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Editorial

Education is the most powerful weapon which you can use to change the world – Nelson Mandela

The overwhelming response in contributions by authors/researchers is commendable. Contributors are requested to follow the guidelines given to frame their research papers in letter and spirit. I sincerely hope that the emphasis on building bridges will continue to guide us in selecting the most important research for publication in GMJACS. I am particularly intent on making sure that any academic and corporate research endeavor finds its due place in the journal. With a review board that is larger and more diverse than before, we are ready to accept quality submissions. We invite authors to take a more active part in the assessment process; it will be an honor and privilege for me and my team to help you make that work known by our distinguished readership. We encourage to consider submitting your best work to GMJACS.

As we know, a great journal is recognized not only as one where authors choose to send their most exciting findings, but also as one handed to students to illustrate the sorts of important questions management science students should be asking and the methodologies that need to be adopted. In a time when interdisciplinary research is ubiquitous, it can be difficult to define what truly bridges disciplines and simultaneously combine theory and application. Academicians, researchers and managers value interdisciplinary research because it challenges assumptions, interrogates as to which questions are most important, which methods are most appropriate, and what evidence should constrain the interpretation of any given research finding.

The current issue of GMJACS contains fourteen research papers. Out of the total received research papers, only thirty three percent research papers were found publishable after passing through our rigorous evaluation process. Rejection rate of sixty six percent by this journal is evident of the quality standard in higher education maintained by Business Studies Department, Bahria University Karachi Campus. We congratulate and appreciate the efforts of all authors whose manuscripts could make space in the current issue.

I would like to thank all members of the editorial board, review board, contributors, and all colleagues and staff members who have extended their support that made this edition of GMJACS possible. We expect our readers to send us their precious feedback at gmjacs@gmail.com, so that we can assimilate value in order to further enhance the quality of the journal.

Dr. Danish Iqbal Godil
Editor

A Critical Analysis on Organisational Growth and Managerial Turnover

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Abstract:

The fundamental purpose of this research is to critically analyse the impact of managerial level turnover on organisational growth. This research also emphasises on different aspects and its correlations that contribute in the retention and turnover of the employees. The nature of this research is quantitative. The data that has been obtained for this research is collected through primary methods using survey questionnaire that comprises of 20 question, while analysis has been performed using Smart-PLS. The findings of this research concludes that turnover has a significant impact on organizational growth. Furthermore, the relationship between these two variables have been discussed under the light of various elements, such as affective commitment and opportunities on the turnover intentions of the employees. The research is limited to the sample size of 100 individuals because of the time and cost constraints. The research implies that turnover of employees at managerial level impact organisational growth. However, the impact can be negative. Therefore, it is required by the management to ensure that productive and skilled managers are retained for betterment of the organisation.

Keywords*:* Organisational Growth, Managerial Turnover, Retention, Turnover Intention

1. Introduction

In the current times, the career path of any individual is not solely linked with an organisation as a result of high potential career curves and job mobility, as identified in the research of Carper (2017). Therefore, employees are required to maintain a balance between their desire to grow in their careers while having a positive attitude with the current organisation (Landy and Conte, 2016). Based on the research of Mayo (2016), human resources are considered as one the most important assets of any organisation as it directly impacts the development, success, and growth of organisation. Moreover, the research of Erickson (2017) concluded that human resources are most important in the recent era as the concept of lifetime employment is old and employees tend to seek better opportunities that contribute in improving their career.

It has been noted in the research of Santhanam et al (2018) that turnover in an organisation mostly occur due to many organisational factors, which includes lack of potential career growth as the most prominent

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element. Hence, employees seek new jobs and opportunities in the vast global market. Moreover, it has been noted that globalisation has increased the frequency of mobility and career change as compared to the older times. The research of Sandhya and Kumar (2014) suggests that despite the awareness and chances to seek more career opportunities, there are significant implications attached with the managerial turnover on the company. On the other hand, the research of Coccia (2015) focuses on the notion that managerial level turnover impacts performance of an organisation that further reduces the chances of that organisation to grow.

There have been various studies like Khoele and Daya (2014) and Oyewobi et al (2016) that focused on the subject of turnover of employees in organisation. According to the research of Kale, Reis, and Venkateswaran (2014), turnover adversely impacts the performance of an organisation as it requires additional time and resources to achieve goals of the organisation. Moreover, the research of Karpoff, Lee, and Martin (2014) identifies that losing a highly skilled employee is considered as the loss for an organisation. In addition to this, the adverse effects of employee turnover include extended workload, unfilled work position, and economic climatic change within the organisation. According to the research of Oladapo (2014), the human resource management is required to retain the employees in order to achieve goals and growth of the organisations. It has been noted in the research of Surienty et al (2014) that human resource management can be crucial in retaining and turnover of employees. It has been observed through the research of Peretz, Levi and Fried (2015) that human resource management reflects on the recruitment of employees that are not only fit for the organisation but can also be satisfied with the job description, working environment, salaries, and rewards and compensation.

Past researches have evaluated the impact of performance on turnover intentions of managers. According to the research of Khoele and Daya (2014), poor performance compel managers to leave the organisation in order to support organisational growth. On the other hand, the research of Katzenbach and Smith (2015) indicated that managerial turnover can have significant impact on the performance of any organisation. In addition to this, the research of Hale, Ployhart and Shepherd (2016) has highlighted that most of the top managers tend to leave organisation when the organisation is expected to have declined profits. On the other hand, the study of Surienty et al (2014) concluded that in most organisation, the notion of survival of fittest is often applied as managers are significant tool to transform different forms of resources into meaningful results. It implies that manager who fail to do their job are expected to leave the organisation. However, the research of Long and Perumal (2014) suggested that the skills of a managers are required effectively and consistently to improve the organisational growth.

The human resource field of research have acknowledged that managerial level turnover mostly occurs because of the poor performance, which indicates the change of management as per the need of an organisation. While there are studies that focus on the need for managerial turnover, there are studies like Katsikea, Theodosiou and Morgan (2015) that have focused on the shortcomings that are experienced because of the managerial turnover level. However, the research of Karpoff, Lee, and Martin (2014) have emphasised on the cost that is endured by the organisation upon the turnover of managerial level employees. According to the research of Khoele and Daya (2014) separation cost is one of the biggest drawback that is associated with the managerial level turnover, and can be monetary or non-monetary. The examples of these are difficulty in recruiting individuals with similar or better qualities, increased job insecurity, influence on other employees, loss of talented employees, changed authority, insurance premiums, higher unemployment, contractual obligations, involuntary packages voluntary severance packages, and early retirement packages.

The purpose of this paper is to analyse the change experienced by the organisation as a result of turnover of employees at managerial level. It has been found in the research of Katzenbach and Smith (2015) that most of the senior managers contribute directly on the performance and growth of the organisation. In addition to this, the research of Khoele and Daya (2014) suggests that the role of managers extend from implanting the strategies, modifying it according to the need that impacts the results. However, it has been found that there is a gap in literature that is associated with the growth or failure of an organisation as a result of managerial level turnover. Hence, the primary focus of this research is placed on the evaluation of relationship between organisational level and managerial level turnover.

The research contributes in adding value to the literature that covers subject area of human resource management, organisational growth and turnover of employees at managerial level. In addition to this, the research can be deemed significant for the organisation as the insights can help them their human resource management to retain managers that are positively significant for organisational growth.

2. Literature Review

The literature on retention and turnover of employees in organisations cover wider aspect and include different variables that impact the intention of employees (Sattar and Ahmed, 2014). According to the research of Sandhya and Kumar (2014), salaries and job security are the two main elements that contribute in the satisfaction of top managers, which then can be reflected through the future prospects and performance of the organisation overall. It indicates that there is a strong link between the satisfaction level of top managers and the organisational growth and performance (Katsikea, Theodosiou and Morgan, 2015). On the other hand, the research of Long and Perumal (2014) concluded that working environment is considered as one of the most powerful element that determines the intention of top managers to stay or to leave. It has been noted I the research of Karpoff, Lee, and Martin (2014) dynamic nature of the working environment poses a threat to manager’s performance in generating high profitability in an organisation, which may pose a threat to their job security.

In accordance with the research of Long and Perumal (2014) the association between turnover rates and competitive salary is significant and positive. It has been noted in the research of Kale, Reis, and Venkateswaran (2014) that managers are liable to allocate resources, which includes the process of distributing and budgeting as well. It directly impacts the raises, salaries and compensation of the workers that motivates them to stay within the organisation. It has been noted in the research of Hale, Ployhart and Shepherd (2016) that organisational effectiveness is achieved through the efficient performance of top managers within an organisation, as they have the formal power to strategies the move of entire company. However, it has been observed through the findings of Coccia (2015) that the replacement of managers by other managers often have consequences that directly influences the performance and growth of the organisation.

It has been noted through the research of Carper (2017) that the turnover of managers in some cases bring positive change in the organisation as new managers brings new idea and fresh perspective to the strategy. On the other hand, the research of Khoele and Daya (2014) concluded that any form of organisational change, especially the one that is linked with managerial turnover can be considered as disruptive. This is due to the fact that management teams tend to get processed through this organisational change, including disruption throughout hierarchies and structure. According to the research of Guan et al (2014), managerial turnover often limits the performance of an organisation. Based on the findings of Karpoff, Lee, and Martin (2014), the duration of succession period is likely to give birth to the conflict within an organisation, causing disruption and miscommunication between the staff and other managers. In addition to this, it has been found in the research of Watty-Benjamin and Udechukwu (2014) that managerial turnover also results in the reluctance of external investors because of the preferences. Hence, it lowers the performance and growth of an organisation which has been progressing in the tenure of previous manager. In accordance to the research of Krug, Wright and Kroll (2014), it also causes a communication gap when top managers tend to pass on the new strategies to the staff that involves uncertainty and sometimes conflict. All of these instances cause lower organisational growth that results because of the managerial turnover.

According to the research of Long and Perumal (2014), there are cases where manager’s productivity hinders the growth of an organisation, which could be instilled through implementation of new laws and regulation, consolidation of the industry, and the introduction of new technologies. Therefore, companies that are successful tend to give their managers and employees the package that fulfils their desire and contribute in their intention to stay within the company (Katsikea, Theodosiou and Morgan, 2015). However, the research of Khoele and Daya (2014) concludes that designing competitive package, salary, and incentive plan is not an easy task as most of the managers are fully aware of the outcomes of organisational growth. According to the research of Krug, Wright and Kroll (2014), one of the most significant element to retain managers is to create a welcoming yet dynamic working environment where they function effectively.

It has been observed through the research of Kale, Reis, and Venkateswaran (2014) that lack of promotion is one of the most prominent reasons for managers to leave the organisation. The notion of promotion is not only associated with the elevation of grade, designation, or increments, but it is also associated with the cognition that reflects on the behaviour of managers (Hale, Ployhart and Shepherd, 2016). In accordance with the research of Carper (2017), promotion offers commitment of resources as well as rewards and compensation to the employees that in return motivate them to perform better. In addition to this, promotion can be based on rewards that are monetary or non-monetary. Lack of satisfactory promotion, hence, compels the individual look for opportunities that best matches his or her skills and experiences and has equal or better reward system.

2.1 Hypotheses

H1 – Affective commitment has a significant impact on the Turnover Intention
H2 – Competitive pay has a significant impact on the Perceived External Prestige
H3 – High Sacrifice has a significant impact on the Turnover Intention
H4 – Information about the Organization has a significant impact on the Perceived External Prestige
H5 - Low Alternatives has a significant impact on the Turnover Intentions
H6 - Manager Practices has a significant impact on the Perceived Organizational Support
H7 - Opportunities for Growth has a significant impact on the Perceived Organizational Support
H8 - Perceived External Prestige has a significant impact on the Affective Commitment
H9 - Perceived External Prestige has a significant impact on the High Sacrifice
H10 - Perceived External Prestige has a significant impact on the Low Alternatives
H11- Perceived Organizational Support has a significant impact on the Affective Commitment
H12 - Perceived Organizational Support has a significant impact on the High Sacrifice
H13 - Perceived Organizational Support has a significant impact on the Low Alternatives
H14 - Turnover Intentions has a significant impact on the Organizational Growths

3. Research Methodology

In order to analyse the relationship between organisational growth and managerial level turnover, this research has deployed quantitative methods of research using primary methods of data collection. The deductive approach has been used and the instrument of data collection is survey questionnaire which comprises of 30 closed ended questions. These were based on the likert scale, in which 1 implied strongly disagreed while 5 implied strongly agreed. The sample size of this research is 100 individuals who have worked in one or more than one organisation at managerial level. These individuals have been selected through implementing non-random sampling method. The questionnaires were sent to them through online mediums, and the same medium has been used to store their responses. The data has been analysed through multiple regression analysis as its statistical and has been passed through different stages in order to ensure validity and reliability of the research. The independent variables discussed in the research were friendly working environment, competitive salary, job security, and lack of promotion, which fall under the hood of organisational growth. On the other hand, the dependent variable is managerial level turnover. Five hypotheses has been developed and tested to investigate the association between organisational growth and managerial level turnover.

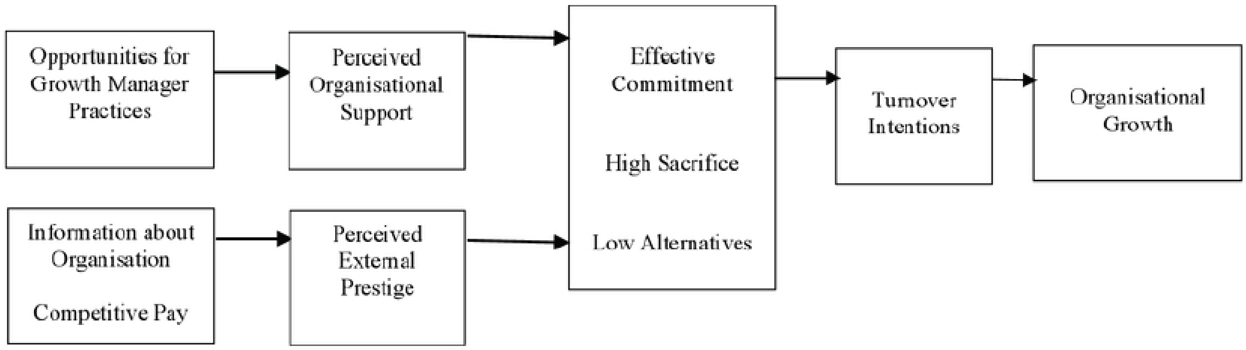
3.1 Research Model

3.1.1 The Theory of Planned Behaviour (TPB)

The theory of planned behaviour has been stemmed through theory of reasoned action which is associated with the intention of an individual to engage himself with the place through his behaviour for a specified duration. According to the research of Kautonen, Van Gelderen and Fink (2015), one of the primary elements that reflects on to the theory is the intention and behaviour of individual that shapes an overall attitude. The same attitude can further be reflected on through the benefits and risks of the decisions taken.

There are many dimensions associated with the theory of planned behaviour including the ability of the person to perform an action, the motivation that leads to the intention of performing the task by an individual. It also includes the variety of behaviour that can be predicted through the recognition of surroundings and conditions (Sawang and Kivits, 2014). In accordance with the research of Kaur Sahi and Mahajan (2014), the theory is based on the intention of an individual along with its ability that is reflected through his behaviour. There are three beliefs system that are distinctive in nature within the theory: Control, Normative, and Behavioural. However, it has been noted that the theory of planned behaviour or TPB has six basic constructs accommodated that represents an individual’s control on his actions and behaviour. It includes attitudes, behavioural intention, subjective norms, social norms, perceived power, and perceived behavioural control. Within this theory, attitude reflects the extent to which the evaluation of favourable or otherwise conditions shapes the behaviour of individual’s interest. Perceived behavioural control is regarded as the perception of an individual in judging the difficulty or ease of the situation. The notion may vary from situation to situation. On the other hand, it has been noted that impact of elements on the behavioural performance of an individual can be considered as his perceived power, which contributes in modifying and controlling his behaviour towards these elements. Social and subjective norms are the ones that indicate acceptable and non-acceptable behaviour or code of conduct within a social group.

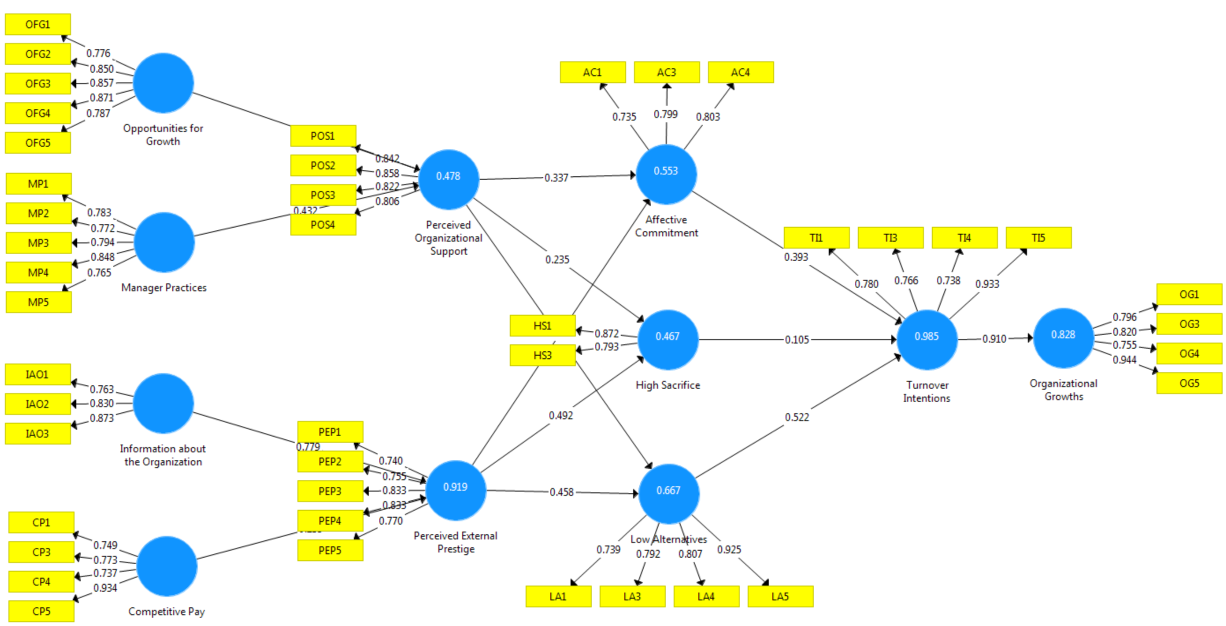
Conceptual Model



3.2 Empirical Findings and Analysis

The fundamental aim of this study is to evaluate the model that has been developed to understand and critically analyse the relationship between organisational growth and managerial level turnover. This research has applied various model, such as SMART-PLS and tests to estimate the outcome in the form of hypotheses. The research is quantitative in nature, data has been collected through primary methods using survey questionnaire as the instrument of data collection.

Analysis



3.3 Factor Loadings Significant

The following table presents the factor loading of 43 variables on 11 factors. It has been noted that higher absolute value of factor loading indicates a higher contribution of factor to the variable. The table also accommodates 11 extracted components which are then evaluated through analysing impact of 43 variables that is further divided accordingly. It has been observed that the value of factor loading for these variables and factors are all above 0.5, which implies that the desired results are met.

Statistical Data

	Affective Commitment	Competitive Pay	High Sacrifice	Information about the Organization	Low Alternatives	Manager Practices	Opportunities for Growth	Organizational Growths	Perceived External Prestige	Perceived Organizational Support	Turnover Intentions
AC1	0.735										
AC3	0.799										
AC4	0.803										
CP1		0.749									
CP3		0.773									
CP4		0.737									
CP5		0.934									
HS1			0.872								
HS3			0.793								
IAO1				0.763							
IAO2				0.830							
IAO3				0.873							
LA1					0.739						
LA3					0.792						
LA4					0.807						
LA5					0.925						
MP1						0.783					
MP2						0.772					
MP3						0.794					
MP4						0.848					
MP5						0.765					
OFG1							0.776				
OFG2							0.850				
OFG3							0.857				
OFG4							0.871				
OFG5							0.787				
OG1								0.796			
OG3								0.820			

OG4								0.755			
OG5								0.944			
PEP1									0.740		
PEP2									0.755		
PEP3									0.833		
PEP4									0.833		
PEP5									0.770		
POS1										0.842	
POS2										0.858	
POS3										0.822	
POS4										0.806	
TI1											0.780
TI3											0.766
TI4											0.738
TI5											0.933

3.4 The Convergent Validity

In accordance with the research of Hair et al. (2013) it has been observed that convergent validity can be marked as a theory that relates different factors into one in order to investigate a matter, concept or hypotheses. In order to analyse the convergent validity within a subject area, it is essential for the researcher to investigate on the values presented through factor loadings, average variance and composite reliability extracted. According to the research of Melchers and Beck (2018) the value of factor loading of items are required to be more than 0.6 and to be significant in the form of statistic. On the other hand, it is essential for the AVE or Average Variance Extracted to be over the value of 0.5. Lastly, the minimum value of CR or Composite Reliability should be over 0.7. In accordance with the values recorded in the table below, it has been noted that all values are above their threshold implying high level of validity, reliability and consistency in between all variables and factors.

