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The Impact of Cost Leadership Strategy and Financial Management Control Systems on Organizational Performance in Pakistan's Services Sector

Ahmed Imran Hunjra*, Farida Faisal and Faiza Gulshion*****

Abstract

This study gauges the impact of cost leadership strategy and financial management controls on financial performance of firms in Pakistan's services sector. Drawing on a sample of banking, insurance and investment firms listed on the Karachi Stock Exchange, we find that cost leadership strategy and financial management control systems have a significant and positive impact on financial performance. This implies that both factors should be aligned in the long term.

Keywords: Cost leadership strategy, financial control system, organizational performance, services sector.

JEL classification: G21, G30, G39.

1. Introduction

Given how rapidly market environments can change, firm performance may be vulnerable to instability in the face of intense competition and risk. To remain market leaders, organizations must be able to respond quickly to change (Lee et al., 2010). According to Dyment (1987), the existence of tougher markets and heavy competition warrants better strategies for competing in international as well as domestic markets. In the case of Pakistani firms, this entails building better and more efficient control systems and competitive strategies to compete with global rivals. Business strategies depend on two factors: industry position and competition in the overall industry (Porter, 1985). Favorably positioned firm have an advantage over their industry rivals (Liao, 2005).

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Of the different types of business strategies, Snow and Miles (1984) distinguish among defenders, prospectors and analyzers; Porter (1985) highlights focus, differentiation and cost leadership; and Jackson and Schuler (1987) look at cost reduction, quality enhancement and innovation. Porter's generic strategy approach is the most commonly used (Dowling & Schular, 1990; Beaumont, 1993; Huang, 2001), given that it incorporates different patterns of competitor advantage, investment strategies and positioning objectives with respect to competitors (Hofer & Schendel, 1978).

This study examines the extent to which firms' use of Porter's (1985) cost leadership strategy (CLS) affects financial performance in Pakistan's services sector. For firms to remain competitive and enjoy enhanced organizational performance, their CLS and financial management control system (FMCS) should remain aligned. Cost leadership has therefore become an important contingent variable determining overall organizational performance and needs to be matched well with the firm's FMCS (Chenhall, 2003). Generally, FMCS falls within the domain of the management and operational department.

Interest in the enhanced contingent relationship between FMCS and CLS has grown over the last two decades (Auzair & Langfield-Smith, 2005; Cades & Guilding, 2008), especially given highly competitive markets (Simon, 1990; Langfield-Smith, 1997; Kald et al., 2000; Gani & Jermias, 2004). The concept of CLS originates from Porter's (1985) study and involves setting a low cost for products in a competitive industry and utilizing resources efficiently and effectively. CLS produces a cost advantage for the firm through the pursuit of different sources over time, such as updated private technology, privileged access to raw material and gaining economies of scale (Govindrajan, 1988). It also depends on organizational structure (Langfield-Smith & Auzair, 2005). FMCS is a major type of internal control used for implementing different strategies in organizations at a large scale (Hitt et al., 2006). It helps firms manage competition within the market and their overall organizational performance (Farkas & Wetlaufer, 1996).

Organizational performance measures three types of performance indicators: financial performance, market performance and shareholder value performance. In this study, it is measured by different constructs such as returns on investment (ROI), profitability, cash flows from operation, cost control, sales turnover, revenue from new products and market share. Production of earnings and revenue generation through accruals and cash flow affects organizational performance (Dechow, 1993).

However, FMCS and CLS are not practiced effectively in the Pakistani services sector. There is a need, therefore, to investigate the level of performance, especially when low economic growth follows steady growth, such as over the last decade. The application of these strategies is critical to the performance of the organization. If applied successfully and effectively, they can enhance profit margins and promote better resource utilization. The role of such strategies in enhancing firm performance has already been explained in the literature for countries such as the US, China and Japan (Sahadev et al., 2010). This study investigates the extent to which CLS and FMCS are applied in the services sector in Pakistan and their impact on financial performance. Our findings are likely to be useful to financial decision makers.

2. Theoretical Framework

Firms work to gain a better position and earn higher profits by enhancing their turnover ratio and increasing activities using business strategies. These strategies are, therefore, based on customer valuation and are designed to gain an advantage over competitors (Dess et al., 1995). A company's strategy is a sign of how and where it thinks it can gain a competitive edge over its rivals (Liao, 2005).

CLS is a strategic move by large corporations to gain a competitive advantage and directly increase their returns and lower the cost of business (Porter, 1985). The literature explains CLS as the interrelated chain of action used to generate services and tangible items at the lowest possible price in comparison to competitors (Hitt et al., 2001). Organizations that have used these strategies successfully include Black & Decker, Texas, DuPont and Wal-Mart (Charlene et al., 2012). Porter's (1985) typology explains CLS as value creation for the customer by maintaining a standardized quality and emphasizing quality enhancement. Aligning its strategy with the organizational control system can enhance a firm's performance (Charlene et al., 2012).

Several studies have observed a link between performance and low cost (Jushon & Parnell, 2008; Koseoglu et al., 2009). Wright (1987) relates cost leadership to market share and profitability. CLS is related to the elasticity of demand in the market, which promotes price concession policies. As demand rises, price policies change. Consequently, higher earnings can be achieved using different cost reduction strategies efficiently, for example, through economies of scale.

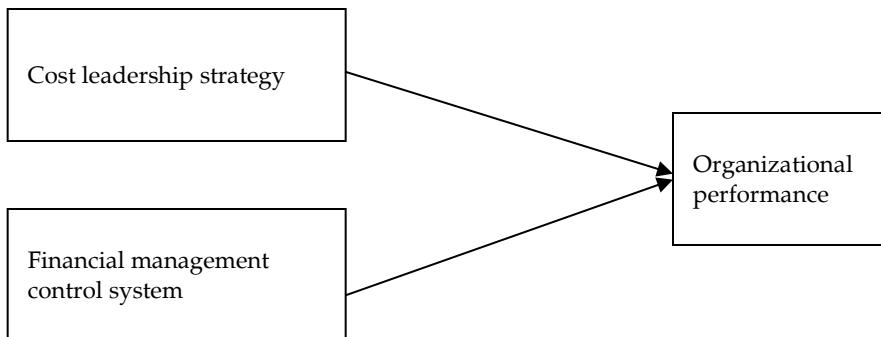
There are different categories of FMCS in the literature (Tsamenya et al., 2011). The major categories in the management's control are formal control, informal control, action control, result control, loss control, and financial and nonfinancial control (Simon, 1990; Kald et al., 2000). Financial management control is the backbone of any organization and has a prominent impact on profit and firm performance (Johnson & Kaplan, 1987; Kaplan & Norton, 1992; Otley, 1994). Liao (2005) explains FMCS in terms of ROI, which a decision maker can use to analyze overall firm performance. FMCS consists of different constructs, including standard costing, budgetary control, absorption costing, variance analysis and overhead analysis (Vanderstede & Bruggeman, 1993; Firth, 1996; Collins et al., 1997; Simon, 1987).

Rowe and Wright (1997) note that organizations can enhance performance by adopting a cost behavior approach through short-term ROI, short and long-term financial analyses and knowledge of business operations. Baysinger and Hockison (1989) argue that any firm aiming to enhance profits through better performance must maintain better financial controls. Dyment (1987) notes that FMCS exists worldwide and includes reporting cash expenses, borrowing cash, analysis of financial exchange, dealing with working capital at the lowest financing rates and exchange rate positions. Other financial controls include examining total profits, including net profit, gross profit, receivable turnover in days, cost of inventory in days and capital expenditure to gauge organizational financial performance.

Organizational performance is used as the dependent variable for this study. The organizational performance can be improved by the increased production of earnings and revenue generation through accruals and cash flow (Dechow, 1993). Another way to enhance performance is through cost controls, that is, by managing the firm's expenses. In an environment of higher costs and lower benefits, companies may not always be able to compete. As more product is converted into sales, this increases assets and generates profits, which directly improve the financial position of the organization. The greater the market share, the higher will be the cash inflow. These measures thus affect organizational performance.

As Figure 1 shows, contingency theory is the dominant theoretical framework in analyzing the relationship between CLS and FMCS and how they influence firm performance (Chenhall, 2003; Langfield-Smith, 1997). These studies suggest that adopting a certain strategic orientation can promote firm performance when supported by a given FMCS (Collins et al., 1997; Cooper, 1996).

Figure 1: Theoretical framework



The literature provides ample evidence of the importance of Porter's CLS framework. Govindarajan and Fisher's (1990) study of 145 managers finds that financial control systems lead to higher performance. Therefore, it can be argued that FMCS coupled with low CLS will enhance financial performance in the services sector. Asdemir et al. (2017) argue that financial information generated through a financial management system plays a major role in the link between firm strategy and financial performance. Another study of 106 firms in Ghana and South Africa reveals the positive impact of management control systems on firm performance, where CLS mediates this link (Martí, 2017). Following this argument, we posit that:

- H1: Low CLS positively affects the performance of services sector firms.
- H2: FMCS positively affects the performance of services sector firms.

3. Methodology

This study gauges the impact of two independent variables – CLS and FMCS – on firms' financial performance in the services sector of Pakistan. A total of 32 companies were selected for data collection. The study population included the finance managers of companies with head offices in Lahore and Rawalpindi/Islamabad and listed on the Karachi Stock Exchange (in the banking, insurance and telecommunication sectors).

We apply purposive sampling to the services sector companies representing the study population. Confirmatory factor analysis (CFA) and regression analysis are carried out to check the validity of the structural model and hypothesis, respectively. A questionnaire of 32 items (see the

Appendix) was designed according to the nature of the underlying variables. The CLS measure is adapted from Miller and Dess (1993) and the FMCS measure is based on Firth (1996). Performance is measured in terms of effectiveness, and scale is adapted from Govindarajan (1988), Govindarajan and Gupta (1985), Govindarajan and Fisher (1990), Jermias and Gani (2004) and Cadez and Guilding (2008).

Although the link between CLS, financial control systems and firm performance is well established in the literature, there is little evidence for countries such as Pakistan. Hence, we carry out a CFA to establish the fit of the model with the data (Bakari et al., 2017; Martin et al., 2009). We analyze the factor loadings, AVE and CR to establish evidence of convergent and discriminant validity and report the results of hypothesis testing through a path analysis. Table 1 gives standardized estimates, including and excluding five items under CLS. A construct with a factor loading of above 0.40 is considered significant. The values of the standardized coefficients are CL1, CL2, CL3, CL4 and CL5, respectively. For all five items, the factor loading is above or equal to 0.40, so that all these items were included in the questionnaire and are deemed significant.

Table 1: Factor loadings, AVE and CR values

No.	Items	Factor loading (≥ 0.40)	Decision	Reliability (λ_2)	$\Delta = 1$ item reliability
Cost leadership					
1.	CL1	0.90	Included	0.8100	0.1900
2.	CL2	0.46	Included	0.2116	0.7884
3.	CL3	0.49	Included	0.2401	0.7599
4.	CL4	0.89	Included	0.7921	0.2079
5.	CL5	0.40	Included	0.1600	0.8400
$\Sigma \lambda_1 = 3.14$					$\Sigma \delta_1 = 2.7860$
AVE of cost leadership strategy = $[(0.90)^2 + (0.46)^2 + (0.49)^2 + (0.89)^2 + (0.4)^2]/5 = 0.44276$					
CR for cost leadership strategy = $(3.14)^2 / (3.14)^2 + 2.7860 = 9.8596 / 12.6456 = 0.779686$					
Financial management control system					
1.	FMCS1	0.72	Included	0.5184	0.4816
2.	FMCS2	0.86	Included	0.7396	0.2604
3.	FMCS3	0.66	Included	0.4356	0.5644
4.	FMCS4	0.80	Included	0.6400	0.3600
5.	FMCS5	0.68	Included	0.4624	0.5376
6.	FMCS6	0.65	Included	0.4225	0.5775
7.	FMCS7	0.58	Included	0.3364	0.6636
8.	FMCS8	0.75	Included	0.5625	0.4375
9.	FMCS9	0.69	Included	0.4761	0.5239
10.	FMCS10	0.63	Included	0.3969	0.6331
11.	FMCS11	0.81	Included	0.6561	0.3439

No.	Items	Factor loading (≥ 0.40)	Decision	Reliability (λ_2)	$\Delta = 1$ item reliability		
12.	FMCS12	0.80	Included	0.6400	0.3600		
13.	FMCS13	0.86	Included	0.7396	0.2604		
14.	FMCS14	0.78	Included	0.6084	0.3916		
15.	FMCS15	0.86	Included	0.7396	0.2604		
16.	FMCS16	0.57	Included	0.3249	0.6751		
17.	FMCS17	0.88	Included	0.7744	0.2256		
18.	FMCS18	0.93	Included	0.8649	0.1351		
19.	FMCS19	0.89	Included	0.7921	0.2079		
20.	FMCS20	-0.80	Excluded	-----	-----		
$\sum \lambda_1 = 14.4$				$\sum \delta_1 = 7.8996$			
AVE for FMCS = $11.1304/19 = 0.5858105$							
CR For FMCS = $(14.4)^2/(14.4)^2 + (7.8996) = 207.36/215.2596 = 0.96330$							
Organizational performance							
01	OP1	0.28	Excluded	-----	-----		
02	OP2	0.41	Included	0.1681	0.8319		
03	OP3	0.56	Included	0.3136	0.6864		
04	OP4	0.21	Excluded	-----	-----		
05	OP5	0.58	Included	0.3364	0.6636		
06	OP6	0.21	Excluded	-----	-----		
07	OP7	0.97	Included	0.9409	0.0591		
$\sum \lambda_1 = 2.52$				$\sum \delta_1 = 2.2410$			
AVE for OP = $[(0.41)^2 + (0.56)^2 + (0.58)^2 + (0.97)^2]/4$							
CR for OP = $(2.52)^2/(2.52)^2 + 2.2410 = 6.3504/8.5914 = 0.7391$							

Note: CR = $(\sum \lambda_1)^2 / (\sum \lambda_1)^2 + \sum \delta_1$, and AVE = $\sum (\lambda^2) / N$ and $\sum \lambda_1$ = sum of factor loading > 0.40.

The value of AVE is near 0.5, implying adequate convergent validity. Construct reliability explains the degree to which the assessment tools produce consistent results. Since the value is greater than 0.7, this suggests higher reliability in the case of the CLS variable. Table 1 gives the standardized estimates or factor loadings, including or excluding 20 items under FMCS. A factor loading above 0.40 is generally considered significant. For the given 20 questions for FMCS, 19 items have a factor loading above 0.40, while one corresponds to less than 0.40 and is excluded from the final questionnaire due to its negative value.

AVE is almost equal to or greater than 0.50 in comparison to the variance, since the construct is greater than the latter due to the measurement error. Since the value of construct reliability is greater than 0.7, this suggests reliability within an acceptable range. The table gives standardized estimates or factor loadings for seven items under organizational performance in the questionnaire, as measured by the CFA. Any item with a factor loading greater than 0.40 is taken as significant. For

four items, the value of the estimate or factor loading is greater than 0.40: these are included. Questions 1, 4 and 6 have a factor loading of less than 0.40 and so are excluded from the CFA survey.

The value of AVE is equal to 0.50 for organizational performance, which implies adequate convergent validity. In other words, the constructs explain more variance in the model than their respective error terms, thus indicating good convergent validity. The value of construct reliability for organizational performance lies in the acceptable range, which implies that the variable is reliable and the assessment tools will produce a stable, consistent result.

The CLS measure, adapted from Miller and Dess (1993), is divided into further constructs to elicit responses in comparison to other leading companies. These include economies of scale, procurement, prices, market share and operating efficiencies. Respondents were asked to compare the firm with the nearest competitor on a five-point scale. A company with a score of less than 3 is taken as exhibiting lower cost leadership in comparison with its competitors. Likewise, an organization with a score of more than 3 is deemed to exhibit better management of cost reduction compared to its competitors.

The FMCS variable is adapted from Firth (1996) and measured on a five-point scale ('used less often' to 'used more often'). Respondents were asked to measure budgetary control and price control elements. Organizational performance is measured using a five-point Likert scale ('very poor' to 'very good') for six items. The average value indicates better firm performance. Organizational performance is measured in terms of effectiveness (Govindarajan & Gupta, 1985; Govindarajan, 1990; Jermias & Gani, 2004, Cadez & Guiding, 2008). The reliability of each variable is calculated using Cronbach's alpha for each item. Organizational performance is a dependent variable and consists of four items, with a reliability value of 0.721. The corresponding values for CLS and FMCS are 0.839 and 0.961 with a total of five and 19 items, respectively (Table 2).

Table 2: Reliability of instruments

Variable	No. of items	Cronbach's alpha
Cost leadership strategy	5	0.839
Financial management control system	19	0.961
Organizational performance	4	0.721
Total	28	0.926

4. Results

Table 3 shows that 93.75 percent of the respondents are male. Only two are female, of a total of 32 respondents, possibly because cultural norms, socioeconomic constraints to education and restricted mobility curb their participation in the services sector. The table gives the rate of response by occupation and level of education. There is a high degree of response from managers and chartered accountants, as well as people with management degrees. Most managers and executives are aged 26–40 and 41–55 (near 50 percent each). Only 3.1 percent of respondents are older. The table shows that most managers who responded to the survey have 10–20 years' experience. Of an overall sample of 32 respondents, 29 responses are from the private sector. Public sector responses have a frequency of 9.4 percent, with a total of three organizations. The mean value of the variable is almost 4, which represents the number of finance managers considering strategic decisions important to firm growth and performance.

Table 3: Frequency distribution

Gender	Number of respondents (N = 32)	
	Frequency	Percentage
Male	30	93.75
Female	2	6.25
Qualification		
Chartered accountant	13	40.60
ICMA	5	15.60
PhD	0	0
Others	14	43.75
Age		
25 or under	0	0
26–40	16	50
41–55	15	46.90
56 or older	1	3.1
Experience		
Less than 10 years	16	50
10–20 years	16	50
20–30 years	0	0
Others	0	0
Profile		
Public sector	3	9.40
Private sector	29	90.60
Variables	Mean	SD
Cost leadership strategy	3.8707	0.8145
Financial management control system	4.2500	0.5000
Organizational performance	3.8138	0.8517

Figure 2, a structural equation model (SEM), shows that there is a positive effect of CLS and FMCS on organizational performance. A 1 percent change in CLS results in a 0.71 unit change in organizational performance. A 1 percent change in FMCS results in a 0.397 unit change in organizational performance. Of five questions for CLS, six for organizational performance (OP) and 19 for FMCS, some questions were excluded to improve the overall model. Two questions for CLS, one for OP and four for FMCS were excluded due to the maximum discrepancy between items.

Figure 2: Path analyses for overall model

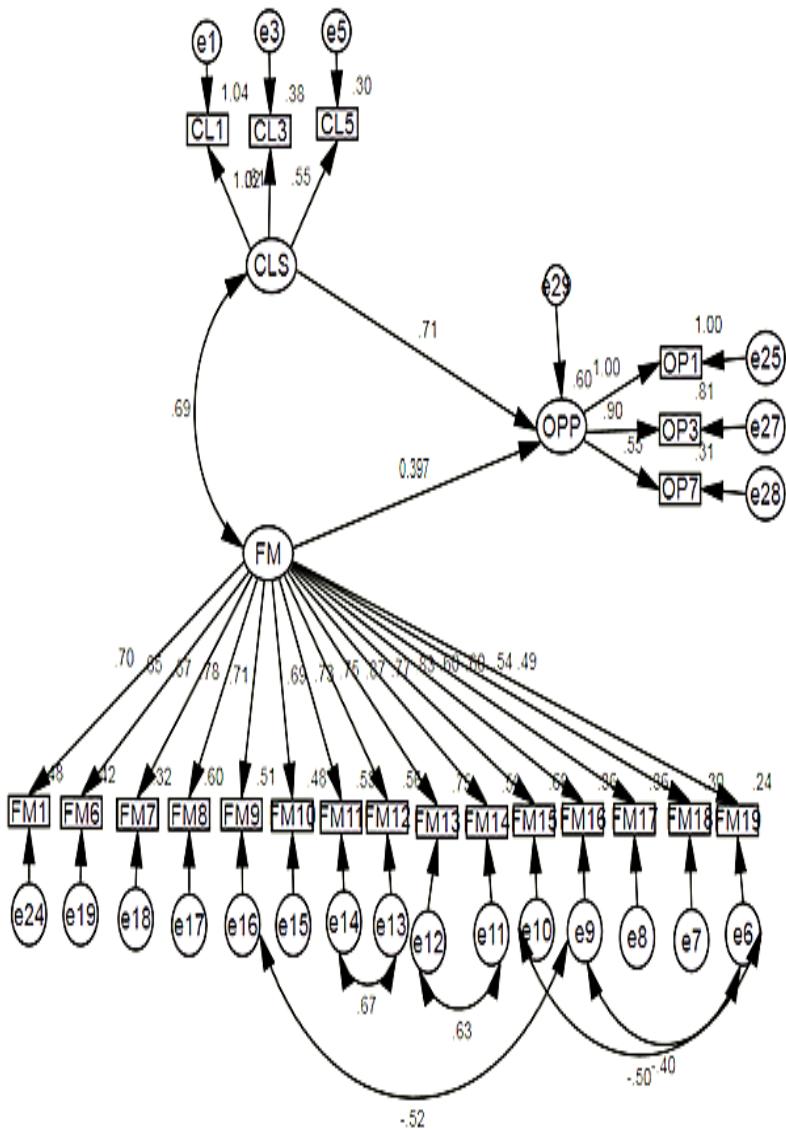


Table 4 shows that the model is significant as the p-value is less than 0.05, indicating a significant association between the dependent variable OP and independent variables CLS and FMCS. The results also show the direction and magnitude of the relationship through the structural and path coefficient in the SEM, which is used for checking the direct effect on a given dependent variable in a single-group study. The critical ratio gives the significance of the covariance among the variables ($CR > 1.96$). FMCS is a more important variable than the others, as it has a coefficient of 0.298. The individual variable has a larger positive impact on the dependent variable, as indicated by the standard error.

