviation is 1.2365. Board independence mean value is 0.7532 and standard deviation is 1.2142. The log of firm size has a mean value of 13.2563 with standard deviation of 0.5963 and these results are in line with previous research (Martinez & Ramalho, 2014). Average value of profitability is 0.1423 with a standard deviation of 0.1326 and these results are consistent with existing literature (Arieftiara et al., 2019).

**Correlation Matrix**

Correlation matrix describes the relationship between dependent variable, independent variable and controls. Table 3 represents the correlation matrix of this study. Board size and \(\text{GAAP}_{\text{ETR}}\) are negatively correlated while \(\text{NID}\) has positive relation with \(\text{GAAP}_{\text{ETR}}\). Firm profitability and leverage are negatively correlated which means that they are highly opposite in relative trends.

**Moderating role of board size in the relationship between business strategy and tax avoidance**

This study applied generalized method of moment for the estimations of equations 1 and results are presented in Table 4. \(L1\) is lag of ETR that is insignificant with a negative value of -0.2412 \((p\)-value=0.125). Table shows the existence of negative and significant relation between business strategy and \(\text{GAAP}_{\text{ETR}}\). The moderate factor of board size and business strategy (BSBSTRAT) shows negative and significant relation with tax payments. Board size as a control variable is significantly related to tax payments with a negative value. Firm profitability and leverage are negatively related to tax payments while firm size show positive association with tax payments.
Independent Variables | GAAP_ETR (Dependent Variable)
--- | ---
Coefficient | Standard Error
L1 | -0.2412 0.0412
BSTRAT | -0.0125*** 0.0172
BS | -0.0312*** 0.0182
LTA | 0.0921** 0.0231
ROA | -0.0081* 0.0014
DER | -0.0321** 0.0325
Constant | 1.8123 0.3213
Sargan test (P-value) | 0.1712 0.1932

Moderating Role of Board Independence in the Relationship between Business Strategy and tax Avoidance

Table 5 represent the results of analysis of moderating role of board independence in relationship between business strategy and tax avoidance. L1 show insignificant impact of lag GAAP_ETR. Business strategy shows significant (p-value=0.001) and negative relation with tax payment. Board independence is positively and significantly related with tax rates. Result shows that board independence significantly positively moderates the relation between business strategy and tax payment in emerging economy. Firm profitability and leverage are negatively related to tax payments while firm size show positive association with tax payments.

Table 5 Board independence as a moderator

Discussion of Results

Results show a negative relation between business strategy and tax payment. Therefore, we can deduce a positive relation of business strategy with tax avoidance. This statement suggests that those firms who follow prospector strategy tend to avoid more taxes as compared to others. This study results are consistent with previous studies (Higgins et al., 2011, 2015; Hsu et al., 2018; Martinez & Ferreira, 2019). This is happen due to the fact that cost of tax avoidance which must be borne by prospector type firms is not an obstacle for them. This is because prospector gets high income from a broad market share and from sale of their unique products that can adjust to changes in consumer tastes and trend therefore, they have few competitors (Higgins et al., 2011; Sadjiarto et al., 2020). These results support H1 that is 'there is significant impact of business strategy on tax avoidance.'

Moderating effect of board structure in the relationship between business strategy and tax avoidance is different with respect to characteristics. As negative and significant relation of board size with tax payments give an indication that higher the board size lower will be tax payments which ultimately increase tax avoidance. In the same way moderating effect of board size with business strategy shows negative and significant results. These results support our second hypothesis H2 and in line with previous researches (Holland & Wahab, 2012; Paratma, 2017). Therefore, we can say that increase in board size of a prospector firm will increase its trend to avoid taxes. Board independence results show positive and significant relation with tax payment which give an indication that an increase in independent directors in board will increase tax payments that ultimately decrease tax avoidance which are consistent with existing literature (Aburajab et al., 2019; Chytis et al., 2018). The moderating effect
of board independence with business strategy (NIDBSTRAT) is significance and positive which implies that an increase in the independent directors in prospector firms will decrease tax avoidance. These supports our third hypothesis.

Firm size has a positive impact on tax payment which means larger the size of a firm higher will be tax payments and tax avoidance will be low. These results are supporting political cost theory, according to which large firms aim to avoid negative reputation while maximizing financial performance (Martinez & Ferreira, 2019; Halioui et al. 2016; Boussaidi & Hamed 2015). ROA results are negative and indicate that as the profitability increases tax payments will decrease, these results are similar to prior research (Pratama, 2017). The results of this study give evidence that leverage has negative relationship with tax payment. These results suggest that firms with higher the debt to equity ratio (DER) are associated with reduced ETR and are consistent with prior researches (Higgins et al., 2011; Sadjiarto et al., 2020; kasim & saad, 2019).

**Conclusion of Study**

This study aimed to investigate the relationship between corporate board structures, business strategy and tax avoidance in emerging equity market. Specifically this study investigate the extent to which business strategy effect the decisions of firms regarding tax avoidance in the presence of board size, and independent director in corporate board. The sample of this study consist of 125 companies listed on Pakistan stock exchange with time period of 5 years from 2013 to 2017 on annual basis. Due to unobserved heterogeneity, endogeneity, and simultaneity baseness in panel data analysis, researchers apply the generalized method of moments – GMM - for the estimation of the models.

This study concluded that business strategy has significant and negative relation with tax payment means the firms with prospector type strategies show inclination toward tax avoidance. In the presence of moderator, the tax avoidance activities of prospector type firms show mixed results depending upon the moderating variable being used. The larger board size tend to show an increase in tax avoidance activities and on the other hand, board independence will decrease the tax avoidance activities of prospector firms. The findings of this study extend existing literature (Higgin et al., 2011; Minnick and Noga, 2010; Armstrong et al. 2015; Richardson et al. 2013) in different dimension by determining the moderating effect of corporate governance characteristics in relation between tax avoidance and business strategy. This study suggest through its findings that the tax authorities should suggest the prospector firms to increase the number of independent directors on board because there presence cause a reduction in tax avoidance activities and increase tax payments.

As a future research direction, we suggest that other types of corporate governance characteristics such as CEO mechanisms, compensations, female director in board, CEO duality can be used as moderators with different dimensions in relation between tax avoidance and business strategies in context of developing as well as developed economies. Future studies can also use other dimension of the business strategy to determine its effect on tax avoidance in both developing and developed economies.

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CSR Image and Customer Satisfaction: The Mediating Role of Customer Trust and Customer Loyalty

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ABSTRACT

Purpose: This study aims to examine the impact of Corporate Social Responsibility (CSR) image on customer satisfaction in the context of the banking sector of Pakistan. Further, the intervening role of customer trust and customer loyalty in the relationship between CSR image and customer satisfaction is also examined.

Design/Methodology/Approach: Present research is quantitative in nature and collects the data through structured questionnaires. By employing the Smart PLS technique to test the proposed hypothesis.

Findings: This study reveals the following salient findings: 1) the response of CSR image to customer satisfaction is positive (p<0.01); 2) customer trust and customer loyalty both significantly mediate the impact of CSR image on customer satisfaction.

Implications/Originality/Value: Based on novel findings, the current study will help the organizations to realize the significance of CSR practices to enhance the customers’ satisfaction level.

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Introduction

Since last few decades, the concept of Corporate Social Responsibility (CSR, hereafter) is much widely studied by researchers from different perspectives (Ali, Danish, & Asrar-ul-Haq, 2020; Ali, Frynas, & Mahmood, 2017; McWilliams & Siegel, 2000; Pino et al., 2016). This enhancement is due to the greater scrutiny of firms in the wake of the global financial crisis, and the improving nature and understandability of the firms in the social fabric (Chen, Hung, & Wang, 2018). The social context of the business has been constantly redefining. In the current complex world, business activities have a long-lasting impact on our planet, people, and the ability to sustain the holistic development to which we aspire. A globalized market has been emerging parallel with growth, but this advancement has been increasing the social conflicts. In midst of this world, business is being ascribed roles and significance that has never been imagined previously. In the current era, it is not just longer acceptable that firms do well by doing well (Qiu, Jie, Wang, & Zhao, 2020). Further, Aguiler, Guerrero, Vidal, and Delgado (2015) contended that CSR is viewed as a commitment of firms towards sustainable economic improvements, such improvements enhance the quality of life of an assortment of people (employees’,
their families and, local communities). CSR practices pursue firms to increase their participation more in social activities than the obligations which are expressed under the law. However, a wide range of existing literature examines the effect of CSR practices and found the significant impact of CSR practices on brand performance (Lai, Chiu, Yang, & Pai, 2010), firm reputation (Park, Lee, & Kim, 2014), financial performance (Ali et al., 2020), firm political activity (Den, Rehbein, Bakker, & Lankveld, 2014) and customer satisfaction (Ali, Danni, Latif, Kouser, & Baqader, 2021).

Since the last two decades, customer satisfaction has been widely discussed by various researchers as a central element of a company's marketing concept. For the commercial success of company, it is required that firms not only attract first-time customers but also provide quality services that enhance the satisfaction level of customers which ultimately leads the repeated visits of customers (Hwang & Lyu, 2020; Lee, Han, Radic, & Tariq, 2020). Every business can advance to the highest level of advantage by achieving customer satisfaction in a highly competitive marketplace. Although, a wide range of researches explored the impact of CSR on customer satisfaction and offered different outcomes (Coles, Fenclova, & Dinan, 2013; Lebe, Mulej, Zupan, & Milfelner, 2014; Mohammed & Rashid, 2018). Still, Mohammed and Rashid (2018) contended that the effective impact of CSR practices on customer satisfaction is may be based on some potential mediators.

Moreover, multiple researchers have documented a positive relationship between customer satisfaction and customer loyalty (Anderson, Fornell, and Lehmann, 1994, El-Adly, 2019; Ozkan et al., 2019) and highlighted the importance of customer satisfaction in customer loyalty. Furthermore, trust has been recognized as one of the most widely examined and validated constructs, particularly concerning marketing research (Aydin and Ozer, 2005). Ahmed, Riswan, Ahamad, and Haq, (2014) contended that a customer cannot enter in the loyalty pool without the trust of a brand. Similarly, contingency theory also recommended that the relationship between two variables is fairly dependent on a third variable. Therefore, from the perspective of contingency theory and the above arguments, this study extends the literature on CSR and customer satisfaction by considering the mediating role of customer loyalty and customer trust which is surprisingly ignored by the literature, hence it requires further research.

The fundamental objective of this research is to examine the relationship between CSR image with customer satisfaction by explicitly considering the mediating role of customer trust and customer loyalty. Present research contributed to literature in multiple dimensions. Firstly, the authors hope that the present research will make bridge the gap in the existing strand of literature by developing as well as testing the model which connects CSR with customer satisfaction by explicitly consider the mediating role of customer trust and customer loyalty. Secondly, this research will also help to justify the CSR investments and their benefits to its customers, which is still an inconclusive matter (Aramburu & Pescador, 2019; Latif, Pérez, & Sahibzada, 2020). Thirdly, as far as our knowledge this is the first study that incorporates customer trust and customer loyalty as mediators in the relationship between CSR and customer satisfaction in context of the banking industry of Pakistan. Fourthly, the present study contributes by helping the firms to will identify the factors which provide the mechanism to improve customer satisfaction based on CSR approaches. Finally, the study is also unique in a sense because it is conducted in the banking sector of Pakistan. The choice of the banking sector is inspired due to multiple reasons: In an area where banks are increasing the amount available for CSR activities, many banks around the world are experiencing an increase in the levels of dissatisfaction with retail customers (Australian Consumer Association, 2005). For example, in the 2006 CSR report, Japan's largest bank “MUFG” reported extremely low customer satisfaction with interest rates and service charges despite massive investments in various CSR activities. In developing countries like Pakistan, most companies are reactionary rather than precautionary to government regulations. Further, Ali and Frynas (2018) also documented that pressure to disclose CSR practices is lower in developing countries as compared to developed countries. Therefore, the government should encourage companies to make efforts for the welfare of society, including health, poverty, and environmental protection, by developing and enforcing strict rules for companies (Naeem et al., 2009). Therefore, we can say that CSR in Pakistan is still in its
beginning. In Pakistan, very few companies have their CSR strategies and standards and most of the local companies are unaware of the benefits of CSR or are not afraid of being punished by the government for non-compliance. Therefore, Pakistan calls for a massive awareness campaign in which all stakeholders must actively participate. Further, a concurrent study Ullah et al., (2020) revealed that due to the different micro and macro variables like daunting economic situations and financial crisis of 2008-10 banking industry is forced to face tough competition and asymmetric performance patterns since the last decade.

This study is arranged in the following manners; 2nd section reports the conceptual pillars for the formulation of the hypothesis. Research methods and analysis tools and techniques are presented in 3rd section, while results and discussion are reported in section 4th. Finally, conclude the whole study and provide the theoretical and practical implications.

**Hypothesis Development**

**CSR Image and Customer Satisfaction**

According to the theoretical literature, if clients are satisfied with their selected brands, they would increasingly prefer to repurchase their products or services, eventually becoming loyal customers with high customer goodwill. The CSR image and sharing of CSR experiences assist management in evaluating CSR, resulting in customer satisfaction. Customer happiness has been demonstrated to have a considerable beneficial impact on consumer retention, service utilization, and a share of customer purchases in studies. As a result, one of the most important antecedents of client loyalty is customer satisfaction (Verhoef, 2003). Strong CSR contributes to the creation of a friendly environment that has a good impact. Lee et al., (2019) examined the impact of CSR image in the context of airline services by deploying the SEM and OLS techniques they found that CSR image develops with the experience and sharing of this experience allow the management to evaluate the CSR practices. A positive response towards the customers’ experience sharing builds up the strong CSR image which ultimately invites customer satisfaction. Another study contended that customers are concerned about the organization’s environmental performance and such customers are more satisfied with the products which are developed by the socially responsible firms (Luo & Bhattacharya, 2006). It is evident that the previous performance of CSR activities stimulates a positive response of customers towards the satisfaction and firm’s perception. Mohammed and Rashid (2018) illustrated the significant relationship between CSR and customer satisfaction in the context of the hospitality industry. They contended that the Malaysian hotel industry can win customer satisfaction with the weapon of CSR activities. Based on the above literature study formulate the following hypothesis:

H1: CSR image is positively linked with customer satisfaction.

**CSR Image and Customer Trust**

A firm's socially responsible benefits emphasize that it has values and personalities, which aids in building trust in the organization (Brown and Dacin, 1997). Companies that prioritize ethical values when making strategic decisions increase stakeholder trust (Hosmer, 1994). According to Pivato et al. (2008), one of the major results of a firm's social responsibility performance is consumer trust, which has a considerable impact on consumer responses. Other studies looked at the impact of CSR on brand equity and corporate reputation through customer trust and discovered that CSR activities increase consumer trust in the organisation, which influences corporate reputation and brand equity (Fatma et al., 2015; Wu and Chen, 2015). Further, the positive influence of CSR practices on brand trust is also proved by Khan and Fatma (2019) study. Singh, Iglesias, and Batista-Foguet (2012) and Kim, Nobi, and Kim (2020) also contended that the perceived ethicality of consumers influenced customer trust. A study Gilal et al. (2020) by employing confirmatory analysis found that CSR activities positively enhance customer trust in the case of young consumers living in Pakistan. A concurrent study also reveals the positive association of perceived CSR towards customer satisfaction Ali et al., (2021). Thus, based on the above arguments current study proposes the following hypothesis:

H2: CSR image is positively linked with customer trust.
**CSR Image and Customer Loyalty**

Loyalty is influenced by CSR efforts (Maignan and Ferrell, 2001; Werther and Chandler, 2005). Because it transmits a character (Brown and Dacin, 1997; Melo and Galan, 2011), a character that shows concern for serving customers correctly, respecting their values, and meeting terms with quality standards, consumer perceptions of socially responsible behaviour can build relationships toward a brand. All of these efforts are recognised by the client, which leads to increased customer loyalty to the company (Maignan et al., 2005). Khan, Ferguson, and Pérez (2015) contended that CSR initiatives are the crucial factor for brand trust which in turn positively increases the customers’ loyalty. Research which is undertaken in Saudi Arabia suggested the direct as well as a positive influence of CSR beliefs on loyalty (Ajina, et al., 2019). By employing SEM as an econometric approach Lu et al. (2020) documented that CSR initiatives positively increase brand loyalty. Another research Sharma and Jain (2019) concluded that perceived CSR practices are positively associated with brand loyalty in the context of the sportswear industry of India. Further, concurrent research Ahmad et al. (2021) also proved that CSR communications through social-media applications have a positive influence on customers’ loyalty in the banking sector of Pakistan. Similarly, Ali et al., (2021) also documented the positive association between CSR and customer loyalty. Hence, the present study proposed the following hypothesis:

**H3:** CSR image is positively linked with customer loyalty.

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**Customer trust and Customer Satisfaction**

Delgado-Ballester and Munuera-Alemán (2001) found that the process by which an individual develops trust for a brand is influenced by his or her interactions with that brand. Experiences with a brand are a valuable source of personal information that can help a consumer develop trusting attitudes. Because the concept of trust is rooted in social psychology and stems from personal connection theories, it is seen as a necessary component of any significant social interaction (Morgan and Hunt, 1994). Brand image allows the customers to recognize the proper match of the products with their needs and desires. This match-up develops customer trust among the customers. Satisfaction is a psychological state in which a customer's experience with a product or service satisfies their expectations and demands (Oliver, 1997). It indicates their satisfaction level and resulting in a shift in attitude toward the product or service. Customer satisfaction is an important aspect of business strategy since long-term success is based on it (Gruca & Rego, 2005), and satisfied stakeholders (e.g. consumers) are a source of intangible resources for a company (Blumenthal & Bergstorm, 2002). When customers are satisfied with a product or service they develop favorable behavioral intentions to maintain that level of satisfaction (Hsu, 2012). Zia et al. (2021) empirically proved the significant relationship between brand image and customer satisfaction. A technique of simple random sampling from the general population via survey proved a positive impact of brand trust on customer satisfaction. Brand experience significantly influences customer trust which ultimately affects the consumer satisfaction level (Budi et al., 2021). Nowadays, marketers and managers are active in the creation of customer trust to earn customers satisfaction. A sample of 240 questionnaires from the health care sector revealed that brand trust and brand image are the highest influencing factors on the customers' satisfaction (Hamid et al., 2017). A recent study by Arya et al. (2021) proposed that customer trust positively influences customer satisfaction in the telecommunication sector. Therefore, to test the relationship between customer trust and customer satisfaction formulate the following hypothesis:

**H4:** Customer trust has a significant positive relationship with customer satisfaction.

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**Customer loyalty and Customer Satisfaction**

Customer loyalty is a powerful tool for businesses and one of the most important marketing strategies for them to compete. Many businesses have made client satisfaction and loyalty their marketing objectives. Customer happiness is becoming the guiding concept for many businesses when it comes to devising marketing approaches and operations. Customer pleasure should not be seen of as a goal in and of itself, but rather as a means of increasing the company's performance (Martensen et al., 2000). Customer loyalty is a sense of assurance toward a brand that leads to repurchase behaviour in the
customer, despite potential marketing attempts by competitors to sever the brand-consumer alliance (Oliver, 1999). Customer loyalty is thought to provide a competitive advantage, reduced marketing expenditures (Aaker, 1991), and increased market share (Jarvis and Mayo, 1986). With the help of 150 HP products consumers, it is recognized that customer loyalty helps the firms to get customer satisfaction and to compete in the market (Ahmed et al., 2014). Another study by Lee (2019) empirically examined the impact of customer loyalty on customer satisfaction in the context of the life insurance sector. With the help of SEM and PLS, the study concluded that customer loyalty among the customers boosts the level of satisfaction. Brand confidence and brand familiarity do not contribute to customer loyalty but it is concerned with consumer happiness. The basics of connecting customers who are eager to go to a specific product are clearly the consequences of their satisfaction with the product experience (Khalid & Asim, 2021). Thus, the study develops the following hypothesis:

H5: Customer loyalty has a significant positive relationship with customer satisfaction.

CSR image and Customer Satisfaction: Mediating role of Customer trust

Previous studies indicated that CSR practices significantly influence brand performance (Lai et al., 2010; Xie et al., 2017). A study contended that firm commitments about ethical responsibilities can help to develop trust among consumers (Fatma, Rahman, & Khan, 2015). Further, Khan and Fatma (2019) also stated that at the time of making strategic decisions if firms pay keen attention to societal betterment goals then it leads to an increase in brand trust level. Based on social identity theory (Gilal et al., 2020) concluded that the perception of CSR practices enhances the customer trust level among the customers. Brand image facilitates the customers to recognize the proper match of the products with their desires and this match-up creates customer trust among the customers. A study also proved the positive and significant response of brand image towards customer satisfaction (Zia et al., 2021). Hamid et al., (2017) reported that brand image and brand trust are the key factors that influence the customer’s satisfaction. Another concurrent research documented that customer trust positively affects customer satisfaction (Arya et al. 2021). These studies indicate that customer trust is not only a predictor of CSR it also facilitates customer satisfaction. Based on this current study motivate to consider customer trust in our research. Further, all of the above discussion highlighted that the relationship between CSR and customer satisfaction is dependent on a third variable based on the contingency approach. Although, studies used different mediators in the relationship between CSR and customer satisfaction but observed that no single study explicitly considering the role of customer trust in this relationship. Therefore, this study tries to fulfill this literature gap by considering the mediating role of customer trust in the relationship CSR and customer satisfaction and develops the following hypothesis:

H6: Customer trust significantly mediates the CSR image-Customer satisfaction nexus.

CSR image and Customer Satisfaction: Mediating role of Customer loyalty

Many researches documented that the influence of CSR image on customer satisfaction is not directly linked and it depends on several other contextual and firm-level variables (Chung, Yu, Choi, & Shin, 2015; Mohammed & Rashid, 2018; Xie et al., 2017; Zhang, Cao, Zhang, Liu, & Li, 2020). Therefore, researchers recommended using a contingency perspective in the relationship between CSR and customer satisfaction. In addition, different studies tested the unidirectional links between CSR, customer loyalty. Like, in one side a study documented that CSR activities positively enhance brand loyalty (Lu et al. 2020). Similarly, contended that CSR activities are positively linked with brand loyalty in the case of Indian sport wear industry (Sharma and Jain 2019). On the other side, Ahmed et al., (2014) recognized that customer loyalty helps firms to get customer satisfaction and to compete in the market. In the same line Lee (2019) empirically proved the direct association of customer loyalty towards customers satisfaction. Khalid and Asim (2021) contended that the basics of connecting customers who are eager to go to a specific product are clearly the consequences of their satisfaction with the product experience. Hence, according to the contingency approach perspective, we believe that customer loyalty is a potential factor that mediates the relationship between CSR image and customer satisfaction.

Overall, based on a critical evaluation of the literature, the instrumental view of CSR-customer...
satisfaction nexus reflects that CSR and customer satisfaction both are significantly linked, while customer loyalty also increases customer satisfaction. These outcomes lead us to ask ourselves whether customer loyalty acts as mediating variable in the CSR and customer satisfaction relationship by putting forward the next (following) hypothesis of this study:

H7: Customer loyalty significantly mediates the CSR image-Customer satisfaction nexus.

Material and Methods

Present study is based on the explanatory research design because of quantitative in nature and a structured questionnaire is used to access the proposed relationships. Since official language of Pakistan is English, thus questionnaire is developed in English language and questionnaire is consists of two portions. The first contains the demographics-related questions and the second portion comprise the structure items about key constructs. Items about core independent variable CSR image are adapted from Perez et al. (2013) and Lam (2016) studies. All the items about customer satisfaction are adapted from Yim et al. (2008) study. Further, five items of customer trust adapted from (Sirdeshmukh et al., 2002) and six items of customer loyalty are adapted from Baumann et al. (2004) study. Complete details about all of these scale items are presented in Appendix A.

All the constructs are measure through a five-point Likert scale (1=strongly disagree to 5=strongly agree). Responses are collected from the customers of banking sector in the context of Pakistan. The reason for choosing the banking industry is inspired due to multiple reasons. Since the last decade, the banking industry forced to face tough competition and asymmetric performance patterns (Ullah et al., 2020) due to different micro as well as macro-level variables, such as the financial crisis 2008 to 2010 (Laeven & Valencia, 2018) and daunting economic situation of the country (Haris, Yao, Tariq, Malik, & Javaid, 2019). Before collecting the data, authors carefully searched for listed banks which largely constituted their presence over the country and also having several hundred branches across Pakistan. Total 400 questionnaires were distributed among the targeted employees. 301 responses returned by the employees and 31 out of these are also excluded due to the incomplete record. Hence, finally able to use the responses of 270 employees’. All the responses are collected in the time spanning from 21st November 2020 to 1st February 2021. As per recommendations of PLS-SEM, sample size of study should be ten times the arrows reflected in theoretical model (Hair Jr, Sarstedt, Hopkins, & Kuppelwieser, 2014). Theoretical framework contains the seven arrows, hence requires 70 questionnaires. The sample size of present research (i.e. 270) is fairly greater than 70, which proves that this study has an adequate sample size.

In current research, the non-probability approach is utilized to purposive sampling because this is more valid when it’s not possible to get a response from all targeted population and the entire targeted population is unknown (Reynolds, Simintiras, & Diamantopoulos, 2003). Further, the non-probability approach is also perceived as much validated for theory-based generalization (Calder, Phillips, & Tybout, 1981).

Further, multiple approaches are employed to estimates the validity and reliability of the constructs. Validity of all the constructs (CSR image, customer satisfaction, customer trust, and customer loyalty) are accessed through Cronbach’s Alpha values. In addition, composite reliability and AVE analysis is used to test the convergent reliability of the constructs. For hypothesis testing present study uses the smart PLS approach to identify that whether the proposed hypothesis is accepted or rejected.

Table 1 reports the demographic profile of the respondents. The participation ratio of males is 87% and the majority of the respondents having a master’s degree can be seen from Table 1.

<table>
<thead>
<tr>
<th>Profile</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>192</td>
<td>87%</td>
</tr>
<tr>
<td>Female</td>
<td>80</td>
<td>13%</td>
</tr>
</tbody>
</table>
Results and Discussion
Several reliability and validity tests were performed before testing the conceptual framework of the study. Smart PLS 3 is used to perform the estimations. Table 2 reports the reliability and validity estimations, reliability is measured through Cronbach’s alpha values. We find that all Cronbach’s alpha values lie between 0.857 to 0.901, which is fairly greater than 0.7, which is considered suitable for confirming the internal consistency of the scales (Nunnally, 1978). Composite reliabilities are also examined to determine the construct reliability. All of the composite reliabilities values are truly greater than 0.70 and lies between 0.90 to .092 values, which excellently proves the reliability of the variables.

Table 2: Reliability and Validity Analysis

<table>
<thead>
<tr>
<th>Construct</th>
<th>Cronbach’s Alpha</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSR Image</td>
<td>0.943</td>
<td>0.949</td>
<td>0.574</td>
</tr>
<tr>
<td>Customer trust</td>
<td>0.899</td>
<td>0.925</td>
<td>0.713</td>
</tr>
<tr>
<td>Customer loyalty</td>
<td>0.901</td>
<td>0.922</td>
<td>0.629</td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>0.857</td>
<td>0.899</td>
<td>0.641</td>
</tr>
</tbody>
</table>

Further, the validity of this study is tested through the convergent and discriminant validity of the scales. The AVE values are ranging from 0.641 to 0.713. We found that the value of average variance extracted for all the constructs exceeds the suggested threshold of 0.50 as recommended by (Fornell & Larcker, 1981). This highlights that results satisfy the requirements of convergent validity. Discriminant validity represents that constructs’ items do not correlate with the items of other constructs (Malhotra, 2010). Hence, to assess the discriminant validity, based on Fornell and Larcker (1981) criteria the square root of AVE values should be greater than the correlation among the latent variables. Table 3 reports the outcomes of discriminant validity and indicates that the square root of AVE values are more than the inter-correlation of constructs which proves the discriminant validity of the constructs.

Table 3: Discriminant Validity

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Customer loyalty</th>
<th>Customer trust</th>
<th>CSR Image</th>
<th>Customer Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer loyalty</td>
<td>0.801</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer trust</td>
<td>0.790</td>
<td>0.845</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSR Image</td>
<td>0.702</td>
<td>0.793</td>
<td>0.865</td>
<td></td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>0.719</td>
<td>0.722</td>
<td>0.758</td>
<td>0.801</td>
</tr>
</tbody>
</table>

Tables 4 and 5 reports the hypothesis testing estimations. Table 4 presents the outcomes of the first five
hypotheses which examine the direct relationships through path analysis in Smart PLS. Concern with $H1$ of this study, estimated coefficient shows the positive impact of CSR image on customer satisfaction at ($p<0.01$), which provide support to the $H3$ of our study. The findings are similar to the Mohammed and Rashid (2018) study which are illustrated that firms can achieve the customer satisfaction level with the weapon of CSR practices. The result is also supported by Bello, Jusoh, and Nor (2020) research, which contended that firms’ efforts towards CSR practices lead to an increase in the feelings of satisfaction. The second hypothesis of the study is to test the influence of CSR image on customer trust. The results indicate that the response of CSR image to customer trust is positive in estimated coefficients at ($p<0.01$). However, the findings are similar to the results of Choi and La (2013) and Gilal et al. (2020) studies which proved that increase in CSR activities positively enriches customer trust among the customers. Finding also consistent with the argument that customer trust is a major driver of CSR initiatives (Khan & Fatma, 2019). Findings of the third hypothesis, result identifies a positive and significant impact of CSR image on customer loyalty at ($p<0.01$). This finding is similar to the study of (Fan et al., 2018), which concluded that if firms pay significant attention to their ethical considerations for the welfare of society, then it leads to a significant and positive effect on customer loyalty, which also verifies the $H3$ of our study. The result is also same in line with the notion that CSR image will acts as an “insurance policy” towards customer loyalty (Moisescu, 2015). Concerning $H4$, results show that the response of customer trust towards customer satisfaction is positive and significant. Though the findings are similar to the results of Arya et al. (2021) study, which documented that customer trust positively influences customer satisfaction. This outcome also provides support to that customer trust develops the belief in the consumers about product and service quality, which is the result of customer satisfaction (Hosseini & Behboudi, 2017). The last row of table 4 reports the outcomes of $H5$ of this study and specifies a positive and significant impact of customer loyalty on customer satisfaction in estimated coefficients. This proves that customer satisfaction is also the major driver of the customer loyalty. The finding are similar to the (Naqvi et al, 2013) study, which contended that when the customers are loyal with their brand then it ultimately enhance the satisfaction level of employees.

Table 4: Hypotheses testing using Bootstrapping

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Std. Beta</th>
<th>Std. error</th>
<th>T value</th>
<th>P Values</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: CSR Image &gt; CS</td>
<td>0.657</td>
<td>0.061</td>
<td>3.577</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2: CSR Image &gt; CT</td>
<td>0.702</td>
<td>0.025</td>
<td>3.158</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3: CSR Image &gt; CL</td>
<td>0.485</td>
<td>0.042</td>
<td>8.739</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>H4: CT &gt; CL</td>
<td>0.170</td>
<td>0.049</td>
<td>11.074</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>H5: CL &gt; CS</td>
<td>0.111</td>
<td>0.074</td>
<td>30.619</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Table 5 reports the estimation of $H6$ and $H7$ respectively, which aims to examine the mediating role of customer loyalty and customer trust in the relationship between CSR image and customer satisfaction respective. The results are performed through bootstrapping method. Concern with the sixth hypothesis, the result indicates that customer loyalty fully mediates the association between CSR image and customer satisfaction at ($p<0.01$). With regard last (seventh) hypothesis of the present research, outcomes prove that our $H7$ of is true because customer trust significantly mediates the association between CSR image and customer satisfaction. The results about $H6$ and $H7$ prove that contingency perspective should use in the relationship between CSR image and customer satisfaction. Result also reveals that the contingency perspective is a better approach to explain the nature of the association between CSR image and customers satisfaction. Results also resolve the ambiguity that how CSR image positively leads the customer satisfaction. It can be documented that the positive linkage of CSR image and customer satisfaction is due to customer trust and customer loyalty and these both are the outcomes of CSR image.

Table 5: Mediation Analysis using Bootstrapping

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>beta</th>
<th>Std. error</th>
<th>t-value</th>
<th>Prob.</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H6: CSR Image -&gt; Customer loyalty -&gt; Customer Satisfaction</td>
<td>0.540</td>
<td>0.035</td>
<td>1.561</td>
<td>0.001</td>
<td>Accepted</td>
</tr>
<tr>
<td>H7: CSR Image -&gt; Customer trust -&gt; Customer Satisfaction</td>
<td>0.120</td>
<td>0.035</td>
<td>3.446</td>
<td>0.001</td>
<td>Accepted</td>
</tr>
</tbody>
</table>
Conclusion and Implications
A large number of studies examined the direct relationship between CSR image and customer satisfaction but this association is imprecise and spurious. Therefore, the present study investigates the mediating role of customer trust and customer loyalty in the association between CSR image and customer satisfaction. Results indicate that response of CSR image to customer satisfaction is positive and significant (p<0.01) in context of the banking sector of Pakistan. Moreover, findings also reveal that both customer trust and customer loyalty significantly mediate the relationship between CSR image and customer satisfaction.

Present study has certain important limitations. Firstly, in this use the data which is collected from only the employees of banking sector of Pakistan. While, services industry and SME’s are vibrant sectors and considered the backbone of the economy and significantly contributed to Pakistan’s economy, which is ignored by this research. So, the future researcher may conduct this research on the services sector or SME’s sector and compare the results with the banking sector of Pakistan. Further, although, based on the contingency approach use customer trust and customer loyalty as mediators in CSR and customer satisfaction relationships. But it is not possible to employ all relevant mediators in a single study. Hence, the contingency perspective in the association between CSR and customer satisfaction is still unexplored. Thus, future researchers may use the other important as well as relevant mediators in the linkage between CSR image and customer satisfaction nexus and found new avenues.

Current research has also several implications for both theory and practice. Theoretically, this study extends the existing strand of literature by investigating the role of CSR image in determining customer satisfaction in the case of Pakistan. In addition, considering the contingency approach provide a new shed to the previous literature by exploring the intervening role of customer trust and customer loyalty in the association between CSR image and customer satisfaction. Practically, this study suggests the management of targeted industry to actively practice the CSR activities because this will ultimately uplift customer satisfaction. Therefore, management should realize the importance of CSR practices to enhance customer satisfaction.

References


Choi, B., & La, S. (2013). The impact of corporate social responsibility (CSR) and customer trust on the restoration of loyalty after service failure and recovery. Journal of Services Marketing.


## Appendix: A

### Scale Items

<table>
<thead>
<tr>
<th><strong>CSR Image:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CSR1: The bank follows employee-friendly rules and policies.</td>
<td></td>
</tr>
<tr>
<td>CSR2: The bank offers fair compensation and equal employment opportunity.</td>
<td></td>
</tr>
<tr>
<td>CSR3: This bank pays fair salaries to its employees</td>
<td></td>
</tr>
<tr>
<td>CSR4: This bank treats its employees fairly without discrimination or abuses.</td>
<td></td>
</tr>
<tr>
<td>CSR5: The bank follows high ethical standards in its business operations and behaves ethically with its customers.</td>
<td></td>
</tr>
<tr>
<td>CSR6: The bank provides full and accurate information to all its customers.</td>
<td></td>
</tr>
<tr>
<td>CSR7: This bank treats its customers honestly.</td>
<td></td>
</tr>
<tr>
<td>CSR8: This bank make an effort to know customers’ needs.</td>
<td></td>
</tr>
</tbody>
</table>

| CSR9: The bank supports talent development (e.g. education scholarships). |  |
| CSR10: The bank gives back to the charities and communities in which it does business. |  |
| CSR11: The bank helps the communities in distress, e.g. disadvantaged people, disaster relief, anti-drug. |  |
| CSR12: This bank contributes money to cultural and social events (e.g. music, sports). |  |
| CSR13: This bank conducts annul environment audit. |  |
| CSR14: This bank plays a role in society beyond the economic benefits generation. |  |

<table>
<thead>
<tr>
<th><strong>Customer Trust</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CL1: This bank makes me feel a sense of security</td>
<td></td>
</tr>
<tr>
<td>CL2: I trust on the quality of this bank</td>
<td></td>
</tr>
<tr>
<td>CL3: The services of this bank is a quality assurance.</td>
<td></td>
</tr>
<tr>
<td>CL4: This bank is interested in its customers</td>
<td></td>
</tr>
<tr>
<td>CL5: This bank is honest with its customers</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Customer Loyalty</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CT1: I shall continue with my current bank over the next few years</td>
<td></td>
</tr>
<tr>
<td>CT2: I recommend this bank to my friends and relatives</td>
<td></td>
</tr>
<tr>
<td>CT3: I am completely satisfied with the services of this bank.</td>
<td></td>
</tr>
<tr>
<td>CT4: I am willing to pay a higher price for using the service of this bank</td>
<td></td>
</tr>
<tr>
<td>CT5: I consider this bank to be my first choice.</td>
<td></td>
</tr>
<tr>
<td>CT6: I prefer to be a loyal customer of this bank.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Customer Satisfaction</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CS1: I am satisfied with the services, the bank provides me.</td>
<td></td>
</tr>
<tr>
<td>CS2: I am satisfied with my overall experience with this bank.</td>
<td></td>
</tr>
<tr>
<td>CS3: I will continue to visit this bank in the future</td>
<td></td>
</tr>
<tr>
<td>CS4: The staff is highly trained</td>
<td></td>
</tr>
<tr>
<td>CS5: The service of this bank is very good</td>
<td></td>
</tr>
</tbody>
</table>
Work Engagement as a Consequence of Work Overload and Intimidation: The Moderating role of Spiritual Leadership and Organizational Climate

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ARTICLE DETAILS

ABSTRACT

Purpose: The purpose of the study seeks to proposed and test a research model that investigates impact of work-overload on employee engagement and employee psychological wellbeing via mediating role of intimidation and moderating role of spiritual leadership and organizational climate by employing moderation-mediation-moderation model.

Design/Methodology/Approach: The data was collected from 351 pharmaceutical employees working as sales force. The study issuing convenient sampling technique. Smart PLS-SEM was used for data analysis.

Findings: The result of SEM findings revealed that spiritual leadership fails to moderate the relationship in the perspective of existing framework whereas organization climate moderates the relationship between intimidation and employee engagement, which indicates that even the intimidated employees got engaged in their work in the presence of supportive organization climate.

Implications/Originality/Value: The study framework and methodology contribute in the existing literature and creates future horizons for the scholars. Longitudinal data might be valuable in future studies for establishing causal extrapolations between study variables. Future studies could benefit from incorporating cross-cultural study. Our insights can even be extended to employees in plenty of other workplaces wherein everyday organizational interactions are necessary.

Keywords: Spiritual leadership, Work overload, Intimidation, Employee engagement, Psychological Well-being, Organizational climate

JEL Classification: M1, M2

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Introduction

In today’s competitive business environment, work overload is a critical concern (García-Arroyo & Segovia, 2019). Workplace pressure or work-overload is a substantial cost to employee work behavior which leads to intimidation that has long been identified as a common element of impression management practice in the research on impression management, involves the intentional use of pressure to demonstrate one's personal strength and secure behavioral compliance in order to generate a desirable impression in the minds of others(Kimura et al., 2018a). Under certain circumstances, intimidation comes as a result of allocating an overwhelming quantity of work, whilst in others, it results in work overload. Work overload has received a lot of attention in the management area among the numerous work stressors (Kimura et al., 2018b). Workload and time pressures surpass employees' ability to do their tasks, resulting in work overload. Work overload, for example, is described by the International Labor Organization (ILO) as a major source of workplace stress and a major cause of mental health problems (ILO, 2016). Due to challenging duties and a culture of extended working hours, today's workers are completely overwhelmed at the end of the day (Kimura et al., 2018b). The stress of working from 8 a.m. to 5 p.m., for instance, has been recognized as a central source of growing medical conditions, including hyperglycemia, hypertension, psychiatric and mental health issues, joint pain, as well as other diseases (Su et al., 2018). Keeping people healthy and able to work insane hours efficiently is a major concern for personnel management. Employee engagement at work is one measure of healthy mental wellbeing (Uchechukwu et al., 2020). Employee well-being, both physically and psychologically, is critical, and studies have shown that it has an impact on organizational progress. Employees who feel good and deal with less stress at work and at home, for example, are generally more engaged with their employment, which can have also impact on their well-being and the business progress (Dinh, 2020). The work behaviors of employees reflect their dedication, loyalty, and positive disobedience. When employees are under stress, their output level may be low or high as compared to the normal production rate? When employees are unproductive, it takes a longer time to complete the job, which increases the cost to the employer. Employees’ productivity directly affects an organization's performance in terms of growth and profitability (Naru & Rehman, 2020).

Globally, 27% of the staff is Highly Engaged, 38% are Moderately Engaged, 21% Passive, 14% Actively Detached (AON, 2018). Though, high productivity and the happiness of the employees are the results of better employee engagement (“Organizational Happiness Index (OHI): Conceptualization and Operationalization of Measurement among Employees in Services Industry,,” 2016; Rich et al., 2010). It is because work engagement may create motivation among employees and is measured as a motivational construct that gives various optimistic outcomes. Work engagement is well-defined as a self-determining and prevalent motivational psychosomatic condition with a tri-factor arrangement (Babic et al., 2020; Schaufeli et al., 2006). Despite the fact that the aspects of engaging at work, job performance, and psychological well-being have critical interactions amongst each other, as well as a tendency to demonstrate constancy among people over time, among practitioners and academics, employee engagement is their foremost focus(Ahmed, 2019; Uchechukwu et al., 2020). This is due to the fact that engaged workers are likely to have higher levels of motivation and commitment in their respective occupations and organizations. The drive and outcomes of employee behavior cause employee work engagement as well as contribute to the improved mental well-being. This considerable emphasis is directed towards the development of potential benefits of work engagement, such as better organizational performance (Ali & Zia-ur-Rehman, 2020), organizational citizenship behavior (Gupta et al., 2017), organizational obligation (Hanaysha, 2016), and individuals' job satisfaction ((Flores et al., 2021). Conversely, according to COR (conservation of resource theory) we acknowledge a number of personal resources can contribute to mitigating the negative effects of the workload (Prapanjaroensoin et al., 2017), we emphasized spiritual leadership and organizational climate as moderator in our study to...
determine employee engagement and psychological well-being. According to Lazarus' transactional theory, the autonomous personal resources reduce the negative effect of work-overload (Lazarus, 1991). While empirical research have focused on the moderating effects of job resources, evidence for the interplay between personal resources and job demands is scarce, as Bakker & Demerouti, (2018) pointed out that personal resources are people's perceptions of their capacity to effectively organize and influence employees surroundings, despite difficult situations (TRUONG et al., 2021). Moreover, it is important to check moderation effects in these scenarios the study aim to take organizational climate as moderator it is also a depiction of conservation resources theory that if employee having enough resources, he takes stress as motivation and remain engaged with their work. On the other hand, moderating variable spiritual may sound as positive leadership and one can be more mentally healthy and happy at workplace if he/she is internally satisfied religiously (Zou et al., 2020). This study expands the scant literature by determining the moderating roles in regard to work-overload and its consequences. Overall, this study contributes to workplace behavioral research by providing strategies to improve employee engagement levels and their psychological wellbeing in the pharmaceutical sector.

**Literature Review**

**Work-overload and employee engagement**

According to Taylor et al., (1997), employees who feel obligated to work too long and too hard at too many everyday jobs report more stress, have poorer health habits, and account for more health grievances than workers who are not subjected to work-overload. Today's workplace demands its employees be highly efficient and must be able to maintain productivity. To meet this need, workers face a workload, a condition that presents some real challenges for employees, including the company (García-Arroyo & Segovia, 2019). The apparent work burden is tied to an employee's engagement level. An engaged employee, thus, will be more satisfied with one's professional role and performance at work, in contrast to disengaged employees who will display higher levels of anxiety (Ugwu & Onyishi, 2020). An empirical study by Fairbrother & Warn (2003) acknowledged that the high intensity of stress at work decreases the employee engagement with the corporation and increases the logical reasoning to depart from the organization (Chen et al., 2011). Based on the preceding, we hypothesize the following:

H1: There is a relationship between work overload and employee engagement.

**Work Overload and Employee Psychological Well-being**

Work overload is a principal aspect of empirical studies of stress (García-Arroyo & Segovia, 2019). Psychological wellbeing is linked to flexible and creative thinking, pro-social behavior, and overall health of the individual (Huppert, 2009). It is the combination of feeling happy and executing well. Therigorous psychological health associated issues reported by employees in organizations of industrialized countries are the consequence they are facing psychological anxiety and stress which are the link to excessive job strains and challenges at the workplace. (WHO, 2007) the workload is the top of the stressor. Organizations ask employees to do more work and cut resources, lack of capital and inadequate recruitment can make it difficult for employees to get their job done properly. (Justice, 2018). Work pressures like work burden and physical grievances reported by the employees (i.e., sciatica, annoyance, eye strain, diminishing sleep, faintness, fatigue, craving loss and intestinal glitches). All of these job stressors comprised in (Nixona et al., 2011) meta-analysis (i.e., relational- clash, lack of control, structural restraints, title role uncertainty, title role conflict, working periods, and work-overload) by a multiple degree of corporal indications. Thus, we formulated the hypothesis that:

H2: Work-overload has a negative correlation with employee’s psychological wellbeing.

**Intimidation Affects Employees’ Engagement**

Intimidation often well – define as negative irritating behavior at the workplace. (Lamontagne, 2010; Musselman et al., 2005; Nadzam, 2009). Employees who perceive that they are getting negative conduct
in the business organization and their engagement towards work get reduce, so they are more overly exposed towards getting anger, revengeful and pull out commenceing their character. Reliable by means of the directions of a tradeoff, these displeased staffs keep behaving in divergent ways, for instance, suppression power, coming late at the office, captivating extensive pauses more than that are permissible, and others negative conducts like this(Shantz et al., 2013).Nobody likes to work in an intimidating and non-productive atmosphere, particularly if you have bullying or bullying, which has a health and productivity impact. Management by intimidation may be short-term. Anxiety does not enable employees to weaken them as a point of work engagement. In a workplace environment based on fear, an employee is no longer concerned about the company’s goals or purposes. Servicing, work performance, and quantity are no longer important to them(Chawla et al., 2020). Furthermore, tiredness and depersonalization were found to be associated to devotion and vigor in an indirect manner. Thus we formulated:

H3: There exists a reciprocal relation between intimidation and employee engagement.

**Intimidation Effects Employee Psychological Well-Being**

Intimidation which is also named as frightening is a premeditated performance that "would cause a person of ordinary sensibilities" to terror or doing harmful acts for others. International labor organization ILO conveyed that forcefulness at work mainly intimidation is the reason for musculoskeletal abnormalities which is getting attention in occupational health and safety practices now (International Labour Organization, 2016). A current study explores that mental strain is mediated in this whole process. (M. C. Bolino & Turnley, 2003; Jones & Pittman, 1982). Nixona, Mazzolab, Bauera, Kruegerc, & Spectora, (2011) studied about work pressures like work burden and physical grievances reported by the employees. (i.e., sciatica, annoyance, eye strain, diminishing sleep, faintness, fatigue, craving loss, and intestinal glitches). It is shown empirically by different studies that Intimidation caused by job demands may lead to psychological withdrawal. So, we formulated the hypothesis:

H4: Intimidation positively effects employee psychological well-being.

**Intimidation Mediates the Relationship between Work –Overload and Employee Engagement**

Lack of social support will lead to employee stress and finally affect their occupational health and well-being. Today work overload burdens its employees to be greatly efficient and must be able to maintain productivity and they feel aggressive (Frone, 2008; Kimura et al., 2018b). Correspondence to the theory of general strain when employees feel a intimidation to themselves so they get involved in handling strategies and to cope that stress they behave divergently towards others and get intimidated (AGNEW et al., 2006). The apparent work burden is tied with an employees’ engagement level. Work engagement is thoroughly associated with workers’ physical and mental well-being. (Kah,1990). Employees who perceive that they are getting negative conduct in the business organization, so they are more overly exposed towards getting anger, revengeful and pull out commenceing their character so it decreases their commitment and passion towards their work (Kimura et al., 2018b).

H5: Intimidation mediates the relationship between work –overload and employee engagement

**Intimidation Mediates the Relationship between Work Overload and Employee Psychological Well-Being.**

Intimidation is a forceful approach that involves the use of threatening or harassment in a way to act menacing and influential (Harris et al., 2013). According to Chawla et al., (2020), modern organizations value teamwork and homogeneity, and individuals who intimidate and harass coworkers may be viewed as a problem rather than an asset, and hence receive lower performance ratings. Likewise, experts believe that people are frequently furious and suspicious of all those who try to influence and bully them (Arifin et al., 2019). Correspondence with Lazarus transactional theory of stress the severe psychological health associated issues reported by employees in organizations of industrialized countries.
are the consequence they are facing psychological anxiety and stress which are the link to excessive job strains and challenges at the workplace. (WHO, 2007). It is shown empirically by different studies that Intimidation caused by work-overload may lead to psychological withdrawal. So, we formulated that:

**H6:** Intimidation mediates the relationship between work-overload and employee psychological well-being.

**Organizational Climate Exists as a Moderator between Work-Overload and Intimidation.**

There are many aspects of workplace settings that are assumed directly or randomly by the workforce, which is regarded to have a significant influence on employee behavior (McMurray et al., 2010). Employees in today's workplace must be very efficient and capable of maintaining productivity. Workers are strained in order to meet this need, which poses some serious issues for the organization (2016, Egbert). Fear of punishment is a sort of intimidation that aims to increase the severity of formal punishment among an organization's employees (Lara, 2006). Businesses have a proclivity for provoking or preventing divergence from their way of life. Einarsen & Skogstad, (1996) indicate if a behavior is understood, abided by, or acknowledged based on workplace principles such as whether or not employees can self-control divergent acts at work.