3.5 Construct Reliability and Validity

Constructs	Items	Loadings	Composite Reliability	Variance Extracted (AVE)
Affective Commitment	**AC1**	0.735	0.823	0.608
	AC3	0.799		
	AC4	0.803		
Competitive Pay	**CP1**	0.749	0.877	0.644
	CP3	0.773		
	CP4	0.737		
	CP5	0.934		
High Sacrifice	**HS1**	0.872	0.819	0.695
	HS3	0.793		
Information about the Organization	**IAO1**	0.763	0.863	0.678
	IAO2	0.803		
	IAO3	0.873		
Low Alternatives	**LA1**	0.739	0.89	0.67
	LA3	0.792		
	LA4	0.807		
	LA5	0.925		
Manager Practices	**MP1**	0.783	0.894	0.629
	MP2	0.772		
	MP3	0.794		
	MP4	0.848		
	MP5	0.765		
Opportunities for Growth	**OFG1**	0.776	0.917	0.688
	OFG2	0.850		
	OFG3	0.857		
	OFG4	0.871		
	OFG5	0.787		
Organizational Growth	**OG1**	0.796	0.899	0.692
	OG3	0.820		
	OG4	0.755		
	OG5	0.944		
Perceived External Prestige	**PEP1**	0.740	0.89	0.619
	PEP2	0.755		
	PEP3	0.833		
	PEP4	0.833		
	PEP5	0.770		
Perceived Organizational Support	**POS1**	0.842	0.9	0.692
	POS2	0.858		
	POS3	0.822		
	POS4	0.806		
Turnover Intention	**TI1**	0.780	0.882	0.653
	TI3	0.766		
	TI4	0.738		
	TI5	0.933		

3.6 Predictive Relevance of The Model

It has been noted through the research of Hair et al.(2017b)that the predictive power of constructs within a research can be investigated through analysing the value of its R square and cross validity redundancy, which is also known as the Rsquare adjusted . The research also indicates that the value of R square adjusted for all the given variables is required to be above 0. Based on the values presented within the table below, it has been observed that all these values are greater than 0, which implies that the results are positive. On the other hand, the research of Alexander, Tropsha and Winkler (2015) indicates that the value of R square is required to be more than 25%. Hence, the results of this research presents positive outcome.

	R Square	R Square Adjusted
Perceived Organizational Support	0.478	0.471
Perceived External Prestige	0.919	0.918
Affective Commitment	0.553	0.547
High Sacrifice	0.467	0.460
Low Alternatives	0.667	0.663
Turnover Intentions	0.985	0.985
Organizational Growths	0.828	0.827

3.7 The Structural Model (Inner Model) or Hypothesis Testing

The analysis of inner measurement through structural model of hypothesis testing is the preceding stage to outer measurement model. It is also been considered as the testing of hypothesis that is based on the structural equation modelling done through Partial Least Squares in Smart PLS 3.2.4. According to the research of (Ringle, Wende and Becker, 2015) Smart PLS is often used in the researchers to present outcomes that are based on complex models as compared to the other approaches of covariance. Furthermore, the inner model is tested by the researcher using re-sampling methods and bootstrapping of 5000 sub samples.

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Affective Commitment -> Turnover Intentions	0.393	0.386	0.066	5.982	**0.000**
Competitive Pay -> Perceived External Prestige	0.235	0.234	0.048	4.865	**0.000**
High Sacrifice -> Turnover Intentions	0.105	0.105	0.026	4.021	**0.000**
Information about the Organization -> Perceived	0.779	0.779	0.041	18.928	**0.000**

External Prestige					
Low Alternatives -> Turnover Intentions	0.522	0.529	0.064	8.186	**0.000**
Manager Practices -> Perceived Organizational Support	0.432	0.434	0.099	4.381	**0.000**
Opportunities for Growth -> Perceived Organizational Support	0.311	0.315	0.097	3.203	**0.001**
Perceived External Prestige -> Affective Commitment	0.459	0.459	0.084	5.442	**0.000**
Perceived External Prestige -> High Sacrifice	0.492	0.490	0.114	4.330	**0.000**
Perceived External Prestige -> Low Alternatives	0.458	0.460	0.071	6.464	**0.000**
Perceived Organizational Support -> Affective Commitment	0.337	0.335	0.077	4.392	**0.000**
Perceived Organizational Support -> High Sacrifice	0.235	0.235	0.122	1.917	**0.056**
Perceived Organizational Support -> Low Alternatives	0.418	0.417	0.061	6.843	**0.000**
Turnover Intentions -> Organizational Growths	0.910	0.912	0.012	77.754	**0.000**

The findings of this research as presented in the table above are reflected in accordance with the rejection and acceptance of the hypothesis found in regards with the value criteria of P. The threshold value of p is required to be 0.05. It has been mentioned earlier that this research contains 14 hypothesis. Based on the findings presented in this model, it can be found that all of the values concerning the hypothesis are less than 0.05 of p value.

The findings of this research indicates that affective commitment, low alternatives and high sacrifice has a significant impact on the turnover intention. Moreover, the perceived organisational support has a significant impact on low alternatives, high sacrifice, and affective commitment. On the other hand, perceived external prestige has impact on low alternatives, high sacrifice, and affective commitment. Competitive pay and information about the organisation has a considerable and significant impact on the perceived external prestige. In addition to this, manager practices and opportunities for growth has a significant impact on perceived organisational support. Lastly, the research identifies turnover intentions to have a significant impact on organisational growth.

4. Discussion and Conclusion

This research has been conducted in an attempt to critically analyse the impact of turnover of employees at managerial level on the growth of organisation. For this purpose, different variables were discussed such as affective commitment, competitive pay, high sacrifice, perceived organisational support, perceived external prestige, and low alternatives. The results of this research has concluded that all of these factors have a significant impact on the turnover intentions of an employee which eventually impacts the growth of the organisation.

Affective commitment has found to have a significant impact on the turnover intention of the individual. It is further emphasised in the research of Kim (2014) that affective commitment of an individual reflects his attachment with the organisation he has been working in. It involves the stability, belongingness and devotion he experiences within the premise of organisation, which are all linked with his experience, organisational structure, and personal traits.

It has been concluded that affective commitment, high sacrifice and low alternatives are significantly impacted by the perceived external prestige. Perceived external prestige is known for its ability to promote the perception of an employee towards the job and environment of the organisation. As noted in the research of Ojedokun, Idemudia and Desouza (2015), perceived external prestige cause employees to perceive their jobs positively while considering the environment of other organisations under a negative life. This in return adds satisfaction and reduces the turnover intention of the employee. Furthermore, the research of Gunalan and Ceylan (2014) indicates that employees with a positive perception through perceived external prestige often are willing to make high sacrifices and project commitment with the organisation.

The research finds that competitive pay has a significant impact on the perceived external prestige. It is so because most of the employees seek satisfaction in knowing that their organisation is known for better packages and wages (Nica, 2016). Therefore, there is a positive impact of competitive pay on minimizing the turnover intention of employees if the perceived external prestige is positive as well. This is so because perceived external prestige is associated with the firm’s reputation outside its organisational structure, which further increases the satisfaction of its employees.

Furthermore, the research of Ojedokun, Idemudia and Desouza (2015) have highlighted that the said reputation can be regarded as a perception of other people about the organisation, including clients, customers, family members and friends working in other organisation. Reputation of the organisation is built over the passage of time and can be reflected through the feedback received from investors, stakeholders, and audience. According to the research of Tuna et al (2016), media and other sources can help employees get the information about organisation that contributes in the perceived external prestige if the reputation is positive. It has also been evident through the findings of this research.

The results conclude that managerial practices and opportunities for growthhave significant impact on the perceived organizational support. Even though perceived organisational support is the collaboration of various elements like the support of supervisors, fairness within the workplace, and perception of the organisation; the research of Dhar (2015) suggests that managerial practices indicate the amount of care and value an organisation has towards its employees. Also, a supportive environment within an organisation is likely to challenge the employees for betterment with each passing day. The research of Kang, Gatling and Kim (2015) also indicates that a perceived organisational support also involves acknowledgement of hard work and reward system, which guarantees the opportunities for growth and hence reduces the turnover intentions of employees.

The findings of this research indicates that perceived organizational support has a significant impact on the affective commitment, high sacrifice and low alternatives. The research of Casimir et al (2014) finds that affective commitment plays the role of mediator when it comes to the evaluation of perceived organisational support and its impact on the turnover intentionof employees. It implies the perception of an employee towards an organisation that cares for their safety and wellbeing. The findings also indicate that employees that experience higher levels of perceived organisational support have higher affective commitment, as they experience high sense of belongingness with the organisation. Moreover, higher perceived organisational support also related to the high level of sacrifice the person has to endure when he decides to leave the company. It is even more significant if there are low or no alternatives (Shuck et al, 2014). Therefore, it can be concluded that high perceived organisational support is associated with the lower intentions of turnover among employees.

As discussed earlier, high Sacrifice and low alternatives have significant impact on the turnover intentions. The research of Allen (2017) discussed that high sacrifice is often linked with the continuance commitment, which compels the individual to stay in the company because of low alternatives. Hence, it can be said that higher sacrifice as well as low alternatives causes reduction in turnover significantly. This is so because an employee considers the estimated cost against the benefit he might seek psychologically or materialistically when leaving the organisation. Similarly, the research has found that employees who have low alternatives are likely to stay in the organisation for a longer period of time. Therefore, low alternatives for an employee can significantly lower their turnover intentions.

The research concludes that turnover intentions has a significant impact on the organizational growth. However, the impact experienced is often negative for the organisational growth (Abbas et al, 2014). This is due to the fact that new employees, even at the managerial level, require time to pace and adjust within the organisation. It disrupts the cycle of operations and in some cases, the turnover of talented and skilled employee cost company time and effort which could have been used to achieve organisational goals.

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Effect of Recruitment & Selection on Task Performance with the Mediating Role of Organization Politics: An Empirical Evidence from Public Sector Hospitals of Karachi

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Abstract:

This paper has examined the effect of recruitment & selection on task performance along with the mediating role of nepotism in the relationship between recruitment & selection and task performance in the public sector hospitals in Karachi, Pakistan. The study is explanatory for which the deductive approach was adopted for testing hypotheses. First-hand information from 384 respondents was collected through a questionnaire survey. The gathered data was analyzed through statistical tools using SPSS and AMOS. Analysis of the data indicates that 'recruitment & selection' has a direct effect on task performance and it is positively linked to nepotism, which in turn leads to better task performance among employees working in public sector hospitals. The study is considered quite helpful for the management of the healthcare sector to evaluate the effect of existing recruitment & selection practices and develop strategies to further improve the same. The study is also useful for academia and other service sector organizations.

Keywords: Recruitment & Selection, Organization Politics, Nepotism, Task Performance, Social Exchange Theory.

1. Introduction

In the field of management, researchers have viewed the occurrence of organizational politics with diverse meanings that are chosen by its usage in different settings. For illustration, in a setting of public-sector, politics is delineated as a means to accomplish the anticipated consequences which are provoked through the vested benefits of higher-ups (Kacmar & Baron, 1999). Contrary to this, Hudson & Claasen (2017) viewed politics as a practice of giving a privileged treatment by superiors to family members via using power to favor their close ones. Correspondingly, Ali & Brandl (2017) have argued that the practices of nepotism in public sector institutions affect the implementation of HR functions due to the use of excessive power. On the other side of illustration, according to Hasan & Sultana (2014), in the private sector, workers due to having a special power or political view are being preferred by higher management during the implementation of HR practices based on partiality i.e., nepotism & favoritism. In line with the presence of this phenomena, Faisal & Jafri (2017) and Pelletier & Bligh (2008) explicated that a violation of merit criteria in employment exists which is allied with authority abuse to make the discretionary decision related to HRM practices towards the favored ones and it is well-thought-out as a dimension of corruption and politics within the organization. Congruently, Erden & Otken (2019) elucidated that nearly

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all decisions linked to HR practices have been affected through nepotism (politics) within an organization which in turn affects the performance of employees.

Nowadays, researchers are paying more attention to nepotistic activities prevailing in the organizations which are considered as a way of giving privilege treatment to relatives by using power rather than on performance criteria (Abubakar, Namin, Harazneh, Arasli, & Tunç, 2017; Seçilmiş & Uysal, 2016). Furthermore, in the literature, researchers have also expounded that nepotism is considered as the easiest means to attract the workforce while the presence of this practice is not an illicit act unless it is intricate with differentiating individuals based on different aspects of diversity (Fields & Cheeseman, 2016). Additionally, this practice has positive outcomes in the form of high performance due to having a positive relationship with management (Nelton, 1998). Besides, mixed evidence found in the literature regarding nepotism and performance of employees, for instance, nepotism can positively affect the work outcomes (Gok & Ekmekci, 2015; Ishaq & Zuilfqar, 2014; Nadeem, Ahmad, Ahmad, Batool, & Shafique, 2015; Pearce & Huang, 2014). Whereas Ombanda (2018) found that nepotistic practices affect the performance of employees negatively. On the other side, employees also believe that nepotism (kinship) in organizations affect the implementation of HRM practices as well as the individual performance and organizational productivity (Pearce & Huang, 2014; Sidani & Thornberry, 2013).

One of the most leading issues organizations are facing today is nepotism, whereas the understanding of such phenomena within organizations perhaps serves to anticipate the consequences of this conduct on the relationship between HRM practices and employee performance (Alreshoodi, 2018; Elbanna, 2010; Haroon, Hussain, & Nawaz, 2017; Sadozai, Zaman, Marri, & Ramay, 2012). Nepotism has now become a more widespread phenomenon in developing countries also. That is why we can observe the prevalence of nepotism with different notions among different countries such as guanxi in China (Dunfee & Warren, 2001; Ledeneva, 2008), clanism in Kazakhstan (Minbaeva & Muratbekova-Touron, 2013), Wasta in the Middle East (Tlaiss & Kauser, 2011), jaan-pehchaan in India (McCarthy et al., 2012) and nepotism & favoritism (sifarish) in Pakistan (Islam, 2004; Mangi, Jhatial, Shah, & Ghumro, 2012; Sarwar & Imran, 2019). Additionally, nepotism has now become an endemic in Asian countries which perhaps supports the association between employee and employer (Andrews, Nimanandh, Htun, & Kantabutra, 2019).

Keeping in view the above-mentioned arguments, the incidence of the preferential treatment by an influential person has become an indigenous issue in the health care sector of Pakistan, especially during the hiring of individuals which subsequently affects the motivation, behavior, and performance of human resource (Ali, 2013; Jooma & Sabatinelli, 2014; Willis-Shattuck et al., 2008). Besides, employees always protest about the existence of nepotism during the recruitment & selection process in the health care organization of Pakistan (Mahmood, 2014; Ousat, 2017; The Sindh Times, 2018) which in turn affects the overall performance of organizations. Moreover, regardless of the growing concerns by management researchers regarding organization politics in the form of nepotism, no study is available in the current literature related to public sector hospitals which inspected the mediating role of organizational politics on the relationship between recruitment & selection and task performance.

The current study aims to address this gap by considering recruitment & selection as one of the main HRM practices as the predictor while task performance which is one of the dimensions of employee performance is taken as an outcome variable. Besides, nepotism is considered as a mediating (intervening) variable in the current study which is the dimension of organization politics and also specifies how this mechanism can be explained by social exchange theory (Blau, 1964). Therefore, this study highlights the effect of recruitment and selection on task performance of employees in a public sector (health care) context and it also explains a more nuanced view about how the practices of recruitment and selection via nepotism translate into task performance from the viewpoint of employees as researchers proposed that this link need to be inspected (Sarwar & Imran, 2019; Tabiu, Pangil, & Othman, 2016). Therefore, the subsequent objectives were put forth:

- To investigate the effect of recruitment & selection on task performance.
- To analyze the mediating role of nepotism in the relationship between recruitment & selection and task performance.
- To examine how this mechanism can be explained using social exchange theory.

2. Hypotheses Development

2.1 Recruitment & Selection and Task Performance

A process through which an organization generates a pool of candidates is defined as recruitment whereas selection is a process of assessing the skills and capabilities of the applicants to choose the best suitable candidates for the available positions (Rees & French. 2013). Nabi et al. (2014) asserted that the elementary feature of recruitment is to draw the pool of applications while the elementary feature of selection is getting the right person on the job. Likewise, careful execution of the recruitment & selection process can result in better management as well as the performance of human capital (Stiles & Kulvisaechana, 2003). Similarly, Gupta & Jain (2014) also explained that the recruitment process is essential for an organization to continue its operations and succeed in the short to medium-term through identifying competent individuals while the selection process is led in the organization to offer candidates for employment, those who are not part of the service. Besides, the strength or weakness of an organization comes from the competence of its personnel, and to attain this purpose organizations executes virtuous recruitment & selection to attract the right and qualified employees (Adam, Ogolla, & Maore, 2017) that can help in improving the effective functioning of an organization and individual performance as well.

In the contemporary world, task performance is well-thought-out as a vital factor of individual performance for any organization. According to Carpini, Parker, & Griffin (2017), task performance can be delineated to meets the designated expectations effectually towards the job. Consistently, Harzer & Ruch

(2014) explained that job performance can be delineated as task-related performance i.e., doing job-specific tasks. In the same way, Borman & Motowidlo (1993) defined task performance as the efficiency of a worker to perform actions or behaviors that supplement towards attaining the goals of the organization or by providing the required facilities to perform the specific responsibilities that employees are selected to perform. Also, to maximize the task performance implementation of HRM practices play a substantial role through which an organization can accomplish the desired goals by motivating employees intrinsically & extrinsically (Yousaf, Yang, & Sanders, 2015). Thus, it becomes critical for organizations nowadays to continually execute the HRM practices especially hiring & selection based on impartialities which can lead to an increase in a satisfactory level of task performance (Mastura, Imam, & Osman, 2013; Weldegebriel, Ejigu, Weldegebreal, & Woldie, 2016). Indeed, task performance is well-thought-out a vital component of individual performance for organizations.

Mokaya, Mukhweso, & Njuguna (2013) gives the sights that it is imperative for organizations to comprehend the execution of recruitment as well as the selection process to attract & select the individuals with relevant experience, education, and capabilities to attain a higher level of performance related to assigned tasks and responsibilities. Consistent with the extant literature, around the world many organizations have been concerned about the execution of recruitment & selection practices as it can eventually influence the performance of an individual related to the assigned task. Likewise, Babagana (2014) elucidated that human resource practices such as recruitment & selection practices are critical for the improvement of assigned (task) performance by employees. Consequently, based on arguments offered in the aforementioned paragraphs, the subsequent hypothesis was anticipated:

Hypothesis 1: Recruitment & selection has a positive effect on task performance.

2.2 Nepotism as a Dimension of Organization Politics

Holm, Westin, & Haugen (2017) explained that nepotism or kinship is considered as the core factor of social power in the past and it is still pertinent today to prefer family contacts into places of living as well as in working setup for the selection and employment followed by distribution of resources, learning, along with a performance of related job tasks. Correspondingly, Hotho, Minbaeva, Muratbekova-Touron, & Rabbiosi (2018) regarded that nepotism is nowadays a common display in organizations around the world. Moreover, Seçilmiş & Uysal (2016) have avowed that nepotism occurs at the workplace when a manager uses the power to prefer some employees over others irrespective of their knowledge and experience for the given position. Also, Pelletier & Bligh (2008) stated that nepotism is well thought-out as one of the displays of organizational politics that perhaps relevant in apprehending the employee perceptions linked to the practice of showing preference to family members during the deliberations of hiring within an organization. Therefore, giving privileged treatment to family members by superiors via using politics has primarily become a prevalent practice in the organization (Hudson & Claasen, 2017).