Table 4: Regression weights and hypothesis testing

IV		DV	Estimate	SE	CR	P-value	Label
CLS	--->	OP	0.710	0.250	3.376	***	H1 supported
FMCS	--->	OP	0.397	0.137	2.897	***	H2 supported
Model fitness index of overall model							
Factors	Values	Factors	Values	Factors	Values	Factors	Values
CMIN	487.99	Df	181	AGFI	0.864	GFI	0.913
Chi-square	2.697	P-value	0.000	TLI	0.896	CFI	0.907
RMSEA	0.097						

Our results prove hypothesis H1: that cost leadership has a positive, significant impact on the dependent variable, organizational performance. Similarly, we test the impact of the second independent variable, FMCS. Table 4 gives the values of different criteria for overall model fit. Most values are in the correct range, including goodness of fit index (GFI), adjusted goodness of fitness (AGFI), Tucker Lewis index (TLI), comparative fit index (CFI), root mean square of approximation (RMSEA) and degree of freedom (0.913, 0.864, 0.896, 0.907, 0.097 and 181, respectively). Since the p-value is lower than 0.05, there exists a positive relationship between the dependent and independent variables. Therefore, the model is acceptable. FMCS emerges as the most influential independent variable, showing how critical it is to financial managers.

We have looked at different demographic variables, including age, qualifications, experience, type of organization and gender. The results of the regression analysis indicate a relationship between the established variables and organizational performance, with a p-value of less than 0.05. This implies that all the identified critical variables have a positive impact on public and private sector firm performance in the services sector.

The results of the correlation analysis show that OP has a significant, positive directional impact through the independent variables. Thus, CLS and FMCS contribute toward OP through their correlational significance. The results imply that these variables are decisive factors in organizational performance. The variables that affect organizational performance also depend on how different factors are recognized, based on the work of an industry or sector, its location and the country where the data is collected.

The rationale for using financial managers as respondents is that they have a direct impact on price and cost adjustment and thus on firm operations and performance. Although cost reduction strategies and FMCS are not as common in the services sector in Pakistan, combining these would enhance overall performance. A deeper analysis of FMCS is especially important for larger firms (Hitt et al., 2006). While firms' performance also depends on the expectations of the management, increasing competition means that cost management is the most effective way of increasing a firm's competitive advantage.

5. Conclusion

This study explains the impact of CLS and FMCS in the services sector. Our results differ from the literature to some extent: while cost leadership and FMCS are highly influential variables, as supported by other studies, other factors such as the top management's decision making strategy, the nature of the sector (private or public) and strategy matching also have a significant impact on organizational performance.

Our purpose was to determine the level of application of CLS and its impact on organizational performance. The results confirm the importance of CLS and FMCS, based on feedback from a sample of financial managers. These factors must therefore be part of the financial decision making process. We also find that demographics have a positive and direct effect on organizational performance. While other studies have also looked at the impact of different management control systems on firm performance, we find that FMCS is the most effective, in line with the literature.

Organizational performance can be hard to measure. Tools used to measure it include key performance indicators (KPIs) and critical success factors, which are slightly different from one another. We recommend using KPIs in this context. The literature also reveals that the misalignment of financial and nonfinancial strategies and lack of technological

enhancement of control systems is a major constraint to organizational performance. We recommend public-private partnerships in the services sector to enable better strategy alignment in the long term. Strategies should also be evaluated properly and alternatives presented.

The study has theoretical and practical implications for the services sector, especially for financial managers who are involved in the firm's organizational capabilities and structure. Our results show how important it is to be oriented toward competitors through CLS, since this affects organizational performance indirectly. The study also helps managers gauge real outcomes versus forecasts. CLS can be used for balancing profits. A better FMCS aligned with CLS will help generate capital for further growth and investment and increase the firm's market share. CLS helps target budget-conscious customers. Efficiency can be enhanced by lowering costs related to the supplier through the vertical integration of outsourcing. More money can then be spent on research and development. Higher investment ultimately results in better organizational performance.

The study has several limitations that future research could address. First, it does not account for any difference in responses between male and female respondents. Second, it is restricted to the services sector, which makes it more difficult to generalize the results. Extending it to different countries would add more variables. Third, the study was cross-sectional. A longitudinal design would allow the results to be more generalized. Fourth, we have used nonprobability sampling. Finally, the study does not look at other managers who may be involved in financial decision making. Future studies could therefore use other sampling techniques, look at business strategies other than CLS and consider different sectors, such as manufacturing.

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Appendix**Cost leadership strategy**

On a scale of 1 to 5, compare the following aspects of your company to those of your largest competitor (1 = significantly lower, 2 = lower, 3 = average, 4 = higher, 5 = significantly higher).

Item	1	2	3	4	5
1. Your organization pursues cost advantages in procurement					
2. Your organization pursues economies of scale					
3. Your organization pursues operating efficiencies					
4. Your organization offers high prices					
5. Your organization uses aggressive product pricing to gain market share					

Financial management controls

On a scale of 1 to 5, indicate the extent to which the following aspects are part of your management control system (1 = less often, 2 = less, 3 = average, 4 = more, 5 = more often).

Item	1	2	3	4	5
1. Your organization uses budgetary performance measures					
2. Your organization uses variance analysis					
3. Your organization uses activity-based costing					
4. Your organization uses variable costing					
5. Your organization uses absorption costing					
6. Your organization uses multiple overhead cost pools					
7. Your organization allocates overheads based on multiple activities					
8. Your organization uses multiple service cost pools					
9. Your organization allocates service cost pools based on multiple activities					
10. If standard costing is in place, it is used for budgeting					
11. If standard costing is in place, it is used for control purposes					
12. Your organization calculates standard cost variances					
13. In your organization, all variances are reported to the management					
14. Your organization prepares cash/working capital budgets					
15. Your organization prepares sales budgets					
16. Your organization prepares profits budgets					
17. Your organization prepares production budgets					

Item	1	2	3	4	5
18. Your organization uses product costs when making decisions					
19. Your organization uses product costs when evaluating inventory					
20. Your organization uses product costs when setting prices					

Performance

On a scale of 1 to 5, compare the following aspects of your company's performance to those of your largest competitor (1 = very poor, 2 = poor, 3 = average, 4 = good, 5 = very good).

Item	1	2	3	4	5
1. ROI					
2. Profitability					
3. Cash flow from operations					
4. Cost control					
5. Sales turnover					
6. Revenue from new product					
7. Market share					

Stock Market Anomalies as Mediators Between Prospect Factors and Investment Decisions and Performance: Findings at the Individual Investor Level

Syed Zain Ul Abdin*, Naheed Sultana, Mariam Farooq***
and Syed Zulfiqar Ali Shah******

Abstract

While other studies have investigated the direct impact of prospect factors on investment decisions and performance at the individual level, we examine the mediated link between the two, via fundamental, technical and calendar anomalies. The study applies a structural equation model to data for 324 individual investors in Pakistan. Our findings show that two processes, fundamental and calendar anomalies, mediate the relationship between certain prospect factors and investment decisions and performance. Of these prospect factors, regret aversion is the strongest predictor of investment decisions and performance, followed by calendar anomalies. It is also the strongest predictor of investment decisions and performance via fundamental anomalies.

Keywords: Prospect theory, stock market anomalies, investment decision and performance, behavioral finance.

JEL classification: G2, G14, G15.

1. Introduction

While many studies have established a direct link between prospect factors and investment decisions and performance among institutional investors, this study focuses on the mediated link through which this relationship exists for individual investors. Should theory prove inadequate, it is important to test mediation processes empirically by

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introducing the mediator during the research design phase. In newer fields of inquiry, researchers may choose to focus on developing a causal relationship between variables.

In this study, we develop the causal relationships between prospect components and investment decisions and performance. The more established areas of investigation warrant the use of multiple mediators. Accordingly, we apply different mediation mechanisms to better understand these processes (see Farooq et al. 2014; Judd and Kenny 1981). To the best of our knowledge, this study is the first attempt to examine and compare multiple mediators of the relationship between prospect factors and investment decisions and performance at the level of individual investors – a key aspect of behavioral finance.

The literature identifies different classes of anomalies in the securities market that may influence the investment decisions and performance of individuals (see Barber and Odean 2008; Brealey et al. 2012; Daniel et al. 1998). We examine three classes of anomalies – fundamental, technical and calendar – to gauge whether they mediate the relationship between prospect factors and individuals' investment decisions and performance. Specifically, we argue that prospect factors induce these stock market anomalies, which in turn affect the investment decisions and performance of individuals. Our study focuses on three components of prospects: loss aversion, regret aversion and mental accounting.

This study contributes to the literature by using an integrated model to identify the mediated relationship between prospect components and investment decisions and performance. Given that behavioral finance is a comparatively new aspect of financial theory, we aim to gauge whether it is well suited to the proposed model in the context of a non-Western economy – an area that has garnered little attention in the literature. We do not, however, account for the cultural aspects of this relationship.

We start with a conceptual overview of prospect components and stock market anomalies, examining how the first affects the second according to prospect theory and, in turn, how this relationship determines investment decisions and performance among individuals. Next, we present the study's methodology and data, using a structural equation model (SEM) and phantom model to test the multi-mediation relationship. Finally, we present the study's results, followed by a discussion and conclusion.

2. Literature Review

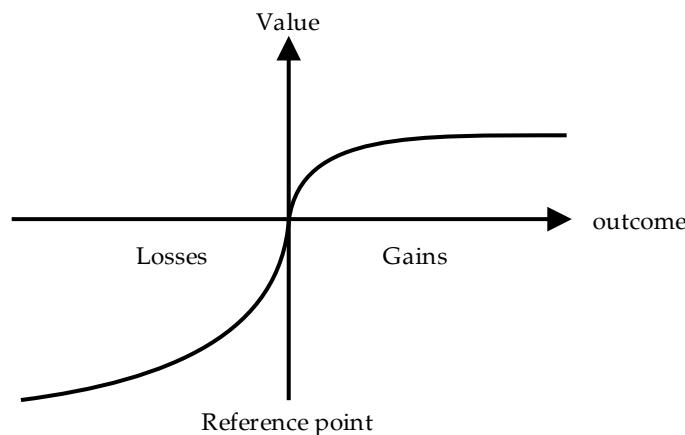
This section reviews the literature on prospect theory and stock market anomalies.

2.1. Prospect Theory

Prospect theory is a critique of expected utility theory – a descriptive model of decision under uncertainty (Kahneman and Tversky 1979) – on the premise that choice under the latter is inconsistent when prospects are deemed risky. Constructing the expected utility function requires satisfying several axioms: completeness, transitivity, continuity and independence (Barberis 2001).

According to prospect theory, investors focus on changes in wealth rather than total wealth (Levy and Levy 2004). A change in the value of wealth will lead to loss aversion, while risk aversion depends on previous performance (Barberis et al. 2001). Prospect theory accounts for situations in which investors are loss-averse as well as risk-averse. As Figure 1 shows, the value function is normally concave for gains and convex for losses (Kahneman and Tversky 1979). Prospect theory thus explains which factors and effects come into play when gauging the stock market.

Figure 1: Value functions



2.2. Stock Market Anomalies

Stock market anomalies affect the performance of the stock market as well as that of individual investors. These anomalies are usually

associated with certain kinds of securities, causing them to under- or over-perform (Thaler 2005). In traditional finance theory, such anomalies describe stock price movements or events that cannot be explained by the efficient markets hypothesis (Silver 2011). In the context of an inefficient market, we look at three classes of stock market trading anomalies: fundamental, technical and calendar anomalies.

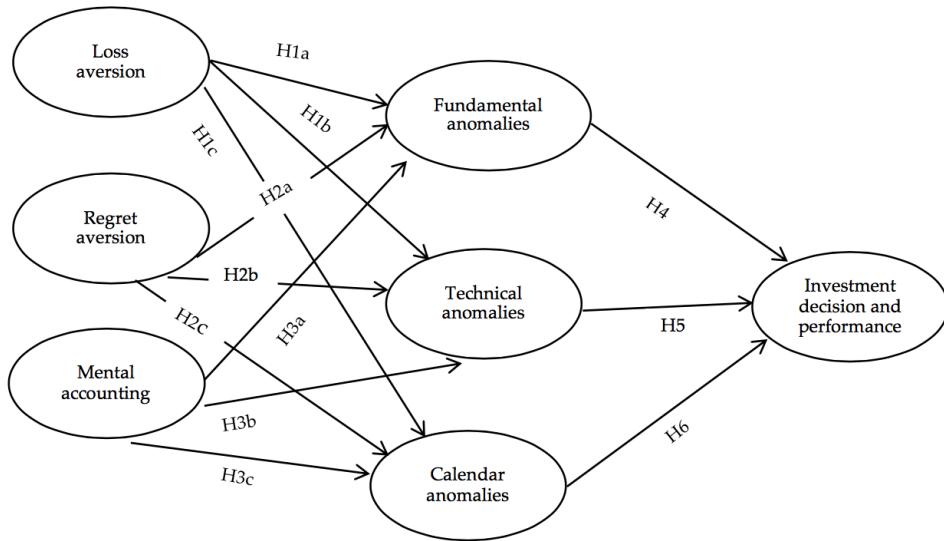
Fundamental anomalies are associated with elements of fundamental analysis (Richardson et al. 2010) – factors that determine the intrinsic value of a stock, including economic factors, companies' financial statements and industry trends (Graham and Dodd 1934). Technical anomalies relate to elements of technical analysis (Bako and Sechel 2013), whereby past price and volume are used to predict stock returns (Mizrach and Weerts 2009). This refers particularly to price patterns and volume spikes (Turner 2007), often using predictive charts (Achelis 2001). When stock prices are not fully indicative, investors may attempt to make logical conjectures about the abstraction between stock prices and signals (Brown and Jennings 1989). Finally, the time or calendar element is integral to investment decisions because a security may have different prices at different times. Season, for instance, can influence stock price movements (Thushara and Perera 2013; Thaler 1987).

Under prospect theory, the value function evaluates only a single outcome (Kahneman and Tversky 1979). When individuals result in multiple outcomes, however, the value function interprets these through prospect factors to explain why individuals behave differently in different situations. All three classes of anomalies apply under prospect theory, which thus helps us understand the market conditions under which individual investors behave, depending on a specific prospect.

3. Conceptual Model

This section develops a conceptual model of prospect factors, stock market anomalies and investment decisions and performance, based on which we present the study's hypotheses (see Figure 2).

Figure 2: Conceptual model



3.1. Loss Aversion and Fundamental Anomalies

Loss aversion refers to an investor's tendency to feel a loss more keenly than a gain (Kahneman and Tversky 1979). Such individuals are likely to sell winning stocks too early by overreacting to an uptrend in stock prices. Similarly, they may end up holding onto losing stocks too long by underreacting to a downward trend in stock prices until that stock recovers (De Bondt 1998; Shefrin and Statman 1985).

Once the stock price rises, less risk-averse investors will invest on the assumption that prior gains will buffer any later losses. A fall in the stock price will make investors more risk-averse if they wish to avoid any further losses (Odean 1999). This variation in preferences indicates that investors gauge their prospects depending on changes in stock price. Based on this, our hypothesis (H1c) is that *the higher the degree of loss aversion, the more strongly it will generate fundamental anomalies in the stock market*.

3.2. Loss Aversion and Technical Anomalies

Prospect theory explains how individuals choose from among different prospects under conditions of uncertainty (Kahneman and Tversky 1979). In the context of loss aversion, they may assign a greater probability to expected losses than to acquired gains, depending on

previous stock performance and other market information (Barberis et al. 2001). This, in turn, will drive their future investment decisions.

On observing a drop in the stock's price below a support level (technical analysis) and fearing any further loss, such individuals will sell the security at equilibrium. Investors heavily rely on technical analysis in this case, which also accounts for technical anomalies in the securities market. Thus, we expect (H1b) that, *the higher the degree of loss aversion, the more strongly it will generate technical anomalies in the stock market.*

3.3. Loss Aversion and Calendar Anomalies

Loss-averse individuals will consciously aim to avoid losses and focus on certain gains instead. They are more likely to sell winning stocks and hold onto loss-making stocks (Weber and Camerer 1998) because they would rather not lose a sure gain in the first case and would prefer to avoid incurring a loss in the second. Moreover, individual investors may choose to invest in small-capitalization stocks, which they perceive as growth stocks (Bauman et al. 1998) that will yield a certain and higher return.

Branch and Chang (1990) find that stocks that performed poorly in December were likely to recover in January, thereby driving individual investors to sell their losing stocks at the end of the year (December) to take advantage of tax losses. The certain gain in January made such individuals more risk-averse. This implies that they are loss-averse in the sense of calendar anomalies. This explanation leads to the following hypothesis (H1a): *the higher the degree of loss aversion, the more strongly it will generate calendar anomalies in the stock market.*

3.4. Regret Aversion and Fundamental Anomalies

Regret aversion stems from having made the wrong choice or carried out the wrong action, or from having missed a good opportunity (Ackoff 1994). Regret-averse individuals behave irrationally in response to a change in stock price, for instance, by selling a stock quickly if its price goes up because they assume the price might fall in the future (Dodonova and Khoroshilov 2005). In contrast, they may hold onto a losing stock in the hope that its price will go up. In both cases, this is done to avoid future regret, where individuals assume that the stock's expected price will revert to its mean. Moreover, regret-averse individuals prefer to invest in 'glamour' companies because they associate 'riskier' companies with having to make more difficult or complex decisions (Pompian 2011). Based

on this, we propose (H2a) that, *the higher the degree of regret aversion, the more strongly it will generate fundamental anomalies in the stock market.*

3.5. Regret Aversion and Technical Anomalies

Regret-averse investors use their past performance in the stock market to make decisions that will minimize the likelihood of regret in the future. This forecasting of stock returns is, therefore, based on previous risk and uncertainty (Azzopardi 2010). The technical analysis entails using past stock prices and volume to project future stock prices (Konstantinidis et al. 2012). In this context, prospect theory suggests that regret-averse individuals do not behave rationally all the time (Ricciardi and Simon 2000). Their technical analysis may, therefore, generate technical anomalies in the stock market. Based on this, we propose (H2b) that, *the higher the degree of regret aversion, the more strongly it will generate technical anomalies in the stock market.*

3.6. Regret Aversion and Calendar Anomalies

Prospect theory shows that regret may be expressed through a change in investors' point of reference (Thaler 1980), whereby they are more likely to act out of fear of loss rather than expectations of gain. Regret aversion can also become a tax-inefficient investment strategy because investors can reduce their taxable income by realizing capital losses. This implies that they will sell their losing stocks at the end of the year for tax reasons and invest in smaller firms that are likely to yield certain gains, thereby avoiding future regret. This tendency to sell losing stocks stems from regret aversion (Odean 1999). Thus (H2c), *the higher the degree of regret aversion, the more strongly it will generate calendar anomalies in the stock market.*

3.7. Mental Accounting and Fundamental Anomalies

Under prospect theory, investors may carry out mental accounting with a view to achieving specific goals. Pompian (2011) explains that investors whose goal is to preserve their wealth are likely to focus on growth firms or dividend-paying companies, even if this means ignoring other stock fundamentals. Grinblatt and Han (2005) show that the disposition effect driven by prospect theory and mental accounting creates a dispersion between the stock's intrinsic value and its equilibrium and the realized momentum in stock price. Such investors will focus on changes in stock price, depending on the objective that drives their mental accounting.

We propose (H3a) that, *the higher the degree of mental accounting, the more strongly it will generate fundamental anomalies in the stock market.*

3.8. Mental Accounting and Technical Anomalies

Thaler (1985) argues that investors frame their financial decisions according to specific prospects. The value they place on different accounts depends on certain points of reference. As mentioned earlier, prospect theory-based mental accounting creates a disposition effect as well as momentum in the market (Grinblatt and Han 2005). Individuals who tend to hold onto losing stocks too long and sell winning stocks too soon (Shefrin and Statman 1985) may assign a different mental accounting process to different asset classes. Some assets may entail risk aversion, while others induce risk taking (Grinblatt and Han 2005).

Since mental accounting does not always entail rational decisions, with investors treating each element of an investment separately (Pompian 2011), they may rely on technical analysis to make investment decisions, thereby creating technical anomalies in the stock market. Accordingly, we propose (H3b) that, *the higher the degree of mental accounting, the more strongly it will generate technical anomalies in the stock market.*

3.9. Mental Accounting and Calendar Anomalies

Thaler's (1985) concept of mental accounting relates to prospect theory in that individuals frame their prospects in accordance with a value function relative to a reference point (Kahneman and Tversky 1979) for each account, while ignoring any possible interaction among these accounts. Thus, they will alter their preferences depending on the situation. Thaler and Johnson (1990) add that, to some extent, investors' preferences reflect integration and segregation outcomes over time.