So, we formulate a hypothesis:

**H7:** Organizational climate act as a moderator between the workload and intimidation

**Organizational Climate Moderates the Relationship between Intimidation and Employee Engagement.**

The supported organizational environment creates desire which is mandatory to influence and increase the engagement level of employees working there. Outside income, employees may expect to advance profits from their workplaces such as gratitude towards attainment, occupation expansion and development, and pleasant-sounding organizational environment and supportive executive chic. It is believed that companies that offer a better work-life balance and hospitable working environments will likely enjoy high profitability and the retention of the greatest human capital. Essentially, the organizational climate, often known as the business climate, is the process of outlining an institute's "culture". It leads to the concept of workplace strategy. It is a set of work environment attributes assumed directly or indirectly by the workforce to be a primary driver in affecting employee behavior (McMurray et al., 2010). So we formulated the hypothesis:

**H8:** Organizational climates moderate the correlation between intimidation and employee engagement.

**Spiritual Leadership Moderates the Correlation between Workload and Intimidation**

Spiritual leadership is essential for effecting change and advancing the success of knowledge enterprises. Prior studies have also shown a significant relationship with workplace divergent behavior. Fear of punishment is an intimidation paradigm that intends to extend the degree of formal penalty among the organization’s workers. (Lara,2006). The impression of difficulty or proficiency that comes from executing the work was determined to be an inner drive (Keaveney& Hunt, 1992). In any job, inherent drive is crucial. Other issues can be addressed by being stimulated and achieving personal pleasure. Employees who are associated with elevated degrees of workplace spirituality may be more likely to reject threatening behavior and renounce immediate benefits in order to reveal greater sense of meaning and purpose at work (Fry, 2003; Hsu et al., 2011). As a result, spiritual leadership plays a unique role as a buffering device. Spiritual leadership can boost both employee work engagement and organizational citizenship behaviors (Ahmad & Omar, 2014).

**H9:** Spiritual leadership moderates the correlation between workload and intimidation

Yang et al. (2019) emphasized the inner self. He believes that the working spirit of employees cannot be neglected because it is what makes an individual human. Transmitting an organization's knowledge and
practice is a major challenge (Mariwa et al., 2021). In order to make the businesses progress, the business models and psychological well-being of an employee must include the element of spirituality for creating pro-social behaviors in the organization, increasing performance and doing sustainable practices. Saks, (2011) projected framework of spirituality at job and employee engagement in which tri-scopes of spirituality are definitely related to employee engagement and not involve in negative acts. Workers feel harmless in settings that remained considered by the directness and supportive. Employees have spiritual needs same as their other needs. (Singh & Chopra, 2016) so we formulated the hypothesis:

H10: Spiritual leadership moderates the correlation between intimidation and employee engagement.

H11: Spiritual leadership moderates the relationship between intimidation and employee psychological well-being.

**Transactional theory**

Lazarus’s theory of stress-strain provides a transaction model of stress and confrontation is the context for assessing the process of dealing with stressful happenings. Stress-full experiences are interpreted as a person-environment operation. These transactions depend on the influence of external stressors. This is interceded first by the impost of the strain by the individual and then by the social and traditional means in his or her personality.

When the individual is confronted with frustration, he will assess the latent threat (preliminary assessment). A preliminary assessment is a judgment of the prominence of an event, that is, stress, optimism, controllable, challenging or immaterial. In the face of possible stressors, the second assessment is an assessment of people's responses to resources and choices(Kimura et al., 2018b; “Lazarus Theory,” 2020). According to the theory, people do not feel strained when they believe they have enough personal resources. Individuals, on the other hand, suffer a strain when they believe the personal coping resources are limited, thus they engage in a coping approach as one part of stress management is dealing with the source of the stress (problem-focused coping). These coping techniques include intimidation, in which the employee addresses the causes of stress with aggressive ways to undermine the circumstances and resolve the issue(Sivan-Donin et al., 2019).

And according to “Organ. Stress A Rev. Crit. Theory, Res. Appl.”( 2012) job strain such as intimidation is a sort of behavioral strain, which is a way for individuals to manage stress by either eliminating the stressor or minimizing the unpleasant feelings generated by it (Penney & Spector, 2005). Intimidation is defined by M. Bolino et al., (2016a) as strategy of an individual to "let others know that if they have been pushed too far, they can make life harder, deal aggressively with individuals who get in their way, or use vigorous behavior to get coworkers to act properly. “They also claimed that people who utilize intimidation may create resistance or contempt in the end (M. Bolino et al., 2016b).

**Conservation of Resource Theory**

The Conservation of Resource Theory (COR) provides a structure for understanding the stress response and suggests that stress is the result of threats or conditions related to the actual loss of valuable resources. It has been found to be a reliable basis for understanding the processes involved in the experience, addressing and overcoming long-lasting and distressing stress. In addition, the desire to protect and acquire these valuable resources motivates human behavior against stress. Agreeing to the COR theory, the damage is more important than gain, and damage causes damage.

**General strain theory**

General strain theory suggests that whenever a person confronted with an amplified level of stress like work overload, they receive a highly deleterious incitement and involves deviant actions and aggressive
behavior with others. The person got angry when he or she got unable to achieve their goal (Agnew, 1992).

Research Framework

![Research Framework Diagram]

Figure # 1: Research Framework

Methodology
Respondents and the procedure
We employed a sample matching supervisor to carry out a quantitative analysis of a questionnaire survey to put our technique to the testing. In order to ensure a proper representation of sales force, we have requested replies from numerous pharmaceutical businesses. The companies were picked on the basis of their commercial status and because they supplied predominantly business clients. The final sample includes 350 corresponding supervisor salesperson dyads, with 150 salespeople and 100 supervisors. Participants received no compensation for providing their responses.

Measurement
The survey instrument was initially written in English. The scales were adopted from different authors. Employees responded on work overload, intimidation, spiritual leadership, corporate atmosphere, employee engagement, and psychological well-being. Whereas their immediate managers gave information on their subordinates' sales performance and level of workplace involvement overwhelming workload. We used the five-point Likert scale ranging (1=strongly disagree to 5=strongly agree).

Findings
Descriptive Statistics
The demographics of respondents showed descriptive data (table #1&2) indicating just 06 % of those who participated in the research were women. The responders were usually between 26 and 35 years of age. The size of the respondents received a diploma with the highest academic qualifications, 54 per cent. Of the 351 participants, 75% have had more than two years of solid job experience. Lastly, most of the respondents 98% were belong to the private sector.

Testing of Hypotheses
We conducted a conditional process analysis utilizing the SPSS Release 2.16 process. Age and gender of the salesperson were used as control variables. For data analysis, the Partial Least Squares Structural Equation Modeling (PLS-SEM) method was used (Hair et al., 2011). Hypothesis 1 results that work-
overload have an insignificant relationship with employee engagement of sales employees of the pharmaceutical sector. Figure demonstrates ($\beta = -0.059$, $t = 1.36$, $p > 0.17$). Hypothesis 2 asserted that work-overload has a statistically significant association with employee psychological well-being ($\beta = -0.486$, $t =3$, $P>0.05$), as indicated by the statistically significant effect of their interaction.

Hypothesis 3 asserted that there is an insignificant association between intimidation and employee engagement which tells us that being coercing at work does not impact the commitment level of employees ($\beta = 0.001$, $t=0.015$ $p >0.05$) Hypothesis 4 predicted that intimidation is significantly related to employee engagement. Results (Figure 8) demonstrate the negative relationship between intimidation and work engagement ($\beta = -0.171$, $t = 3.300$, $p < 0.05$). Hypothesis 5 resulted that intimidation having a direct path and fully mediated the relationship between work-overload and employees engaging behavior as it predicted that if an employee will feel work overburden he will lead towards strain and the employee will behave violently so his engagement towards work will get reduced ($\beta = 0.182$, $t=4.638$, $p <0.05$). Hypothesis 6 resulted that there exists a partial mediation association between the work overload and employee's mental/psychological wellbeing so if the worker will get frustrated so he or she will experience stress and become psychologically ill ($\beta = 0.106$, $t=4.262$, $p <0.05$). To probe the moderating effect of spiritual leadership and organizational climate Hypothesis 7 which explains that the environment of an organization will have a relationship with employee engagement and if the climate of the organization will be supported so the employee will take their stress as motivation and work with commitment. ($\beta = 0.248$, $t=3.562$, $p <0.05$). Similarly, Hypothesis 8 predicted that spiritual leadership is significantly related to employee engagement. Results demonstrate a negative significant association among SL and employee engagement ($\beta = -0.624$, $t =11.235$, $p < 0.05$) supports hypothesis 7. Furthermore, Hypothesis 9 predicted that spiritual leadership is insignificantly moderated between work-overload and intimidation. Results demonstrate a positive relationship between market SL and work engagement ($\beta = 0.028$, $t = 0.345$, $p>0.05$). Hypothesis 10 predicted that spiritual leadership is insignificantly between work engagement and intimidation. Results demonstrate no moderation among them ($\beta = -0.014$, $t = 0.313$, $p>0.05$). Hypothesis 11 predicted that spiritual leadership having no moderation between intimidating behavior and employee psychological wellbeing which tells us that spiritual they will not enhance the mental wellbeing of employees at a job ($\beta = -0.033$, $t = 0.818$, $p>0.05$).

Overall, the results mostly supported the framework hypothesis except for few hypotheses in which work overload not directly affect employee engagement. Else spiritual leadership showed no moderating effect in this current study but there exists a significant relationship for the second moderation organizational climate.

**Table 01: Descriptive Statistics**

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The descriptive statistics of the model has been shown in the above table which demonstrates the minimum and maximum scores, the value of the standard deviation and mean. The mean score of this study ranges from 1.06 to 1.0229 and standard deviation of the variables were ranges from 0.1271 to .00896. Moreover, the ranges of skewness and kurtosis were also seen in this study.

**Figure 01**: Measurement Model

**Table 2**: Measurement Model Summary

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According to Hair Jr. et al. (2014), contrasting Cronbach’s alpha, CR does not undertake an equivalent pointer loading of the construct. CR varies between 0 and 1; the threshold value should not be lower than 0.60 but the value of 0.70 and above is most desirable (Hair et al., 2012). Accordingly, CR value between 0.6 and 0.7 indicates average internal consistency, while a value between 0.70 and 0.90 is regarded as more adequate. In the model assessment, the measurement model was considered to confirm reliability and rationality. In line with the opinions of Vinzi et al., (2010) who gave the rule of thumb for outer loading, the outer loading must be .50 and above. Next, the average variance removed, must be more than 0.50. However, in factor loading the value below 0.50 need to be erased one by one starting with the lowermost value, as it increases the excellence of overall data, this technique is also recommended by (F. Hair Jr et al., 2014). Although this research considered only Confirmatory factor analysis (CFA) by employing Smart PLS 3.2.7 (Henseler et al., 2014). As suggested by Hair et al. (2010, 2014), convergent validity is attained when the factor loading of all the indicators are more than 0.50 and not a single loading from supplementary variable has a greater loading than the one which thinks to measure. The findings highlighted that out of 33 items, 4 were deleted as their loadings were less than the cutoff value of 0.50. Thus, rest of the model left with 29 items which are within the range of 20% deletion of lower factor loadings and rest of the loadings were retained ranging from 0.510 to 0.953 (F. Hair Jr et al., 2014).

Discriminant validity was obtained by associating the correlation among the latent constructs with the square root of AVE as suggested by (Fornell & Larcker, 1981b). Furthermore, to assess the discriminant validity, Fornell & Larcker, (1981a) recommended the use of the average variance extracted with a score of 0.50 or more. To investigate the discriminant validity this research considered discriminant validity to confirm the external consistency of the model. However, the comparison between the suppressed constructs as explained in Table 8 summarize the square root of AVE of the concepts: Work overload

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Altruistic Love</th>
<th>Employee Engagement</th>
<th>Faith</th>
<th>Intimidation</th>
<th>Organization Climate</th>
<th>Psychological Well Being</th>
<th>Vision</th>
<th>Work over load</th>
</tr>
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<tbody>
<tr>
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<td>0.718</td>
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<td>Organization Climate</td>
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<td>0.316</td>
<td>-0.211</td>
<td>-0.589</td>
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</table>

660
=0.799; Intimidation = 0.99; Spiritual leadership =0.822; Work engagement=0.751; Organizational climate=0.843; Psychological Well Being=0.858.

<table>
<thead>
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<th>Hypothesis</th>
<th>Statement</th>
<th>Decision</th>
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<td>H1</td>
<td>There is a relationship between work overload and employee engagement.</td>
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</tr>
<tr>
<td>H2</td>
<td>There is a relationship between work-overload and employee psychological well-being.</td>
<td>Supported</td>
</tr>
<tr>
<td>H3</td>
<td>Intimidation effects employee engagement.</td>
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</tr>
<tr>
<td>H4</td>
<td>Intimidation effects employee psychological well-being</td>
<td>Supported</td>
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<tr>
<td>H5</td>
<td>Intimidation mediates the relationship between work–overload and employee engagement.</td>
<td>Supported</td>
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<td>H6</td>
<td>Intimidation mediates the relationship between work–overload and employee psychological well-being.</td>
<td>Partially supported</td>
</tr>
<tr>
<td>H7</td>
<td>Organizational culture moderates the relationship between workload and intimidation.</td>
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</tr>
<tr>
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<td>“Spiritual leadership moderates the relationship between workload and intimidation.</td>
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<td>H10</td>
<td>“Spiritual leadership moderates the relationship between intimidation and employee engagement.</td>
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<td>H11</td>
<td>Spiritual leadership mediates the relationship between intimidation and employee psychological well-being</td>
<td>Not Supported</td>
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Table 04: Hypothesis Testing

Statistical Analysis
Prior research on influence strategies and political behavior has found that undesired types of behavior, such as intimidation, are common in workplaces, and that such behavior is viewed negatively by supervisors and employees. The findings demonstrated that spiritual leadership does not have a significant moderating effect on the relationship between work-overload and employee engagement and psychological well-being. On the other hand, OC can be used to discourage individuals from engaging in intimidating behavior, but it is insufficient for coping with resource depletion induced by work overload. Findings suggest that employees who work in a sufficiently supportive environment are less inclined towards intimidation. Here, our second moderation works best, i.e., OC showed a significant relationship with employee engagement and psychological wellbeing, so that the findings explore that the climate of the organization is good and supported, so that employees feel engaged and happy at their work. Supportive organizational climate acts as a protective factor against risk factors. As the state when individuals face a high level of stress and loads of work (Kimura et al., 2018b).

Conclusion
This empirical study analyzes the relationship between the variables such as work-overload, spiritual leadership, organizational climate intimidation, and work engagement and employee psychological well-being. The research reveals that if the employee feels stress at work, they get involved in some sort of divergent behavior with others and try to show power to harm others and eventually lose their passion to do work and their healthiness. The study has taken organizational climate and Spiritual Leadership as moderators and a MOD-MED-MOD analysis has been done. The finding shows that spiritual leadership did not work very well in this context and there exist no moderation results. This result shows that there exists a full mediation of intimidation in the relationship between work overload and work engagement and partial mediation and significance with employee psychological well-being. Moreover, it was shown by current findings that spiritual leadership and organizational climate moderates the relationship between intimidation with work engagement and psychological well-being but it does not play moderating role between work overload and intimidation. After the examination of this study it has been concluded that if the environment of the company is supported then employees will take their work-overload stress as motivation to them and will not engage in aggressive negative behavior and it will enhance their engagement towards their jobs.
Managerial Implications
Managers need strategies to cope with employee engagement and employee mental wellbeing issues. Employee psychological wellbeing enhances corporate wellness and creates a healthy environment. This study has provided useful insights to policymakers, practitioners, academics, and management in pharmaceuticals as well as other related industries. Our findings are extremely important to sales management for two reasons. For instance, many salespeople's daily work involves human interactions with peers or colleagues (e.g., short meetings, brief discussions for exchange of information, regular reports, and so forth), which can escalate to intimidation. Moreover, the salesperson's work has gotten more demanding, sophisticated, and difficult, requiring work to be done over a longer period of time.

Limitations and Future Paths for Research
Although this study contributes significantly to the literature as well as it keeps several shortcomings. These limits necessitate a "with reservations" conclusion, but they also open up some avenues for further investigation. This study was limited to a few pharmaceutical companies in Pakistan. The research should be expanded to include more samples and any industry in Pakistan to improve the model's generalizability. Furthermore, other industries and organizations might be added in the sample to develop the value of the outcome. Future research could look into this subject in different industries. Second; our findings revealed that work overload has a direct impact on salesperson employee engagement and mental health. While the indirect approach via intimidation shows an IM influence on supervisory appraisal, the direct path may reflect the significant effect of job overload on employee engagement and psychological well-being. Future research could look into the impact of other aspects of impression management as mediation, such as Exemplification (Kimura et al., 2018b). Future research can expand on this topic by using observation, peer reports, or supervisor ratings. Future research can look into other work outcomes and behaviors. Comparison of two sectors like private and public can also be studied further. To better comprehend the process of intimidation, employee engagement and employee mental wellbeing, the contributions to the model must be increased to include emotional aspects such as surface action, deep behavior and other cognitive characteristics (Kimura et al., 2018b). Exploratory research may help the literature of intimidation and work engagement and psychological well-being. Moreover, other psychological variables may be used in the future. Although, we can extend our findings in other work contexts and industries like salesperson of industry food and beverage.

References


The Impact of Cash Flow Management Practices on Financial Performance of Cement Manufacturing Firms: A Comparative Study of Pakistan and India

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**ARTICLE DETAILS**

**ABSTRACT**

**Purpose:** The study examined the impact of cash flow management practices on Pakistani cement firm’s financial performance with comparison of Indian cement sector’s selected firms.  
**Methodology:** The Pooled OLS Regression is applied with the Help of EViews software. The data collection is from official websites of the concerned companies from 2009 to 2018 with help of secondary source. The multiple regressions, Random Effect Model and Fixed effect models are used for the analysis of data and confirmed with Husman test.  
**Findings:** The finding of this study for both selected countries indicated the influence of cash flow management practices wherein both countries cement producing companies shows significant impact on firm’s performance but in terms of Pakistan Return on Assets have no impact on firm’s Profitability.  
**Implications:** Therefore, after a careful analysis study recommended that cement manufacturing companies must reevaluate their practices of managing cash flows in order to generate more profitability and generate enough cash to meet their obligations.

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Introduction

The cement industry is the building block as well as important item used for development in country’s construction industry, which constantly considered as a barometer of improvement in developing country and properly taken as a significant indicator of economic activity. The production of cement at industrial level was started in the middle of nineteenth century, first with shaft incinerators, later these were switched by rotary incinerators as standard equipment around the world. Cements (the concretes that they may be used to build) were increasingly being investigated as an alternative to wood and stone by the time of the industrial revolution. Those seeking to develop the needs for unique construction materials created several outstanding and new cement patents and designs in the late 1700s and early 1800s. China represents a major producer and purchaser of cement, After China, which is unquestionably the world's largest cement production; India was the most significant cement producer in 2010.

Cement is a capital-intensive, energy-intensive, and vital industry for building national infrastructure. However, accounting for a minor percentage of global output, the worldwide cement sector has been growing much faster than local demand in recent years. Cement production firms have been pushed to relocate to nations with less strict environmental restrictions as an outcome effort to protect the environment in emerging countries, particularly Europe. It is broadly utilized in the manufacture of concrete and has offered a trend for economic performance and environmental enforcement, along with continuously increasing real prices. Concrete is made up of inert aggregate particles like sand, gravel, broken rocks, and cement. Cement use and production are intimately connected to the construction industry, and consequently to overall economic activity. Cement is one of the most developed items in the world, and it is created in almost every country due to its importance as a building material and the geographical availability of the key raw materials, namely limestone. The broad development is also attributable to the relatively low price and high density of cement, which reduces ground transportation expenses due to the relatively high prices. Export trade (except plants grown near the border) is generally limited in terms of global production (Abeer.M, 2021).

Because it is required to build and improve infrastructure, cement plays an important social and economic function. This industry, on the other hand, is a major polluter. Cement production contributes about 4% to global warming by generating 5–6% of the carbon dioxide produced by human activities. It has the ability to release significant amounts of chronic chemical pollutants such dioxins, heavy metals, and particulate matter. The efficient use of energy is also critical. Cement manufacturing consumes about 0.6 percent of all electricity generated in the United States. The chemistry that drives cement manufacturing and use, on the other hand, can be quite useful in addressing these environmental concerns.

Pakistan's cement industry has grown tremendously since 1947. Undoubtedly, cement is the most essential and broadly used construction material in the Advanced era. The Karachi Stock Exchange lists 21 businesses in the cement industry with a combined net prosperity of roughly Rs. 25 billion. A number of the corporations have multiple factories in different cities. According to All Pakistan Cement Manufacturing Authority, there are right 24 cement plants in Pakistan. The cement production capacity of 57.13 million tons and the utilization capacity is 80.71%. The total dispatch of cement production is 34.58 million tones including local dispatches of 29.45 and Exports of 5.13 million tones. The total capital registered is Rs 67,629.56 million, with a market capitalization of Rs 377,405 million. The benefit after expenses for the sector was Rs 55,185.67 million. (Page# 44,91, Pakistan Economic Survey 2018-19).

India's cement sector was deregulated in 1982, and the country is now ranked second in the world for cement production. It's no surprise that India's cement business contributes significantly to the country's economy by directly or indirectly employing over a million people. The Indian cement business has
received significant investments from both global and domestic firms. India has great ability for advancement within the infrastructure as well as construction sector and expecting larger interest from cement sector. A key factor that helps in the development of this sector is the prepared accessibility of the raw materials for producing cement, includes limestone and also coal. The capacity of producing cement is 509 million tons each year (mtpa) as of March 2019, the main 20 companies record around 70% of the overall production (IBEF; May 2020) This study purposes to compare the performance of Pakistan and India cement manufacturing industry with the help of cash flow management practices. Both countries follow the same accounting standards provided by IFRS (International Financial Reporting Standards), so their financial statement is understandable.

**Problem Statement/Research Gap**

Cement industry is arguably the most important source of material for construction and physical infrastructure and counted among the top 10 manufacturing in the world and there it is required to analyze the influence of cash flow practices of firm’s performance specially on cement industry in Pakistan by comparing the impact of cash flow management practices of cement industry with its neighboring country like India, which will worth more and meaningful contribution to knowledge because there is no work done before on comparison of cement industry’s cash flow management practices among India and Pakistan.

**Research Questions**

Q1: What is the impact of the cash flow management practices on Cement manufacturing firm’s financial performance?

Q2: How cash flow management practices differ in India and Pakistan?

**Conceptual Framework**

![Conceptual Framework Diagram]

**Source:** Janaki Samuel (August 2016) International Journal of Economic and Business Review (EPRA)

**Literature Review**

Cash flow management mentions a systematic way by which the organizations retain authority over the inflow and outflow of assets and the objective of cash flow management is to make sure that the business does not run into cash deficiencies, a business must not be overdue in receivables of the creditor. Additionally, it must not have long-standing borrowers in its books.

The company’s performance is largely determined by how it manages its cash flows. Many people underestimate the importance of cash flow management, which leads to many firms failing to realize their full potential. The management of cash flow relies on cash conversation cycle and is counted as an
essential element in upgrading the performance of companies. The importance of cash flow management is to ensure there is positive cash flow for easy business measures as cash has been considered as the existence blood of any company (Thevaruban, 2016). The practices of management of cash flows of a firm manages working capital as receivables of cash from consumers, inventory stocked, and payments of cash to the raw material providers, are inevitably connected to the performance of firm.

Chintha et al (2021). According to their research, cash management is linked to a number of crucial areas, including the impact on a company's liquidity, performance, insolvency, and all-inclusive working capital. To confirm the links between cash management as well as financial performance, 36 firms listed on the Muscat Securities Market (MSM) were chosen across time, commencing in 2014 and ending in 2019. The study employed financial performance statistics such as Return on Assets (ROA), Return on Equity (ROE), and Net Profit Ratio, as well as the Cash Ratio (CR) and Operating Cash to Debt Ratio (OC-DR) (NPR). With ROA, ROE, and NPR Cash Ratio (CR) exhibits a statistically significant positive relationship. The OC-DR has a significant influence on ROA and NPR When Return on Asset was employed as a dependent variable, Overall, the major finding is that cash management strategies used by Omani manufacturing companies account for a significant amount of their financial performance.

Efeeloo et al (2020) The relationship between cash flow management and the financial performance of some selected oil and gas companies which are listed on the stock exchange of Nigeria was investigated experimentally in this study. The Stakeholders’ Theory served as the foundation for the project. It used a judgmental research method. Data was gathered from five selected publicly traded companies’ annual reports over a 5-year span (2013-2018), correlation and multiple regression methodologies were used to assess the data. Cash flows from operating and investment activities were found to have a negative and insignificant relationship with profitability, whereas cash flows from financing operations were found to have a positive and significant impact on firm performance. in the oil and gas industry.

Thomas et al (2019), In the Kitale region, worked on Agricultural Development Corporation units. The study's major goal was to see how cash flow management affected the performance of agricultural businesses in Trans-Nzoia County. The goal of the research was to determine the impact of stable and healthy liquidity on agricultural firm performance in Trans-Nzoia County. The research used a descriptive design. Using the SPSS version 21 program, the data was cleaned, coded, and analyzed. The link between the independent factors and the dependent variable was determined using a multiple regressions model/analysis. As per the findings of this study, healthy and stable liquidity has a major impact on the functioning of agricultural businesses in Trans Nzoia County.

Bari et al. (2019) believes that good cash management techniques are essential to maintain their company's profitability and long-term viability are in line with their goals. The goal of this study was to learn well about current cash management techniques of food and beverage shops in Puntland, as well as the effects of those practices on their profitability and long-term viability. The study had four desired outcomes relating to the effect of the first cash conversion cycle of Puntland's food and beverage businesses. The second step was to see if the retailers had adequate inventory management systems in place. Third, determining whether the retailer's account receivable management procedures are in place and whether they are favorable to their business's maximum profitability. Fourth, establishing whether food and beverage retailers had account payable management practices in place and assessing their impact on the business. We performed financial analysis based on the research of the sampled shops and discovered that they had a low liquidity ratio in their operations, as well as that the cash flow from different merchants was not consistent. Most retailers said the issue of low liquidity ration stemmed from their inability to pay their liabilities on time owing to fluctuations in the area's food and beverage market patterns. It was also clear that the problem emerged as a result of poor management practices, such as
retailers' inability to maintain track of their operations and apply the knowledge gathered in financial planning and management.

**Pakistani Cement Manufacturing Companies Data**

### Table 1: Shows independent variables (Debtor Turnover Ration and Inventory Turnover Ratio)

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### Table 2: Shows Dependent variables (Operating Profit Margin, Return on Assets and Profit Margin to Sales)

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<td>15.26</td>
<td>20.35</td>
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<td>13.13</td>
<td>14.98</td>
<td>22.08</td>
<td>26.78</td>
<td>12.80</td>
<td>16.21</td>
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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>RETURN ON ASSETS %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dewan cement</td>
<td>0.26</td>
<td>-2.88</td>
<td>-1.73</td>
<td>1.86</td>
<td>2.14</td>
<td>2.02</td>
<td>3.04</td>
<td>6.09</td>
<td>5.13</td>
<td>2.98</td>
</tr>
<tr>
<td>Dgkc</td>
<td>1.23</td>
<td>0.50</td>
<td>0.34</td>
<td>8.11</td>
<td>8.66</td>
<td>8.14</td>
<td>10.25</td>
<td>10.54</td>
<td>7.36</td>
<td>7.25</td>
</tr>
<tr>
<td>Fauji Cement</td>
<td>4.70</td>
<td>0.93</td>
<td>1.32</td>
<td>1.80</td>
<td>6.92</td>
<td>8.94</td>
<td>13.48</td>
<td>18.28</td>
<td>9.42</td>
<td>11.81</td>
</tr>
</tbody>
</table>

Source: The data is taken from the above-mentioned company’s annual reports for 10 years

Wadesango et al (2019) The focus of this thesis was to put into sets the current cash flow management strategies used by Zimbabwean SMEs and to investigate how these practices affect their profitability and long-term viability. In this study, both qualitative and quantitative research methods were used. The Yamane formula was used to calculate the sample, which resulted in a total of 50 responses. Data was collected through questionnaires and interviews, The chi square test was used to examine and test these data, which revealed that most SMEs' cash management procedures had a major impact on their profitability and long-term viability. The findings also found that most SMEs are hesitant to implement good cash management techniques, which leads to failure.

**Research Methods & Material**
This research is based on quantitative methodology, wherein two countries such as Pakistan and India were selected as sample size. The data collection is from official websites of the concerned companies from 2009 to 2018 with help of secondary source. The multiple regression, Random Effect Model and Fixed effect models are used and confirmed with Husman test for the analysis of data with the help of E views tool.

Variables
The Variables are set based on past literature review and current situation of cash flow management in cement manufacturing firms.

**Dependent variable:** Profitability measures such as Return on Assets (ROA), Profit Margin to Sales, and Operating Profit Margin are used to assess a company's financial performance.

**Independent variables:** Cash Flows variables of the firm contains, Debtor Turnover Ratio & Inventory Turnover Ratio.

**Data collection**
The data is collected though the secondary source from Pakistan Stock Exchange & official websites of relevant companies of India and Pakistan and the period of data collection is from 2009 to 2018. The tables bellow will show the collected data which is further used for data analysis.

**Indian Cement Manufacturing Companies Data**

| Table 3: Shows independent variables (Debtor Turnover Ration and Inventory Turnover Ratio) |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|
| DEBTOR TURNOVER RATIO (Times)  |
| Ambuja Cement                  | 26.76 | 36.18 | 27.89 | 28.98 | 26.84 | 25.49 | 22.16 | 20.67 | 24.51 | 18.19 |
| Ultratech Cement              | 21.12 | 22.54 | 18.60 | 17.02 | 14.30 | 11.22 | 12.29 | 11.82 | 13.69 | 13.04 |
| Acc Ltd                        | 22.37 | 27.55 | 34.89 | 28.59 | 20.31 | 19.26 | 17.10 | 14.34 | 15.17 | 12.31 |
| Shree Cement                  | 32.65 | 32.55 | 23.11 | 25.08 | 13.80 | 12.97 | 10.33 | 9.82  | 19.35 | 16.21 |
| India Cement                  | 7.53  | 6.19  | 7.04  | 12.47 | 8.06  | 6.78  | 6.53  | 5.66  | 7.55  | 6.04  |
| INVENTORY TURNOVER RATIO(Times) |
| Shree Cement                  | 17.59 | 10.13 | 8.54  | 11.72 | 10.54 | 7.27  | 7.02  | 6.76  | 6.54  | 6.27  |
| India Cement                  | 8.59  | 7.88  | 7.04  | 7.99  | 9.27  | 8.06  | 7.29  | 7.1   | 7.76  | 7.94  |

Source: The given data is taken from annual reports of above-mentioned companies & Moneycontrol.com
Measurements and Estimations

Based on the previous literature the research model is developed that is similar to Efeeloo et al (2020) Study.

To test the hypothesis. Therefore, taking a basic equation of regression will proceed to Panel POLS Regression model.

\[ Y_{it} = \alpha + \beta x_{it} \ldots \ldots eq (1) \]

Study is applying Pooled ordinary least square (POLS) as intercept is assume same for all firms.

\[ ROA_{it} = \alpha + \beta x_{it} + \epsilon_{it} \ldots eq - 2 \]

\[ OPit = \alpha + \beta_1(Debtor Turnover Ratio)_{it} + \beta_2(Inventory Turnover Ratio) + \epsilon_{it} \ldots eq (3) \]

\[ PMS = \alpha + \beta_1(Debtor turnover Ratio)_{it} + \beta_2(Inventory Turnover Ratio) + \epsilon_{it} \ldots eq (4) \]

Equation Explanation

\[ ROA_{it} = \alpha + \beta x_{it} + \epsilon_{it} \ldots eq (2) \]

Table 4: Shows Dependent variables (Operating Profit Margin, Return on Assets and Profit Margin to Sales

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATING PROFIT MARGIN %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultratech Cement</td>
<td>23.30</td>
<td>24.20</td>
<td>15.62</td>
<td>19.92</td>
<td>20.16</td>
<td>15.41</td>
<td>15.16</td>
<td>14.94</td>
<td>16.00</td>
<td>14.63</td>
</tr>
<tr>
<td>Acc Ltd</td>
<td>29.63</td>
<td>19.67</td>
<td>16.95</td>
<td>13.79</td>
<td>12.02</td>
<td>10.38</td>
<td>7.22</td>
<td>7.90</td>
<td>9.86</td>
<td>14.15</td>
</tr>
<tr>
<td>Shree Cement</td>
<td>17.40</td>
<td>26.00</td>
<td>12.87</td>
<td>15.65</td>
<td>43.47</td>
<td>16.04</td>
<td>8.08</td>
<td>9.51</td>
<td>15.1</td>
<td>16.00</td>
</tr>
<tr>
<td>India Cement</td>
<td>11.40</td>
<td>11.00</td>
<td>11.24</td>
<td>9.06</td>
<td>12.65</td>
<td>11.81</td>
<td>11.23</td>
<td>12.86</td>
<td>10.57</td>
<td>8.54</td>
</tr>
</tbody>
</table>

|                  |      |      |      |      |      |      |      |      |      |      |
| PROFIT MARGIN TO SALES % |      |      |      |      |      |      |      |      |      |      |
| Ambuja Cement    | 17.21| 17.10| 14.45| 13.41| 14.25| 15.09| 8.62 | 10.59| 11.95| 13.09|
| Ultratech Cement| 15.31| 15.51| 10.63| 13.47| 13.27| 10.68| 8.89 | 9.12 | 9.67 | 7.27 |
| Acc Ltd          | 20.02| 14.51| 13.72| 9.34 | 9.83 | 9.95 | 5.01 | 5.40 | 6.45 | 10.18|
| India Cement     | 11.26| 8.64 | 1.95 | 6.97 | 3.56 | 3.66 | 3.26 | 3.26 | 3.00 | 1.88 |

|                  |      |      |      |      |      |      |      |      |      |      |
| RETURN ON ASSETS % |      |      |      |      |      |      |      |      |      |      |
| Ambuja Cement    | 13.70| 12.16| 10.65| 10.44| 9.99 | 10.76| 5.70 | 4.17 | 5.07 | 5.90 |
| Ultratech Cement| 12.65| 13.07| 7.02 | 10.66| 9.69 | 7.22 | 5.72 | 5.75 | 6.69 | 4.10 |
| Acc Ltd          | 15.72| 9.93 | 11.05| 8.90 | 9.06 | 9.22 | 4.61 | 4.48 | 6.15 | 9.40 |
| India Cement     | 6.13 | 4.52 | 0.86 | 3.55 | 1.86 | 1.86 | 1.74 | 1.67 | 1.63 | 0.94 |

Source: The given data is taken from annual reports of above-mentioned companies & Moneycontrol.com

Whereas

\[ ROA = \text{Dependent variable measures performance of cement manufacturing companies of Pakistan.} \]
\[ \alpha = \text{measures the intercept line} \]
\[ \beta = \text{measures the coefficient} \]
\[ DTR = \text{Debtor Turnover Ratio is independent variable measures the impact in terms of cash flow.} \]
\[ ITR = \text{Inventory Turnover Ratio is independent variable measures the impact in terms of cash flow.} \]
\[ \epsilon = \text{Control variable to measure the standard error} \]
Equation Explanation

\[ O\text{Pit} = \alpha + \beta_1(\text{Debtor Turnover Ratio})it + \beta_2(\text{Inventory Turnover Ratio})it + \epsilon it \ldots \ldots eq \ldots \ldots (3) \]

Whereas

OP = Dependent variable measures performance of cement manufacturing companies of Pakistan.
\( \alpha \) = measures the intercept line
\( \beta \) = measures the coefficient
DTR = Debtor Turnover Ratio is independent variable measures the impact in terms of cash flow.

ITR = Inventory Turnover Ratio is independent variable measures the impact in terms of cash flow.
\( \epsilon \) = Control variable to measure the standard error

Equation Explanation

\[ P\text{MS} = \alpha + \beta_1(\text{Debtor turnover Ratio})it + \beta_2(\text{Inventory Turnover Ratio})it + \epsilon it \ldots \ldots eq \ldots \ldots (4) \]

Whereas

PMS = Dependent variable measures performance of cement manufacturing companies of Pakistan.
\( \alpha \) = measures the intercept line
\( \beta \) = measures the coefficient
DTR = Debtor Turnover Ratio is independent variable measures the impact in terms of cash flow.
ITR = Inventory Turnover Ratio is independent variable measures the impact in terms of cash flow.
\( \epsilon \) = Control variable to measure the standard error

<table>
<thead>
<tr>
<th>Estimation technique</th>
<th>Pooled OLS</th>
<th>REM</th>
<th>FEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTR</td>
<td>-0.018596</td>
<td>-0.017178</td>
<td>(0.3104)</td>
</tr>
<tr>
<td>ITR</td>
<td>-1.401036</td>
<td>-0.122774</td>
<td>(0.0085)</td>
</tr>
<tr>
<td>Breusch-Pagan Test</td>
<td>0.0000</td>
<td>0.5267</td>
<td></td>
</tr>
<tr>
<td>Husman Test</td>
<td>0.879377</td>
<td>0.6442</td>
<td></td>
</tr>
</tbody>
</table>

Note that all values in parenthesis are respective significance at 10%, 5% & 1% and these values are above in small brackets. Abbreviation of REM random effect model, FEM Fixed effect model DTR Debtor turnover ratio, ITR Inventory turnover ratio.

Table 5: Explains the results of model equation 2.
\[ ROA_{it} = \alpha + \beta_1 x_{it} + \beta_2 i_{it} + \varepsilon \ldots eq \ (2) \]

Hence, Coefficient of debtor’s turnover ratio (-0.018) shows negative but nonsignificant relationship with ROA here P-value shows (0.3104). while Coefficient Inventory turnover ratio (-1.401) shows negatively significant relationship with ROA with P- value (0.0085).

Hence as per Breach Pagan test hypothesis, results showing for Return on Assets the cross-sectional P-Value (0.0000) is significant and time shows non-significant value (0.5267).

As the probability value of cross-section indicates for ROA significant at P-value 0.0000 and time shows insignificant P-value 0.5267, therefore as per Brush Pagan Hypothesis Null Hypothesis is rejected with less than 0.05 probability of cross section.

Therefore, test Pooled OLS is not appropriate and required to estimate Random Effect Model / Fixed Effect Model, which can be confirmed from Hussman test that between both REM/FEM which one is appropriate. As per Husman test if P-value is greater than (0.05) study have to accept null hypothesis and go for Random Effect Model.

Hence the results of above table illustrated that as the Probability value (0.64) is greater than (0.05) so null hypothesis is accepted; therefore, Random Effect Model is appropriate for the model equation.

Table 06: Result for Operating Profit Performance Indicator of Cement firm of Pakistan

<table>
<thead>
<tr>
<th>Estimation Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pooled OLS</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>DTR</td>
</tr>
<tr>
<td>(0.7179)</td>
</tr>
<tr>
<td>ITR</td>
</tr>
<tr>
<td>(0.0000)</td>
</tr>
<tr>
<td>Breusch-Pagan Test</td>
</tr>
<tr>
<td>0.7110</td>
</tr>
<tr>
<td>Husman Test</td>
</tr>
<tr>
<td>12.498213</td>
</tr>
</tbody>
</table>

Note that the all value in parenthesis all P-value respective significance at 10%, 5% & 1% and these values are above in small brackets. Abbreviation of REM random effect model, FEM Fixed effect model, DTR debtor turnover ratio, ITR Inventory turnover ratio.

The above-mentioned estimations explain the results of model equation 3.

\[ OP_{it} = \alpha + \beta_1 (Debtor \ Turnover\ Ratio)_{it} + \beta_2 (Inventory\ Turnover\ Ratio)_{it} + e_{it} \ldots eq \ (3) \]

Hence, Coefficient of debtor’s turnover ratio (0.009900) shows positive but nonsignificant relationship with Operating Profit here P-value shows (0.7179), while Coefficient Inventory turnover ratio (-4.236111) shows negatively significant relationship with ROA with P- value (0.0000).

As per Brush Pagan test hypothesis, results showing for Operating Profit the cross-sectional P-Value (0.7110) is non-significant and time shows significant value (0.0000).

As the probability value of cross-section indicates non-significant at P-value 0.7110 and time shows significant P-value 0.0000, therefore as per Brush Pagan Hypothesis Null Hypothesis is rejected with less than 0.05 probability of cross section.

Hence the results of above table illustrated that as the Probability value (0.019) is less than (0.05) so null hypothesis is rejected; therefore, Random Effect Model is not appropriate for the model equation.so we have chosen to run Fixed Effect Model.
Table 07: Result for Profit Margin to Sales Performance Indicators of Cement firm of Pakistan

<table>
<thead>
<tr>
<th>Estimation Equation</th>
<th>Pooled OLS</th>
<th>REM</th>
<th>FEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTR</td>
<td>-0.004291</td>
<td>0.004050</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.8626)</td>
<td>(0.8746)</td>
<td></td>
</tr>
<tr>
<td>ITR</td>
<td>-2.878461</td>
<td>-2.129152</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0165)</td>
<td></td>
</tr>
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Breusch-Pagan Test

<table>
<thead>
<tr>
<th></th>
<th>Cross-Section</th>
<th>Time</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>0.6630</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Husman Test

<table>
<thead>
<tr>
<th></th>
<th>Chi Square</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.804602</td>
<td>0.0905</td>
</tr>
</tbody>
</table>

Note that the all value in parenthesis all P-value respective significance at 10%, 5% & 1% and these values are above in small brackets. Abbreviation of REM random effect model, FEM Fixed effect model, DTR debtor turnover ratio, ITR Inventory turnover ratio.

The above estimations explain the results of model equation 4: hence, Coefficient of debtor’s turnover ratio (0.004291) shows positive but nonsignificant relationship with Profit Margin to Sales here P-value shows (0.8626), while Coefficient Inventory turnover ratio (-2.878461) shows negatively significant relationship with ROA with P-value (0.0001).

Brush Pagan test hypothesis results shows cross-sectional P-Value (0.6630) is non-significant and time shows significant value (0.0000). As the probability value of cross-section indicates Profit Margin to Sales as non-significant at P-value 0.6630 and time shows significant P-value 0.0000, therefore as per Brush Pagan Hypothesis Null Hypothesis is rejected with less than 0.05 probability of cross section.

Results of Random effect Model but before interpreting the results study applying Husman test check weather Random Effect Model is appropriate or not as further to proceed for Fixed Effect Model. Hence the results of Husman test the Probability value (0.09) is greater than (0.05) so null hypothesis is accepted; therefore, Random Effect Model is appropriate for the model equation

Table 07: Result for Return on Assets Performance Indicators of Cement firm of India

<table>
<thead>
<tr>
<th>Estimation Equation</th>
<th>Pooled OLS</th>
<th>REM</th>
<th>FEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTR</td>
<td>0.301438</td>
<td>0.294512</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.0001</td>
<td>0.0002</td>
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</tr>
<tr>
<td>ITR</td>
<td>0.619416</td>
<td>0.704133</td>
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</tr>
<tr>
<td></td>
<td>0.0409</td>
<td>0.0071</td>
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</tbody>
</table>

Breusch-Pagan Test

<table>
<thead>
<tr>
<th></th>
<th>Cross-Section</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.0000</td>
<td>0.4610</td>
</tr>
</tbody>
</table>

Husman Test

<table>
<thead>
<tr>
<th></th>
<th>Chi Square</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.236886</td>
<td>0.3268</td>
</tr>
</tbody>
</table>

Note that the all value in parenthesis all P-value respective significance at 10%, 5% & 1% and these values are above in small brackets. Abbreviation of REM random effect model, FEM Fixed effect model, DTR debtor turnover ratio, ITR Inventory turnover ratio.

The above estimations explain the results of model equations; hence, Coefficient of debtor’s turnover ratio (0.301438) shows Positive significant relationship with Return on Assets here P-value shows (0.0001) similarly Coefficient Inventory turnover ratio (0.619416) indicates positive significant
relationship with Operating Profit with P- value (0.0409).

Hence as per Breauch Pagan test hypothesis explains the results as, ROA has one-way significant pro value that is the Pooled least squire equation for ROA is not appropriate and required further Rem or FEM estimates for appropriateness of model equation.

The results of Random effect Model but before interpreting the results study applying Husman test check weather Random Effect Model is appropriate or not as further to proceed for Fixed Effect Model.

As per the results of Husman test the Probability value (0.32) is greater than (0.05) so null hypothesis is accepted; therefore, Random Effect Model is appropriate for the model equation.

| Table 8: Operating profit and Profit margin to sale Performance Indicators of Cement firm of India) |
|---------------------------------------------------------------|---------------------------------------------------------------|
| Estimation Equation                                           | Operating Profit                                             | Profit Margin to sale                                       |
|                                                               | Pooled OLS | Prob | Pooled OLS | Prob |
| DTR                                                           | 0.274769   | 0.0304 | 0.361931   | 0.0000 |
| ITR                                                           | 0.518291   | 0.3368 | 0.377065   | 0.2375 |
| Breusch-Pagan                                                 | Cross- Section | Time | Cross- Section | Time |
|                                                               | 0.6704     | 0.8278 | 0.1155     | 0.0825 |

Note that the all value in parenthesis all P-value respective significance at 10%, 5% & 1% and these values are above in small brackets. Abbreviation of REM random effect model, FEM Fixed effect model, DTR debtor turnover ratio, ITR Inventory turnover ratio.

Table 8: Explain that the null hypothesis of Breuschr- Pagan in two-way component is non-significant at p values accordingly. It is concluded that the panel least square is appropriate model and no FEM OR REM is required.

**Conclusion**

The major goal of this research is to look into the impact of cash flow management on the financial performance of Pakistan's and India's cement industries. A comparative study have been done taking analysis of both selected countries and the findings based on the results analyzed in EViews tool applying Panel Least square regression in which the dependent variables are Return on Assets (ROA), Operating Profit (OP) and Profit Margin to sales (PMS) and independent variables Debtor Turnover Ratio (DTR) and Inventory Turnover Ratio (ITR) to answer the questions and achieve the objectives of the thesis the data has been taken from 2009 to 2018 as both countries follows IFRS International financial Reporting Standards.

The findings for hypothesis one which studies the relationship between cash flow management practices and performance of cement manufacturing company in Pakistan. The results for independent variable DTR shows negative and non-significant relationship with dependent variable ROA. While the findings for ITR indicated negatively significant relationship in Pakistan cement sector. Hence, it is illustrated from results there is not any long dependency of account receivables rather short term in nature that because no relationship extracted from the data analysis. However, the inventory turns over indicated the negative and significant relationship with ROA which validate the theoretical assumption.

The findings for hypothesis two which studies that cash flow turnover ratios have expected negative significant impact on cement firm’s financial performance in Pakistan. The result for independent
variable shows DTR non-significant relationship with dependent variable Operating Profit, while the findings for ITR indicated negatively significant relationship in Pakistan cement sector. Therefore, theory suggests that as quick as inventory would sell out the firm will gain enough return as operating profit there for findings shows decrease in inventory turnover and increase in operating returns.

Meanwhile, the findings for hypothesis 3, which studies that there is greater influence of cash flow management practices on cement firm are financial performance in Pakistan. The results for independent variable DTR shows Positive but non-significant relationship with dependent variable Profit Margin to Sales. While the findings for ITR indicated negatively significant relationship in Pakistan cement sector. Hence it is illustrated from results and theoretical description there is not any long dependency of Profit Margin to sales because no relationship extracted from the data analysis. However, the inventory turns over indicated the negative and significant relationship which validate the theoretical assumption.

It is observed from the findings that overall, for all performance indicator due to short term influence of DTR which shows no influence on dependent variables. While Hypothesis for inventory ITR is accepted.

The findings for hypothesis one which studies the relationship between cash flow management practices and performance of cement manufacturing company in India. The results for independent variable DTR shows positively significant relationship with dependent variable ROA. While the findings for ITR significant relationship as well in Indian cement sector. It is observed from the results that there is impact of DTR on ROA.

While the findings for hypothesis two which studies that cash flow turnover ratios have expected negative significant impact on cement firm’s financial performance in India. The result for independent variable DTR shows significant relationship with dependent variable Operating Profit. Whereas the findings for ITR indicated positive non-significant relationship in Indian Cement sector. Hence, as theory suggests that as quick as inventory would sell out the firm would gain enough return as operating profit. Therefore, findings show decreasing inventory turnover and increase in operating returns.