2.3 Link between Recruitment & Selection, Nepotism, and Task Performance

Currently in organizations recruitment practices have shifted largely from principles of meritocracy which built on education and experience towards factors such as nepotism, political support, and ethnicity (Okeke-Uzodike & Subban, 2015) these factors can have a harmful effect on the recruitment process and performance of an individual. Likewise, Otoo, Assuming, & Agyei (2018) affirmed that in the public sector recruitment and selection practices mainly depend on the reference as a key mode of employment along with delays after interviews can lead to generating a perception related to partiality or bias in recruitment & selection process among applicants. Hitherto, recruitment, as well as a selection process, is affected by nepotistic practices (Mahesar, Chaudhry, Ansari, & Nisar, 2016). Also, researchers explicated that nepotism is considered as the easiest means to attract the workforce and sometimes it produce positive outcomes (Nelton, 1998), so nepotism is not an illicit act unless it discriminates competent people to enter the organization based on the facets of diversity (Fields & Cheeseman, 2016).

Subsequently, investigators unveiled that nepotism can positively affect the work outcomes (Nadeem et al., 2015), while the effective implementation of recruitment and selection practices can lead to augment the performance at individual as well as at the organizational level positively as it is stated by Ekwoaba, Ikeije, & Ufoma (2015). Furthermore, based on Blau (1964) social exchange theory, people respond in a manner as they are treated. For instance, positive actions have been retorted positively on one side, whereas on the other side of the continuum negative actions or behaviors have been negatively answered. Similarly, Martin, Guillaume, Thomas, Lee, & Epitropaki (2015) stated that positive exchange between a supervisor and subordinate is associated positively with citizenship behavior as well as task performance.

In the current literature, mixed evidence found related to nepotism and performance of employees such as Ombanda (2018) found that nepotism can have a detrimental effect on employee performance. Contrasting to this, Altındağ (2014) found no direct effect of nepotism on the performance of employees. On the other hand, Amjad et al. (2015) found that workplace relationship has a positive effect on task performance. Though we did not find any study in the current literature related to public sector context which inspected the mediating role of organizational politics from the viewpoint of nepotism, yet, we found limited studies that were based on parallel arguments. For the case, Nabi et al. (2014) determined the usefulness of recruitment and selection procedures in the public-sector of Pakistan. They found that recruitment and selection effectiveness is affected by organizational politics which ultimately lead to affect performance due to the involvement of management behind politics within the organization to hire and select the preferential individuals. Therefore, based on arguments presented in earlier paragraphs, the following hypothesis was projected:

Hypothesis 2: Nepotism mediates the relationship between recruitment & selection and task performance.

3. Methodology

3.1 Sample and Data Collection

For data collection, the population of the current study comprises of public sector employees working in tertiary care hospitals located in Karachi, Pakistan. Besides, for the current study, the sample was chosen solely by stratifying the respondents by their position in the organization. Around 600 questionnaires were disseminated among employees in the public-sector hospitals. While ethical considerations were kept to conduct a study and respondents were informed that they fill the questionnaires without any fear because their data will remain confidential and it will be reported in an aggregate form. Moreover, the congregated data was evaluated using AMOS version 22 and SPSS version 25.

Besides, the questionnaire was embraced of items regarding the respondents' demographics along with the items for determining the outcome variable i.e., Task Performance, the intervening variable i.e., nepotism, and predictor variable i.e., recruitment & selection. A total of 384 questionnaires were received in (complete) form, resulting in a response rate of 64%. Moreover, among the respondents of the current study, a total of 43% female and 57% male were presented in our sample. While 35.9% of respondents were doctors, 33.9% were nurses and 30.2% were the paramedical staff. Besides, 19.3% of the respondents were under 30 years, 46.4 % were between 30 and 39 years, 22.9% were between 40-49 and 11.5 % were older than 49 years.

3.2 Measures

For a collection of data, the questionnaire was administered among respondents in the English language with 5-point Likert-type scales ranging from 1(strongly disagree) to 5 (strongly agree). Besides, pilot testing was performed among 100 employees to test reliability by using Cronbach's alpha technique. The fallouts indicate a score of greater than o .7 which is in the acceptable range. Moreover, after confirmation of reliability, the questionnaires were disseminated among the sample of the study.

For measuring recruitment and selection practices scale developed by Demo, Neiva, Nunes, & Rozzett (2012) was used containing six items while the sample items for recruitment and selection (R & S) are "Organization disseminates information about both external and internal recruitment requirements", "Organization discloses information to applicants regarding the criteria of the selection process", "Recruitment & selection process is conducted by an impartial person". The Cronbach's alpha reliability for recruitment & selection was .752.

To measure nepotism four items were used that was adopted from Büte, M. (2011) and the sample of items are as follows: "I am always cautious when talking to the relatives of hospital top management", "Hospital permitting the employment of relatives causes internal conflicts in the organization". The Cronbach's alpha reliability for nepotism was .747.

In the present study, to measure task performance six items were taken from the scale developed by Pradhan & Jena (2017) such as "I maintain a high standard of work as per job specification", "I can handle various assignments without much supervision to attain the organizational goals", "I am very passionate about my work", "I complete my tasks on time". The Cronbach's alpha reliability for task performance was .702. Besides, self-reports were used to measure the task performance of employees as Guo, Kang, Shao, & Halvorsen (2019) elucidated that employees' self-evaluation or reporting regarding their performance needs to be examined.

4. Findings

4.1 Descriptive and Correlation Analyses

The descriptive statistics, as well as the correlations of all variables, are presented in Table 1.

Table 1: Mean, Standard Deviation, and Correlation among Variables of Study (N = 384).

	Variables	M	SD	1	2	3
1	Recruitment & Selection	4.36	.623	(.752)		
2	Nepotism	4.27	.716	.784	(.747)	
3	Task Performance	4.19	.675	.695	.720	(.702)

Note. Correlation is substantial at .01 levels (two-tailed); reliabilities (alpha value) are specified in parentheses and p value < .01.

Table 1 portrays mean and standard deviation of recruitment & selection (M=4.36 & Std Dev. =0.623), nepotism (M=4.27 & Std Dev. =0.716) and task performance (M = 4.19 & Std Dev = 0.675). Recruitment & selection is correlated positively with nepotism ($r = .784$, $p < .01$) and task performance ($r = .695$, $p < .01$). Similarly, nepotism is also positively correlated with task performance ($r = .720$, $p < .01$).

4.2 Full Collinearity Diagnostics

Before testing hypotheses full collinearity diagnostic was used to test the common method bias (Kock & Lynn, 2012), as data were collected from a single source using the same instrument. Table 2 comprises of the summary related to collinearity diagnostics.

Table 2: Full Collinearity Diagnostics after Collection of Data

	Variables	VIF Value
1	Recruitment & Selection	2.85
2	Nepotism	3.07
3	Task Performance	2.28

The fallouts show in table 2 that the VIF value of all variables is less than 5 as par Rogerson's (2001) explanation that VIF value must be less than 5. Correspondingly, if all values of VIFs resulting from a full collinearity test are < 3.3, then there is no issue of common method bias that exists (Kock & Lynn, 2012). Therefore, there is no issue of common method bias in the current study.

4.3 Testing of Hypotheses

The standardized coefficient for a structural path of hypothesis 1 is presented in Table 3.

Table 3: Standardized Coefficients for Structural Path of Hypothesis 1.

Structural Path	ß	B	S. E	P-value
R & S $\longrightarrow$ TP	.695	.753	.040	***

Note. Recruitment & Selection (R&S), Task Performance (TP), *** = P < 0.001, ß = Standardized Regression Coefficients, B = Un-Standardized Regression Coefficients, S.E = Standard Error.

According to the results of the study recruitment & selection has a positive as well as a substantial effect on task performance (ß = 0.695, $p < 0.001$). Therefore, hypothesis one of this study is accepted that recruitment & selection influence the task performance of hospital employees.

4.4 Mediation Analyses using Bootstrapping

Table 4, shows the value of direct effect, indirect effect, upper & lower limits of the confidence interval of hypothesis 2 has been reported. Hypothesis 2 anticipated the mediating role of nepotism in the relationship between recruitment & selection and task performance.

Table 4: Mediation Analyses using Bootstrapping

Hypothesis	DE	IDE	LL (95% CI)	UL (95% CI)	Result
R & S $\longrightarrow$ N $\longrightarrow$ TP	.096	.112	.059	.179	Mediation

Note. Lower Limit (LL), Upper Limit (UL), Confidence Interval (CI), Indirect Effect (IDE), Direct Effect (DE), Recruitment & selection (R&S), Task Performance (TP), Nepotism (N).

The outcome of the study unveiled that the values of a lower limit of confidence interval =.059 and upper limit of confidence interval = .179 are positive and no zero exists between the lower and upper limits of confidence intervals. As per it is imperative for mediation that the values of the lower and upper limits of confidence interval should be positive or negative and there should not fall any zero between the lower and upper limits of confidence interval (Preacher & Hayes, 2008). Consequently, Hypothesis 2 is accepted that nepotism mediates the relationship between recruitment & selection and task performance. Based on the outcomes of the current study recruitment & selection has a positive effect on the task performance of hospital employees while nepotism mediates the relationship between recruitment & selection and task performance of hospital employees. Hence, the framed hypotheses of the current study were supported.

5. Discussion

The aspect of nepotism as a dimension of organization politics has received greater attention from researchers nowadays (Hotho et al., 2018; Mangi et al., 2012). Besides, structuring on the existing body of research, the current study has attempted to examine task performance as an outcome of recruitment & selection practices along with the mediating role of nepotism between recruitment & selection and task performance. Based on the fallouts of the study we found ample empirical support for the framed hypotheses. Besides, our results unveil that recruitment & selection is related positively to the task performance of employees. Consequently, our results support the notion that hiring of preferred employees tends to react positively in the form of performing the assigned task. The fallouts are in line with prior studies which argued that the execution of recruitment, as well as selection, play a crucial role in the attainment of a higher level of performance related to the designated tasks and responsibilities as elucidated by Babagana (2014) & Mokaya et al. (2013). Nepotism also mediates the relationship between recruitment & selection and task performance as the hiring and selection of individuals based on relations can have a positive effect on the performance of employees due to the preferences they receive from higher-ups than other applicants (Amjad et al., 2015; Ekwoaba et al., 2015; Nadeem et al., 2015), therefore, the outcomes of our study are consistent with results of the above-mentioned study. In line with the presence of this phenomena, a violation of merit criteria in employment exists which is allied with authority abuse to make the discretionary decision related to HRM practices towards the favored ones is viewed as a dimension of politics within the organization (Faisal & Jafri, 2017; Pelletier & Bligh, 2008). Besides, nepotism now becomes an endemic in Asian countries which perhaps supports the association between employee and employer (Andrews et al., 2019). On the other side, our results also support that the employees feel satisfaction to make a connection with higher-ups to gain benefits during the execution of HRM practices by repaying the positive favors with positive work-related outcomes especially in terms of task performance. This is consistent with the Blau (1964) social exchange theory, that people respond in a way they are treated for instance positive actions or favors have been retorted positively while on the other side of the continuum negative actions or behaviors have been negatively answered. In the same way, Martin et al. (2015) stated that positive exchange between a supervisor and subordinate is associated positively with task performance. Consistently, this argument is supported by the result of the study that human resources in Pakistan are happy with having connections or relationships in top management to survive within the organization and they try to repay this support based on the principle of reciprocity with positive outcomes in terms of task performance.

6. Conclusion

This paper has primarily engrossed at detecting the influence of recruitment selection on task performance along with the mediating effect of nepotism as a dimension of organization politics in the relation between recruitment & selection and task performance. The fallouts of the study designate that there is a strong relationship that exists between recruitment & selection and task performance of employees working in hospitals. While there is a substantial effect of recruitment & selection on task performance of employees working in public sector hospitals. Moreover, recruitment & selection has a positive impact on task performance in the presence of nepotism. It may be because the employees working in this important sector are happy to make connections with higher-ups to get the most benefits out of the relationship especially during the hiring and selection process. Therefore, people respond in a way they are treated like positive actions or favors have been retorted positively. This study is helpful for the management of the healthcare sector to develop strategies to overcome this phenomenon in the recruitment & selection process which eventually helps in amplifying the task performance of healthcare professionals.

7. Implications

The findings of our study have implications for public sector hospitals as the fallouts indicate that recruitment and selection play a crucial role in affecting the task performance of employees. The fallouts also designate that nepotism indirectly affects the relationship between recruitment and selection and task performance of healthcare professionals. It may be because the employees working in this important sector are happy to make connections with higher-ups to get the most benefits out of the relationship especially during the hiring and selection process. It is important to establish a practice of merit-based hiring and selection of employees in public sector hospitals because it is the responsibility of HR manager to hire and appoint the workforce based on education and experience rather on connections or relationships by creating a system to observe the hiring process by an impartial person who is accountable to sightsee the whole process. After all, it will be leading to affect the outcomes at the individual level, organizational level, and societal level.

8. Limitations, and Future Research Directions

The current study has the following limitations. Firstly, in our study, only one HRM practice and one dimension of employee performance were assessed. Future studies may investigate other dimensions of HRM practice and employee performance with the mediating effect of organizational politics in the form of nepotism. Secondly, future studies may investigate this study model in the private sector with a larger sample size to further widen the horizons. Thirdly, future studies may collect data from employees and supervisors to further assess the whole process.

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Psychological Impact of COVID-19 Pandemic on University Students at Karachi, Pakistan

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Abstract:

The spread of the COVID-19 pandemic across the world has shaken the economic and social sectors of life. The pandemic has not only affected these sectors but also endorsed intolerable psychological pressure on the public including the students. In this study, data was collected from university students of Karachi, Pakistan through cluster sampling using a convenience sampling technique. Generalized Anxiety Disorder Scale (GAD-7) with 7 items along with inquiry about basic information was used to assess the anxiety level of students. A total of 299 valid questionnaires were received. The results showed that 33.70% of the participants experienced mild anxiety, 19.53% experienced moderate and 18.36% experienced severe anxiety. Results of ordinal logistics regression analysis showed that students living in the district east and students staying with parents were considered protected against anxiety. Fear of COVID-19 was considered as a risk factor to enhance anxiety. Pearson correlation analysis results indicated that economic effects and their influence on daily life and delay in academic activities are positively associated with anxiety levels. On the other hand, social support was negatively associated with anxiety levels. The COVID-19 pandemic has adverse effects on the mental health of the students. This study provides implications to the policymakers that the student's mental health needs to be given priority through effective and comprehensive psychological therapy and multiple anxieties coping and solution-seeking campaigns.

Keywords

Psychological impact, COVID-19, University, anxiety, students

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1. **Introduction**

The spread of pandemic diseases is not new to human beings. History is full of such events and catastrophic happenings where humans were pushed to the walls. Is it annoyance of nature or something which human beings create for themselves knowingly or unknowingly? Such questions come to everyone’s mind under the conditions of helplessness and despair. COVID-19 is one of such phenomena where modern medical science has appeared to be exhausting its expertise despite much needed and proclaimed technological advancements (Cunningham et al., 2020).

The virus known as Coronavirus starts its journey from China as claimed by the media predominantly the western one and spreads like jungle fire almost spontaneously. Then over the period, it changed its dimensions, causes of spreads, and predictions like it are sensitive to heat and hot weather etcetera. Conclusively, it affected all dimensions of human relationships and dimensions; to include social, political, and economic, and belief systems. It is being controlled as an outcome of the enforced measures or it coming to an end by itself is again a mystery. It has affected human beings of all status, faith, color, civilization, and walks with the natural formula of equality. However, students have been impacted with more severity due to the conditions of homebound and pressure of studies under limited guidance from the teachers (Islam et al., 2020).

1.1: Problem statement

To avoid the further spread of this virus, like other countries, the government of Pakistan also decided to close schools, colleges, and universities in the first week of March 2020. Later on, the whole country had been locked down completely and remained so for many months. These measures not only affected the economy of the country but also severely affected the mental health of the general public especially medical staff, patients, and students (Dhahri et al., 2020). In Pakistan, limited studies and research have been done on the impact of this virus on the mental health of the general public that reveals a negative influence on the psychology of the masses (Islam et al., 2020; Zafar et al., 2020). Students are one of the vital elements of society that are directly affected by this virus in different dimensions. Besides this, the fear of being infected, social distancing, and death, this pandemic had severely affected not only the academic activities but also the way of carrying out academic pursuits. Students had to face uncertain academic, social, and mental challenges. These challenges and fear had a significant impact on the mental wellbeing of students (Cao et al., 2020a). The focus of the recent research regarding COVID-19 is technical so far because scientists and professionals want immediate treatment of this deadlier virus. Besides this, others are focusing on the economic impacts of this virus in the whole world and regions. Students are the chief contributors in the economic, social and cultural development of nations. Worldwide limited research studies have been conducted on the psychological impacts of COVID-19 among masses and especially on the students (Dhahri et al., 2020; Islam et al., 2020; Mei et al., 2011a). Similarly, in Pakistan one does not find much on the psychological dimensions of this virus, therefore, the aspect needs more studies and redressal of the issue comprehensively and effectively.

1.2: **Objectives**

- To study the psychological conditions of university students who have become homebound under the lockdown conditions caused by COVID-19.
- To investigate the psychological impact of COVID-19 on university students because of their study hours versus idle time situations.
- To conclude the given environments and suggest measures for the psychological health of young people.

1.3: Scope and Significance of the Study

The study takes into account the students of universities located in Karachi, their psychological conditions, and social impacts. The results of this study have tremendous practical implications regarding the provision of knowledge, cognitive, and behavioral directions. Moreover, this study provides an immediate sketch about the mental and psychological health of university students to the management and government institutions. The recent study provides evidence in this regard that family attention, social support, and psychotherapy are vital elements in the rehabilitation of students' mental health (Ye et al., 2020). Besides this, this study is helpful in the theoretical contribution towards the field of psychology and also provides an insight to government and the management of the university to formulate policies regarding the psychological rehabilitation of the students. The rest of the paper is designed as section two describes the literature review, section three describes the methodology, section four includes results and discussion, section five provide other statistical inferences and the final section describes conclusion and policy implications.

2. Literature Review

2.1: The Breakout and Shades of COVID-19

The world since its inception had faced dramatic and destructive tragedies along with growth and development (Gushulak & MacPherson, 2004). One of the major destructions caused to humanity has been through infectious diseases. Millions of people have died with such type of pandemics. Similarly, an outbreak of COVID-19, a coronavirus disease caused by the virus SARS-CoV-2 emerged in the city of Wuhan, China in December 2019 as reported by media especially the western channels (Cao et al., 2020). Numerous patients associated with seafood and animal markets in the city of Wuhan, in central

China, presented with an acute respiratory tract illness in the last week of December 2019 (Son et al., 2020).

2.2: Diagnosis of Chinese Health Officials

In the first week of January 2020, Chinese health officials diagnosed novel coronavirus (2019-nCov) as a source of this infection (Patel, 2020). This type of virus has never been detected earlier in humans and even in animals. Genetic information studied among these patients was significantly similar to that of bats. Soon after this breakthrough, the virus was renamed SARS-CoV-2 because it caused severe acute respiratory syndrome among the presented patients. SARS-CoV-2 share approximately 79% of its genetic sequence with subgenus Sarbecovirus (Beta-CoV lineage B), however, it is much more different to MERS-CoV responsible for Middle East respiratory syndrome which is a member of Merbecovirus subgenus. All the viruses belong to a subfamily called Orthocoronavirinae and come under the Coronaviridae family(Xu et al., 2020).

2.3: Symptoms and Causes

This disease causes severe acute respiratory syndrome which ultimately leads to death in most of cases. Moreover, the virus spreads among people through physical contact. A study conducted in China reveals that the nature of spread causes severe pressure on the governments, medical professionals, and the general public (Pan et al., 2020). Isolation, physical distancing, and staying at home are the only remedy suggested by medical professionals and scientists so far. The world has been locked down by this virus and approximately more than 2.5 million people have been affected and approximately one lakh eighty thousand have died so for, more deaths and infections are expected in coming months. On the other hand, in Pakistan, approximately ten thousand people have been infected and more than 200 have died so far (*Corona Stats - Google Search*, 2020). More deaths and infections are expected in Pakistan as well.