Investors treat their assets differently because they evaluate their gains and losses separately. Investors who are reluctant to incur any losses may choose to sell their losing stocks in December for tax reasons and then invest in smaller firms – that are likely to provide a high return – in January (Haug and Hirshey 2006). This calendar effect results from investors' mental aggregation and segregation events. Based on this, we hypothesize (H3c) that, *the higher the degree of mental accounting, the more strongly it will generate calendar anomalies in the stock market.*

3.10. Fundamental Anomalies and Investment Decisions and Performance

A fundamental anomaly in a stock market occur when a stock's price does not reflect its intrinsic or fundamental value (S et al. 2014). While there is no conclusive evidence in the literature as to why and how such anomalies appear, Graham and Dodd (1934) have identified several factors that influence stock prices. One of these is that investors may choose growth stocks over value stocks in the belief that the former performs better. This behavior (focusing on growth stocks) then influences investment decisions and performance. Lakonishok et al. (1994) conclude that value stocks are not necessarily neglected because they are associated with greater risk, but because this is an error on investors' part. Their stock selection behavior – classed as a fundamental anomaly – influences their investment decisions and performance. Accordingly, we propose (H4) that *fundamental anomalies affect individuals' investment decisions and performance.*

3.11. Technical Anomalies and Investment Decisions and Performance

Technical anomalies are inconsistent with the efficient markets hypothesis (Pompian 2011). Such anomalies relate to past trends in price and volume in the securities market (Latif et al. 2011) and stem from elements of technical analysis and its impact on investment decisions and performance. Technical analysis is used to predict price movements based on previous trends in price and volume (see Bako and Sechel 2013). As a form of investor behavior, this can give rise to technical anomalies in the market, in turn influencing investment decisions and performance. We propose (H5) that *technical anomalies affect individuals' investment decisions and performance.*

3.12. Calendar Anomalies and Investment Decisions and Performance

Anomalies resulting from a specific period, or calendar anomalies, include the 'January effect' or 'weekend effect' (Taylor 2011; Singal 2006). Fama (1970) argues that a stock's price reflects all the information available. However, it may be difficult to control conditions in an efficient market. Stock prices are subject to a seasonal effect, which makes the market inefficient and compels investors to beat the market at a specific time. Schultz (1985), for instance, presents the tax-loss-selling hypothesis, under which investors sell their losing stocks at the end of the year with the aim of saving the tax amount and investing in a smaller firm that offers a higher return. This behavior has an impact on investment decisions and performance. We hypothesize (H6) that *calendar anomalies affect individuals' investment decisions and performance.*

4. Method

This study was conducted in 2014 using a sample of individual investors in the Pakistani stock market. The sample frame consisted of individual investors who had been trading in the stock market for at least a year. We used simple random sampling to target the unit of analysis. Of a total of 700 responses collected, 373 were usable. Given that the sample targeted real investors, this was considered adequate for analysis.

Three or four items are developed for each construct, except for calendar anomalies, which consist of two items based on an extensive review of the literature on behavioral finance and psychology. The prospect components are measured by three constructs, using a five-point Likert scale: loss aversion, regret aversion and mental accounting, following Waweru et al. (2008) and Babajide and Adetiloye (2012). Stock market anomalies are gauged using three constructs: fundamental anomalies, adapted from Waweru et al. (2008) and modified to include four items; technical anomalies, following Waweru et al. (2008) and Achelis (2001); and calendar anomalies, comprising two items adapted from Keim and Stambaugh (1984) and Wachtel (1942). Three items are used to measure investment decisions and performance, following Le and Doan (2011) and Waweru et al. (2008). This study uses AMOS to apply the widely used CB SEM to test its hypotheses.

5. Data Analysis

An SEM is used to test the study's hypotheses. First, we examine the hypothesized structural model to investigate the direct and indirect impact of the prospect components on fundamental, technical and calendar anomalies and on investment decisions and performance. Second, we apply a phantom model (Macho and Ledermann 2011) to examine the total and specific indirect effects.

Using the instrument developed to measure the constructs, we carry out a confirmatory factor analysis (CFA) to investigate their dimensionality and validity in Pakistan. The study applies seven concepts: loss aversion, regret aversion, mental accounting, fundamental anomalies, technical anomalies, calendar anomalies, and investment decisions and performance.

Table 1 provides a single-factor CFA in which all the items comprising the seven constructs are loaded on a single factor (Anderson and Gerbing 1988). The results show that the indices fit the data poorly.

However, the seven-factor CFA in which the items are loaded on their respective factors yields a good fit.

Table 1: Fit indices of two alternative CFA models

Model	Description	Model fit indices					
		X2	df	X2/df	CFI	TLI	RMSEA
Model 1	Single factor CFA	1,753.846	299	5.865706	0.548	0.509	0.123
Model 2	Seven factors CFA	692.086	271	2.553823	0.869	0.843	0.069
							0.094

6. Results

Table 2 presents the mean and standard deviation for each variable and the correlation (all hypothesized and non-hypothesized relationships) between variables.

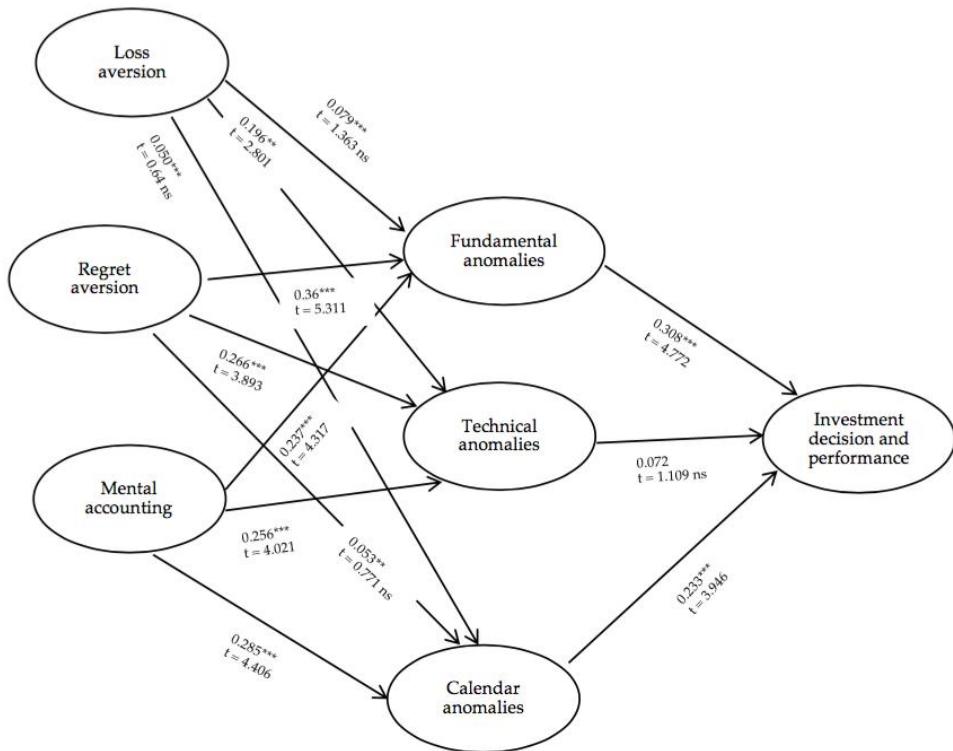
Table 2: Descriptive statistics and correlation matrix

Variable	Mean	SD	1	2	3	4	5	6	7	8
Loss aversion	3.5	0.85	1.000							
Regret aversion	3.3	0.87	0.550**	1.000						
Mental accounting	3.2	0.83	0.427**	0.518**	1.000					
Fundamental anomalies	3.6	0.91	0.345**	0.455**	0.367**	0.238**	1.000			
Technical anomalies	3.5	0.94	0.407**	0.413**	0.394**	0.418**	0.476**	1.000		
Calendar anomalies	3.0	1.06	0.180**	0.234**	0.228**	0.239**	0.260**	0.352**	1.000	
Investment decision and performance	3.5	0.84	0.842**	0.197**	0.175**	0.071**	0.435**	0.289**	0.343**	1.000

Note: ** correlation is significant at the 0.01 level (2-tailed).

6.1. Model Testing

The SEM introduces the three mediators – fundamental anomalies, technical anomalies and calendar anomalies – and helps estimate the direct effect of the three prospect components on all three mediators and their effect, in turn, on investment decisions and performance. We use a phantom model to identify the specific indirect effect of the prospect components on investment decisions and performance via three paths. Figure 3 presents the estimated results for the direct effect of the three prospect components on fundamental anomalies, technical anomalies and calendar anomalies, and the impact of these three classes of anomalies on investment decisions and performance.

Figure 3: Direct causal effect among variables

Note: * significant at 0.05, ** significant at 0.01, *** significant at 0.001, ns = not significant.

The results in Table 3 indicate that the model fits the data well. Of the three prospect components, regret aversion has a positive effect on fundamental anomalies and calendar anomalies. We find that, in the context of individual investors, regret aversion is the strongest determinant of fundamental anomalies and calendar anomalies. Moreover, two mediators, fundamental anomalies and calendar anomalies, have a strong, positive effect on investment decisions and performance (Table 4).

Table 3: Model fit

Model	Description	Model fit indices						
		X2	df	X2/df	CFI	TLI	RMSEA	SRMR
Model 1	Multi-mediation	746.31	280	2.6654	0.855	0.832	0.154	0.072

6.2. Specific Mediation Effects

Phantom modelling is used to examine the indirect specific effects of the variables concerned. Regret aversion has a positive effect on

investment decisions and performance through fundamental anomalies (indirect effect = 1.416, $p < 0.001$) and calendar anomalies (indirect effect = 0.578, $p < 0.001$) (Table 4).

Table 4: Direct and indirect effects of independent variables on dependent variable

Independent variables	Direct effects				Dependent variable		
	Fundamental anomalies	Technical anomalies	Calendar anomalies	Investment decisions and performance	Indirect effect on investment performance		
					Via fundamental anomalies	Via technical anomalies	Via calendar anomalies
Loss aversion	-1.264*	-1.341*	-1.560*		-0.717*	0.160	-0.470*
Regret aversion	2.497***	2.145***	1.919**		1.416**	-0.255	0.578**
Mental accounting	-0.773*	-1.244*	-1.453*		-0.438	0.148	-0.437
Fundamental anomalies				0.567***			
Technical anomalies				-0.119			
calendar anomalies				0.301***			

Note: The table gives standardized regression weights. N = 324.

* significant at 0.05, ** significant at 0.01, *** significant at 0.001.

7. Discussion

The study's aim is to investigate the effect of prospect factors on investment decisions and performance through the mediation of fundamental, technical and calendar anomalies. The results of the SEM indicate that certain prospect factors are strong predictors of investment decisions and performance via these classes of anomalies. This implies that investment decisions and performance are not a direct consequence of prospect factors. Rather, they are caused by fundamental, technical and calendar anomalies, which are in turn direct outcomes of prospect factors. This multiple mediation mechanism sheds new light on how prospect factors influence investment decisions and performance, with important implications for the role of individual investors.

Of the three prospect components, regret aversion is the strongest predictor of fundamental anomalies. This result validates H4 – that individual investors' behavior induces fundamental anomalies in the stock market – and is consistent with Singh (2012) and Shefrin and Statman (1985). Our findings also show that regret aversion has a strong, positive

effect on calendar anomalies. This validates our hypothesis that investors' behavior generates calendar anomalies in the capital market and is consistent with Shefrin and Statman (1985) and Koenig (1999). The impact of regret aversion on fundamental and calendar anomalies reflects how individual behavior can influence the stock market. Under prospect theory, investors assign value in terms of gain and loss – this finding thus deviates from expected utility theory.

In the context of a developing country such as Pakistan, the study shows that investors are more likely to follow behavioral rather than rational patterns when making investment decisions. This, in turn, generates anomalies in the stock market. It also underscores the importance of studying behavioral finance with a view to making better investment decisions.

Surprisingly, loss aversion does not have the same directional relationship with stock market anomalies as regret aversion, even though it is an important dimension of investment prospects. This could be for two reasons. First, Pakistani investors may be less sensitive to the loss aversion impact of investment decisions and performance – especially in this case, where the sample comprises a high percentage of men, who are considered less risk-averse than women. Second, given that Pakistan is characterized by a collectivist culture rooted in strong familial and community networks, investors may be less risk-averse. This inverse relationship does not, therefore, support our hypothesis.

Stracca (2004) and Abdin et al. (2017) argue that behavioral finance provides a mechanism for understanding market conditions and the formation of market beliefs, especially vis-à-vis the rationality assumption. In this context, the study investigates how individual investors' decisions can influence market conditions. It shows that irrational investor behavior can give rise to anomalies in the stock market and highlights the critical role of fundamental, technical and calendar anomalies in measuring investment decisions and performance. Investors tend to remain happy with their investment decisions and performance despite the existence of anomalies because they rely on prospect components in an efficient way. This is a useful finding from a theoretical as well as practical perspective.

8. Study Limitations and Avenues for Further Research

A key limitation of the study is that we consider only pre-identified antecedents of prospect constructs. Our findings suggest that these three

dimensions explain only a portion of the variance in outcome variables. However, perception can vary across the dyad (John and Reve 1982). This implies that other prospect factors could be added to the model to determine their effect on stock market anomalies and, in turn, on investment decisions and performance. Examples include endowment and optimism (Pompian 2011). The study also focuses on individual investors alone, implying that future research could focus on institutional investors or mutual fund managers. Moreover, it does not address the moderating effect of assured variables such as age, gender, nature of employment and work experience. Incorporating these would enrich the research model.

Finally, while we have used a three-item scale to measure each construct, except for calendar anomalies, which consists of two items, future research could enhance the strength of the model by adding the number of items for each construct. Thus, certain paths that did not emerge as significant in this model could be specified further, with modified or additional constructs and their items. We have used the minimum number of items for each construct to avoid respondent bias as well as data collected from a sample of bona fide investors. Moreover, while we have relied on a single method, the study's model could be tested using more than one methodology, such as self-reporting surveys.

9. Conclusion

The study's results show that investor behavior may be irrational vis-à-vis market conditions (anomalies). Therefore, gauging individual investment decisions and performance entails taking into account not only investor behavior, but also market conditions. While the literature presents a range of findings on the direct relationship between prospect factors and investment decisions and performance, we argue that this relationship is mediated by stock market anomalies. Knowledge of such anomalies is critical to developing an effective behavioral model of investment decisions. This is, therefore, one of the first efforts to examine the behavior of Pakistani investors in this context, thus addressing a key gap in the behavioral finance literature.

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The Job Complexity Effect on Job Outcomes: The Role of Positive Core Self-Evaluation as Moderator

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Abstract

This paper examines the moderating effect of positive core self-evaluation (CSE) in the job complexity and job outcomes (job satisfaction, job performance and job creativity) relationship, using a sample of 295 workers from various public and private sector organizations in Pakistan. The results show that a positive relationship is found between job complexity with job satisfaction, job performance and job creativity. Positive CSE moderates the job complexity and job outcomes (job satisfaction and job creativity) relationship and strengthens the positive relationship between job complexity and these outcomes. However, it does not moderate the job complexity and job performance relationship. The results suggest that individuals with elevated CSE due to positive self-evaluations respond more positively to the challenge stressor of JC and tend to become not only more satisfied with their jobs, but also more creative.

Keywords: Job complexity, positive CSE, job satisfaction, job performance, job creativity.

JEL classification: D23, J28, M12.

1. Introduction

The concept of job complexity (JC) and positive core self-evaluation (CSE) has received much attention in the literature on organizational behavior. JC is described as the level to which the demands of a job become difficult to handle (Fried et al., 2002). JC has gained a lot of importance as the bulk of jobs pose greater cognitive challenges for employees (Morrison et al., 2005). The nature of work has changed over time with shifts in workforce composition, more intense competition and technological changes (Morgeson & Campion, 2003; Parker & Wall, 2001; Parker et al., 2001). With improved technology, augmented skills variety and the

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transformation to knowledge-based work, work has become more complex and cognitively challenging (Parker & Wall, 2001).

The cognitive demands of complex jobs are higher, which makes them mentally challenging (Humphrey et al., 2007) and requires workers to have high levels of competency. Examples of complex jobs include the role of managers and professionals (Kinnie et al., 2005). Many organizations strive to increase the number of experts with skilled jobs, which are associated with multifaceted cognitive needs (David, 2015). Complex, enriching jobs are considered valuable for organizations as they are more likely to satisfy individual needs and cause higher job satisfaction (JS), motivation, quality job performance (JP) and job creativity (JCr), as highlighted in the seminal works of Maslow (1943), Herzberg (1968), and Hackman and Oldham (1976, 1980).

The main purpose of this study is to assess the unexplained variance in the relationship between JC and job outcomes (JO). Empirical studies examining the JC-JO relationship (Fried & Ferris, 1987; Johns et al., 1992; Kopelman, 1985; Loher et al., 1985; Oldham, 1996; Parker & Wall, 1998; Parker et al., 2001) report low to moderate correlation, which clearly indicates the possibility of moderators. Recognizing the importance and influence of job design, researchers have highlighted the need for more theory building and empirical research in this area (Humphrey et al., 2007; Morgeson & Campion, 2003). Recently, researchers have stressed the need to examine the role of individual difference variables in the relationship between job characteristics and attitudinal and behavioral outcomes (Grant et al., 2010).

This study is based on the interactionist approach (Diener et al., 1984; Endler & Edwards, 1985, 1986; Mischel, 1977), which recognizes that multifaceted human behavior is an outcome of the interaction between personality and situational variables. Several studies have investigated the interaction between individual job characteristics and personality traits such as growth need strength, the need for achievement, general self-efficacy – among the ‘big five’ traits of job attitudes and behaviors (Barrick & Mount, 1993; Brief & Aldag, 1975; Fried & Ferris, 1987; Hackman and Lawler, 1971; Le et al., 2011; Steers & Spencer, 1977; Sims & Szilagyi, 1976; Sluss et al., 2012; Raja & Johns, 2010; Wanous, 1974). However, to the best of our knowledge, no other study has exclusively examined CSE as a moderator between JC and JO, although studies such as Lemelle and Scielzo (2012) recognize the possible interaction between JC and CSE.

According to Magnusson (1990), 'An individual's view of himself or herself... with respect to self-evaluation (overall approval and acceptance of himself or herself), plays a central role in the process of interaction with the environment' (p. 201). The theory of 'core self-evaluations' was proposed by Judge et al. (1997) in their continual theoretical development in the field of personality. Although relatively new, the construct of CSE is becoming a dominant focus of research in industrial organizational psychology (Chang et al., 2012; Judge et al., 1997). While the mainstream research on CSE focuses on its direct influence on job attitudes and behaviors (Erez & Judge, 2001; Judge & Bono, 2001; Judge et al., 2003; Song & Chathoth, 2013), a limited number of studies have recognized the broad construct of CSE as a moderator (Bowling et al., 2012; Harris et al., 2009; Judge & Hurst, 2007; Karatepe, 2011; Lim & Tai, 2014; Rosopa & Schroeder, 2009; McNall et al., 2011).

The reason for choosing CSE as a personality trait above others is that it consists of fundamental traits and has its origin in more specific traits (Judge et al., 1997). We propose that CSE interacts with JC in influencing job outcomes. People with positive CSE are more likely to appreciate the positive aspects of JC by strengthening the positive association of JC with JO, whereas for people with low positive or negative CSE, this effect will be negative or neutral (Judge et al., 1997). Another reason for choosing CSE is that studies have shown that it explains more variance in job attitudes and behaviors than the 'big five' personality traits or individual CSE traits (Erez & Judge, 2001; Dormann et al., 2006; Judge et al., 2003; Judge et al., 2008; Lemelle, & Scielzo, 2012; Rode et al., 2012).

This study is based on one of the most important and widely examined job attitudes, that is, JS, and job behaviors, that is, JP and JCr, in industrial and organizational psychology (Abu Al Rub, 2004; Crawford et al., 2010; Eatough et al., 2011). JS results from an evaluation of job characteristics (Weiss, 2002). JP is defined as the sum of activities in which employees involve themselves positively and negatively, directly and indirectly, both to achieve organizational objectives (Borman & Motowidlo, 1993; Campbell et al., 1990). JP comprises behaviors that are specified in the job description, such as mandatory duties (Williams & Anderson, 1991). JCr is the creation of fresh, new and valuable ideas (Amabile, 1988). It drives useful ideas and customized solutions (Amabile 1996; Oldham & Cummings, 1996). Moreover, JCr can be an element of an employee's regular job duties or go beyond these (Unsworth, 2001).

This study analyzes two facets of job behavior: in-role JP and JCr. Consistent JP and an employee's involvement in innovative or creative activities are indispensable for the sustained vitality of an organization (Griffin et al., 2007; Katz, 1964; Pulakos et al., 2000) and it is not necessary that all people are equally good at performing all job behaviors (Raja & Johns, 2010). Moreover, the effect of dispositional variables such as CSE can be highlighted using more than one dependent variable (Johns, 2006). The importance of these three JOs emerges in numerous studies examining job characteristics/JC or personality traits or both as an outcome (Barrick & Mount, 1993; Le et al., 2011; Raja & Johns, 2010; Sims & Szilagyi, 1976; Truxillo et al., 2012).

We aim to address the gap in the literature by examining the role of positive CSE as a moderator in the JC-JO relationship, using a unique sample of Pakistani organizations. Section 2 discusses the literature and proposes a hypothesis. Section 3 highlights the methodology and discusses the measures used for data collection. Section 4 presents the analysis technique and results. Section 5 discusses the results, study limitations and directions for future research.

2. Literature Review and Hypothesis

2.1. Job Complexity and Job Outcomes Relationship

According to Hackman and Oldham (1980), JC is the level to which a job is demanding, stimulating, exciting, inspiring and involves diversity. The job characteristics model (JCM) has its roots in Maslow's (1954) individual needs theory and is well acknowledged as a theory of job enrichment (Fried & Ferris, 1987; Hackman & Oldham, 1976; Hackman & Lawler, 1971; Xie & Johns, 1995). It comprises five attributes: identity, variety, autonomy, feedback and significance (Hackman & Oldham, 1980; Oldham & Cummings, 1996). An additive index of the five essential job characteristics – JC or job scope – is considered an efficient estimator of job attitudes and behaviors in comparison with any single job characteristic (see Fried & Ferris, 1987; Boonzaier et al., 2001). To further understand the model, Morgeson and Campion (2003) review the literature on work design and note that JC consists of JCM dimensions as well as other aspects such as job responsibility, job control and specialization. In the interest of parsimony, we focus on a single JC facet.

JC provides employees the opportunity and independence to use various skills and the prospect of accomplishing an indispensable piece of

work and obtain performance feedback (Baer et al., 2003). Similarly, highly complex jobs require individuals to apply their knowledge, skills and abilities (KSA) with extreme diligence and to regularly update their knowledge of new methods and technologies (Kozlowski & Hults, 1986) and exchange their KSA with their peers (Man & Lam, 2003). Instead, jobs with a low difficulty profile involve monotonous and boring tasks that may not require problematic planning activities and judgements and can be taught relatively faster (Fay & Kamps, 2006).