The findings for hypothesis three which studies that there is greater influence of cash flow management practices on cement firm’s financial performance in India. The results for independent variable DTR shows significant relationship with dependent variable Profit Margin to Sales. While the findings for ITR indicated positively non-significant relationship in Indian cement sector. Hence, it is illustrated from results and theoretical description there is not any long dependency of Profit Margin to sales because no relationship extracted from the data analysis. However, the inventory turns over indicated the negative and significant relationship which validate the theoretical assumption.

**Recommendations**

- It is to be recommended that firms must reconsider their practices of managing cash flows in order to generate more profitability and generate enough cash to meet their obligations.
- It is observed from the theory that debtor’s turnover is important factor for earning and Pakistan cement factors must improve debtor’s turnover practices for sales growth and simultaneously earnings.

**Practical Contribution**

The study on cement factor contributed to research area and open knowledge corridor for researchers. Additionally, it highlighted key areas that determine weak factors which can impact badly on firms practices and having highlighted areas firms can improve their weakness and improve their practices in cash flow management and hence performance.

**Future Research Direction**
• In future, researcher can further explore the study by determining impact of working capital on cement sector by comparing the companies of home country or it can be done at international level.
• This study was done based on two turnover ratios Debtor Turnover and inventory turnover; further researchers can carry this study by including Creditor turnover ratio as this ratio was removed from this study due to unavailability of data, but it has importance in cash flow management practices.
• As this study is based on cement manufacturing sector it is recommended that research can further explore different manufacturing sectors that how cash flow management is impacting performance of different sectors.

References


Determinants of Foreign Capital Inflows in Emerging Markets: The Role of Institutional Quality

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*Patricia Lindelwa Makoni, Professor of Finance, Department of Finance, Risk Management and Banking, University of South Africa

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ARTICLE DETAILS

ABSTRACT

Purpose: The purpose of the study was to examine the key determinants of foreign direct investment (FDI) and foreign portfolio investment (FPI) in emerging market economies, with greater emphasis placed on the impact of institutional quality.

Design/Methodology/Approach: The study applied a panel data system generalised method of moments (GMM) model using annual data spanning the period 2007 to 2017, in respect of 12 emerging market economies. To measure institutional quality, the study adopted the Worldwide Governance Indicators, and constructed a composite index for institutional quality using the Principal Components Analysis (PCA) method.

Findings: The results revealed that FDI in the selected emerging markets was attracted by institutional quality and economic growth. Capital account openness, institutional quality and economic growth were positive determinants of FPI. However, stock market development stood out as the key determinant factor for foreign capital inflows.

Implications/Originality/Value: The implications of these findings are that, in their pursuit of foreign capital inflows, these emerging markets should continue to liberalise their economies and develop their financial markets. Importantly, such developments must be coupled with the strengthening of the formal governance institutions. Robust institutions would not only curb institutional weaknesses that deter international capital inflows, but would also insulate emerging markets from unfavourable effects of volatile capital flows.

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Introduction
Growing financial market integration and globalisation are marked by increasing international capital flows across advanced and emerging economies. The debate over the effects of capital inflows and globalisation in economic development has continued in scholarly papers and policy areas over the past few decades. This debate gave rise to skepticism that saw some countries somewhat reversing their financial liberalisation and deregulation policies towards foreign capital inflows; while other countries remained resolute in their pursuit of foreign investment (UNCTAD World Investment Report, 2019).

Fueling this uncertainty over the impact of capital inflows might also have been the literature that has produced differing results on the relationship between foreign direct investment and economic growth. However, there also exists substantial empirical evidence showing the importance of absorptive capacities in the form of sufficient development in factors such as human capital, capital markets, infrastructure, and institutional quality, in relation to the host economy. These absorptive capacities enable the host economy to absorb the growth enhancing benefits that are embedded in foreign direct investment (Borensztein, De Gregorio & Lee, 1998; Choong, Baharumshah, Yusop & Habibullah, 2010; Slesman, Baharumshah & Wohar, 2015). Other empirical literature goes on to suggest that the uncertainty in the direct relationship between foreign direct investment and economic growth can be partly ascribed to the type of foreign direct investment a recipient economy would attract – that is, whether efficiency-seeking, market-seeking or resource-seeking foreign direct investment (Zarkovic, Gligorić & Zarkovic, 2017; Khan, Arif & Raza, 2021).

Moreover, foreign portfolio investment may have faced skepticism, in some countries, due to its volatile nature. However, empirical literature has shown that the interaction between foreign portfolio investment and adequately developed institutions and financial markets has the capability to transform or mitigate any adverse economic effects from volatile portfolio flows (Choong et al., 2010; Agbloyor, Abor, Adjasi & Yawson, 2014; Slesman et al., 2015). Economies faced with the problem of low savings rates often depend on the international capital flowing into the domestic capital markets in order to lower current account deficits as well as to fund investment projects that are necessary to stimulate economic activity and growth. In addition to these advantages of foreign portfolio investment, foreign participation and significant FPI inflows carry the benefit of broadening the domestic capital markets by increasing liquidity, which in turn lowers the cost of finance (Marozva & Makoni, 2021). This further includes the role of foreign participation in improving market efficiency and the allocation of resources to productive ventures (Errunza, 2001).

Empirical literature studying the drivers of foreign capital inflows often point to such factors as macroeconomic variables, as well as global, policy and development variables (Różański & Sekula, 2016; Gossel & Biekpe, 2017; Saini & Singhania, 2018; Sabir, Rafique & Kamran, 2019; Makoni, 2020). These include, among others, variables such as economic growth, global interest rates, human capital development, capital market development, and financial market liberalisation (Różański & Sekula, 2016; Gossel & Biekpe, 2017). The focal interest behind this current study is the growing belief that over and above the macroeconomic, policy, and development factors - domestic institutions are a prime and crucial determinant of inward foreign investment (Alfaro, Kalemli-Ozcan and Volosovych, 2007; Fratzscher, 2012; Ghosh et al., 2014; Agbloyor et al., 2016; Różański & Sekula, 2016; Kurul, 2017). Therefore, the purpose of this study is to examine the key determinants of foreign direct investment (FDI) and foreign portfolio investment (FPI) in emerging market economies, with greater emphasis placed on the impact of institutional quality.

Literature Review
Theoretical Literature
Several earlier theoretical frameworks in the study of foreign direct investment or international production remain relevant to date. These theories include, among others, the imperfect markets theory,
pioneered by Hymer (1960), as well as the eclectic paradigm theory (Dunning, 1980). More relevant to this current study of the determinants of foreign capital inflows is the eclectic paradigm theory, which practically hinged on the insights of Hymer (1960). This theory combined several elements of international production to formulate a paradigm that explains the rationale for entities to embark on foreign direct investment (Dunning, 1980). These elements include ownership, locational and internalisation aspects of FDI; and they essentially set out to explain the requisite advantages that an entity should hold in order to pursue competitive and successful international production. Ownership advantages refer to the firm’s privileges that give it an upper hand or competitive advantage relative to other firms, such as greater access to capital, markets, and technology (Denisia, 2010). Locational advantages involve the factors that determine the country to host the multinational firm (Dunning, 1980). These factors would entail, in relation to the host country, institutional quality, capital market development, macroeconomic conditions, and natural resources (Dunning, 2001). Finally, internalisation advantages pertain to the firm’s preference of exploiting its ownership advantages in foreign markets within the firm (internally), which may be more lucrative than to supply the foreign market through licensing agreements or exports (Dunning, 1980).

Concerning FPI, scholars such as Calvo, Leiderman and Reinhart (1996) and Taylor and Sarno (1997) pioneered the view that international capital flows might be driven by pull and push factors. This meant that portfolio flows can be attributed to factors that are internal (pull factors) to recipient countries and those that are external (push factors) to the recipient countries (Calvo et al., 1996; Nxumalo, 2020). Sarno, Tsiakas and Ulloa (2016) described push factors as those global forces that push capital flows from wealthier economies to other countries. These include low interest rates, low growth, high appetite for risk and international portfolio diversification on the part of wealthier economies. By contrast, pull factors are country-specific factors that reflect favourable domestic economic conditions in host economies such as higher economic growth and interest rates (Sarno et al., 2016). These factors pull capital flows into host countries, and reflect the host countries’ relative attractiveness in terms of investment opportunities and risk (Sarno et al., 2016).

Dunning and Dilyard (1999) later reconfigured the eclectic paradigm theory and applied it to the FPI context. The aim was to elucidate the trade-off that international firms face between FPI and FDI, where FDI serves to strengthen and expand existing competitive advantages, while FPI serves as a conduit to transfer other financial resources. In this context, ownership advantages relate to the privileges that the investing firm has greater access to than other firms do, for instance, superior access to capital markets and investable capital (Dunning & Dilyard, 1999). Locational advantages are similar to those contained in the context of FDI, such as host country institutional quality and capital market development. Finally, internalisation advantages, in this context, are replaced by externalisation advantages. Externalisation essentially refer to the use of external/international capital markets in lieu of internal processes for the transfer of capital to foreign markets (Dunning & Dilyard, 1999).

**Empirical Literature**

Previous empirical evidence has shown that a set of high quality institutions is important for emerging markets economies to attract sizeable inflows of foreign investment. However, there is still no consensus as to which institutional factors are the most salient institutional determinants for foreign capital inflows in emerging markets. In addition, existing studies appear to have been relatively more concerned with the impact of institutions on foreign direct investment inflows than to foreign portfolio investment inflows. These gaps can be observed in the following earlier and recent strands of empirical literature.

In a study of 83 emerging markets, Busse and Hefeker (2007) observed that law and order, government stability, democratic accountability, and bureaucratic quality stand out as the most salient institutional determinants of foreign direct investment inflows in emerging markets. In the same spirit, Alfaro, Kalemli-Ozcan and Volosovych (2008) averred that the quality of institutions, as measured by a broad
set of institutional indicators, was the most consistent variable in accounting for the phenomenon of the “Lucas paradox”; which essentially posits that international capital flows do not flow from wealthier countries to poorer countries. These institutional indicators included, inter alia, conflicts, bureaucratic quality, government stability, law and order, and corruption. Ali, Fiess and MacDonald (2010), on the other hand, found that insofar as inward FDI flows are concerned, the protection of property rights is the most pertinent aspect of institutions, relative to other institutional factors such as political stability and corruption, for FDI flows to emerging markets. This was based on their assessment of FDI inflows in 69 emerging market economies between 1981 and 2005.

There are also recent studies that have adopted the Worldwide Governance Indicators (WGI) as a measure of institutional quality. For instance, Różański and Sekuła (2016) employed the WGI and found that rule of law, political stability, and voice and accountability had a positive and statistically significant impact on FDI inflows, while control of corruption was negative but statistically significant, in a sample of 51 developed and emerging countries, over the period 1996-2014. In the same vein, for 113 developing economies, over the period 2002 to 2012, Kurul and Yalta (2017) observed that control of corruption, government effectiveness, and voice and accountability were statistically significant and positive for FDI inflows. On the other hand, Peres, Ameer and Xu (2018), focused specifically on the impact of the control of corruption and the rule of law on FDI inflows, and found that these indicators were strongly significant for FDI inflows only in advanced countries, and weakly significant in the case of emerging markets. Similarly, Sabir et al. (2019) recently found more statistical significance of institutional quality on FDI inflows in advanced economies than in emerging markets. Both Peres et al. (2018) and Sabir et al. (2019), based on their separate findings, concluded that emerging markets did not succeed in attracting sufficient capital inflows due to the weak state of domestic institutional quality. Finally, Gossel and Beard (2019), in a sample of sub-Saharan African developing economies, observed that political stability, government effectiveness, regulatory quality, rule of law, and control of corruption, were the notably relevant institutional factors for foreign portfolio inflows in that region, over the period 1985-2015.

It was therefore the purpose of this study to complement this strand of empirical literature by re-examining the role of institutional quality on both FDI and FPI inflows in the context of emerging markets. We sought specifically to reassess the key determinants of FDI and FPI inflows in emerging markets, with emphasis on the role of institutional factors.

**Methodology**

**Data, Variables and Sample**

The study applied panel regression models using annual data spanning the period 2007 to 2017, in respect of 12 emerging market economies. Our dependent variables in this study consisted of FDI net inflows and FPI net inflows, both as a share of GDP. These data were retrieved from the World Bank’s World Development Indicators (WDI) database. Institutional quality indicators served as our main independent variables. To measure institutional quality, we utilised the World Governance Indicators (WGI). These WGI rank countries on the basis of six aspects of governance: Voice and Accountability, Political Stability/Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption (Thomas, 2010; Kaufmann, Kraay & Mastruzzi, 2011; Nxumalo, 2020).

An array of additional explanatory variables, including macroeconomic variables, that are considered in the existing scholarly literature as strong drivers of foreign capital inflows, were also included in this empirical study. The data for these control and explanatory variables were also mainly sourced from the World Bank’s WDI database. Table 1 below presents the variables and their data sources as applied in this study.

<table>
<thead>
<tr>
<th>Table 1: Variables and Data Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FDI Net Inflows</strong>:</td>
</tr>
<tr>
<td><strong>Dependent Variable</strong>: FDI net inflows as a share of GDP.</td>
</tr>
<tr>
<td><strong>Institutional Quality Indicators</strong>:</td>
</tr>
<tr>
<td><strong>Independent Variables</strong>: WGI indicators of Voice and Accountability, Political Stability/Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption.</td>
</tr>
<tr>
<td><strong>Explanatory Variables</strong>:</td>
</tr>
<tr>
<td><strong>Macroeconomic Variables</strong>: GDP, Inflation, Interest Rates, Exchange Rates, etc.</td>
</tr>
</tbody>
</table>

An array of additional explanatory variables, including macroeconomic variables, that are considered in the existing scholarly literature as strong drivers of foreign capital inflows, were also included in this empirical study. The data for these control and explanatory variables were also mainly sourced from the World Bank’s WDI database. Table 1 below presents the variables and their data sources as applied in this study.
<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>INDICATOR</th>
<th>SOURCE</th>
<th>SIMILAR STUDIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDI net inflows</td>
<td>Ratio of net FDI inflows to GDP</td>
<td>World Development Indicators</td>
<td>Jensen (2003); Choong et al. (2010); Makoni (2018); Saini &amp; Singhania (2018)</td>
</tr>
<tr>
<td>FPI net inflows</td>
<td>Ratio of net FPI inflows to GDP</td>
<td>World Development Indicators</td>
<td>Choong et al. (2010); Singhania &amp; Saini (2017); Makoni (2020)</td>
</tr>
<tr>
<td>Institutional quality indicator</td>
<td>Rule of law</td>
<td>Worldwide Governance Indicators</td>
<td>Ali, Fiess &amp; MacDonald (2010); Różański &amp; Sekula (2016); Peres et al. (2018); Gossel &amp; Beard (2019); Nxumalo (2020)</td>
</tr>
<tr>
<td>Institutional quality indicator</td>
<td>Regulatory quality</td>
<td>Worldwide Governance Indicators</td>
<td>Gossel &amp; Beard (2019); Nxumalo (2020)</td>
</tr>
<tr>
<td>Institutional quality indicator</td>
<td>Political stability</td>
<td>Worldwide Governance Indicators</td>
<td>Busse &amp; Hefeker (2007); Różański &amp; Sekula (2016); Aziz (2018); Meyer &amp; Habanabakize (2018); Gossel &amp; Beard (2019); Nxumalo (2020)</td>
</tr>
<tr>
<td>Institutional quality indicator</td>
<td>Government effectiveness</td>
<td>Worldwide Governance Indicators</td>
<td>Kurul &amp; Yalta (2017); Gossel &amp; Beard (2019); Nxumalo (2020)</td>
</tr>
<tr>
<td>Institutional Quality indicator</td>
<td>Voice and accountability</td>
<td>Worldwide Governance Indicators</td>
<td>Różański &amp; Sekula (2016); Kurul &amp; Yalta (2017); Gossel &amp; Beard (2019); Nxumalo (2020)</td>
</tr>
<tr>
<td>Institutional Quality indicator</td>
<td>Control of corruption</td>
<td>Worldwide Governance Indicators</td>
<td>Kurul &amp; Yalta (2017); Peres et al. (2018); Gossel &amp; Beard (2019); Nxumalo (2020)</td>
</tr>
<tr>
<td>Economic growth</td>
<td>Real GDP growth rate %</td>
<td>World Development Indicators</td>
<td>Ahmed &amp; Zlate (2014); Žarković, Gligorić &amp; Žarković (2017); Akalpler &amp; Adil (2017); Singhania &amp; Saini (2017); Owusu-Nantwi &amp; Erickson (2019); Khan, Arif &amp; Raza (2021)</td>
</tr>
<tr>
<td>Financial market development</td>
<td>Stock market capitalisation (% of GDP);</td>
<td>World Development Indicators</td>
<td>Alfaro et al. (2004); Ahmed et al. (2007); Agbloyor et al. (2014); Soumaré &amp; Tchana (2015); Makoni (2021)</td>
</tr>
<tr>
<td>Financial market development</td>
<td>Domestic credit to private sector by banks (% GDP)</td>
<td>World Development Indicators</td>
<td>Alfaro et al. (2004); Ahmed et al. (2007); Agbloyor et al. (2014); Soumaré &amp; Tchana (2015); Makoni (2018)</td>
</tr>
<tr>
<td>Human capital development</td>
<td>Education index (expected &amp; mean years of schooling)</td>
<td>Human Development Index – United Nations Development Reports</td>
<td>Kheng et al. (2017); Mallik &amp; Chowdhury (2017)</td>
</tr>
</tbody>
</table>
Table 2 below portrays the list of emerging market countries that constituted our sample for this study. The selection of these countries was based solely on complete data availability for the respective variables for the duration under study. These countries are also some of the recipients of the largest inflows of foreign capital in their regions, according to the World Economic Outlook (2018) of the International Monetary Fund.

<table>
<thead>
<tr>
<th>Total natural resource rents (% of GDP)</th>
<th>World Development Indicators</th>
<th>Mohamed and Sidiropoulos, (2010); Anarfo et al. (2017)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global interest rates</td>
<td>US real interest rates, measured as the lending interest rate, adjusted for inflation by the GDP deflator.</td>
<td>World Development Indicators</td>
</tr>
</tbody>
</table>

Source: Authors’ own compilation.

Institutional Quality Index
This study applied the principal components analysis method to construct a composite index of institutional quality, similar to the work of Sabir et al. (2019). The use of a single composite index, rather than individual indicators of institutional quality, was necessitated not only by the glaring correlations among the individual indicators comprising the WGIIs; but also the lack of consensus in previous studies as to which of the indicators are the most pertinent in attracting foreign capital inflows into emerging economies (Nxumalo, 2020).

The principal components analysis method is carried out by estimating the eigenvalues of the correlation matrix of the original variable data set. Usually, the first few generated principal components associated with the greatest eigenvalues are considered to account for the largest part of the variation between the dataset/variables, and they are therefore deemed to embody the most relevant information about the original dataset (Kurul, 2017; Nxumalo, 2020).

Model Specification
To address the objective of assessing the key determinants of FDI and FPI inflows into our sample of emerging market economies, we adopted a dynamic panel data system generalised method of moments model (system GMM). The panel data methodology requires the selection of an appropriate estimation approach from random effects and fixed effects. To this end, we applied the Hausman test with a null hypothesis that the appropriate approach was the random effects approach, against the alternative hypothesis that the fixed effects approach was the appropriate one (Nxumalo, 2020).

Two separate panel regression models were specified for examining FDI determinants and FPI determinants. Guided by the theory and previous empirical studies reviewed, we specified the FDI regression model as follows:

\[
FDI_{it} = \alpha_0 + \alpha_1 FDI_{it-1} + \alpha_2 FPI_{it} + \alpha_3 INSTDEX_{it} + \alpha_4 SMC_{it} + \alpha_5 CRED_{it} + \alpha_6 HUMC_{it} + \alpha_7 NATR_{it} + \alpha_8 EXCH_{it} + \alpha_9 GDP_{it} + \epsilon_{it}
\]

where \( i \) denotes cross-section, \( t \) denotes time, \( \alpha \) represents the constant term and coefficients of...
explanatory variables (indicating the mean change in the value of the dependent variable from changes in the independent variable), and \( \varepsilon_{it} \) is an error term. The rest of the variables are defined as follows: \( FDI_{it} = \) FDI net inflows as a percentage of GDP into country \( i \) at time \( t \); \( FDI_{it-1} = \) first lag of FDI net inflows, measured as the previous period’s FDI net inflows as percentage of GDP into country \( i \) at time \( t-1 \); \( FPI_{it} = \) FPI net inflows as a percentage of GDP into country \( i \) at time \( t \); \( INSTDEX_{it} = \) institutional quality index, composed of the Worldwide Governance Indicators; \( SMC_{it} = \) stock market capitalization as a percentage of GDP; \( CRED_{it} = \) domestic credit by banks to the private sector as a percentage of GDP; \( HUMC_{it} = \) education index, measured as the number of expected and mean years of schooling; \( NATR_{it} = \) total natural resources rent as a percentage of GDP; \( EXCH_{it} = \) real effective exchange rate; and \( GDP_{it} = \) real GDP growth rate.

The FPI dynamic GMM regression model was expressed as follows:

\[
FPI_{it} = b_0FPI_{it-1} + b_1FDI_{it} + b_2INSTDEX_{it} + b_3GINTR_{it} + b_4SMC_{it} + b_5CRED_{it} + b_6CAOP_{it} + b_7NATR_{it} + b_8GDP_{it} + \varepsilon_{it}
\]

(2)

where \( i \) denotes cross-section, \( t \) denotes time, \( b \) represents a constant term and coefficients of explanatory variables, \( \varepsilon_{it} \) is a random error term. The remainder of the variables are defined as follows: \( FPI_{it} = \) FPI net inflows as a percentage of GDP into country \( i \) at time \( t \); \( FPI_{it-1} = \) first lag of the FPI net inflows as a percentage of GDP into country \( i \) at time \( t-1 \); \( FDI_{it} = \) FDI net inflows as a percentage of GDP into country \( i \) at time \( t \); \( INSTDEX_{it} = \) institutional quality index, composed of the Worldwide Governance Indicators; \( GINTR_{it} = \) global interest rates, proxied by US interest rates; \( SMC_{it} = \) stock market capitalization as a percentage of GDP; \( CRED_{it} = \) domestic credit by banks to the private sector as a percentage of GDP; \( CAOP_{it} = \) measure of capital account openness based on Chinn and Ito capital account index; \( NATR_{it} = \) total natural resources rent as a percentage of GDP; and \( GDP_{it} = \) real GDP growth rate.

Results and Discussion of Findings

This section presents the results of the study, together with a discussion of the findings, as derived from the two GMM model estimations.

Our FDI estimation results based, on the fixed effects approach, are presented in Table 3 below. The Hausman test produced a p-value of 0.0000, which warranted the rejection of the null hypothesis, and thus rendered the fixed effects estimation approach more suitable for our FDI model. The discussion of results that follows will be focused solely on the system GMM output. Other results in Table 3 merely served as robustness checks.
Table 3: FDI System GMM regression results

<table>
<thead>
<tr>
<th></th>
<th>Pooled effects</th>
<th>Fixed Effects</th>
<th>Random effects</th>
<th>System GMM</th>
<th>GLS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FDI</td>
<td>FDI</td>
<td>FDI</td>
<td>FDI</td>
<td>FDI</td>
</tr>
<tr>
<td>L.FDI</td>
<td>0.625***</td>
<td>0.0991***</td>
<td>0.625***</td>
<td>0.702***</td>
<td>0.625***</td>
</tr>
<tr>
<td></td>
<td>(0.118)</td>
<td>(0.0919)</td>
<td>(0.118)</td>
<td>(0.597)</td>
<td>(0.0783)</td>
</tr>
<tr>
<td>FPI</td>
<td>0.00743*</td>
<td>-0.00736</td>
<td>0.00743*</td>
<td>-0.149*</td>
<td>0.00743*</td>
</tr>
<tr>
<td></td>
<td>(0.0219)</td>
<td>(0.0168)</td>
<td>(0.0219)</td>
<td>(0.0862)</td>
<td>(0.0231)</td>
</tr>
<tr>
<td>INSTDEX</td>
<td>0.0375*</td>
<td>-0.0306</td>
<td>0.0375</td>
<td>0.636*</td>
<td>0.0375*</td>
</tr>
<tr>
<td></td>
<td>(0.0587)</td>
<td>(0.0802)</td>
<td>(0.0587)</td>
<td>(0.211)</td>
<td>(0.0557)</td>
</tr>
<tr>
<td>SMC</td>
<td>-0.00155*</td>
<td>-0.000729</td>
<td>-0.00155*</td>
<td>0.00361</td>
<td>-0.00155*</td>
</tr>
<tr>
<td></td>
<td>(0.000649)</td>
<td>(0.000866)</td>
<td>(0.000649)</td>
<td>(0.00316)</td>
<td>(0.000724)</td>
</tr>
<tr>
<td>CRED</td>
<td>0.00371*</td>
<td>0.00575</td>
<td>0.00371*</td>
<td>-0.0208*</td>
<td>0.00371*</td>
</tr>
<tr>
<td></td>
<td>(0.00179)</td>
<td>(0.0033)</td>
<td>(0.00179)</td>
<td>(0.0101)</td>
<td>(0.00165)</td>
</tr>
<tr>
<td>HUMC</td>
<td>0.0065</td>
<td>0.336</td>
<td>0.0065</td>
<td>-2.291</td>
<td>0.0065</td>
</tr>
<tr>
<td></td>
<td>(0.482)</td>
<td>(1.148)</td>
<td>(0.482)</td>
<td>(5.120)</td>
<td>(0.374)</td>
</tr>
<tr>
<td>NATR</td>
<td>0.0037</td>
<td>0.011</td>
<td>0.0037</td>
<td>-0.0643*</td>
<td>0.0037</td>
</tr>
<tr>
<td></td>
<td>(0.00957)</td>
<td>(0.0162)</td>
<td>(0.00957)</td>
<td>(0.0288)</td>
<td>(0.00874)</td>
</tr>
<tr>
<td>EXCH</td>
<td>-0.00114</td>
<td>0.00271</td>
<td>-0.00114</td>
<td>-0.0275</td>
<td>-0.00114</td>
</tr>
<tr>
<td></td>
<td>(0.0027)</td>
<td>(0.00236)</td>
<td>(0.0027)</td>
<td>(0.0179)</td>
<td>(0.00309)</td>
</tr>
<tr>
<td>GDP</td>
<td>0.0231**</td>
<td>0.024</td>
<td>0.0231**</td>
<td>0.0531*</td>
<td>0.0231*</td>
</tr>
<tr>
<td></td>
<td>(0.00821)</td>
<td>(0.0135)</td>
<td>(0.00821)</td>
<td>(0.0208)</td>
<td>(0.0104)</td>
</tr>
<tr>
<td>_cons</td>
<td>3.751**</td>
<td>8.377***</td>
<td>3.751**</td>
<td>3.751***</td>
<td>3.751***</td>
</tr>
<tr>
<td></td>
<td>(1.356)</td>
<td>(1.269)</td>
<td>(1.356)</td>
<td>(0.938)</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>120</td>
<td>120</td>
<td>120</td>
<td>108</td>
<td>120</td>
</tr>
</tbody>
</table>

Source: Authors’ own compilation.

Note: Standard errors in parentheses. ***P < 0.001, **P < 0.01, *P < 0.05 are levels of statistical significance at 0.1%, 1% and 5% respectively. Dependent variable: FDI (Foreign direct investment). Independent/Explanatory variables: L.FDI (lag of the dependent variable, FDI); FPI (Foreign portfolio investment); INSTDEX (Institutional quality index); SMC (Stock market capitalization); CRED (Bank credit to private sector); HUMC (Human capital development); NATR (Natural resource rent); EXCH (Exchange rate); GDP (GDP growth rate).

The system GMM output depicted in Table 3 above revealed a statistically significant and positive relationship between institutional quality and FDI inflows in emerging markets. Given the notion that emerging economies are associated with inadequate institutional systems, this finding suggested that foreign investor optimism is significantly raised by enhancements in the institutional environment. In addition, the significant and positive impact of previous period inflows of FDI indicated the persistence of foreign direct investment inflows. This finding was in line with the hypothesis of clustering effects; which suggests that, when selecting a host economy, new investors imitate and cluster with existing FDI with the aim to benefit from external economies of scale (Walsh & Yu, 2010). Moreover, the FDI results revealed a statistically significant but negative association between FPI inflows and FDI inflows. Although this result contrasted the complementary and positive association found by Noman, Rahman and Naka (2015); it, however, corroborated the findings of Humanicki, Kelm and Olszewski (2017) of a trade-off or substitutability relationship between FDI and FPI inflows, in the case of Poland.

One of the key absorptive capacities for inward foreign direct investment in the host country is the development of domestic financial markets (Alfaro & Chauvin, 2016). To capture the effects of financial market development on foreign direct investment inflows, we used the stock market capitalisation ratio as well as the domestic credit to the private sector by banks, both as share of GDP. Our results indicated stock market capitalisation, although not statistically significant, had a positive impact on FDI inflows. Domestic credit, on the other hand, had a significant but negative relationship with FDI inflows. One would interpret these results as indicating that higher domestic liquidity provided by bank credit lowers
the need for foreign direct investment (Marozva & Makoni, 2021). Moreover, considering both the measures of financial market development, equity markets appear to play a relatively more positive on inward FDI than the banking sector (Nxumalo, 2020). These results are comparable to the findings of Soumaré and Tchana (2015) and Makoni (2021) who found an indecisive relationship between bank credit and FDI, but revealed a positive and significant association between stock market capitalisation and FDI.

With regards to the explanatory variables, although it was observed that economic growth exerted a significantly positive influence on foreign direct investment inflows, the other variables of natural resources, human capital development and exchange rate volatility exerted weak deterministic influence on FDI inflows to this sample of emerging market economies.

For FPI, the outcome of the Hausman test produced a p-value of 0.9889, which meant that the null hypothesis was not rejected, implying that the random effects approach was appropriate. The results of the FPI GMM estimation are displayed in Table 4 below.

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<th>Table 4: FPI System GMM regression results</th>
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Source: Authors’ own compilation.

Note: Standard errors in parentheses. *** P < 0.001, ** P < 0.01, * P < 0.05 are levels of statistical significance at 0.1%, 1% and 5% respectively. Dependent variable: FPI (Foreign portfolio investment). Independent/Explanatory variables: L.FPI (Lag of the dependent variable, FPI); FDI (Foreign direct investment); INSTDEX (Institutional quality index); GINTR (Global interest rates); SMC (Stock market capitalization); CRED (Bank credit to private sector); CAOP (Capital account openness); NATR (Natural resource rent); GDP (GDP growth rate).

Based on Table 4 above, the results suggest that the statistically significant determinants of inward foreign portfolio investment in emerging markets were past FPI inflows, global interest rates, stock market capitalisation, domestic credit to the private sector by banks, and natural resources.
A negative and highly significant association between global interest rates and FPI inflows was also observed. Global interest rates were proxied by U.S interest rates. The inverse relationship between these two variables is consistent with the push and pull factor hypothesis; which postulates that lower interest rates in advanced economies push international capital flows towards emerging markets, which offer higher returns because of higher growth rates and interest rates (Calvo et al. 1996; Carstens & Schwartz, 1998; Nxumalo, 2020).

Both stock market capitalisation and bank credit had statistically significant effects on FPI inflows. However, the impact stock market capitalisation was positive, while the effects of bank credit to portfolio investment inflows were negative. The positive effects of stock market capitalisation signify the important role of equity markets, relative to the banking sector, on the allocation of global portfolio flows in emerging market economies (Bayar, 2017; Qamruzzaman & Wei, 2019). Lastly, another negative and significant relationship was found between natural resources and FPI inflows. Given that these natural resources are rarely traded in the capital markets, FPI would only have exposure to them through commodity markets. Moreover, even though a good number of these emerging economies are richly-endowed with natural resources, the natural resource sectors are in most cases strictly controlled by government and the state. Therefore, the negative relationship between FPI and natural resources imply that the more the emerging market economy is based on the natural resources (given as well the domestic institutional weaknesses and dominant government/state control), the more foreign investors keep away from such economy (Nxumalo, 2020).

Weak statistical significance was observed in respect of the remaining explanatory variables. The impact of FDI on FPI inflows was negative and statistically insignificant. This outcome supports the earlier argument that these two types of capital inflows are substitutes rather than complements in emerging markets (Humanicki et al. 2017). The substitutability between FDI and FPI can also be linked to the earlier evidence by Wu, Li and Selover (2012), which suggested that foreign investors would pursue more foreign direct investment than foreign portfolio investment in a country whose institutional environment is prevailed by informal institutional systems over formal institutions.

The impact of institutional quality, which was the main explanatory variable, on FPI was positive but insignificant. The negligible effect of institutional quality signifies the low quality of institutions in emerging markets. Correspondingly, capital account openness had a positive but insignificant effect on FPI inflows. It has been highlighted that the coefficient of capital account openness, particularly the Chinn-Ito index, is always statistically insignificant, which reflects the poor implementation of capital account liberalisation in emerging markets (IMF, 2008). Nonetheless, the result of a positive impact of capital account openness implies that the liberalisation and deregulation of the capital account pursued by these emerging markets is producing positive results in attracting foreign portfolio investment inflows. Relatedly, Byrne and Fiess (2016) had earlier found that institutions, or capital account openness, could not independently attract international capital flows. However, the positive effects of capital account liberalisation on capital inflows become stronger with improvements in the quality of institutions, as argued by Makoni (2020).

Economic growth was found to exert a positive but insignificant influence on FPI inflows. Slesman et al. (2015) had earlier found that the impact of GDP growth on foreign portfolio inflows becomes significant in the recipient country when the levels of institutional quality and financial market development improve. Therefore, for the growth benefits of foreign capital inflows to be experienced, these emerging market economies would have, as a priority, to strengthen institutions as well as financial market development.

**Conclusion and Recommendations**

In conclusion, although stock market development stood out as the most important variable for foreign
capital (FDI and FPI) investors, as evidence by the significant positive relationship between FPI inflows and stock market capitalisation, it is still argued that institutional quality plays an equally important role in the attraction and retention of international capital flows in emerging markets. Hence, emerging market economies should therefore prioritise stock market development, not only to enhance FPI and FDI flows, but also to insulate their fragile economies from the volatility of portfolio flows, while harnessing the more stable FDI inflows. Moreover, the continued development of financial markets is crucial if the spillover effects of FDI and FPI are to be realised, as financial markets play a critical intermediation role in the channeling of capital inflows to productive investment endeavours (Choong et al., 2010; Agbloyor et al., 2014; Gök & Güvercin, 2020). In order to achieve financial market development, coupled with higher inward foreign capital flows - emerging markets should strive to combine their financial liberalisation (capital openness) policy efforts with the development of strong governance institutions in order to enhance their attraction to both domestic and foreign investors, and enjoy sustainable economic growth benefits (Slesman et al., 2015; Byrne & Fiess, 2016; Makoni, 2021). Future studies could consider undertaking a comparative analysis of the same variables between emerging markets and developed economies.

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Methodology and analytical issues. Hague Journal on the Rule of Law, 3(2), 220-246. DOI: https://doi.org/10.1017/S1876404511200046.


Impact Factors on Internal Audit Quality of Businesses the Case Study of Karachi Pakistan

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**ABSTRACT**

**Purpose:** Internal Audit Quality is relied upon to prompt top notch financial reporting to the outsiders of the businesses. Excellent financial reporting communicates in earning quality. Earning quality has been playing a key role in the capital market for quite a while. Account clients give exceptional consideration to procuring quality since they settle on their choice dependent on it. Then again, the market economy will encounter terrible, gone misfortunes if the association's exhibition isn't reflected in its income.

**Methodology:** This examination targets researching the connection between Internal Audit Quality, a leading group of audit quality and financial reporting. Exploration information, acquired from 300 audit firms had internal audit offices. Just the selected firms met inclusion standards, to which research polls were sent. At long last, 300 surveys were affirmed as satisfactory, and were taken as exploration test.

**Findings:** Discoveries indicated that excellent Internal Audit Quality will prompt great financial reporting. Additionally, solid top managerial staff will fortify this connection.

**Implications/Originality/Value:** So, it is concluded that all these three newspapers were mostly against the peace talks and government and media were not on the same page on the issue of peace talks. (Times New Roman 11pt including headings and text, single line spaced).

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**Introduction**

**Background**

The dissertation has provided perceptions keen on the efficiency of Internal Auditing (IA) that is observed as an unexplored ‘black box’ in academic research. That subject matter is a sort of ‘Elephant in the room’, that is, an obvious issue no one or only a few want/s to discuss. This examination starts to
make up for the shortfall by considering the adequacy of the Internal Audit.

To guide the informed and uninformed reader on the subject matter of my dissertation, I first define what constitutes IA effectiveness and explain the importance of the topic. I reference the gap in academic literature and how this dissertation contributes to knowledge. I disclose my particular motivation to carry out this research before detailing the multi-method and multi-perspective approach chosen in the study to provide fresh insights into this field (Lenz & Rainer, 2020).

The researchers’ investigations have suggestions for the viability of inward review from the viewpoint of correspondence of the danger alerts. It isn't our mean to give a formula to the inside inspector on the best way to augment IA adequacy, however, we give a few proposals to an inward review that could emphatically add to the IA viability.

A chief demonstration that isn't eager to tune in to the danger notice message that the continuation of a data framework project isn't sensible and the undertaking should be diverted or ended. The Manager demonstrations in the part of a review (the board) that isn't happy to tune in to the danger notice message identified with the dangers engaged with the executives' dynamic in the association all in all. The courier, giving the danger admonitions our examination is the inner reviewer who is a sound source that makes genuine affirmations dependent on an intensive examination incongruity with the inside inspecting principles and prerequisites (Centre, 2018).

The authors of the Institute of Internal Auditors (IIA), featured the requirement for an inner review work as "need made inward inspecting and is making it an essential piece of present-day business. No huge business can get away from it. On the off chance that they haven't got it now, they should have it eventually, and, if occasions, creating as they do as of now, they should have it sooner (Obeid, 2007).

The new corporate disappointments have expanded the conspicuousness of interior evaluating. Concerning the issue, the creator has contended that the insolvencies, monetary abnormalities, and deceitful exercises that happened at Enron, WorldCom, and different firms have expanded the requirement for corporate checking. He inferred that outer review disappointments identified with these occasions’ increments the job of inner evaluating incorporate checking (Obeid, 2007).

Associations have experienced quick changes in monetary multifaceted nature, extended administrative prerequisites, and mechanical headways as of late. Notwithstanding these progressions the current corporate outrages and the worldwide monetary emergency likewise pushed people in general and administrative bodies to give the exceptional situation to inward review in corporate administrations interior affirmation administration (Berehe, 2016).

The development of inside review as an order is followed to the mid-1940s when the Institute of Internal Auditors (IIA) was set up in 1941 at Lake Mary, Florida, USA. The primary book on interior inspecting, Modern Internal is examining, was additionally distributed. Therefore, the inside review calling has been becoming worldwide under the worldwide administration of the Institute of Internal Auditors (IIA) (Berehe, 2016).

A basic condition for the endurance of an organization or all the more and large of an association lies in the capacity of its individuals to act dependably and effectively to accomplish the goals of the association. The generous coordination of conduct can be accomplished from various perspectives. In a private company, the supervisor can confirm straightforwardly that the undertakings have acted in the manner he believes is appropriate. Be that as it may, the oversight of the chief and the common change among different creators are rapidly getting inadequate when the number of firms expanded. In any case, it very well might be wished to keep up these methods of controlling however; it would simply be
applied to the piece of the association. In this way, it is vital that the administration set up systems to fill the hole in management (Saud and Marchand, 2012).

Great administration turned into a profoundly effective business issue toward the start of the 21st century, following a progression of huge corporate embarrassments and disappointments. Great administration alludes to government organizations' lead in executing creative arrangements and projects to expand the nature of public help with a definitive point of expanding financial development. Such imaginative approaches and projects address administration viewpoints, for example, straightforwardness, responsibility, interest, and polished methodology. Great administration prompts great administration, great stewardship of public cash, great public commitment, and eventually, great results for residents and administration clients. Great administration empowers a position to seek after it vision successfully just as supporting that vision component for the administration of danger as referenced by OECD in 2004 (Unam and Asaolu, 2016).

The viability of the control climate, add esteem and improve an association's operations the internal audit, these objectives can be achieved and the activities also be designed to assess these objectives. Internal audit assesses the suitability of the internal system and controls if finds hazards then endorse to improve these controls (Unam & Asaolu, 2016).

**Problem Statement**

The previous works have tried to find out the Internal Audit functions are related to the experience of external audit in this regard the framework worked surrounding of legality, decentralizing and stakeholders’ theories and reported to the government agencies with the effective financial statement. The effective internal audits prevent non-compliance with the laws, rules and regulations. The good governance can be prevailed within the system through internal control. The internal controls provide better monitoring of the organization and its feedback on the system which have been well defined (Gabrini, 2013).

In the USA the new, New York Stock Exchange, corporate administration guidelines require each recorded organization to keep an inner review work, while in the UK the new Combined Code didn't need UK recorded organizations to have an inside review work, yet organizations ought to legitimize their choice not to have an interior review work. Sudan was colonized by Britain and influenced by the British monetary Laws and guidelines. All things considered, the Sudanese Companies Act doesn't need recorded or unlisted organizations to build up an inside review work yet the bank of Sudan guidelines requires each bank working in Sudan to set up an interior review office and require each bank to introduce inspected accounts with a greatest time of 3 months after the conclusion of.

As inward and outer evaluators are worried about the strength of interior review work and both are endeavoring to keep up the connection between the two capacities, the issue Selected for in this investigation is intrinsic in addressing the accompanying inquiries:

1. How the segment foundation of inner and outside inspectors impacts them Assessment of inner review work in Sudanese banks as far as, objectivity, Capability and work execution and observing of interior controls?

2. To what degree the outside reviewers answerable for banks' reviews are depending on the Work of inner examiners in Sudanese banks, corresponding to, objectivity, capability also, work execution and observing of inward controls kept up by inner Review offices? (Obeid, 2007).

In this study paper, it is to be examined that the effective internal audit provides such impact that create not only better governance by the management, but also satisfied the external audit authority and government agencies by fulfilling the legality, decentralizing and stakeholders’ theories with the reporting of the effective financial statement. It is also examined that the non-compliance of the audit
laws, rules and regulations can be controlled through the internal controlling system which provides immediate feedback if any hazard finds to show the good governance by the management to prove its effectiveness internal control.

**Research Gap**
The previous studies have provided the details of the elements that are considered to be affected on the adequacy Internal Audit as concentrated by the written literature. The literature acknowledges that a powerful Internal Audit brings incentive to the association by guaranteeing the adherence to the set-up strategies, laws, and guidelines, and give occasion to improve existing cycles. Be that as it may, the current partners additionally pinpoint a broadening gap between the desires for Internal Audit stakeholders. Appropriately, the fundamental issues are frequently recognized after the Internal Audits, which cause a trouble in deciding if the review was compelling or not. Besides, it was recommended that evaluating the adequacy of Internal Audit may be provided by analyzing the variables that may impact the adequacy of Internal Audit. In this manner, it is Important to examine these variables and address our subsequent exploration question.

This study paper considers the examination as an extensive source that offers pointers on the variables explored in the literature and a reason for future exploration in this field to address the gap that are identified. The commitments of this examination will help in better understanding the state of the exploration on interior review viability, including the compelling components, and gapes open doors for future exploration.

**Research Objectives**
The principal point of this investigation is to inspect the strength of inner review work in Sudanese banks and in this manner to assess the dependence put by outer evaluators on Crafted by inner evaluators. To accomplish this primary point, the accompanying targets were set for the investigation:

1. To take the perspectives on members (interior and outer evaluators) with respect to:
   a. Focus on the objectivity of inner review offices at Audit firms, Companies, and Businesses.
   b. Proficiency of inner review offices at Audit firms, Companies, and Businesses.
   c. Performance and observing of inner controls at Audit firms, Companies and Organizations
2. To analyze the job of segment factors (schooling, experience, insight into inner examining, the quantities of inside evaluators in the interior review offices, inspectors' occupation, examiners' area, and sex) according to their assessments of:
   a. Focus on the objectivity of interior review divisions at Audit firms, Companies and Organizations
   b. Proficiency of inward review offices at Audit firms, Companies, and Businesses
   c. Performance and checking of interior controls at Audit firms, Companies, and Businesses
3. To survey the level of outer inspectors on crafting by interior examiners in Audit firms, Companies, and Businesses thinking about the reviewers' area (private review firms and the General Auditors).
4. To clear the distinction in the inspecting writing as for the investigation factors,
5. Providing recommendations for overseeing objectivity, ability, and work execution and checking of inside controls, in view of the examination results for the Audit firms, Companies, and Business area in Pakistan (Karachi).
Research Questions
The following main hypotheses were proposed by the theoretical framework and tested in the course of this study:

1. How does the Performance of Auditors have an impact on Internal Audit Quality?
2. How does the Management Support have an impact on Internal Audit Quality?
3. How does the Autonomy to Implement audit Technique have an impact on Internal Audit Quality?
4. How do the Physical Environment, Health and Safety have an impact on Internal Audit Quality?
5. How do the Promotion and Reward have an impact on Internal Audit Quality?
6. How do the Training and Development have an impact on Internal Audit Quality?
7. How does the Audit budget have an impact on Internal Audit Quality?

Literature Review
Internal Audit
In this examination paper, the first concerning the assessment of inside review work in the Audit firms, Companies, and Business areas in Pakistan essentially in Karachi. Where, the agricultural nations are in more prominent need of comparable examinations to assist them with creating and increment their insight in the zone of inward inspecting and the connection among inner and outer evaluators.

Secondly, this examination could be valuable to scholars and specialists. For the scholars, it will improve their comprehension of the variables that fortify the inside review work, in particular objectivity, skill, and work execution and observing of inner controls and outside the reviewers' trust in crafting by inward inspectors. For professionals, it might assist with taking care of the reasonable issues confronting the interior review capacity of Pakistan's business areas regarding its objectivity and fitness and its connection among inside and outside evaluators.

Thirdly, in Pakistan, rarely to utilize more than one exploration strategy. This research study applies triangulation examination strategies by brushing the poll review, for inspecting the investigation factors across an enormous number of cases, with the Meeting strategy, the components influencing the strength of interior review work. This blend may give a superior clarification of the examination issue, which is the primary driver for picking the suitable exploration techniques (Gabrini, 2013).

Internal Audit Quality
Internal audit quality expects examiners to do their job and in consistence with acknowledged measures for proficient practice, with the end goal that inside review movement will assess and add to the improvement of danger the executives, control and administration utilizing an orderly and trained methodology The Institute of Internal Auditors (IIA). This is significant for consistence with legitimate necessities, but since the extent of an evaluator's obligation could include the assessment of regions in which an elevated level of judgment is included, and review reports may directly affect the choices or the strategy received by the executives (Lenz & Rainer, 2020).

The more prominent nature of IA work – comprehended regarding consistence with formal norms, just as a significant level of productivity in the review's arranging and execution – will improve the review's adequacy. Nonetheless, the IIA requests consistence with its Code of Ethics, which demands that inside reviewers will perform interior review administrations as per the International Standards for the Professional Practice of Internal Auditing and will constantly improve their capability and the adequacy and nature of their administrations (Unam & Asaolu, 2016).

Organizations
In outcomes the authoritative status of the inside review division, seen that the autonomy of the interior review office is controlled by the way in which it is directed. In accordance with characterized the
hierarchical autonomy as the circumstance that will permit the interior review movement to satisfy its capacity with adequacy (Saud & Marchand, 2012).

It has contended that the supervisory crew's help is central and that the head of interior inspecting ought to have direct access and the opportunity to answer each Supervisor including the leader, chief, the top chief, and the review council (Gabrini, 2013).

**Internal Audit Management and Department**

It has been discovered that focused on that the overseer of the inward review Office in organizations is answerable for the consistence of inward review the standard confirmation adequacy and ability. The inner review office representatives size rely on the exercises of the association as it has four degrees of expert inspectors: chiefs, administrators, ranking staff (Asaolu and Unam, 2016).

**Employees**

Coming up next are the duties of the inside review office's workforce: The overseer of inward evaluating: is answerable for the general interior inspecting Capacity. His duties incorporate arranging, gives examining approaches and Methodology, overseeing staff, coordination of work with outer examiners and the Association with the governing body and review board and sets up a review Quality program.

The inner review supervisor: is answerable for directing individual reviews, other than arranging and planning the review work. Chiefs ought to have a sensible administrative experience. Ranking staff, inspectors have the obligation to manage the review work; ranking staff generally have the insight of three years in the field of evaluating. Junior staff examiners: generally, do, the not so much perplexing, but rather more day by day and routine work (Centre, 2018).

**Internal Audit Reporting Level**

The freedom of the inside review office should be created and maintained all through the whole pecking order of the association. It tends to contend that, the level to which the division reports can be a marker of its autonomy and position in the association.

For instance, the head of the inside review division ought not to be responsible to the leader answerable for money (boss bookkeeper or account chief) since this will bargain the evaluator's autonomy.

As proposed by the Statement of Auditing Standards, SAS No SAS 65, the hierarchical freedom of inner review staff is basic for their objectivity.