3. Research Methodology

3.1: General Anxiety Disorder Scale

The General Anxiety Disorder Scale (GAD-7) consisting of 7 items has been used for this study. This scale is widely used to screen and detect anxiety disorders and especially developed to detect patient health.

3.2: Population and Sampling Technique

The population of this study is university students of Karachi, Pakistan. We selected university students as our respondents because (1) they have more awareness regarding COVID-19 severity, (2) they are more conscious about their future and can present well interpretation of their concerns, (3) earliest completion of the degree is the prime target of every university student and due to COVID-19 their education delayed and they have to pay in terms of money and time. Cluster sampling followed by convenience technique was adopted to collect the data. District east of Karachi was selected randomly among the six districts of Karachi. A list of districts was obtained from the official website of Karachi Municipal Corporation. Data has been collected from the students who are enrolled in universities situated in the district east. Students from different districts of Karachi are enrolled in these universities so we compare the mean scores in our analysis and interpretations. A structured questionnaire was distributed among students to gauge their mental wellbeing.

3.3: Measurement Scale

The survey questionnaire consisted of four sections. The first section inquired demographics information of respondents followed by section two comprising of General Anxiety Disorder Scale (GAD-7) which consisted of 7 items. The scale encompassed the symptoms and frequencies of occurrence of these symptoms among the students during the preceding two weeks. Respondents were asked to respond on a Likert scale. The total score of GAD-7 ranges from 0 to 20 and known as a strong screening scale with extremely good internal consistency (Toussaint et al., 2020) was used.

3.4: Data Analysis Tool

Data were analyzed using SPSS Version 22.0. Descriptive analysis was conducted to measure the demographic characteristics and some other characteristics associated with respondents. Parametric tools were used to conduct the uni-variate analysis to evaluate the significant relationship among sample characteristics and level of anxiety during the COVID-19 pandemic. Multivariate analysis was conducted through regression. To measure the strength of the relationship, the Pearson's correlation coefficient was used to illustrate the association.

4. **Results and Discussion**

4.1: **General characteristics of the study population**

There have been 299 respondents out of those, 184 (61.5%) were male and 115 (38.5%) female. The majority of them have been from Bahria university 140 (46.8%) followed by SZABIST 136 (45.5%) and others 23 (7.7%). Approximately 83.3% were students and 16.7 were faculty members and most of them belong to the management sciences department 81.9 %. Approximately 41 % were from district east followed by district south 25.4 % district west 10.7 % district Malir 9% district North 8.7 % and district Korangi 4.7 %. Besides this 93.6 % were living with their families.

4.2: Anxiety Level

Anxiety level among university students and faculty members during the COVID-19 pandemic is shown in the table below. Table 1 shows the level of anxiety among students and faculty members of universities. The majority of them have mild anxiety levels 100 (33.70) followed by normal 85 (28.7%), moderate 58 (19.53), and severe 55 (18.36). our findings in this regard are consistent with the previous studies conducted to measure anxiety and depression among students (Dhahri et al., 2020; Islam et al., 2020; Zafar et al., 2020).

Table 1: Students and faculty members with different anxiety level (n=299)

Anxiety level	Number	Ratio
Normal	85	28.7%
Mild	100	33.70%
Moderate	58	19.53%
Severe	55	18.36%

4.3: Factors affecting the student's anxiety level during COVID-19 pandemic

Table 2 shows the relationship between demographics and level of anxiety. Students living alone have a significant effect on anxiety. The students living apart from family has increased anxiety level ($P <$ .05). On the other hand, all the other demographic parameters have an insignificant effect on anxiety ($P >$ .05). Besides this, 24.4% of male students and 16.1% of female students have mild anxiety. 19.1% of students of Bahria University, 19.4% of students of SZABIST found to be mildly affected by the anxiety. Between faculty and students, 37.5% of students feel mild anxiety. Students of management sciences felt mild anxiety (34. 5%). A mild level of anxiety is noted among the students of district east (16.4%). A recent study conducted by Zafar et al. (2020) observed the anxiety and depression level among the general public, health professionals, and medical students in Pakistan and found that the females and general public having least awareness of COVID-19 have more anxiety and depression as compared to health professionals, medical students, and young people.

Table-2: Relationship between demography and anxiety level

Variable		Total	Anxiety level				P-value
			Normal.	Mild	Moderate	Severe	
Gender	Male	184	22.8%	24.4%	11.7%	2.6%	.739
	Female	114	13.4%	16.1%	7.3%	1.3%	
University	Bahria,	140	16.7%	19.1%	8.3%	2.6%	.403
	SZABIST and	135	14.7%	9.4%	9.0%	1.3%	
	Others	23	3.0%	2.3%	1.3%	1.0%	
Position	Faculty	50	7.3%	3.35%	4.6%	1.3%	.393
	Student	248	28.5%	37.5%	14.4%	2.6%	
Department	Management Sciences	244	28.8%	34.5%	15.1%	3.3%	
	Social	11	1.3%	1.3%	1.0%	0%	
	Sciences	5	.67%	.33%	.33%	.33%	.474
	Computer	4	.33%	.33%	.33%	.33%	
	Sciences					.33%	
	Humanities	6	.67%	.33%	.67%	0%	
	Engineering and Others	28	3.3%	3.5%	2.3%		
Region[b]	East	123	13.4%	16.4%	8.3%	2.6%	
	South	76	10%	16.1%	4.0%	.67%	
	North	26	2.6%	3.9%	2.0%	.33%	
	Malir	27	2.0%	5.05	2.0%	0%	.260
	Korangi	14	2.1%	.67%	2.0%	0%	
	West	32	5.3%	.67%	3.9%	.33%	
Steady income[a]	Yes	252	31.5%	33.9%	15.7%	3.3%	.408
	No	46	4.7%	6.7%	7.0%	1.3%	
Living with family[a]	Yes	280	37.5%	33.5%	20.1%	2.6%	.012
	No	18	.67%	2.7%	.68%	.73%	

[a] Independent sample t-test [b] One way ANOVA

4.4: **Correlation Analysis between COVID-19-Related Stressors and Anxiety**

Table-3

Related stressors	Anxiety level	
	R	P
Worry regarding economic influence	.207	.000
Worry regarding academic delays	.172	.003
Influence on daily life	.062	.298
Social support	-.181	.002

Table 3 shows the outcomes of the correlation analysis between the COVID-19 related stressors and anxiety level. The results of the correlation analysis revealed that the worry regarding the economic influence of the pandemic was positively associated with the anxiety level of the college students (r= .207, P < .000). Besides this, worry regarding the academic delays also positively associated with the anxiety of college students (r = .172, P < .003), and the effect of the COVID-19 on daily-life (r = .062, P < .298) was not significantly associated with the anxiety level. Moreover, the results suggested a negative association between social support and anxiety symptoms of college students during the COVID-19 outbreak. (r = -

.181, *P*< .002). The findings of this study are also consistent with the recent study conducted by Coa et al. (2020) in China. They found that the delay in academic activities due to COVID-19, economic effect, and the influence of COVID-19 on daily life activities are positively related to anxiety levels.

4.5: Ordinal Regression Analysis among Factors of Anxiety

The outcome of ordinal regression analysis of parameters related to anxiety level among the university students during the COVID-19 pandemic is presented in table 4. Some of the important and influential factors are included in the ordinal regression analysis. Significance value P= .004 in the model fit table reveals that the ordinal regression analysis values of at least one or more variables are found statistically significant. Significance value P=.005 in the goodness of model fit indicates a good model fit for this study. Hence, χ^2=256.021,p=.000 found in the test of parallel lines table reveals a weak model fit with the experiential values. On the other hand, results in table 3 showed that students living in district east as compared to other districts were found safe against the depression and experienced by the respondents as: (OR=.733 at 95% confidence interval=.052, 1.14). The students living with family (OR= -1.192 at 95% confidence interval= -.2.039, -.350) and fear of COVID-19 infection (*OR* =.922 at 955 confidence interval=.281, 1.56) were also found safe from anxiety. Our findings are consistent with the recent study that also showed a higher level of depression and anxiety among older students and students who provide tuition in the pre-pandemic period (Islam et al., 2020). Similarly, the study of Zafar et al. (2020) also supports our findings by providing evidence of higher depression and anxiety among females, occupations, and individuals ≤30 years.

Table-4 Results of Ordinal logistic regression analysis of factors affecting university student's anxiety level

Factors	Number	SE	OR	P-Value	OR (95%CI)
Region					
East	123	.348	.733	.035	.052, 1.14
South	75	.368	.308	.402	-.413, 1.03
North	26	.463	.675	.145	-.232, 1.58
Malir	27	.459	.754	.100	-1.45, 1.65
Korangi	14	.559	.105	.851	-991, 1.20
West	32	-----	-----	------	------
Steady income					
Yes	251	.283	-.334	.238	-.889, .22
No[a]	26	-----	-----	-----	-----

Living with family					
Yes	279	.430	-.1.192	.006	-2.039, -.35
No[a]	18	-----	------	-----	-----
Fear of COVID-19					
Yes	33	.327	.922	.005	.281, 1.56
No[a]	264	-----		-----	-----

SE Std. Error OR Odds ratio CI Confidence interval a: reference group

5. Statistical Inferences

5.1: Incubation Period

All the diseases have some major impacts on different sectors of life but the impact made by epidemic and pandemic are remarkable. Similarly, the outbreak of COVID-19 has made a huge impact on different sectors of life all over the world. The outbreak of COVID-19 is the same as SARS CoV and MERS-CoV but the symptoms are different. However, the mode of transmission is similar but faster than the SARS Cov and MERS-CoV. The incubation period of COVID-19 is 14 days and manifestation includes cough, fever, and flue. COVID-19 had locked down the entire world and creates economic shutdown and fear among the public. Besides this, the fear and worry created by this virus among students have some major psychological impacts (Mei et al., 2011b)**.**

5.2: Psychological Impacts and Anxiety

The psychological impacts and anxiety created fear and concern regarding academic delays and online learning issues. The primary objective of this study was to measure the anxiety level of university students and the factors that affect the level of anxiety. The results of the study showed that 79.59% of the students have been influenced by the anxiety caused by COVID-19. Among them 33.70 % feel mild, 19.53% feel moderate and 18.36% feel severe anxiety. This study is consistent with a recent study conducted in China by Cao et al; (2020). However, the percentage of anxiety among students is much higher in Pakistan as compared to China. The anxiety among university students is because of the effect on coursework, future employment, and social distancing among students and faculty members (Cornine, 2020). Moreover, the lack of idea sharing, problem sharing, interpersonal communication, and personal sharing is also factors of anxiety among the students (Kmietowicz, 2020; Xiao, 2020)**.**

5.3: Anxiety Issues of Pakistan

In Pakistan, the higher percentage of anxiety among students is because of the rapid increase in the number of patients across the country, presence of suspected patients, and inconsistent government policies regarding the COVID-19 as also highlighted by Bao and others (2020). The shortage of protective surgical and medical equipment, breathtaking and irresistible, and fake news regarding COVID-19 further deteriorated the anxiety level among students (Ayittey et al., 2020). The statistical analysis also indicated that students living alone had a significant effect on anxiety levels. The students living away from families had increased anxiety levels ($P < .05$). On the other hand, all the other demographic parameters have an insignificant effect on anxiety ($P > .05$). No significant difference in means score in gender and other parameters contradicting the previous studies (Moreno et al., 2019).

5.4: **Area Specific Analysis**

Results of ordinal regression analysis showed that students living in the district east of Karachi are protected from anxiety as compared to other regions. The reason appears to be better economic health, cultural and educational facilities. District east is comparatively better in social and health facilities. Hence, the region with better economic facilities provides residents a much prosperous social and security needs. Besides this, the infrastructure of the district east is much better than other regions especially the planning of residential and commercial areas which helps maintain the social distancing among residents. The availability of educational institutes also contributes to the awareness regarding the prevention of the pandemic (Tang et al., 2020). Another favorable factor that is helpful against anxiety is family support and living with family. Students living with family have experienced less anxiety. Existing researches suggest that anxiety, depression, and emotional disorders among children and adults are because of psychological reasons state of being away from their families.

5.5: Economic Implications

Results of correlation analysis among the COVID-19 stressors showed a positive association among economic effects, effects on daily life and academic delays, and level of anxiety. These findings are also consistent with previous research conducted by Kernan (2019) which showed that pandemic emergencies have a strong impact on economies, daily life routines, and educational activities. The economic shutdown across Pakistan resulted in the unemployment of many families and students experienced anxiety about their university fees. The lockdown across the country resulted in the travel ban, holidays, and closure of all activities; it has severely disturbed the daily activities of individuals. The closure of schools, colleges, and universities for an unlimited time also disturbed the daily life activities of parents and students. Online education for students at home created burdens on the parents. In the end, social support has been negatively associated with the level of anxiety and it is consistent with previous studies (Chen et al., 2020; Thompson et al., 2016). Social support reduces the stress of the population in economic shutdown and also enhances the methods of social support and influence the attitude of the public regarding social support and charity. In Pakistan social support by the organizations, government and affordable people has contributed to the reduction of stress and it was appreciated across the world. An effective and influential social support system is essential to meet the pandemics (Yin-xia et al., 2005).

6. Discussion, Conclusion, and Recommendations

A major percentage i.e. 79.59% of the students has been influenced by the anxiety caused by COVID-19. Among them 33.70 % feel mild, 19.53% feel moderate and 18.36% feel severe anxiety. Students living in the district east of Karachi were better protected from anxiety as compared to other regions. Another favorable factor that is helpful against anxiety is family support and living with family. Besides this, the fear of COVID-19 infection is another independent risk factor of anxiety. The COVID-19 concerned stressors including economic factors had adverse effects on daily life. Apprehensions of academic delays had a significant association with the anxiety level. However, social support is negatively related to the anxiety level. The study showed a psychological blow of COVID-19 on the students of universities in Karachi Pakistan. They need concentration, assistance, family, and social support along with university guidance and support. To build the students' mental health, the government, higher education commission, and universities should conduct high-quality seminars on psychological empowerment and crisis management.

Timely and accurate information regarding COVID-19 indicators is very much essential to take the public and students in confidence. Government and media should take a lead to segregate positive images and avoid spreading fake, overwhelming, and sensational news across the country. The news regarding cured patients can alleviate the ambiguity and fear among the students which ultimately reduces anxiety levels. Social media is a very important tool to enhance awareness and knowledge regarding infection. Besides this, online education in Pakistan is at the initial stage and the decision to continue courses in universities through online sources need due analysis in collaboration with the students. The infrastructure of the internet should be modified to meet the needs of the students. Moreover, students should be given compensation in studies and universities should establish a friendly environment between students and faculty members to reduce unrest of the students.

Human beings have faced many disasters since the inception of the universe. Similarly, an outbreak of COVID-19 also attracts the attention of the world. The disease has been highlighted and showed as an emergency across the world by WHO. Despite being the deadliest infection, COVID-19 is still a manageable disease all over the world and people need not be panic. To deal with COVID-19 infection, it is essential to maintain a clean and healthy daily routine. Wearing of face mask, washing hands repeatedly, and keeping a social distance can reduce the infection dramatically. The people need to understand the severity of COVID-19 and should deal with it seriously without fear, depression, and anxiety. Moreover, the policymakers need to consider the students' mental health during the pandemic period a arrange some of the online seminars to rehabilitate the mental health of students. This study like other studies has some limitations which include limited time and geographical area. Future studies can be done in rural areas with a large sample size covering a larger population.

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Country of Origin, Price Sensitivity and Customer Involvement as New Antidotes to Purchase Intention: Evidence from Mobile Phone SME's

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Abstract:

This study has observed the purchase intention of mobile phones of SME's owners in Pakistan. The theoretical framework of this examine is grounded on the theory of planned behavior model (TPB) with an addition of country of origin (COO), price sensitivity (PS) and customer involvement (CI) as moderator. Data was collected from 370 mobile phone SME's owners in Pakistan. A sample size of 370 SME's was selected by following simple random sampling technique with replacement from a population list of 10,794 SME's. The quantitative data was analyzed by applying PLS- SEM technique using a long-familiar research analysis software Smart PLS 3.0. The findings suggested that attitude and perceived behavioral control (PBC) has a substantial relationship along with purchase intention (PI) except subjective norm (SN). Moreover, COO, PS and CI moderate the relationship between purchase intention and its most of the antecedents used in the present study. However, moderation of PS was not proved between the relationships of (1) PBC and PI, and (2) attitude and PI. Similarly, moderation of CI was found insignificant between the relationship of perceived behavioral control and purchase intention. Moreover, present study is the first to instigate the country of origin, price sensitivity and customer involvement relationships with different variables to enhance the purchase intention of mobile phone brands from the point of view of SME's owners of Pakistan.

Key words: Country of Origin, Price Sensitivity, Customer Involvement, Mobile Phone

1. Introduction

According to a research study conducted by World Bank, mobile phone industry of Pakistan is growing by leaps and bounds. The aggregate tally of registered cellphone subscriptions in 2000 was just 0.03 million while in just 14 years it has reached to 13.57 million (Shaheen, Lodhi, Mahmood, & Abid, 2017) which is greater than 3.5 million in 2013 in Republic of Sierra Leone (Sam, 2017). Now, there is a gigantic increase in digit of cellular subscribers. According to a report published by PTA, this tally will cross a figure of 170 million till the end of 2020. Those enterprises that are willing to innovate their businesses are achieving results in new mobile era and those are not adopting new technologies are

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falling behind. In 2017, a research report published by GSMA intelligence having topic “The Mobile Economy- Asia Pacific 2017” explained that mobile is often the only access point in developing countries of Asia Pacific region and most of the e-commerce transactions were conducted by using this device. In this region, smart phones adoption is continuously increasing with the passage of time and by the end of 2016, half of the total connections were smartphones. In 2016, mobile technologies and services generated 5.2% of total GDP which is around US $ 1.3 trillion in economic values and this number is expected to increase in coming years. Still, 2 billion people are in this region without access to mobile data or internet.

Due to the substantial contribution to the economy, small and medium enterprises have acknowledged growing consideration of the researchers (Dar, Ahmed, & Raziq, 2017). Small and medium enterprises are essential to socio-economic development in most of the least developed countries (Kabanda & Brown, 2017). According to Dar et al. (2017), small and medium enterprises are contributing to growth of a country and maintaining the standard of life of different people in Pakistan (Dar, Ahmed, & Raziq, 2017). Another research study conducted by Khalique et al. (2015) states that almost 90 percent of the enterprises in Pakistan comprises of small and medium-sized initiatives, nearly 3.2 million small and medium initiatives are in business sector of Pakistan and their contribution to Pakistan’s total GDP is about 40 percent, giving jobs to 80 percent of the total population and 30 percent of the total exports in Pakistan. “Made in—” tag on mobile phones imported from other countries is getting more customers, sales volume of different mobile phone brands is decreasing and consumers in developing countries are very sensitive to COO effect (Yunus & Rashid, 2016). Customer’s Involvement in purchase needs to check (Hsu, Chang, & Yansritakul, 2017) and SME sector in Pakistan is less researched area (Khalique, Bontis, Bin Shaari, & Isa, 2015).

This study is clearly reflected by Yunus and Rashid (2016) and based on previous research, they proposed that consumers in developing countries are considered to be very sensitive to country of origin effect. So, in a developing country like Pakistan, it would be a timely response to fill this gap by considering a moderating variable of COO in between the relationship of PI and its antecedents. Secondly, a research study was conducted in Taiwan proposed future studies should consider consumer’s degree of involvement as a moderator between purchase intention and its antecedents (Hsu, Chang et al., 2017). This study fills this research gap also by adding a moderator of customer involvement between PI and its antecedents. Thirdly, most of the researchers found that small and medium enterprises are crucial for a country’s economic development, but few of the studies are conducted on small and medium size businesses in Pakistan (Hyder & Lussier, 2016). This study addresses this gap by considering SME’s owners. The study aims;

- To find out the relationship between purchase intention and its antecedents (Attitude, Perceived Behavioral Control and Subjective Norm).

- To assess the impact of different moderating variables like COO, customer involvement and price sensitivity in purchase intention and its antecedents at an individual level.

- To shed light on mobile phones industry, not only in Pakistan but in other countries as well, this research study explains the transformational forms of mobile phones industry in the World.