Research shows that JC and JO are related: when employees find their jobs intrinsically meaningful, their reactions toward their jobs are more positive (Fried & Ferris, 1987; Griffin, 1987). Similarly, in their seminal work, Hackman and Oldham (1980) stress that highly complex jobs may motivate the affective functioning of an employee, specifically in jobs that are developed to be demanding and challenging. According to the challenge-hindrance model of occupational stress, JC is characterized as a challenge stressor (Cavanaugh et al., 2000) – a demand that causes strain, but can also create high performance predictions and a strong realization of accomplishment if one overcomes its inherent difficulties. Challenge stressors also have a promising relationship with JS (Podsakoff et al., 2007), loyalty (Boswell et al., 2004) and JP (Pearsall et al., 2009).

Several studies recommend that job design is an important element that affects employees' attitudes toward their jobs, intrinsic motivation and JCr (Amabile, 1988; Hackman & Oldham, 1980; Kanter, 1988; Shalley et al., 2004; West & Farr, 1990). Abundant empirical research shows that core job characteristics are associated with workers' outcomes such as JS, commitment to the organization, job engagement, cooperation, intention to leave and actual turnover, anxiety, frustration and psychological strain (see, for instance, Champoux, 1991; Fortunato & Stone-Romero, 2001; Fried & Ferris, 1987; Gerhart, 1987; Griffin, 1991; Hackman & Oldham, 1980; Hochwarter et al., 1999; Humphrey et al., 2007; Judge et al., 2000; Loher et al., 1985; Mathieu & Zajac, 1990; Opron, 1979; Saavedra & Kwun, 2000; Saks, 2006; Spector & Jex, 1991). Although the literature has extensively examined JC and JOs, studies have stressed the need for future research to examine the relationship between JC and JOs (Humphrey et al., 2007).

2.2. Job Complexity-Job Satisfaction Relationship

According to the JCM, JS is one of the most important consequences of intrinsically enhanced jobs. The job characteristics theory hypothesizes a positive relationship between JC and JS on the premise that complex,

challenging and engaging jobs allow employees to experience stimulation, which in turn leads to job satisfaction (Morgeson & Campion, 2002, 2003). Several studies in management also show that JC is an important factor in increasing the JS of employees (Noe et al., 2006). Numerous studies observe that increasing JC is the best way to increase the JS of job incumbents (Fried & Ferris, 1987; Judge, 2000; Morgeson & Campion, 2003). Humphrey et al. (2007) conduct a meta-analysis and report that JC has a positive relationship with JS. Therefore, we propose that JC has a positive relationship with JS (**H1**).

2.3. Job Complexity-Job Performance Relationship

Specific job characteristics enable employees to feel positive and experience self-stimulation, which in turn induces persistent excellent performance (Hackman and Oldham, 1980). When jobs are developed to have Tayloristic designs, individuals end up with limited role orientation, which can lead to lack of interest and ultimately cause performance and innovation to deteriorate (Karasek & Theorell, 1990; Klein, 1976; Parker et al., 2006; Parker et al., 1997). Hackman and Oldham (1980) argue that jobs that are high in complexity invoke the affective and motivational working of an employee. Specifically, jobs that are devised to be difficult and challenging – those high in complexity and autonomy – are anticipated to cultivate higher levels of intrinsic motivation compared to routine or simple jobs (Amabile, 1988; Hackman & Oldham, 1980). As a result, employees' performance is more likely to be good.

Individuals are more likely to feel enthusiastic about their tasks and more involved in finishing these, even without the presence of external checks and controls (Hackman & Oldham, 1980; Oldham & Cummings, 1996). Empirical studies report a positive association between motivating job characteristics and JP (Fried & Ferris, 1987; Kopelman, 1985; Oldham, 1996; Parker et al., 2001). A meta-analysis also notes that motivational work design characteristics explains 25 percent of subjective performance (Humphrey et al., 2007). Thus, we expect a positive relationship between JC and JP (**H2**).

2.4. Job Complexity-Job Creativity Relationship

Theories in the domain of employee creativity emphasize the implications of workplace contextual factors among other factors that influence creativity (Amabile, 1988; Woodman et al., 1993). Oldham and Cummings (1996) report that employees' creative performance tends to be higher if they have creativity-related personal characteristics, perform

challenging and complex jobs and work in an environment that is supportive and non-controlling. Work-related challenges foster creativity (Amabile et al., 1996). In addition, high-technology stimulants increase the sense of challenge, in turn enhancing creativity (Amabile & Conti, 1999).

Harrison et al. (2006) show that work characteristics are important elements that impact creativity at work. According to a meta-analysis by Hammond et al. (2011), JC results in individual innovation. Perceptions of a complex job cause employees to become more innovative and execute new ideas (Ohly et al., 2006; Hammond et al., 2011; Scott & Bruce, 1994). In complex jobs, employees have more discretion to solve the issues at hand and are less confined in typical organizational settings (Amabile, 1983). Research in the area suggests that employee productivity and creativity achieves maximum levels not due to extrinsic rewards or stressors, but because of the job's challenge, passion, satisfaction, interest and enjoyment, which motivates employees intrinsically (Amabile, 1996; Amabile & Kramer, 2007). In addition, task-based intrinsic motivation causes job engagement, which fosters job creativity (Parker et al., 2001). Therefore, we propose that JC has a positive relationship with JCr (**H3**).

2.5. Moderating Role of CSE in JC-JO Relationship

CSE is recognized as individuals' opinion of themselves and their self-worth (Judge et al., 1997). It is a comprehensive personality variable that includes four necessary, extensive and self-evaluative dispositional traits: an internal locus of control, low neuroticism, high self-esteem and self-efficacy. These traits signify a distinct higher-order factor that becomes the basis for other, more exact assessments (Judge et al., 1997). The reliability and validity of the CSE concept is well proven through empirical research (Bono & Judge, 2003; Erez, 1997; Erez & Judge, 2001; Heller et al., 2002; Judge, 2009; Judge & Bono, 2001; Judge et al., 2002, 2003; Judge, Erez et al., 1998; Judge et al., 2000; Judge, Locke et al., 1998).

People with positive CSE are highly content with their job and life (Judge & Bono, 2001; Judge et al., 1998, 2000). Several studies reveal that CSE has a positive impact on motivation, goal-directed behavior, leadership, JS and JP (Bipp, 2010; Eisenberg, 2000; Erez & Judge, 2001; Judge & Bono, 2001; Judge et al., 2003; Lemelle, & Scielzo, 2012) and negatively influences stress (Best, 2003). We assume that the personality variable of CSE is likely to affect the JC-JO relationship. As pointed out by Judge et al. (1998): 'People who consider themselves worthy and able to cope with life's exigencies bring a "positive frame" to the events and situations they encounter' (p. 31).

Individuals with a high CSE perceive fewer stressors, experience less strain and are more involved in effective coping strategies (Kammeyer-Mueller et al., 2009; Luria & Torjman, 2009).

The theory of self-regulation by Bandura (1997) plays an important role in explaining how CSE moderates the JC-JO relationship. According to this theory, individuals' self-confidence, related to their task competence, will affect their level of motivation in pursuing or refraining from the given task. Bandura also argues: 'People avoid activities and environments they believe exceed their capabilities, but they readily undertake activities and pick social environments they judge themselves capable of handling. The higher the perceived self-efficacy, the more challenging the activities they select' (p. 160). Therefore, we propose that individuals with a high, positive CSE are likely to believe that they are capable of dealing with the difficulties associated with the job and respond positively by strengthening the positive association between JC and JO.

Empirical studies that have examined specific CSE traits have also highlighted the importance of these traits and the role they play collectively in the JC-JO relationship. Individuals with a high level of self-efficacy believe in their ability to manage and implement a plan or strategy (Bandura, 1997). Individuals with a high level of self-esteem opt for more difficult goals (Levy & Baumgardner, 1991) and are more involved in their tasks (Hall & Foster, 1977). Individuals with an internal locus of control tend to perceive stressors as under control: they exert more effort to accomplish the goal and persevere in times of failure (Spector, 1982). In addition, studies show that a person's locus of control and self-efficacy affects their determination and coping regardless of obstacles (Anderson, 1977; Bandura, 1997). When jobs are complex, people with high levels of anxiety (an essential element of neuroticism) decrease their job performance, but not for routine tasks (Spector, 1982).

The personality construct of CSE plays an important role in how an individual assesses a given circumstance as beneficial. Employees with high levels of positive CSE are predicted to tolerate the bad and generate the maximum benefit from favorable conditions at the workplace (Judge & Hurst, 2007). Employees with high levels of positive CSE are likely to assess a difficult task as a prospect that the individual can conquer and benefit from. In contrast, people with a negative CSE might perceive it as a threat to avoid (Bandura, 1997; Locke et al., 1996).

We assume that employees with positive CSE are strongly likely to respond with higher JS, JP and JCr. People with a high level of CSE consistently evaluate themselves positively as valuable and proficient and view their life as controllable (Judge et al., 2004). As pointed out by Judge et al. (2000), individuals with positive CSE – because of their goal-setting behavior – trust in their competencies, have higher involvement in tasks, are more likely to expend effort and less likely to withdraw from difficult jobs when they face obstacles. In complex jobs, employees with positive CSE are liable to perform better due to their greater coping abilities (Judge et al., 2000). The research also suggests that individuals with positive CSE feel enthusiastic and energetic about their jobs (Karatepe et al., 2010). Therefore, we propose the following hypotheses:

- H4: Positive CSE moderates the JC-JS relationship such that the relationship is strengthened for people with a high level of positive CSE.
- H5: Positive CSE moderates the JC-JP relationship such that the relationship is strengthened for people with a high level of positive CSE.
- H6: Positive CSE moderates the JC-JCr relationship such that the relationship is strengthened for people with a high level of positive CSE.

3. Research Methodology

This study utilizes the survey method for obtaining responses, as it is grounded in the perceptions, dispositions, attitudes and behaviors of individual employees. This requires a meticulously designed survey for the targeted sample and is a common method in such studies (see Jamal, 2010; Jamil et al., 2013; Raja et al., 2004).

3.1. Sample and Data Collection

The population for this study comprises employees from diverse sectors in Pakistan. We have targeted public and private sector organizations in Islamabad and Lahore. Almost all these organizations belong to the banking, telecom and software development industries. The data collection is based on nonprobability random sampling or convenience sampling. We have included a variety of public and private sector organizations to increase the generalizability of our results. The sample includes permanent employees working at different levels, from first-level management to middle and senior management.

Although we faced several constraints during data collection – such as resource and time constraints, access to organizations, extensive dispersion of the selected organizations and industries – we managed to collect responses from 295 employees from 13 different organizations, including two private sector banks, two from the telecom sector, two from the software development industry, two from the chemicals industry, three public sector organizations, one call center and one technical consulting and outsourcing company.

The data was collected through self-administered questionnaires with the help of contact persons at each organization. Participation was voluntary and a cover letter accompanied each questionnaire, explaining the importance and scope of the research and ensuring confidentiality. Since the study was cross-sectional, the data was collected over two to three months. We circulated 400 questionnaires in person among our focus organizations and received 295 complete and usable responses (74 percent response rate).

About 81 percent of the respondents were male, of a total sample of 295 respondents. Respondents' age varied from 18 to 57 years, with a mean age of 28.44 years ($SD = 5.83$). Almost 62 percent of the respondents were single and 36 percent were married. Moreover, 32 percent had a Bachelor's degree, 54 percent had a Master's degree and 7 percent had an MPhil/MS degree. Respondents had a mean tenure of 3.09 years ($SD = 3.35$) with their present organization.

3.2. Measures

The variables are acquired through a 'self-report' questionnaire, which assumed an appropriate method for these constructs. Except where specified otherwise, all variables were anchored to a Likert scale (five-point) from 1 (strongly disagree) to 5 (strongly agree). We used the following scales when collecting the data.

- A four-item scale developed by Glick et al. (1986) is used to evaluate JC. A sample item states: 'The job is mentally demanding'. For this scale, Cronbach's alpha value is 0.71.
- The 12-item CSE scale developed by Judge et al. (2003) is used for measuring the personality concept of CSE. One sample item states: 'I am confident I get the success I deserve in life'. This scale is reported to have high validity and reliability (Judge et al., 2003). We obtain a Cronbach's alpha reliability coefficient of 0.71 for this scale.

- JS is evaluated using six items from the Michigan Organizational Assessment Questionnaire established by Cammann et al. (1983). A sample item states: 'All in all, I am satisfied with my job'. The literature reports respectable reliability for this measure (Webster et al., 2011). A Cronbach's alpha reliability coefficient of 0.82 is acquired for this scale.
- William and Anderson's (1991) seven-item scale is used to assess JP (with 1 = 'never' and 7 = 'always'). This scale has the best reliability and validity (William & Anderson, 1991). A sample item states 'meets formal performance requirement of the job'. For JP, we obtain a Cronbach's alpha reliability coefficient of 0.83.
- The three-item scale developed by Oldham and Cummings (1996) is used to assess JC (with 1 = very little and 7 = very much). A sample item states: 'How creative is this person's work? (creativity refers to the extent to which the employee develops ideas, methods or products that are both original and useful to the organization)'. We obtain a Cronbach's alpha reliability coefficient of 0.75 for this scale.

3.3. Control Variables

The results of the variance analysis confirm vital differences among the organizations in our sample for JS ($F = 2.84$, $p < 0.01$), JP ($F = 5.96$, $p < 0.001$) and job creativity ($F = 1.74$, $p < 0.05$). A post-hoc Tukey's test signifies that these differences are distinct for the three telecom sector organizations. Hence, we create three dummy coded variables O4, O9 and O13 to control for the effect of these organizations in the analysis.

4. Results and Analysis

Table 1 gives the reliability, zero-order correlation, mean and standard deviation of all the variables. Cronbach's alpha reliability coefficient for all five constructs is above the acceptable value of 0.7, suggesting that all five study variables are highly reliable and consistent. JC attains a significant correlation with JS ($r = 0.21$, $p < 0.01$), JP ($r = 0.19$, $p < 0.01$) and job creativity ($r = 0.34$, $p < 0.01$). CSE has a significant correlation with JS ($r = 0.14$, $p < 0.05$) and JP ($r = 0.29$, $p < 0.01$).

Table 1: Means, standard deviations, correlations and reliabilities

	Mean	SD	1	2	3	4	5	6	7
1. Age	28.44	5.83	--						
2. Tenure	3.09	3.35	.63**	--					
3. Job complexity	3.59	.69	.09	-.02	(.71)				

4. Core self-evaluation	3.13	.75	-.01	-.02	-.10	(.77)
5. Job satisfaction	3.74	.67	.00	-.07	.21**	.14* (.82)
6. Job performance	5.44	1.02	.07	.01	.19**	.29** .37** (.83)
7. Job creativity	4.85	1.09	.04	-.09	.34**	.05 .38** .25** (.75)

Note: N = 295. Cronbach's alphas presented in parenthesis. * p < .05 ** p < .01.

A CFA is performed to ascertain if the five study elements (JC, CSE, JS, JP and job creativity) are theoretically different constructs in our sample. The findings reveal that a five-factor model gives the best data fit while a one-factor model (combining all five constructs) produces an acceptable model fit (see Table 2). This validates the reasoning that all five variables are separate constructs.

Table 2: Confirmatory factor analysis model fit results

	X ²	dF	X ² /df	CFI	NFI	GFI	AGFI	IFI	RMSEA
Five factor model	439.30	276	1.59	.94	.86	.89	.87	.94	.04
One factor model	1405.7	288	4.88	.60	.55	.69	.63	.61	.11

According to hypotheses 1, 2 and 3, JC is positively correlated with JS, JP and JCr, respectively. As depicted in Table 3, JC has a strong positive relationship with JS ($\beta = 0.19$, $p < 0.001$), JP ($\beta = 0.33$, $p < 0.001$) and JCr ($\beta = 0.57$, $p < 0.001$), thus supporting hypotheses 1, 2 and 3. Table 3 also gives the results of CSE as a moderator between JC and JO. The JC x CSE interaction is reported to be significant for the outcomes of JS ($\beta = 0.19$, $p < 0.01$) and JCr ($\beta = 0.33$, $p < 0.01$). However, the JC x CSE interaction is reported to be insignificant for JP ($\beta = -0.03$, $p > 0.05$).

Table 3: Direct and moderation effects

	Job satisfaction (H4)				Job performance (H5)				Job creativity (H6)				
	B	SE	LLCI	ULCI	β	SE	LLCI	ULCI	B	SE	LLCI	ULCI	
Constant	3.78***	.03	3.71	3.86	5.60***	.05	5.49	5.72	4.83***	.06	4.71	4.95	
JC	.19***	.05	.09	.30	.33***	.07	.18	.48	.57***	.08	.40	.74	
CSE	.12*	.04	.02	.22	.32***	.07	.18	.47	.10 n.s.	.07	-.05	.26	
JC x CSE	.19**	.07	.05	.34	-.03	.10	-.23	.17	.33**	.11	.10	.55	
					n.s.								
ΔR^2 due to interaction	.02**				.00 n.s.				.02**				
F	7.35				.07				8.12				
Conditional effects of moderator between JC and outcomes (slope test)													
Moderator = CSE	Job satisfaction				Job performance				Job creativity				
-.75	.05	n.s.	.07	-.09	.19	.35**	.10	.14	.56	.32**	.11	.09	.55
.00	.19***	.05	.09	.30	.33***	.07	.18	.48	.57***	.08	.40	.74	

.75	.34***	.07	.19	.49	.31**	.11	.09	.53	.82***	.12	.57	1.07
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N = 295. Unstandardized regression coefficients are reported. * p < .05, ** p < .01. Bootstrap sample size = 5,000. LL = lower limit. CI = confidence interval. UL = upper limit.

The results of the slope test further indicate that, when the value of the moderator (CSE) increases from 0 to 0.75, the positive effect of JC also increases for JS (from $\beta = 0.19$, $p < 0.001$ to $\beta = 0.34$, $p < 0.001$) and JCr (from $\beta = 0.57$, $p < 0.001$ to $\beta = 0.82$, $p < 0.01$). The interaction plots as shown in Figures 1 and 2 show that the positive relationship between JC and JO (JS and JCr) is stronger for individuals with a high level of CSE. Hence, hypotheses 4 and 6 are supported and hypothesis 5 is rejected.

Figure 1: CSE as a moderator between JC and job satisfaction

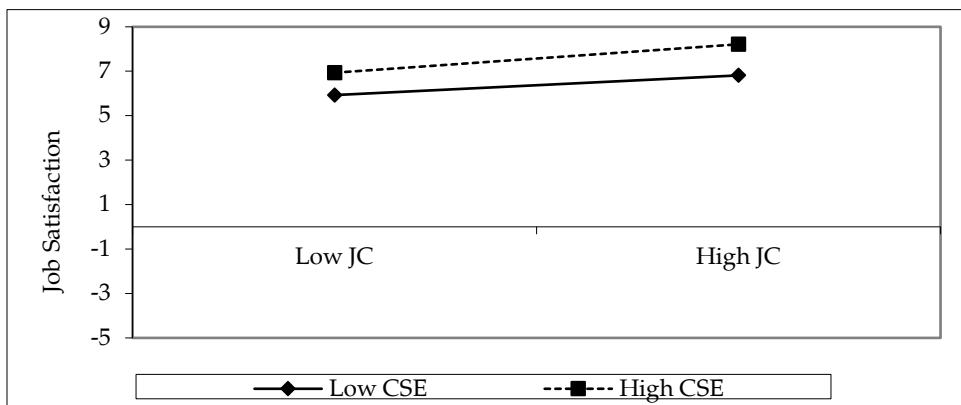
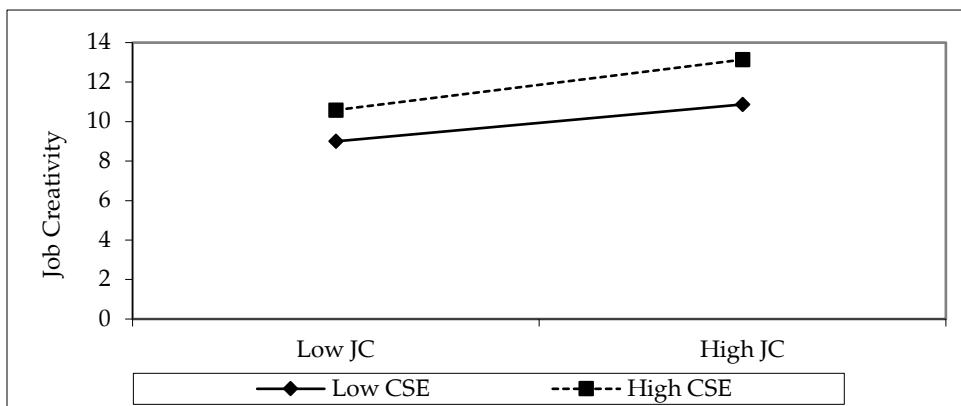


Figure 2: CSE as a moderator between JC and job creativity



5. Discussion

This study contributes both theoretically and empirically to the literature on job characteristics and personality. Our results indicate that JC positively influences JS, JP and JCr, hence supporting hypotheses 1, 2 and 3, respectively. This finding is in accordance with other empirical studies that also report a positive association between job complexity and these outcomes (see Fried & Ferris, 1987; Hackman & Oldham, 1980; Hammond et al., 2011; Harrison et al., 2006; Humphrey et al., 2007; Judge, 2000; Morgeson & Campion, 2002, 2003; Oldham, 1996; Oldham & Cummings, 1996; Parker et al., 2001). The most important contribution of this study is the finding that CSE is an important broad personality construct that moderates the JC and JS and JCr relationship, supporting hypotheses 4 and 6, respectively. This reveals that people with an elevated CSE due to positive self-evaluations respond more positively to the challenge stressor of JC and become not only more satisfied with their jobs, but also more creative.