Nonetheless, while thinking about the objectivity of inward examiners, the other reviewer ought to perceive the authoritative level to which inward reviewers report their outcomes what's more, in this way, the authoritative level to which they report officially. This can be a pointer of the degree of their capacity to act autonomously of the people answerable for the capacity being reviewed (Saud & Marchand, 2012).

**Governments**

As more prominent accentuation is currently being laid on acceptable administration and responsibility, Internal Control expects a lot more noteworthy significance, and should be planned in a more present day and logical way to guarantee the validity and proficiency. The principal capacity of all branches of the Federal Board of Revenue is to guarantee the assortment of due income, for the Federal Government, and to check its spillage through avoidance. A powerful Internal Control, through Internal Audit, subsequently has an immediate bearing on income. In the event that it positively affects income assortment, it will be seen as being valuable and viable. The Directorate General, Internal Audit (Indirect Taxes) whose primary errand is Internal Control, through Internal Audit, Investigative review
and watchfulness, has this fundamental target in view. In any event, when Audits are led for ensuring right use of law, techniques, rules and guidelines, the fundamental thought is to help secure authentic income (Saud & Marchand, 2012).

**Performance of Auditors**
The independence of internal auditor is considered as a critical driver for Internal Audit adequacy. In this substance, the independence is characterized as "the independence from conditions that undermine the capacity of the Internal Auditor movement to complete Internal Audit duties in an unprejudiced way". To permit the inner evaluator direct Internal Auditor freely, there ought to protect instruments in the Internal Auditor division. The investigation uncovers that the reference archive that contains the function of the Internal Auditor’s office in the association, its privileges of admittance to people, records and resources, and the report sets out the extent of inner examining are gainful to guarantee Internal Auditor freedom. The writing concurs that the absence of freedom is a snag to good Internal Auditor execution (Özkan & Turetken, 2019).

**Management Support**
Despite the fact that Internal Auditor can have an enormous level of independence and self-governance, they may even now have a restricted ability to play out their obligations inside an association. Thus, the management support gets basic to encourage the inside evaluators in directing their obligations. Like the case in any considerable endeavor in an association, the help and support of the top management for Internal Auditing play a significant job, especially in the usage of the audit recommendations [S1], [S13], [S16]. Along these lines, a few examinations consider the management support as a significant impacting factor on the Internal Auditing viability. These examinations (e.g., [S1] and [S13]) normally utilize a bunch of survey things to catch representatives' observation with respect to the level of the management support for IAs (Gabrini, 2013).

**Autonomy to Implement audit Technique**
The associations have a bit of the issues range from insufficient dispersions, limited wellsprings of pay, inadequacies, feeble inside control system, and survey methodology occurring to spillages and distortion. Meanwhile, the premise of the regional government Association, a game plan of changes has happened with the purposes of ensuring its objectives of groundbreaking and capable utilization of resources. Inward survey unit being a basic segment of the record structure of the local government should be coordinated with all the basic resources and support for its convincing limit. A steady complaint in the zone by the general populace exceptionally the occupants of the areas are closer to close by power is that the unit which is set up to check the budgetary dealings of the close by government (internal survey unit) is unreasonably weak in its abilities either due to lacking staffing, delicate internal control, vulnerable association, nonattendance of required labor force, inadequate documentation, and usage of fitting inside audit methods in the local governments, among others, to prevent distortion (Onoja Emmanuel E, 2015).

**Physical Environment, Health and Safety**
The climate where the heads perceive the importance of controls and the structures that overview their sufficiency can empower the correspondence with various laborers, who consistently consider a to be audit as an 'association police', and better appreciation of within the survey work of the board. The control climate suggests the plan standards, cycles, and structures that give the reason of making internal authority over the affiliation. It concerns the respectability and moral estimations of the association, the administrative structure and duties, the cycle for pulling in, creating, and holding equipped people, and the thoroughness around execution measures, motivating forces, and compensations drive responsibility for execution. The investigation in [S19] reports a critical relationship between the nature of IA and the control environment part of the inward control framework. Additionally, the concentrate in [S34] contends on the positive impact of the steady control environment on the IA viability. The elements that
depict the strong control environment are frequently utilizing proclamations starting from the COSO system 2013. Such proclamations mean to catch discernments on the explanations that speak to specific parts of the control environment, for example, the moral mindfulness and the executives’ style, the degree of mindfulness for the significance of control, and the presence of big business management risk and related checking exercises (Özkan & Turetken, 2019).

Promotion and Reward
Internal auditors may have various thought processes (monetary awards from supervisors, individual associations with chiefs to act against the governing body interest, and its review advisory group. To play out an inward review action expertly and impeccably, they should be able to make all around defending decisions, future situating of interior examiners and their compensations, instruction and expert confirmation, and involvement with leading a review. Furthermore, the presence of a powerful review council with an outright expert in the association has settled the above issues (Wodajo, 2019).

Training and Development
The nature of internal Audit work will play critical positive effect on internal Audit adequacy since when administrators and clients segment accepted on the nature of internal Audit, they will see audit work in as a key point for association this will expands the help given by managers to build the measure of spending plan appointed to internal Audit and expert staffs training given to engage internal Audit staffs, last this activity will improve Internal Auditors viability. Subsequently, review quality has a huge and constructive outcome on inward review viability (Berehe, 2016).

Organization’s management has a close relationship with internal auditors in their day-to-day activities. They need good support and the perception of their management to be more effective and develop audit technique to achieve the audit objectives. Management support is expressed in terms of supporting the auditing process by fulfilling the necessary resources, finance, transport if required, providing training, introducing auditors with new technology and procedures, budgeting funds for certification other facilities that facilitate the internal auditing works. Management support has a far-reaching consequence on IA effectiveness in organizations (Wodajo, 2019).

Audit, Budget
Inward review offices in Sudanese banks are likewise influenced by these issues in terms of budgetary requirements that have restricted the assets designated for inward review offices. Along these lines, financial plans dispensed for preparing of inner review staff were diminished. The exploration members believed interior review offices to be fundamentally understaffed and once in a while can't cover the banks' exercises in a fitting manner (Obeid, 2007).
**Conceptual Framework**

![Conceptual Framework Diagram]

**Research Methodology**

**Method of Data Collection**

The personnel who relate to the auditing department are approached by interviewer for taking interview or management of auditing or any other related person who has the knowledge of the Internal Auditing or persons are related to finance department and know the accounting basics. The primary data collection is adopted.

The close ended questionnaire is prepared with the different options consists of the research topic as shown in the appendix I and the approached to the related personnel who know or are currently working in Audit Departments or in any way are getting in touch with the Internal Audit. The Likert Scaling adaptive questions adopted.

**Theoretical Model**

As shown in the literature, all the investigation factors relate together into a hypothetical model as laid out in conceptual framework. The Concept of this piece of study is presentation of theory dependent on inspecting writing to explore the impact of Internal Audit the enormous business to searching for auditing departments or organizations. The resulting objective is improvement of theoretical models to overview the impact of internal audit at enterprises (Obeid, 2007).

This study paper has recognized both dependent and independent factors. The free factors are all of those internal auditing services that are given by auditors to its clients. In this way, the finding of the assessment study depends upon the relationship and yields of ward and independent factors. The
schematic theoretical structure shows the association between dependent and independent factors in literature review.

**Role and Responsibility of Internal Auditor**

The fundamental occupation of inside assessment is to help the heads with achieving authoritative goals. It similarly gives certification that the organization has executed a satisfactory inside control system to prevent possibilities. Additionally, assessing should give inside directing organizations at all levels of the affiliation with respect to planning, advice, help, and course (IIA, 2011). The Institute of Internal Monitors gave the internal assessing obligations; the part related to objections communicated, "The objective of inward-looking at is to help all people from the chiefs in the fruitful arrival of their obligations by furnishing them with examinations, assessments, proposition, and proper comments concerning the activities reviewed. The inside inspector is stressed over any time of a business development where he can be of an organization to the board. This incorporates going past accounting and money related records to gain a full understanding of the exercises under study.

It was also portrayed advantages of inner inspecting help, which gives activity and judgment premise to administrators by detailing, execution and interior control impediments and suggestions for enhancements, for arrangement of business issues giving insight to governing body and administrators for its arrangement and giving valuable, convenient and solid data to the administration.

Moreover, the assertion additionally specifies the inner inspector administrations types and exercises kind accomplishing the general targets. The inner inspector evaluates the firm tasks as arranged and to decide the results with the set-up targets and assesses the inward control framework sufficiency and adequacy of the organization. The fundamental reason to check the sufficiency of the inward evaluating of the organization is to decide about the sensible confirmation arrangement that the organization targets met efficiently (Saud & Marchand, 2012).

**Data Analysis and Interpretations**

**Descriptive Analysis**

The phenomenological worldview is portrayed to be a subjective technique that burdens the emotional parts of human movement that centers on the importance as opposed to estimation of common spectacles. That is offered that this methodology depicted as the descriptive strategy and specifies that each occasion should be concentrated in a one-of-a-kind occurrence in its own right.

**Multiple Regression Analysis**

Multiple linear is an all-inclusive type of basic straight relapse. It is used when we need to envision the assessment of a variable subject to the assessment of at any rate two distinct factors freely. The variable we need to predict is known as the needy variable. The components we are using to anticipate the assessment of the destitute change are known as the autonomous variable. (Ali, 2019)

The reliability test is tested first on the data collected after that the multiple linear regression as a model is run to check the influence of the independent variables on the dependent variable.

In this study paper the hypothesis regarding the influence of the 1-Performance of Audit, 2- Top Management Support, 3-Autonomy to Implement audit Technique, 4-Physical Environment, 5-Promotion and Reward, 6-Training and Development, 7-Availability of the Budget on the Internal Audit Quality which identify the strength and weaknesses of internal Audit Quality finding the appropriate results in long- term objectives. To simplify the model and easy to predict each variable item has been transformed into average (mean). Then the model runs in SPSS to check the hypotheses.
Multiple Linear Regression Models
The model for MLR, given in observations, is:
\[ Y_i = B_0 + B_1x_1 + B_2x_2 + ... + B_p x_p + E \]
Where,
Y= Dependent Variable
X= Independent Variable
β= Beta Coefficient

According to this research
\[ Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + E_i \]
Y= Internal Audit Quality
X1= Performance of Audit
X2= Top Management Support
X3= Autonomy to Implement audit Technique
X4= Physical Environment
X5= Promotion and Reward technical support
X6= Training and Development
X7= Availability of the Budget

Internal Audit Quality = B0 + B1 Performance of Audit + B2 Top Management Support + B3 Autonomy to Implement audit Technique + B4 Physical Environment + B5 Promotion and Reward + Technical support + B6 Training and Development + B7 Availability of the Budget

Validity and Reliability
The reliability assessment is the underlying stage in the quality control of leading examination, contingent upon the essential information assortment. The dependability examination frameworks process different generally used proportions of scale, dependability, quality, and moreover give information about the associations between particular things in the scale. Association coefficients can be used to measure cover rate steadfast quality evaluations. In this manner, by using faithful quality, insightful, how much the things in the survey are related to each other can be settled, so we can get an overall record of the dependability or within the consistency of the scale as a total. Using the unwavering quality examination can perceive issues things that should be evaded from the scale. In this assessment, Cronbach's Alpha was used, considering its congruity an overview relies upon the Likert five-point scale, and measures within the consistency of the survey, taking into account the typical between the relationships of the things (Obeid, 2007).

Outcomes and Analysis of the Results
Dependent and Independent Variables Cronbach Alpha Analysis
Table 1.1: Showing the Cronbach’s Alpha (α) Statistical Reliability test

| Reliability Statistics | | |
|-------------------------|------------------|
| Cronbach Alpha | No of Items |
| 0.896 | 48 |

In this table it depicts that the reliability test which shows that the all 48 items can be taken all to gather for testing. As the alpha value (α = 0.896) of Cronbach provides relief to instrument to collect the data from the instrument.
### Descriptive Statistics Mean and Standard Deviation

#### Dependent Variable (Internal Audit Quality) with different Dimensions

<table>
<thead>
<tr>
<th>Variable References</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable</strong></td>
<td>IAQ</td>
<td></td>
</tr>
<tr>
<td>Does the existing role that internal auditors play sufficient to address the purpose for which it is established? IAQ1</td>
<td>2.08</td>
<td>.998</td>
</tr>
<tr>
<td>Does the organization internal audit ensure activity performed is compliance with established policies, procedure, laws and regulations? IAQ2</td>
<td>3.06</td>
<td>.905</td>
</tr>
<tr>
<td>Does the internal audit activity influence positive change and continual improvement of business processes, bottom line results and accountability within the organization? IAQ3</td>
<td>2.08</td>
<td>.998</td>
</tr>
<tr>
<td>Does the internal activity, promote appropriate ethics and values within the organization? IAQ4</td>
<td>2.86</td>
<td>1.079</td>
</tr>
<tr>
<td>Do the Organization Internal Audit findings &amp; recommendations critical and Constructive to improve non-compliances activities or control systems of the organization? IAQ5</td>
<td>2.60</td>
<td>1.041</td>
</tr>
<tr>
<td>Does the non-compliance report provide internal audit is reliable and significant to the organization? IAQ6</td>
<td>2.58</td>
<td>.983</td>
</tr>
<tr>
<td>Do the number of complaints (doubts) about the internal audit finding (report) represent very low because the report is correct and reasonable? IAQ7</td>
<td>2.32</td>
<td>1.049</td>
</tr>
<tr>
<td>Does the internal audit ensure the economical, effective and efficient use of the organizational resources? IAQ8</td>
<td>3.30</td>
<td>.923</td>
</tr>
<tr>
<td>Do inter auditors of the organizational capable of carrying out the internal control function under current corporate governance? IAQ9</td>
<td>2.14</td>
<td>1.022</td>
</tr>
<tr>
<td><strong>Independent Variable 1</strong></td>
<td>PA</td>
<td></td>
</tr>
<tr>
<td>Do the Internal Auditors possess sufficient experience to understand the organization’s system? PA1</td>
<td>2.86</td>
<td>.987</td>
</tr>
<tr>
<td>Do the Internal Audit staffs have the appropriate and relevant education in auditing that allow them to audit all of the organization’s systems (financial, operational, logistical and computerized). PA2</td>
<td>2.40</td>
<td>1.079</td>
</tr>
<tr>
<td>Independent Variable 2</td>
<td>MS</td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>----</td>
<td></td>
</tr>
<tr>
<td>Do the top level management trust and value the advice of the internal audit?</td>
<td>2.60</td>
<td>1.041</td>
</tr>
<tr>
<td>Does the Internal Audit service see as a key strategic partner throughout the organization?</td>
<td>2.86</td>
<td>.982</td>
</tr>
<tr>
<td>Do the senior managers understand and fully support the work of internal audit?</td>
<td>2.40</td>
<td>1.079</td>
</tr>
<tr>
<td>Do Internal Auditors have full access to records and information they need?</td>
<td>2.94</td>
<td>.969</td>
</tr>
<tr>
<td>Does Internal Audit obtain a sufficient budget to carry out its duties successfully?</td>
<td>2.86</td>
<td>1.079</td>
</tr>
<tr>
<td>Independent Variable 3</td>
<td>AIT</td>
<td></td>
</tr>
<tr>
<td>Have you freely decided the scope, time and extent of auditing procedures based on auditing standards and the organization policy?</td>
<td>2.08</td>
<td>.998</td>
</tr>
<tr>
<td>Does the internal auditing operate totally independently; any issue in the audit can be considered for auditing?</td>
<td>3.10</td>
<td>.856</td>
</tr>
<tr>
<td>Do you perform the auditing activities without any interference from anybody and without any influence from the organization?</td>
<td>2.08</td>
<td>.998</td>
</tr>
<tr>
<td>Does the Internal Audit staff have free access to information and data about the organization, and unrestricted access to its site?</td>
<td>2.08</td>
<td>.998</td>
</tr>
<tr>
<td>Independent Variable 4</td>
<td>EHS</td>
<td></td>
</tr>
<tr>
<td>Does the organization develop Environment, Health and safety plan strategy?</td>
<td>2.08</td>
<td>.998</td>
</tr>
<tr>
<td>Does the organization provide Medical services?</td>
<td>3.10</td>
<td>.856</td>
</tr>
<tr>
<td>Does the management provide a hygienic environment?</td>
<td>2.08</td>
<td>.998</td>
</tr>
</tbody>
</table>
Does the Implement environmental Management?  EHS4  2.32   1.049
Monitor and manage operational environmental aspects? EHS5  3.30   .923
Does the Implement environmental Management Manage Corporate Environmental Data? EHS6  2.14   1.022
Does the Organization Plan & Manage Emergency Response? EHS7  2.86   .982
Does the Organization provide Incident Learning and Prevention? EHS8  2.40   1.079
Does the Organization manage legal requirement and commitments and Identify, evaluate and action regulatory changes? EHS9  2.94   .969

Independent Variable 5

<table>
<thead>
<tr>
<th>PR</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the linguistic and cultural diversity hurdle in working? PR1</td>
<td>2.86</td>
<td>.982</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the benefit important part of the total remuneration Package? PR2</td>
<td>2.83</td>
<td>1.118</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the earnings of the Internal Auditors are related to performance? PR3</td>
<td>2.91</td>
<td>.993</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Independent Variable 6

<table>
<thead>
<tr>
<th>PR</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Do the remuneration policies, identify the long term results than short term ones? PR4</td>
<td>2.83</td>
<td>1.118</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the remuneration system in the organization is futuristic orientation. It focuses auditor’s attention on long term goals? PR5</td>
<td>3.31</td>
<td>1.058</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Independent Variable 7

<table>
<thead>
<tr>
<th>AB</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the technical training have more important than formal training? TD4</td>
<td>3.00</td>
<td>.900</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the training that Internal Auditors currently receive seems to meet or exceed their perceived need for formal training? TD5</td>
<td>2.69</td>
<td>.873</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the clear training and development have an important consideration to most internal auditors in planning their career progression? TD6</td>
<td>3.11</td>
<td>.915</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the internal auditor express concern that there are gaps in their receiving the appropriate training? TD7</td>
<td>3.09</td>
<td>1.024</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Does Internal audit obtain a sufficient budget to successfully carry out its Duties?  

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does Internal audit obtain a sufficient budget to successfully carry out its Duties?</td>
<td>2.81</td>
<td>1.214</td>
</tr>
<tr>
<td>Do Auditors review checking of budget implementation?</td>
<td>2.93</td>
<td>1.203</td>
</tr>
<tr>
<td>Does the firm set the actual time and budget for key performance and audit assignment?</td>
<td>1.81</td>
<td>.799</td>
</tr>
</tbody>
</table>

Number of Cases  300

Mean of Elements of Dependent Variable
Having a glance at this table the highest mean of Internal Audit Quality8 (IAQ8) which is (mean=3.30) that relates to the dependent variable. It means that it is the most controlled determinant of dependent variable while the second highest mean of IAQ2 which is (mean=3.06) and it secondly well controlled determinant of the dependent variable. The lowest mean of the dependent variable element is 2.08 IAQ1. It means this determinant need to control more as it’s far from other elements.

Mean of Elements of Independent Variables
The lowest mean of the independent variable element is 1.81 AB3. It means this determinant need to control more as it’s far away from other elements of independent variables.

The highest mean of the element of the independent variables is 3.31 PR5 and TD5 3.26 which are controlled by the firms, but may not remain the same in the next academic research.

Standard Deviation of Elements of Dependent Variable
The highest deviated element is IAQ4 (SD=1.079). It means that it is far from the its mean and out of control and the management of the audit firms need to control it, but the determinants do not remain the constant forever they change over the time. The next academic research may find this element in a different way or closer to its mean.

The lowest Standard deviation is (SD= 0.905) of IAQ2 which is the closest to its mean and the audit firms do not need to more focus on it but over the time it may change in the future.

Standard Deviation of Elements of Independent Variable
The highest deviated element is AB2 (SD=1.214) It means that it is far away from the its mean and out of control and the management of the audit firms need to control it but the factors do not remain the same forever they change over the time. The next academic research may find this element in a different way or closer to its mean.

The lowest Standard deviation is AB3 (SD= 0.799) which is closer to its mean and the audit firms do not need to more focus on it but over the time it may change in the future.

Hypotheses Assessment Summary
Table 4.3: Depicts the model summary explain the independent Variances to the dependent Variable

<table>
<thead>
<tr>
<th>Model Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

711
Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>R Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.965</td>
<td>.931</td>
<td>.929</td>
<td>.152</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Audit budget (AB), Physical Environment Health And Safety (EHS), Training And Development (TD), Autonomy To Implement Of Audit Technique (AIT), Promotion And Reward (PR), Management Support (MS), Performance Of Auditor (PA)

In this table it depicts that dependent variable Internal Audit Quality variance is explained 96.5 percent by the seven independent variables Audit Beudget (AB), Physical Environment Health And Safety (EHS), Training And Development (TD), Autonomy To Implement Of Audit Technique (AIT), Promotion And Reward (PR), Management Support (MS), Performance Of Auditor (PA) as shown by the R2 value. It means that these independent variables are directly correlated with the dependent variable.

Table 4.4: Showing the beta coefficient of Independent variables and their Impact on Dependent Variable.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>.094</td>
<td>.069</td>
</tr>
<tr>
<td>Performance Of Auditor (PA)</td>
<td>-.869</td>
<td>.057</td>
</tr>
<tr>
<td>Management Support (MS)</td>
<td>.552</td>
<td>.046</td>
</tr>
<tr>
<td>Autonomy to Implement Of Audit Technique (AIT)</td>
<td>.406</td>
<td>.014</td>
</tr>
<tr>
<td>Physical Environment, Health and Safety (EHS)</td>
<td>.859</td>
<td>.033</td>
</tr>
<tr>
<td>Promotion And Reward (PR)</td>
<td>-.039</td>
<td>.019</td>
</tr>
<tr>
<td>Training And Development (TD)</td>
<td>.029</td>
<td>.019</td>
</tr>
<tr>
<td>Audit Beudget (BA)</td>
<td>.026</td>
<td>.018</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Internal Audit Quality

Hypotheses testing
Performance of Auditor
H1: How does the predictor (Performance of an auditor) have an impact on (Internal Audit Quality)?
There is a connection between the size of the interior review quality and review firm. Experience of the Internal Audit and Firm Performance The third assessment of IAC is the knowledge of inside survey. Exactly when an individual has various significant stretches of inclusion, he/she can make a right decision, pick brisk and deal with any condition. This variable is assessed by the amount of years the people have gathered through an overview that is dispatched off each firm by email Reliable with the asset reliance hypothesis and its advocates, master people help in firm development since they have a reasonable knowledge about how to manage measure and achieve their undertakings prevalent quality.
Furthermore, when the firm gives board high specialists, they help to comprehend outer climate and thus, will improve execution of organization there is a relationship between the size of the internal audit and firm performance (Al-Matari, Al-Swidi, & Binti Fadzil, 2014).

This study paper has also found that Performance of Auditor (PA) has a negative effect as its beta coefficient is (-0.869) it is significant as its probe value is < 0.05 (0.000). It means that the Performance of Auditor (PA) has significant impact on the dependent variable Internal Audit Quality (IAQ) but it is not necessary that it will remain the same in the future. This independent variable may get better and positive significance effect in future research.

**Management Support (MS)**

H2: How does the predictor (Management Support) have an impact on (Internal Audit Quality)?

As demonstrated by the awesome interchanges these organization instruments look like a corporate organization mosaic. In any case, issues among free and boss bosses in light of disproportion information shows inside survey more likely as a correlative instrument. This is maintained by choosing affirmations from investigates breaking down the association between survey sheets and inside audit.

This is according to the IIA see about inside analyzing; which urges relationship to improve and survey organization measures. Thusly, positive connection between the Internal Audit Quality and a more grounded review panel can be typical due to their solidly destinations. A practical audit leading body of trustees can fortify the internal survey work position; however, an earth-shattering internal survey limit can achieve improved the audit warning gathering's stability (Saud & Marchand, 2012).

This study paper has also found Management Support (MS) has a positive effect as its beta coefficient is (0.552) it is significant as its probe value is < 0.05 (0.000). It means that the Management Support (MS) has a significant positive influence on the dependent variable Internal Audit Quality (IAQ). The more will be the experience management support the better will be the results of the audit but it is not necessary. This independent variable opens new ways of thinking in the future.

**Autonomy to Implement of Audit Technique (AIT)**

H3: How does the predictor (Autonomy to Implement Of Audit Technique) have an impact on (Internal Audit Quality)?

It has been discovered that there is the huge connection between inward review procedure and customary interior evaluating approach in misrepresentation anticipation at the neighborhood government by the Pearson Product Moment Correlation Coefficient test on the huge connection between inner review method and conventional inside inspecting approach in blackmail evasion at the close by government. The r-decided is 0.72 which is a colossal difference with r-essential found to be 0.28. It appropriately dismisses the invalid hypothesis that state, there is no tremendous association between inside survey technique and standard inward reviewing approach in coercion expectation at the close by government. Thusly, enduring the political race hypothesis that state, there is a basic association between inward audit system and traditional examining approach in deception evasion of the local government.

This study paper has also found Autonomy to Implement Of Audit Technique (AIT) has a positive effect as its beta coefficient is (0.406) it is significant as its probe value is < 0.05 (0.000). It means that the Autonomy to Implement of Audit Technique (AIT) has significant positive Impact on the dependent variable Internal Audit Quality (IAQ). When the audit technique is implemented for the internal audit the results will be better.
Physical Environment, Health and Safety (EHS)

H4: How does the predictor (Physical Environment, Health and Safety) have an impact on (Internal Audit Quality)?

The administration and overseers of an element receive the cycle of inside a control. This cycle gives affirmation about the achievement of the substance's objectives as for financial uncovering, exercises, and reliability with the rules. External is looking at the rules and shows that the controlled atmosphere can be sustained by using fruitful in survey work by:

1. Review of the inward control structure of a firm.
2. For the administration; checking various tasks as to data framework and control techniques. Interior Health, Safety, Environment, and Quality (HSEQ) Audit Programs can be improved with a portion of the accompanying things:
3. A persistently improving HSEQ the board framework structure that encourages the distinguishing proof of the dangers, openings, and steady controls.
4. Strong administration that sees HSEQ execution greatness as one of the keys to in general corporate execution?
5. Productive checking and self-appraisal programs by bleeding edge and specialty unit danger and control proprietors with driving execution measurements that drive wanted results.
6. An autonomous interior review work with spending plan, staff, and skill equivalent with the nature and profundity of HSEQ danger and control development.
7. Contribution of outside specialists where validity and mastery are required.
8. Great information investigation and computerization.
9. Danger based review program plan that centers on basic controls, and business measures. \n10. Vigorous episode investigation and analysis of the causes and holes distinguished during the review.
11. Describing review outcomes elder management and the board of full straightforwardness.
12. Communication, constant improvement theory. (Brun, 2018)

This study paper has also found Physical Environment, Health and Safety (EHS) has a positive effect as its beta coefficient is (0.859) it is significant as its probe value is < 0.05 (0.000). It means that the Physical Environment, Health and Safety (EHS) have significant positive impact on the dependent variable Internal Audit Quality (IAQ). The more will be the better environment for health and safety the management work provides good results.

Promotion and Reward (PR)

H5: How does the predictor Promotion and Reward (PR) have impact on (Internal Audit Quality)?

To see the impact of the board uphold on the interior review adequacy a relapse investigation was done and its yield shows a beta estimation $\beta = 0.299$, $P < 0.05$; from this figure we can presume that the inside review viability is straightforward and altogether affected by the help the review group got from the administration. Thusly, invalid theory $H30$ (There is no certain connection between top administration upholds and interior review adequacy) is rejected. This outcome was steady with the past inspecting research works of .They have found that the top administration upholds was the basic determinants of inner review adequacy. The ministration shapes the association vital move and in the event that they consider being an essential point for the association they will give all the vital contribution to the fruitful (Berehe, 2016).

This study paper has also found Promotion and Reward (PR) has a negative impact as its beta coefficient is (-0.039) it is significant as its probe value is < 0.05 (0.000). It means that the Promotion and Reward (PR) has significant negative impact on the dependent variable Internal Audit Quality (IAQ). This will unfold to think the management in the future academic research because the factors never remain the
same forever.

**Training and Development (TD)**

H6: How does the predictor Training and Development (TD) have an impact on (Internal Audit Quality)?

Inter Audit dependent on preparing prerequisites hypothesized by the Institute of Internal Auditors (IIA) that requires rehearsing CIAs (Certified Internal Auditors) to have on normal 40 hours out each time of proceeding with proficient instruction (CPE). Among others, agrees with this view and finishes up 'the best inner review capacities. It has worked with are constantly seeming to be imaginative and improve the manner in which they work. As the IA movement doesn't add to administration in a similar way as it does to controls (IIARF 2011b, 5) potentially in light of the fact that these review subjects are seen as especially requesting, sufficient preparing to perform administration, misrepresentation and moral reviews can be useful and may build the opportunity that interior inspectors convey more and better.

In this study paper, it has been found that the Training and Development (TD) has not significant impact on the Internal Audit Quality (IAQ) because its probe value is > 0.005 that is (0.132). This factor may change in the future of academic research and gives better results.

**Audit Budget (AB)**

H7: How does the predictor Audit Budget (AB) have an impact on (Internal Audit Quality)?

The best five devices utilized by and by (IIARF, 2009: 12) when self-observing IA execution is consistent with the review plan (i.e., the quantity of reviews arranged versus the number executed); consistent with a financial plan; a fulfillment overview from audit; review time the board (arranging, hands on work, shutting); and revealing time the management.

In this study paper, it has been investigated that the Audit Budget (AB) does not have significant influence of the Internal Audit Quality (IAQ) its probe value if greater than >0.005 that is 0.144. This factor has found insignificant not forever, it may be changed in the future academic research. When internal audit practices will change by using the new techniques, training and development by providing new education regarding accounts as the market regarding finance is changing rapidly as the time passing.

This study paper has found most of the independent variables significant, but two of them are the insignificant.

**Discussion and Conclusion**

**Discussion**

The earlier study over the internal audit quality, providing has been conducted since 2014 and the auditing specialists trying to figure out that in reality the audit quality is provided or not and still established that this not providing properly. Much of the earlier research has found that the chances have been disappeared to build better audit quality. The internal audit quality is the most effective tools to provide long lasting benefits as well as multiple returns on investment within a short period (months) by hiring and retain the average audit experts this is the question that is still alarming in audit and finance department (Berehe, 2016).

In this paper, it has been trying to figure out the factors which make it easier to deliver the internal audit quality process which not only help the public but also the private sectors to fetch out the experts which make internal audit quality more and more outclass, flexible and adaptable.
Conclusion
The internal audit and audit organizations, both together can provide much better benefits not only domestically but also globally. Internal Audit Quality helps the auditors to polish in the tasks and provides grip to face new challenges whatever they are and whenever they arise. The Internal Audit Quality process can find out the management who works effectively and efficiently, which not only cut down the cost of organizations but also provides satisfaction to the clients.

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Influence of Capital Structure on Corporate Performance of Listed Firm in PSX: Role of External Factors

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ARTICLE DETAILS

ABSTRACT

Purpose: A company’s capital structure is a blend of its equity and debt financing and is considered a significant factor in the valuation of any firm. The decisions related to capital structure formation play an integral role for the firms, therefore; this research tends to explore the factors of capital structure and their impact on firm performance. For this purpose, financial data for different listed companies in PSX has been gathered, and dividends and taxes are used as firm external factors.

Design/Methodology/Approach: To examine the impact, the panel data has been used for the period 2016-2020 and panel least square has been applied.

Findings: The findings suggest that among the variable’s current ratio, dividends, taxation, total debt to total equity ratio, and the firm size are statistically significant to profitability. The study also concludes that dividends and tax have a greater impact on capital structure and firm performance.

Implications/Originality/Value: Managers and owners of the firms must make sure that their profits are used for future investments rather than payment of debts to avoid bankruptcy.

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Introduction

A company’s improvement and advancement need a specific degree of financing. There are two sorts of sources for funds provisioning, debt and equity. If a firm gets funds through debt financing, it must have to pay interest, lease, or coupon payment at first. While on the other hand firms can get funds through investment by issuing shares, in that case, the firm has to make further two decisions. These decisions are either to pay dividends or retain the profit for future investment and are known as decisions of capital structure (Damodaran, 2001). Responsibility source is considered to be a great and heavy obligation on the firm which an affiliation must pay attention to, in the near future. The responsibility
support has a value that is intriguing and worth is given by business visionaries. The individuals who buy shares are called shareholders and they are proprietors of the affiliation; regard money, in addition, a dedication on affiliation in any case and not fixed like responsibility which must be paid in future. Monetary experts need a return on their theory and are seen as an advantage and the other return that they can have is the capital extension. The choice of capital has a vital impact on an organization's worth. It has been the sketchiest subject. According to Modigliani & Miller (1958), it relied upon assumptions and without charges, out of a strong financial stock market, the estimation of the organization is relatively unaffected by how that certain firm is being financed. Rajan & Zingales (1995) study communicate that the affiliation debt ratio unveils to us the comprehension among the obligation favored position and obligation cost. Various other research has done that debt cash reduces the firm's worth. Progressive system's theory (Myers & Majluf, 1984) suggested that perfect funds structure is up till now an unresolved issue. This research revolves around how a firm value is affected by the capital structure that the organization applies - To find the impact of capital structure on firm value, what will be the effect on profitability, growth and return on both assets and equity? Which way of financing is better for a firm, either equity financing or debt financing?

The way firms are operating, and their relative capital structure has been generally a long way from being clearly obvious subject. To find which funds source of financing is better for advancement and accomplishment of a firm and moreover in what situation which source of financing is better. The study of Modigliani & Miller (1963) further analyzed and disseminated the results on capital structure, which made the reason of thinking on capital structure. Further study by Emini et al. (2012) concluded that capital structure has been a policy challenge due to money related issues for firms. Modigliani & Miller (1958) study is based on assumptions such as given frictionless markets, standardized way of information for all investor available; capital structure decision of the firm is irrelevant. By releasing up the doubts and separating their management, theories hope to describe whether an ideal capital structure exists or not and if it exists, by then what may be its determinants (Patrick et al. 2013). The existence of irrelevant hypotheses (Kraus & Litzenberger, 1973) and numerous different research about capital structure has done more on this topic to pay more attention than how to meet the fund's requirement of the firm. The main objective is finding the relative effect of a capital structure on the organization's various variables such as equity, profit, etc., the impact of capital structure on those dependent variables such as growth and earnings per share. There are many financial factors that can affect the return a shareholder can receive on their stock, but this is yet constant with many other variables but in this research, the focus will be on capital structure and its incorporating ratios of a company.

**Hypotheses of Model EPS and Growth**
H1: Current Ratio has a significant effect on the EPS of Pakistani companies.
H2: Dividend has a significant effect on the EPS of Pakistani companies.
H3: There is a significant impact of total debt to equity ratio on the EPS of listed firms.
H4: Tax has a significant impact on the EPS of Pakistani companies.
H5: The size of the firm has a significant effect on the EPS of Pakistani companies.
H6: Current Ratio has a significant effect on the growth of Pakistani companies.
H7: Dividend has a significant effect on the growth of Pakistani companies.
H8: There is a significant impact of the total debt to equity ratio on the growth of firms.
H9: Tax has a significant effect on the growth of Pakistani companies.
H10: Size of the firm has a significant effect on the growth of Pakistani companies.

This study explores the above hypothesis based on the research framework and review of previous literature. The study also used the data to explore the relationship between the profitability of the firm and the mixture of capital structure. The outline of the study utilized the following sections. After the introduction of the topic, the study explores literature review in section 2, while in section 3 study gives detail of the research method. The section 4 presents findings and summarize the data results and section
5 concludes the study.

**Literature Review**

When capital structuring is discussed, there have been many researchers who have provided different comparisons and views on the cost pertaining to the capital structure and associations with firm. Many studies focus on that topic because it impacts on firms growth, utilization of funds and responsibility of payment to investors of the additional income. Jensen and Michael (1986) study showed that capital structure decision depends on the difficulties associated with money and interest of managers. Budget experts prefer to spend money considering the way the CEO is inclined. Companies must make plans if a company does not pay the necessary fees on time, this will cause confusion and may affect the image of the company, because an experienced accounting manager will consider putting pressure on owners, and the corporate manager does not have to close the reduction of cash-related geniuses if they invested in more funds than promised, but at the same time, certain costs with reduced fees would not adversely affect the promised funds budget accuracy, debt costs, liquidity, improvement, the basic quality of resources and short execution (Sharma & Handoo, 2014). He further commented on how a stable salary has an undesirable significant impact on the promised funding. If you firmly use this experience for support, it will only bring negative reviews, this is not the same as salary. Established relationships have a stronger significant impact on compulsory financing (Ju, Nengjiu et al. 2005). They expect that a solid amount of leverage will be the basis of the exchange hypothesis (Shibru & Mekonnen, 2015). As per Shibru & Mekonnen (2015) factors affecting currency choices are advantages, liquidity, basic quality, but development and danger will not be affected. The capital structure affects the performance of the firms due to a higher debt-to-equity ratio (Baker & Wurgler, 2002). This is the basis for the stock price as it is more important than the indicated price after taking financing decisions. Reporting time is considered crucial for companies to provide their shares value. Khravish et al. (2010) showed us that the degree of debt positively depends on the size of the company and organization, regardless of whether there is a negative correlation between relations and roundness. In Jordan, various branches continue the experience of using a selection of core motivations. The exchange of assumptions in this theoretical way, company requires dedication (Kraus & Litzenberger, 1973). Their findings conclude that as long-term debt higher than firm may face increases bankruptcy but lower liquidation costs. This is another bankruptcy agency, and lenders trust these organizations more. This is another bankruptcy agency, and lenders trust these organizations more. Studies have shown that pecking is important for various assumptions. In a study, Odit & Gobardhun, (2011) stated that it is necessary to understand the importance of consistency of the theory of monetary structure for average relationships in overhauls. Due to the explanation of the high resource structure and the size of the company, they made enough debts to extend the term, but because of the size and resource limitations of SMEs, they do not have too many obligations to the basic package. SMEs rely more on domestic financing. This helps Pecking order's hypothesis (Glen and Singh, 2004) to get some information about the report that owners have fewer obligations than industrialized countries due to misrepresentation. Khan (2012) studies on the sample of listed Pakistani firms also considered capital structure influence on firms’ performance and their lowering value of share obligations. Studies have shown that companies pay a significant price for inefficient markets and short-term obligations, pecking theory. With this opportunity, the company’s first step is to improve and focus on its internal sources, not external ones. Nirajini (2013) shows that this is achieved by considering the relationship between the structures of the capital using data of the Sri Lankan listed firms. He found a close relationship between the process of capital action and corporate execution. Akintoye (2009) in his assessment found that the choice of listed firms either debt or equity financing was based on compromised assumptions. The signal hypothesis (Spence, 1973) proposed that firm performance not confirmed, obtaining the funds due to ambiguous situation of the firm as an imperfect control on market. The signaling hypothesis shows a negative association between performance and capital structure. Since the agent is currently an experienced business opportunity, it is more harmful than a company that cannot significantly use the promised funds. The theoretical possibility of making a profit is a chance for a company to use the allocated funds. Huang & Song
(2006) rely on dependencies to see the relationships between the fluctuating performance of companies and pay before collusion and costs. If an enterprise has a lower level of debts and increases the level of liquidity resources, it can cope with these liquidity resources and additional monetary significantly weakens. Vaidean & Laura (2013) found that factors in the structure of capital are not just a reduction in the firm performance. Jensen and Meckling (1986) also explain that a capital structure problem can be explained if the owner is offered a share to the investor or an increasing debt financing. The pecking requirement is important for cash negotiations, which affects the capital structure (Majluf, 1984). If a company makes an offer, it uses the value of the assets. Money trumps for the company are not enough. To avoid this problem and reduce the cost of citation, the company uses the allocated funding (Titman & Wessels, 1988). Debit accounts are reasonable for the use of capital, such as company size, fixed resources, opportunities for improvement, and an extended valuation area. Companies must understand the variables to which they must obey. Majluf (1984) required that the theoretical costs of liquidation and data conflicts could increase the value of the company because this pooling requires an understanding of internal assets, i.e., internal additional costs are not as good as simplifying external sources structure of the account to fulfill obligations, and in the end, the company can give a share. The assessment found a connection between liquidity and capital structure (Lipson & Mortal, 2009). These high liquidity relationships do not affect the review report, and banks must maintain a relationship. Liquidity reduces the risk of currency experts for their efforts. With less danger than cost, costs will decrease. Instead of using redundant work responsibilities, the company retained a new theoretical structure inside the store and after a while made an offer (Majluf, 1984). He fights using a mixture of duty and value. Maintenance costs will not be less than expected revenues. If a company uses more prominent obligations, it becomes risky, and the value of the obligations increases in the same way (Berger and Patti, 2006). There is a dynamic link between voluntary support and improved membership. If you firmly use this experience for support, it will only bring negative reviews. Solid use of more important debts will add value even further. (Antoniou, 2008). Campello (2007) found a negative correlation between credit cash and acquaintances. If companies expand the scope of job finance, good jobs will decrease. His assessment showed that if the company used a more visible explanation of responsibility, its slowness would develop, and its personal image would decrease. Margaritis & Psillaki (2007) obtained some evidence of Sri Lanka's ownership and found that there was an imperative link between capital structure and conspiracy considerations. Pandey (2009) during his audit found that these companies do not procedurally violate the structure of their capital and that these connections cause game behavior in their capital structure, which is an achievement that enterprises need to draw up a game plan for the capital structure. Lemmon, (2008) tested with different affiliations and work. Studies show that every company and industry have a clear capital structure. Graham and J.R. (1996) & Mackie-Mason (1990) showed using Pakistani listed data that companies with high unrelated costs use more renowned managers with higher tenure employees to reduce costs in various companies, are usually responsible for complying with and accepting temporary responsibilities to long time managers. Short-term responsibilities usually have an insignificant association with performance. They usually used those managers who achieved well during their tenure and most decisions made by these managers brought good results. Significant on how the company is represented and moreover these short-term reputations are combined through a clear understanding that affects the growth of the company. Usually, banks are a huge source of financing, and they have a more understanding of the asymmetry of information, unconventional payment and inefficient regulatory structures other than financing (Kausar, 2014). The leaders of each alliance must build a relationship, and for this, they may think that they need a guarantee from external sources. In any case, the authorities hope that relying on progress will lead to an increase in costs with a slight assessment. The alliance will be equipped with a liability shield, and interest will influence the ratings of companies so that the budgetary impact will be disastrously determined in the financial statements of the company, either a company with high efficiency or a company with low efficiency. Higher influence on any company leads to better execution. This privileged position is explained by the cost reduction estimate approved. On the one hand, for any relationship, the impact is obviously valuable. The value of a business is dependent on the firm performance and the firm need for
funds for the future. Speculatively, it may be the whole funds that one needs to pay to buy/expect authority over a business operation. For any company, this can have a negative and significant, since an influential company can exclude the opening of a company with great influence, which can lead to insufficient investments and can reduce the company's market valuations, if necessary; therefore, relative influence is an extremely important relationship between performances. Higher relative impacts accumulate lower impacts, for example, increasing impacts improve better and decreasing relative significant increase financial as a result, firms with less influence have better performance (Sitana, 2014). Research studies have shown that there are two hypotheses signaling and pecking order theory but different studies use a different level of tests for research which made a different assessment of results (Brînduşa, 2012).

The above literature shows a different level of factors and theories with little association of firm capital structure. No study has focused on combining the firm's term factors and short-term business operation needs. These factors have more influence on capital structures and firm future performance. This study used dividend payment and tax as an additional factor because firm management plans require their fund's needs after payment of tax and dividend from profit. As most of studies showed that investors invest their funds in companies that have higher growth in profit and payment of dividends rather than that pay higher interest on their obligations. Firms require funds during their initial periods due to lower funds and lower profits.

Research Method
The research has used secondary data and performed Panel regression using fixed or random models based on the Hausman test results. The data for this study is collected from the listed firms in the PSX-100 index during 2016-2020. This research incorporates a sample size of 357 firms listed in the PSX 100 Index, belonging to various different sectors. All the financial statements are accessed using company official websites, while only listed firms are selected for the research using purposive sampling. In this research model, the dependent variable is profitability (EPS). While the capital structure is measured through different variables that are: total debt to total equity ratio, current ratio, firm size, tax and dividends.

Following models were adopted to examine the impact of capital structure on firm’s profitability.

\[
\begin{align*}
EPS &= C(1) + C(2) * SIZ + C(3) * DIV + C(4) * TAX + C(5) * CR + C(6) * TDTE \\
GROWTH &= C(1) + C(2) * SIZ + C(3) * DIV + C(4) * TAX + C(5) * CR + C(6) * TDTE
\end{align*}
\]

Where; C(i), (i=1…n) shows the unknown intercept for every entity (n entity – specific intercepts); SIZ = Size of the Firm; DIV = Dividends; TAX = Taxes; CR = Current Ratio; TDTE = Total Debt to Total Equity; EPS = Earnings per Share

Results and Discussion
The results section attempts to test the proposed model using statistical test. This research uses panel regression method to examine the model. Data for 357 companies was evaluated for the period of 5 years (2016-2020). The nature of the gathered data is panel cross-sectional data. Studies identified that, panel data is tested using the panel least square, fixed and random effect models. Most of the econometric equation shown fixed or random effect model is appropriate for this study using Chow test, LM test and Hauseman test. Considering this, researcher applied Hausman test in order to examine whether to focus the panel, random or fixed effect results. The Hauseman test favors random effect model which shows that chi square statistics value 3.22 with df. 5 and sig value 0.6648 ≥ 0.05 so random effect model results are selected for analysis.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>T-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-44.71491</td>
<td>13.00964</td>
<td>-3.437059</td>
<td>0.0006</td>
</tr>
<tr>
<td>Current Ratio</td>
<td>0.034806</td>
<td>0.093851</td>
<td>0.370867</td>
<td>0.7108</td>
</tr>
<tr>
<td>Dividend</td>
<td>6.751107</td>
<td>8.19E-07</td>
<td>0.824514</td>
<td>0.4098</td>
</tr>
<tr>
<td>Size</td>
<td>3.577075</td>
<td>0.862946</td>
<td>4.145187</td>
<td>0.0000</td>
</tr>
</tbody>
</table>
The above results suggest that the size of the firm has a significant impact on profitability while other variables like, current ratio, dividends, taxation, and TDTTE have a positive but non-significant relationship with profitability. Previous studies have also provided significant evidence to suggest that, firm size has a significant impact on profitability. This may be concluded that the bigger size of the firm implies them to attract capital on a cheaper basis which reduces cost and increases profitability. Another school of thought suggests that bigger size firms can achieve economies of scale by taking orders which again aid in reducing cost and significant asset utilization, which helps in increasing profitability. Similarly, the current ratio shows insignificant relationship with profitability. The current ratio has a positive (insignificant) relationship with profitability, this suggests that it has no influence.

The dividends have a positive but insignificant relationship with profitability this suggests that it has no influence. Some previous studies have identified that dividends effect profitability but in the longer run, as it is a strategic decision (Huang & Song, 2006). Taxation has a positive but insignificant relationship with profitability which suggests that it has no influence. TDTTE insignificant relationship with profitability. The TDTTE ratio has a positive but insignificant relationship with profitability which suggests that it has no influence.

Results about the growth suggest that size of the firm has no significant impact on profitability while other variables also have non-significant relationship with growth. The current ratio showed insignificant relationship with growth, which suggests that it has no influence. The dividends have shown insignificant relationship with growth, this suggests that it also has no influence. Similarly, Taxation and TDTTE showed insignificant relationship with growth suggested that these variables have no influence on profitability.

Conclu

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In conclusion, the research examines the impact of capital structure on profitability. Results from the random effect showed that among the variables current ratio, dividends, taxation, total debt to total equity ratio, the firm size is statistically significant to profitability. Since firms like automobile, cement, sugar is regarded as capital intensive industries in which elements like working capital are higher, firm size matters a lot. The larger firm size has many advantages like attracting more capital, attracting...
capital on less interest rate, financing can be attained on longer time period; the cost would be lower since, production is on economic scale thus, enhancing profitability. This study results suggest our academician, researchers and corporate managers must focus on above mentioned variables during their future planning, they must focus more on short-term financing to overcome the current operations related to working capital management, they should also focus on dividends and taxes as well.

More research variables whose impact can be witnessed in firms' capital structure decisions like shareholding pattern, cash conversion and cash flow management need to be included and explored in reference to reach the optimum capital structure. Further, future research can include more companies and more data from other sectors like automobile, manufacturing, etc. For managers, it is recommended that an optimum capital structure should be devised considering the financing situation. The targeted capital structure should be flexible. Managers also need to make their decisions according to the changes in the capital structure as a firm should possess earning power to generate revenues to meet its cost of capital and finance its future growth.

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Islamic Microfinance and Women Entrepreneurship Performance during COVID-19 Pandemic

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ABSTRACT

Purpose: In the contemporary era, women are playing a vital role in changing the global economy as entrepreneurs, workers, and consumers, yet they encounter many problems and obstacles in the development of entrepreneurship. This study aims to investigate the impact of Islamic microfinance on women entrepreneurship performance: mediating role of social capital and moderating role of opportunity for social interaction in South Punjab, Pakistan.

Design/Methodology/Approach: Data were collected from 183 women entrepreneurs, who were using Islamic microfinance, through the convenience sampling technique. Convenient sampling technique was used to collect the information. PLS-SEM was employed to statistically test the data.