The significance of this research study is threefold; one is for researchers, second is for marketers and third is for industrialists or mobile phone manufacturers in Pakistan and in the World as well. First, this research study adds to the knowledge of marketing by checking the mobile phones purchase intention of SME's owners in Pakistan and it's the first of its kind of study that has been conducted in the context of Pakistan because as per my knowledge there is not even a single study has been conducted earlier. This study also checks the moderating influence of customer involvement in between the association of purchase intention and its antecedents, which has never been examined and highlighted by researchers in China during a research study on PI of true-to-nature skincare products (Hsu, Chang et al., 2017). Moreover, mediating role of attitude amid the relationship of PBC and PI of SME's owners has checked.

Second, this research study proves a remarkable addition for marketers in Pakistan and in other countries as well. They will be able to use this study for their marketing activities, targeting to a business community in Pakistan and other parts of the world as well. Marketers will know that what are their preferences and how to target businessmen in a country. Third, this will be a value addition for mobile phone manufacturers in the World because it closely analyzes the purchase intention of business community in Pakistan and different mobile phone industrialists will be able to use this study for future strategies and decision making processes.

2. Review Related Literature

2.1. Theory of Planned Behavior

The TPB was given by Ajzen, (1991) has been used as a theoretical base to support an integrative model projected for this study. This is an addition in theory of reasoned action (TRA) with a single variable addition of perceived behavioral control (PBC). The TRA explained that the individuals are rational and motivation based in their decision making and create rational decisions among alternatives. In TBP model, Ajzen (1991) elucidated that the attitude, subjective norm and perceived behavioral control influences intention while intention further influences real behavior. In addition, as explained by Ajzen (1991), attitude refers towards person's positive or negative evaluation or appraisal behaviour towards some situation or object.

TBP has been used by various authors for different research studies. Han and Kim (2010) used TPB to observe the customer's intention to re-experience a green hotel and concluded that a friendly attitude, subjective norm and perceived behavioral control will result in an increase in possibility of reconsidering a green hotel. Kashif et al. (2015) used an extended theory of planned behavior (ETPB) framework to explore the behavioral intention of Pakistani bank employees. Despite the significance of TPB, no study is conducted to analyze the perception of SEM's owners about mobile phone brands. The study helps to investigate the businessmen perception regarding purchase intention of mobile phones in Pakistan by using TPB.

2.2. Country of Origin

The concept of country of origin (COO) branding has vast importance (Kabadayi & Lerman, 2011). Zonfagharian et al. (2017) explained that COO is a country where the product is designed, manufactured or assembled and where headquarter is located. So, COO is defined as imprints of a country that has influenced a person's assessment of that country's trademarks. Most of the consumers consider products from lower developed countries as low-quality products while products from more-developed countries are considered of superior quality (Kamwendo et al., 2014).

A research study conducted by Kabadayi and Lerman (2011), indicated that for the last four decades, the product's country of origin effect on buyer's perception, evaluation or intention has been one of the most extensively considered phenomenon in global marketing and customer behavior. COO can be stated as diverse brands of products belong to different countries and those countries that owned the brands are stated as country of origins (Brodie and Benson-Rea, 2016). Not only the consumers of developed markets but now consumers of developing markets also have a veriety of products from both home country and globe as well (Sharma, 2011). Another researcher showed the importance of COO in international business and marketing by quoting that "over the thirty-five yesteryears, approximately six hundred peer-reviewed articles had been published (Lu et al., 2016). COO is equally beneficial for organizations because when a firm seeks to expand to another international or national market and its trademark is not well-known in that specific market, country image could play a momentous role in solving selection problems of consumers (Brodie and Benson-Rea, 2016). However, in the last few years, studies on country of origin effect exists while studies that are investigating country related influences are rare in statistics (Suh et al., 2016). So, the research was conducted on individuals of SME's to know their intention regarding purchase of mobile phone brands.

2.3. Price Sensitivity

Price is a foremost driver in consumer behavior process and significant element of brand management. Price is most powerful tool than any other tools available to the marketers (Han et al., 2001). Hence, price sensitivity can be defined as that how different customers feel about paying a certain price for a product (Dominique-Ferreira et al., 2016). It's crucial for a product producer that how to price a product because price signals a product's quality (Rassenfosse, 2019).

Another term related to price is price elasticity which states the overall condition of market and didn't measure an individual's or a group's reaction to a certain price (Goldsmith et al., 2010). Irani and Hanzaee (2011) stated that most of the marketers and research scholars are aware of this term and defines it that variation in demand of a product is due to adjustments in price. If demand is elastic then impact of price change on product demand will be high and if demand is inelastic then vice versa.

Over the past two decades, pricing has been much discussed issue because of its direct influence on profits of an organization and its difficulty to estimate. Price is an important factor that influences purchase intention and behavioral intention while buying something (Kim & Kim, 2004). Abdullah-Al-Mamun and Robel (2014) explained price sensitivity as an individual's perception about prices of different products or services. They explored that a product's buying decision is mostly based on price rather than brand or accessibility. Liang et al. (2018) collected data from 395 respondents in USA and Canada and concluded that price sensitivity does not reduce customer's perceived risk but can positively influence to repurchase the products and considered price sensitivity as an important factor for consumers when evaluating something worthiness or utility. Lee et al. (2015) enlightened consumer's buying behavior for organic coffee in seven cities of South Korea. They highlighted that price sensitivity and ethical concern are emphasized moderators in the relationship between purchase intention and its antecedents as explained in TBP. Hence, the importance of price as a variable for businessmen also makes it an attractive variable to study the viewpoint of Pakistani SME's owners.

2.4. Customer Involvement

Customer involvement is defined as the amount of communication, involvement, contact and collaboration between buyers, consumers or supply chain and organization during a specific activity to portray a commercial product (Bharti & Agrawal, 2018). Involvement may vary from high involvement to low involvement. Some of the products or decisions are described as highly involved because they require complex decision making or higher in prices while others are low invovled due to their low involvement or frequent buying (Goldsmith, 2010). Similarly, mobile phone is a high involvement product and high involvement leads to broad problem-solving. Whenever individuals highly involved then they voluntarily search for problem-solving information (Huang, 2013).

The concept of involvement has appeared as a dominant paradigm of importance in consumer behavior research and due to its vast importance, this had been widely researched (Goldsmith et al., 2010). So, customers involve with a product only when they perceive a product or service addressing something importance or beneficial to them (Rahman & Reynolds, 2015). Bruwer and Huang (2012) conducted a research study to check the consumer involvement behavior for buying of wine products in

Australia and concluded that consumer’s involvement has an impact on consumer’s bring your own bottle behavior while high involvement has a direct impact on consumer’s behavior. Another research study was conducted to check the involvement of different consumers of UK in buying of wine and concluded that high-involvement consumers consume wine regularly while low-involvement consumers use to purchase wine for special events (Bruwer et al., 2014).

In business research studies, consumer involvement is related to consumer behavior which is ultimately related to purchase decision making process or consumption of the product. Consumer involvement is either high or low. Highly involved consumers search more for products information than those consumers who are low or not involved (Kautsar et al., 2012). Hence, despite the importance of this concept, there are only few studies to explain the findings of customer involvement regarding different mobile phone brands. Hence, the study tries to investigate the involvement level of individuals of different SME’s regarding different mobile phones brand in context of Punjab, Pakistan.

2.5. Purchase Intention

Purchase intention can be changed if someone blows hot and cold towards brand-named products and it varies too due to the PBC. Multinationals must concentrate on perceived behavioral attitude while customers are looking for to extravagantly outlay their incomes in purchasing trademarked products only (Son & George, 2013). Purchase behavior can also impact positively by providing strong social and commercial activities (Yin et al., 2010). Using the effective marketing strategies, companies can create a strong positive behavioral purchase intention that can be useful for a growing business (Lu, Fan et al., 2016).

Intention to purchase increases when customers are offered a good discounted price by the companies, manufacturers, retailers or shopkeepers. If companies or firms successfully gain the trust of its customers, it will lead to gain higher intention of customers to purchase. In online shopping, companies can increase customer’s purchase intention by delivering orders on time and with a good quality of products (Thamizhvanan & Xavier, 2013).

Purchase intention can also be controlled by the utilitarian values which is the most solid factor in commerce sector (Zafar & Lodhi, 2018; Gan & Wang, 2017). According to the society, customers seek for the product which fulfills the requirement of their religious obligations. If the customers are from the Islamic society, they will go for the halal products or look for the halal certifications and halal marketing (Awan et al., 2015). Electronics customer’s intention to purchase and their attitude can be influenced by word of mouth on social websites. If the words of mouth are positive, it will increase purchase intention or if words of mouth are negative it will impact negatively on purchase intention (Kudeshia & Kumar, 2017).

By involving and awarding customers about the products, a company can gain more market share and it will enhance purchase intention (Suki, 2016). Mobile advertisement can also influence the decision of a customer about the purchase of an individual product in future (Chang A. Y., 2016). Hence, customers purchasing behavior can be influenced by many factors. However, a vacuum is still existing on study of purchase intention from the perspective of SME's owners. Hence, the study fills this gap by explaining the factors that affect the behavior of SME's owners towards the purchase intention of mobile phone brands.

3. Theoretical Foundation and Development of Hypothesis

The association between attitude and purchase intention (PI) can be better explained using TPB (Kim & Chung, 2011; Hsu, Chang et al., 2017). Hsu, Chang et al. (2017) used TPB to explore the PI of organic skincare merchandises in China and concluded that attitude towards natural skincare products has a substantial positive direct effect on PI. Sethuramman and Thanigan conducted a study to examine consumer attitude towards online shopping PI and found positive relationship between attitude and PI (Sethuraman & Thanigan, 2019). Another research study concluded that attitude and PI towards buying of pirated digital media has a significant negative relationship (Casidy, Phau, & Lwin, 2016). Badrinarayanan et al. also proved a direct and total effect of consumer's attitude towards the online store of a multichannel retailer on PI (Badrinarayanan, Becerra, & Madhavaram, 2014). Based on the above discussion, it is hypothesized that;

H_1**:** Attitude has a positive effect on purchase intention.

Relationship between perceived behavioral control (PBC) and purchase intention (PI) can be studied through TPB (Hsu, Chang et al., 2017). Hsu, Chang et al. (2017) used TPB to explore the PI of organic skincare products in China and concluded that PBC has a significant positive direct effect on PI. Hsu, Chen et al. (2017) conducted a study to analyze the PI of green e-books and technology adoption, concluded that PBC has a positive significant effect on PI of e-books. Another research study conducted by Casidy et al. (2016) and concluded that PBC and PI towards buying of pirated digital media has a significant positive relationship. Based on above discussion, it is hypothesized that;

H_2: Perceived behavioral control has a positive effect on purchase intention.

The association between subjective norm and PI is significant too (Hsu, Chen *et al.,* 2017). Hsu, Chang *et al.* (2017) used TPB to explore the PI of natural skincare products in China and concluded that SN has a significant positive direct effect on PI. Hsu, Chen *et al.* (2017) conducted a study to analyze the purchase intention of green e-books and technology adoption, concluded that SN has a positive significant influence on PI of e-books. Another research study concluded that SN and PI towards buying of pirated digital media has a significant negative relationship (Casidy, Phau, & Lwin, 2016). Based on above discussion, it is supposed that;

H_3: Subjective norm has a positive effect on purchase intention.

The relationship between PBC, attitude and PI is worth important for researchers. Despite the importance of attitude as a mediator, only few studies are found to explain the role of attitude as mediator (Altawallbeh *et al.,* 2019). Literature used TPB to explain the intention of hotel customers to go to a green hotel and revealed that attitude has a mediating role in between PBC and visit intention (Han & Kim, 2010). Another research study was conducted by Altawallbeh *et al.* (2019) and concluded that attitude acts as mediator to enhance the behavioral intention to adopt the e-learning. Based on previous discussion, it is postulated that;

H_4: Attitude has a mediating effect between perceived behavioral control and purchase intention.

Further, the relationship between COO, purchase intention and its antecedents is worth-while for researchers (Hsu, Chang *et al.,* 2017). Hsu, Chang *et al.* (2017) used TPB to explore the PI of organic skincare products in China and concluded the interaction effects between the PI and its antecedents were significantly positive while this relationship is stronger when COO effect is high as compared to when it is low. Hence, the study tries to find out this relationship in the Pakistan's businessmen viewpoint. Thus, as per above discussion, it is hypothesized that;

H_5: With more positive COO;

a) The positive relationship between attitude and purchase intention will be strengthened.
b) The positive relationship between perceived behavioral control and purchase intention will be strengthened.
c) The positive relationship between subjective norm and purchase intention will be strengthened.

Moreover, it is also important to study relationship between price sensitivity, purchase intention and its antecedents (Hsu, Chang, *et al.,* 2017). The study uses TPB to explore the purchase intention of natural skincare products in China and concluded that interaction effects between PI and antecedents were significantly positive while this relationship is stronger when price sensitivity is high as compared to when it is low. Thus, as per above discussion, it is hypothesized that;

H_6: With greater price sensitivity;

a) The positive relationship between attitude and purchase intention will be strengthened.
b) The positive relationship between perceived behavioral control and purchase intention will be strengthened.

c) The positive relationship between subjective norm and purchase intention will be strengthened.

Despite the importance of these variables, no comprehensive study is found to explain the relationship between customer involvement, purchase intention and its antecedents (Hsu, Chang *et al.,* 2017) especially from the context of Pakistani SME businessmen point of view regarding distinctive cellular phone brands. So, it can be stated that

H_7: With greater customer involvement;

a) The positive relationship between attitude and purchase intention will be strengthened.
b) The positive relationship between perceived behavioral control and purchase intention will be strengthened.
c) The positive relationship between subjective norm and purchase intention will be strengthened.

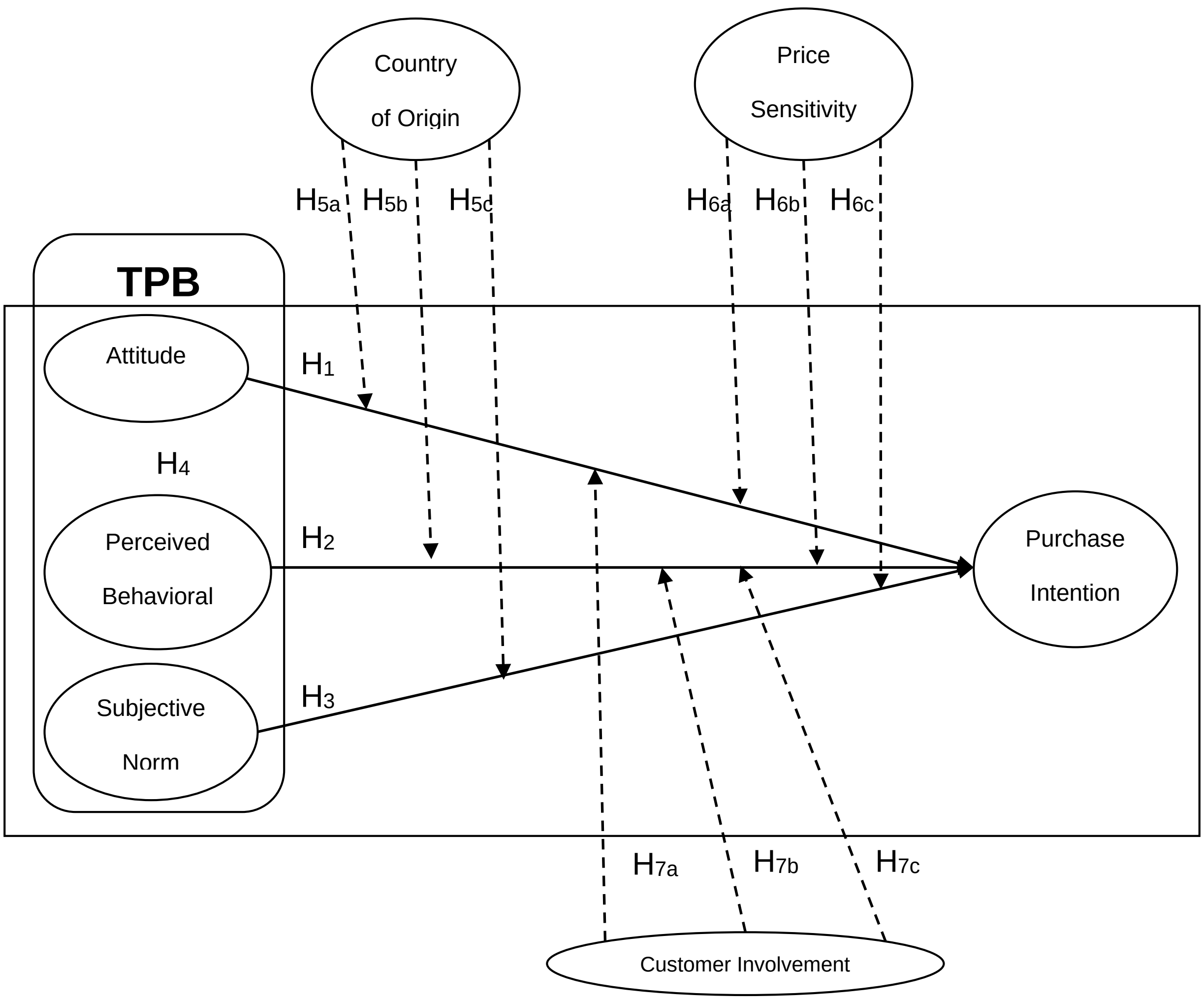


Figure 1: Theoretical Framework

Hence, all these different relationships between dependent, independent and moderating variables are tested to know the mobile phones purchse intention of small and medium enterprises owners in Punjab, Pakistan.

4. Methodology

Survey method was used to collect data from SME's owners in Punjab, Pakistan through an already established research questionnaire adapted from different research studies. The list of SME's owners provided by Small and Medium Enterprises Development Authority (SMEDA) collected by Punjab Small Industries Corporation (PSIC) was used for this study. The reason for choosing these individuals is to ascertain that the entire sample comprised of business community of Punjab, Pakistan and to know their purchasing intention in buying different mobile phone brands. The SME's owners from a final list of 10,794 were selected by using simple random sampling with replacement and questionnaire developed on Google forms were sent to them by using their mobile phone numbers through Whatsapp and few of them were targeted by personally visiting them. Incomplete data and SME's having contact numbers other than mobile numbers were excluding while choosing final respondents. Because it was not possible to individually visit each and every respondent due to the shortage of time and money. Hence, a total number of 370 useful questionnaires from total floated questionnaires of 525 were utilized for data analysis with a response rate percentage of 70.5%. Moreover, an already established questionnaire was adapted on 5-likert scale from 1. Strongly Disagree to 5. Strongly Agree.

5. Analysis and Results

5.1. Descriptive Statistics

The descriptive statistics data part in the questionnaire comprises of four questions. This information was collected regarding which of the mobile phone brand you are using now, gender, age group and education level of the respondents. The Table I reveal the descriptive statistics of the current study.

Table I. Demographics

		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Male	368	99.5	99.5	99.5
	Female	2	0.5	0.5	100
	Total	**370**	**100**	**100**	
Age	25-34	154	41.6	41.6	41.6
	35-44	33	8.9	8.9	50.5
	45-54	8	2.2	2.2	52.7
	55-64	175	47.3	47.3	100
	Total	**370**	**100**	**100**	
Education level	Postgraduate Degree	8	2.2	2.2	2.2
	Graduate Degree	213	57.6	57.6	59.7
	Bachelor's Degree	121	32.7	32.7	92.4

	Junior College/ Vocational School	28	7.6	7.6	100
	Total	**370**	**100**	**100**	
Mobile phone brand	Samsung	60	16.2	16.2	16.2
	Apple	68	18.4	18.4	34.6
	Oppo	50	13.5	13.5	48.1
	Nokia	109	29.5	29.5	77.6
	Huawei	60	16.2	16.2	93.8
	Other	23	6.2	6.2	100
	Total	**370**	**100**	**100**	

5.2. Convergent Validity

Convergent validity is a concept regarding convergence of variables and items. This concept discusses the theoretical correlation between concepts to some extent. Convergent Validity is evaluated through two main criteria i.e. factor loading values and Average Variance Extracted value proposed by Hair et al., 2014. Its discussed in literature that factor loading should have value higher than 0.7 but 0.6 is also considerable in the situation where existence of that factor did not disturb reliability of data. Secondly, AVE discuss the variance between model's variables and its value for each construct should be higher than 0.5, to show the theoretical convergence of model.