Hypothesis 5 is not supported as CSE is found to be an insignificant moderator in the relationship between JC and JP. Since JP consists of routine job duties specified in the job description, the JP of individuals would remain the same despite their personality differences. Our findings indicate that CSE is not a significant moderator of the JC-JP relationship, indicating that, in highly complex jobs, the performance of individuals remains the same whether they have a high or low CSE. This implies that, while CSE is a positive personality construct, even these individuals perform their job duties normally without putting in extra effort.

Our findings indicate that CSE moderates the JC-JCr relationship, such that individuals with a high CSE put in extra effort to be more creative. Therefore, the results support the notion that it is not necessary that all people are equally good at performing all job behaviors (Raja & Johns, 2010). Moreover, the effect of the dispositional variable (CSE) is highlighted since we take more than one dependent variable (Johns, 2006). The literature shows that it is very important for organizations to identify individual differences and match them to jobs that are compatible with their distinct needs, personality, skills and competences (Lawler, 1974). The construct of personality has received a lot of research attention because of its role in selection and placement decisions (Raja & Johns, 2010).

The findings of this study have important implications for managers, particularly for human resource managers, in selection and placement. The results highlight that human resource managers should try to design jobs in

a way that they are complex, challenging and stimulating. Such jobs increase job satisfaction, job performance and job creativity. Moreover, they should try to develop their selection practices to attract, recruit, select and retain employees with a high level of CSE because such employees – due to their positive traits – gain the maximum benefit of complex jobs. People with low positive CSE can be matched to less complex jobs to facilitate their natural inclination toward such jobs.

When organizations are in the process of selection, particularly personnel testing, they can ensure this by including a measure of CSE (Judge & Kammeyer-Mueller, 2011). Human resource managers should not only try to select individuals with high CSE, but also use techniques such as role modeling, pep talks and constructive feedback to enhance employees' sense of achievement, confidence, success, individual and professional development – the main elements of CSE (Bandura, 1997; Judge & Kammeyer-Mueller, 2011).

Since this study was conducted in a developing country, it also has valuable insights for professionals and researchers. As the number of multinational firms continues to increase in Pakistan (Jadoon et al., 2016; Colakoglu et al., 2016; Ghani, 2013), these companies often either transfer managers from developed countries or hire locals who have acquired their terminal degrees or professional experience in advanced countries. Although this study has not tested the specific propositions of the JCM, its findings show that the model can be generalized to a developing country such as Pakistan in terms of the relationship between job complexity and important job attitudes and behaviors.

It is possible that the results of this study could have been affected by CMV as this is a cross-sectional study, based on self-reported questionnaires (see Podsakoff et al., 2003). Although data collection using self-reported questionnaires is useful and one of the most common methods used to capture respondents' attitudes, behavior, perceptions and other related personality dimensions (see Schmitt, 1994; Wallbott & Scherer, 1989), respondents may exaggerate and create unwanted bias, which can affect results. To confirm that our results are not significantly affected by CMV, we perform Harman's one-factor test (Podsakoff et al., 2003) and rule out the possibility of self-reported measures influencing our results.

The literature shows that findings with interaction/moderation effects should not be critiqued for CMV (Harris & Kacmar 2005; Siemsen et al., 2010; Wall et al., 1996). As pointed out by Siemsen et al. (2010), 'finding

significant interaction effects despite of CMV in the data set should be taken as strong evidence that an interaction effect exists' (p. 470). We suggest that the findings of this study are not affected by CMV for three reasons. First, the study with moderation/interaction effects diminishes the CMV. Second, the survey enumeration with multiple items for measuring a single construct lessens the CMV. Third, the survey was administered in such a way that maintained the anonymity of respondents, which further reduced the chances of bias.

Future research could examine the same research model with longitudinal and supervisor-reported data for the outcomes of JP and JCr. This study examines only one personality construct – CSE – as a moderator. Future studies could examine other constructs such as leader member exchange and psychological capital.

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The Mediating Role of Job Embeddedness Fit: Perceived Job Characteristics and Turnover Intention in the Services Sector

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Abstract

Organizations able to retain their human resources have an advantage over their competitors. Employee turnover adversely affects the stability of the workforce and carries the cost of having to hire and train new personnel. Employee retention is, therefore, a priority for senior management. This study explores the mediating impact of employee fit in terms of organizational job embeddedness on the relationship between job characteristics and employees' intention to quit. Based on a sample of 375 employees working in a private commercial bank in Pakistan, we find that job identity, job significance and task variety have a significant negative effect on intention to quit. Job variety has the greatest impact on turnover intention. Organizational job embeddedness fit mediates the relationship between two of three job characteristics – job identity and significance – and turnover intention, but not the latter's relationship with perceived task variety. Thus, organizational job embeddedness fit mediates the relationship between overall job characteristics and turnover intention.

Keywords: Job identity, job significance, job characteristics, organizational job embeddedness fit, turnover intention.

JEL classification: M510, J22, J23, J62, J63.

1. Introduction

Given the unpredictability of the global economy, retaining human resources within an organization has clear advantages. Employee turnover has a negative influence on the performance of an organization (Shaw et al. 2005). Organizations with higher turnover rates underperform relative to their competitors (Hatch and Dyer 2004). Accordingly, senior management is interested in insights that contribute to employee retention (Ulrich and Smallwood 2006). Human resources have a strong impact on the success of

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an organization. In part, its progress depends on employees and how they feel about the organization (Ali et al. 2014).

Since organizations incur high costs when employees leave (Glebbeek and Bax 2004), employee retention is a top priority for senior management. In this context, practitioners and researchers focus on two key questions: why employees leave and why employees stay (Mitchell et al. 2001). The literature has tried to answer these questions by looking at the alternatives. Job satisfaction among employees leads to organizational commitment. Work-related attitudes also have some impact on turnover and retention (Griffeth et al. 2000; Hom and Griffeth 1995).

Managers can build employee morale and reduce withdrawal attitudes by redesigning and enriching jobs (Lin et al. 2013). In some cases, however, this practice may be hard to implement because certain aspects of the industry are inherent to the nature of the job, e.g., managers may have little control over working hours (Dawson et al. 2011), but can investigate job characteristics and their impact on employees' attitudes and behaviors to gauge the extent to which the latter can be motivated intrinsically (Zhao et al. 2016).

Job characteristics have a significant impact on the meaningfulness, responsibility and knowledge that employees associate with their job activities (Loher et al. 1985). Job characteristics comprise five dimensions: job identity, job significance, skills variety, feedback and autonomy. These dimensions influence personal and work-related outcomes, and are related to employees' turnover intentions. They also have a significant impact on job satisfaction (Hackman and Oldham 1974). Given the growing cost of turnover intentions, studies such as Crossley et al. (2007) have focused on the impact of job embeddedness, which constitutes the motivational factors that enmesh employees within specific job roles in particular industries (Harris et al. 2011).

There are two aspects of job embeddedness: organizational and community-related (Mitchell et al. 2001). Embedded employees remain with an organization for three reasons under the umbrella of organizational job embeddedness (OJE): (i) personal links with the organization, its employees (managers, peers) and clients; (ii) a sense of harmony between their skills and the demands of the job; and (iii) a reluctance to lose the relationships and resources (personal status, reputation within the organization, bond with clients) they have built there.

When employees are attached to their jobs based on social or financial commitments, they avoid behaviors that could have adverse effects on their employment (Lee et al. 2004). The literature reinforces the idea that highly embedded employees exhibit low levels of counterproductive work behavior compared to less embedded employees (Holtom and Inderrieden 2006). Thus, OJE helps reduce high turnover among employees.

The attachment between employee and employer acts as a deterrent to counterproductive work behaviors (Thau et al. 2007). Workplace spirituality moderates the association between openness, agreeableness and conscientiousness and counterproductive work behaviors (Iqbal and Hassan 2016). Employees with a strong attachment to their organization will be more careful to avoid breaking any rules. Thus, job embeddedness plays a role in reducing not only counterproductive workplace behavior, but also turnover, which carries a considerable cost for organizations.

2. Literature Review

This section outlines the literature on perceived job characteristics, organizational embeddedness and turnover intentions.

2.1. Perceived Job Characteristics and Employee Turnover Intention

Organizations bear the direct cost of recruitment and training when employees leave. They also incur indirect costs through disruptions to daily operations. Organizations attract personnel by offering high salaries and incentives, which also result in high levels of turnover (Davidson 1999). In tight labor markets, researchers and practitioners emphasize the importance of exploring employee turnover. Notwithstanding the effect of a tight labor market, the work environment – from where turnover is initiated – is also a key factor to consider. Managers are liable to underestimate job descriptions and organization (Barley 1996; Cappelli 2000) to the extent that poor job design reduces employee satisfaction and commitment, with an adverse impact on employee turnover (Griffeth et al. 2000).

Many task characteristic theories and models, such as requisite task attributes theory, the social information processing model and job characteristics model, underscore the role of job characteristics in motivating employees and improving their job satisfaction. The literature reinforces the validity of the job characteristics model, which emphasizes the importance of employee talent, the number of activities required and the variety of skills needed to perform certain tasks. Hackman and Oldham (1974) identify five core job dimensions that affect personal and work-

related outcomes: job significance, job identity, skills variety, feedback and autonomy. This model serves as a framework for managers to design jobs that intrinsically satisfy employees. These dimensions have a significant impact on the meaningfulness of the work or activities concerned and help produce the desired outcomes.

These psychological states affect job-related outcomes such as job satisfaction, work effectiveness and absenteeism (Fried and Ferris 1987; Hackman and Oldham 1976). Task identity, task significance and skills variety enhance the meaningfulness of the work through high internal motivation (Spector and Jex 1991). Task identity captures what employees feel about their jobs and thus motivates them to work more efficiently and effectively. Task significance refers to the extent to which a job has a significant impact on the work or lives of other people within and outside the organization. Skills variety measures the extent to which employees use their personal and professional skills to perform their assigned tasks. Employees experience high levels of meaningfulness from employment based on their personal abilities.

Autonomy gives employees the discretion to schedule and select procedures for conducting their work. This is defined as the vertical enlargement of the decision-making rights, independence and responsibility assigned to employees (Price and Mueller 1986). Autonomy allows employees to try out new ideas, accept the consequences and enhance their expertise. Feedback refers to how employers provide information on the effectiveness and efficiency of employees' performance. Senior managers give their employees feedback to enhance the latter's understanding of work-related weaknesses with a view to improving their performance (Coelho and Augusto 2010).

There is evidence to suggest that job characteristics moderate job satisfaction. Job autonomy – control over decision making – is positively related with job satisfaction in social work. Skills variety, feedback and autonomy have a significant positive impact on job satisfaction among sales managers. The literature finds that job significance, job identity, feedback, job autonomy and skills variety are positively associated with job satisfaction (Ali et al. 2014; Katsikea et al. 2011; Poulin 1994; Said and Munap 2010).

Job characteristics are considered motivational factors that have a positive effect on job meaningfulness, work-related knowledge and responsibility among employees. Five core dimensions are used to measure the motivational potential score of a job, that is, the degree to which it motivates employees (Boonzaier et al. 2001; Saavedra and Kwun 2000). Job

characteristics are also strong predictors of stress among employees (Kuruüzüm et al. 2008). The job characteristics model explains how these five job attributes influence employee behavior and attitudes (Zhao et al. 2016).

Job characteristics help develop intrinsic motivation through three core dimensions – task identity, significance and skills variety – that reflect the level of meaning tied to a given job (Behson et al. 2000). Employees perceive higher levels of meaningfulness when using their personal abilities (Cummings and Bigelow 1976; Lawler and Hall 1970). Moreover, their colleagues are more likely to consider them independent in the context of their jobs (Cerasoli et al. 2014). In the presence of intrinsic motivation, employees perform better, are more satisfied with their jobs and face less work stress (Karatepe and Tekinkus 2006; Kim and Jogaratnam 2010; Vittersø 2003; Wiesner et al. 2005).

Task identity, task significance and skills variety have a significant impact on job satisfaction (Said and Munap 2010). There is evidence to suggest that job satisfaction has a negative influence over employees' intention to quit (Freund 2005). Thus, perceived job characteristics reduce turnover intention among employees. Based on this, we hypothesize:

- H1a: Perceived job identity has a significant effect on employees' turnover intentions.
- H1b: Perceived job significance has a significant effect on employees' turnover intentions.
- H1c: Perceived skills variety has a significant effect on employees' turnover intentions.
- H1d: Perceived job characteristics have a significant negative impact on employees' turnover intentions.

2.2. Organizational Job Embeddedness Fit as a Mediator, Job Characteristics and Turnover Intention

Job embeddedness influences an individual's internal and external job performance (Dicken et al. 1994). It refers to the factors that compel employees to remain with their current employer (Mitchell et al. 2001). Job embeddedness has two dimensions: embeddedness in the organization or OJE, and embeddedness in the community.

OJE comprises the accumulated affective and nonaffective constraints – links, fit and sacrifice – relevant to a job. OJE fit refers to the

degree to which employees feel comfortable holding a certain job with an organization. Their links to that organization reflect how connected they are to their colleagues, team or company. The sacrifice dimension considers the perceived cost to the psychological or physical convenience of leaving one's current job (Mitchell et al. 2001). Community job embeddedness is concerned with the extrinsic forces – family pressure, relocation anxieties and social ties to the community – that keep employees connected to their jobs (Harris et al. 2011; Mitchell et al. 2001).

There is evidence that certain work-related behaviors can predict OJE. Job embeddedness plays a mediating role between various organizational 'on-the-job' factors, community 'off-the-job' factors and turnover intention or employee retention (Reitz and Anderson 2011). Job embeddedness can be measured by considering fit, link and community (Holtom and O'Neill 2004). The likelihood of remaining in one's current job increases with higher levels of embeddedness in that organization and community (Holtom and Inderrieden 2006; Lee et al. 2004; Mitchell et al. 2001; Thau et al. 2007).

OJE fit is defined as the compatibility between individuals and their work and nonwork environment (Mitchell et al. 2001). An employee's fit with an organization refers to his/her career prospects, professional goals and personal preferences (Yang et al. 2011) as well as the scale of current job demands, that is, job skills required, job abilities and job knowledge (Cable and Judge 1996). This attribute can also be linked to the community fit dimension, which encompasses location, weather, amenities, religious and political environment and scope for entertainment (Mitchell et al. 2001). The evidence suggests that the links and fit dimensions of job embeddedness are related to person-organization fit. Lower levels of person-organization fit are more likely to lead to employees leaving that organization (Yang et al. 2011). Person-job fit reinforces the association between job crafting with organizational commitment (Iqbal 2016).

Job compatibility is similar to job embeddedness fit and has a negative influence on turnover (Villanova et al. 1994). The extent to which individual values are aligned with those of an organization also relates to job embeddedness fit (Chatman 1989; Lee et al. 2004). Research suggests that perceived job characteristics are not stable, their values varying from time to time (Wrzesniewski and Dutton 2001). Employees may experience different levels of job autonomy and task variety even over the period of a week. Despite different attitudes to job autonomy and task variety, employees still report constant perceptions of job significance (Jex and Bliese 1999). This

drives them to comply as far as possible with organizational norms and values and to invest their effort in accomplishing the tasks they are set. The literature suggests that, as job significance increases, there is a corresponding rise in the commitment levels of employees (Thatcher et al. 2002). Organizational commitment has a negative association with employees' turnover intentions (Couger et al. 1979). Thus, higher levels of commitment are correlated with lower turnover.

Perceived job characteristics have a significant negative impact on turnover intentions. The five core dimensions of the job characteristics model – task identity, task significance, skills variety, job autonomy and job feedback – are positively associated with work-related outcomes (Burn et al. 1994; Couger et al. 1979). In the absence of these dimensions, we find lower motivation, lower job satisfaction, higher absenteeism and higher turnover. Task identity, task significance and task variety are used to measure the importance of a job and to gauge its motivating potential (Hackman and Oldham 1976). Job enrichment constitutes the formation of work units and the combination of tasks (Hackman et al. 1975). While task identity concerns both these concepts, task significance and skills variety emphasizes the implementation of ideas (Hackman and Oldham 1976).

Task identity, skills variety and task significance reflect the meaningfulness of a job, enabling employees to experience high levels of internal work motivation (Spector and Jex 1991). Task identity motivates employees by indicating that a job is meaningful and worthwhile (Coelho and Augusto 2010). Perceived job characteristics and job satisfaction are moderately related with one another (Spector and Jex 1991). OJE fit indicates the compatibility between an employee's job and the organization. Employees will exhibit lower turnover intentions if they feel suited to their jobs and working community (Mitchell et al. 2001). Thus, OJE fit contributes significantly to reducing turnover intentions while job embeddedness links have no relationship with turnover (Kim 2002). Accordingly, we propose that:

- H2a: OJE fit significantly mediates the association between perceived job identity and turnover intention.
- H2b: OJE fit significantly mediates the association between perceived job significance and turnover intention.
- H2c: OJE fit significantly mediates the association between perceived skills variety and turnover intention.

- H2d: OJE fit significantly mediates the association between perceived job characteristics and turnover intention.

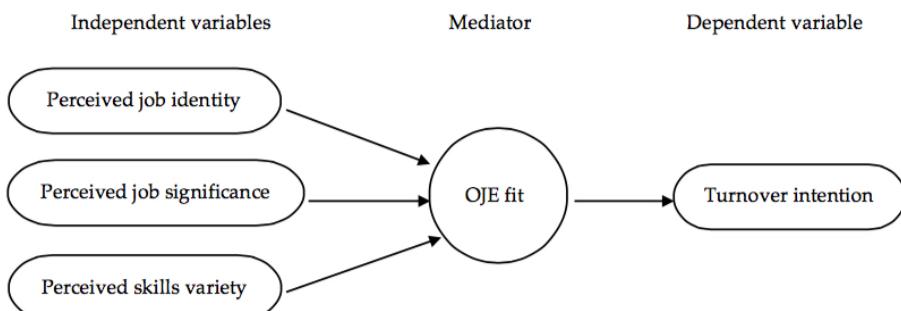
The literature recommends analyzing the role of intrinsic and extrinsic factors in the context of turnover intentions (Barley 1996; Cappelli 2000; Griffeth et al. 2000). Job characteristics affect the three psychological states of an employee: meaningfulness, responsibility for outcomes and knowledge of outcomes (Hackman and Oldham 1980; Pinder 1984). Perceived characteristics directly drive these three states. Job identity, job significance and skills variety are pertinent to the meaningfulness of a job (Hackman and Oldham 1980). This study investigates the role of perceived job characteristics based on job identity, job significance and skills variety because all three dimensions reflect the meaningfulness of a job and influence job enrichment.

These characteristics are highly linked with the formation of task units and the combination of various tasks. Employees remain with an organization because of their intrinsic or instrumental value. We explore the mediating role of OJE fit owing to its instrumental value (Kiazad et al. 2015). Empirical evidence of the role of job embeddedness is limited (Karatepe and Ngeche 2012). Much of what is known about job embeddedness is based on data from developed countries such as the US (Bergiel et al. 2009; Lee et al. 2004). This study attempts to present empirical evidence from a developing country such as Pakistan. In doing so, we follow Svensson et al. (2008) who recommend presenting empirical evidence on OJE from developing countries.

3. Conceptual Framework

Figure 1 illustrates the conceptual framework of the study.

Figure 1: Research framework



In the light of the above mentioned framework, we attempt to address the following research questions:

- Do perceived job characteristics – job identity, job significance and skills variety – have a significant impact on employees' turnover intentions?
- Does the OJE fit dimension change the relationship between these perceived job characteristics and turnover intention?

4. Research Methodology

We carry out a regression analysis to investigate the association between job characteristics and the turnover intentions of employees in the private banking sector in Pakistan. The bootstrap process model as suggested by Hayes and Rockwood (2017) is used to investigate the mediating role of OJE fit. The data collected is analyzed using SPSS.

4.1. Sample and Data Collection

A self-structured questionnaire based on adapted items was used to collect data from a sample of employees working at local bank of Pakistan. This sample population was selected for three reasons: (i) at the branch level, employees manage a large volume of work and the nature of their jobs is risky; (ii) the employees and management are very conscious of customer feedback in a competitive market; (iii) while a trust deficit makes it difficult to collect data from bank employees, we were able to approach the bank's employees through a former colleague. Convenient sampling was employed to collect the data. An online questionnaire was constructed and bank employees were emailed the link to the questionnaire. Of a sample of 375 employees, we received an 89 percent response rate.

4.2. Data Screening

Pilot testing was used to identify the instrument's reliability, based on Cronbach's alpha values in 30 cases. The missing values were identified using a frequency table constructed in SPSS for each variable. Any cases with missing data for a variable were deleted, leaving 354 cases with complete data. The outliers were winsorized. The data did not contain any extreme outliers.

4.3. Measurement Tools

A six-item scale developed by Mitchell et al. (2001) is used to gauge OJE fit, defined as the compatibility between employees and their organization. Cronbach's alpha value of OJE fit is 0.71. Job identity, job significance and skills variety are measured using the job description scale developed by Hackman and Oldham (1974), based on employees' perception of their assigned job or task. Cronbach's alpha values of perceived job identity, perceived job significance and perceived task variety are 0.76, 0.70 and 0.61, respectively. Job characteristics are measured based on the data collected for job identity, job significance and skills variety. Cronbach's alpha of perceived job characteristics is 0.85. Turnover intention is gauged using a three-item scale developed by Mobley et al. (1978), where Cronbach's alpha value is 0.86.

5. Data Analysis

This section presents the study's correlation and regression analyses.

5.1. Correlation Analysis

Table 1 shows that perceived task identity and perceived task significance have the lowest negative relationship with employees' turnover intentions, where $\alpha = -0.20$ and $\alpha = -0.25$, respectively. There is a moderate negative association between perceived task variety and employees' turnover intentions, where $\alpha = -0.54$.