Findings: This study results indicate that microfinance had a negative relationship with women's entrepreneurship performance. However, when Islamic microfinance led to the formation of social capital among women that eventually caused the women entrepreneurship performance. Moreover, the extent to which microfinance provisions affected the social capital of clients was dependent upon the microfinance providers facilitated social interaction among clients.

Implications/Originality/Value: This paper will give benefit to academics in preparing a plan for future research. Moreover, findings will also assist policymakers and IMFs to set out microfinance initiatives that will improve the betterment of clients and will maximize their enterprise results.

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Introduction

Microfinance is an important tool for improving the economic growth of the poor and a strategy to
reduce the level of poverty worldwide (Evelyn & Osifo, 2018; Newman et al. 2017). Ashok et al. (2014) pointed out in their study that the national income of the economy can be increased through women's entrepreneurship. The capital plays a fundamental role in such developments but the poor are suffering a paucity of funds. Therefore, access to funds is the primary need of the poor to established SMEs (Newman et al. 2017). Women face some socio-cultural attitudes, legal obstacles, lack of education and personal difficulties in getting finance. Albeit they need a small amount of money to start and develop their entrepreneurship.

The supply of microloans to poor people with the objective they should start entrepreneurial activity is known as microfinance (Khaval et al. 2013). the major purpose of such a small loan is to reduce the level of poverty by facilitating poor men and poor women to take part in economic activities and to gradually make them self-sufficient by producing financial gain (Siwale & Ritchie, 2012). The foregoing elements are studied to explore the ability of microfinance organizations to offer social interactions and to create confidence among the clients through periodic meetings, seminars and training facilities and expansion of support proffered by such organizations during the whole credit giving procedure (Agbeoko et al. 2017, Karlan & Valdivia, 2011).

Yunus established Grameen Bank for the promotion of microfinance in the economy, later the bank became successful and popular. A large number of microfinance institutions emerged globally after the success of Grameen bank (Bruton et al. 2011), established on the axiom that interest-based loans are better than donations to combat against poverty because such loans create responsibility in borrowers and provide them with a chance to have a start of activity like agriculture, business, etc. that generate income which ultimately able them to repay the debt.

During the last three decades microfinance has been considered a necessary development technique throughout the world, particularly in developing countries. Governments taking initiating various credit schemes that help the poor. Most of these schemes intentionally focus on women as they have limited access to credit facilities, have negligible access to wage labor, have a very small part of power in decision making in their homes but have excellent loan repayment records better than those of men’s. Therefore, women with little credit risk are targeted by microfinance institutions (Pitt et al. 2006).

Virtuously, Pakistan is a leading emerging economy with a population of 216.6 million of which 62% are living in rural settings (World Bank report, 2019), around 42% of Pakistani people are living below the poverty line. However, the poverty rate is highest in FATA and Baluchistan. During 2014-2019, the poverty level reduced from 49% to 35%, the poverty level in rural and urban areas is 52.6% and 9.6% respectively. To set up the microfinance institution, the government of Pakistan has established the Khushhali Bank (specialized in microcredit). Later, in 2001, the Microfinance Institutions (MFIs) Ordinance was published to regulate the activities of MFIs through the State Bank of Pakistan. Following MFIs such as Khushhali Bank, First Microfinance Bank Ltd, Tameer Microfinance Bank Ltd and Pak-Oman Microfinance Bank Ltd are working at a national level and Rozgar Microfinance Bank Ltd and Network Microfinance Bank Ltd are operating at the district level.

Another development in empirical research has come forward to know the qualitative factors which impact the success of microfinance (Siwale & Ritchie, 2012). Social relationships, a sense of individuality, shared understanding, trust, shared norms and values, cooperation and reciprocity are some ingredients of social capital that are important for the effective functioning of social groups. However, World Bank has defined social capital as attitudes, institutions and values which develop interactions among the people and ultimately, they take part in social and economic progress.

The research studies on the impact of microfinance upon alleviating poverty and adequate recovery of loans are lacking. However, how microfinance loan schemes influence the creation of new businesses and the growth of existing ones are new avenues for future research (Karlan & Zinman, 2011). Swapna (2017) pointed out that the impact of microfinance on women entrepreneurship performance be explored
and the mediating role of social capital on the above relation needed investigation (Haider et al. 2017). Furthermore, Newman et al. (2014) suggested examining the extent to which the opportunities for social interaction among clients, which were facilitated by microfinance providers, affected social capital.

The objective of paper is to examine the relationship between access to Islamic microfinance and performance of women entrepreneurship and also mediating role of social capital and moderating role of opportunity for social interaction. Therefore, following objectives are established:
1. To identify the role played by Islamic Microfinance (IMF) on women entrepreneurship performance during Covid-19.
2. To explore the mediating role of social capital in empowering women through IMFs.
3. To find out the moderating role of the opportunity of social interaction on social capital.

Our study focuses on the effect of Islamic Microfinance on women entrepreneurship performance in South Punjab, Pakistan. It is about the access of Islamic microfinance to invigorate the income-generating activities of women and the role played by social capital and opportunity for social interaction in the above relation. So the ensuing questions have emerged:
1. What is the impact of Islamic microfinance for promoting women entrepreneurs’ performance?
2. What is the mediating impact of social capital in the empowerment of women through IMF?
3. What is the moderating role of the opportunity of social interaction on social capital?

This paper is comprised of six sections. The first section introduces the matters to be studied. It states the objectives of the study and research questions. The second section presents the reference of extant and current research on the related subject. The third section is about the research methodology. In the fourth section, the results of the study are shown and in the fifth section, the results are discussed. The fifth section also states the limitations of the study and the future avenues of research. The sixth section is about references.

**Literature Review**

Microfinance is a small amount of credit provided for supporting the poor to become entrepreneurs (Nawai, 2010). Generally, small loan customers are small farmers, artisans, traders, vendors, service providers, blacksmiths and seamstresses. Microfinance is an effective method of reducing poverty, increasing financial development and increasing employment in society. According to Asian Development Bank (ADB), microfinance is the provision of monetary (i.e. microcredit), saving, money payment, insurance and remittance facilities to low-income individuals, poor and small businesses of poor (ADB, 2000).

The study by Titus et al. (2014) explored that the institutions dealing in microfinance had an impact on the growth of medium and micro-enterprises. They selected a random sample of 296 respondents through stratified random sampling. The results of the research revealed that microfinance institutions had an impact on the growth of medium and small enterprises. Entrepreneurship development, financial and management counselling, seminars, workshops, etc. have affected such growth. A similar study by Hipango & Dana (2012) investigate the opportunity and ability in relation to firm longevity, the results revealed that gender is a very important informative variable and face broad discrimination in terms of firm survival. A study by Karlan & Ratan (2014) demonstrates that microcredit accessibility increased the rate of saving and living standards of the poor. Even so, in spite of loans provided by MFIs globally, the impact of microloans on the poor has not been forever positive (Bruton et al. 2015).

Waithaka et al. (2014) conducted a study to assess the role of institutions dealing in microcredit for making micro and small enterprises flourish. The primary data was collected from 296 respondents through a questionnaire using the stratified random sampling method. To find out the significance of independent variables upon the development and expansion of micro and small enterprises, a simple regression model was applied. The results envisaged that the development of entrepreneurship requires factors such as counselling about matters like finance, management workshops, entrepreneurial skills and seminars that had a positive impact on micro and small enterprises.
Mahmood (2011) conducted research and explored the effect of microfinance services on women's empowerment and the development of their entrepreneurship in Pakistan. He found out that microfinance institutions cater loans to females for establishing their businesses. But all the women did not use the loan facility for starting their business. The study revealed that 62% of the female borrowers developed their businesses from microfinance facilities while the other 38% did not employ the small loan for this objective. This is because no training is provided by microfinance institutions to women.

Research by Umara et al. (2011) examine that microcredit can reduce the level, and they found that microcredit significantly improves the education of children and spending by households. In the same, Daud & Yusoff (2010) urged that social capital has outstanding contribution in enterprises by increasing knowledge capture, knowledge transfer, knowledge alteration that can guide to innovation. In their empirical research in Malaysia, King Valley, on 833 small and medium-sized businesses proved social capital exceptionally affects firm performance.

**Conceptual Framework**

The conceptual framework shows the direct relationship between microfinance and women entrepreneurship performance. The independent variable is assumed to have a direct relationship with entrepreneurship performance, while social capital plays a mediating role in microfinance-women entrepreneurship performance. This means social capital affects women entrepreneurs’ performance through microfinance. At the same time, microfinance and other variables have a relationship with both social capital and women entrepreneurs’ performance. Moreover, the degree to which microfinance provisions impact the social capital of clients is dependent upon the level to which microfinance providers facilitate social interaction among clients.

At present Yunus’s model of microfinance is accepted all over the world and is supposed to affect all economies. Still some institutions are reluctant to offer loans without collateral. Thus international research is needed to survey the quantum of microloans provided by MFIs, their impact on women's entrepreneurship development, the effect of collaterals on repayment of such loans and further need for such loans to women.

Previous studies found mixed results; microfinance has no achievable influence to reduce the level of poverty. The success of microfinance providers is that millions of small amounts of loans disbursed during the last three decades indicated the fulfilment of a host of needs of borrowers as has been revealed by literature review. However, the objective of creating entrepreneurship and poverty reduction objectives has been accomplished by MFIs and the loans they awarded lacked clarity (Bruton et al. 2011); this requires investigation. Hence the following hypothesis is developed:

*H1: Microfinance has a significant relationship with Women's entrepreneurship performance.*

Intangible resources, such as human capital, relational capital, structural capital is critically significant for the nourishment of organizations (Zhou & Fink, 2003) and social capital as well (Roxas & Chandee,
2011). Putnam (2000) found out that monitoring expenses can be reduced by social capital. Social capital is comprised of loyalty, norms, networks, and reciprocity between-group fellows (Marin et al., 2012) and a set of social relationships with people, business units, institutions, and communities.

Microlending in the form of groups is the best way of selecting borrowers, credit disbursement, recovery and a good substitute of collaterals (Mayous, 2001). Examples of group-based lending are the Grameen Model developed by Yunus in Bangladesh for the creation of self-employment based on credit cooperatives and saving and the model of self-help groups. Mayous (1998), Women get significant benefits from group-based microfinance by having access to loans, savings and social capital created by their economic and social network.

Light & Dana (2013) study on the topic of social capital boundaries in entrepreneurship, However, people of Alutiiq have ample social capital, used for economic purposes, however, did not apply for commercial entrepreneurship. Their results are comprehended that social capital support entrepreneurship only when supportive cultural capital is in place.

Van Bastelaer (2002) explores that the microfinance institutions and NGOs provide the needy a social collateral that logically replaces the need for collaterals whether physical or financial. Generally, microfinance institutions work on the idea of providing loans to groups where the female borrowers participate in oscillatory meetings, share problems, money transaction issues, look for attainable opportunities and suggestions on incumbent affairs. The officers of microfinance conduct meetings; the very purpose is to recover due to the instalment of the loan. If there is a default from any group member, the other group members pay on behalf of defaulting member. This is the idea of social collateral instead of physical or financial collateral and this is the social capital that is created and used by institutions providing microfinance. Thus, we developed the following hypothesis:

**H2: Social capital mediate the impact of microfinance on women entrepreneurship performance**

Social capital is the total resources i.e., actual resources as well as possible resources present in networks that are necessary for the working of people (Nahapiet & Ghoshal, 1998). The entrepreneur’s network possesses social capital along with other economic actors which are necessary for gathering timely information thus paving the way for identification and exploitation of opportunities (Tang, 2010). To get access to the credit facilities, group members are linked with each other in a transactional way instead of generating social ties in a true sense.

Lending groups are a source of negative pressure for repayment of loans because the group members want to avoid the responsibility of defaulting members (Montgomery, 1996). However, based on up-to-date findings, the impact of group lending seems to be positive rather than to be negative. Individual lending which gets credit via business training and support programs; their procedure should be studied. Consequently, it is clear from the foregoing discussion that the extent to which microfinance institutes provide opportunities to clients for interaction with social capital. Thus, require empirical research in a local context. Thus, the hypothesis:

**H3: The degree to which microfinance provision affects the social capital of clients depends upon the opportunity of social interaction the microfinance providers facilitate.**

**Data And Methodology**

In this paper, we have collected data from women entrepreneurs to recognize the relationship between entrepreneurship performance and microfinance. Women enterprises in South Punjab are the population of the study. To involve maximum respondents and be cost-effective, a convenience sampling technique was employed to select women enterprises as respondents. The primary data was collected through well-structured questionnaires as a survey method, which were filled by women respondents.

The Akhuwat (IMFI) has been selected as a case study to examine the effect of Islamic microfinance on
women entrepreneurs’ performance and the influence of social capital on this relationship as well as the impact of opportunity for social interaction on social capital were the main aims of the analysis. As stated above, a questionnaire was prepared to collect the data. For the preparation of the questionnaire, the researcher conducted detailed interviews with the managers of Akhuwat and UPAP. Thus, well-focused questions were adopted for all four constructs. All the questions were translated into Urdu (the local language) for the convenience of respondents. For sample selection, the convenience sampling method was employed due to the reason that it was an appropriate method for collecting samples from a big population with limited resources and minimum time span. This method of sampling is a non-probability sampling technique that involves selecting respondents haphazardly because they are easily available access to the researcher. The process of data collection took about a period of one month to collect 183 questionnaires filled by respondents.

Data were analyzed in three stages. Firstly Confirmatory Factor Analysis (CFA) was used to test the measurement theory. The indicators/fit indices of chi-square/degree of freedom, and Confirmatory Fit Index (CFI) and Root Mean Square Error of Approximation (RMSEA) and P Close were used. All fit indices met the criteria levied by Hair et al. (2017, 2010). Secondly, reliability and validity measures were calculated using composite reliability, Alpha (Cronbach) reliability and convergent and discriminate validity. The data possessed required reliability and validity measures. Lastly, a structural model was tested through Structural Equation Modeling and hypotheses were also tested. The hierarchical regression method was used to test the moderation.

**Results And Discussions**

The purpose of the paper is to examine the role of MFIs played in the success of women's entrepreneurial performance and to determine the mediating impact of social capital in empowering women through Islamic microfinance institutions. Further, we examine whether social interaction on social capital moderates the relationship between Islamic microfinance and women’s business performance. The results provide an interesting outcome and will provide helpful insights into the research area of entrepreneurship, Islamic microfinance and social capital. Descriptive statistics show the frequency and cumulative percentage of certain characteristics of women entrepreneurs. Those characteristics are age, family size, education, business type and source of finance.

### Table 1: Descriptive Statistics

<table>
<thead>
<tr>
<th>AGE</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-34</td>
<td>33</td>
<td>18.0</td>
<td>18.0</td>
</tr>
<tr>
<td>35-44</td>
<td>105</td>
<td>57.4</td>
<td>75.4</td>
</tr>
<tr>
<td>45-54</td>
<td>45</td>
<td>24.6</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Family size</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2</td>
<td>6</td>
<td>3.3</td>
<td>3.3</td>
</tr>
<tr>
<td>3-4</td>
<td>72</td>
<td>39.3</td>
<td>42.6</td>
</tr>
<tr>
<td>5-&lt;</td>
<td>105</td>
<td>57.4</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Formal Education</td>
<td>29</td>
<td>15.8</td>
<td>15.8</td>
</tr>
<tr>
<td>Primary Education</td>
<td>56</td>
<td>30.6</td>
<td>46.4</td>
</tr>
<tr>
<td>Secondary Education</td>
<td>77</td>
<td>42.1</td>
<td>88.5</td>
</tr>
<tr>
<td>Graduation And Above</td>
<td>21</td>
<td>11.5</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Business Type</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beauty Parlor</td>
<td>29</td>
<td>15.8</td>
<td>15.8</td>
</tr>
<tr>
<td>Boutique</td>
<td>62</td>
<td>33.9</td>
<td>49.7</td>
</tr>
<tr>
<td>Shop</td>
<td>81</td>
<td>44.3</td>
<td>94.0</td>
</tr>
<tr>
<td>School/Academy</td>
<td>4</td>
<td>2.2</td>
<td>96.2</td>
</tr>
<tr>
<td>Others</td>
<td>7</td>
<td>3.8</td>
<td>100.0</td>
</tr>
</tbody>
</table>

### Table 2: Descriptive statistics and correlations

<table>
<thead>
<tr>
<th></th>
<th>MF</th>
<th>WEP</th>
<th>OP</th>
<th>SC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>4.0191</td>
<td>4.4350</td>
<td>3.3151</td>
<td>3.3038</td>
</tr>
</tbody>
</table>

732
### The characteristics of the subjects are shown in table 1. Table 2 presents mean values, standard deviations and correlations for the important variables used in this study. The correlation values range from 0.211 p<0.05 between social capital and microfinance to 0.896 at p<0.01 between opportunities for social interaction and social capital.

#### Reliability and Validity Test
We apply the confirmatory factor analysis (CFA) test to check the reliability and validity of variables (Islamic Microfinance, Women Entrepreneurship Performance, Social Capital, and Opportunity of Social Interaction) used in this study. Initially, the measurement model of the current study added four variables with forty-one observed variables. We employed a few acceptable standards to document the findings, included CMIN, CMIN/DF, CFI, SRMR, RMSEA, and P Close as shown in table 3. Initial results are not according to criteria set by Hair et al. (2010). Consequently, went through modification indices and squared correlations process, where a few items were removed. Finally, the indices sufficiently met the criteria established by Hair et al. (2010). The CFA is also illustrated in Figure 2.

#### Table 3: Model Fit Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Estimate</th>
<th>Threshold</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIN</td>
<td>164.839</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>DF</td>
<td>111</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CMIN/DF</td>
<td>1.530</td>
<td>Between 1 and 3</td>
<td>Excellent</td>
</tr>
<tr>
<td>CFI</td>
<td>0.978</td>
<td>&gt;0.95</td>
<td>Excellent</td>
</tr>
<tr>
<td>SRMR</td>
<td>0.060</td>
<td>&lt;0.08</td>
<td>Excellent</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.054</td>
<td>&lt;0.06</td>
<td>Excellent</td>
</tr>
<tr>
<td>P Close</td>
<td>0.331</td>
<td>&gt;0.05</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

#### Table 4: Cronbach Alpha reliability

<table>
<thead>
<tr>
<th>Factors</th>
<th>Cronbach Alpha reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women entrepreneurship (WEP)</td>
<td>0.742</td>
</tr>
<tr>
<td>Opportunities for social interaction (OSI)</td>
<td>0.896</td>
</tr>
<tr>
<td>Social capital</td>
<td>0.713</td>
</tr>
<tr>
<td>Islamic Microfinance</td>
<td>0.705</td>
</tr>
<tr>
<td>Overall Cronbach alpha</td>
<td>0.766</td>
</tr>
</tbody>
</table>

#### Table 5: Validity Measurement Model

<table>
<thead>
<tr>
<th></th>
<th>CR</th>
<th>AVE</th>
<th>MSV</th>
<th>MaxR(H)</th>
<th>OSI</th>
<th>WEP</th>
<th>IMF</th>
<th>SC</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSI</td>
<td>0.950</td>
<td>0.767</td>
<td>0.003</td>
<td>0.982</td>
<td>0.876</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEP</td>
<td>0.894</td>
<td>0.643</td>
<td>0.010</td>
<td>1.007</td>
<td>0.020</td>
<td>0.802</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMF</td>
<td>0.758</td>
<td>0.550</td>
<td>0.104</td>
<td>1.128</td>
<td>-0.045</td>
<td>-0.099</td>
<td>0.742</td>
<td></td>
</tr>
<tr>
<td>SC</td>
<td>0.71</td>
<td>0.51</td>
<td>0.104</td>
<td>0.798</td>
<td>0.051</td>
<td>0.027</td>
<td>0.323**</td>
<td>0.588</td>
</tr>
</tbody>
</table>

All factors sufficiently surpass the Cronbach alpha reliability criteria of 0.70 while the overall Cronbach alpha value for the data is 0.766.
Subsequently, CFA fulfils the measurement theory criteria, thus we examine the psychometric properties. The CR should be higher than 0.70 (Bagozzi & Yi, 1988), CR should also greater than Average Variance Extracted (AVE), while AVE should be greater than 0.50 (Hair et al., 2010). Finally, AVE of each construct should be greater than squared correlations with other constructs (Fornell & Larcker, 1981). Our construct fulfils this criterion, therefore possess convergent validity and discriminant validity as well.

**Testing of Hypothesis**

Hypothesis 1 is rejected as Islamic microfinance has a negative relationship with women entrepreneurs. The coefficient value indicates that a lower perception of Islamic microcredit worthiness leads to a higher women entrepreneurship performance. Findings are contradictory to our initial assumptions that better perceptions of microcredit worthiness amend the efficiency of women entrepreneurs.

**H2: The relationship between microfinance and women entrepreneurship performance is mediated by social capital.**

<table>
<thead>
<tr>
<th>Paths</th>
<th>Estimate</th>
<th>S.E.</th>
<th>C.R.</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social capital&lt;---Micro finance</td>
<td>0.388</td>
<td>0.133</td>
<td>2.915</td>
<td>0.004</td>
</tr>
<tr>
<td>Women entrepreneurship &lt;---Micro finance</td>
<td>-0.484</td>
<td>0.142</td>
<td>-3.398</td>
<td>***</td>
</tr>
</tbody>
</table>

*Figure 2: Confirmatory Factor Analysis*

*Figure 3: Path analysis of mediation model*
The above results show that social capital mediating the relationship of microfinance with women entrepreneurship performance ($\beta=0.374$, $p<0.001$). Hence Islamic Microfinance leads to create social capital among females that sooner or later leads to a higher women business performance. Table 6 and figure 3 exhibits the same.

### Table 7: Moderation Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td></td>
</tr>
<tr>
<td>1 Micro finance</td>
<td>0.388</td>
<td>0.133</td>
<td>2.907</td>
</tr>
<tr>
<td>2 Micro finance</td>
<td>0.391</td>
<td>0.133</td>
<td>2.934</td>
</tr>
<tr>
<td>Opportunity for social interaction</td>
<td>-0.028</td>
<td>0.022</td>
<td>-1.268</td>
</tr>
<tr>
<td>3 Micro finance</td>
<td>0.467</td>
<td>0.126</td>
<td>3.700</td>
</tr>
<tr>
<td>Opportunity for social interaction</td>
<td>-0.239</td>
<td>0.048</td>
<td>-5.027</td>
</tr>
<tr>
<td>Interaction</td>
<td>0.093</td>
<td>0.019</td>
<td>4.939</td>
</tr>
</tbody>
</table>

**Figure 4:** Moderation analysis, Opportunity strengthens the positive relationship between microfinance access and social capital.

A hierarchical regression analysis was employed to examine the moderating relationship. Firstly, regression analysis between social capital and Islamic microfinance has been carryout. In the next step, moderation analysis has been done between social capital and microfinance and moderator variable opportunity for social interaction. Thirdly, an interaction term is obtained by multiplying the independent variable with the moderator variable. Further, to decrease the risk of multicollinearity resulting from the correlation, these variables have had their data mean centred (Aiken & West, 1991; Cronbach, 1987). The increase in R2 from 0.211 to 0.765 shows that there is a significant direct moderation result of opportunity for social interaction ($F=8.952$, $p<0.001$). Thus, the opportunity for social interaction strengthens the positive relationship between Islamic microfinance access and social capital as illustrated in figure 4.

### Conclusions

Our first hypothesis is rejected. As stipulated in our research, microfinance accessibility does not relate to the positive performance of women entrepreneurship. Our study findings are contrary to previous studies results demonstrate that microfinance positively affects individuals and SME (Osunde & Mayowa, 2012). Major explanations of our contrary results are some obstructions such as deficiency of collaterals, a higher rate of interest on loans, documentation of business and lack of knowledge and skill that prevent entrepreneurial growth (Salum, 2014). In the same, Mahmood (2011) documented that a similar process is ensured to set up small businesses in Pakistan, though MFIs provide small loans to female entrepreneurs to start/enhance their small businesses which was a major contingency for the female entrepreneurs.
The H2 is accepted that the relationship between microfinance and women entrepreneurship performance is mediated by social capital. Our results are consistent with the findings of Kickul et al. (2007), which documented that social capital intensifies business growth and market expansion. Similarly, Jiang et al. (2012) evidence that social capital positively contributes to the success of small businesses. Likewise, Van Bastelaer (2002) supports this signification that MFIs help individual borrowers in the shape of social capital that is substitute of financial and physical collaterals.

The H3 also acknowledged the moderating role of opportunity for social interaction which reinforced the positive link of Islamic microfinance access with social capital. Our results are consistent with previous studies (Bruton et al. 2011); microfinance programs lead to greater structural and relational social capital between clients. Furthermore, there is extra group pressure to prevent obligation in terms of failing payments possibly opportunities of social interaction among peer members that significantly add to the social capital (Barnett, 2011).

It is recommended to the government enhance the microfinance facility to boost up small and medium enterprises in the country. The government should develop training institutes to promote entrepreneurial education which will help micro-enterprises to reap new opportunities. Moreover, suitable technologies should be introduced to exploit their potential in getting reasonable profit from loan proceeds. The microfinance institutes should provide opportunities for social interaction through regular meetings, seminars, training, etc. The government should come forward to open new microfinance institutes and the staff of such institutes must have knowledge and skill to provide quality service to poor borrowers. They should provide insight into business opportunities and discuss business plans with prospective women entrepreneurs. If poor women were equipped with activities of microfinance, business opportunities and working plans, it will pave the way going towards poverty alleviation and sustained growth in the country. Overall results indicate that social capital significantly mediates the microfinance and women entrepreneurship performance relationship, the effect of social capital is strengthened when moderated by the opportunity of social interaction.

This paper has highlighted certain aspects that require further studies in this area. This study was limited to South Punjab only. In the future, the researcher should add more samples from all provinces of Pakistan so that results will generalize nationally. Further to add more factors that affect women's entrepreneurial activities and their perception of the creditworthiness of MFIs. As data has been taken from Akhuwat and UPAP, therefore, the results are less generalized. Moreover, future researchers may include the impact of important factors such as training, savings and empowerment of women. As at present the focus of the majority of MFIs is on loans and their recovery. Even the very important variable namely savings is not well established in Pakistan.

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An Exploratory Inquiry into the Psychological Biases in Financial Investment Behavior Evidence from Pakistani Financial Markets

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**ABSTRACT**

**Purpose:** This research aims to explore the psychological biases in the investment behavior of Pakistani investors, which refers to the natural inclination of investors towards specific financial products based on certain perceptions developed through information or news relating to the issuer of financial products.

**Design/Methodology/Approach:** A sample of twelve actively participating investors were selected in this research contacted through telephone in which the conversations were tape-recorded with the consent of the interviewee. It was then transcribed and coded into Ms. Word, or themes were developed.

**Findings:** Thematic analysis was conducted over the responses received; the results suggest that due to lack of training, knowledge relating to an investment in financial products, the behavior of investors is highly biased; partly either because of their association in the form of employment with issuing authorities or because of the news or information floated relating to financial products of the various companies.

**Implications/Originality/Value:** The study has many practical implications; the financial managers and consultants can design financial management behavior practical learning approach to reduce biases. Also, stock stockbrokers, investors identify such biases and reduce their impact. Furthermore, this study highlights the philosophical paradigm through ontological and epistemological understanding.

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Introduction

Financial Investment behavior is comprehensive decision-making influenced by a variety of factors. Individuals behave differently when making financial decisions. There are decisions based on personal judgment, whereas other decisions are made on many different factors. These financial decision-making processes become easier when different varieties are well understood by the decision-maker. Similarly, these decisions become difficult when financial complexity, i.e., risk, ambiguity, and choice overload, can seriously affect the household earning outcome. (Awais et al., 2016). Household financial management practice may be categorized as cash flow management, debt management, and investment management. (Hilgert et al., 2003) To understand this from the context of business enterprise is to examine the relation of designing a product according to the need of the household. The contemporary financial market offer variety of different financial products. This aids more to the wards complexity of decision making. (Diliberto [2006]).

For an investor, effective decisions relating to commercial economics sources steer towards achieving desired results and to progress towards economic upliftment. (OECD 2004). Financial satisfaction refers to an increase he economic well-being-and hence an essential determinant of the future course of action(Vera-Toscano et al., 2006). In Pakistan, particularly Karachi Financial market in the given circumstances coupled with enormous complexity with the high number of companies in the markets offering numerous shares alternatives abound; getting insights into how investor responds to that situation when the actual decision-makers are inquired is particularly important, particularly in the role of investor biases. Previous studies have focused on the factor that affects investors' decision apropos financial decision. However, no attempt is made to understand the phenomena from the perspective of companies offering companies. This is because investment decisions have become complex, and therefore this research will help financial product companies determine different biases to take into account while offering their products is an essential part of a household’s financial management practice (Diliberto [2006], Mudholkar and Sadique [2007]), understanding it in context of a business enterprise is a significant feature to design products accordingly; with the increasing competition in financial markets and new products being introduced every day makes this worthwhile (OECD 2004), for an investor, decisions regarding economic stability and enhancement of portfolio marks the notions of increased economic benefit. Nevertheless, massive transition and complexity in financial markets in introducing financial products has considerably increased over the years leading to heuristics and biases in financial investment behavior (Sjoberg and Engelberg [2006], Lovric, Kaymak and Spronk [2008]). Consequently, in the given circumstances coupled with enormous complexity with multiple actors in the marketplaces posing various asset substitutes abound; getting insights into how investor responds to that situation when the actual decision-makers are inquired is particularly important, particularly in the act of shareholder prejudices (Olsen [2007Pompeianian [2008]).

Problem Statement

In Pakistan, there are many financial products offered, which aids in the complexity of decision-making. Many factors affect the decision-making making of investors. Therefore, we are trying to explore the psychological bias that affects risk-taking taking ability and decision-making. The biases also led as beliefs and preferences act as lenses in the decision-making thought process hence; these biases and preferences could better be studied when real-time active investors are inquired on their beliefs and preferences.

Objectives

There are different reasons why an individual makes a particular decision regarding the financial investment. These decisions then impact the future outlook of the invite statement portfolio. How do they make these decisions regarding financial investment is the question? What beliefs and attitudes help make these decisions? The study investigates the biases that help those decisions and whether these biases are flaws or some design of investor’s mind. This research is unique in its methodological and
findings point of view as no previous research has been conducted on the biases of decision-making of financial investors in Pakistan.

**Literature Review**
Households ‘Old’s welfare rest on the quality of their financial decision-making. These financial decisions serve as the achieving landmarks or despairing individual welfare. Recent research indicates that individual strives to make the most of their financial decision by improving their portfolio by reducing risk. (Hilgert et al., 2003) There are many financial theories, for example, Modern Portfolio Theory, Capital Asset Pricing Model, Efficient Market Hypothesis, that describes the financial management behavior of an individual.

Nevertheless, the thing in the market does not usually follow financial theories. The individuals, while making a decision, depends a lot on irrational investment behavior. These attitudes disregard the rational approach and therefore are considered biases in decision making. These attitudes are part of an individual, and more often than not, the investor does not even know apropos to these biases and therefore fail to overcome these behavior which results in inappropriate decision making. (Kubilay & Bayrakdaroglu, 2016) Thus effective financial decision-making requires knowledge-based approach and reduction biases.

**Different Psychological biases**

**Rule of Thumb (heuristics)**
Heuristics is basically the rule of thumb, which explains how investors make a decision during uncertain situations based on emotional and mental factors along with a trial-and-error basis. This way, investors usually gather information related to the situation; however, they make decisions based on their judgment, which is far from rational decision-making and can lead to poor results. (Kubilay & Bayrakdaroglu, 2016)

**Representative Bias**
The investor looks for the similarity of the cases solved in the past. Alternatively, the decision-making that has come through in the past. The investor looks for similar qualities of shares. The investor makes a decision based on past successful decisions. (Marchand, 2012)

**Overconfidence Bias**
The investors may not be trained or skilled enough, though they make decisions based on their ability to estimate information. They overemphasize their ability to make the decision based on what they believe know is enough to make a suitable decision. Investors may believe that they have more skills than other average investors. The tendency to believe that they know more than they actually know. (Marchand, 2012)

**Anchoring Bias**
The ability of an individual to rely on a single trait or a piece of information while deciding is called anchoring bias. For example, some people may react to the initial information and base their forecast on it. (Kubilay & Bayrakdaroglu, 2016)

**Availability Bias**
The investor rests their decision based on the information most readily available. Unfortunately, this approach lacks the critical analysis of the situation and can lead to adverse results. (Kubilay & Bayrakdaroglu, 2016)
Prospect Theory
The prospect theory was initially proposed by Kahneman and Tversky (1979). This theory purports that there are two different phases in any choice. One is evaluation, and the other is framing. The Prospect theory was initially advocated by Kahneman and Tversky (1979) and advanced by Daniel Kahneman, which crowned him with Noble laureate in the discipline of Economics. The concept put forward segregates the decision process into phases: The initial phase is demarcated as framing and the succeeding stage of evaluation. (Kobilay & Bayrakdaroglu, 2016) The theory explains that investors have diverse approaches in coping with risk and uncertainty. The investor does not avoid risk in a difficult situation. However, they avoid risk while earning a good return. This is also called the risk aversion concept, in which the financial decision-maker is more inclined towards risk when faces losses and is more prone to risk-averse when there is a chance of a gain. (Kobilay & Bayrakdaroglu, 2016) The regret aversion is another essential psychological phenomenon that exerts that people make mistakes in their financial investment management, the undesirable emotion that arises after these choices restrict them from making other choices. As a result, they try to hold loss-making shares and try to sell gain-producing shares immediately. Investors do not want to be in negative feelings for a very long time, and therefore they adjust their emotions by selling the profitable share to ward off negative feelings.

Cognitive dissonance discusses the two inconsistent views that the person holds. This yields distress in the investor's mind, so they try to reduce one of these views by modifying one of their attitudes. For example, when avoiding the feeling of pain, they try to convince themselves apropos rationality of their decision.

The mental accounting is another psychological bias that exerts that investor attach different values using cognitive skills. The way they will spend it depend on it is subject to inconsistent mind operation without following any economic guidelines. Because of such an attitude, investors fail to embark on the opportunities while designating money for preconceived investment. The irrational decision-making behavior may end up spending more and saving less for future opportunities.

Self-control is another psychological behavior that investors follow when they are unable to plan for the future by investing too much today. As a result, investors may inaccurately spend without realizing the asset imbalance. (Kobilay & Bayrakdaroglu, 2016)

Philosophical Underpinning
Till the 19th century, only one method was assumed as an objective reasoning research methodology. At the beginning of the 20th century, another saw a new research method evolve, i.e., Qualitative research methodology. This methodology emphasizes the construction of the social reality and thus can also be justified as an objective research method. (Soiferman, L.K., 2010). The qualitative method justifies that reality can be gained through multiple sources, not just from scientific facts, as observed in quantitative research. In the qualitative method, the bonding of the observer with the object signifies the fact. The ontology of qualitative research is the subjective lens to view the reality. (Simon, 2011). The qualitative research follows interpretative research philosophy, which undermines that reality is interpreted from the data collected. The types of methodological grounds established depend more on the question the research is trying to answer. The researcher gathers the data by observing or interviewing the participants in the natural setting, converting data into meaningful themes, and then developing theories inductively. (Janosik, 2005)

Themes
Market Capitalization (Historical data, index points, buying power, market sentiments)
Diversification (preferable investment)
Riskiness (risk-averse, risk-taker, volatility, growth and defensive strategy, holding back for opportunities, financial indicators, luck, no benchmark, random selection)
Experience in the same field (personal experience in the field, familiar products, and favorable sectors)

**Market Capitalization**
The theme entails the total capital invested by any investor in the capital market; the majority of respondents in the research believe that the whole of the investment that an individual decision-maker brings to the market is based on the certain expectations associated with it, this includes the amount of capital initiated by the investor, total points that a particular stock increases or decreases in any single day, the buying power of the investor, and lastly the market sentiments- the word of mouth or the perception created in the minds of overall investors, altogether, these elements relating to the investment behavior are highly associated with these factors, if these factors portray positive incentives there are chances that an investor will definitely invest his/ her savings in that financial product.

**Diversification**
This theme of the research entails the spread of the total investment across various securities or financial products; the respondents highly perceive that any investment diversified across multiple securities or financial products will tend to bring large amounts of profits, and this diversification accordingly modifies the investment behaviors of investors willing to put forth their savings into different financial products.

**Riskiness**
The transcript of interviews clearly indicate that the investment in financial products is highly uncertain and that there are behaviors that need to be understood by the investors, for example, risk-taking and avoiding risks are both two opposite sides of one aspect, an investor tends to think as a broad rather than sticking to his/ her safe zone, there are circumstances when you have to invest your entire savings and come up to know that investments should have been placed at a better place, or before investing your money, one should make sure that the money invested is in a portfolio that has the ability to brings good profits back in hands, so this theme containing the riskiness behaviors should be taken into account very seriously.

**Experience**
This theme entails one's association with any company; as per the interviews by the researcher, it would be noted that majority of respondents were of the views that they usually opt for financial products which are highly familiar or that some basic knowledge of the issuing authority, this indicates that the respondents were not aware of the other techniques or options available for them to invest in stocks or financial products which are more potential products that might be more profitable for the investors than the existing portfolio of investments.

**Research Methodology**

**Research Design**
We have embarked on exploratory qualitative research, which consists of taking interviews from a financially active shareholder of Karachi. These participants buy and sell shares on a daily basis and therefore were considered crucial in our study. Because of the pandemic, Hussain Khawaja and Jameel Ahmed Khan conducted a telephonic interview. A qualitative thematic analysis study was assumed to be most appropriate as we wanted to explore in-depth information and analyze the impact of different biases in the decision-making process. Ethics approval was taken from the Institute of Business Management.
Sampling and Recruitment
The sampling of data was based on purposive sampling. This is due to the fact that we needed the data from investors who are frequently investing Karachi Stock Exchange. This provided us with a wide range of raw data from different investment behavior. The Table shows how the participants of the interview shaped. The entire information providers (interviewees) in this study participated voluntarily. The interview participants were given an invitation to participate in an interview. This also consists of an information leaflet and interview guide. The data was gathered until we attained data saturation.

Table 2: Respondents Information

<table>
<thead>
<tr>
<th>Interview</th>
<th>Gender</th>
<th>occupation</th>
<th>Location</th>
<th>status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Male</td>
<td>Investor</td>
<td>Karachi</td>
<td>Active Investor</td>
</tr>
<tr>
<td>2</td>
<td>Female</td>
<td>Internal Auditor</td>
<td>Karachi</td>
<td>Active Investor</td>
</tr>
<tr>
<td>3</td>
<td>Male</td>
<td>Doctor</td>
<td>Karachi</td>
<td>Active Investor</td>
</tr>
<tr>
<td>4</td>
<td>Male</td>
<td>Investor</td>
<td>Karachi</td>
<td>Active Investor</td>
</tr>
<tr>
<td>5</td>
<td>Male</td>
<td>Real Estate Agent</td>
<td>Karachi</td>
<td>Active Investor</td>
</tr>
<tr>
<td>6</td>
<td>Female</td>
<td>Private Job</td>
<td>Karachi</td>
<td>Active Investor</td>
</tr>
<tr>
<td>7</td>
<td>Male</td>
<td>Private Job</td>
<td>Karachi</td>
<td>Active Investor</td>
</tr>
<tr>
<td>8</td>
<td>Male</td>
<td>Government Job</td>
<td>Karachi</td>
<td>Active Investor</td>
</tr>
<tr>
<td>9</td>
<td>Male</td>
<td>Investor</td>
<td>Karachi</td>
<td>Active Investor</td>
</tr>
<tr>
<td>10</td>
<td>Male</td>
<td>Investor</td>
<td>Karachi</td>
<td>Active Investor</td>
</tr>
<tr>
<td>11</td>
<td>Male</td>
<td>Investor</td>
<td>Karachi</td>
<td>Active Investor</td>
</tr>
<tr>
<td>12</td>
<td>Male</td>
<td>Teacher</td>
<td>Karachi</td>
<td>Active Investor</td>
</tr>
</tbody>
</table>

Data Generation
The average duration of the interview was 27 minutes. The most extended interview lasted for 35 minutes, and the shortest interview was 22 minutes. The interviews were conducted from 10th August 2020 to 20th August 2020. Interviews were conducted in Urdu and English according to the interviewee's preference. The interviewee was verbally informed before the interview regarding the intention to conduct the interview, and verbal consent was also taken. The interviews were initiated with a topic guide. However, participants were given complete freedom the put forward their views.

Data handling and Analysis
The data gathered through interviews were tape-recorded and then were transcribed by Jameel Ahmed khan and Hussain Khawaja. The transcripts of the raw interview were gathered on MS word document. The iterating analysis was undertaken in order to obtain codes and themes. The analysis was also encouraged to obtain any extreme case into the account. We analyzed the data vigilantly without drawing any interview bias into the study. The data was analyzed using Nvivo software.

Method of Reasoning
The inductive reasoning is defined as a type of research that moves from experience and observation to developing themes to constructing a theory. In other words, the inductive reasoning approach moves from specific to general. (Soiferman, L.K., 2010). In this study, the data is collected from individual investors to gain an understanding of the biases of their investment behavior.
The Rigorousness of Research
The qualitative method is criticized for lack of scientific measurement that outlines the credibility of the data. (Nowell et al., 2017) state that there are a number of ways to achieve the credibility of qualitative thematic analysis research; one such method is Member Checking. In this study, we confirmed the finding of the raw data with all the respondents in order to test the interpretation is achieved in accordance with the respondent utterance.

Transferability
Transferability refers to the generalizability of the finding. (Nowell et al., 2017) This study provides a detailed account of active investor biases and how financial investors can improve decision-making in the natural setting.

Table 3: Responses Coded

<table>
<thead>
<tr>
<th></th>
<th>A: Diversified Investments</th>
<th>B: Experience</th>
<th>C: Market capitalization</th>
<th>D: Risk behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Interview 02</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Interview 03</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>Interview 04</td>
<td>1</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>Interview 05</td>
<td>0</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>Interview 06</td>
<td>1</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>Interview 10</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>Interview 11</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>Interview 12</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>Interview 07</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>Interview 08</td>
<td>0</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>Interview 09</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td>Interview 1</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>
Table 4: Mind Mapping

Results and Discussions
This research aims to study the psychological biases in investment behavior in the context of Pakistani investors. These psychological biases mean the general tendency of an investor towards any financial product of a company, he or she has own preferences and attitudes towards a financial product that influences and alters the actual investment behavior, by following the rigorous process of conducting interviews from the selected respondents from Pakistan Stock Exchange duly registered with brokerage houses, we conclude that the investors in Pakistani context are heavily going through some biases, which significantly affect their investment behaviors.

Firstly, there is a specific set of assumptions that an investor considers before making an investment in any financial product; these assumptions vary according to their professional and social circle, assumptions include such as country’s political or economic conditions shall remain same so does the volatility of prices of financial products, which subsequently creates hope for the investors that this volatility in the prices acts as a way to maximize profits for investors, an employee working in Oil and Gas sector also an active investor of stock market develops such expectations accordingly as there is an energy crisis in the country and this has remained a trend in the country that the prices of commodities shall always fluctuate, similarly a banking employee has similar sort of expectations due to access to the financial system of the country. Another assumption includes that the world agrees on the fact that the stock markets are always manipulated and that some big guns of the country strongly influence the way it has to operate, for example, if people from bureaucracy has invested their savings into the sector of
their choices, they can affect the way market operate in the context of that sector. Investors have similar sort of perceptions/assumptions related to the Pakistan Stock Market as well. Considering these assumptions, their behavior related to any financial product is affected accordingly. From the literature point of view, the investors in the Pakistani Stock Exchange are incredibly biased in terms of their ability to trade in the stock market, which requires at least basic knowledge to trade financial products of listed companies. The literature supports our findings and endorses that the investors in Pakistani markets are biased in these two following categories.

**Heuristics Biases**
Since an investor always perceives that the market is highly uncertain and the history confirms this notion, therefore, an investor, without going or referring to the fundamentals of any sector or company, invests his or her money in the stock market in a time which he/she considers as the uncertain time and anything is possible, with the expectation of appreciation in the price of a stock, since he/she is a working employee of any company in which the same individual has invested money, considering the inside information might change his or her Destiney.

**Overconfidence Biases**
As per our observation from the selected respondents, the majority of the respondents lack training when it comes to trading financial securities in Pakistan; without the basics of any company, an investor creates a notion into his or her mind expecting that the investment put forth will always bring positive returns to him. This way, the investors are also the victims of overconfidence biases, considering their level of knowledge is enough to understand the game behind the trading mechanism in the stock market.

**Conclusion**
This research investigation concludes on the findings that the investment behavior of investors should genuinely be based on merit of the financial products rather than other factors relating to the perception of investors which develops from time to time, considering the market for financial products in Pakistan, investors in Pakistani stock market are not that much trained to actively invest in the financial products, investment in financial products requires the initial fundamental and technical analysis which at least requires the basic understandings of financial terms so that an investor actively investing in financial products of any company might initially goes some basics to understand the market sentiments of financial products but here; majority of the investors belong to a class that has no basic education; who actively invest in the stock market, our sample we considered were individuals from different spheres of life including medical and engineering background, for these respondents, investment in financial products is highly biased, as per the responses deducted from thematic analysis, there are investors in Pakistani market who never consider any training neither any consultancy from specialized experts, therefore; investment behaviors in context of Pakistani investors investing in financial products is entirely different from those of others.

The primary kind of biases that people are going through in the Pakistani context are heuristics and overconfidence biases; both types of biases suggested by the literature is strongly observed in the case of Pakistani investors, which ultimately shows the lack of awareness amongst the Pakistani investors.

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Capital Account Liberalization Institutions and Economic Growth in the Emerging World

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**ABSTRACT**

**Purpose:** The relationship between capital account liberalization and economic growth has been a fervently discussed subject among economists and policy-makers. The role of institutions is imperative to comprehensively investigate the impact of financial openness on growth. The objective of the study is to inspect the nexus between financial liberalization and economic growth after incorporating the contribution of institutional quality.

**Methodology:** A panel of data on 17 emerging market economies (EMEs) is used for the period 1995-2019. We employ the GMM technique by using different de facto and de jure measures of financial liberalization along with institutional variables.

**Findings:** The empirical results illustrate that better quality institutions strengthen the connection between capital account liberalization and output growth in the emerging World.

**Implications:** The policymakers should focus on the more beneficial nature of financial liberalization such as FDI. Also, the policy should be aiming at availing the services of efficient human resources with proper institutional infrastructure.

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**Introduction**

Liberalizing the movements of capital across countries is considered to be an important economic event of the past. The liberalization of capital account provides opportunities for the investors to avail foreign capital in case of capital deficiency. Capital account liberalization is very important for developing countries to remove the deficiency of domestic savings to boost up economic growth and productivity. However, liberalization can bring economic volatility, especially in emerging market economies.
The finance growth nexus has been a hotly debated topic among economists and policymakers. The traditional views about finance and growth relation tend to underestimate the role of institutional quality. This study tries to contribute to the literature by incorporating the role of institutions with a special reference to emerging market economies. The contribution of institutions in the finance-growth relation is imperative to understanding the dynamics of economic development. According to economic theory, a robust institutional infrastructure may significantly contribute to GDP growth in the long run. Goldsmith (1969) found a positive link between institutional arrangements and output growth in the long run. The positive impact of institutions in finance growth relation is attributed to the enhancement of allocative efficiency of financial resources. The influx of foreign finances from the capital-abundant nations creates positive spillovers when utilized for availing profitable investment opportunities.

McKinnon (1973) as well as Shaw (1973), both suggest the abolition of government restrictions and regulatory controls on the financial system. The liberalization reforms concerning the financial flows triggered massive foreign capital inflows to the emerging market economies in the late 1980s. In the presence of proper financial intermediation, these foreign resources can stimulate economic growth in many countries of the world. A developed institutional setup may contribute to the proper functioning of an economy. In the nations where legal Institutions are not properly developed and the law enforcement is weaker, the market functioning is badly influenced. Better institutional quality can increase the growth-promoting role of financial liberalization. The minimum level of corruption in the institutions makes the foreign flows more productive and leads to the optimal utilization of foreign financial resources. So, institutional quality is a decisive factor in analyzing the long-run growth of an economy. Acemoglu, Johnson and Robinson (2002) claim that the institutional system promoting investments is a vibrant feature in explaining the development of an economy.

North (1990) regards the institutions as the rules of the game in a social setup. The functioning of an economy is greatly influenced by the institutional infrastructure (Aghion, 2005 and Law et al., 2018). Better institutions contribute to the better functioning of an economy (Aghion, 2005 and Law et al., 2018). The frizzle institutional system minimizes the supportive role of financial flows in economic performance. Financial corruption, fragile law enforcement, and political interventions main divert towards productive activities. That's the successful growth impact of financial liberalization is mainly dependent on the institutional infrastructure which encourages productive Ventures.