Table II. Measurement Model

Constructs	Items	Factor Loading	Average Variance Extracted	Cronbach's Alpha	Composite Reliability
Attitude	**ATT_1**	0.832	0.688	0.925	0.939
	ATT_2	0.863			
	ATT_3	0.861			
	ATT_4	0.747			
	ATT_5	0.839			
	ATT_6	0.846			
	ATT_7	0.813			
Customer Involvement	**CI_1**	0.850	0.705	0.797	0.878
	CI_2	0.815			
	CI_3	0.854			
Country of Origin	**COO_1**	0.703	0.622	0.796	0.868
	COO_3	0.807			
	COO_4	0.839			
	COO_5	0.800			
Perceived Behavioral Control	**PBC_2**	0.903	0.792	0.869	0.919
	PBC_3	0.863			
	PBC_4	0.903			
Purchase Intention	**PI_2**	0.852	0.713	0.799	0.882
	PI_3	0.844			
	PI_4	0.838			
Price Sensitivity	**PS_1**	0.772	0.700	0.786	0.875
	PS_2	0.901			
	PS_3	0.832			
Subjective Norm	**SUN_2**	0.901	0.782	0.722	0.878
	SUN_3	0.867			

The factor analysis results for loading values for items with respect to each variable is shown in Table II showing that all the variables are ideally good and above the ideal acceptance level criterion, all the factor loading values below the accepted criteria including COO_2, COO_6, PBC_1, SN_1 and PI_1 were removed for the sake of further analysis. Thus, 25 items were retained for further analysis from a total of 30 items. Next table also shows the results for second criteria of convergence which is AVE for each constuct. Here the value for each variable is well above than 0.5 show the goodness of second cruiteria as well.

5.3. Discriminant Validity

Discriminant validity is the second measure to ensure the validity test, this concept deals with the discrimination or theoretical difference between constructs and items. It's being tested through Cross loading and squareroot of AVE in Fornell-Larcker criteria to show theoretical difference between variables (Urbach & Ahlemann, 2010).

Table III. Fornell-Larcker criterion

	Attitude	Country of Origin	Customer Involvement	Perceived Behavioral Control	Price Sensitivity	Purchase Intention	Subjective Norm
Attitude	**0.829**						
Country of Origin	0.366	**0.789**					
Customer Involvement	0.362	0.677	**0.840**				
Perceived Behavioral Control	0.507	0.677	0.505	**0.890**			
Price Sensitivity	0.364	0.680	0.730	0.579	**0.837**		
Purchase Intention	0.389	0.624	0.763	0.463	0.658	**0.845**	
Subjective Norm	0.754	0.209	0.211	0.390	0.224	0.259	**0.884**

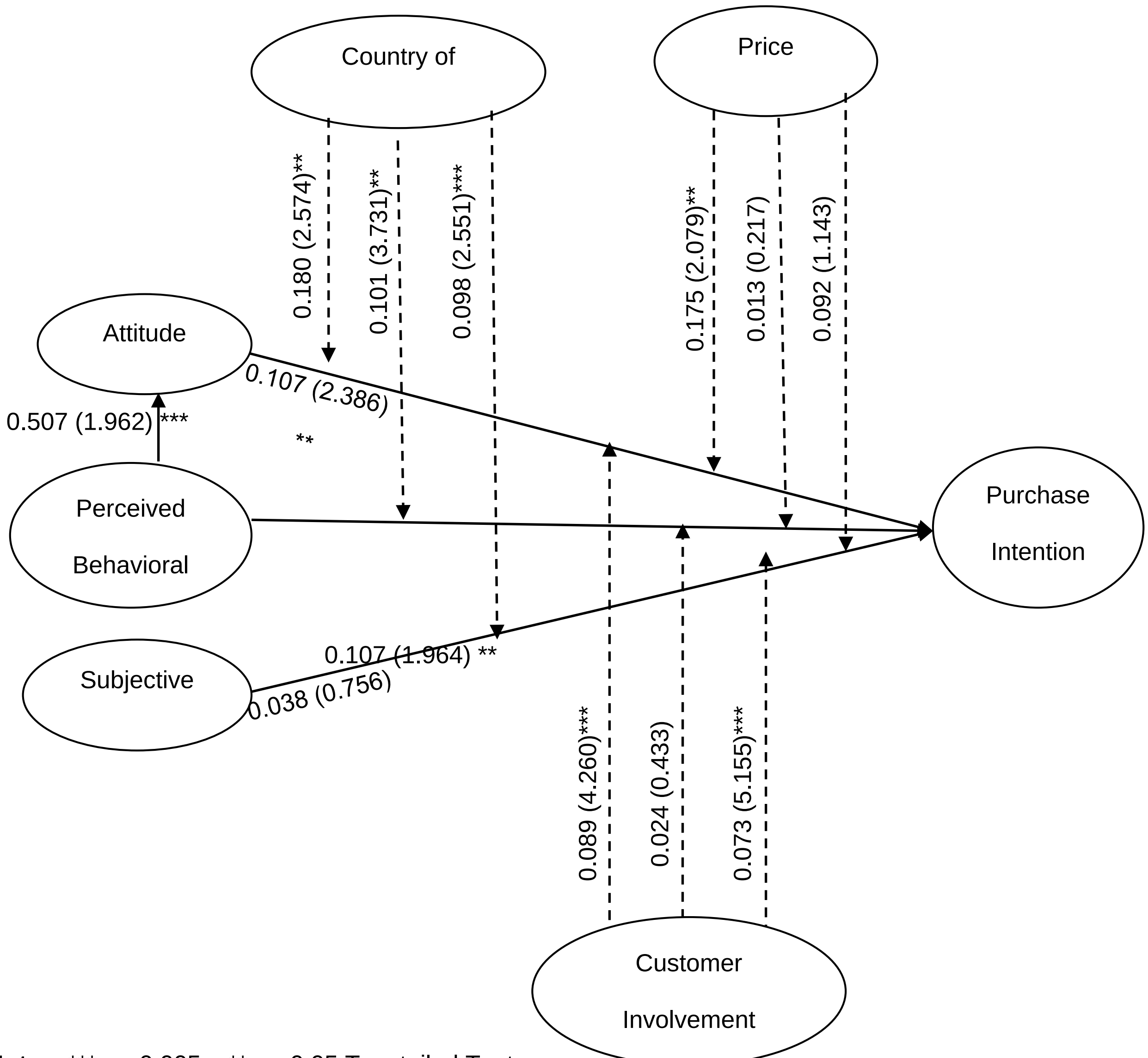
Table III shows the results regarding Fornell-larcker criteria here the threshold is that upper diagonal values of table should be maximum and higher than 0.7. This revealed that each construct have maximum correlation with its own and lesser with other or in other words it shows that each construct is different from other one.

5.4. Composite Reliability and Cronbach's Alpha

Realibility is being tested to measure internal consistance of collected data through vaious tests, here in present research its being evaluated through Composite Relaibility and Cronbach's Alpha. Empirically its discussed well thatg both of these values are considered the most essential measure to ensure relaibility of data. The value for Composite Reliability and Cronbach's Alpha should be 0.7 or greater than 0.7 (Hair *et al.,* 2014). In our research study, values of all variables are meeting the threshold value of 0.7 as shown in Table II.

5.5. PLS-SEM

Path analysis is considered to measure the path values through beta value i.e. (β) between the variables. It's also measures the moderation or mediation which is tested through SEM approach between different latent variables.



Note: p*** = <0.005, p** = <0.05 Two-tailed Test

Figure 2: PLS-SEM Structural Model

Table IV. Hypotheses Testing

Relationships	Original Sample	Sample Mean	T Statistics	P Values
Attitude -> Purchase Intention	0.141	0.140	2.386	0.017
Perceived Behavioral Control -> Purchase Intention	0.107	0.102	1.964	0.050
Subjective Norm -> Purchase Intention	0.038	0.034	0.756	0.450
CI B/W ATT & PI -> Purchase Intention	0.089	0.092	4.260	0.002
CI B/W PBC & PI -> Purchase Intention	0.024	0.021	0.433	0.652
CI B/W SN & PI -> Purchase Intention	0.073	0.072	5.155	0.000
COO Between PBC & PI -> Purchase Intention	0.101	0.103	3.731	0.014
COO Between ATT & PI -> Purchase Intention	0.180	0.179	2.574	0.009
COO Between SN & PI -> Purchase Intention	0.098	0.089	2.551	0.001
PS B/W ATT & PI -> Purchase Intention	0.175	0.181	2.079	0.038
PS B/W PBC & PI -> Purchase Intention	0.013	0.012	0.217	0.829
PS B/W SN & PI -> Purchase Intention	0.092	0.088	1.143	0.254

Here the relationship between all variables i.e. direct, mediation and moderation impacts are demonstrated in Figure 2 and Table IV. Table IV shows the result of bootstrap path analysis to test the significnace of proposed hypotheses through T statistics and P values. Accordingly, the value of T Statistics should higher than 1.96 and P value should be lesser than 0.05 at 95% confidence level or 5%error chance (Hair Jr, Hult, Ringle, & Sarstedt, 2014).

Values for impact of attitude on purchase intention are (β=0.141, T-Statistic=2.386 and P-Value=0.017) shows 14% significant impact, the T-statistics value being 2.386 and P-value being 0.017, both meeting the threshold criterion i.e. T-statistic >1.96 and P-value < 0.05 (Hair *et al.,* 2014). So, the study accepts H_1 in Pakistani context. Values for impact of perceived behavioral control on purchase intention are (β=0.107, T-statistic=1.964 and P-value=0.050) shows 10.7% impact, meeting the threshold criterion. So, the study accepts H_2 and significant relationship between perceived behavioral control and purchase intention. Values for impact of subjective norm on purchase intention are (β=0.038, T-statistic=0.756 and P-value=0.450) shows 3.8% impact, the T-statistics and P-value, both are not meeting the threshold criterion, so, the study rejects H_3 and does not have a significant relationship from the context of SME's owners in Pakistani mobile phone market.

Now showing the values for moderating impact of attitude in between the relationship of perceived behavioral control and purchase intention, these are (β=0.072, T-statistic=2.290 and P-value=0.022) shows 7.2% impact, Hence, H_4 is accepted.

Further coming towards the moderating impact of country of origin, the values for moderating impact of COO on the relationship of attitude and purchase intention are (β=0.180, T-statistic=2.574, P-value=0.009) which shows a positive moderation of 18% on the relationship from the perspective of owners of SME's regarding mobile phone brands in Pakistani context, so the study accept H_{5a}. The values for moderating impact of COO on the relationship of perceived behavioral control and purchase intention are (β=0.101, T-statistic=3.731, P-value=0.014) shows a moderating impact of 10.1% on the relationship, Hence, H_{5b} is also accepted. The values for moderating impact of COO on the relationship of subjective norm and purchase intention are (β=0.098, T-statistic=2.551, P-value=0.001) which shows a positive moderating impact of 9.8% on the relationship, so, the research study accept H_{5c}.

The values for moderating impact of price sensitivity on the relationship of attitude and purchase intention are (β=0.175, T-statistic=2.079, P-value=0.038) which shows a positive moderating impact of 17.5% on the relationship, Therefore, H_{6a} is accepted. The moderating impact of price sensitivity on the relationship of perceived behavioral control and purchase intention (β=0.013, T-statistic=0.217, P-value=0.829) shows a weak moderating impact of 1.3% on the relationship and does not enhance the relationship, so, H_{6b} is rejected. The moderating impact of price sensitivity on the relationship of subjective norm and purchase intention (β=0.092, T-statistic=1.143, P-value=0.254) shows a positive moderating impact of 9.2% on the relationship, while T-statistics value and P-value both doesn't meeting the threshold criterion, so the study rejects H_{6c}.

Now, the values for moderating impact of customer involvement on the relationship of attitude and purchase intention in Pakistani context are (β=0.089, T-statistic=4.260, P-value=0.002) showing a positive moderating impact of 8.9% on the relationship. On these bases, the present research accepts H_{7a}. The moderating impact of customer involvement on the relationship of perceived behavioral control and purchase intention (β=0.024, T-statistic=0.433, P-value=0.652) shows a weak moderating impact of 2.4% on the relationship, while T-statistics value and P-value both doesn't meeting the threshold criterion (Hair *et al.,* 2014). So, the present study rejects the H_{7b}. The moderating impact of customer involvement on the relationship of subjective norm and purchase intention (β=0.073, T-statistic=5.155, P-value=0.000) shows a positive moderating impact of 7.3% on the relationship, so, the study accepts H_{7c} and strengthen the current relationship in Pakistani context.

5.6. Mediation Test

Table V. Mediation Test

Path	Path Coefficient	T Statistics	P Values	Supported
Perceived Behavioral Control -> Purchase Intention	0.107	1.964	0.05	Yes
Perceived Behavioral Control -> Attitude -> Purchase Intention	0.072	2.290	0.022	Yes

Table V shows that mediation paths results i.e. 10.7% for direct path and 7.2% with mediation path results. Hypotheses of both of these direct and indirect paths proved, so it's a partial mediation of attitude in between the relationship of perceived behavioral control and purchase intention.

6. Discussion and Conclusion

A study presented here, scrutinises the influence of attitude, perceived behavioural control and subjective norm on purchase intention of mobile phone brands in Pakistan. Variables like country of origin (COO), price sensitivity (PS) and customer involvement (CI) have been added to the original model of TPB. This study inspected the moderating effects of COO, PS and CI on the relationships of attitude, PBC, SN and PI of mobile phone brands in Punjab. After successfully analysing the collected data, it has been concluded that attitude and PBC have strong positive impact on PI of mobile phones while impact of SN on PI is not so strong due to its 3.8% impact on PI. Moreover, SME's owners don't consider the opinions of their social circles while buying mobile phone brands. It has been observed that impact of attitude towards PI of cellular phones is stronger when COO, PS and CI are stronger; this depicts a positive relationship between attitude, COO, PS, CI and PI.

Secondly, results suggest that impact of PBC on PI of mobile phones is stronger when COO and PS are stronger and weaker in case of CI; it depicts a strong positive relationship between PBC, COO, PS and PI while weak positive relationship between PBC, CI and purchase intention.

Thirdly, this model proposed that impact of SN on PI of mobile phones is stronger when COO, PS and PI are stronger, results proved that this relationship was not proved for direct impact of SN with PI and for moderation of PS in between the relationship of SN and PI for mobile phones. The relationship of SN with COO and CI is proved; it depicts a strong positive relationship between SN, COO, CI and PI of cellular phones.

6.1. Practical Implications

The current research study is responsible for a number of recommendations for marketers. First, this present research found that attitude and PBC is considered as positive and significant factor which influence individual's purchase intention of different mobile phone brands while SN has not a noteworthy relationship in comparison to attitude and PBC. Therefore, to raise consumer's purchase intention towards different mobile phone brands marketers can spread their messages via various sources, such as national and international media like TV, print media like magazine and newspaper, brochures or the worldwide web to convey brand message and to arouse target audience positive attitude toward mobile phone brands.

Additionally, marketers can also hire spokesperson to endorse their brands. Most of the mobile phone brands like Samsung, Oppo and Q-mobile are using this strategy and successfully targeting their markets via these celebrities. Moreover, mobile phone brands should be rationally priced; this might be a reason that most of the SME's owners are buying Nokia and other mobile phone brands instead of Samsung, Apple and Oppo. Accordingly, marketers should be expert to handle queries and problems from clients by offering pricing promotional events to evoke consumer's purchase intention of mobile phones. These suggestions can change buyer's attitude, lessen behavioural control and interference of social circles in buying a product.

6.2. Contribution of Study

This research study makes significant contributions for both researchers and marketers. This study adds to the knowledge of marketing by timely responding the research gap highlighted by Hsu, Chang et al. (2017) that future researchers should consider the moderating variable of customer involvement in between the relationship of purchase intention for mobile phones and its antecedents. This study also makes a contextual contribution by changing the country of base study from China to Pakistan and tested theory of planned behavior model with additional variables like COO, purchase intention and customer involvement for businessmen in Punjab. Previous studies has not been collected responses from SME's owners in Punjab (Khalique et al., 2015) while, the present study contributes in research by collecting responses of SME's owners from all over the Punjab, Pakistan.

6.3. Limitations and Future Implications of the Study

Undoubtedly, the present study have several contributions for both knowledge and practice. But like other research studies, this study also have few limitations; Firstly, data was being collected with the help of survey-based method for this study, researchers should use a qualitative technique like in-depth interviews of SME's owners to explore their purchase intention of mobile phones. Second, this is a cross-sectional study and consumer's purchase intention might changes over time so future studies can test purchase intentions for different time periods. Third, the data was collected from a single region and future researchers might compare purchase intention of SME's owners in different provinces of Pakistan or can extend their studies to other countries to conduct cross-cultural studies.

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The Gross Profitability Premium: An Empirical Examination in Pakistan Stock Exchange (PSX)

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Abstract:

Profitability, which is estimated by the company's gross profits to assets i.e. Revenue (R) less cost of good-sold (COGS) has approximately the same power as a book to market (B/M) in forecasting the stock's average return in 'cross-section'. Profitable companies engender significantly greater average returns as compared to unprofitable companies, even with the greater valuation ratios of the company. Thus, this study endeavors to explore either the gross profitability anomaly exists in the 'Pakistan Stock Exchange (PSX)' and examined through famous asset pricing models i.e. CAPM, FF (three-factor & five-factor) model in the (PSX). Data set of listed-delisted companies are gathered from the period (2000-2018) through "Thomson Reuters Data Stream" and (PSX). Decile portfolios of the companies are constructed for analysis of time-series techniques. Equally (EW) and value-weighted (VW) gross profitability based portfolios are developed to examine the robustness of the sorted portfolio. Generalized method of moments (GMM) and Wald Test are utilized. The empirical time series analysis depicts the findings with significant evidence that gross profitability anomaly exists and yields higher returns in (PSX). Therefore, it can be concluded from the results that all three asset pricing (CAPM, FF- three & five-factor) models are misspecified models in (PSX) and there are other factors such as gross profitability for the prediction of the stocks.

Keywords: Gross profits, CAPM, PSX, Fama French three & five-factor

1.Introduction

Asset pricing is the core area of research in the context of financial markets and is important for making investment decisions and forecasting asset prices. Assets are priced to earn the maximum return. Asset prices generally follow the law of demand and supply which means the asset price will increase with a decrease in the supply of an asset or surge in demand of an asset. To determine the asset price, numerous research studies have been carried out to examine the financial models. Markowitz (1952) developed a mean-variance model. Various portfolios have been generated in which investors were given the preferences for risk and return. The theory was initiated with the idea of a one-time model, in which the portfolio was formed at

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the initial period by an investor. Markowitz's contributions which are based on the risk acceptability and the need to make an optimal return with the reduced risk leads to Modern Portfolio Theory (MPT). The MPT was centered on two main ideas. Each investor aims to optimize return for any type of risk and others that the risk can be lessened by portfolio diversification.

The financial economist Sharpe (1964) and Lintner (1965), introduced a famous financial model called the asset pricing model (CAPM). CAPM elucidates the association among the systematic risk and asset's return. This model focuses on individual investments encompass two kinds of risk. Systematic risk is the market risk that can't be mitigated through diversifying the stocks in a different portfolio. Unsystematic (diversifiable) risk can be reduced by diversifying the stocks in different portfolios. Individual stocks are to be rewarded for non- diversifiable risk; the greater the market risk greater will be asset's expected return which generally the investor assumes (Lau & Quay, 1974).

The asset pricing model (CAPM) is the rational and basic concept of finance. However, consequent studies recommend that the cross-sectional changes in the average returns are estimated not only by systematic risk as suggested by the asset pricing (CAPM) model but also by the company's market capitalization, past returns, and (B/M) ratio (Basu, 1977). Ball (1978) claims that market ratios pick up deviation in the expected return as price changes to expected returns. The company's size, market, and (B/M) pull out the information about asset prices which are related to risk and expected return (Fama & French, 1992). Though, both of them identify the linear relationship among the market valuation ratios and the expected return. A question arises, whether beta exhibiting in a risk-based model has been used to single stock can elucidate the size, book to market, value, and impact of momentum on projected return, all of these are considered to be financial market anomalies (Avramov, 2006). Kuhn (1970) marked the term anomaly and suggested that documentation of such anomalies often signals a transitional phase which leads towards an innovative paradigm. These anomalies are either 'cross-sectional' or 'time-series' which are not projected by any paradigm or theory. Market anomaly is termed to as any variations or unexpected occurrence in the pattern of stock's performance from its expected prices which deviate from the currently accepted theories as assumed and determined by the Efficient Market Hypothesis (Frankfurter & Elton, 2001).