Table 1: Correlation analysis results

	OJE fit	Turnover intention	Perceived job characteristics	Task identity	Task variety	Task significance
OJE fit	Pearson correlation	1.00				
Turnover intention	Pearson correlation	-0.25** 1.00				
Perceived job characteristics	Pearson correlation	0.48** -0.38** 1.00				
Task identity	Pearson correlation	0.39** -0.20** 0.38** 1.00				
Task variety	Pearson correlation	0.28** -0.54** 0.45** 0.39** 1.00				
Task significance	Pearson correlation	0.38** -0.25** 0.89** 0.42** 0.24** 1.00				

Note: ** = correlation is significant at the 0.01 level (2-tailed).

Perceived job characteristics also have a significant negative association with turnover intention, where $\alpha = -0.38$. OJE fit has an indirect negative impact on turnover intention, where $\alpha = -0.25$.

5.2. Regression Analysis

Hypothesis H1a proposes that perceived job identity has a significant impact on employees' turnover intentions. As Table 2 shows, perceived job identity has a negative and significant impact on turnover intention, where R-squared = 0.04, $\beta = -0.086$ and the p value = 0.00. Accordingly, we accept H1a. For every one-unit change in perceived job identity, there is a 0.86-unit decline in the value of turnover intention. As employees' perceived job identity rises, their turnover intentions fall.

Hypothesis H1b proposes that perceived job significance has a significant effect on turnover intention. Table 2 indicates that we can accept this hypothesis because perceived job significance has a significant negative impact on turnover intention, where R-squared = 0.06, $\beta = -0.039$ and the p value = 0.00. Thus, higher levels of job significance are associated with lower turnover intentions.

Hypothesis H1c states that perceived skills variety has a significant effect on turnover intention. The results indicate that skills variety has a strong, significant and negative impact on employees' turnover intentions, where R-squared = 0.29, $\beta = -1.52$ and the p value = 0.00. Therefore, H1c can be accepted. There is a 1.52-unit decline in turnover intention with every one-unit rise in skills variety. Skills variety is associated with 29 percent variation in employees' turnover intentions. As the range of skills in an organization increases, employees exhibit lower turnover intentions.

Hypothesis H1d states that perceived job characteristics have a significant negative impact on turnover intention. The results in Table 2 support this hypothesis, where R-squared = 0.15, $\beta = -0.54$ and the p value = 0.00. Therefore, we accept H1d: when employees perceive a higher level of job characteristics, their intention to quit falls.

Table 2: Regression analysis results

H	Hypothesis	R sq.	B	SE	t-stat	p-value
H1a	Perceived job identity -> turnover intention	0.04	-0.86	0.22	-3.88	0
H1b	Perceived job significance -> turnover intention	0.06	-0.39	0.08	-4.89	0

H1c	Skills variety -> turnover intention	0.29	-1.52	0.13	-12.18	0
H1d	Perceived job characteristics -> turnover intention	0.15	-0.54	0.07	-7.74	0

5.3. Mediation Testing

Hypothesis H2a proposes that OJE fit significantly mediates the association between perceived job identity and turnover intention. Table 3 indicates that perceived task identity has a significant overall impact on turnover intention, where effect = -0.86, $\rho = 0.00$, LLCI = -1.29 and ULCI = -0.42. Perceived task identity also has a significant direct effect on turnover intention, where effect = -1.48, $\rho = 0.00$, LLCI = -1.92 and ULCI = -1.04. The bootstrap confidence values for the indirect effect of perceived task identity on turnover intention are 0.49 to 0.82. This does not include 0, which implies a statistically significant indirect effect. Thus, we accept H2a on the mediating role of OJE fit.

Table 3: Mediation testing: Effect of perceived task identity on turnover intention

Total effect					
Effect	SE	T	p	LLCI	ULCI
-0.86	0.22	-3.89	0.00	-1.29	-0.42
Direct effect					
Effect	SE	T	p	LLCI	ULCI
-1.48	0.22	-6.63	0.00	-1.92	-1.04
Indirect effect					
	Effect	Boot SE	Boot LLCI	Boot ULCI	
Job embeddedness fit	0.63	0.08	0.49	0.82	

Hypothesis H2b states that OJE fit significantly mediates the association between perceived job significance and turnover intention. Table 4 shows that perceived task significance has a significant total impact on turnover intention, where effect = -0.40, $\rho = 0.00$, LLCI = -0.55 and ULCI = -0.24. Perceived task identity also has a significant direct effect on turnover intention, where effect = -0.63, $\rho = 0.00$, LLCI = -0.79 and ULCI = -0.47. The bootstrap confidence values for the indirect effect of perceived job significance on turnover intention are 0.16 to 0.32. This does not include 0, which indicates a statistically significant indirect effect. Thus, we accept H2b on the mediating role of OJE fit.

Table 4: Mediation testing: Effect of perceived task significance on turnover intention

Total effect					
Effect	SE	T	p	LLCI	ULCI
-0.40	0.08	-4.89	0.00	-0.55	-0.24
Direct effect					
Effect	SE	T	p	LLCI	ULCI
-0.63	0.08	-7.81	0.00	-0.79	-0.47
Indirect effect					
	Effect	Boot SE	Boot LLCI	Boot ULCI	
Job embeddedness fit	0.24	0.04	0.16	0.32	

Hypothesis H2c states that OJE fit significantly mediates the association between perceived skills variety and turnover intention. Table 5 shows that perceived skills variety has a significant overall impact on turnover intention, where effect = -1.52, $p = 0.00$, LLCI = -1.76 and ULCI = -1.27. Perceived skills variety also has a significant direct effect on turnover intention, where effect = -1.44, $p = 0.00$, LLCI = -1.70 and ULCI = -1.19. The bootstrap confidence values for the indirect effect of perceived task identity on turnover intention are -0.18 to 0.01. Since this range straddles 0, it implies a statistically nonsignificant indirect effect. Thus, we reject H2c on the mediating role of OJE fit in this case.

Table 5: Mediation testing: Effect of perceived task variety on turnover intention

Total effect					
Effect	SE	T	p	LLCI	ULCI
-1.52	0.12	-12.18	0.00	-1.76	-1.27
Direct effect					
Effect	SE	t	p	LLCI	ULCI
-1.44	0.13	-11.13	0.00	-1.70	-1.19
Indirect effect					
	Effect	Boot SE	Boot LLCI	Boot ULCI	
Job embeddedness fit	-0.08	0.05	-0.18	0.01	

Hypothesis H2d states that OJE fit significantly mediates the association between perceived job characteristics and turnover intention. As Table 6 shows, perceived job characteristics have a significant total impact on turnover intention, where effect = -0.54, $p = 0.00$, LLCI = -0.68 and ULCI = -0.40. Perceived job characteristics also have a significant direct effect on turnover intention, where effect = -0.92, $p = 0.00$, LLCI = -1.05 and ULCI = -0.78. The bootstrap confidence values for the indirect effect of perceived job characteristics on turnover intention are 0.32 to 0.44. This does not include 0, implying a statistically significant indirect effect. Thus, we accept H2d on the mediating role of OJE fit.

Table 6: Mediation testing: Effect of perceived job characteristics on turnover intention

Total effect					
Effect	SE	t	p	LLCI	ULCI
-0.54	0.07	-7.74	0.00	-0.68	-0.40
Direct effect					
Effect	SE	t	p	LLCI	ULCI
-0.92	0.07	-13.53	0.00	-1.05	-0.78
Indirect effect					
	Effect	Boot SE	Boot LLCI	Boot ULCI	
Job embeddedness fit	0.38	0.03	0.32	0.44	

6. Discussion

Job identity and job significance are considered 'hygiene factors' in the two-factor theory and are associated with employees' stress levels. Management should therefore formulate strategies to address these factors with a view to lowering employees' stress levels. Human resource and operations departments should decide how much autonomy and responsibility are relevant to a certain job. Branch employees should attend training sessions that clearly define their job descriptions and focus on building perceptions of task significance. Management should empower employees and give them the freedom to provide customers with tailored services. These steps reduce stress levels and turnover intentions among employees.

Skills variety is considered a double-edged sword in that efforts to improve it may not be as productive unless managers do so strategically. Human resource managers should gauge employees' attitudes to skills variety and provide additional resources where required. Employees at the branch level will then feel greater job satisfaction, leading to lower turnover intention.

There is a need for research on alternative ways to reduce turnover and increase employee retention. The literature emphasizes concept building to engage employees in bank jobs and reduce turnover. From this perspective, job embeddedness is a key topic in academic research, given its high negative association with turnover intention. Higher levels of job embeddedness lead to lower turnover intentions. Additionally, when employees have a better fit with their organization, they will have less intention to quit because they are well connected with their colleagues, supervisors and management. Management should

therefore build strategies that promote job embeddedness to reduce turnover among employees.

7. Conclusion

This study concludes that perceived job identity, perceived job significance and perceived skills variety have a significant effect on employees' turnover intentions. Of these three dimensions, skills variety has the greatest impact on turnover intention, where the higher the level of skills variety, the more likely that employees feel satisfied and exhibit less intention to quit. While OJE fit does not mediate the association between job identity, job significance and skills variety and intention to quit, when we measure job characteristics based on these three variables, OJE appears to play a mediating role in the relationship with turnover intention.

Perceived job characteristics – comprising perceived job identity, perceived job significance and perceived skills variety – influence work outcomes such as absenteeism, motivation and job satisfaction because they have a psychological bearing on employees' work behavior. Organizations can calculate the motivating potential score of a given job to identify its impact on an employee's behavior. Human resources departments can reduce turnover by emphasizing the OJE fit dimension. The literature supports recruitment and selection procedures that raise the fit dimension (Allen et al. 2010). If well embedded in employees, this discourages turnover and enhances the possibility of recouping an organization's investment in employee development (Bambacas and Kulik 2013).

This study presents a series of limitations, each of which offers a basis for future research. Its main limitation is that it excludes other variables of job characteristics and job embeddedness. Working environments differ between public and private organizations and future research could therefore incorporate different organizations for comparison. Respondents could include senior employees involved in decision making and problem solving. To revalidate these findings, future research could include interviews as part of the data collection. This study is dependent on employees' self-perceptions of the variables used. While employees are considered the most appropriate source of data on job embeddedness and human resource practices in an organization (Arthur and Boyles 2007; Podsakoff and Organ 1986), single-source data may inflate the relevant relationships and raise concerns of common method variance (Podsakoff et al. 2003). As such, researchers suggest using alternative sources of data as well.

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Reasons for Debt Specialization: Understanding the Perspectives of Small and Large Organizations

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Abstract

Debt specialization (DS) has become widespread among organizations in recent years. However, the reasons for its existence and prevalence have yet to be fully examined, especially among small and large firms. This paper aims to empirically determine whether both small and large companies pursue DS strategies for similar reasons. We use seven years' panel data for 2009–15 for 419 nonfinancial companies in Pakistan, listed on the Pakistan Stock Exchange. The results of the comparative analysis confirm the existence of DS across organizations. Small firms follow DS to reduce expected bankruptcy costs, economize information asymmetries and decrease agency conflicts due to limited ingress to the debt market. Large companies include fewer types of debt to reduce operational risk and flotation costs and for building a good reputation. We suggest several theoretical justifications for these results, based on tradeoff and agency cost theory.

Keywords: Debt specialization, bankruptcy cost, information asymmetry, agency conflicts, operational risk.

JEL classification: G32, G33, G38.

1. Introduction

Debt structure composition has become a contested topic in the corporate finance literature after the remarkable work of Rauh and Sufi (2010) who explain the heterogeneous nature of debts. Financial managers face difficulty in designing their debt structure composition in the presence of multiple debt sources, that is, in determining whether to follow a debt specialization (DS) strategy or diversified debt structure. DS implies dependence on a single (or fewer) debt type(s). This conversation is

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essential for academics to establish the field of debt structure and for financial managers to design corporate strategies in a way that helps achieve an optimal debt structure. The existence of DS has been confirmed in developed countries (Colla et al., 2013) and most recently in emerging economies (Khan et al., 2016). The question is why it takes place, which we examine through a comparison of small and large organizations.

The literature emphasizes that the primary purpose of adopting DS is to reduce liquidation costs and monitor expenses and constrained access to the debt market (Povoa & Nakamura, 2014). Additionally, Li et al. (2015) and Tengulov (2015) contend that organizations that have few investment opportunities, face more fluctuations in stock prices, and maintain inferior accounting systems utilize DS. On similar grounds, Colla et al. (2013) state that low-leverage, small, new and unrated firms, with low levels of profitability and tangibility, prefer this strategy, while Khan et al. (2016) provide theoretical justifications for the existence of DS among large firms.

We move a step forward by empirically testing the reasons for adopting DS among small and large companies, based on an extensive dataset for Pakistan. Our findings contribute to the literature in several ways. First, the study provides insight into the emerging debate on DS by explaining the reasons for its existence separately for small and large organizations. Second, it reveals the strategic perspective of financing choices that help achieve an optimal capital structure.

2. Literature Review

Most other studies provide evidence for the existence of DS specifically among small, new, less profitable, growing and risky companies (see Colla et al., 2013; Tengulov, 2015). These companies use DS strategy as a cost minimization mechanism. Khan et al. (2016) postulate that, if small, new, less profitable firms utilize this approach as a cost minimization mechanism, then large and mature companies might also employ it for the same reasons: to reduce their operational risk, economize flotation costs, and so forth. Mature, profitable and reputable companies have extended access to the debt market, but when they add new debt, then new creditors demand special covenants for their loan contracts for protection. This demand for special covenants increases the cost of debt and eventually the cost of financial distress, monitoring and agency conflict, thereby compelling them to adopt a DS strategy. Mature, large and profitable companies may also implement this approach due to their excellent market reputation, which gives them a better bargaining position to select debt instruments according to their requirements.

Based on this deliberation, the current study provides five possible explanations for the existence and relevance of DS strategy across organizations: limited ingress to the debt market, lower expected bankruptcy costs, economizing information asymmetry costs, reducing agency conflicts and lowering flotation cost.

2.1. Limited Ingress to the Debt Market

The first contrast in the financing decisions of companies originates from their capacity to access debt financing. Small businesses have restricted access to long-term debt because of information asymmetries and agency problems. Therefore, they cannot approach public debt markets (Arena, 2011) and specialize in fewer types of debt. Companies borrow from those sources that are easily accessible. Povoa and Nakamura (2014) consider the restricted access of firms to the debt market to be the primary cause of DS. A company with greater access to the debt market borrows from multiple sources while businesses with limited access depend on fewer debt types (Tengulov, 2015). Previous studies show that a firm is likely to issue either equity or rely on fewer kinds of debt when there is restricted access to the debt market (Lemmon & Zender, 2010). Sometimes, the high borrowing costs associated with debt may limit a company's accessibility and compel them to specialize in fewer, less expensive, debt types.

2.2. Lower Expected Bankruptcy Cost

Managers consider the expected bankruptcy costs associated with each type of debt instrument when they decide their debt structure. The probability of bankruptcy is higher for those companies that have a higher value of financial distress. In this situation, these companies borrow from fewer lenders to minimize their chances of bankruptcy. Since they may also encounter difficulties in renegotiating their debt with numerous lenders (Pessarossi & Weill, 2013), very few choices are available to them in times of financial distress.

Tradeoff theory states that companies face bankruptcy costs in the form of direct costs (legal fees, credit cost, restructuring cost) and indirect costs (loss of creditors, customers, employees) at the time of bankruptcy (Baker & Martin, 2011). Barclay and Smith (1995) argue that these costs have different implications for large and small companies. Large companies have significant economies of scales and are therefore likely to have higher leverage than their smaller counterparts. Ding et al. (2016) argue that when firms manage their earnings efficiently, they can reduce

their cost of debt and financial distress. This leads larger businesses to rely on fewer debt types and follow a DS strategy.

2.3. Economizing Information Asymmetry Cost

The information-based explanation includes information confidentiality, monitoring benefits and information collection costs, which affect the choices of debt financing. High information asymmetries often cause losses to debt holders (Derrien et al., 2016) and customers, and increase the cost of debt. Agency cost theory supports this notion by explaining that firms bear high costs due to information asymmetries, which can cause disputes among different debt holders. Large companies can resolve this and create better financing facilities by disclosing their research and development or marketing strategy. At the same time, such companies may lose their advantage over competitors (Kale & Meneghetti, 2011). Therefore, they choose to specialize in fewer debt types.

Some corporations may present themselves for monitoring – especially new or small businesses – to build their credit reputation (Denis & Mihov, 2003) and eliminate the information asymmetry (Chemmanur & Fulghieri, 1994). In this situation, they prefer a DS strategy to avoid monitoring and information collection costs because if they switch to other types of financing, they may face the extra charge of monitoring and information collection. These costs increase the overall expenses of the firm (Bruche & Segura, 2017). Therefore, small and new businesses may be more inclined toward a DS strategy.

2.4. Reducing Agency Conflicts

Companies can lower their financing costs by removing agency conflicts between different stakeholders (Povoa & Nakamura, 2014). Initially, companies may focus on resolving the agency conflict between debt holders and shareholders (Jensen & Meckling, 1976). Colla et al. (2013), however, provide a new direction to agency cost theory by highlighting the agency conflicts between different types of debt holders.

A company may face financial constraints to the debt market due to agency conflict (Locorotondo et al., 2014), which forces them to borrow from fewer debt sources, thereby indicating a positive relationship between agency conflict and DS. Greater disputes between different debt holders lead toward the use of fewer debt types. This argument is in line with Lou and Otto (2015) who argue that more dispersed debt structures generate a

conflict of interest between different debt holders. Therefore, they will return to concentrated debt structures and rely on fewer debt types.

2.5. Lowering Flotation Cost

Flotation cost is the fixed cost associated with the issuance of public debts, bonds or debentures (Blackwell & Kidwell, 1988). The issuance of bonds benefits large companies in the form of economies of scale, but its cost is relatively high for small businesses. Hence, small companies are constrained from issuing long-term debt, especially bonds or debentures (Beattie et al., 2006). Large public limited corporations prefer public debt when they do not face agency conflict or monitoring requirements and need large funds to finance their investment projects. Government-owned companies also favor bonds because they are less information-sensitive for regulators and have a high probability of approval (Pessarossi & Weill, 2013). This empirical evidence suggests that public limited companies are more inclined toward bonds or debentures when they can minimize their flotation costs. Otherwise, they will likely approach other types of debt.

3. Research Methodology

The data for this study is from the annual audited reports and analysis reports of the Pakistan Stock Exchange (formally, the Karachi Stock Exchange) and State Bank of Pakistan. This includes all publicly traded nonfinancial companies listed on the Pakistan Stock Exchange during 2009–15. We exclude missing or zero data for total debts and assets, leverage outside-unit intervals (Lemmon et al., 2008) and delete outliers by winsorizing all continuous variables up to the first percentile at the upper and lower levels. The final data then comprises 2,001 company-year observations for 419 nonfinancial companies for seven years.

DS is the inclusion of fewer or even single debt types in the debt structure of organizations (Khan et al., 2016). It is measured using the Herfindahl-Hirschman index (Hanssens et al., 2016) ENREF_18, based on the types of debt available in the debt structure of these organizations. Six types of debt – short-term secured debt (SSD), other short-term debt (OSD), long-term secured debt (LSD), long-term unsecured debt (LUND), debentures (DEB), and other long-term debt (OLD) – prevail among Pakistani organizations. To measure DS and construct different organizational characteristics, we use similar definitions and measures to Colla et al. (2013) and Khan et al. (2016). The Appendix provides detailed descriptions of the variables used in our analysis.

The proxies for measuring the reasons for DS are carefully selected from the literature. Colla et al. (2013) highlight the measurement issues related to these causes. We have tried to employ theoretically and empirically relevant proxies. This study uses default risk as a proxy for bankruptcy cost, measured by the Altman z-score (Albring et al., 2011) and expect that the high value of default risk for small businesses indicates a high probability of bankruptcy. Earnings volatility is used as a measure of operational risk for large and mature companies, following Li et al. (2015). High earnings volatility will increase the likelihood of bankruptcy for large and mature firms. We use quality and return on assets as a measure of information asymmetry.

Business group affiliation and regulation is used to measure debt market accessibility for organizations, whereas Arena (2011) uses credit rating as a measure of restricted access to the debt market. Our measure of agency conflict is growth opportunities and the market-to-book ratio, which serves as a proxy for growth opportunities (Kaya, 2011). A lower market-to-book ratio is an indication of the existence of agency conflict. Asset maturity is also used as a proxy for agency conflict (Meneghetti, 2012). Companies with larger asset maturities conveniently reduce agency disputes through collateral provision to debt holders. Finally, the premise for lower flotation costs is tested using size (Pessarossi & Weill, 2013). Small companies face higher flotation costs. Therefore, this study expects a negative relationship between flotation cost and DS.

4. Results

Table 1 presents the descriptive statistics for our sample. We segregate small and large firms, following Khan et al. (2016) who define small firms as those that belong to the lowest (first) quartile, while large corporations fall in the largest (fourth) quartile of the data. There are 1,225 (61 percent) company-year observations for small firms and 776 (39 percent) company-year observations for large organizations. Our findings show that the characteristics of the companies in our study are significantly different by size, except for age and return on assets.

Table 1: Sample overview: small and large companies

Variables	Small companies		Large companies		Test of differences between samples	
	Mean	Median	Mean	Median	t-test	Wilcoxon test
Size	2.29	2.46	4.37	4.31	-70.11**	-27.36**
Age	25.92	21.00	27.47	23.00	-1.66**	0.37
Asset tangibility	0.69	0.74	0.63	0.68	3.42**	-4.65**
Sale growth	1.85	0.15	0.37	0.18	0.96	-1.39
Dividend payers	0.58	1.00	0.62	1.00	-13.96**	-12.78**
Book leverage	0.52	0.56	0.59	0.61	-4.89**	-5.08**
Default risk	1.25	1.30	1.98	1.35	-5.20**	-3.78**
Quality	0.32	0.42	0.30	0.36	0.16	-0.71
Business group affiliation	0.58	1.00	0.51	1.00	-1.04	-1.04
Market to book ratio	0.71	0.31	1.38	0.87	-2.55**	-11.05**
Return on assets	0.05	0.01	0.05	0.04	-0.10	-6.24**
Earnings volatility	0.14	0.07	0.07	0.05	6.85**	-6.14**
Regulation	0.87	0.00	0.84	0.00	-9.06**	-8.71**
Asset maturity	3.11	1.42	3.33	1.41	-0.59	-1.19

* p < 0.05, ** p < 0.01.