Acemoglu et al. (2001) discover a major effect of institutional quality on per capita income in the European states. Acemoglu & Robinson (2010) declare that the main factor behind income differentials among countries is the difference in economic institutions. The secret of economic development is to reform economic institutions. The reforms in economic institutions depend on the state of the political institutions of a country. The sound political system leads to forming better political institutions and thus helps in the formation of growth-promoting economic institutions. The process of institutional reforms depends upon the political system of an economy. The nations face many obstacles in the way of institutional reforms due to their political bottlenecks. The countries with a better political system can form better institutions and successfully achieve higher growth rates. So, properly functioning institutions lead to economic development. Institutions can support economic development through property rights protection, financial market efficacy and effective law enforcement. A rising level of expropriation and oppression discourage investment and hinder economic growth. Institutions affect economic growth through financial development (Fernández and Tamayo, 2015).

**Literature Review**

Klein (2005) explores the effect of financial liberalization on output growth in 71 economies. After controlling for the institutional quality, different estimation approaches are employed including linear and nonlinear least square and instrumental variable techniques. The empirical results suggest that the
connection between financial market liberalization and GDP growth is inverted U shaped. The findings also propose that a well-developed institutional system helps to enhance the growth-promoting role of financial liberalization. Kose et al. (2006) examine the relationship between financial openness and output in 145 economies. The empirical results suggest different impacts of financial liberalization on growth. The difference in empirical results may be observed due to the use of diverse measures of financial liberalization. The use of more advanced de facto and de jure measures provide more favorable results. It is found that financial openness in turn may also provide Collateral benefits in the form of better institutional quality and a developed financial system. The study also finds that the different forms of financial flows have different impacts on total factor productivity and growth.

Blackburn (2008) study the small open economy by using a dynamic general equilibrium model. It is found that the government-appointed bureaucracy may tend to avail the opportunity of corruption in public funds. This opportunity can become more attractive after financial liberalization. The better institutional quality and minimum level of corruption can help to avail the proper benefits of financial liberalization.

Honig (2008) explores the influence of financial liberalization on GDP after incorporating the institutional quality for 122 economies for the period 1970-2005. The empirical results suggest a positive effect of financial globalization on economic growth. However, these findings are not very much improved in the economies with better institutional setups.

Edison et al. (2002) empirically analyzes panel data set for 57 countries during 1980-2000 to discover the effect of financial openness on output. Using the GMM approach, the authors are unable to find any impact of capital account openness on GDP growth. No evidence of any positive influence was found even after controlling for the institutional quality.

Eichengreen et al. (2011) explore the association between capital account openness and industrial sector growth in the 49 economies. The empirical estimates are controlled for the banking crisis, financial development and institutional quality. A significantly positive effect of financial openness is observed in financially dependent industries. A well-developed financial and institutional infrastructure is important to avail the benefits from the financial liberalization policy. The authors suggest that a threshold level of institutional improvement must be achieved to avail the proper benefits of liberalized foreign financial flows.

Saidi (2014) uses a simultaneous equation model for the developed and developing states for the period 1983-2012. The author explains that the EME's should prepare proper institutional infrastructure before implementing the capital account liberalization strategy. Concerning macroeconomic framework liberalizing financial markets can be favorable and growth-promoting when combined with a minimum level of corruption and better law enforcement. So, the better-quality institutions make a valuable contribution to the success of the financial openness policy. This is likely to raise output growth in emerging economies.

**Empirical Methodology and Data**
The dynamic panel data generalized method of moments technique is employed for the estimation in this paper. This methodology provides solutions to the simultaneity and reverses the causality problem. We are justified in using GMM because of the presence of lagged dependent variable on the right-hand side. Two variants of GMM estimator of dynamic panel data are available namely first difference GMM and system GMM. The first one is originated from the methodology of Arellano and Bond (1991), whereas the second one is consequential upon Blundell and Bond's (1998) methodology. The system GMM is considered to be more efficient than the first differenced GMM. We adopt the system GMM for the estimation in this study.
A general estimation equation can be written as

\[ Y_{it} - Y_{i,t-1} = \beta_0 + \beta_1 (Y_{i,t-1}) + \beta_2 X_{it} + \beta_3 (CAL_{it}) + \beta_4 (INST_{it}) + u_i + \nu_t + \varepsilon_{it} \]

Then, \( Y_t \) is per capita real GDP and \( X \) is the vector of control variables. The notation \( CAL \) indicates the capital account liberalization measured by any de facto or de jure measure. The variable \( INST \) is representing the institutional quality.

Where, \( i \) and \( t \) represent a country and time, respectively. Moreover, \( u_i \) represents country-specific effect, \( \nu_t \) is a time-specific effect, and \( \varepsilon_{it} \) is the error term.

According to theory, institutional development significantly influences the per capita real income. In this perspective, we constructed an institutional quality measure by using three subcomponents of the World Governance Indicators (WGI). The sum of three subcomponents of WGI, Rule of Law, Regulatory Quality and Control of corruption is used to represent the quality of institutions. Furthermore, Klein (2005) points out that the effect of capital account openness on GDP is not monotonic, and this effect depends upon the level of institutional development. In this study, we try to empirically discover this hypothesis by presenting an interaction term between institutional quality and capital account liberalization.

We compiled data on 17 major emerging market economies including Argentina, Brazil, Chile, China, Hungary, India, Indonesia, Malaysia, Mexico, Pakistan, Philippines, Poland, Russia, Thailand, Turkey, Ukraine, and Venezuela for the period 1991-2015. The source of data for income per capita, schooling, life expectancy and trade openness is the World Bank's World Development Indicators (WDI) database. We use some de facto and de jure measures of capital account liberalization in our study. De facto measures represent actual capital flows while de jure measures represent the legal restrictions on the flow of capital. We use three de facto measures in this study including foreign assets, foreign liabilities plus assets and FDI inflows as a share of GDP. Two de jure measures including the Chin-Ito KAOPEN index and Schindler index are utilized in our study.

**Empirical Results**

The empirical results are presented in the following tables.

**Table 4.1**

<table>
<thead>
<tr>
<th>Dependent Variable; Growth Rate of Real GDP Per Capita</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Income</td>
<td>-1.5662**</td>
<td>-1.5368**</td>
<td>-1.3770**</td>
</tr>
<tr>
<td></td>
<td>(0.5747)</td>
<td>(0.5714)</td>
<td>(0.6797)</td>
</tr>
<tr>
<td>Schooling</td>
<td>0.9561</td>
<td>0.9558</td>
<td>0.8836</td>
</tr>
<tr>
<td></td>
<td>(0.6146)</td>
<td>(0.6147)</td>
<td>(0.6778)</td>
</tr>
<tr>
<td>Life Expectancy</td>
<td>3.2455**</td>
<td>3.1657**</td>
<td>2.6494**</td>
</tr>
<tr>
<td></td>
<td>(1.2983)</td>
<td>(1.2804)</td>
<td>(1.3537)</td>
</tr>
<tr>
<td>Trade Openness</td>
<td>-0.4941</td>
<td>-0.4752</td>
<td>-0.2858</td>
</tr>
<tr>
<td></td>
<td>(0.4162)</td>
<td>(0.4139)</td>
<td>(0.4191)</td>
</tr>
<tr>
<td>Institutions</td>
<td>1.2163</td>
<td>1.224</td>
<td>1.2625</td>
</tr>
<tr>
<td></td>
<td>(1.0800)</td>
<td>(1.0886)</td>
<td>(1.202)</td>
</tr>
<tr>
<td>Total Liabilities</td>
<td>0.9462***</td>
<td>0.9558</td>
<td>0.8836</td>
</tr>
<tr>
<td></td>
<td>(0.5001)</td>
<td>(0.6147)</td>
<td>(0.6778)</td>
</tr>
<tr>
<td>Total Liabilities*Institutions</td>
<td>0.0509***</td>
<td>0.0561**</td>
<td>0.0611**</td>
</tr>
<tr>
<td></td>
<td>(0.0271)</td>
<td>(0.0303)</td>
<td>(0.0223)</td>
</tr>
<tr>
<td>Total Liabilities + Assets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Total Liabilities + Assets) *Institutions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Interpretations of Empirical Results

The empirical estimates using de facto measures of capital account liberalization are presented in table 4.1. The negative and significant initial income coefficient depicts the income convergence. The life expectancy variable is found to be positive and statistically significant showing that better health facilities or improved social sector stimulus economic growth. In general, the measures of financial liberalization and institutions are significant. Capital account liberalization measures include total liabilities, total liabilities plus assets and FDI inflows, all as ratios to GDP have interacted with institutional quality. The core variable FDI is positive and statistically significant at a 5 percent level of significance. The interaction terms using all the de facto measures are statistically significant. FDI makes a developing country able to import modern technologies and encourages innovations. So, the FDI is significant even without any support from quality institutions. The positive signs of interaction terms indicate that the growth effect of financial liberalization is supported by better institutional quality. The weakly significant interaction terms in some cases perhaps depict that the institutional infrastructure in the emerging market economies is in the process of transition. As the institutions properly develop, they start playing a more
important role in generating growth effects from outward-oriented policies.

The empirical results with de jure capital account liberalization are presented in table 4.2. The negative and statistically significant initial income coefficient describes the convergence. Among control variables, the life expectancy variable is consistently significant with the positive sign which shows that better health facilities or improved social sector stimulate growth. The remaining control variables are insignificant except schooling in the KAOPEN equation. The signs of interaction terms between liberalization and institutions are positive and significant in the case of the Schindler index. The p-values of the Hansen test asserts that the instruments are valid for all the estimations presented in both tables.

The countries with the better institutional quality and higher legal standards are expected to experience vital growth responses from financial market liberalization policy. Acemoglu et al. (2003) I was good that better quality Political and institutional system can efficiently contribute to the economic growth by taking advantage of outward-oriented policies. On the other hand, economies with relatively bad institutional quality and inefficient legal systems can experience stagnant growth rates. The inconsistent statistical significance may depict that the institutional infrastructure in the EMEs is in the process of transition.

Conclusion
This study tries to unveil the relation between capital account liberalization and GDP growth after incorporating the contribution of institutions in this nexus. The liberalization of financial flows may buoy up growth by optimal utilization of finances in the emerging market economies. The liberalization of the financial sector can provide access to foreign financial resources and proves to be helpful for the accumulation of savings leading to profitable investments and growth. The role of institutional quality is imperative to comprehensively analyze the impact of financial openness on economic growth. Using a panel data set from 17 EMEs, the GMM technique is adopted for the estimation. The empirical analysis is made by utilizing the popular de facto and de jure measures of capital account openness. The empirical estimates propose that better institutional quality strengthens the association between financial openness and growth in emerging markets. The capital account liberalization measures are statistically significant when interacted with the institutional quality. FDI can import modern production techniques and propagate a competitive environment among producers. It is the most expedient and the least volatile capital flow playing a pivotal role in economic growth. The policymakers should focus on the more beneficial nature of financial liberalization such as FDI. Also, the policy should be aiming at availing the services of efficient human resources with proper institutional infrastructure. The better quality institutions with efficient bureaucracy and minimum corruption along with a well-functioning legal system can avail the proper growth benefits of financial liberalization in the emerging market economies.

References
Blackburn, Keith; Forgues-Puccio, Gonzalo F. (2008) : Financial liberalisation, bureaucratic corruption


Significance of Financial and Non Financial Information on Credit Rating: An Empirical Study on Banking and Insurance Sectors of Pakistan

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ARTICLE DETAILS

ABSTRACT

Purpose: Apart from standard spheres of financial institutions’ performance such as asset quality, profitability, liquidity and efficiency; the study investigates the influence of non-financial factors such as governance and management.

Design/Methodology/Approach: This study utilizes 2009 through 2018 data for the sample of commercial banks and insurance companies of Pakistan to analyze the significance of financial and non-financial information on credit rating. The study is done by employing frequently used Fully Modified Ordinary Least Square (FMOLS).

Findings: The main contribution lies including explanatory variables from various areas that have an impact on the financial position of the examined banks and insurance companies.

Implications/Originality/Value: The obtained results suggest that the combined use of financial and non-financial information tends to a significant impact on credit rating.

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Introduction

Credit risk is a risk of failure, it may be discussed as the possible risk that a borrower or counterparty will neglect to meet its obligations in accordance with agreed terms. Credit risk is also defined as the risk of loss or to be a loss that may occur from the default or failure of any contractual party to obey the terms and conditions of any financial contract, principally the failure to make required payments on loans including the earnings due to an entity. The risk is a representation of an uneven expectation of loss or variation in the return of any given asset.
The history of credit risk revealed the history of lending or borrowings activities itself and also cleared the birth of the concept of insurance since 1300 B.C. Caouette et al. (1998) mentioned about the most ancient risk of the financial market. The authors explained the history of credit risk and explained that the credit risk has an existence earlier of 1800 B.C. Kohn (1999) also explained that risk came back with the merchant bank and then bore the risk by bill of exchange through funding. The more or less main concern for the traditional banking system was the credit risk since its inception and concept evolved. However, then the banking system becomes more advance and involved in the relationship side to promote the business rather than the concentration in profitability.

The current study consists of a comprehensive sample data of commercial banks and insurance companies operated in Pakistan with their assigned ratings. The study demonstrates the whole research on the banking and insurance sector of Pakistan because of its unique significance. In recent years a number of studies dealing with the ratings of financial and corporate industries however minority of them are related to the credit rating of banking and insurance sectors in this region under the same topic and utilization of information collectively. As far as the economic instability, political intervention in each institute and a hike of corruption makes great differences. Banks need some insurance to secure their business and depositors and insurance companies also need investment and reinsurance companies in this type of squeeze environment. So, the study will helpful for Pakistan’s banks and insurance companies in the current situation to manage their businesses.

**Literature Review**

Adams et al. (2003) reported that the credit rating determinants can suggest the regulators, policymakers, investors and the market leaders decide the reliability of assigned credit ratings. The CRAs issued some specific guidelines to give an overview of their credit rating assessment of different categories on which the credit rating decision depends. These measures are included quantitative and qualitative measures like asset quality, management, ownership structure, business and financial risks, capital adequacy, business strategy, business leverage, liquidity and funding, market overview, the regulatory environment and all the relative factors of the risk assessment that directly and indirectly affect the creditworthiness of the institution.

Hammer et al. (2012) examined the performance of the banks by using absolute values of 14 accounting variables and 9 representative financial ratios. All the ratios described the asset quality, profit & cost efficiency and liquidity of the institution. The author concluded the performance of those areas which had an impact on the bank’s performance and has strong intervention power. Paula et al., (2018) investigated the impact of financial variables on the firm’s credit rating. The authors revealed that the firm’s management used its earnings and operational returns to retain ratings rather than the downgrades. The authors concluded that all the variables have their own impact but the association of operational return and the firm’s earnings are more relevant to the creditworthiness of the firm.

Cornett et al. (2009) examined that there was a positive relationship between the institutional performance and the various corporate practices like independence of board of director. The authors conducted the study by taking a sample of 300 public-traded USA banks for the examination of the respective corporate governance and performance of the public banks. The authors concluded the results that if the sponsors increase the ownership and increase the independence in the board then the bank can perform more efficiently.

Erkens et al. (2012) and Beltratti and Stulz (2012) investigated the relationship between corporate governance and institutional performance. The study found that the performance of the firms was adversely affected by their high institutional back support and stake due to the more risk-taking before
the big financial crises. After that, the same firms could not make the proper dealing that’s hurt in the big crises and strongly affected the performance of the firms.

Liao et al. (2017) observed that credit rating agencies give more preference to the non-financial factors when evaluating the creditworthiness of any firm and issued good ratings to the clients that hold major market share relative to the others.

Research Methodology

Conceptual Framework

Hypothesis Development
H1: There is an association between bank non-financial determinants and the credit rating.
H2: There is an association between bank financial determinants and the credit rating.
H3: There is an association exists between non-financial determinants and the IFS rating.
H4: There is an association exists between financial determinants and the IFS rating.

Criteria of Sample Data
According to Ilker Etikan et al. (2016), in each type of research, it would be remarkable to use the population but in many cases, it is not possible to include each subject because the whole population is almost finite. This is the rationale behind using sampling techniques like convenience sampling by most researchers. Convenience sampling adopted in this study and the banking and insurance sectors of Pakistan is selected. Therefore, the sample of the study is taken from both sectors in the region of Pakistan. Scheduled Banks (other than foreign banks) and insurance companies (including general and life) operating in Pakistan are selected for the analyses.

Source of Data and Data Collection
In this study, seven variables are used, six independent variables including financial and non-financial determinants and the one is the dependent variable. The researcher used secondary data to conduct the study. The data for the study is collected from the financial statements and CRAs rating reports of each financial institution. The total dataset consists of over ten years, from 2009 to 2018. The number of observations of the study are 140. However, there is a little bit variation in the accounting of observations according to the availability of information.

Fully Modified Ordinary Least Square (FMOLS)
Kao and Chiang (2000) suggested the FMOLS technique. This technique was supported to statistically estimate the panel co-integration. With the support of this technique, the author can estimate standard pooled OLS which is helpful for endogeneity and auto-correlation of regressors. Following is the fixed effect regression equation and with its help it can be discussed:

\[ y_{it} = \alpha_i + X_{it}\beta + \mu_{it} \]

where:
- \( y_{it} \) denotes matrix of the order (1,1)
- \( \beta \) denotes the vector of slopes show having a dimension (k,1)
- \( \alpha_i \) denotes individual a fixed effect
- \( \mu_{it} \) is the disturbance or error terms.

In this FMOLS model, it is assumed that \( x_{it} \) (k, 1) having dimension vectors are integrated for all I of order 1.

\[ x_{it} = x_{it-1} + \varepsilon_{it} \]

With the respective specifications, a model of co-integrated regression is utilized to show the relationship between the two parameters \( y_{it} \) and \( x_{it} \). The normality of the distribution is checked through the evaluation of FMOLS estimators. The FMOLS estimators can be written as:

\[ B_{FMOLS} = \left[ \sum_{i=1}^{N} \sum_{i=1}^{T} (x_{it} = x{i}) \right] - 1 \left[ \sum_{i=1}^{N} \sum_{i=1}^{T} (x_{it} - x{i}) y_{it}^+ + Ty \Delta_{\varepsilon \mu}^+ \right] \]

where:
- \( \Delta_{\varepsilon \mu}^+ \) denotes the term of auto correlation and \( y_{it}^+ \) denotes the transformed variable which comes from \( y_{it} \) to estimate the endogeneity correction.

The co-integrating panel regressions are maybe part of FMOLS. So that the importance of this FMOLS technique was used to check the long-run relationship in the study among the applied variables.

**Description of Variable**

**Dependent Variables**
The dependent variable of the study is credit rating assigned by both of the CRAs – PACRA and JCR-VIS period of the interest are then 2009 - 2018. As the main interest of the study is generally depend on inflective determinants of credit ratings, therefore it doesn’t matter that which CRA assigns the ratings.

**Credit Rating**
Guarati (2006) stated that ordinal variable is the variables of different categories which are represented by the degree of ranking like a variable shows the degree of satisfaction. Every bank and insurance company is assigned rating by CRA within a specified time period.

**Independent Variables**

**Asset Quality**
Non-performing loans can be defined as the loan that is not performing or the principal amount is unrecoverable with its due interest amount. A loan is non-performing when the payments are due to interest and principle by 90 days or more. The credit risk of solvency is originate from the asset quality of that institution. The asset quality of any commercial bank is analyzed through the advances portion and the loan loss provision. This is measured as the ratio of non-performing loans to total loans.

**Efficiency**
The efficiency ratio is calculated by dividing operating cost to operating income. According to Mensah et al. (2017), efficiency denotes the average ratio of cost to income. Cocheo (2000) inducted that public banks considered the efficiency ratio as a benchmark, others also show concerns but a less than the others.

**Governance**

The measurement tool of corporate governance is comprises on the assessment of the size of the board, members profile, board effectiveness and quality of governance framework. Financial Institutions are structurally very complex and opaque in terms of their internal operations and disclosure, thus increasing the level of information asymmetry between shareholders and management.

**Liquidity**

Financial performance of any bank can be measured through the funding line that a bank manages to meet the obligations without any big deposit base. According to Mensah et al. (2017), liquidity presents the average ratio of liquid assets to deposits and short-term funding.

**Management**

The assessment of management starts with conducting an in-depth analysis of organizational structure, analysis of management, management effectiveness, management information system and effectiveness of the risk management function of the entity. The elements included in quality management (e.g. professional experience, technical knowledge, analytical skills, the integrity of the company, personal honesty, eagerness to ensure a good reputation and maintained regulated environment and powers to implement plans effectively), which is a qualitative measure in the credit rating risk evaluation analysis.

**Profitability**

Profitability is proxies with return on asset (ROA) of the institution, where ROA is measured as the ratio of net income to total assets. According to Shen et al. (2012), ROA tells how effective banks’ resources in achieving objectives and every institution have an objective to maximize the financial strength of entity for the shareholder’s worth.

### Empirical Test and Results

**Bank’s Non-Financial Variables Analysis with Respect to Credit Rating**

Adjusted R square is 0.8287 which is much significant. Which shows the explanatory power of the model. Two qualitative variables in the model are included, both are significant at 5% level of significance.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOVERNANCE</td>
<td>0.218813</td>
<td>0.087759</td>
<td>2.493324</td>
<td>0.0148</td>
</tr>
<tr>
<td>MANAGEMENT</td>
<td>0.169337</td>
<td>0.049609</td>
<td>3.413448</td>
<td>0.0010</td>
</tr>
</tbody>
</table>

R-squared 0.837505 Adjusted R-squared 0.828692

The estimated results in table 1 show that both of the non-financial variables governance and management are significant at 95% level of confidence which confirm the importance of their induction in the model. Therefore the null hypothesis (H0) is rejected in the favor of these significant and positive coefficients. Considering results of the analysis it may claim that governance with a coefficient value of 0.2188 more contributing than management with a coefficient value of 0.1693.
Bank’s Financial Variables Analysis with Respect to Credit Rating
The value of adjusted R square is 0.8318 which is significant and shows the explanatory power of the model. There are four quantitative variables in this empirical model, almost all are positively significant at a 95% confidence interval shows in table 4.2 Significant and positive correlation with all determinants suggests that the hypothesis is supported by the data. The most contributing turned out to be profitability with a coefficient value of 14.6616, asset quality with a coefficient value of 4.3276, followed by liquidity with coefficient value of 1.6289 and efficiency with a coefficient value of 0.5894 of the banks. The results also proved that if these variables include in the credit risk assessment, the chances of a better credit rating are increased for banks.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASSETQUALITY</td>
<td>4.327605</td>
<td>0.976492</td>
<td>4.431787</td>
<td>0.0000</td>
</tr>
<tr>
<td>EFFICIENCY</td>
<td>0.589362</td>
<td>0.223019</td>
<td>2.642652</td>
<td>0.0100</td>
</tr>
<tr>
<td>LIQUIDITY</td>
<td>1.628944</td>
<td>0.531282</td>
<td>3.066063</td>
<td>0.0030</td>
</tr>
<tr>
<td>PROFITABILITY</td>
<td>14.66157</td>
<td>6.971300</td>
<td>2.103133</td>
<td>0.0388</td>
</tr>
</tbody>
</table>

R-squared: 0.841651
Adjusted R-squared: 0.831670

Insurance Non-financial variables Analysis with respect to Credit Rating
The results in table 3 show that the significant value of adjusted R square is 0.8517 which shows the explanatory power of the model in this study. Both of the two qualitative variables are significant at a 95% confidence interval which is included in the model.

As well as in the respective hypothesis the obtained results reveal that the implied assumptions are considered well. Governance and management are the most significant non-financial determinants. It also confirmed that an insurance company can observe a high rating if it includes better management with good governance.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOVERNANCE</td>
<td>0.487684</td>
<td>0.066867</td>
<td>7.293341</td>
<td>0.0000</td>
</tr>
<tr>
<td>MANAGEMENT</td>
<td>0.225743</td>
<td>0.060215</td>
<td>3.748945</td>
<td>0.0003</td>
</tr>
</tbody>
</table>

R-squared: 0.857634
Adjusted R-squared: 0.851659

Insurance Financial variables Analysis with respect to Credit Rating
The adjusted R square shows a significant value of 0.8095. This value shows in this study, the explanatory power of the model. In the model, all of the financial variables show significant values at a 95% confidence interval.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASSETQUALITY</td>
<td>2.037547</td>
<td>0.961661</td>
<td>2.118779</td>
<td>0.0461</td>
</tr>
<tr>
<td>EFFICIENCY</td>
<td>0.803722</td>
<td>0.225434</td>
<td>3.565216</td>
<td>0.0006</td>
</tr>
<tr>
<td>LIQUIDITY</td>
<td>0.097179</td>
<td>0.046603</td>
<td>2.085259</td>
<td>0.0509</td>
</tr>
<tr>
<td>PROFITABILITY</td>
<td>4.964243</td>
<td>1.211346</td>
<td>4.098122</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

R-squared: 0.822737
Adjusted R-squared: 0.809521
The findings in table 4 regarding the financial variables support the hypothesis and shows a high interconnection of these variables in the rating assignment of the creditworthiness of insurance companies. The same as for financial variables of bank’s credit rating applies also for the credit rating of the insurance company. The only exception is that efficiency is leading from liquidity in the insurance’s rating assignment.

The analytical results of the study confirm that some of the accounting ratios are specifically, derive the probability of default of any institution and hence, play a vital role in assigning a rating to them. The most contributing and worthy variable to be profitability followed by asset quality and two other variables of the financial institutions. So as there is a significant relationship between independent and dependent variables at 5% level.

After the consideration of quantitative factors, the second part contributes in the analysis of non-financial measures and hence, the obtained analysis results are transparent and clear to inform that non-financial variables are the important determinants of credit rating assignment and influence the credit rating decision. As the most important and critical part of non-financial objects is corporate governance that is highlighted in the analysis model. However, on the other hand, management does not lag behind significantly. These results are comparable and prove to be claimed that the current model is well fitted and able to catch the underlying principles of credit rating assessment and also prove that the independent variables are factors of insurance company’s rating quality.

In practice, it is to be required the managers and stakeholders to keep in their eyes and also put a careful focus on the operations and determinants (e.g. profitability, asset quality, liquidity and etc.) that help to achieve a good credit rating. Each CRA has its own internal customized risk evaluation process and assessment mechanism that is not a public document and not published by the CRA, which is a support rating system.

With valuable information, this chapter is beneficial for all the managers, investors or other market researchers for their assessment and also help them to adjust business strategies that enable banks and insurance companies in Pakistan a high and best credit rating. Both of the players of the financial sectors seek a right and high credit rating should improve their asset quality, profitability and suggest that the credit rating assessment strongly depends upon the profitability factor.

In the end, this section winds up with the importance of non-financial variables. The study infers that without non-financial variables, rating assessment will consider incorrect and invaluable. So that the non-financial variables improve the powers of a model and the results conclude that corporate governance (non-financial factor), plays a pivotal role while assigning a rating to any financial institute.

**Discussion, Conclusion and Recommendations**

The credit ratings and CRAs, both are becoming the most important and essential part of the financial market. Due to the complex procedures of credit rating assessment and many other issues around the role of ratings in financial markets, the current study sets out to examine empirically important aspects of bank and insurance company’s credit ratings. This study constitutes the first attempt to explore the role of financial and non-financial information in credit ratings.

**Summary of Research Findings**

**Financial Categories**

In quantitative measures, profitability is important and is essential for risk evaluation of credit rating and the result are consistent and supported with the results of Shen et al. (2012). For asset quality, it looks that commercial banks and insurance companies want to get high credit rating must pay more attention to asset quality measures and the findings are supported with the reported results of Shen et al. (2012)
The current study concluded that liquidity has a positive relationship with the dependent variable credit rating and it is statistically approved as well and the same is reported and supported by Poon (2003) and Doumpos et al. (2005). Interestingly, Adams et al. (2003) revealed that not only for the CRAs credit risk assessment, liquidity also important for the internal rating system of insurance companies.

**Non-financial Categories**

This study concludes that banks and insurance companies operating in Pakistan with weak governance practices are assigned low ratings. This finding is intuitive and consistent with results reported by Boot et al. (2006) and Kick et al. (2011). The key role of the non-financial information to assess the risks is the key management team of any institution. Therefore there was a significant role and impact of management variable across the analysis and influence the credit rating decision.

**Conclusion of the Study**

The obtained results of this empirical study support the stated hypothesis and analysis is also consistent with studies conducted previously. Specifically, the analysis of the study shows the importance of quantitative and qualitative measures of creditworthiness of any institution in the assigning of credit rating because of the credit rating procedure. The measurement of the probability of default for any subjected institution comes first for the risk evaluation assignment. The overall results, therefore, reveal that both of the quantitative and qualitative variables contribute to explain the quality work of assigned rating and therefore considered important during the assessment and consistent with findings as reported by Belloti (2011). This study is a knowledge hub and strongly contributes to the credit rating risk assessment evaluation, specifically in the financial and non-financial determinants. The coefficients of the variables show a positive relationship with the dependent variable. The analysis of this study has significant importance, it ensures the importance to reduce default risk FIs pose.

**Limitations of the Study**

As there are a number of limitations and constraints for every research work, same as in this study. However, the study analysis was done with full of quality work so that the observed results were not muted but due to some of the specific constraints that intend to be continued and more research work in this area. The more important constraint was that the time frame of research was ten years 2009 -2018 due to the non-availability of data. Moreover, the research work was done on only two sectors from the financial industry of Pakistan. Furthermore, the data is based on the financial statement and time for this study was very short because of the length and depth of the study. In addition, Pakistani credit rating industry is wholly controlled by a couple of agencies. Therefore it was assumed to be an oligopolistic industry in its structure. Hence, the assigned ratings of these two CRAs as well as the analysis and other research work by using the same agencies rating data are argued to be similar and may be the specimen of the whole credit rating industry.

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A Comparative Study of Southern Punjab and Balochistan SMEs Success vs Failure Factors

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ABSTRACT

Purpose: SME’s in Pakistan like developed economies play crucial role in the economic development and sustainability as long as entrepreneurs should be mindful about SME’s success and failure factors. In the extant literature, particularly in Pakistan, there is a lack of studies that have been empirically examined the comparative factors of Southern Punjab and Balochistan this setting particularly in Pakistan. The current study has focused on the comparative analysis of success or failure of Southern Punjab and Balochistan SME’s. The purpose of paper is to examine the aspects of SMEs that are central to their success/failure functioning in both areas of Pakistan.

Design/Methodology/Approach: Data was collected through a questionnaire using the Lussier’s Model of success or failure factors among the owners of successful and unsuccessful SMEs. The researchers collected 200 questionnaires from SMEs. Data was analyzed by using the logistic regression technique.

Findings: Results of the current study showed that management experience, planning, professional advice, staff, product and services, marketing, and age are important for the viability and success of SME’s operating in Southern Punjab. In Balochistan, management experience, planning, professional advice, education, marketing are significant for the success/failure of SME’s.

Implications/Originality/Value: Thus, this study adds value to the knowledge to enhance understanding in “why some businesses succeed and others fail” by using Lussier’s Model. The results of the study assist policymakers in developing the programs that enhance the SME’s promotion, establishment, and development.

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Introduction

Economists, experts and academicians proved that SMEs help economies raise scarcity; create employment, increase growth (Soltanian, Zailani, Iranmanesh, & Aziz 2016; Tarek, Zouhayer, & Adel 2019), encourage improvement and improve R&D (Ejaz, 2012). SMEs help economies in job creation, create social strength and increase access to capital (Peter et al., 2018). The study of Tambunan (2019) underlined that more than 90% of SMEs in developing countries, particularly more than 90% Pakistani small enterprises are engaged in the development of SMEs. These SMEs were supported by SMEDA\(^2\) in many areas of industry and trade (Ali, Ahmed, Mirani, Khan 2021). It is highlighted in the previous study that failing ration SME’s is very high (Hyder & Lussier, 2016). Moreover, the failure rate of SME’s can be minimized with the many factors that are associated with the owners’ ability to efficient utilization of resources and its skills and entrepreneurial characteristics.

It is also well documented that the formation and creation of SME’s are crucial for the growth, success and sustainability of this sector in Pakistan. Reardon et al., (2021) recommended that it is necessary to focus on the development of SMEs in Pakistan. Therefore, it is crucial to focus on the establishment of SME’s and to reduce the phenomenon of their failure. The objective of this study is to focus on highlighting the success or failure factors of Southern Punjab and Balochistan.

Literature Review

Success or failure is not an action rather the result of several factors that can influence SME’s competence to persistence, growth, and prosperity (Antoniuk et al., 2018). SME’s owners like other organizations may receive precautions that should alarmed them about a business problem or a conflict that need to be highlighted (Salomo et al., 2008). Like success, failure is the product of the events that comes from the process that an entrepreneur strives for (Krstić & Radulović, 2015). From this point of view, an entrepreneur receives a cautionary signal that warns him/her about the business problematic situation that needs a solution. However, the frequent indications subsequent from the problematic situation might befall, till an enterprise is enforced to close. In this study, failure is defined as proprietor of enterprise close his/her business due to suffering loss or not earning a profit.

The current study used Lussier (1995) SME’s success/failure prediction model. The fifteen factors’ variables were examined to determine the reason for the business’s success vs failure of SME’s operating in Southern Punjab and Balochistan. These factors are: “capital, industry experience, record keeping and financial control, planning, management experience, education, professional advisors, staffing, age of the owner, product/service timing, marketing skills, partners, parents and economic timing”. To conduct further research on SMEs for the development of society and economy was highlighted by the study of Arasti et al. (2012).

Researchers argued that it is difficult to point out success or failure on SME’s (2000). Both defined as “success as the company’s ability to survive” (Stefanovic et al. 2010). The study of Hussain and Windsperger, (2010) that entrepreneur’s “previous experience, knowledge, social skills, capital, and working hard are essential for success” The study of Benzing et al., (2009) divided the success factors into psychological and personal (skills, knowledge and training) and environment. Psychological factors include independence, innovativeness, attitude towards risk and a competitive nature. Personal factors consisted of skills includes entrepreneur’s ability to manage work stress and self enhancement. The environmental conditions depend upon sufficient governmental support, access to the capital and support of family and friends (Mayr, Mitter, Kücher, 2021).

The factors that lead to the failure of SMEs are ignored in the existing literature. However, there are

\(^2\) Small and Medium Enterprise Authority (SMEDA)
studies that have discussed about the failures of SMEs. The study of Bezing et al (2009) explained that the agile environment (political and economic), tax system, and inappropriate rules are the common reasons of failure in developing economies. Asian Development Bank in (2005) reported the constraints faced by the SMEs in their growth; credit limit, high cost of credit and financing, high compliance cost, poor infrastructure, poor skill and training, market transaction cost, and legal requirements. The study of Hussain et al. (2010) explained that lack of financial support and access to capital is the highest rating failure factors.

The current study has selected the most widely used prediction Model of Lussier (1995) to measure success or failure of SME’s. Previous studies have validated the model, particularly in comparative analysis. Lussier (19915) prediction model examined the ability of success or failure factors examined and tested in prior studies (Baidon et al. 2018; Gyimah et al. 2020; Lussier & Halabi 2010). The following fifteen factors tested to measure success or failure of SMEs by previous studies: “Capital, Record keeping and financial control, Industry experience, Management experience, Planning, Professional advisors, Education, Staffing, Product/ Service timing, Economic timing, Age, Partners, Parents, Minority, Marketing”.

Lussier & Halabi (2010) inform about the consistency of financial models that used the financial data to predict the financial performance of SME’s that were used by the extant studies to measure their financial performance. These financial models were incapable to perfectly predict the performance of new SME’s. The dependable financial data are dependent on financial policies and unrealistic to foresee success/failure (Gayimah et al., 2020). The reasons of using prediction Model proclaimed that subjective factors perfectly forecast the success/failure of SME’s particularly for new SMEs without previous financial information.

One of the important intentions of selecting a prediction-based model is model flexibility. Lussier & Halabi (2010) suggested other researcher to consider a prediction model to measure the success/failure of SME’s operating in other economies because their demographic and cultural factors. Following the recommendation, the current study measure the success/failure of SME’s operating in Southern Punjab and Balochistan.

Methodology
To fulfill the objective of the current study, the information was collected from the areas of Southern Punjab and Balochistan. The researcher has taken the responses of the set of questionnaires through the various categories of respondents that belonged to different sizes of business gender, education and areas. The close ended questionnaire was developed. The population of this study was successful or failed SME's. Successful owners are explained as those operating their business at least more than 3 years and failed owners are those who cannot successfully run their business.

Using Lussier (1995) prediction model to measure success or failure variables of SMEs operating in both provinces. In this study, the variables in the prediction model were already inferred in the literature as contributing causes of success/failure in SMEs through statistical testing in previous studies. Each one of the independent variables in the model is tested to determine if they have an effect or not on the dependent variables (success and/or failure) in the context of SMEs in Southern Punjab and Balochistan.

Like Lussier (1995), suggested using failed or successful matched SMEs to run their business for at least three years. The researcher approached to the Chamber of Commerce and SME’s offices established in Southern Punjab and Balochistan.

The current study used convenient sampling approach. The researcher personally visited the successful and failure SMEs owners in South Punjab and Balochistan. Data was collected from the SMEs operating in Southern Punjab and Balochistan. The data were analyzed from the sample of 100
successful or failed SME’s operating their business in South Punjab and Balochistan. The well-established Lussier’s Success/Failure model was adopted to measure the variables of the current study.

**Logistic Regression**
The data of SME’s success/failure factors were analyzed through the most widely used Logistic Regression method (Cooper et al. 1994). The multiple logistic regression analysis method help to choose the finest blend of success/failure factors “reduced model”.

Cox (1958) developed a statistical model that is widely used called the logistic regression model. The logistic regression was estimating the relation of multiple parameters. Therefore, this multivariate regression describes that the paradox exists between the dependent variables and independent variables.

According to Scherr, (1989), the appropriate test for the overall significance of the model is the goodness of fit of the model measured by the $-2 \log$-likelihood (LL) statistic. The (LL) compares the actual model to a perfect model in which all cases would be correctly classified.

The results of logistic regression are always categorical. The binary logistic regression model has multinomial logit means to have more than two dependent variables and the value of these corresponding probability labeled as 1 and 0. The other perspective is helpful to analysis the discrimination of variables; hence it is appropriate to use the interpretation of present study. Further, the logistic regression can be applied on variables “binominal, ordinal or multinomial” therefore, dependent variable must be dichotomous. This study used logistic regression to estimate factors used in the following equation.

\[
SUC = \beta_0 + \beta_1 \text{capt} + \beta_2 \text{inex} + \beta_3 \text{maex} + \beta_4 \text{plani} + \beta_5 \text{pradi} + \beta_6 \text{stafi} + \beta_7 \text{pstii} + \beta_8 \text{ecti} + \beta_9 \text{mrkt} + \beta_{10} \text{pent} + \beta_{11} \text{educ} + \beta_{12} \text{agei} + \beta_{13} \text{parti} + \beta_{14} \text{rkfc} + \beta_{15} \text{miori} + \mu_i \\
\]

\[
FAL = \beta_0 + \beta_1 \text{capt} + \beta_2 \text{inex} + \beta_3 \text{maex} + \beta_4 \text{plani} + \beta_5 \text{pradi} + \beta_6 \text{stafi} + \beta_7 \text{pstii} + \beta_8 \text{ecti} + \beta_9 \text{mrkt} + \beta_{10} \text{pent} + \beta_{11} \text{educ} + \beta_{12} \text{agei} + \beta_{13} \text{parti} + \beta_{14} \text{rkfc} + \beta_{15} \text{miori} + \mu_i 
\]

Where SUC/FAL=dummy for success/failure variables and a set of independent variables “capital (capt), industry experience (inex), management experience (maex), planning (plan), professional advisor (prad), staffing (staf), product/services timing (psti), economic timing (ecti), marketing (mrkt), parents (pent), education (educ), age (age), partners (part), record keeping financial control (rkfc), minority (mior)” (Lussier, 1995).

The concept “success/failure” implied a sole factor that can have influence on “success and/or failure”, not certainly either or. Furthermore, a factor can influence on “success, on failure, or both”. With the variable “Capital” (a variable in this study) mean that for some, this variable is a “success” factor while for others this variable contribute to “failure” due to lack of capital, it can be either way. In this case the null hypothesis would be rejected in favor of the alternative hypothesis. There is a null and alternative hypothesis for 15 independent variables in this study.

**Analysis**
The variables under consideration are: for example, capital “money invested to start the business was sufficient”. Previous experience “I had propose experience of this business for starting it”. “I had previously management experience” and so on. Table 1 showed overall result of the current study.

**Table 01: Variables in the Equation**

<table>
<thead>
<tr>
<th>Step 1</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Money invested to start the business was sufficient”</td>
<td>2.755</td>
<td>6350</td>
<td>0.000</td>
<td>1</td>
<td>1.000</td>
<td>0.0640</td>
</tr>
<tr>
<td>“I had propose experience of this business for starting it”</td>
<td>0.958</td>
<td>8832</td>
<td>0.000</td>
<td>1</td>
<td>1.000</td>
<td>0.384</td>
</tr>
</tbody>
</table>
I had previously management experience.  

Before starting the business properly planned that business

I got professional advice to start that business

My employees in that business active & reliable

I have been introducing new product and services

I have been actively changing decisions according to market situation

I have marketing skills

Did your parents have similar business?

Do you think education play important role in business

Do you think owner’s age also impact on business?

Financial control record sufficient for success and failure

Minority has participation in business

Table 02 showed that p values greater than 0.05 showed insignificant effect of the factor on success/failure while p value less than .05 value (< 0.05) showed significant effect of a particular factor on success/failure of SME’s. In Table 02 the p value greater than “< 0.05” indicated that there is need to change the significance of result and predict that there is need of change. However, capital and parents values are greater than 0.05 that showed the insignificant effect of these two variables on the success/failure of SME’s. Result showed that “industry and management experience, planning, professional advice, staff, product and services, economic timing, marketing, education, age, partners, and record keeping and financial control” are significant factors that effect on success/failure of SME’s in Southern Punjab and Balochistan.

Table No: 2 Overall Results of SUCCESS/ failure Predicted Model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coeff.</th>
<th>Std. Error</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1(capital)</td>
<td>0.010</td>
<td>0.0122</td>
<td>0.4108</td>
</tr>
<tr>
<td>Q2(industry experience )</td>
<td>0.0676</td>
<td>0.0218</td>
<td>0.0182</td>
</tr>
<tr>
<td>Q3 (management experience)</td>
<td>0.0686</td>
<td>0.0288</td>
<td>0.0192</td>
</tr>
<tr>
<td>Q4(planning)</td>
<td>0.1476</td>
<td>0.0304</td>
<td>0.0000</td>
</tr>
<tr>
<td>Q5(professional advise)</td>
<td>0.0372</td>
<td>0.0137</td>
<td>0.0066</td>
</tr>
<tr>
<td>Q6(staff)</td>
<td>0.1172</td>
<td>0.0280</td>
<td>0.0000</td>
</tr>
<tr>
<td>Q7(product &amp; services)</td>
<td>0.0353</td>
<td>0.0135</td>
<td>0.0089</td>
</tr>
<tr>
<td>Q8(economic timing)</td>
<td>0.0621</td>
<td>0.0243</td>
<td>0.0106</td>
</tr>
<tr>
<td>Q9 (marketing)</td>
<td>0.0606</td>
<td>0.0208</td>
<td>0.0172</td>
</tr>
<tr>
<td>Q10(parents)</td>
<td>0.0195</td>
<td>0.0250</td>
<td>0.4364</td>
</tr>
<tr>
<td>Q11(education)</td>
<td>0.2303</td>
<td>0.0833</td>
<td>0.0057</td>
</tr>
<tr>
<td>Q12(age)</td>
<td>0.1789</td>
<td>0.0886</td>
<td>0.0436</td>
</tr>
<tr>
<td>Q13 (partners)</td>
<td>0.0616</td>
<td>0.0208</td>
<td>0.0162</td>
</tr>
<tr>
<td>Q14(record keeping &amp; financial control)</td>
<td>0.3749</td>
<td>0.1298</td>
<td>0.0039</td>
</tr>
<tr>
<td>Constant</td>
<td>0.1732</td>
<td>0.024149</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Table 3 showed the results of success/failure factors of both Southern Punjab and Balochistan SME’s. The results of SME’s operating in Southern Punjab are: “management experience, planning, professional advice, staff, product and services, marketing, and age” were the significant and positive association with success/failure SME’s as the p values are <.05. However the factors, namely, “capital, industry experience, parents, education, partners, and record keeping and financial control” were not significant factors because the p values are greater .05 that can contribute to success/failure of Southern Punjab SME’s.

The factors that are significant towards the success/failure of SME’s in Balochistan are: “management experience, planning, professional advice, education, marketing” while “capital, industry experience,
staff, product and services, parents, education, age, partners and record keeping and financial control” are insignificant factors as the p values are greater than .05.

<table>
<thead>
<tr>
<th>Table No: 3: Dependent Variable: Success Vs Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 (capital)</td>
</tr>
<tr>
<td>Q2 (industry experience)</td>
</tr>
<tr>
<td>Q3 (management experience)</td>
</tr>
<tr>
<td>Q4 (planning)</td>
</tr>
<tr>
<td>Q5 (professional advice)</td>
</tr>
<tr>
<td>Q6 (staff)</td>
</tr>
<tr>
<td>Q7 (product &amp; services)</td>
</tr>
<tr>
<td>Q8 (education)</td>
</tr>
<tr>
<td>Q9 (marketing)</td>
</tr>
<tr>
<td>Q10 (parents)</td>
</tr>
<tr>
<td>Q11 (education)</td>
</tr>
<tr>
<td>Q12 (age)</td>
</tr>
<tr>
<td>Q13 (Partners)</td>
</tr>
<tr>
<td>Q14 (record keeping &amp; financial control)</td>
</tr>
<tr>
<td>Constant</td>
</tr>
</tbody>
</table>

Discussion
Factors that have been identified as important to the success or failure of SMEs in the two provinces (Southern Punjab and Baluchistan). The result indicated that these factors need to be focused and improved in both areas as these contributed towards the success or failure of SME’s.

It describes that the management experience, planning, professional management, no of staff, product and services marketing and age are the pillars of the success of Southern Punjab SME’s. The results indicated prior experience of running the business is crucial for successful business. Proper planning, appropriate, support from staff and nature and innovation and the nature of product and services leads to the growth of SME’s. Southern Punjab results are supported with the result of prior studies. For instance, the result are in lined with the study conducted in Singapore, the critical success factors for SMEs were high quality staff working in the business and top management quality. Moreover, another study also found surprising result like the current study that access to finance, and good government policy as not statistically significant compared with other variables in the model (Siow et al., 2011). However, finance and economic policies, the current study also found that parent support, education, partners support and record keeping were found to be insignificant.

Moreover, in Balochistan, in addition to managerial experience, planning, professional advice, the proper education and marketing strategies of product services were found to be significant. A study conducted in the US also highlighted the role of specific plans and marketing and professional suggestions to success of the business (Marom & Lussier, 2014). However, the current study found that education also plays important role in Balochistan SME’s as compare to Southern Punjab SME’s. Therefore, SMEs in Balochistan have cultural diversity, focus on education, and operates SMEs businesses with a focus on planning.

The result highlighted that there is a need to focus on staff, product and services and age in Southern Punjab SME’s while there is need to focus on education and marketing Balochistan SME’s. Overall management experience, planning, and professional advice need to be focused in both areas of SME’s.

Implication and Recommendation
The result implied that SME’s policy makers and government bodies should focus on arranging training sessions, conferences, and to educate the entrepreneur’s about the significance of successful factors,
particularly on training of staff, products, age in Southern Punjab while education and marketing strategies in Balochistan. Business owners need to make aware that focus on the factors make their business successful rather than relying on luck. This will help to decrease SME’s failure rate, close up, bankruptcies and default rates. In addition, the initiatives create employment, decrease job losses, efficient planning, increase in government revenues and help towards a healthier economy. Moreover, there is a lack of entrepreneurial mentorship and in the provincial government provides a low level of support to the public to facilitate and boost up entrepreneurship in Southern Punjab and Balochistan. This initiative is also highlighted by the study of (Peter, Adegbuyi, Olokundun, Peter, Amaihian, & Ibidunni, 2018)

Theoretically, it is quite significant research in which efforts made at the wide area of Pakistan to determine the involvement of factors in success versus failure and these are also relevant to the developing economy such as Southern Punjab and Balochistan. Hence, to develop an indigenous model of entrepreneurial success versus failure, which constitutes the comprehensive but balanced combination of micro and macro factors. Its anticipation should develop the Southern Punjab and Balochistan SME’s, according to the provided model formation that will boost up SME’s towards growth.

To increase the generalizability of findings, there is need to collect data from all provinces of Pakistan. In addition, a qualitative study can also be conducted to know about the success or failures’ of SME’s in Pakistani context and culture.

**Conclusion**

As small medium enterprises are a perspective to the growth of the economy. Particularly, it is the discussion related to the effect of SMEs in Southern Punjab and Balochistan. These SMEs need institutional and governmental support from a general point of view. The strength of the development of SMEs in Southern Punjab and Balochistan required proper guidelines and help. This study steps forward to guide the enterprises in a particular area of Pakistan. The prediction model has reported the result of the significant influence of success or failure factors SMEs operating in Southern Punjab and Balochistan. Results of the current study indicated that factors like management experience, planning and professional advice are the determinants of SME’s in both areas. In Southern Punjab, marketing, age, no of staff and product and service are the significant factors. In Balochistan, education and marketing strategies are significant factors. Precisely, the result of the current study highlighted the success or failure factors varied across the regions because these are based on cultural and behavioral differences.