There are three basic types of anomalies i.e. fundamental, seasonal, or calendar and technical. Fundamental anomalies are identified using financial analysis of the companies. Calendar anomalies are associated with a specific period i.e. variations in the securities from day to day, month effect, year to year, etc. In technical anomalies, future stock's prices are predicted based on previous prices and related information. Later on, there were many empirical conflicts were observed in the (CAPM) model. The failure of the model and its incomplete description of stock's asset prices lead Fama to develop a model with three factors. They identified the projected returns of cross-sectional related mainly to the equity features that can be captured by market, value, and size (except momentum). Fama & French (2015) recognized that two vital factors i.e. profitability and investment are to be added in the model with three variables.

This research study focuses on the fundamental type anomaly i.e. “Gross profitability anomaly.” Robert Novy-Marx identified an innovative estimation that is continuing to be maintained by researchers, academics and scholars is the gross profitability premium. The gross profitability produces value such as average excess stock returns and has approximately the same power as (B/M) forecasting the stock’s average return in the ‘cross-section’. Gross profitability provides robust results in the prediction of stock’s return i.e. it includes many anomalies associated with earnings as well as unrelated anomalies like free cash flow-book equity and earning to book- equity. However, a growing literature supports that anomalies associated with profitability have significant power in predicting the cross-section of stock’s return and it could be among the topmost options for the fund manager and investors to earn profit maximization from the market anomalies. Gross profitability anomaly is the ratio of revenue (R) less cost of goods sold (COGS) to its overall assets (Marx, 2010).

This study endeavors to explore either the gross profitability anomaly exists in the ‘Pakistan Stock Exchange (PSX)’. Following the studies of Novy-Marx (2013) & Kenchington et al; (2019), this study focuses on gross profitability anomaly which is not yet examined in the developing economies like Pakistan. Using famous asset pricing models i.e. CAPM, FF (three-factor & five-factor) model, gross profitability anomaly is checked and examined whether gross profitability anomaly is captured by these models in the (PSX).

2.Literature Review

The asset pricing models have been discussed that are related to the current research study. These models include the Markowitz mean-variance model, CAPM, FF (three & five-factor) model.

2.1:Mean-Variance Model (Markowitz)

Markowitz (1952) proposed a model called mean-variance. The model is a framework for analyzing the association between ‘risk and return’. Portfolios were measured based on only average returns previously. Investors believed that portfolio investment is based on the larger average returns without considering any risk correlated with that portfolio. Markowitz challenged this thought by adding a mean-variance trade-off in examining the selection of the portfolio. His contributions which are based on the risk acceptability and the need to make an optimal return with less risk leads to Modern Portfolio Theory (MPT). Later, the “efficient frontier line” was familiarized by Markowitz which is groundbreaking in various ways. The line is formed when additional stocks in the portfolio are further enhanced in which investors can move and take decisions along with the frontier line contingent on the risk the individual wants to tolerate. This theory is groundwork by Markowitz which leads to the development of CAPM.

2.2:Capital Asset Pricing Model and Deviation

Based on the Modern Portfolio theory, the CAPM model was introduced by Sharpe and Lintner in 1964 and 1965. CAPM elucidates linear association among the systematic (non-diversifiable risk) and return. The model is used generally by the stockholders in which they predict the related risk associated with the investment and the expected return of the securities (Jagannathan & Wang, 1993). This model is based on some strong assumptions: 1. Investors are logical and avoid risk, 2. An individual has the same viewpoint (homogenous expectations), 3. The limitless amount at a risk-free rate can give and take 4. Single investment, 5. Securities divisibility, 6. In a perfect market no transaction cost and taxes (Bhatti & Hanif, 2010).

Any variations or unexpected occurrence in the normal pattern of stock's performance from its expected prices which deviate from the currently accepted theories as CAPM and rules of the Efficient Market Hypothesis (EMH) is referred to as anomaly. Fama (1970) delineated one of the imperative paradigm "efficient market hypothesis" of traditional models. The efficient market asserts the market in which various rational investors are competing for profit maximization. All the information about stocks is easily accessible to the stockholders which makes it difficult to earn a higher return than the expected market return. As soon as new information reaches the market, the stocks are repriced immediately and hence unable to earn a higher profit than other buyers.

Kendall (1953) argued that stock prices are random and change due to unpredictable events. Later, Ross (1976) & Roll (1977) elaborated not only the present theory based on the CAPM model but also instigated an innovative theory called arbitrage pricing (APT) theory. APT is based on the groundbreaking idea that inefficient business market opportunities about arbitrage do not exist. The key concept behind this APT is that numerous X factors are associated with the systematic risk and not only one factor as elucidated by the CAPM model. This theory only focuses on systematic deviation and does not consider the firm's specific risk and returns. These firm's specific variations are not correlated with each other as they can be evaded by diversifying the portfolio. This indicates that market places are not usually efficient all the time that exhibit accessible information to the stockholders and also there may be an occurrence of other arbitrage opportunities.

However, following empirical studies by Basu (1977), Ball (1978), Jagadeesh (1990), Banz (1981), and Fama & French (1992) advocates that the cross-sectional changes in the average returns are estimated not only by systematic risk as suggested by the asset pricing (CAPM) model but also by company's market capitalization, past returns, and (B/M) ratio. Consequently, any deviation, irregularity, or abnormality in the stock's normal pattern signpost the presence of an anomaly. Kampman (2011) mentioned in his study that any behavior about the stock returns which is left inexplicable by the CAPM asset pricing model is referred to as an anomaly. Fama and French (FF,1992) excavated the breakthrough and found evidence that only a single beta was not virtuous and adequate to describe the variances and cross-sectional of the stock returns. This motivates FF92 to propound three-factor besides size and value in the CAPM model.

2.3:Fama & French Asset Pricing Models

Cross-section regressions methods of Fama and MacBeth in 1973 were followed by Fama & French (1992). However, both identified two anomalies i.e. size of the company and book to market which CAPM fails to elucidate the above anomalies. They observed that the size of the company and average returns have a negative correlation and securities holding greater B/M leads towards greater average profits. This two-factor size and value were included in the three-factor model which is an improved version of CAPM. SMB is the small market cap firm minus big market cap firms. SMB estimates the past excess stock's return of the small-cap firms over the large-cap firms. The third factor is value i.e. HML. HML is high (book-to-market B/M) firms minus low (book-to-market B/M) firm's ratio.

Fama and French (2015) recognized that two vital factors i.e. profitability and investment are to be added in the (three-factor) model. FF (1993) three-factor asset pricing model has been used extensively in the business industry as well as by academia. However, present evidence advocates the FF (1993) three-factor is an inadequate and incomplete model as the model fails to explain the profitability and investment-related strategies of the stock's return. Initially, Novy-Marx in 2013 provides evidence that profitability monitoring upgrades the value investment strategy performance. Later, Aharoni et al. (2013) recognize the association between investment and equity stock's return. Moreover, stock's mean returns about investment and profitability are not captured by Fama and French (FF93). The findings identified by Novy and Aharoni enthused the foundation of Fama and French (FF, 2015). FF15 tested these two factors i.e. profitability and investment in the US market and noticed that the five-factor (FF15) model provides a better elucidation of average returns as compare to the three-factor model of FF93. Investment is referred to as CMA i.e. Return on the firm's conservative investment minus the firm's aggressive investment. Profitability is referred to as RMW i.e. return of the robust profitable firms minus weak profitable firms.

2.4:Gross Profitability Premium

Novy-Marx (2013) advocated that profitability, which is estimated by the company's gross profits to assets i.e. revenue (R) less cost of good-sold (COGS) has almost a similar power as a book to market (B/M) in forecasting the mean returns of the cross-section. Profitable companies engender significantly greater average returns as compare to unprofitable companies, even with the greater valuation ratios of the company. Profitability monitoring intensely enhances the performance of the companies related to value investment strategy, particularly between the greatest liquid company's stocks. However, the consequences are arduous to resolve with popular elucidations of the value-based premium, as companies with the profitability are not as much concern, have elongated periods of cash flow and the operating leverage of the company is smaller.

Novy-Marx (2010) suggested that gross profits to assets provide significant information efficiently and above than that involved in valuations. It is also complementary to the factor book-to-market (B/M). FF (2006) remarked that earnings have much descriptive and explanatory power in cross-section regression carried out by Fama and MacBeth in 1973. Profitability sorts generate the weakest returns of the hedge portfolio and fail to provide any basis for decisions. However, returns and profitability are positively correlated as market cap and book to market (B/M) is controlled (Fama & French, 2008). Novy-Marx conclusions are different than those of previous studies of FF (1993, 2006), in which the study revealed that there is less contribution of profitability in the forecasting of average returns given by size and book to market (B/M). The modification in the Novy-Marx study is that profitability is computed by utilizing gross profits to assets, not by earnings. Gross profitability denotes the 'other-side' of value. He pointed out that gross profitability generates abundant power than earnings in analyzing the returns of the cross-section.

2.5:Gross Profitability & Related Studies

Value strategies surpass the overall market. Value investing is an investment strategy in which stocks are priced lower comparative to earnings and are traded lower than their book value. Comparatively to growth stocks, value stocks outperform in the market apparently, due to the real growth price or trading of growth investing stocks are much lesser as compare to value stocks (Graham and Dodd, 1934). However, the market overvalues the future growth of investing in growth stocks. Investors overvalue due to two reasons. The first reason behind the idea is that they make misjudgments; another reason is that they mainly concentrate on previous performance despite the fact; the growth rate is unexpected to remain constant in the future. Moreover, financial investors favor growth stocks above value stocks, because of the timeline, instead of waiting for months they tend to produce abnormal average returns within a shorter period (Lakonishok, 2002).

Many previous studies claim that the profitability of the value investment strategies firm is mechanical. Usually, companies in which investors expect a higher rate of return with the higher risk are valued lower, and therefore have a greater book to market (B/M) than companies for which individual prefers lower average returns. Since valuation- ratios support in to recognize the deviations in estimated returns, with greater book to market (B/M) signifying greater required returns. Value strategy companies engender greater average returns as compared to growth companies (Ball, 1978). This claim is consistent with the pricing of the risk-based assets; it works if the deviation in expected returns is determined by the investor's behavioral forces.

Another contention by Lakonishok; Shleifer, & Vishny (1994) that small book to market (B/M) stocks are usually overvalued and also purchasing value investment and sales growth investment stocks signifies a crude but produces mispricing in cross-section of stock's return. Strategies centered on gross profitability produce value like average surplus returns, although these strategies are growth strategies that give an outstanding hedge to value. These two strategies contribute to many common qualities, despite being not similar in both covariance and features. Whereas traditional value investment strategies invest in low-cost assets by dealing in expensive products, whereas, profitability strategies follow a different set of value by acquiring the productive asset in exchange of unproductive assets. Since these two effects are affiliated it is capable to analyze the profitability concerning value. Related arguments indicate that companies having productive assets generate greater mean returns than those companies having unproductive assets. In this tactic, deviation in productivity assists in identifying the deviations in investors' expected return rates.

Profitability is another feature of value. Profitable companies are particularly disparate from the value companies. Profitable companies produce greater returns than least profitable companies even though having greater market capitalization. However, dealing with the gross profitability manipulates the value-philosophy, as a consequence, the strategy formed is a growth strategy assessed by valuation ratios. As the strategies, which are developed on value and profitability, average returns are associated negatively and both strategies work together. Moreover, a valued individual can capture the whole profitability premium exclusive of any extra risk. Putting, a strategy of profitability on the top of a current value strategy decreases the overall volatility of the portfolio, even though doubling the individual's exposure to risky securities. As a consequence, value investor gives whole attention towards gross profitability in portfolio selection, since control of profitability intensely upsurges the value-based strategies performance.

Fama & French (2006) examine the expected association among profitability and stock's expected returns and identified their regression of cross-sectional which indicates that earnings are associated with the prediction of the average returns. However, their portfolio analysis recommends that profitability has slight or nothing in the stock's return prediction specified by size and B/M. Additionally, used a simple proxy of current earnings for the measurement of the future profitability, Novy Marx (2013) documents; though gross profitability is a superior and better proxy. Earnings signify a company's real economic profitability and off the income-statement denote the company's real economic profitability decreased by investments which are considered expenses like research and development, expansion of the human capital, or advertisement.

These expenses directly decrease earnings without any increment in book equity, however, they are related to greater economic profits and hence greater dividends in the future.

However, Gross-profits are the unpolluted accounting measure in which real economic profits can be evaluated. If one moves, farther down the gross profit in the income statement, the more unclean measures of the profitability. Likewise, if the company expensed on research and development to upsurge its production or make investments in the company's capital to further maintain competitive gain. As a consequence, these actions decrease current earnings. Furthermore, capital expenses that directly upsurge the scale of the company's operations further decrease its free cash flows compared to its competition. These facts indicate that creating the empirical proxy for the company's productivity utilizing gross profits is scaled by a measure of a book based despite market-based. Novy-Marx (2013) utilized book assets to measure gross profitability instead of book equity. As gross profits denote as an asset-based scale of earnings. Thus, gross profit will not decrease by interest payments and therefore, liberated of leverage.

Novy-Marx (2013) documents the result of value-weighted returns constructed based on gross profitability (single sorting), utilizing the New York Stock Exchange (NYSX) data from July (1963) to December 2010. The findings from the time-series regression by using the asset pricing model i.e. Fama & French (three-factor) model depicts the highly significant correlation among gross profits to its assets and book to market (B/M) ratio by using Spearman-rank-correlation. Profitable firms yield greater average returns as compare to unprofitable firms with significant t-statistic value. Hence, gross profitability is a strong predictor of forthcoming growth.

Lettau & Wachter (2007) reported contradictory findings and observed obstacles from the statement that profitable companies produce greater returns in comparison to the least profitable companies. The model observed that short period assets are riskier over long period assets. Companies based on value strategy have shorter periods and as a result, generate greater average returns as compare to long-period growth companies. Moreover, gross profitability is correlated to long-period growth in earnings, dividends, profits & free cash flow. As a result, profitable companies have an elongated duration in comparison to unprofitable companies. Therefore, the model forecast that profitable companies should under-perform less in comparison to unprofitable companies.

In comparison with other anomalies, gross- profitability anomaly might be the topmost selections for the portfolio managers who expect to deal with and earns revenue through market anomalies (Stambaugh et al, 2012; Novy-Marx, 2013 & Edelen et al, 2016). Kenchington et al; (2019) conducted a study in the U.S market to assess if portfolio managers employ the gross profitability based anomaly. The gross-profitability investing measure (GPIM) was constructed utilizing mutual fund data. The study found that funds contained in the highest GPIM (quintile) are significantly performed well than those contained in the lowest (quintile) and yield greater monthly return through (three-factor) model and Carhart (four-factor) model. The study reports a positive association among GPIM and the future performance of the funds. Ball et al. (2015) report that operating profitability has the same power in predicting the stock's return to gross profitability. To check if the findings are robust as compare to other profitability measures, two stock level measures i.e. GPIM and OPIM of trend were formed. GPIM and OPIM depict the positive association with the fund performance by using the Carhart four-factor (alpha) model.

Foye (2018) extends prior research studies by analyzing the alternative profitability measures. Fama and French (2015) cite the study as the motivation, conducted by Novy-Marx (2013) for involving a profitability factor in their model. The primary analysis depicts that the re-specified, Fama, and French (five-factor) model utilizing gross profit instead of operating profit reveals better elucidation of UK market equity. The findings depict that FF (five-factor) model utilizing gross profitability factor showed the greater r-square when portfolios sorted on size. The study constructed the portfolios based on profitability utilizing the operating profit (OP), net income (NI), gross profitability (GP) factor, and free cash flow (FCF). Moreover, the profitability measure (OP) utilized by FF (2015) has significantly less t-value as compare to gross profitability.

3.Research Methodology

The research methodology explains the data collection, measurement of determinants, asset pricing models, statistical techniques in which gross profitability premium is tested using asset pricing models i.e. CAPM, FF (three-factor & five-factor) model, and portfolio construction.

3.1:Data and variables

To empirically examine the gross profitability premium in Pakistan stock exchange, a dataset of all registered and non-registered companies is gathered from the period (2000-2018) through the "Thomson Reuters Data Stream" and Pakistan Stock Exchange (PSX). Both dead and alive, listed-delisted companies are to be taken to keep away from the survivorship bias (Kostakis et al., 2012). The gross profitability ratios are taken on the monthly frequency considering the selection criterion (t-1). Excess return is estimated on the current period at a time (t) and the market value (MV) is estimated taking the last period lag on a monthly basis at a time (t-1). Risk-free rate (6-months T-bills) are to be taken monthly at a time't'. Survivorship bias can be a very serious concern in predicting the stock returns as portfolios are developed with innate ex-post selection biases based on the accounting data which do not signify dealing strategies that are considered replicable ex-ante (Nagel, 2001). The empirical studies conducted by Banz & Breen (1986) and Davis (1996) exhibit that the results can be sensitive as it only includes firms that earn higher stock returns and disparate share of non-surviving companies are excluded from the data which may misinform the stock returns. The dependent variables in this study are an excess rate of return and explanatory variables in asset pricing models which involves CAPM, FF (three-factor & five-factor) models contains a market, size, value, profitability, and investment.

3.2:Variables Estimation

Portfolios returns are preferred over individual stocks returns because stocks in which investment is made individually contain unsystematic risk or company's specific risk for which there are challenges in determining the expected returns. Traditional acumen holds this sort of portfolio a well-diversified portfolio that can mitigate the idiosyncratic risk through diversification. However, this risk can be managed by building portfolios that are stable for a while (Campbell et al., 2001). The study utilized the portfolio approach in which discrete returns, gross profitability ratios, and market value are estimated every month. Data of all individual stocks registered and non-registered; listed and delisted (non-financial companies) in (PSX) are gathered for the estimation of discrete and market returns. Monthly returns are measured using a discrete returns approach. Discrete returns are defined as the value-weighted aggregate sum of individual asset returns in a portfolio in which weights are assigned on all assets which exhibit the contribution of a portfolio from total investment in a particular asset. Additionally, discrete returns are a more appropriate approach to examining cross-sectional asset returns (Campbell et al., 1997). The data for the estimation of market value (MV) and gross profitability is collected from "Thomsen Reuters Data Stream."

3.3:Gross Profitability Measure

Following the empirical studies documented by Novy-Marx (2013) & Kenchington et al; (2019), gross profitability is calculated as revenue (R) less the cost of good-sold (COGS) ascended by assets.

$$\frac{Gross\ Profits}{Assets} = \frac{Revenue\ (R) - Cost\ of\ Good\ Sold\ (COGS)}{Total\ Assets}$$

Decile portfolios are constructed at the end of every year i.e. June (t) by utilizing (PSX) as sorting criteria based on gross profitability at (t-1). Then value-weighted (VW) average returns decile portfolios are computed from year July (t) to June (t+1). Each portfolio is rebalanced at year June (t+1). Data of total revenue with mnemonic codes (WC01001), mnemonic code (WC01051)-cost of goods sold (COGS), and mnemonic code-(WC02999) are gathered from "Thomson Reuters Data Stream" and utilized for gross profitability.

3.4:Construction of Portfolio & Sorting Criteria

Following the study of Novy-Marx (2013), stock returns are sorted monthly at the time (t) into deciles based on the stock's gross profitability ratio at a time (t-1) monthly. Market value (mv) on a monthly basis at a time (t-1) is sorted to calculate the portfolio returns at the period (t). Portfolio returns are measured monthly in which single sorting technique or post ranking stock returns are adopted. Decile portfolios are constructed as they contribute greater division of sorting criteria in comparison with percentile portfolios (Fama, & French, 1993). Decile portfolios assist in constructing the more effective and diversified portfolios. Stocks are ranked in ten decile portfolios i.e. from P1 to P10. Portfolio (P1-P10) represents the stocks with a low value of gross profitability to the highest values. Then the two sorts of portfolios i.e. equally (EW) and value-weighted (VW) gross profitability based portfolios are developed to examine the robustness of the sorted portfolio (Kostakis et al., 2012). Value weighted returns are computed to find all stock's weights in a portfolio. The gross profitability based portfolio is assessed and tested using asset pricing models.