4.1. Presence of Debt Specialization

First, we employ a threshold analysis to assess the use of a given type of loan over the threshold boundaries from 10 percent to 90 percent. This is computed as the fraction of company-year observations in the sample that obtain a substantial amount of their loan from a single source. Panels A and B present the results for small and large organizations.

The evidence provided in Table 2 affirms the presence of DS among small and large businesses. Within the small companies' subsamples, 15 percent of company-year observations rely predominantly on a single type of loan. About 24 percent (93 percent) attain more than 60 percent (30 percent) of their loans from one type of debt, while 5 percent (15 percent) obtain more than 90 percent (70 percent) from a single source of financing. Within the large companies' subsamples, 14 percent of company-year observations exclusively follow a DS strategy. About 23 percent (98 percent) obtain more than 60 percent (30 percent) of their loans from one type of debt, while 6 percent (14 percent) obtain more than 90 percent (70 percent) of their loans from a single source.

Table 2: Thresholds analysis

Types of debt	Thresholds								
	10%	20%	30%	40%	50%	60%	70%	80%	90%
Panel A: Small companies									
SSD	0.27	0.22	0.18	0.14	0.10	0.06	0.03	0.00	0.00
OSD	0.24	0.20	0.15	0.11	0.09	0.07	0.06	0.04	0.03
LSD	0.38	0.25	0.15	0.10	0.06	0.03	0.01	0.01	0.00
LUND	0.33	0.20	0.15	0.11	0.07	0.05	0.03	0.02	0.02
DEB	0.42	0.24	0.18	0.08	0.05	0.02	0.02	0.00	0.00
OLD	0.54	0.24	0.12	0.06	0.03	0.01	0.00	0.00	0.00
Total	2.18	1.35	0.93	0.60	0.40	0.24	0.15	0.07	0.05
Panel B: Large companies									
SSD	0.27	0.23	0.18	0.14	0.09	0.05	0.03	0.01	0.00
OSD	0.23	0.21	0.16	0.12	0.09	0.07	0.06	0.02	0.03
LSD	0.37	0.25	0.16	0.10	0.06	0.04	0.02	0.01	0.00
LUND	0.35	0.20	0.15	0.11	0.07	0.05	0.03	0.03	0.02
DEB	0.44	0.26	0.23	0.07	0.02	0.00	0.00	0.00	0.00
OLD	0.52	0.24	0.11	0.06	0.04	0.02	0.01	0.00	0.00
Total	2.18	1.39	0.99	0.60	0.37	0.23	0.15	0.07	0.05

Conditional debt structure is the second way to investigate the relevance of DS among our subsamples. In this method, we impose the condition that the use of a given debt type must exceed 50 percent of the total debt. We then compute the mean and median (in square brackets) of debt ratios for all debt types from the subsets of observations that follow the condition. Table 3 shows that the values of the primary diagonal for large companies is smaller than the values for small organizations. In Panel A, the values of the main diagonal indicate that the conditional mean use of a given loan type on which the condition is imposed is between 61 percent and 79 percent, showing a stronger tendency toward specialization among small companies. In Panel B, the values for each debt type range between 52 percent and 76 percent.

Table 3: Conditional debt structure

Condition	1	2	3	4	5	6
Panel A: Small companies						
1. SSD > 50 percent	0.679 [0.643]	0.206 [0.193]	0.078 [0.059]	0.021 [0.000]	0.002 [0.000]	0.035 [0.018]
2. OSD > 50 percent	0.089 [0.002]	0.787 [0.775]	0.024 [0.000]	0.013 [0.000]	0.002 [0.000]	0.084 [0.025]
3. LSD > 50 percent	0.111 [0.099]	0.172 [0.152]	0.635 [0.585]	0.029 [0.000]	0.000 [0.000]	0.053 [0.033]
4. LUND > 50 percent	0.036 [0.000]	0.175 [0.156]	0.012 [0.000]	0.734 [0.711]	0.000 [0.000]	0.042 [0.009]
5. DEB > 50 percent	0.036 [0.036]	0.090 [0.090]	0.006 [0.006]	0.186 [0.186]	0.682 [0.682]	0.000 [0.000]
6. OLD > 50 percent	0.021 [0.000]	0.318 [0.338]	0.021 [0.000]	0.023 [0.000]	0.002 [0.000]	0.614 [0.578]
Panel B: Large companies						
1. SSD > 50 percent	0.631 [0.608]	0.230 [0.220]	0.072 [0.039]	0.021 [0.000]	0.003 [0.000]	0.044 [0.028]
2. OSD > 50 percent	0.114 [0.020]	0.762 [0.744]	0.028 [0.000]	0.022 [0.000]	0.001 [0.000]	0.073 [0.023]
3. LSD > 50 percent	0.128 [0.121]	0.172 [0.148]	0.631 [0.596]	0.019 [0.000]	0.000 [0.000]	0.050 [0.028]
4. LUND > 50 percent	0.028 [0.000]	0.193 [0.148]	0.008 [0.000]	0.747 [0.738]	0.000 [0.000]	0.024 [0.000]
5. DEB > 50 percent	0.104 [0.104]	0.121 [0.121]	0.105 [0.105]	0.002 [0.002]	0.523 [0.523]	0.146 [0.146]
6. OLD > 50 percent	0.007 [0.000]	0.312 [0.348]	0.011 [0.000]	0.012 [0.000]	0.006 [0.000]	0.654 [0.617]

Tables 2 and 3 present a similar trend of specialization for both subsamples, but their reasons for prevalence are different. Table 4 provides a theoretical and empirical justification for why small and large companies pursue DS strategies.

4.2. Why Debt Specialization?

Table 4 uses Tobit regression models to provide multivariate evidence for the reasons for using DS among small firms (model 1), large firms (model 2) and the total sample (model 3). First, we include traditional capital structure characteristics in columns 1 to 3, which show comparable results for all three models. This implies that small and mature companies maintain low asset tangibility and their book leverage ratios are more

inclined toward DS. The effect of sales growth and dividend payers remains positive in all three models, but these variables are unable to produce enduring results.

We then add default risk, quality, business group affiliation and the market-to-book ratio in model 1. The significant, positive relationship between default risk and DS supports tradeoff theory and explains why riskier companies are more inclined toward DS due to their high probability of default. Quality, a measure of information asymmetry, has a significant negative association with DS and supports the pecking order perspective: low-quality companies face higher information monitoring and collection costs and thus adopt a DS strategy.

Table 4: Reasons for DS

Variables	Small	Large	Total sample
	Model 1	Model 2	Model 3
Size	-0.182**	-0.081**	-0.086**
Age	0.001**	0.001**	0.006**
Asset tangibility	-0.260**	-0.167**	-0.008**
Sale growth	0.000	0.001	0.000
Dividend payers	0.012	0.079**	0.029*
Book leverage	-0.336**	-0.146**	-0.002**
Default risk	0.009*		0.006**
Quality	-0.010*		-0.004**
Business group affiliation	-0.046*		-0.014**
Market to book ratio	-0.008*		0.005**
Return on assets		-0.175*	-0.263**
Earnings volatility		0.169*	0.018*
Regulation		0.086**	0.008*
Asset maturity		0.016**	-0.017*
Constant	1.227**	0.766**	0.222**
LR chi-square	177.620	252.270	898.580
Pseudo R2	0.855	0.778	0.649

* p < 0.05, ** p < 0.01.

Business group affiliation is used as a measure of constrained access to the debt market. A group-affiliated company has better access to the debt market due to cross-securities. Financial institutions also consider them more appropriate loan grantees. Therefore, these companies are in a better position to utilize diversified types of debt. The negative and significant association between business group affiliation and DS is also evident from the results. The market-to-book ratio significantly impacts the

DS decision of organizations. This is expressed as ($\beta = -0.008$, $p < 0.05$) and supports agency cost theory.

Along with traditional capital structure characteristics, model 2 includes return on assets, earnings volatility, regulation and asset maturity. This analysis provides some additional reasons for the prevalence of this strategy among large organizations, according to capital structure theories. Return on assets, a proxy for information asymmetry, has a significant, negative relationship with DS, thus supporting the pecking order perspective: a high return on assets reduces information asymmetry and increases confidence among investors, loan agencies and other stakeholders. It builds up the reputation of the company and gives it a good bargaining position to select the debt instrument of its choice. In this situation, large, mature and profitable firms adopt DS strategies as a cost minimization mechanism to enjoy the benefits of cost economization.

Earnings volatility measures the operational risk of large organizations. Such companies also face the likelihood of bankruptcy. The results support tradeoff theory by explaining that organizations with high operational risk move toward DS strategy to decrease their cost of financial distress. Regulation, a measure of debt market accessibility, is introduced in model 3, which demonstrates a positive and significant relationship. The regulation factor increases the creditworthiness of organizations and access to the unconstrained debt market. These companies are in a better position to approach multiple debt instruments, but prefer to follow a cost-minimizing strategy due to their better bargaining position. Hence, they adopt a DS strategy.

The positive and significant association between asset maturity and DS is also supported by the results. Asset maturity is used as a proxy for agency conflict: companies with larger asset maturities can reduce agency conflict through collateral provision to debt holders. This finding supports agency cost theory. The study also uses size as a measure of flotation cost: the negative relationship we find implies that larger companies adopt this strategy to minimize their borrowing cost. In model 3, the findings for the complete sample show that small, mature, dividend paying, regulated and growing companies face elevated risk in business operations and depend more on concentrated debt structure. However, profitable, group-affiliated and top-quality companies with substantial tangible assets, high leverage ratio and asset maturity employ diversified types of debt.

5. Discussion

This study contributes to the ongoing debate as to why DS occurs by providing new empirical evidence of the presence of specialization among large and small organizations. We present three primary results. First, the findings of our thresholds analysis and conditional debt structure reaffirm the existence of DS among listed companies, irrespective of their size. We find similar trends in specialization across size distribution. Our results are different from the literature, which focuses on the applicability of DS strategy based on comparisons by size.

Second, it reaffirms the dominance of short-term debt in the debt structure of public limited companies, followed by unsecured and secured long-term debt. These results are in line with Khan et al. (2016) who find that short-term debt is the most persistent type of financing among Pakistani firms. Companies follow a DS strategy due to fewer covenant restrictions (Alipour et al., 2015). However, Rauh and Sufi (2010) claim that 70 percent of organizations include at least two types of debt in their debt structure and that the most consistent types are secured and subordinated debt.

Finally, we offer five possible explanations for the presence of DS strategy across organizations. Small companies adopt DS due to limited ingress to the debt market and lower expected bankruptcy cost and to economize information asymmetry cost and reduce agency conflicts. Large enterprises follow DS to reduce operational risk and lower flotation costs and because of their good reputation.

This study makes several significant contributions to the literature on debt structure and could help practitioners in designing corporate financial strategies. First, it proposes a strategy perspective as a framework for debt structure choices. There is a general call to integrate capital structure decisions with financial strategy and examine how financing decisions are related to strategy (Baker & Martin, 2011; Bender, 2014; Priester & Wang, 2010). We link financing choices to DS strategy and thus contribute to the literature on debt structure and financial strategy.

Second, the study could help financial managers design their strategies by including appropriate types of debt to cope with the crisis and add value to their organizations. Management is more interested in inputs from functional areas of finance (such as capital structure) to design its financial strategy. Since this study explains the financing choices of

organizations, especially debt structure, it could help financial managers to include only those types of debt that have fewer contractual restrictions, incur the least cost and match the tenor of the assets.

Our study faces certain limitations that future research could address. First, although the theoretical and empirical rationale provides unique insight into DS strategy, a comprehensive view of the concept is still necessary. This is only possible if we identify more theoretically and empirically related antecedents (organizational and non-organizational) to identify the most relevant predictors of DS and provide a more in-depth understanding. Second, we have discussed the reasons for DS based on capital structure theories. We use different measures to explain these causes, but cannot distinguish between some measures because they may be used to test more than one reason for DS. For example, larger companies often have a credit rating, which reduces information asymmetry and agency conflict, but size is used as a measure of flotation cost. Similarly, companies with good earnings quality may have less likelihood of financial distress. Third, our empirical findings show trivial differences between small and large organizations. This is perhaps because we differentiate between organizations by equity capital. Future research could adopt other methods of differentiation for a more authentic view of the concept.

6. Conclusion

This study provides insight into the existence and relevance of DS strategy across organizations. We explain that DS is a widespread phenomenon that is vital to all types of publicly traded companies, irrespective of size. The findings of our thresholds analysis and conditional debt structure confirm that short-term debt is the most persistent type of financing among Pakistani firms. We show that the main reasons for adopting a DS strategy among small companies are to minimize bankruptcy cost, agency conflict, information asymmetry and limited access to some segments of the debt markets, whereas large companies adopt this strategy due to their good market reputation and high operational risk and to reduce flotation costs.

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Appendix

Description of variables

Variable	Measure	References
Organizational characteristics		
Size	Logarithm of total assets	Leary (2009)
Age	Age is the time in years since the company announced its first IPO	Povoa and Nakamura (2014)
Asset tangibility	(Tangible fixed assets + inventory)/total assets	Booth et al. (2001)
Sale growth	(Salest – sales(t-1))/sales(t-1)	Albring et al. (2011)
Dividend payers	“1” if the company pays either cash or stock dividends, “0” otherwise	Morellec et al. (2015)
Default risk	Altman z-score = [1.2*((working capital)/(total assets))] + [1.4* ((retained earnings)/(total assets))] + [3.3*(ebit/(total assets))] + [0.6* ((market value of equity)/(total liabilities))] + [999 * (sales/(total assets))]	Albring et al. (2011); Alderson et al. (2014)_ENREF_3
Quality	Year to year changes in the total earnings of the organization	Shah and Khan (2009)
Business group affiliation	“1” if a company is group affiliated, or “0” if it is not	Bamiatzi et al. (2014)
Market to book ratio	Market value of equity/book value of equity	Kaya (2011)
Book leverage	Total debts/book value of assets	Graham and Leary (2011)
Return on assets	Annual net profit/total assets	Dewaelheyns and Hulle (2010), Meneghetti (2012)
Earnings volatility	Standard deviation of the five-year annual profit before tax and depreciation, scaled by the average assets	Li et al. (2015)
Regulation	“1” if the company belongs to the regulated industry and “0” otherwise	Graham et al. (2015)
Asset maturity	Sales/fixed assets	Shah and Khan (2009)
Debt structure		
Debt specialization	{[(SSD/TD)2 + (OSD/TD)2 + (LSD/TD)2 + (LUND/TD)2 + (DEB/TD)2 + (OLD/(TD)2] – (1/6)}/(1 – (1/6))	Khan et al. (2016)

How Efficient is the Islamic Banking Model in Pakistan?

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Syed Waqar Azeem Naqvi****

Abstract

The purpose of this study is to analyze the conventional and Islamic banking in Pakistan. For this study, a sample of 19 conventional banks and five Islamic banks was selected. The CAMEL approach is used to evaluate the performance of both conventional and Islamic banks. Ten ratios were used to measure profitability, liquidity and credit risk. Our findings suggest that Islamic banks are less efficient than conventional banks in asset management, management capability and liquidity. Conventional banks have better earning capability in terms of return on assets and overhead ratios. The analysis also shows that Islamic banks have better capital adequacy than conventional banks.

Keywords: Islamic banking, efficiency, CAMEL, capital adequacy.

JEL classification: G21, N20, Z12.

1. Introduction

Islamic banking is now considered one of the most popular banking systems in the Islamic world. Its assets have outgrown the assets of the conventional banking industry and the global worth of Islamic banks is now US\$1 trillion in terms of assets. The sector has experienced an annual continuous growth rate of 16 percent, assisted by the Gulf Cooperation Council through its contribution of an additional US\$91 billion to the Islamic banking system. While the foundations of Islamic banking can be traced to the Quran, its real contribution to the global banking system was observed in the 20th century (Khan, 2013) when proponents of Islamic principles began to express the need for an alternative banking system that did not contravene core Islamic principles.

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There are two fundamental differences between Islamic banking and conventional banking. The first is the model of profit-and-loss sharing in Islamic banks, whereby there is a system for sharing not only profits, but also losses between the lender and borrower. The second is that of interest payment collection: Islamic banks maintain strict regulations to avoid receiving, giving or otherwise partaking in any form of interest. Other differences include additional regulations faced by Islamic banks, which are to practice in accordance with Sharia law as well as local and international banking laws. Islamic banks are also limited in their investment opportunities, as they cannot be involved in any anti-Islamic projects such as those involving alcoholic drinks or gambling.

In Pakistan, Islamic banking is very recent. Despite this, it is considered one of the most effective forms of banking and has shown a significant increase in activity since its inception. As of 2016, a total of five Islamic banks were operational in Pakistan, while 17 conventional banks have incorporated aspects of Islamic banking in their operations. Considering the success of Islamic banks, existing conventional banks have undertaken to introduce their own Islamic banking windows alongside maintaining conventional operations. Deposits have seen an exponential increase of more than 200 percent compared to the figures for 2008. This is noteworthy considering that, prior to 2008, Pakistan had a smaller banking and financial sector with limited growth. Banking has become one of the most profitable businesses in Pakistan since picking up pace in 2008. Due to the exponential growth of this sector as well as its expected future expansion, it is an area that requires further analysis.

This paper attempts to assess the fundamental differences in the performance of both types of banks. Previous studies have reached varying conclusions: while studies such as Usman and Khan (2011) find Islamic banking to be superior in terms of growth and profitability, others – such as Rosly and Abu Bakar (2003) – conclude that Islamic banking is less likely to outshine conventional banking systems. Some findings show that both kinds of banks are similar in performance, such as Samad (2004), who concludes that both show similar results in terms of liquidity and profitability.

Other studies highlight various specifics of the comparison. Jaffar and Manarvi (2011), for example, find that Islamic banks lack recovery of loans, which makes their provisions very high, leaving them with what may be considered an inadequate safety net in times of trouble. Similarly, in comparing the cost efficiency of the two types of banks on a global scale, Beck et al. (2013) find that Islamic banks tend to lean toward higher

cost effectiveness, but lack stability due to their small scale of operations. Akhtar et al. (2011) analyze the liquidity risk management of Islamic banks compared to conventional banks, finding a positive but insignificant relationship for bank size and net working capital to net assets, with liquidity risk in both models. The capital adequacy ratio in conventional banks and return on assets in Islamic banks was found to be positive and significant.

Only a few comparative studies exist on Islamic banking and conventional banking on the basis of the CAMEL approach, despite its advantages in facilitating evaluations of the different aspects of the banking system, ranging from capital to risk sensitivity. Furthermore, there is limited research on this topic for the period 2008–13. In this context, the current study contributes to the literature.

Jaffar and Manarvi (2011) utilize the CAMEL approach to evaluate the performance of Islamic and conventional banking systems. However, their research is limited to five Islamic and five conventional banks. Kouser and Saba (2012) use the model for the Pakistani banking industry in their comparison of three types of banks – Islamic, mixed and conventional – and find that Islamic banks have the best capital adequacy, asset quality, earnings and management competency. Their research is limited to four Islamic banks, five Islamic branches of conventional banks and four conventional banks. Our study utilizes the CAMEL approach to evaluate 19 conventional banks and five Islamic banks. Its significance lies in its larger sample. Moreover, we evaluate each aspect of both banking systems using the CAMEL approach and provide an in-depth analysis of their performance.

The paper is organized as follow. Section 2 provides a review of the literature comparing conventional and Islamic banks. Section 3 describes the data and methodology. Section 4 presents an analysis of the results, followed by Section 5, which concludes the study.

2. Literature Review

Islamic banking has grown rapidly in the last ten years, warranting a comparison with competitive banking systems. The following studies focus on different perspectives of Islamic and conventional banks: some relate to financial aspects, using ratios and other financial measures. Others look at banks' efficiency, categorizing Islamic and conventional banks by size and age.

Kouser and Saba (2012) compare the performance of three categories of banks – Islamic, mixed (which contain elements of Islamic and conventional banking in different branches) and conventional – using the CAMEL model. Islamic banks are found to have the best capital adequacy and asset quality compared to mixed and conventional banks. Furthermore, earnings and management competency are higher in Islamic banking than in conventional or mixed banking. They conclude that the operations of Islamic banks are developmental.

Bader et al. (2008) compare the cost, revenue and profit efficiency of 43 banks – Islamic and conventional – over 1990–2005. They find that cost and revenue structure is the major dividing line between the two, with no major differences in efficiency. Similarly, Hasan and Dridi (2010) compare Islamic and conventional banks on a financial basis to measure credit, asset growth and profitability over the recent global crisis period for a sample of 120 Middle Eastern banks, one fourth of which are Islamic banks. Overall, they find an adverse effect on the profitability of Islamic banks, although these banks perform better in credit and asset growth compared to conventional banks, thus adding to stability in a global crisis.

Rima (2010) analyzes the competitive and financial aspects of Islamic as well as conventional banks, using a sample of 13 banks for 2000–06, using multivariate techniques. The results signal better capitalization in Islamic banking, along with which Islamic banks allocate their assets better among financing activities. The second-stage analysis shows a significant increase in profitability, thus not guaranteeing higher profits for Islamic banks in the market. Samad's (2004) comparative analysis measures the profitability, liquidity and credit risk of interest-free banks (Islamic banks) and interest-based banks (conventional banks). The sample covers 11 years from 1991 to 2000 for banks in Bahrain. Nine financial ratios are used to measure these factors. While profitability and liquidity are shown to be similar, Islamic banks are ahead in credit risk.