**References**


Value Risk Premium and Stock Returns in Kenya: Exploring the Moderating Effect of Investor Sentiment

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ABSTRACT

Purpose: Prior literature has focused on the direct effect of firm level fundamental characteristics on stock returns while ignoring the likely effect of investor irrationality on asset pricing decisions. The purpose of this study is to investigate the role of investor sentiment in the relationship between value risk premium and stock returns in Kenya.

Design/methodology/approach: The study utilized monthly time series data for 60 companies listed at the NSE over the recent 9 years from 2011-2019. The study employed time series regression using ARDL and VEC estimation techniques to examine whether the effect of value risk on stock returns will vary with level of investor sentiment.

Findings: Results show weak evidence for existence of value risk premium at the NSE using the main effects model. The pricing effect of value risk premium is however enhanced in the interaction model. The interaction though not significant implying that there is no moderating effect of sentiment.

Research limitations: The shorter nine-year period considered by the study could be a source of small sample bias in the estimation. Sample periods for studies in mature markets span for over decades. In this light, making comparison of the findings in this thesis with those of other related studies may not be feasible.

Originality/Value: This study is first of its kind to analyze the moderating effect of investor behavior on asset pricing for an emerging market. The paper contributes to portfolio management and asset pricing literature for emerging markets.

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**Introduction**

A number of studies have documented superior performance of value stocks in relation to growth stocks. Stocks with high ratios of fundamentals to market price are referred to as value stocks while stocks with low ratios are referred to as growth stocks. The value effect is the link between a firm’s current book-to-market (B/M) ratio and forecasted stock returns (Karp & Vuuren, 2017). Firms judged by markets as having poor prospects will be signaled by low stock prices and high book-to-market equity ratios (Artmann *et al.* 2012). Such firms are considered risky and will tend to have high expected stock returns or high cost of capital. The reverse is true for low B/M ratio firms. Value effect is attributed to expectation errors made by investors which could lead to over or undervaluation of stocks. This argument is supported by Xing (2008) who opines that professional arbitrageur are risk averse and will tend to avoid stocks with high B/M ratio. Further, non-professional investors, being more sensitive to transaction costs will not trade to take up advantage of this anomaly to earn abnormal profits thereby causing this anomaly to persist.

Analysis of value premium in asset pricing studies has been investigated extensively across global markets over a wide spectrum of sample periods. Whereas some researches in emerging markets show that returns on individual stocks tend to be an increasing function of the B/M ratio (Kubota & Takehara, 2018, Kilsgard and Wittorf, 2011) other studies find a significant negative Book-to-market factor (Shafana, Rimziya & Jariya, 2013). Auret and Sinclair (2006) found a significant value effect in South Africa, similar to Njogo *et al.* (2017) at the Kenyan equity market under the momentum augmented FF5F model. Thus, existing literature in asset pricing shows lack of convergence in the search for explanation for value effect-return relationship both among the developed and emerging markets.

Baker and Wurgler (2006) describes investor sentiment as the systematic error or bias in investors’ belief about future cash flows and investment risks that is not consistent with the fundamental facts. When most investors are optimistic in their irrational beliefs, and think that firms have good prospects for the future, they tend to over-value and invest in the stocks thus increasing the demand. The reverse holds true when investors hold a negative outlook. Berger and Turtle (2012) concluded that investor optimism (or pessimism) may induce mispricings in the stock market thereby drive prices well above or below that warranted by the fundamental value. Thus, it is reasonable to assume that risk-return relationship may be influenced by level of sentiment risk at the NSE.

Some studies find correlation between investor sentiment and stocks with certain characteristics. For instance, small stocks and stocks with high volatility are more subject to sentiment than others (Baker & Wurgler, 2007); Stocks that are harder to value and arbitrage are expected to be sentiment-prone (Berger & Turtle, 2012); Overall, systematic risk exposure is expected vary between periods of high and low investor sentiment. In this study, investor sentiment was conceptualized as having a moderating effect in the relationship between valuation risk and excess returns on NSE listed stocks.

A section of empirical literature show that firm level fundamental variables may proxy for systematic risk (Karp & Vuuren, 2017) and that market conditions may influence stock returns (Chae & Yang, 2016). There are however, gaps in literature owing to selection of variables and methodology adopted. Tripathi & Aggarwal (2020) maintain that universal applicability of any stock market phenomenon demands its investigation in both the developed and developing capital markets of the world. This is because capital markets differ from each other in terms of numerous aspects such as institutional structures and cultural backgrounds. For that reason, a global version of asset pricing model is not overally convincing. A specific context version might provide better insights regarding relevant factors.
It is therefore of essence to explore the debate around asset pricing in the emerging markets owing to their distinctive structure and importance in international portfolio diversification. This study sought to bridge the gap in asset pricing literature by investigating the role of investor sentiment in the relationship between value risk premium and excess stock returns in Kenya, controlling for premium on market, size, profitability and asset growth.

Empirical Literature and Hypothesis Development
Basiewicz and Auret (2010) sought to isolate a suitable measurement for value effect at the Johannesburg Stock Exchange (JSE). The ratios explored were Earnings-to-Price, Cashflow-to-Price and Book-to-Market which have similar economic interpretation. The time series regression analysis revealed high correlation amongst the study variables with the B/M being a strong predictor of returns than earnings-to-price and Cash flow-to-price. In a related study, Auret and Sinclair (2006) applied FF3F model to test the value effect on the same market. Monthly data for stocks from all sectors of the JSE were assembled from 1990 to 2000. Return data was adjusted for dividends and capital events and a thin trading filter was used to ensure that the trading volume of each share exceeded at least one per period. Univariate and multivariate regression analyses were conducted to test the significance of the predictor variables with respect to estimating excess stock returns. Results showed a significant positive relationship between B/M ratios and expected stock returns.

Kilsgard and Wittorf (2011) examined the adequacy of FF3F model in measurement of the value effect on average stock returns in at the United Kingdom (UK). The independent variables in the model were factors formed on size and book-to-market equity other than the market beta. The study adopted Fama-French (1993) approach for constructing 16 portfolio of stocks using 4x4 annual sorting procedure. The yield on UK T-bill with one month to maturity was used to proxy risk-free interest rate. The coefficient on HML variable was positive implying that high B/M ratio stocks earn relatively higher returns than low B/M stocks. Strong value effect was similarly noted by Kubota and Takehara (2018) on Tokyo Stock Exchange.

Shafana, Rimziya and Jariya (2013) employing Fama-MacBeth (1973) procedure analyzed the association between expected stock returns and value premium in Srilanka. For a given year, firm value was measured using the ratio of book to market value of equity while stock returns were operationalized as dividend plus changes in stock price divided by beginning stock price. Cross-sectional regression was used to analyze five-year data from 2005 to 2010 on a sample of 12 firms. In order to smooth the data, all variables were transformed into natural logarithm prior to empirical analysis. The study observed significant negative value effect, on returns. The results also support the view that the value factor explains highly stock returns of financial firms than when full sample or non-financial firms are considered. These findings, however, differ with the results obtained by Mahawanniarachchi (2006) and Anuradha (2007) who reported a significant positive relationship between B/M and individual stock returns in Sri Lanka.

Value effect has also been recently investigated by Chen and Zhang (2019) on non-financial firms at the Chinese market. The sample contained 258 months observations spanning 1996 to 2016 so as to obtain adequate number of cross-sectional units for time series data. The study employed time series and Fama-MacBeth tests on 25 portfolios related to size, constructed following the Fama and French (1993) framework. Over the period of study, the HML (High-Minus-Low) factor generated risk adjusted average monthly return of 0.23% (t-value = 1.40) which is not statistically different from zero at 1% level. The results of time series regression indicated that value factor does not significantly explain the cross-section of stock returns in China. The result corresponds partly to findings by Hou, Xue and Zhang (2015) and Araujo and Machado (2017) who did not find evidence for existence of value effect in their analyses. The results are however inconsistent with other studies such as Chen et al. (2010) and Cakici et al. (2013) who detect significant value effect.
Odera (2010) analyzed value effect by testing the validity of FF3F model at the NSE. They adopted descriptive and correlational research designs. Monthly data of 60 companies were taken over a period of five years from 2008 to 2012. Multivariate regression analysis was applied on nine test portfolios constructed in the framework of Fama and French (1993) on the basis of market value and book-to-market value of equity. The study documented that the value factor is more effective for high B/M stock portfolios. Overall, portfolios containing glamour stocks had higher earnings as compared to value stocks, inconsistent with valuation theory. These findings are however consistent with Hanauer and Linhart (2015) and Njogo (2017).

The exposition of past empirical literature shows that there is no existing current work done in Kenya on risk-return relationship under the FF5F model approach. Most studies on asset pricing are confined to global markets (Hearn & Piesse, 2009). In many African equity markets, the return generating process is not well established making it difficult to identify components for risk premia due to lack of reliable historical data (Girard & Omran, 2007). A study of this nature would therefore bridge an important contextual gap. Past studies have often neglected the role of different states of investor sentiment in explaining risk-adjusted returns (Lind & Sparre, 2016). Thus, the current study adds a new dimension in asset pricing studies by investigating if changes in investor sentiment, proxied by bull-bear spread, would moderate the pricing effect of value risk premium at the Kenyan equity market. Further, a significant contribution of this article is in the use of robust estimation methods in analysis of associations.

Upon the analysis of the foregoing empirical literature and the underlying theoretical perspectives, we proposed two hypotheses:

**H01:** Value risk premium does not significantly explain stock returns at the NSE

**H02:** The effect of value risk premium on stock returns is independent of investor sentiment at the NSE

**Data and Methodology**

This study was anchored on positivist philosophical foundation whereby the established theoretical linkage between value risk premium and variation in cross-section of excess returns was used to develop hypotheses that were tested and validated against empirical observations. Causal research design was employed out of the need to explain the cause effect relationship between value risk premium and excess stock returns in Kenya. Time series study design was also adopted to analyze changes in patterns as well as identify short-term and long-term trends in the data. The study utilized secondary data obtained from audited annual company reports, reports and publications of the central bank of Kenya, the Capital Markets Authority, the NSE annual investor handbook and daily equity price lists. The analysis period from January 2011 to December 2019 was dictated by availability of data on variables. The study population comprised all firms listed at the NSE but the final sample frame comprised 60 firms that met specification of selection criteria commonly used in asset pricing literature.

At the end of December each year, stocks were distributed into two size groups and also independently allocated to two groups of value, asset growth and operating profitability using median breakpoints. The intersection of the independent 2x2 sorting yielded 12 portfolios which formed the dependent variables. The portfolios were ascribed initials relative to their location in the portfolio sorting matrix. For example, a portfolio at the intersection of small size and low B/M ratio (RSL), big size and conservative investment (RBC) and so on. Overall, big market cap stocks were concentrated in robust profitability portfolios while most small stocks were in the weak profitability portfolios possibly due to their low earning capabilities. From the distribution of firms, it was inferred that high book-to-market, weak profitability and conservative stocks tend to be small while low book-to-market, robust profitability and aggressive stocks are associated with big firms.
### Correlation Analysis

<table>
<thead>
<tr>
<th></th>
<th>MKT</th>
<th>SIZE</th>
<th>VALUE</th>
<th>PROF</th>
<th>ASTG</th>
<th>SENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKT</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.2318**</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VALUE</td>
<td>0.0037</td>
<td>-0.1206</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPROF</td>
<td>0.0627</td>
<td>0.1697</td>
<td>0.2446**</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASTG</td>
<td>-0.0942</td>
<td>-0.0431</td>
<td>0.0196</td>
<td>-0.2453**</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>SENT</td>
<td>0.6582**</td>
<td>-0.0377</td>
<td>-0.0402</td>
<td>-0.0013</td>
<td>-0.0991</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

** Significant at 5% level

Table 1 displays correlation matrix of main effects predictor variables. The table shows generally low and insignificant correlation among the main effects variables. There was however significant but less than average correlation between MKT and SIZE ($r = -0.2318, p<0.05$), OPROF and VALUE ($r = 0.2446, p<0.05$) and OPROF and ASTG ($r = -0.2453, p<0.05$). The table further shows that market risk premium (MKT) and sentiment (SENT) are highly positively correlated ($r = 0.6582$). It implies that investor sentiment variable and market factor have a positive co-movement and variation in sentiment may have an impact on estimation of market beta at the NSE.

### Times Series Assumptions

<table>
<thead>
<tr>
<th>Test</th>
<th>Null Hypothesis</th>
<th>Decision Rule</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normality</td>
<td>Normally Distributed Residuals</td>
<td>Unevenly dispersed Q-Q plots</td>
<td>Rejected</td>
</tr>
<tr>
<td>Stationarity</td>
<td>Variable is non-stationary (has unit root)</td>
<td>Absolute ADF/P-P t-stat $&gt;$ test critical value</td>
<td>Rejected</td>
</tr>
<tr>
<td>Cointegration</td>
<td>No Cointegrating Equation</td>
<td>F-stat $&gt;$ Lower I(0)</td>
<td>Rejected</td>
</tr>
<tr>
<td>Multicollinearity</td>
<td>No Multicollinearity</td>
<td>VIF $&gt; 10$</td>
<td>Rejected</td>
</tr>
<tr>
<td>Heteroscedasticity</td>
<td>Data is Homoscedastic</td>
<td>$\chi^2$ value $\frac{(n - p) * R^2}{I(0)} &lt; I(0)$</td>
<td>Rejected</td>
</tr>
<tr>
<td>Autocorrelation</td>
<td>Serially uncorrelated errors</td>
<td>$\chi^2$ value</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

### Model Specification

**The ARDL short-run Main Effects model**

The main effects model was used to check the amount of variation in the outcome variable accounted for by Value risk premium without influence of sentiment.

$$
\Delta(R_j - \gamma)_t = \alpha_0 + \sum_{i}^{p} \delta_i \Delta(R_j - \gamma)_{t-i} + \sum_{i}^{q_1} \beta_i \Delta(MKT)_{t-i} + \sum_{i}^{q_2} h_i \Delta(VALUE)_{t-i} + Controls_{t-i} + e_{1t}
$$

3.3.2 **The Error Correction Main Effects Model Representation**

$$
\Delta(R_j - \gamma)_t = \alpha_0 + \sum_{i}^{p} \delta_i \Delta(R_j - \gamma)_{t-i} + \sum_{i}^{q_1} \beta_i \Delta(MKT)_{t-i} + \sum_{i}^{q_2} h_i \Delta(VALUE)_{t-i} + Controls_{t-i} + \phi ECT_{t-1} + e_{2t}
$$

3.3.3 **The ARDL short-run Interaction Model**
\[ \Delta(R_j - r_f)_t = \alpha_0 + \sum_{i=1}^{n} \delta_i \Delta(R_j - r_f)_{t-i} + \sum_{i=0}^{n} \beta_i \Delta(MKT)_{t-i} + \sum_{i=0}^{n} h_i \Delta(VALUE)_{t-i} + \text{controls}_{t-i} + \sum_{i=0}^{n} \xi_i \Delta(SEN)_{t-i} + \sum_{i=0}^{n} \gamma_i \Delta(VALUE \times SENT)_{t-i} + e_{3t} \]

### 3.3.4 The Error Correction Interaction Model Representation

\[ \Delta(R_j - r_f)_t = \alpha_0 + \sum_{i=1}^{n} \delta_i \Delta(R_j - r_f)_{t-i} + \sum_{i=0}^{n} \beta_i \Delta(MKT)_{t-i} + \sum_{i=0}^{n} h_i \Delta(VALUE)_{t-i} + \text{controls}_{t-i} + \sum_{i=0}^{n} \xi_i \Delta(SEN)_{t-i} + \sum_{i=0}^{n} \gamma_i \Delta(VALUE \times SENT)_{t-i} + \varphi ECT_{t-1} + e_{4t} \]

Where

Note: The short-run model terms go with difference operator.

\( R_j - r_f \): Excess return on portfolio \( j \)

\( \alpha_0 \): Intercept of the model. If the predictors in a model capture adequately expected returns, \( \alpha_0 \) should be indistinguishable from zero.

\( \delta_i \): The coefficient loading for the lagged value of the dependent variable.

\( \beta_i \): The coefficient loading for the market risk factor (MKT).

\( h_i \): The coefficient loading for the Value risk premium (VALUE).

\( \xi_i \): The coefficient loading for investor sentiment (SENT).

\( \gamma_i \): The coefficient loading for the interaction of value and sentiment (VALUE*SENT).

\( \varphi \): Speed of adjustment to long-run equilibrium.

ECT: Error Correction Term

\( e_{3,t} \): The random error term capturing other factors influencing excess portfolio returns.

Controls: Include the size risk factor (SIZE), Profitability risk factor (OPROF) and asset growth factor (ASTG).

### Results

**Value risk premium and Stock Returns**

Over the sample period of investigation, the average of monthly excess returns were -0.52% with a maximum of 18.70%, and a minimum of -23.40%. The market factor had the least premium (mean = -0.70%) with an average standard deviation of 4.56%. The average premium on the value risk premium was 0.05% with a standard deviation of 3.26%. The sentiment proxy had a mean value of -6.78% indicating that a bearish sentiment prevailed over the sample period and that market participants gained negative excess returns. Table 7.1 reports the estimate of results of the time-series regression for main effects model conducted to establish whether value risk premium predicts the monthly equity returns at the NSE.

<table>
<thead>
<tr>
<th>Table 3: ARDL Error Correction Regression—Main Effects Model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SIZE-INV</strong></td>
</tr>
<tr>
<td>RET(-1)</td>
</tr>
<tr>
<td>MKT</td>
</tr>
<tr>
<td>VALUE</td>
</tr>
<tr>
<td>Intercept</td>
</tr>
<tr>
<td>ECT(-1)*</td>
</tr>
<tr>
<td>Adj. R²</td>
</tr>
<tr>
<td>SE</td>
</tr>
<tr>
<td>F-stat.</td>
</tr>
<tr>
<td>Pr(F-stat)</td>
</tr>
</tbody>
</table>
Table 3 displays results of ARDL regression conducted to test the null hypothesis of no significant effect of value risk premium on stock returns at the NSE, controlling for size, operating profitability and asset growth factors. Overall, value risk premium is significant in all portfolios that are in the size-B/M sort but not significant in all size-profitability sorted portfolios. The regression coefficients on value risk premium imply that value stocks earn relatively high returns than growth stocks. Additionally, seven (7) out of twelve (12) portfolios have the expected positive loading on the value risk premium, suggesting that a high valuation risk is likely to increase excess stock returns. The value risk premium is however significantly different from zero in only 41.67% of the regressions, which leads to the conclusion that overall, value risk premium does not explain the variation of stock returns in Kenya. The redundancy of value factor at the NSE could be a reflection of low investor confidence in the accounting information from which value risk premium is derived. The existence of imperfect regulatory environment and weak surveillance systems in the emerging markets may account for problems such as failure by listed firms to make adequate disclosure of relevant information to the investors and insider-dealing. Applying panel data to estimate regression models, Araujo and Machado (2017) observed similar results indicating that B/M ratio has no significant influence on Brazilian stock returns. The current results however are not consistent with Auret and Sinclair (2006) in South Africa, Kilsgard and Wittorf (2011) in UK and Kubota and Takehara (2018) in Japan who observed a positive and significant coefficient on HML factor when studied under the Fama-French (1993) model framework. Contrary results are also reported by Odera (2010) and Shafana et al. (2013) whose overall conclusion suggest that portfolios containing glamour stocks have higher earnings and hence appear to be more risky as compared to value stocks.

**Investor Sentiment, Value risk premium and Excess Returns**

Table 4 shows summary results of the ARDL time-series regression performed to establish if investor sentiment has additional predictive value to the model testing the effect of value risk premium on stock returns at the NSE. The Table also illustrates the estimated intercepts, the error correction term and adjusted R-square for each portfolio regression. The coefficients of the model without interaction were estimated by running the following ARDL error correction model equation:

\[
\Delta(R_j - r_f)_t = \alpha_0 + \delta_i \Delta(R_j - r_f)_{t-i} + \beta_i \Delta(MKT)_{t-i} + s_i \Delta(VALUE)_{t-i} + \xi_i \Delta(SENT)_{t-i} + \text{CONTROLS}_{t-i} + \phi ECT_{t-1} + \epsilon_t
\]

**Source:** Author’s own calculations in Eviews 10

**denotes variable is significant at 5% level**
Table 4: ARDL Error Correction Regression-Model without Interaction

<table>
<thead>
<tr>
<th>Variable</th>
<th>RBA</th>
<th>RBC</th>
<th>RBH</th>
<th>RBL</th>
<th>RBR</th>
<th>RBW</th>
</tr>
</thead>
<tbody>
<tr>
<td>RET (-1)</td>
<td>0.07</td>
<td>0.0237</td>
<td>3</td>
<td>0.009</td>
<td>0.0108</td>
<td>8</td>
</tr>
<tr>
<td>MKT</td>
<td>0.54</td>
<td>0.299</td>
<td>0.810</td>
<td>0.340</td>
<td>0.485</td>
<td>2</td>
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<tr>
<td>E</td>
<td>0.2005</td>
<td>0.1160</td>
<td>0.379</td>
<td>0.3749**</td>
<td>0.1039</td>
<td>8</td>
</tr>
<tr>
<td>SENT</td>
<td>0.030</td>
<td>0.065</td>
<td>0.018</td>
<td>0.060</td>
<td>0.050</td>
<td>7</td>
</tr>
<tr>
<td>Intercep</td>
<td>0.00</td>
<td>1</td>
<td>0.0014</td>
<td>0.005</td>
<td>0.003</td>
<td>7</td>
</tr>
<tr>
<td>d R²</td>
<td>31</td>
<td>9</td>
<td>0.778</td>
<td>7</td>
<td>0.895</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>RSA</th>
<th>RSC</th>
<th>RSH</th>
<th>RSL</th>
<th>RSR</th>
<th>RSW</th>
</tr>
</thead>
<tbody>
<tr>
<td>RET (-1)</td>
<td>0.0456</td>
<td>-</td>
<td>0.0133</td>
<td>0.0594</td>
<td>0.0036</td>
<td>73**</td>
</tr>
<tr>
<td>MKT</td>
<td>0.20</td>
<td>**</td>
<td>0.3769</td>
<td>0.2304</td>
<td>**</td>
<td>0.4912</td>
</tr>
<tr>
<td>E</td>
<td>0.14</td>
<td>0.0189</td>
<td>**</td>
<td>0.4038</td>
<td>0.4306**</td>
<td>0.2755</td>
</tr>
<tr>
<td>SENT</td>
<td>0.05</td>
<td>**</td>
<td>0.0671</td>
<td>0.0691</td>
<td>0.0330</td>
<td>0.0574</td>
</tr>
<tr>
<td>Intercep</td>
<td>0.0047</td>
<td>**</td>
<td>0.0018</td>
<td>0.0043</td>
<td>0.0002</td>
<td>83**</td>
</tr>
<tr>
<td>d R²</td>
<td>61</td>
<td>0.61</td>
<td>0.8034</td>
<td>0.7821</td>
<td>0.5779</td>
<td>0.6125</td>
</tr>
</tbody>
</table>

** Regression is significant at 5%

Results in Table 4 show that the market factor has positive coefficients, 67% of which are statistically significant, consistent with the results in Table 7.1 of the main effects model. The sentiment variable has positive factor loadings in all test portfolio regressions, 67% of which are significant at 5% level. This implies that a high sentiment market condition would significantly increase stock returns, holding other factors constant. The value risk factor is however not significant in the model that adds sentiment variable in the analysis. The adjusted R-square values increase for all but RSL portfolio regression where there was marginal reduction. This implies that augmenting sentiment variable to a model for testing value effect on excess stock returns adds predictive power to the model.

Investor Sentiment, Value Risk and Stock Returns-Interaction model

Table 5 shows summary results of the ARDL time-series regression performed to establish if investor sentiment would influence the relationship between value risk premium and excess stock returns at the NSE. It was conceptualized that the influence could either be direct or through interaction, controlling for other risk factors in the model. The coefficients of the interaction model-2 were estimated by running the following ARDL error correction model equation:

\[
\Delta(R_j - r_f)_t = \alpha_0 + \delta_i \Delta(R_j - r_f)_{t-1} + \beta_i \Delta(MKT)_{t-1} + \gamma_i \Delta(VALUE)_{t-1} + \phi_i \Delta(SENT)_{t-1} + \psi_i \Delta(VALUE \times SENT)_{t-1} + \text{Controls}_{t-1} + \epsilon_{it}
\]

The sentiment effect was established by assessing the change in adjusted $R^2$ and significance of the sentiment variable and its interaction with value risk premium in the interaction model. Table 5 further illustrates the estimated intercepts, the error correction term, factor loadings and their corresponding t-statistics (in square brackets) and p-values (in parentheses).

Table 5: ARDL Error Correction Regression-Interaction Model

<table>
<thead>
<tr>
<th>Variable</th>
<th>SIZE-INV</th>
<th>SIZE-B/M</th>
<th>SIZE-OP</th>
</tr>
</thead>
<tbody>
<tr>
<td>RET (-1)</td>
<td>RBA</td>
<td>RBC</td>
<td>RBH</td>
</tr>
<tr>
<td>RET (-1)</td>
<td>0.0456</td>
<td>-</td>
<td>0.0133</td>
</tr>
<tr>
<td>MKT</td>
<td>0.20</td>
<td>**</td>
<td>0.3769</td>
</tr>
<tr>
<td>E</td>
<td>0.14</td>
<td>0.0189</td>
<td>**</td>
</tr>
<tr>
<td>SENT</td>
<td>0.05</td>
<td>**</td>
<td>0.0671</td>
</tr>
<tr>
<td>Intercep</td>
<td>0.0047</td>
<td>**</td>
<td>0.0018</td>
</tr>
<tr>
<td>d R²</td>
<td>61</td>
<td>0.61</td>
<td>0.8034</td>
</tr>
</tbody>
</table>

784
This study sought to establish if valuation risk explains stock returns at the NSE. In the main effects regression, the value risk premium had the expected positive loading in seven (7) out of twelve (12) portfolios suggesting that a high valuation risk would increase excess returns on stocks in line with fundamental based valuation principle. Overall, the value risk premium is not significant in more than half (58.33%) of the time series regressions thereby supporting the null hypothesis of no effect of value risk premium on stock returns in Kenya. The redundancy of value factor at the NSE could be a reflection of a large concentration on portfolio of big stocks. This therefore implies that value risk premium does not depend on the level of value risk premium. It was also observed that less than 50% of the regressions had significant coefficients on value risk premium, with a large concentration on portfolio of big stocks. This therefore implies that value risk premium and that we can infer long-run convergence/reversion to equilibrium and that we can infer long-run causal relationship.

**Conclusion**

This study sought to establish if valuation risk explains stock returns at the NSE. In the main effects regression, the value risk premium had the expected positive loading in seven (7) out of twelve (12) portfolios suggesting that a high valuation risk would increase excess returns on stocks in line with fundamental based valuation principle. Overall, the value risk premium is not significant in more than half (58.33%) of the time series regressions thereby supporting the null hypothesis of no effect of value risk premium on stock returns in Kenya. The redundancy of value factor at the NSE could be a reflection of low investor confidence in the accounting information from which value risk premium is derived. The

Results in Table 5 show that 50% of the regressions had significant coefficients on value risk premium, with a large concentration on portfolio of big stocks. This therefore implies that value risk premium is priced in a model that incorporates the interaction between investor sentiment and value risk premium. This result suggests that investor sentiment enhances the significance of the valuation risk effect. It was also observed that less than 50% (4 out of 12) of portfolios had significant loading on sentiment variable. Further, only 5 out of 12 portfolios had positive and significant loadings on the interaction term at 5% level. This result imply that the effect of valuation risk on excess returns does not depend on investor sentiment outlook by investors at the NSE. Similarly, the effect of sentiment on excess returns does not depend on the level of value risk premium. The ECT terms are significant with the expected negative sign in all regressions. This shows evidence of long-run convergence/reversion to equilibrium and that we can infer long-run causal relationship.
low confidence could be attributed to perceived less stringent reporting requirements placed on firms listed at the NSE as compared to those in more developed markets across the world. Further, the study observed significant valuation effect in a model that incorporates investor sentiment therefore suggesting that investor sentiment could enhance the predictability of FF5F pricing model model in Kenya. The study did not however find evidence for moderating effect of investor sentiment in the relationship between value risk premium and stock returns in Kenya. The findings highlight the importance of investor sentiment as a proxy for systematic risk in the investment decisions by market players in Kenya.

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Organizational and Personal Drivers of the Financial Sector: A Focus Group of Banking Officials in Pakistan

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ABSTRACT

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Purpose: This study intends to explore the key challenges the financial sector faces today about employees’ perspectives and how these challenges eventually play a role in the employee’s work-life balance.

Design/Methodology/Approach: A Focus group was conducted with a leading multinational bank in Pakistan. Six managerial cadre employees participated in the focus group study. The focus group analysis suggests very stringent rules and regulations incorporated by SBP that bind each bank to undergo strict compliance.

Findings: The challenge of customer retention, declining interest rates, coping with the frugal economic situation of the country, meeting customer satisfaction, incorporating personal relationship management, use of ancillary support services by customers, reward and recognition to employees, dealing with information savvy knowledgeable customers, work-life balance and overall motivation of the bank employees are assumed by the participants as the key challenges that drive the banking industry of Pakistan.

Implications/Originality/Value: Senior management of the banking sector of Pakistan can learn from the problems discussed, and the possible solution proposed to the said problems. This research contributes to the body of knowledge while explaining the issues faced by the professionals working in the banking sector of Pakistan.

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Introduction

The financial sector has faced several challenges in the last few decades (Huang, 2019). The global recession has hit financial institutions badly, leading to a negative spiral in the industry. The challenges for the financial institutions have been aggravated in South Asia due to weak national institutional support (Ali, Butt, & Butt, 2019; Basheer, Hidthiir, & Waemustafa, 2019; Chu, 2018). In today’s competitive environment, the industry dynamics are changing daily, and banking professionals have to meet a growing number of challenges to perform their responsibilities effectively and efficiently (Bashir, Yugang, & Hussain, 2020; Hussain et al., 2017). The key challenges faced by the banking industry include but are not limited to: the cut-throat rivalry between national and multinational banks, satisfying highly information-savvy customers, adhering to the State Bank of Pakistan (SBP), providing an unmatched level of banking services.

Taking benefit from a perfect competition market, the customers usually try to play off one bank with another in the pursuit of gaining maximum (and at times undue) shares from the pie. The banking industry employees are expected to endure the two-pronged challenge of meeting customers’ expectations on one end of the equation and achieving the management’s objectives at the other (Islam, Hasan, Rahman, Baten, & Islam, 2019; Paul, Mittal, & Srivastav, 2016). Such pressure situations can adversely impact employees’ work-life balance (Rahi, Ghani, & Ngah, 2019). The problem at hand faced by the banking industry motivates us to inquire further and explore the issues and critical challenges that the banking industry in Pakistan is facing today. We emphasize employees’ perspectives (both mid-level managers and strategic management) and how these challenges eventually play a role in the employees’ work-life balance.

The banking sector plays a fundamental role in economic development (Hasan, Wachtel, & Zhou, 2009; Nasir, Huynh, & Tram, 2019). It is noticed that the banking sector of Pakistan is experiencing multiple challenges in a competitive environment. According to Abbas, Hunjra, Saeed, and Ijaz (2014), most banks in Pakistan have become privatized and strategically process mergers and acquisitions to sustain negative trends and stabilize financial status. This change in ownership and market structure influences the overall performance of banks in Pakistan. The banking sector of Pakistan is turned into a competitive financial industry and has a big share in the economic growth of the country (Mahesar, Zehri, Zafar, & Chaudhry, 2015; Shaikh, Glavee-Geo, & Karjaluoto, 2017). Many empirical studies also supported the phenomenon that financial development is correlated with the country’s economic growth.

The banking sector of Pakistan is playing a pivotal role in the growth of the Pakistani economy. The industry is regulated by the State Bank of Pakistan (SBP), which governs local banks under its prudential regulations. Moreover, the banks also must comply with the international Basel III standards. Overall, the potential in this sector is vast (Xu, Li, & Ahmad, 2018). With that being said, the growth potential is enormous—primarily because of the introduction of high-speed, mobile Internet; the advent of Islamic banking; and the increased awareness of the benefits of banking in the country (Akhtar, Mehmood, Pervez, Aslam, & Akhtar, 2016).

Research Methodology

A focus group is a socially-oriented research procedure that allows the moderator to probe and explore the unanticipated issues. It has high face validity, incorporates relatively lower costs, and generates fast results. A focus group can be a very economical, efficient, and quick method to ascertain data from multiple participants (Krueger & Casey, 2000) in a very socially oriented environment (Krueger & Casey, 2000). When participants get a sense of belonging to an overall group, this can directly lead to an increased sense of cohesiveness (Peters, 1993) which in turn motivates them by the feeling of being safe and not being afraid to share the underlying information (Vaughn, Schumm, & Sinagub, 1996). Such an interaction that occurs among the group participants can ultimately result in yielding many important data (Morgan, 1988) and can lead to the possibilities of creating more spontaneous responses (Butler,
to discuss personal problems and to find out possible solutions to the issues as well (Duggleby, 2005).

One of the research methods to extract detailed information and deep insight from people is called a focus group interview. Researchers have been using focus group interviews (Morgan, 1988). In the past 20 years, social scientists’ qualitative data collection has increased by many folds (Madriz, 2000). Social science researchers, particularly those involved in qualitative research, tend to rely more on focus groups to simultaneously collect data and information from multiple individuals (Onwuegbuzie, Dickinson, Leech, & Zoran, 2009). A focus group is a carefully planned discussion designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment. According to Wilkinson (2004) a focus group is “a way of collecting qualitative data, which essentially involves engaging a small number of people in an informal group discussion (or discussions), ‘focused’ around a particular topic or set of issues.”

By providing the participants a comfortable and safe environment to speak out, focus groups can ascertain some thought-provoking answers in their own words by adding meaning to the solutions provided. Krueger and Casey (2000) view that when a less threatening environment is provided to research participants, it facilitates and helps them discuss their thoughts, ideas, opinions, and perceptions more openly and freely. Such interviews can be considered very effective in collecting information regarding the attitudes and attributes of people, how they feel, what they perceive, and how they enact with the environment around which they live. The key to conducting any focus group is practical planning as the moderator or researcher digs deep to find answers to the problems that otherwise cannot be found out by quantitative data naturally occurring. Due to its unique historical, geopolitical, and national institutional context, Pakistan is a suitable research setting for understanding the drivers of the financial sector.

**Respondents Profile**

Due to the purpose of confidentiality, the bank’s name or its exact location will not be disclosed. Still, they said the bank is located in the Lahore cantonment area. It comprises 22 employees working at various managerial and administrative level branches. Altogether six (06) employees participated in the focus group who belonged to multiple departments of the bank including, branch operations, back-end operations, customer sales, service and support, new business development, etc. and all the employees had been associated with the said bank for a period of between 2 years to 13 years.

To meet the research objective, the researchers opted to conduct a focus group with one of the leading multinational bank employees, with over 275 branches across Pakistan. For the said purpose, six managerial cadre employees (including both operations and strategic managers) participated in the focus group study conducted on the branch’s premises and lasted for over 90 minutes. The entire interview session was audio recorded for transcriptions and generation of results. Oral consent was taken from all participants of the focus group before initiation. Before conducting the focus group, all branch participants were contacted to take their agreements to participate in the focus group. Altogether six (06) employees participated in the focus group who belonged to various departments of the bank including, branch operations, back-end operations, customer sales, service and support, new business development, etc. and all the employees had been associated with the said bank for a while of between 2 years to 13 years.

**Issues Discussed**

To achieve our research objectives and to keep the discussion focused around its specific areas of interest, the following issues were broadly discussed:

1. Challenges faced by the banking industry.
2. Challenges faced by the employees of the banking industry.
3. Critical success factors are prevalent in the banking industry.
5. Performance-Reward and motivation.

Primary Topic Questions Key Challenges
The moderators put an aide question to find out the participants’ opinions to address the critical challenges faced by the Banking industry of Pakistan. The following transcriptions & themes emerged out of the discussion:

Customer Retention
P6 initiated the discussion by identifying customer retention as one of the banking industry’s key challenges. To retain the customer, the services provided to the customers must specifically address the problems and offer tailor-made solutions to the client, delivering all services in accordance and compliance with the standards of the State bank of Pakistan and the “Internal Performance Monitoring Score Cards” (IPMSC). To gauge the quality of the services provided to the customers, the top management in the bank sets SMART objectives at the start of each year for every branch of the bank, e.g., audit compliance, customer services, service quality, internal processes controls, and then these are monitored through a centralized information system on a monthly and quarterly basis. It helps the top management evaluate the performance levels of various bank branches across Pakistan and serves as a recognition and reward appraisal tool for above-par and below-par performing units.

P2 explained that all performance evaluation criteria are based upon tag time applied to all services. Tag Time is the time elapsed from the point a customer walks into the branch until they exist the unit. Giving an example, P2 explained that the tag time for Pay order generation according to the bank’s standards is ten (10) minutes, and for accounts opening, it is 2-3 working days. P6 stressed that it is not the responsibility of one person or department to retain a customer; instead, it’s a collective effort to perform above the expected bar levels. P1 tried to put an introductory discussion into a nutshell by inferring that if the organization wants to be competitive, it should collectively retain its clients by using both the front-end and back-end support services.

Verifications of Sources of Funds
The group discussants had made a debut to a new thought, “verifications of sources of the fund.” The participants shared that as per the new governmental policies and state bank regulations, the bank should strictly adhere to the compliance for opening up a new account by verifying the primary source of the deposited money. P3 and P4 both commented that It was a preeminent challenge for them to prove the source of the funds. Alongside P3 and P4 also insisted that checking and verifying the source of funds in terms of white or black money and out of proportion large deposits was a key challenge faced by the bank employees.

Interest Rate Offering
P2, P3, and P5 highlighted the interest rates currently given to the customers. According to P3, the customers are very informed and information savvy and, in most cases, have already done a comparative analysis regarding interest rates offered by competing banks. They are well updated and keep the latest knowledge of all rack rates offered by banks, and with It information, they try to play off one bank’s offerings with another’s. The prime objective of the customer is to get the maximum returns on their investments. P2 mentioned that due to the state bank’s latest policy, interest rates had been reduced from 10.5% to almost 8% in the last two years. Its reduction has impacted the banks drastically and made it extremely difficult to retain clients, but It has also led to immense dissatisfaction.

P2 further shared that those banks with smaller networks are even worse, as they want to sell more- they are mainly selling their products at a loss to have more customers switching from larger banks to smaller
ones. It is perceived as a strategic disadvantage by the larger banks, as they cannot offer more interest rates than they are allowed to do. When the moderators further probed The issue as to how It is possible, P2 clarified that large banks receive defined rates from the state bank, and then they work with their treasury departments to offer rack rates for regular deposits and special rates for clients bringing in deposits of Rs. 5 million and above.

**Customer Satisfaction**

The moderator used an aided technique to address the issue of customer satisfaction by asking the participants about its importance. P3, P4, and P5 all agreed on the high volume of customer satisfaction. Due to increased competition in the industry, the participants believed that if one does not provide good customer service, customer satisfaction will decline, churning to other competing banks. It was reaffirmed by P2, who clarified that there are two main categories of customers, one coming to the bank for lucrative interest rates, while the others who come to the bank for better customer services and the way they are treated personally. P2 gave the example that many a time, customers just come to the bank to have a cup of coffee with the branch manager or operations manager as they feel substantial in getting such a treatment from the bank.

**Personal Relationship Management**

In continuation to the customer satisfaction theme, personal relationship management also stemmed out as another essential theme identified by P2. Walk-in customers do not have the same impact in the eyes of P2 as those customers with whom the employees have developed a personal relationship, especially when it comes to meeting the targets. Having an empathetic attitude with the customers to even listening to unique/family problems is the key to maintaining such personal relationships. According to P1, every client expects a higher level of personalized treatment irrespective of the amount of money that client is bringing, but from the bank’s point of view, the bank only provides such services to its profitable customers who bring in higher deposits. It may lead to a dichotomy between the customer and the bank.

**Customer Expectations**

According to P1, the expectations of the banking industry clients are incredibly high and, at times, unjustified. Citing an example, P1 explained that clients are not interested in the problems or constraints that the bank might face, e.g., even if there are some resource constraints from the bank, e.g., systems or network down issues, etc., the client will persist in getting their issue resolved. If the client is directed to another channel to solve their problem, e.g., the helpline or ADC, they get perturbed and demand to see any superior office.

**Recognition and Rewards**

Another issue highlighted by P1 was the lack of recognition of the efforts put in by employees when dealing with challenging situations. Employees try to satisfy and serve their clients, but management seldom appraises or recognizes such activities. Although P1 did admit that some customers acknowledge the extra efforts being put in by the employee to resolve their issues, the administration is mostly lulling. The reward that an employee can get out of such actions is that the customer may open doors to new business avenues by recommending other prospective clients for such employees. P1 added an inverse relationship between the expectations of the management, VP’s, Line managers, and customers versus the rewards given to the employees.

**Knowledgeable Customer**

While encapsulating today’s customer’s characteristics, P6 explained that today’s customer is highly informed about the products and services of the banks in the ratio of 4:1 where 4 is the level of customer information ascertained from competing banks and their benefits, while 1 being the level of data processed by one particular bank. Such customers are not usually loyal in maintaining their accounts with one bank; instead, they hold multiple banks. It results in possessing monumental information
regarding competing products being offered by competitors, and hence they (the customers) play one bank with another in getting the highest possible augmented incentives by each bank.

Expectations from Ancillary and Support Services
An aided question was put forth by the moderator to find out the impact of other ancillary services (e.g., ATMs, online banking products, automatic funds transfers, one link, mNet, Western Union, etc.). P3 and P5 were of the view that the customers expected the bank employees to be accountable for any direct or indirect service that the bank provides to the extent that even if that service is malfunctioning due to any reason (technical or otherwise), the bank employee is the one to be held accountable.

Surface Threats by Customers
While responding to an aided question about complete withdrawals of money by the customer from their account, all participants unanimously stated that such threats were very commonly posed by the customer and were generally used as a tactic by clients to gain additional leverages from the bank. In most cases, the customers do not intend to withdraw their amounts, yet they still use it as a threat to throw their weights around and try forcing the bank to capitulate to their demands and undue favors.

Banking as Derived Demand
P2 highlighted that the industry’s challenge is the sluggish economy prevailing in Pakistan. The banking sector is directly related to the country’s overall business and economic performance. Pakistan’s economy has been taking a nose dive down south for the past several years, negatively impacting the banking business. The financial crunch has wrapped the entire economy into a vicious cycle affecting everyone negatively.

Transition Questions
Transiting from the challenges faced by the banking industry and its impact on employees, a few transition questions were brought into the discussion to move to the secondary topics. As one of the objectives of this study was to find out about the impact of challenges on the work-life of employees, aided transition questions were put forth to the discussion panel in this regard.

Work-Life Balance
P6 informed that banking which belongs to the service sector, has very different dynamics. The customers’ expectations regarding service delivery put a very high toll on employees’ personal lives, who frequently have to sit back late in the branch even after the close of official operating hours. P1 added that there are undue expectations from the management and customers’ side and in The process, social or personal life gets very much affected.

Employees Motivation
P6 gave the managements perspective regarding motivation. Reiterating the fact that the banking industry in Pakistan was undergoing cut-throat rivalry and was challenged by the frugal economic conditions, there were two main stakeholders whose concerns needed to be addressed, i.e., the management and the employees. The administration pays employees for the efforts that they put in, but if an employee expects higher rewards, they have to be different and “go the extra mile” to be eligible for higher perks. The results they achieve would determine how the incentives should be distributed. P6 clarified that if the employees are efficient in their workings, the bank does not require them to sit in for extended hours, apart from some extreme cases like an audit or a yearly closing. When the moderators asked a probing question whether the management supports the extra mile efforts, the reply was that it is a two-way street. The administration is all out to propagate and project such employees and provide them with better incentives. The management also considers collective performance and teamwork, which benefits all.
P6 also discussed the flip side of giving incentives by reverting to the dynamics of the banking industry by stating that there were SBP’s regulations to be adhered to, there were expenses to be met, there were technological requirements to be in place, and all these were leading to shrinking profits in the overall industry. Incentives, he added, were in direct proportion to profits generated. P2 concurred that banking is a highly complex field, and insight about its profession comes after years of experience in the industry. The initial 2 or 3 years are just the start of the learning process, and employees have to take the long route towards excellence. He added that expecting very high incentives is a recipe for failure.

Results and Discussion
We observed divergent themes that came out while conducting this focus group by looking at the dynamics of how the banks operate. We sum up these themes up as follow:

From the Micro Mindset of Employees to a Macro Perspective of Higher Management
When replies of P6 and P2 were compared, it was observed that P2 who was serving at a lower cadre had a tunneled view regarding things, e.g., the only important aspect for customer retention was the interest rates that were offered by the bank which seconds the results of (Rust & Zahorik, 1993). Contrary to it, P6, a higher-level manager, emphasized that interest rates only do not lead to customer retention. Still, it is a broader complete package that includes excellent customer experiences, tailor-made solutions to customers’ problems, individual personal relationships with the clients, etc. Similar to the notion of cash balancing shortages, P2 believed that the management should not penalize the cashiers if they mistake handing over or under cash to the clients. Contrary to its stance, P6 was of the view that if an experienced employee is negligent and if the bank will not reprimand such employees with stern punishments, then such acts (deliberate or otherwise) can result in heavy losses for the bank; these results have advanced the concept presented by (Cohen, Gan, Hwa, & Chong, 2006).

State Bank as a Regulator
It was also found during different points in the discussion that there are very stringent rules and regulations incorporated by SBP that bind each bank to undergo strict compliance. Rooms for negligence, errors, or mistakes cannot go unchecked. SBP has done a relatively good job in regulating the banking industry, as all SOPs, strategies, and operations that any bank follows have to be in direct compliance with SBP (Hanif, 2003).

Employee’s Frustration
A significant finding in this focus group was that there were paramount expectations from both the customer end and the management end. The customer wants uninterrupted and unmatched services irrespective of the resources available to the bank. On the same notion, there are incredibly high expectations by the bank’s management towards meeting the targets and delivering high customer service by the employees. It leads to extreme frustration and dissatisfaction amongst the employees, who feel considered “machines” and not humans. Results confirm the theory presented by (Zeithaml, Parasuraman, Berry, & Berry, 1990).

The Funds’ Source vs. Target Achievement Oxymoron
Reverting to the opinions of the participants regarding the verification issues and target achievements, we find that on the one hand, each branch has to meet set targets in terms of deposits and new business development, yet, on the other hand, the SOPs creates barriers to effectively achieve such targets by incorporating the policy of verifications of funds and sources of fund generations as in impediment. Achieving challenging targets creates problems for employees, and it also influences the work-life balance; this issue was highlighted by (Riz, 2013) to be an oxymoron.

Strategies to Handle Demanding Customers
During the discussion, the participants identified various techniques for dealing with demanding customers. These strategies included (i) Educating the clients in terms of what is right and wrong and
what falls under the parameters of banking SOP’s so that undue favors can be avoided, (ii) Listening more-saying less, (iii) Showing empathy towards the customer in resolving problems even to the extent of providing them with evidence/proof of steps taken to solve customer complaints and follow up (Broderick & Vachirapornpuk, 2002) (iv) equity in dealing with clients (Nutt, 1999) (v) Having a mindset of “a problem-solving approach,” (Farooq, 2009) and finally (vi) not procrastinating and lingering on problems, rather solving them immediately and as fast as possible.

Conclusion
The Banking industry of Pakistan is faced with numerous challenges today. A 90 minutes focus group was conducted with the employees of a single bank, and this research was able to identify various challenges faced by the industry. Some of the obstacles are customer retention, declining interest rates, coping with the frugal economic situation of the country, meeting customer satisfaction, incorporating personal relationship management, use of ancillary support services by customers, recognition to employees, dealing with information savvy knowledgeable customers, work-life balance, and overall motivation. The sub-themes that spur out from It study include (but are not limited to) stringent compliances required by banks in light of the governing policies and rules of the State Bank of Pakistan and verification procedures at one end, and a highly stressful work environment with paramount expectations (both from clients and the management) flocking over the employees.

Limitation and Future Research
Limitations of the Study
The first limitation of this study was that only the employees from a single branch of a single bank were contacted. Employees from other network branches of the same bank could have been added to increase the validity of It research and generate more valid results. Furthermore, including employees of other banks in the sample frame would give diversity and broaden the scope of this study.

The second limitation of this research is that it was only conducted in Lahore, and other cities were not included in the sampling frame. It can be ascertained from It that the responses generated during the focus group could be regional-centric to some extent. The third limitation of the study is that only one set of research tools, i.e., focus group, was used to analyze and address the study's objective. Other instruments, e.g., face-to-face interviews, case studies, narratives, etc., could generate different cogent results.

Another significant limitation of the study was the participants' role in the focus group discussion. We had only one strategic management focal person and five operational-level managers. We might have better projections if we could have more strategic managers due to varied information. The last limitation of this research is that it did not address the various threats that encircle the banking industry of Pakistan. The sector is vulnerable to many external threats like fraud, hacking, theft, insurance risks, and liquidity issues. Such issues were not addressed in this research, given the limitation of time and resources.