Akhtar et al. (2011) use financial ratios to observe the solvency and liquidity risk difference between conventional and Islamic banks, using a sample of 12 banks for the period 2006–09. Net working capital and net assets have an insignificant relationship with liquidity risk management. However, the capital adequacy ratio in conventional banks and return on assets in Islamic banks have a significant, positive relationship. A negative relationship is found between the capital adequacy ratio and return on assets in Islamic banks. Khaled (n.d.) focuses on the financial aspects of Islamic and conventional banks in Sudan by measuring operational

efficiency. A stochastic cost frontier approach is applied to 17 banks over the period 1990–2000. Sudanese banks are found to be more stable than those owned by the state. Foreign investment in Sudan appears to increase the cost efficiency of banks, but with room for improvement in the paid-up capital ratio.

Jaffar and Manarvi (2011) look at the liquidity position of Islamic and conventional banks in Pakistan. The variables analyzed are capital adequacy, asset quality, management quality and earning ability, applying the CAMEL test standards to five conventional and five Islamic banks over 2005–2009. Islamic banks perform better in terms of adequate capital and liquidity. Conventional banks fare better in management quality and earning ability. However, asset quality for both modes of banking is almost the same.

Cihak and Hesse (2008) look at data for 18 banks over 1993–2004, comparing small Islamic banks, large Islamic banks and conventional banks. Their regression results show that small Islamic banks tend to be financially stronger than small commercial banks, whereas large commercial banks are financially stronger than large Islamic banks. Small Islamic banks tend to be financially stronger than large Islamic banks. Beck et al. (2013) focus on the efficiency of Islamic as well as conventional banks and highlight the different products and services offered by both types of banking systems. Their sample of 510 banks across 22 countries over the period 1995–2009 shows that Islamic banks are more profitable and better capitalized, and exhibit better asset quality than conventional banks.

Abdul (2009) measures the efficiency of Islamic and conventional banks in terms of quality of services, recovery of loans, financing and investments. Based on data from primary and secondary sources for 2006–08, Islamic banks appear to outperform conventional banks in terms of asset quality, liquidity, shock absorption and solvency. Shahid et al. (2010) test technical, cost and allocative efficiencies across a sample of five Islamic banks and five conventional banks over 2004–08. Applying the DEA model to evaluate the performance of both banking systems under the CRS and VRS approach, they find conventional banks to have better technical efficiency than Islamic banks, whereas both banking systems show similar results for cost and allocative efficiencies.

Other comparisons can be based on profitability determinants such as growth, inflation, GDP and real interest. A study by Hassan and Bashir (n.d.) encompasses all these variables. High capital and loan-to-asset ratios

are shown to lead to higher profitability, unlike the adverse effects of implicit and explicit taxes, while favorable macroeconomic conditions have a positive impact on performance measures. Surprisingly, the results indicate a strong, positive correlation between profitability and overheads.

Kaleem (n.d.) finds that monetary policy is a very important factor in economies where Islamic and conventional banks coexist. He explains the significance of monetary policy by referring to real economic growth, reduced inflation and lower unemployment as among the few benefits of a good monetary policy. However, his results reject the notion of one framework for both banking systems. Iqbal and Molyneux (2006) discuss the history of Islamic banks. Conducted in Saudi Arabia, which is where Islamic banking was initiated in the 1970s, the authors refer to Islamic banking as a viable alternative to conventional banking based on factors such as profitability and reliability. They argue that Islamic banking has shown far better results than conventional banking.

The studies discussed above yield mixed results. Some argue in favor of Islamic banks as an alternative banking system based on their better performance. Others refer to Islamic banking as a growing phenomenon with immense potential, but also room for improvement in defining their instruments. Some studies argue that Islamic and conventional banks have no significant differences in financial or efficiency terms. Others are of the view that Islamic banking products are no more or less attractive than those offered by conventional banks.

3. Data and Methodology

This study focuses on a comparison of Islamic and conventional banks. The research is quantitative as the analysis uses financial ratios. In a similar study, Samad (2004) uses nine ratios and concludes that credit activities in Islamic banks are superior. Our sampling frame includes 24 banks in Pakistan. Of these, 19 are conventional and five are Islamic banks. These five Islamic banks were the only Islamic banks in Pakistan in 2015. The 19 conventional banks consist of both big and small banks. The research is based on secondary data for 2008–13, including financial reports for all the banks in the sample. Three banks were excluded as they did not have data for the given years. The components of their financial statements are used to calculate certain financial ratios. These ratios represent the CAMEL approach. Its most commonly used bank-specific indicators are: capital adequacy, asset quality, management quality, earnings and liquidity (Bongini et al., 2002).

- Capital adequacy measures a bank's capital as a percentage of its risk-weighted credit exposure. Reddy and Prasad (2011) explain that capital adequacy takes into account the capital adequacy ratio. Another measure is the debt-to-equity ratio, which is defined by Reddy and Prasad as total outside liability to net worth. Advances/deposits is another measure, along with government securities/total investments.
- Asset quality is a measure of loan marketability as well as the likelihood of default. This is determined using three equations specified by Reddy and Prasad (2011): net nonperforming assets/total assets, net nonperforming assets/net advances, and total investments/total assets.
- Management efficiency involves the ability of the management to use the lowest possible inputs to generate the highest possible outputs without compromising on quality. This generally incorporates total advances/total deposits, business per employee and profit per employee.
- Earning quality can be expressed as the ability of current earnings to be used as a measure of future earnings. It is subdivided into operating profit/average working funds, spread (interest earned less interest expended)/total assets, net profits/assets, interest income/total income, and noninterest income/total income.
- The final component is liquidity, which measures a firm's ability to meet short-term obligations using cash or cash-like resources with easy convertibility. This incorporates equations such as liquid assets to total assets, government securities/total assets, liquid assets/demand deposits and liquid assets/total deposits.

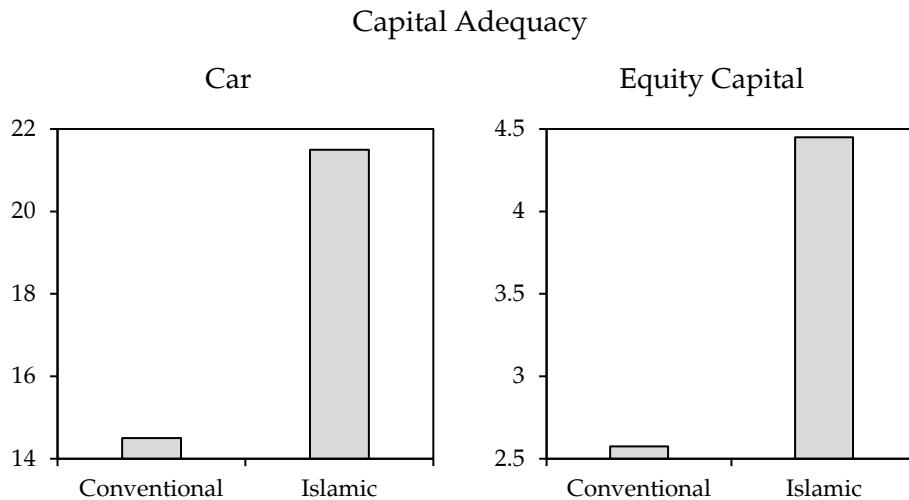
Each component of the CAMEL approach uses a financial ratio to compare the two types of banking systems in Pakistan. A dummy variable is used to assess the performance of all banks with respect to Islamic and conventional banks. A total of nine ratios is used.

4. Analysis and Results

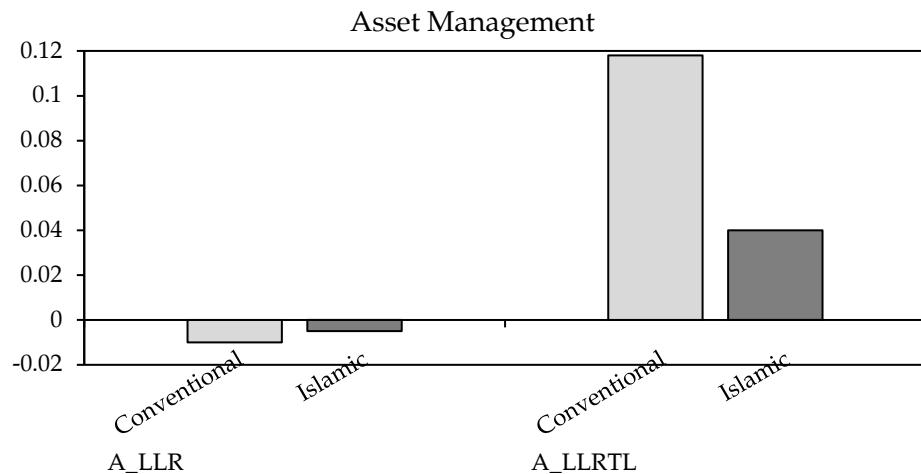
The CAR of Islamic banks is significantly higher than that of conventional banks (Figure 1). However, there is a lot of instability in the results for both types of banks. Equity capital is a measure of capital strength (how much capital is dependent on the assets of the bank): the lower its equity capital, the more leverage it has. Conventional banks have

lower equity capital, so they are less dependent on their assets, while Islamic banks are more dependent on their assets. These findings are in line with Jaffar and Manarvi (2011), who use the CAMEL approach to show that Islamic banks experience a higher CAR than conventional banks. In another study by Akhtar et al. (2011), the analysis reveals an insignificant but positive CAR for Islamic banks.

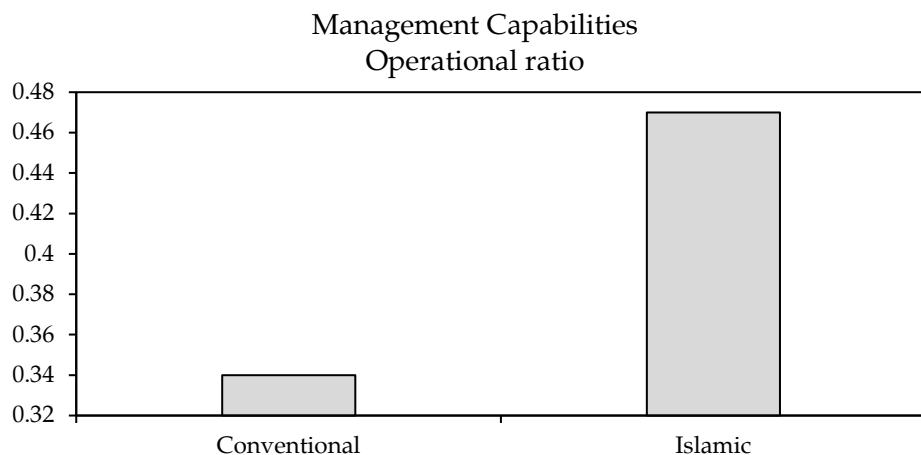
Figure 1: Capital adequacy



Asset management is tested using two ratios. The first is the loan loss reserve (LLR), whereby a higher LLR means that the bank is less efficient in the recovery of loans. Our results indicate that Islamic banks have a higher LLR than conventional banks. The second ratio, loan loss reserve/total loans (LLR/TL) represents loan reserves as a percentage of total loans. The analysis reveals that this ratio is higher for conventional banks than Islamic banks (Figure 2). Thus, conventional banks have a higher ability to absorb loss than Islamic banks. Jaffar and Manarvi (2011) also find that conventional banks have a slightly smaller LLR than Islamic banks, although their asset quality is almost the same.

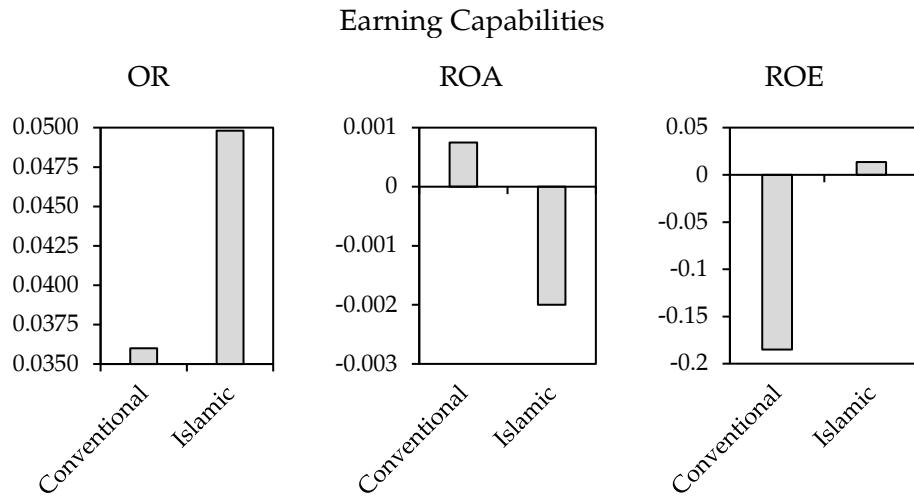
Figure 2: Asset management

However, in terms of operational ratios, Islamic banks are less efficient because they have lower economies of scale and are new market entrants. Figure 3 shows that the operational ratio of conventional banks is significantly lower than that of Islamic banks, which makes conventional banks far more efficient than Islamic banks. Bader et al. (2008) find that overall efficiency is similar for both types of banking models, while Jaffar and Manarvi (2011) find that conventional banks perform better in terms of management quality – similar to our results.

Figure 3: Management capabilities

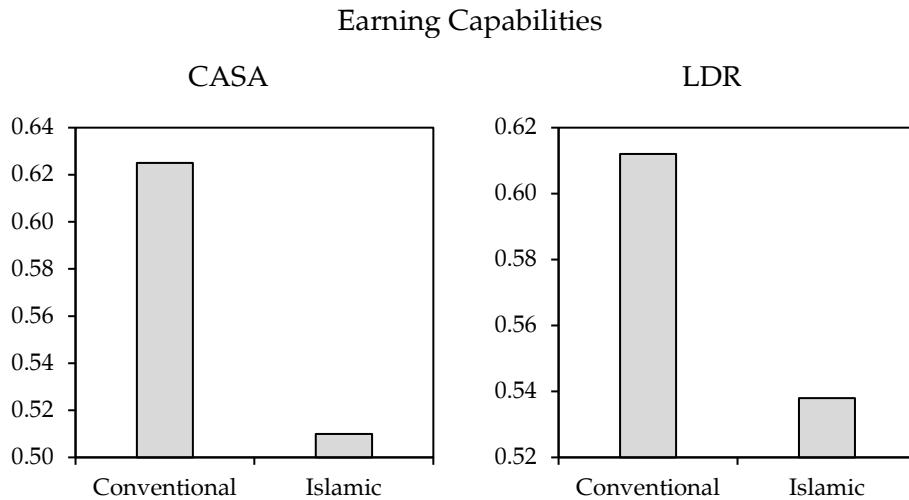
Earning capability is evaluated using three ratios: the overheads ratio, ROA and ROE. The overheads ratio depicts how efficient a bank is in terms of overheads. Our analysis suggests that conventional banks are highly efficient in comparison to Islamic banks (Figure 4) and this can be attributed to the lack of economies of scale for Islamic banks.

Figure 4: Earning capabilities: OR, ROA, ROE



The ROA is positive and significantly better in the case of conventional banks, while that of Islamic banks is negative, which implies that their earning capability is worse than that of conventional banks. Akhtar et al. (2011) also show that conventional banks are better in terms of asset returns and profitability than Islamic banks. The ROE of Islamic banks is higher and positive compared to conventional banks, for which the ROE is significantly low and negative. This may be due to the higher leverage of Islamic banks. The data for conventional banks is also highly unstable. Samad (2004) finds that there is no significant difference in the profitability of the two types of banks.

The current account and savings account (CASA) ratio explains the level of current and savings deposits. Islamic banks have a considerably lower CASA – implying more long-term deposits – compared to conventional banks (Figure 5). This also implies that Islamic banks obtain money at a higher cost than conventional banks. The loan deposit ratio (LDR) indicates the percentage of a bank's loans funded by deposits. This is significantly lower for Islamic banks, while conventional banks have a more stable ratio.

Figure 5: Earning capability: CASA and LDR

5. Conclusion

Islamic banking is considered one of the most popular banking systems in the Islamic world. The fundamental difference between Islamic and conventional banks is that Islamic banking prohibits interest and un-Islamic practices. Thus, it operates under a model of profit-and-loss sharing, with no interest-related practices. Research shows that these banks have been enough of a success that almost every conventional bank has introduced Islamic windows alongside conventional operations.

While the literature shows that Islamic banking outperforms conventional banking in various respects, our findings for the Pakistani banking sector do not support these results. Islamic banks outperform conventional banks in terms of capital adequacy, but are at a disadvantage in terms of asset management, management capability, liquidity and earning capability (see Appendix). The results further show that Islamic banks are more vulnerable in terms of shock and loss absorption due to their lack of asset management. In terms of operations, Islamic banks are less efficient due to low economies of scale and frequent entrants in the market. Moreover, since they are more dependent on long-term deposits, their sources of funds lack diversity and expose them to additional risk.

Despite this performance differential between Islamic and conventional funds, Pakistan could still benefit from an alternative banking system such as Islamic banking. International trends point to the

success of this model and the benefits it offers proponents of Islamic schools of thought. However, the government and regulatory bodies such as the State Bank of Pakistan and Securities Exchange Commission of Pakistan need to develop policies that create a more conducive environment for Islamic banks to flourish. Conventional banks have the advantage of favorable regulations that have developed over centuries as well as international support, whereas Islamic banking is nascent. Furthermore, schemes that encourage participation in the development and use of Islamic banking would provide a better environment for Islamic banks to fulfil their potential.

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Appendix

Table A1

Ratio	Mean (percentage)		Standard deviation (percentage)	
	Islamic banks	Conventional banks	Islamic banks	Conventional banks
C-car	21.55	14.56	10.95	9.94
C-ec	4.45	2.56	4.18	1.71
C-llr	-0.66	-1.14	6.70	1.44
A_llrtl	4.23	11.18	3.10	8.03
M_om	46.92	33.93	16.83	14.69
E_or	4.97	3.58	2.57	1.64
E_roa	-0.21	0.07	1.28	2.18
E_roe	1.31	-18.87	11.39	144.37
L_ltr	53.14	61.31	17.19	13.53
L_casa	51.12	62.34	15.08	13.77

Table A2

Banks	Capital adequacy		ASSET QUALITY		ment Cap		EARNING		LIQUIDITY	
	Capital adequacy ratio	Equity Capital	Loan Loss Rate	Reserve/ total loans	Operational ratio	ROE	ROA	Overhead Ratio	Loan to deposit ratio	CASA
	ratio	ratio	> Loan loss	Ratio	ratio	Ratio	Ratio	Ratio	loan to de	Ratio
Allied Bank Limited 2013	17.85	1.97	-0.01	6.83%	27.83%	27.27%	1.99%	4.77%	43.88%	67.66%
Allied Bank Limited 2012	16.17	1.87	-0.31%	6.55%	36.38%	27.20%	1.85%	5.43%	52.67%	68.31%
Askari Bank Limited 2013	10.39	1.11	-0.51%	17.29%	32.73%	-32.95%	1.39%	2.55%	48.79%	75.27%
Askari Bank Limited 2012	11.81	1.27	-0.75%	13.08%	27.17%	7.10%	0.36%	2.62%	46.83%	78.40%
Habib Bank Limited 2013	15.39	2.02	0.68%	0.95%	28.64%	17.63%	1.34%	2.28%	37.39%	72.44%
Habib Bank Limited 2012	15.81	2.14	0.42%	8.61%	25.41%	19.50%	1.42%	2.43%	40.32%	70.38%
MCB Bank Limited 2013	22.25	3.08	-1.75%	7.84%	26.90%	22.10%	2.64%	2.48%	39.26%	89.81%
MCB Bank Limited 2012	22.13	3.11	-1.85%	9.34%	23.78%	23.75%	2.73%	2.55%	43.96%	84.56%
National Bank of Pakistan 2013	15.24	1.89	-0.70%	16.63%	33.63%	5.45%	0.40%	2.78%	55.89%	47.56%
National Bank of Pakistan 2012	15.50	2.36	-0.63%	10.56%	32.73%	13.93%	1.23%	2-88%	63.34%	61.43%

Table A3

Banks	Capital adequacy		ASSET QUALITY		ment Cap		EARNING		LIQUIDITY	
	Capital adequacy ratio	Equity Capital	Loan Loss Rate	Reserve/ total loans	Operational ratio	ROE	ROA	Overhead Ratio	Loan to deposit ratio	CASA
	ratio	ratio	> Loan loss	Ratio	ratio	Ratio	Ratio	Ratio	loan to de	Ratio
Burj Bank Limited 2013	20.76	2.63	-0.14%	5.10%	63.37%	-21.38%	-2.12%	4.94%	67.81%	43.09%
Burj Bank Limited 2012	22.55	3.92	-1.97%	2.90%	43.56%	1.43%	0.18%	4.29%	65.06%	43.66%
Dubai Islamic Bank Pakistan Ltd 2013	14.59	2.41	-0.39%	4.65%	49.97%	1.98%	0.17%	4.44%	37.03%	64.07%
Dubai Islamic Bank Pakistan Ltd 2012	18	3.04	-0.86%	2.69%	38.34%	5.10%	0.54%	5.15%	49.55%	58.70%
Meezan Bank Limited 2013	12.48	1.48	-0.33%	3.61%	34.41%	22.09%	1.20%	2.78%	44.04%	65.81%
Meezan Bank Limited 2012	14.08	1.63	-0.61%	5.08%	31.44%	22.66%	1.28%	3.02%	38.48%	65.53%
AlBaraka Bank (Pakistan) Ltd 2013	11.97	1.80	-2.35%	12.54%	35.05%	-0.58%	-0.04%	2.78%	29.30%	49.35%
AlBaraka Bank (Pakistan) Ltd 2012	11.18	2.01	-1.07%	9.43%	14.63%	-10.93%	-0.87%	2.88%	45.48%	47.74%
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Key Areas of Interest: *Accounting, Banking, Management, Marketing, Finance, Strategy, Human Resource Management, Organizational Behavior etc.*

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