Future Directions
This 90 minutes focus group has helped us identify various issues and challenges faced by the Banking Industry of Pakistan. To further validate and extend this research, at least two more focus group studies can be conducted from the employees of two different banks, which can help create an exhaustive list of challenges. Based on It list, the particular hypotheses can be developed, which can be tested through a quantitative survey from bank employees of leading banks with the help of a questionnaire as a research instrument. Quantitative data generated from such surveys can then be compiled and tested using various statistical tools. It will give the entire study “mixed-method” research.
References


The Mediating Role of Job Embeddedness between Interruptions at Work and Job Satisfaction of Gritty Faculty Members

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ARTICLE DETAILS

ABSTRACT

Purpose: The study has examined the job satisfaction of gritty faculty members working on Basic Pay Scale, in public sector universities of Pakistan. The construct is derived from motivational intensity theory in the context of Islamic Republic of Pakistan.

Design/methodology/approach: A total of 289 gritty faculty members from Islamic Republic of Pakistan’s Public Sector Universities participated in this study by filling survey questionnaire. The survey questionnaire was adopted from different sources and tested for validity and reliability.

Findings: The study found that interruptions at work have significantly positive relationship with job embeddedness and job satisfaction and most importantly the unique concept for mediating relationship of job embeddedness between interruptions at work and job satisfaction has been established in this study. The study further examined and found that self-efficacy, multitasking, social astuteness has significantly positive relationship with job satisfaction.

Research limitations/implications: The application of the results requires intensive care for other universities and type of appointments in public and private universities of Pakistan and other countries of the world.

Practical implications: The universities in public sector are required to define the job statues and flexible working hours for the faculty members working on basic pay scale to enhance the job satisfaction of faculty members.

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Introduction
Islam instructs upon its believers to acquire knowledge and employ it to produce more knowledge and wisdom. Man is made vicegerent of Allah Almighty on the earth just for the reason that he has wisdom and knowledge. Man is supreme over all creatures; said in Holy Quran (2:30-33), When the Angels quizzed Adam’s appropriateness for representation: Allah mentioned Adam ‘s knowledge to persuade them (Khalid, Chaudhry, & Ilyas, 2014). The ergonomics at workplace is attracting the interest of researchers now a days. The concept is not the new however gaining noticeable attention currently. Ergonomic is not concerned only with seating, car design, instruments, and controls. Its something different from that and it is a process of continuously designing, managing, or arranging workplaces, systems, and products in such a way that they become fit and flexible for employees who use them (Kayabinar, Kayabinar, Önal, Zengin, & Köse, 2021; Scanlon & Pennock, 1987). Ergonomics applies to design anything that involve human beings, sports, leisure, workplace, safety, and health of people. Ergonomics is always there where human factor is involved. It’s the branch of science that learn about limitations, intentions, and abilities of human beings. It improves homo sapiens interactions with products, environments, and systems (Dugan, Hochstein, Rouziou, & Britton, 2019; Robertson et al., 2009).

However, Government in underdeveloped countries often perform their major tasks poorly. Public sector structure of Pakistan has been derived from its inheritance; from the British colonial system of eighteenth century. Since it was formed from British India in 1947, it may not perhaps incept its indigenous procedures of management. Likewise, Universities like organization serves the society slightly in a different style with their potential contribution in generating and sharing knowledge (Khan & Afzal, 2011). Although, universities are deemed as training and research institutions which need to attract, retain, and develop their employees. Similarly, as enlighten in previous research the performance management and mechanism of the universities and the role of faculty members have the principal importance. The strong mechanism of performance assessment for universities that is being utilized for educating their employees is necessary to be up-to-date and reliable to get the genuine results to evaluate and make decision (Sungu, Weng, Hu, Kitule, & Fang, 2020). Universities are prestigious institutions for countries. The performance of these institutions might be evaluated, whereas the reservations of the stakeholders should be addressed and taken under consideration during the strategic planning (Rashid et al., 2020). It is important that the country’s universities improve their world class ranking by attracting and retaining excellent and experienced academicians and support staff (Hassan & Hashim, 2011; Hassan, 2008). As being the prestigious institutions of the country universities are expected to produce high quality human resources. Training and development of well-qualified human resource depends on the universities’ performance (Kim, Youn, & Lee, 2019).

Furthermore, it is necessary that the education standards must meet with the international standards and quality of education (Ijaz, Irfan, Shahbaz, Awan, & Sabir, 2011). Although, in world no one can claim of being perfect or remains perfect in every walk of life, individuals’ expertise is limited and even limited to specific extent in different fields (Arif, Hassan, & Ameer, 2014). Whilst the need of improvement remains present for everyone either institution or the individuals at any stage (Seldin, 1980). Rehman (2016) suggests the infrastructural development in Pakistan’s educational system through improving the education, of the faculty members working in higher educational institutions. Although, faculty members and their satisfaction from job is still unnoticed. Whilst, it has never been taken extensively for the growth, development and productivity of universities (Yasir, Rizwan, Fiza, & Javed, 2013). The universities are striving for attainment of their goals by participating in world ranking focusing on research and knowledge generation in different segments of life, engineering, sciences and
technology (Besharati, Daneshmandi, Zareh, Fakherpour, & Zoaktafi, 2020; Moretti et al., 2020). Unfortunately, the governance in public sector universities is too wicked to manage basic requirements of the faculty members like furniture and fixture for the comforts of the academic staff. As they have to stay long in their offices and have to deliver lectures and produce research articles. Sometimes they remain busy in extra curriculum activities and administrative assignments (Crawford et al., 2020; Davis et al., 2020; Rashid et al., 2020). Intrinsic motivation can be attained from one’s satisfaction from job, it is not astounding that the current study aped slightly a different approach to the job satisfaction for faculty members working in public sector universities on the basis of basic pay scale (BPS). There are different tracks of faculty hiring, we are focusing only on BPS faculty of public sector universities in Pakistan. The chances of greater job embeddings are presumed in that type of appointment. Job embeddedness is closely connected with organizational commitment but not the same. To keep individuals embedded with the job is not an easy task as people change organizations for better opportunities and financial benefits (Hanna, 2014). One’s embeddedness with the job and the factors that enhances greater embeddedness with someone’s job, might come as a result of satisfaction from workplace and environment (Gao, 2015). The study is carried out to examine the factors that influence and enhance job satisfaction.

**Review of Literature:**

The word Gritty came from grit which means hardly small granules, which in turning derived, via Middle English, from an Old English word for Gravel or Sand. Grit is around since 12th century. Grit arrived in American slang with different meaning such as Persistence or Courage in 19th century. It corresponds and suits like Plucky in sense. In new era, gritty is also being used to illustrate a literary style which denoted as rough and coarse. As faculty members working on the basis of BPS facing lots of problems and scarcities such as inappropriate working conditions, lack of infrastructure, no service structure and statues. Nevertheless, stagnant positions, lack of promotions and minimal salaries had created unrest for faculty members (Quaisar, Khulida, & Tan, 2014). If the faculty members of public sector universities are working and contributing for the international rankings of the universities of Pakistan, they can be said gritty. An objective measure adopted in the study. To sum up the the following hypothesis is presented as:

**H1:**  
Job embeddedness has positively significant relationship with job satisfaction

The mediating effect of job embeddedness have been observed and remained significantly different for both the employees of public and private intuitions (Rhee, Zhao, & Kim, 2014). This construct is in its infancy stage and the reliability and validity has not been determined to be examined for the current study. This study defines job satisfaction as an inside psychology from a person’s own perceptions about his/her own satisfaction from professional life. Ergonomic can be expressed as study of work. The term ergonomic has been derived from the Greek words which are ergo (work) and nomos (laws). In view of its term, it demonstrates that ergonomic is about the investigation of work in connection to the physiological and mental capacities and limitations of individuals. Ergonomics is the applied study of planning and building gadgets or instruments that individuals need so they can utilize these materials with significant level of productivity and safety (Quaisar et al., 2014). Hence, the aim of ergonomics is to fit the task to the worker not to force the person to adapt to the work environment. The cultural differences are prevailing everywhere in all societies, Pakistani culture is complex in nature as we enjoy more while entrapped during work as we face multitasking at work. We have socially astute and perform most tasks with self-efficacy (Ajzen, 1991; Frazier, Tix, & Barron, 2004; Zafar, Mohsin, Abrar, & Ghazanfar, 2014). The study suggested the following hypothesis as follow:

**H2:**  
Job embeddedness mediates the relationship between interruptions at work, multitasking, self-efficacy, social astuteness, and job satisfaction

**Ergonomic and job satisfaction**

The study applied two dimensions of Ergonomics (i) Multitasking and (ii) Interruptions at work. The
working environment conditions, and employment demands to the abilities of the employees. Basic instances of ergonomic hazard elements are secured in positions that require tedious movements, heavy lifting, clumsy stances of the wrists, hands, back, neck, and shoulders. Vibrations sway pressure, and cold temperatures may add to the danger of ergonomic related damage. In general, there is a need of data in accordance with ergonomic related injury inside the business (Caruana, Ramaseshan, & Ewing, 1998; Collins & Mossholder, 2014).

The essential focal point of the field of ergonomics is to decrease injuries, mishaps, and weariness so as to improve work conditions and execution. This objective can hypothetically be practiced by structuring machines, gear and establishments that can be worked securely, precisely, and proficiently by individuals and giving general rules to the specialized conditions and interaction. Ergonomics, as a science, was considered to apply the learning derived from life sciences to work execution (Kelly & Morse, 2014).

All the ergonomic practices are to safeguard the employees and to protect them from any hazards at workplace. Application of the said practices enhances the satisfaction from job for employees. Keeping in view the early discussion, current study hypotheses as follow:

\( H_3: \) Interruptions at work has positively significant relationship with job satisfaction

\( H_4: \) Multitasking has positively significant relationship with job satisfaction

**Ergonomics and Job Embeddedness**

Ergonomics was supported by the military and led at university labs. Wartime endeavors had focused fundamentally on the plan of little hardware while the post war endeavors started concentrating on the structure of whole workstations and huge spaces (Rehman, Ozturk, & Zhang, 2019).

The workplace, condition can be described as a dynamic socio-physical framework and can be separated from the workplace as a spot, a physical setting, or a hierarchical unit. This can feature the interdependency between the physical frameworks such as innovation, work necessities and exercises. Nevertheless, the social framework individuals, their qualities, desire and needs individuals' connections to associate, work discernments, importance and corporate culture (Rahman, 2016). There are a few examinations that demonstrate the connection between ergonomic situations with employment execution. Works that need high physical interest can indicate how significantly subordinate the activity execution to ergonomic condition. Health and security guidelines are one of the significant elements of work advertise for the strategy producer that requirements consideration. In developed countries broad writing is accessible on repaying wage differentials and factual estimation of damage however lamentably in developing countries just couple of such examinations exists. With regards to Pakistan a couple of studies have been done (Harisur, Howladar, Rahman, & Uddin, 2018). In fact, there are some different components which have sway on representative execution, for example, acknowledgment and commendation, pay and money related reward however worker's working environment condition is a key determinant of their degree of execution. A superior working environment energizes a worker's degree of inspiration to perform. In fact, poor working environment condition impacts representatives: wellbeing and security, blunder rate, curiosity, joint effort and coordination with different representatives, truancy and social astuteness, to what extent they remain in the job. The impacts of ergonomics on worker execution were broke down by considering various factors, for example, level of ergonomics in Nigerian associations, factors which impede such practices and various strategies embraced by various association for its usage (Kura, Faridahwati, & Chauhan, 2014). Keeping in view the early ponder the study hypothesized as follow:

\( H_5: \) Interruptions at work has positively significant relationship with job satisfaction

\( H_6: \) Multitasking has positively significant relationship with job satisfaction
Social Astuteness and Job Embeddedness
The investigation unveiled that numerous variables were affecting the best possible usage of ergonomics rehearses in developing countries like Pakistan which were ignorance, inadequate important contemplated, individual thought, asset confinements, advances changes, correspondence holes and non-coordination between gear originators and workers. A specific perspective on individual-environment relations is one that expect human responses to situations are fixed and perpetual. It is a robotic model and underestimates that presentation of individuals can be estimated and summed up similarly as the exhibition of physical parts of the environment. Nonetheless, it appears that human responses are variable and conflicting; few guidelines or consensuses are to be found. Specifically, it is evident that individuals' responses to natural boosts are influenced by their impression of the social circumstances wherein they get themselves (Safdar, 2012). In the model of representative interactionism, the physical condition is seen not as a free factor that summons human reactions, however as a vehicle for emblematic correspondence over the span of social association.

The emblematic part of ergonomics is probably going to be of specific hugeness when novel types of lighting are considered. Individuals frequently feel compromised by innovation and are suspicious of its roots and potential impacts. This makes them bound to scrutinize the structure the executives’ procedure and to look for some contribution in that procedure. Such sentiments will impact the way they respond to and utilize the ergonomics. Plan analysts can't bear to overlook this hierarchical setting: first, it gives a vital aspect for understanding the explanations for clients’ appearances and sentiments; and second, through a comprehension of the authoritative setting, designers might have the option to impact it, to build the likelihood that the structure will be acknowledged and adequately use (Sahe, Bibi, Farmanullah, & Abbas, 2014). To close the discussion current study has hypothesizes as:

\[ H_7: \] Social astuteness has positively significant relationship with job embeddedness

Social Astuteness and Job Satisfaction
Several studies Baldwin et al. (2009); Di-Fabio (1995) and Morse et al. (2001) infer that the immediate impacts of ergonomics have been widely contemplated, bringing about a valuable yet deficient accumulation of information. The most created territories are visual execution, color recognition, and visual hunt. To some degree less created are the connection between visual execution and work execution, the impact of ergonomics on creation of fatigue, and the impact of age (Rashid et al., 2020; Robertson et al., 2009). The indirect impacts of ergonomics have not been concentrated widely and, subsequently, investigation into this zone is at a beginning period of improvement. The main aberrant impacts that are set up are the alteration of conduct that happens considering poor ergonomics, and the impact of ergonomics on hormone balance. Other circuitous impacts, for example, impression, perception, satisfaction, and solace are conceivable, yet the elements that impact their occurrence and the dependability of the impacts stay to be built up (Davis et al., 2020; Franssila, Okkonen, & Savolainen, 2016; Michelle, Ciriello, & Garabet, 2013). The connection among ergonomics and laborer fulfillment and execution is yet dependent upon much on uncertain conditions. Given the financial noteworthiness of even little changes in these components, this is irritating; accordingly, it must be helped via cautious research coordinated at remarkable issues. Therefore, to sump, the debate this study hypothesized as follow:

\[ H_8: \] Social astuteness has positively significant relationship with job satisfaction

Self-Efficacy and Job Embeddedness
Training and development of representatives and occupation fulfillment of workers are two urgent parts for the presentation of representative. study demonstrated positive effect of preparing and improvement and occupation fulfillment with representative execution. Training and development will prompt higher occupation fulfillment level in workers, and they will satisfy their obligations with a lot of duty with best performance. Training and improvement are a solid driver driving towards representative execution (Supriyanto, 2013). So, the supervisors should make methodologies to complete or lead productive and
viable preparing programs which will build up the aptitudes of representatives at each level. It was discovered that incredible number of under study respondents consented to the way that was more seasoned representatives don't invite changes in their method for working like regardless they utilize the paper and pen for any documentation as opposed to utilizing PCs or workstations (Iqbal, Rehman, Ali, Khan, & Khan, 2014).

Haines et al. (2004), further examines that logical proof on the impacts of ergonomics on alertness, watchfulness, and state of mind has been gathering throughout the previous 25 years. Scientists find that the everyday and regular rhythms of rest and action can be affected by ergonomics which identified with framework and mindfulness. No less significant are the asserted impacts of ergonomics on mental errands. Ergonomic levels, just as workplace geometry and shading, influence individuals' impression of a space. The impression of a lit space may influence an individual's capacity to perform cerebral assignments and furthermore gadget generation undertakings. Haines et al., (2004) takes note of that exceptionally ongoing examination by Baron and his associates ensnares lighting as a natural prompt for initiating what is named positive effect. Individuals with positive influence are those bound to help other people, volunteer for more work, take huge risks, and see the broad view. Such characteristics can without doubt influence profitability in work environments (Prajogo, 2014). A large portion of the helpful writing about individual -environment frameworks originate from the industrial and occupational fields. By the by, an incredible greater part of this data is pertinent in numerous different settings. Individuals and their physical condition apply common impact, and structure autonomous frameworks. Connections among individuals and physical settings vary, contingent upon whether the unit of investigation is the individual, the relational connections, or the whole association. The three units of examination are interrelated in that people take an interest in relational connections and relational connections are components of organizations. (Lindell, 1994). Boubekri et al., (1991) had examined on connection among personality traits and job embeddedness. He discovered proof that supports the investigation which may reinforce the connection among self-efficacy and job related ergonomic awareness among laborers. In his investigation, he found that the connection among lighting and consciousness of ergonomics isn't huge. Thus, to sum up the debate it is hypothesized as follow:

\[ H_9: \text{Self-efficacy has positively significant relationship with job embeddedness} \]

**Self-Efficacy and Job Satisfaction**

As per Wilson (2014), job satisfaction is the framework facilitated by dissects of job embeddedness, states to improve the setup of a system, and people's associations with it, rather than focusing on an individual piece of it. That system can be a curios, office, condition, and building, and work site, gathering. These issues include issues that individuals have as they attempt to adjust to any workplace. They incorporate solace and efficiency, communication, and relational connections among laborers, impacts on nature and obviously, the profitability and adequacy of the institute.

\[ H_{10}: \text{Self-efficacy has positively significant relationship with job embeddedness} \]

The study hypothesizes a total of 10 hypotheses from which nine hypotheses represent direct and one represents the indirect relationship.

**Research Design and Methodology**

This study opted quantitative research design. Similarly, like other quantitative studies this study also depends on the survey questionnaire. The study used self-administrated questionnaire adopted from different authentic sources which has been well tested in Asian context. A Questionnaire containing 21 items was distributed to the respondents directly through online. Data were collected during February to May 2021. A total of 289 faculty members from Islamic Republic of Pakistan’s Public Sector Universities participated in this study by their kind response. Self-Efficacy consisting of 03 items, Social
Astuteness containing 03 items, Job embeddedness containing 03 items and Job Satisfaction consisting of 03 items has been adopted from Dugan et al. (2018). Whilst two dimensions of Ergonomic: Interruptions at work and multitasking consisting of five and four items respectively has been adopted from Franssila et al. (2016). Most commonly Likert scale is used in different survey research so which is a psychometric scale that commonly used in questionnaires was used in the research. The rating scale from 1 to 7 was used where 1 = “Strongly Disagree”, 2 = “Disagree”, 3 = “Slightly Disagree”, 4 = “Neutral”, 5 = “Slightly Agree”, 6 = “Agree” and 7 = “Strongly Agree”.

**Results and Analysis**

The following figure 01 represents the model:

![Research Framework](image)

**Figure 1: Research Framework**

To assess the reliability and validity of the constructs, the study used Cronbach’s Alpha, CR, AVE, factor loadings and Fornell-Larcker criterion. Table 1 shows that the values of Cronbach’s Alpha as recommended values greater than 0.50. Results indicates that the values of CR are more than 0.70. Therefore, the results confirm that the constructs are reliable. Table 1 shows that the values of AVE are more than 0.50.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Cronbach's Alpha</th>
<th>rho_A</th>
<th>Composite Reliability</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interruptions at Work</td>
<td>0.695</td>
<td>0.718</td>
<td>0.807</td>
<td>0.564</td>
</tr>
<tr>
<td>Job Embeddedness</td>
<td>0.759</td>
<td>0.848</td>
<td>0.851</td>
<td>0.657</td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>0.672</td>
<td>0.673</td>
<td>0.821</td>
<td>0.604</td>
</tr>
<tr>
<td>Multitasking</td>
<td>0.640</td>
<td>0.633</td>
<td>0.787</td>
<td>0.583</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>0.682</td>
<td>0.705</td>
<td>0.820</td>
<td>0.603</td>
</tr>
<tr>
<td>Social Astuteness</td>
<td>0.672</td>
<td>0.690</td>
<td>0.820</td>
<td>0.605</td>
</tr>
</tbody>
</table>

**Table 2: Outer Loading**

<table>
<thead>
<tr>
<th>Interruptions at Work</th>
<th>Job Embeddedness</th>
<th>Job Satisfaction</th>
<th>Multitasking</th>
<th>Self-Efficacy</th>
<th>Social Astuteness</th>
</tr>
</thead>
<tbody>
<tr>
<td>EIW1</td>
<td>0.518</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EIW2</td>
<td>0.620</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EIW3</td>
<td>0.582</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Furthermore, the results shown in Table 2 indicate that the outer loading are significant, and loadings are in between 0.518 to 0.863 which are sufficient to satisfy the criteria. The diagonal values in bold are square root of AVE; additionally, the result shows that the square root of AVE is more than the correlation between the variable. That satisfy the criteria for confirming discriminant validity (See Table 3). Thus, the findings of the measurement model of this study confirm the validity and reliability of all constructs.

![Table 3: Discriminant Validity](image)

The structured model of the study explains the hypothesized relationship of variables. PLS-SEM was used to explain these hypothesized relationships. Table 5 shows model fit indices of the structured model explain that the structured model is a good fit. The values of $R^2$ explained 34.4% of variance in job embeddedness by and 47.6% variance in job satisfaction by the independent variables (See Table 4).

![Table 4: R Square](image)

![Table 5: Model Fit](image)
Furthermore, the path analysis explains that the interruption at work is significantly influencing the job embeddedness and job satisfaction. Therefore, the study accepted the hypotheses. The results show that the job embeddedness is significantly influencing the job satisfaction. The indirect effect of interruption at work on job satisfaction through job embeddedness is also significant (See Table 7). Thus, the relationship between interruption at work and job satisfaction is mediated by the job embeddedness. In addition to that the results in Table 6 shows that the multitasking, self-efficacy, and social astuteness is significantly influencing job satisfaction. However, the results indicate that multitasking, self-efficacy, and social astuteness is not significantly influencing job embeddedness. Moreover, the result of indirect effects shown in Table 7 indicate that the job embeddedness is not significantly mediating the relationship of multitasking, self-efficacy, and social astuteness on job satisfaction.

For further clarification and easy understandings, the figure 02 is presented, in the figure $t$-values are presented for hypothesis testing. The threshold values, to accept the hypothesis at 95% level of confidence is 1.96 and above. So the values above 1.96 represents the acceptance of hypothesis.

![Figure 2: T-statistics](image)

Inline with the figure 02, table 6 is presented for explanation, nine hypotheses are presented below from which three has been disapproved and six are being accepted as:

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Original Sample (O)</th>
<th>Sample Mean (M)</th>
<th>Standard Deviation (STDEV)</th>
<th>$t$ Statistic (STDEV)</th>
<th>P Values</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interruptions at Work -&gt; Job Embeddedness</td>
<td>0.432</td>
<td>0.435</td>
<td>0.063</td>
<td>6.806</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

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Interruptions at Work -> Job Satisfaction 0.321 0.323 0.063 5.107 0.000 Accepted
Job Embeddedness -> Job Satisfaction -0.143 -0.148 0.066 2.174 0.030 Accepted
Multitasking -> Job Embeddedness 0.064 0.066 0.063 1.010 0.312 Not Accepted
Multitasking -> Job Satisfaction 0.153 0.158 0.062 2.480 0.013 Accepted
Self-Efficacy -> Job Embeddedness 0.143 0.144 0.074 1.940 0.052 Not Accepted
Self-Efficacy -> Job Satisfaction 0.222 0.223 0.059 3.744 0.000 Accepted
Social Astuteness -> Job Embeddedness 0.057 0.054 0.058 0.990 0.322 Not Accepted
Social Astuteness -> Job Satisfaction 0.279 0.280 0.054 5.126 0.000 Accepted

Table 7: Specific Indirect Effect

|                               | Original Sample Mean (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (|O/STDEV|) | P Values |
|-------------------------------|--------------------------|-----------------|----------------------------|--------------------------|----------|
| Social Astuteness -> Job Embeddedness -> Job Satisfaction | -0.008 | -0.008 | 0.010 | 0.813 | 0.416 |
| Self-Efficacy -> Job Embeddedness -> Job Satisfaction | -0.020 | -0.020 | 0.013 | 1.518 | 0.129 |
| Interruptions at Work -> Job Embeddedness -> Job Satisfaction | -0.062 | -0.064 | 0.031 | 2.018 | 0.044 |
| Multitasking -> Job Embeddedness -> Job Satisfaction | -0.009 | -0.011 | 0.012 | 0.758 | 0.448 |

As shown in table 07 the 10th hypothesis is presented, the mediating role of job embeddedness has been established between interruptions at work and job satisfaction and not establish with other attributes. As we are already facing scarcity of infrastructure and facing multitasking, therefore interruption at work come like a cool breath in haphazard situation. Individuals enjoy the interruptions like tea breaks, lunch and gathering of colleagues at workplace. The best time for catharses is interruptions during work, it brings colleagues closer and enhances job embeddedness. In different other cultures people avoid from interruptions while we enjoy interruptions during working hours. And this interruptions are beneficent for employees and organizations too as these interruptions strengthen job embeddedness and increases job satisfaction.

Conclusion and Future recommendations:
Multitasking is a common prevalence at our work culture and interruptions are common during office hours. Most of the tasks are performed with self-efficacy and independently. The faculty members working on the basis of BPS are equipped with greater job embeddedness and bears higher satisfaction with job. The future researchers are recommended for qualitative research and the construct can be modified with some other type of faculty hiring criteria.

References


Role of Capital Budgeting Techniques for Investment Decision Making: An Empirical Study of Public and Private Sector Companies in Pakistan

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G31, H61

**ABSTRACT**

**Purpose:** Regardless matter whether it is a commercial or public enterprise, every business would have a capital budgeting procedure in residence. The supply of Public goods is the major force on Public sector institutions, and one means to do this is complete the execution of huge progress schemes. With the current state of affairs in Pakistan, major cost and time overruns have occurred on Public sector setup ventures. One of the most likely reasons of cost overruns is a lack of or insufficient cost and benefit ventures, as well as general venture management since the documentation period through the stage after installation period. This study used capital budgeting decision-making methodologies to assess Pakistan's present technological ambitions.

**Design/Methodology/Approach:** In Pakistan, one of the top corporations did a postal survey and a cross-sectional data analysis. Although empirical data suggests a shift toward genuine conceptions and discounted cash flow (DCF) approaches, corporations still fall short of the fundamental needs. Most methodologies are used, including inner proportion of return, net present value (NPV) and payback method (PBM).

**Findings:** The majority of corporations calculate risk adjusted cash flow, but only a small fraction of firms/businesses use the most modern risk assessment tools.

**Implications/Originality/Value:** In comparison to other industrialized nations, the utilization of the discounted cash flow (DCF) ratio is still quite low.

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**Introduction**

In addition to money resources, an asset is the division and large use of material and human resources (Avram et al, 2009). As a result, it's critical to focus resources on initiatives that will improve the entity's existing position. Many investments, on the other hand, aim not just to increase stakeholder wealth but
also to bring value to groups and the budget. A bad investment choice can cost the investing economic unit and its stakeholders a lot of money (Egbide, Uwalomwa & Agbude, 2013) The Pakistani government is responsible for providing the greatest available facilities to societies in order to eradicate poverty and improve people's lives. Furthermore, activities that aid in the growth of the country's economy are required. Setup development initiatives are among them. In his budget address for the fiscal year 2014-15, the Minister of Finance declared the administration will invest Rs 837 million in the construction of new and existing setup to increase Pakistan's access to healthcare, education, water, sanitation, housing, and electricity. The Presidential Setup Coordination Committee is presently working on a number of Short and long term Investment Plans. Electricity production, transmission, and distribution setup, combined civic and public transportation setup, healthiness and teaching amenities, and water and sanitation setup are all examples of these.

While there is an emphasis on these Short and long term investment plans, most setup ventures in Pakistan have increased prices and time overruns. Investment decisions based on prior experience are included, as are large-scale resource consumption predictions. If the precision is harmed, however, the revenue of firms and businesses is jeopardized. Because investment decisions are so crucial, good decisions are targeted short long term plans (Haddad ET al, 2010) for the long run to secure a comfortable market position. Costing for principal expenditures is an essential administrative device. Current financial disaster takes strengthened view that in instruction to continue, decision-making and value generation should be focused on businesses. This investigation of companies/firms Short and long term investing in various initiatives examines how to employ sophistically to address the issue. A financial manager's responsibility is to select a sufficient cash flow and investment proportion of return. As a result, a financial investment should be able to judge if two or more options are wisely chosen. For this reason, a strong technique to analyses, compare, and pick ventures is required or business make selections based on the type of venture and their financial soundness. There hasn't been a study that plans short-term and long-term initiatives, taking into account the different types. There was no relative impact study decision-making tool selection based on venture size to see if it existed. (Graham and Harvey, 2001) Ryan and Farragher ET al, (2002) discounted cash flow (DCF) (Arnold and Hatzopoulos, 2001) prevail in the assessment procedure (Jog and Srivastava, 1995) (Payne et al, 1999) (Babu and Sharma, 1995) (Anand and Verma, 2009) (Cherukuri, 1996) discounted cash flow DCF (Pike, 2005).

Problem Statement
The Asian Development Bank 2012 claims that deciding between various setup developments alternatives necessitates a thorough cost-benefit analysis this type of analysis makes it easier to target funds to initiatives that provide the most social benefit. If this is not done, national resources will be allocated in an inefficient manner. The implementation of scientific capital budgeting assessment methodologies is required for a proper study of the budgets and benefits of ventured Public sector, as well as private sector firms/companies investments. Demands for setup principal and Public-sector policies used to meet those needs might have direct and indirect relationships which outside the legal need to conservative principal costs ( Nunn, 1990) According to (Chan, 2004) municipal governments' employment of capital budgeting practices is limited, which might be due to the lack of a profit aim in the businesses. Local governments in the United States employed formal methods for assessing and prioritizing principal plans, according to (Miller, 1988). There have been no studies for Pakistani Public sector ventures to control the capital budgeting practice for growth plans and if the assessment plans employed is compatible with traditional stakeholder value-adding short and long term plans utilized in the private sector. Several governmental and private sector ventures in Pakistan have had severe price and judgment invades. An in-depth understanding of Pakistan's Public sector evaluation procedure will shed light on the significant cost and time overruns. This study aims to be an indication in the growth of information on these topics. The findings of this study will aid in the development of a policy for evaluating Public-sector ventures.
Study Purposes
The goal of this research is to examine the capital budgeting methodologies and concepts employed by Pakistani enterprises. Case studies of major Public-sector setup ventures will be used to assess the application of capital budgeting lines and whether they contribute significantly to venture cost and time overruns. The primary purpose of this study is to look at Pakistani capital budgets for business investment decisions.

- How the firms detect a mission?
- What are the main Capital budgeting techniques will use by companies?
- Basic quality and for using a specific method being will use by companies is Payback/NPV/MIRR/DCF.
- Businesses for dissimilar sub ventures that use different approaches.
- Discounted cash flows and market values of companies according to different discount proportions for different sub use, how weights are defined.
- The extent to which the level of education affect how the capital budget decisions?

Research Questions
The study questions that this study objects to answer are as follows:

i. Do Pakistani businesses use capital budgeting concepts while making principal investments?
ii. What capital budgeting plans does the Public sector use?
iii. Does the use of Capital budgeting techniques or the absence thereof, lead to significant setup venture cost overruns?

Hypotheses of the Study
H0: The Pakistani government uses the capital budgeting procedure to evaluate its investments.
H1: Pakistan's Public sector does not use a capital budgeting method to evaluate its investments.

Significance of the Study
This revision is significant because it examines the extent to which capital budgeting methodologies are employed in Pakistan for Public sector growth plans. Lessons may be gleaned from the literature studied for the Public sector investment assessment policy if the operational environment of the Public sector is taken into account. Because the success of every venture begins with appropriate planning and forecasts, venture managers in the Public sector will benefit from this research. The research will assist the Public since initiatives with social benefits will be implemented on time and on budget. Cost overruns will be eliminated, allowing monies to be spent on additional development ventures, which would boost Pakistan's economy.

Capital Budgeting Techniques for Decision Making
Decision on Capital budgeting Making Methods has been utilized in the planning practice, the business financing the ventures determines whether he plans to offer a deep insight to the device, and the company funding the ventures determines whether he plans to give a deep insight to the product. By subtracting the net present value of a venture's needed proportion of return, net cash flow from discovery, and initial investment, the net present value of the venture may be computed. If the NPV is zero or positive, we are in favor of the venture and it should be approved. Although the technique is negative in terms of NPV, we should not accept this venture.

The cash flow intensity of a venture is determined by two factors:
1. The discount proportion was applied.
2. The financial flow of the venture.

Internal Rate of Return
The discount proportion is equal to the inner proportion of return on the venture's original outlay cost.

\[
NPV = \sum_{n=0}^{N} \frac{C_n}{(1 + r)^n} = 0
\]
It is common practice for the net cash flows of the venture will not be equal in all times, and the IRR will be determined through trial and error. Returning to the acceptance of a venture, the IRR is calculated by comparing it to the required proportion. We expected IRR, \( R > K \), and then in the second situation, \( r = K \), the scheme must be refused (P). Graham and colleagues (Graham et al., 2003). Over the net present value of future cash flows, index initial cash investment returns. Benefit – Profitability Index / Cost Ratio (PI) Subtract the discounted value of incremental benefits from the total value of the benefits. BCR is the discounted value of incremental budgets. The cost-benefit ratio is a decision rule that approves initiatives with a cost-benefit ratio greater than one and a benefit to the determined of all cost-benefit ratios less than 1 (James C. Van Horne, 2007).

**Accounting Rate of Return (ARR)**
The ratio between the average yearly earnings is the accounting proportion of return on a venture's initial investment.

\[
\text{Average Annual Earnings} \times \text{Venture Initial Investment} = \text{Average Accounting Proportion of Return.}
\]

**Pay Back Period (PBP)**
The repayment duration of a venture's cash investment takes time to recoup, since the payback period is used as a benchmark. Because this approach isn't particularly useful, it overlooks the time worth of money. Second, the approval of a unique venture to determine the duration of the normal payback period is an opportunity to clarify what is and is not permitted. Profitable ventures in the shortest amount of time to recoup principal outlay according to this short and long term plans since those numbers, payment method does not quantify the return. Therefore, a main fault in this technique Managers both conventional and short and long term plans analysis methods taking into account an suitable evaluation criteria need to build hooked on version all cash flows cash inflows and cash outflows to the intensity and its failure (Russell ET al., 2011).

**Modified Internal Rate of Return (MIRR)**
An unruly allied with more than one IRR cash flow stream form changes the situation is signed extra than after. (James C. Van Horne, 2007). Obtained through MIRR is more realistic proportion of return on investment (Herbert Kierulffa, 2008). Two reasons MIRR IRR is considered better, first MIRR considers the cash flow reinvestment proportion reinvested in the discount proportion is the proportion that was accepted. Second, MIRR proportion of more than one issue (Prasanna Chandra, 2004) does not face.

**Real Options (RO)**
The uncertainties of real options theory as a whole or a part of such abandonment and expansion options that do not consider the other assessment methods. Real options and financial options as well as real assets by investment managers to consider an emerging diagnostic technique that offer flexibility rather than a liability. (Nuno's Gull, 2007) firms are living in the capital budget for such specialists; investment manual, NPV or IRR and post investment audit the use of average models for devious successful decision making approach. (Bennouna ET al, 2010) Approval of the venture to determine a required proportion of return is compared with. (P Graham ET al, 2003)

**Literature Review**
Capital budgeting is one of the four monetary options that may be used to choose what sort of plan to invest in based on its proportion, hazard, and paybacks. All phases of development and costing entails the Public sector forming regions by discrete divisions by managers and the administration and apart from the private sector, Public sector ventures appeal to radical curiosity and political relations that include a radical decision matrix (Bozeman, 1984). According to (Jacobs, 2009), a successful capital budgeting practice is one that is an integral part of the entire costing system, and a well-designed Public finance system supports all aspects of the system, including principal spending. The purpose of capital
Budgets for more than one year that are intended to develop long-term assets is to examine investment opportunities (Peterson and Fabozzi, 2002). Firms are increasingly alert of the basic of reviewing the quality of a venture to assess the risk of failure and the post-completion audit practice through the capital budget and ventures (Pike, 1996). Many methods inner rate of return (IRR) and modified inner proportion of interest and discounted cash flow direct as sophisticated as the easiest ways to help finance managers are inner rate of return (IRR) and modified inner proportion of interest and discounted cash flow direct.

Where non short and long term investments are most suited to analyses alternative Capital budgeting techniques, intangible features of traditional Capital budgeting techniques are most appropriate to decrease risks and evaluate alternative Capital budgeting techniques (Pike, 1996). Methods of capital budgeting are often decreased on non-subsidized technology (Ryan, 2002). Academics have a number of grounds for insisting on long-standing superiority NPV and IRR. First, for mutually exclusive ventures, the net present value and the range of ventured cash flows at a discount proportion show the expected change in shareholder wealth. When one in NPV intermediate term cash flows is reinvested at the cost of principal, cash flow over a long period of time is anticipated. Inner proportion of return, on the other hand, is larger than the cost of principal for the venture inner proportion of return is reinvested into is handled in the intermediate term cash flow positive NPV. Finally, numerous sign changes have no effect on NPV cash flow. There is a means to improve shareholder value or approve a venture that will minimize the monetary amount ventured (Ryan, 2002). Firm size, discounting methods, sensitivity analysis, and other complex approaches have been offered to determine the usage of advanced procedures that may not be a direct causative component and risk analysis methodologies that have an impact on the usage of computer-based capital budget packages (Pike, 1996). He also adds an incremental inner proportion of return in addition to the usual sensitivity analysis and scenario analysis, cash flow and inflation proportion, and economic value (Ryan, 2002).

On the one hand, and valued firms for the appraisal of new ventures using the most up-to-date approaches. On the other hand, rather of evaluating the use of a specific venture plan, a big number of or business is evaluating the use of a companywide discount proportion. Surprisingly, the size of the survey firm has a considerable impact on corporations finance practice, suggesting that, for example, While the net present value of small business methods and the principal asset pricing typical venture to use more evaluation, large companies pay more vulnerable to small businesses to use the test, while the net present value of small business methods and the principal asset pricing model venture to use more evaluation much more likely (Graham and Harvey, 2001). It makes use of Payment and profitability indexes are frequently used by or business with small capital budgets to support the net present value and inner proportion of return (Ryan, 2002). Because of advanced manufacturing technology development and competition, some writers believe that discounted cash flow based on current accounting model is no longer appropriate, primarily due to the short and long term investments, intangible nature of technological innovation, which helps define the benefits involved. Many authors claim that a narrow focus can lead to significant principal investment Capital budgeting techniques for evaluating inappropriate claims that investment myopia can lead to significant principal investment Capital budgeting techniques for evaluating inappropriate claims that a narrow focus can lead to significant principal investment Capital budgeting techniques (Slagmulder, ET al, 1995).

Methods for making investment decisions Such as the scale of the venture, the value of the size, and many other risk variables, according to the firm. These elements have yet to be revealed. Firms with the right to practice should practice using accounting earnings rather than cash flow (Brealey and Myers, 2003). Estimated cash flow and cost of principal, including interest budgets, as a result of the investment ventures' fall. Interest and other financing charges for the decision-making practice is a mistake and should not be included in the venture's cash flow account (Berman, 1993). However, the proportion of inflation should be included in the decision-making companies. For long-term initiatives, removing the
inflation effect may yield results. The real cash flows discounted at a proportion or proportions are added in two methods (Bennouna et al, 2010). The discount proportion is the essential aspect in the computations. The cost of principal for a debt and equity corporation, as well as preferred stock and ordinary equity, is intended to be calculated using a weighted average pricing (Brigham and Earhart, 2002). In terms of market capitalization, the company's weight or goal principal structure should be determined. Companies have various divisions, each with a varying amount of risk (Bennouna et al, 2010). Markets should be included in investment ventures so that the discount proportion matches the specified item. (Ross et al, 2005) (Frank HM Verbeeten, 2005).

Methodology
The nature of the study is quantitative. Using structured surveys/annual reports, small trial reviews, and case studies on chosen schemes undertaken by state-owned entities/companies, the focus will be on determining the extent to which Capital budgeting techniques are used to Public sector principal investments or ventures. A study that is focused with discovering who, what, where, when, and how much, according to (Blumberg, Cooper, and Schindler, 2005) is descriptive in nature The sample size has been limited to 294 firms since 450 companies were chosen from a population that is no longer part of the population. Because roughly 156 companies could not be accessed on the Pakistan Stock Exchange, the sample size has been reduced to 294 companies. The firms have been contacted through e-mail and will be sending a questionnaire in the form of a document to be filled out online. As a result, various statistical approaches (sampling) would be applied for this aim. Follow-up practices for each company's CEO/CFO to phone and ask them to complete out questionnaires and produce physical copies by fax or personal visit have been initiated right away. Companies have been reminded to complete a questionnaire next week. Procedures are also being personally companies and CFOs to fill out questionnaires and assigned a meeting with the competent authorities, including the 156 companies that have not responded (Bennouna ET al., 2010), which is roughly equivalent to the study shows nearly 17 percent response proportion, get a response proportion of 17.4%.

Results and Analysis
The net present value, inner proportion of return, modified inner proportion of return, profitability index, payback period method, accounting proportion of return, and real options for Capital budgeting techniques for decision making were calculated using descriptive statistics, reliability, validity, correlations, and regressions in this study. In Pakistan, the NPV of a tendency toward the usage of corporations 34 percent always, usually always use 49.1 percent is shown in Table 1. Investment Appraisal has a propensity to use technology as IRR Firms (47.2 percent), but only a small percentage of the majority (11.3 percent) does not use the MIRR since the original assessment procedure is always working. The majority of businesses (39.6%) always utilize PB, while only 17% never do. The majority of Pakistani enterprises (70%) do not apply actual data options. The most direct short and long term investments employing NPV is Study businesses (60.4 percent).

<table>
<thead>
<tr>
<th>Variable/Name</th>
<th>Usage Level in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Present Value (NPV)</td>
<td>15.1 1.9 49.1 34.0</td>
</tr>
<tr>
<td>Internal Rate of Return (IRR)</td>
<td>7.5 28.3 24.5 39.6</td>
</tr>
<tr>
<td>Modified Internal Rate of Return (MIRR)</td>
<td>47.2 28.3 13.2 11.3</td>
</tr>
<tr>
<td>Profitability Index (PI)</td>
<td>15.1 17.0 28.3 39.6</td>
</tr>
<tr>
<td>Payback Period (PB)</td>
<td>39.6 17.0 26.4 17.0</td>
</tr>
<tr>
<td>Accounting Rate of Return (ARR)</td>
<td>45.3 24.5 15.1 15.1</td>
</tr>
<tr>
<td>Real Options (RO)</td>
<td>69.8 17.0 7.5 5.7</td>
</tr>
</tbody>
</table>

Various firms in Pakistan (39 percent), the majority of the operations, the new operation plans to grow to about 34 percent, and approximately 27 percent of the company's present expansion plans alternative
ventures suggest that these ventures have been identified. Data undergraduate CFOs NPV is less likely to use shows, and CFO education is linked to the use of complex diagnostic tools. 50% of undergraduate CFOs do not utilize it, but 50% of IRRs are equally likely to use it. Only 25% of people utilize it on occasion. CFOs with a higher level of knowledge or NPV, IRR, and MIRR are meant for usage. Firms, small companies with a total of 1000 workers for the purpose of analysis, and large companies with a total of 1000 employees are classified into two groups. Large corporations nearly always employ the 37.5 percent NPV ratio, and 37.5 percent almost always uses NPV. According to the NPV method for evaluating investment ventures, 25% of major enterprises are not profitable. Small businesses score reasonably well when it comes to NPV. The usage of IRR by large corporations is practically never used, while 28 percent of small enterprises never employ 16 percent IRR. Analyze the most advanced methodologies 35.7 percent of major corporations use 60 percent smaller robustness, as MIRR never fails to indicate. Only 14.3 percent of big and small businesses, and 8% of startups, always review investment initiatives using MIRR technology.

PI is more likely to utilize that represent major robustness as compared to statistically tiny companies (20 percent virtually always, 48 percent almost always) (35.7 percent almost always, always 32.1 percent). The most common way of payment is. Small businesses (14 percent) and big businesses (32 percent) are the most common users of discounted cash flow approaches, which are employed in conjunction with other payment methods. Accounting proportion of return is not a common corporations practice in Pakistan; 40% of small businesses and 50% of big businesses never pay on arrival, and both small and large businesses are discouraged. Small businesses have never used real options theory, while large businesses have the lowest proportion of 14.3 percent who always use it and 10.7 percent who nearly usually use it. As the firms are 60%, the direct approach is used to calculate 80% to 60% of the discounted cash flows using NPV. 40% utilize inner proportion of return (IRR), whereas 40% do not use discounted cash flow (17.4%). Table 6 reveals that the majority of businesses (75 percent of large businesses and 76 percent of smaller businesses) employ various proportions of return for different ventures. According to data, 89 percent of businesses employ discounted cash flow methodologies. Only 77.4 percent of cash flow is utilized in discounted cash flow by 89 percent of enterprises. Only 62.3 percent of businesses use WACC. Many enterprises, 32.1 percent of the values given weight, are still in operation.

Descriptive statistics for various sub-sections demons proportion that around 24.5 percent of enterprises do not employ diverse proportions of return; instead, they return for a wide variety of divisions of the company using single-use proportions. A comparison of big and small corporations reveals 25% and 24% of distinct divisions or ventures, the exchange proportion of different distribution firms for small enterprises, and all ventures utilizing a single discount proportion, respectively. The chi square test showed that the proportion of return between various sub-analyses was,007 in relation to the size of the firm and the proportion of return between different sub-analyses. Also, set the significance threshold to = 0.05, which is higher than the chi-square value of 0.933. According to study, 18.9% of or business do not consider the risk component in their cash flow, whether nominal or real. Using scenario analysis and sensitivity analysis, only a few firms (34 percent and 30.2 percent, respectively) use descriptive analysis. Firms that specialize in simulation and decision tree analysis should be avoided. Surprisingly, just 17% of respondents used the risk adjusted discount proportion. Descriptive data for or business that use a quality-based short and long term plans reflect the majority, with 69.8%, 75.5 percent, and 84.9 percent, at least a considerable number of enterprises having an investment handbook. Standard models for calculations are used in the analysis, with 75.5 percent of enterprises holding a post-audit evaluation for capital budgeting.

**Limitations of the Study**
The survey’s first possible flaw is response bias, and the study’s second flaw is that it is confined to a small group of Pakistani enterprises. It is a real population representative sample. The capital budget for
businesses in other parts of the country that can use the same application procedures. Traditional survey methodologies are used in the third study. It also serves as a baseline for comparison with earlier studies, as no previous study has been conducted in Pakistan, where businesses have had the opportunity to explore the new. The capital budget was the fourth area of this investigation that was constrained. One of the deciding considerations is the discounted cash flow alone advanced capital budget. Finally, this study backs up the assumption that managers make logical judgments. In addition, study into the proper application of discounted cash flow methods that take effect in the context of or business case studies to investigate further elements through other methods directly in depth study of the methods that can be made in relation to Study in the area of taxes, unpredictable government policies, energy crisis, inflation, terrorism discounted cash flow country specific factors can be studied in the risk adjustment.

Conclusion and Recommendations
The study's goal was to look at the Capital budgeting techniques utilized by Pakistan's state-owned enterprises. It was discovered that the capital budgeting principles are not always strictly followed for a variety of reasons. These include the necessity to complete a venture that has been designated as an emergency and must be completed immediately, as well as initiatives that are launched due to political pressure and are deemed urgent. The findings of the study with the State Owned Entities led to the following conclusions. The capital budget of Pakistan's sophisticated firms is examined in this study. From this study, the following major conclusions may be inferred. The literature recommends discounted cash flow as the most effective method. Although discounted cash flow methods are employed, they are not as common as discounted cash flow methods. Because of the modified inner proportion of return and genuine possibilities such as the usage of the most up-to-date tactics in corporations sophistication in Pakistan. The vast majority of businesses employ the short and long term plans, although the sharpness is minimal. Improved modified inner proportion of return and real options, in particular, must be used in many sectors with the lowest incidence.

A fourth company has additional areas where better administrative procedures, well-qualified analysts, the use of contemporary information systems, cost estimation audit office, and ventures with varied levels of uncertainty might be implemented. This study fits into the twenty-first century Pakistan by demonstrating where the body of knowledge on principal rises in a nation that borders Pakistan and is confined to a brief survey. This study improves the procedure by applying discounted cash flow approaches to solve the most common problems identified or business are still utilizing outdated methods and modifying inner proportions of return using actual choices, which is why there is still opportunity for improvement to be adopted in Pakistani companies. It is also advised that sample size be increased for future study in other areas. The Public sector is under growing pressure to enhance its operations and provide key services more effectively at the lowest possible cost to customers. Furthermore, the success of these state-owned companies has a significant impact on the Pakistani economy. As a result, study on the extent of engagement and contribution, whether negative or positive, by Public offices with principal investment ventures managed by State Owned entities/companies is advised. Other sectors, rather than this one, should do study with a big sample size.

References