3.5:Estimation Techniques

In this study, the first decile portfolios of the companies are constructed for analysis of time- series. To analyze the gross profitability anomaly through asset pricing models, generalized method of moments (GMM) and Wald Test are utilized. The Time-series technique is applied that is centered on regressing the additional return portfolio on a single or multifactor explanatory variable over a period (Black et al., 1972). This regression method reflects only a single factor over a different period. In the time series technique, the test needs factors which are also returned. FF (1993) applied the time series technique to assess the stock's returns performance. Hence, verified that intercept in the time series can be utilized by asset pricing models for estimating stock's return performance. Slopes utilized in the time series regression are the risk factors that can capture the stock's return performance. To estimate methods, Generalized Methods of Moments (GMM) are utilized grounded on the method of Newey and West (1987). GMM is employed to estimate the 'W' termed as weighting matrix estimator which can tackle the statistical problems like autocorrelation and heteroskedasticity in the asset returns which are non-normally distributed (Cochrane, 2005). GMM is a framework in which parameters are estimated as a sample mean that includes the model misspecification in the distribution theory and then evaluates the model by observing at the errors of pricing. The alphas of the expected stock returns are measured using GMM. Walt test is applied, to examine the joint significance of intercepts (alpha) or pricing error and also to test that all intercepts that are jointly significance equivalent to zero under the null hypothesis (Cochrane, 2005).

4.Data Analysis & Findings

4.1:Descriptive Statistics

In this section, first descriptive statistics of two sorts of portfolios i.e. equally (EW) and value-weighted (VW) gross profitability-based portfolios are developed to examine the robustness of the sorted portfolio. Equally Weighted & Value Weighted excess returns are considered as the annualized average returns (monthly) of the EW & VW portfolio. Portfolio (P1-P10) represents the stocks with a low value of gross profitability to the highest values. The t-statistic is utilized to the differences among the largest decile portfolio (P10) and the smallest decile portfolio to assess if the extreme portfolios perform differently or not. The difference (P10-P1) represents the spread level among the largest gross profitability portfolio P10 and the smallest gross profitability portfolio P1. In the last column, t-values of hedge portfolios are represented. The findings of equally weighted (EW) and value-weighted (VW) excess returns depicts monotonically growing return trends and significant deviation among decile portfolios denoting the importance of gross profitability as a sorting criterion.

The descriptive statistics of equally (EW) and value-weighted (EW) decile portfolios are formed based on gross profitability are reported in table 1. The table-1 represents descriptive statistics of all gross profitability portfolios from the period of January 2000- December 2018. The results report that EW and VW excess returns of the decile portfolios which are sorted based on gross profitability exhibit a monotonic increasing trend of returns and observe a substantial variation among all portfolios presenting the importance of gross profitability as a sorting criterion. However, there is no specific size pattern among gross profitability portfolios. The results depict that P1 (low value of gross profitability) involves shares with relatively lowest market value and exhibit significantly higher value i.e. (1.25) of CAPM beta (highly risky) as compare to portfolios P10 (higher value of gross profitability) have a lower beta value of (0.75) indicating less risky. The results of EW & VW excess returns depicts that portfolio (P10) yields higher average returns 0.40% p.a. and 0.25% p.a. than the portfolio (P1) yields lower returns of 0.27% p.a. and 0.15% p.a. respectively. However, the CAPM model implies that P1 would expect to earn higher returns as compared to the P10 portfolio. Thus, the result shows portfolio (P10) yield greater returns than the portfolio (P1). Also, the spread level (P10-P1) of EW and VW excess returns among the largest and smallest gross profitability portfolio are statistically significant with the returns of 0.13% (1.80) and 0.10% (2.21) respectively. Therefore, contradictory to the CAPM implication, it can be determined that gross profitability is a significant consideration in the portfolio analysis for the investors in their decision making.

Table 1 Performance and features of decile portfolios based on Gross Profitability

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P10-P1	t-test
EW Excess Returns (% p.a.)	0.27	0.28	0.29	0.28	0.25	0.28	0.31	0.31	0.35	0.40	0.13	1.80*
VW Excess Returns (% p.a.)	0.15	0.15	0.17	0.29	0.18	0.20	0.17	0.22	0.19	0.25	0.10	2.21**
MV (Rs. mn)	0.062	0.093	0.130	0.118	0.156	0.147	0.150	0.313	0.370	0.873	0.812	16.76
CAPM β	1.25	1.08	1.06	1.11	0.87	1.08	0.77	1.00	0.90	0.75	-0.49	-20.58

Table 1 presents the characteristics of gross profitability in the decile portfolio from January 2000 – December 2018. All stocks which are listed on the (PSX) are sorted monthly at a time (t) based on gross profitability values in ascending order. Gross profitability values are measured by utilizing the rolling window of 60 observations (monthly) and are allocated in ten decile portfolios i.e. from P1 to P10. Portfolio (P1-P10) represents the stocks with the lowest gross profitability values to the highest gross profitability values. Portfolios' excess returns are measured at month (t+1) in which single sorting technique or post ranking stock returns is presented and each portfolio is rebalanced (monthly basis). P10-P1 denotes the spread level. EW and VW (excess returns) denote annualized average returns (monthly) of both portfolios i.e. equally weighted and value-weighted. MV (Rs. mn) presents the stock's average market value contained in all portfolios. CAPM beta shows volatility measures against market risk and is an estimate of (VW) portfolio's returns. The t-statistics (last column) reports the Wald test results denoting the null hypothesis of no mean difference among the portfolio's (P1 & P10) characteristics. single (*) indicates t-values significance at 10% and (**) indicates 5% and (***) at 1% significance level respectively.

4.2:Risk-adjusted performance (Asset Pricing Models)

The descriptive statistics in the above table exhibit that risk premium is correlated with portfolios that are constructed based on gross profitability. Risk-adjusted abnormal performances of the EW and VW portfolios are estimated by utilizing three known asset pricing models. CAPM (Jensen's alpha), Fama & French's (three-factor alpha, and five-factor alpha) are considered. To analyze the Risk-adjusted abnormal performance through asset pricing models, generalized method of moments (GMM) and Wald Test are utilized grounded on the method of Newey and West (1987).

Table 2 Jensen Alphas of Equally-Weighted (EW) Portfolios – Gross Profitability

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P10-P1	Wald-Test
CAPM	0.46	0.67	1.37	5.51	5.47	8.11	13.40	12.72	18.52	18.04	17.58	47.26
Alpha	(0.05)	(0.08)	(0.21)	(0.86)	(1.08)	(1.72)*	(2.56)**	(3.07)***	(3.34)***	(3.90)***	(1.77)*	[0.00]
FF3	4.03	3.42	4.14	7.83	3.82	9.16	13.89	12.71	19.05	17.82	13.78	32.33
Alpha	(0.33)	(0.35)	(0.52)	(1.03)	(0.60)	(1.59)	(2.14)**	(2.47)**	(2.75)***	(3.10)***	(2.08)**	[0.00]
FF5	0.32	2.01	3.79	7.49	5.40	8.42	16.15	13.76	19.40	18.63	18.31	32.46
Alpha	(0.02)	(0.20)	(0.45)	(0.94)	(0.81)	(1.38)	(2.39)**	(2.54)**	(2.64)***	(3.10)***	(1.92)*	[0.00]

Table 2 reports the risk-adjusted performance of the equally-weighted gross profitability in the decile portfolio from January 2000 – December 2018. All stocks which are listed on the (PSX) are sorted monthly at a time (t) based on gross profitability values in ascending order. (P1-P10) represents the stocks with the lowest gross profitability values to the highest gross profitability values. Each portfolio is rebalanced (monthly basis). P10-P1 denotes the spread level. CAPM (Jensen's alpha), Fama & French's (three-factor alpha & five-factor alpha) are alpha estimates (annualized). The chi-square t-statistics (last column) reports the Wald test results denoting the null hypothesis of ten portfolios intercepts (alphas) are jointly equivalent to zero under the null hypothesis. P-values are reported in square brackets. The t-statistics are given in parentheses i.e. single (*) indicates t-values significance at 10% and (**) indicates 5% and (***) at 1% significance level respectively.

4.3:Equally Weighted (EW) Portfolios

The alphas estimation and the equally weighted (EW) gross profitability-based decile portfolios are reported here. Table 2 depicts the alphas of equally-weighted portfolios ranges from (P1 to P10) constructed based on gross profitability from January 2000 – December 2018. Portfolio P10, that contains the stocks exhibiting the highest positive gross profitability yields an annualized CAPM (Jensen's alpha) of 18.04% p.a. (t-value= 3.90), FF (three factor-alpha) of 17.82% p.a. (t-value= 3.10), FF (five factor-alpha) of 18.63% p.a. (t-value = 3.10). Whereas portfolio P1 involves the stocks with the necessary features of lowest gross profitability values yields the lowest alpha value of 0.32% under the FF (five-factor) model. The findings reveal that the spread level (P10-P1) is statistically significant for asset pricing models at 10% and 5% significance level and yields an annualized CAPM (Jensen's alpha) of 17.58 % p.a. (t-value = 1.77), FF (three-factor & five-factor alpha) are 13.78% p.a. (t-value =2.08) and18.31 % p.a.(t-value= 1.92) respectively. The Wald test values reveal that cross-sectional deviations of returns exist among the equally-weighted portfolios (P10-P1) constructed based on gross profitability since the p-values are less than 0.05. Further, table 2 exhibits the significant evidence that gross profitability anomaly exists. The results depict the significant evidence that the gross profitability premium is priced in the (PSX). The Wald-test results of the estimated intercepts (alphas) are significant as a null hypothesis of ten portfolios intercepts (alphas) jointly equivalent to zero has been rejected. The overall findings of the EW portfolios by using three asset pricing models are found to be statistically significant. Even after analyzing the risk-adjusted factors in (EW) returns, the outcomes documented in descriptive statistics in table 1 remains intact and provides evidence of gross profitability premium in (PSX). Hence, it can be concluded from the results that all three asset pricing (CAPM, FF- three & five-factor) models are inefficient or misspecified models in (PSX) and there are other factors such as gross profitability for the prediction of the stocks. Hence, the finding gives strong evidence of gross profitability within EW returns.

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P10-P1	Wald-Test
CAPM Alpha	**-15.15 (-1.52)**	**-10.94 (-1.81)***	**-8.76 (-1.67)***	**1.34 (0.20)**	**-3.32 (-0.66)**	**-5.83 (-1.06)**	**-2.24 (-0.53)**	**-2.34 (-0.61)**	**-2.56 (-0.44)**	**-1.09 (-0.28)**	**14.06 (1.84)***	**10.89 [0.03]**
FF3 Alpha	**-13.40 (-1.09)**	**-11.11 (-1.52)**	**-9.41 (-1.42)**	**3.27 (0.39)**	**-4.41 (-0.70)**	**-6.07 (-0.87)**	**0.51 (0.10)**	**0.05 (0.01)**	**-0.78 (-0.11)**	**-1.02 (-0.21)**	**12.38 (2.89)*****	**6.97 [0.03]**
FF5 Alpha	**-16.64 (-1.29)**	**-13.14 (-1.73)***	**-13.48 (-1.96)****	**-0.03 (-0.00)**	**-1.15 (-0.17)**	**-10.51 (-1.51)**	**2.49 (0.45)**	**-1.30 (-0.26)**	**-1.37 (-0.19)**	**1.07 (0.22)**	**17.71 (1.91)***	**11.15 [0.03]**

Table 3 Jensen Alphas of Value-Weighted (VW) Portfolios – Gross Profitability

Table 3 reports the risk-adjusted performance of the value-weighted gross profitability in the decile portfolio from January 2000 – December 2018. All stocks which are listed on the (PSX) are sorted monthly at a time (t) based on gross profitability values in ascending order. (P1-P10) represents the stocks with the lowest gross profitability values to the highest gross profitability values. Each portfolio is rebalanced (monthly basis). P10-P1 denotes the spread level. CAPM (Jensen's alpha), Fama & French's (three-factor alpha & five-factor alpha) are alpha estimates (annualized). The chi-square t-statistics (last column) reports the Wald test results denoting the null hypothesis of ten portfolios intercepts (alphas) are jointly equivalent to zero under the null hypothesis. P-values are reported in square brackets. The t-statistics are given in parentheses i.e. single (*) indicates t-values significance at 10% and (**) indicates 5% and (***) at 1% significance level respectively.

4.4:Value-Weighted (VW) Portfolios

The alphas estimation and the value-weighted (VW) gross profitability-based decile portfolios are reported here. Table 3 depicts the alphas of value-weighted portfolios ranges from (P1 to P10) constructed based on gross profitability from January 2000 – December 2018. The findings reveal that the spread level (P10-P1) is statistically significant for asset pricing models at 1% and 10% significance level and yields an annualized CAPM (Jensen's alpha) of 14.06 % p.a. (t-value = 1.84), FF (three-factor & five-factor alpha) are 12.38% p.a. (t-value =2.89) and 17.71 % p.a. (t-value= 1.91) respectively. The Wald test values reveal that cross-sectional deviations of returns exist among the value-weighted portfolios (P10-P1) constructed based on gross profitability since the p-values are less than 0.05. Table 3 exhibits the significant evidence that gross profitability anomaly exists. The results depict the significant evidence that the gross profitability premium is priced in the (PSX). The Wald-test results of the estimated intercepts (alphas) are significant as a null hypothesis of ten portfolios intercepts (alphas) jointly equivalent to zero has been rejected. The overall findings of the VW portfolios by using three asset pricing models are found to be statistically significant. Even after analyzing the risk-adjusted factors in (VW) returns, the outcomes documented in descriptive statistics in table 1 remains intact and provides evidence of gross profitability premium in (PSX). Therefore, it can be concluded from the results that all three asset pricing (CAPM, FF- three & five-factor) models are inefficient or misspecified models in (PSX) and there are other factors such as gross profitability for the prediction of the stocks. Thus, the overall findings depict that decile based gross profitability anomaly exists and yields higher returns in (PSX).

5.Conclusion

To attain the objective of the study and to empirically examine the gross profitability existence and premium in Pakistan Stock Exchange (PSX), we utilize famous asset pricing models i.e. CAPM model, Fama & French (three-factor & five-factor) models.

The descriptive statistics of equally (EW) and value-weighted (EW) decile portfolios reveal the findings that the lowest gross profitability companies involve shares with relatively lowest market value exhibit significantly higher value of CAPM beta (highly risky) as compare to highest profitability companies having a lower beta value indicating less risky. The result of EW & VW excess returns depicts that the highest portfolio yields a high average return than the lower portfolio which yields lower returns. However, the CAPM model implies that P1 would expect to earn higher returns as compared to the P10 portfolio. The results support the critique document by Roll (1977) & Ross (1976) in which both claim that numerous X factors are associated with the systematic risk and not only one factor as elucidated by the CAPM model. Thus, the result shows portfolio (P10) yield greater returns than the portfolio (P1) and supports the evidence that gross profitability exists in (PSX). The results are consistent with the Novy-Marx (2013 in which they claim that profitable firms yield greater average returns as compare to unprofitable firms. Also, the spread level (P10-P1) of EW and VW excess returns among the largest and smallest gross profitability portfolio are statistically significant.

The risk-adjusted performance of the EW and VW portfolios reports that the spread level (P10-P1) is statistically significant under the asset pricing models. The Wald test values reveal that cross-sectional deviations of returns exist among the (EW) and (VW) portfolios (P10-P1) constructed based on gross profitability since the p-values are less than 0.05. The empirical time series analysis depicts the findings with significant evidence that gross profitability anomaly exists in the (PSX). The Wald-test results of the estimated intercepts (alphas) are significant as a null hypothesis of ten portfolios intercepts (alphas) jointly equivalent to zero has been rejected overwhelmingly and report evidence that gross profitability is priced in the (PSX). The overall findings of the EW and VW portfolios by using three asset pricing models are found to be statistically significant. Hence, it can be concluded from the results that all three asset pricing (CAPM, FF- three & five-factor) models are inefficient or misspecified models in (PSX) as these models are unable to explicate the cross-sectional deviation in returns of the portfolio based on company's gross profitability and there are other factors such as gross profitability for the prediction of the stocks. Thus, the overall findings depict that decile based gross profitability anomaly exists and yields higher returns in (PSX). From the above results, it can be determined that gross profitability is a key factor in (PSX) returns because it captures cross-sectional deviation among the returns of the stock better than the models. Furthermore, the results can benefit investors in determining an applicable risk measure in forming well-diversified portfolios. The future research can be conducted in which decile portfolios are constructed based on different profitability measures utilizing the operating profit (OP), net income (NI), gross profitability (GP) factor, and free cash flow (FCF) by testing the asset pricing models in Pakistan and other developing economies to determine the robustness and predictive power of the stock return.

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Transparency, Stock liquidity and Firm Value in Crisis Period: Evidence from Pakistan Stock Exchange

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Abstract

The primary purpose of the study is to investigate the relationship between information transparency and stock liquidity in Pakistan Stock Exchange (PSX). We also examine other aspects of stock liquidity by considering the impact of extreme market events on stock liquidity and liquidity commonality, and their respective association with transparency and firm value. Data analysis for the study is performed on sample of 40 non-financial firms listed on KSE-100 for the time period of 2010-18. Estimations are carried out using Ordinary Least Squares (OLS) and Generalized Least Squares (GLS) models. The results reveal significant negative relationship between transparency and stock liquidity in PSX. In addition, the results also highlight that variability of the liquidity and extreme market events both decrease the firm value. The findings of the study hold important academic and regulatory implications about financial and regulatory environment, investor behavior and information environment of PSX.

Keywords: Stock liquidity, transparency, firm value, liquidity commonality, crisis period.

1. Introduction

In order to achieve allocative efficiency, a stock market is assumed to create liquidity for traded assets. Handa and Schwartz (1996) reason 'Investors want three things from the markets: liquidity, liquidity and liquidity'. Efficient markets tend to be more liquid providing investors with attractive investment opportunities. A liquid market offers investment opportunities with minimum transaction costs because investors seek compensation for transaction costs along with other risks. Moreover, this also enables firms to obtain financing at lower cost with quick speed to capitalize on growth opportunities (Becker-Blease & Paul, 2006). In addition, various studies have argued that institutional features impact market turnover (Jain, 2005). In particular, liquidity is among central concerns in emerging economies where ample untapped growth opportunities are available. The literature on market microstructure also documents that emerging markets tend to have a lower liquidity as compare to more efficient markets (Fong et al., 2017).

A strand of literature argues that reduced liquidity is among the major drivers of market decline in both developed and emerging markets (Amihud et al., 1990; Chordia et al., 2001; Lesmond, 2005) For instance, Liu et al. (2006) report reduced liquidity in the US stock market following significant economic

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and financial events such as, stock market crash in 1987, the Asian financial crisis in 1997, burst of the high-tech bubble in 2000, 9/11 terrorist attacks, etc. Similarly, Yeyati et al. (2008) indicates that financial turmoil period is linked with high liquidity costs and reduced liquidity in emerging markets. Also, one of the major reasons cited for financial contagion during Global Financial Crisis (GFC) 2007-08 is reduced liquidity of financial assets (Rosch & Kaserer, 2014; Ma et al., 2020). Campello et al., (2011) reason that liquidity problem becomes more pronounced during crisis period because stocks are prone to liquidity freeze and therefore during turmoil periods markets usually experience extreme liquidity issues and credit crunch. In addition, studies have also found that lower liquidity tends to decrease the earnings of the stocks and simultaneously increase the cost of capital (Lipson & Mortal, 2009; Lang & Maffett, 2011).

Another important phenomenon related to stock liquidity is referred as stock liquidity commonality, which means co-movement across stocks' liquidity. Earlier studies have highlighted the crucial role of stock liquidity commonality for market efficiency, asset pricing, portfolio selection and asset allocation (Chordia et al., 2000, 2001, 2011; Acharya & Pedersen 2005; Bhattacharya et al., 2020). Many studies using single and cross country data sets have shown that stock liquidity commonality prevails globally (Karolyi et al., 2012). However, there is relatively less coverage on the determinants of stock liquidity and their consequent impact on stock prices.

In the aftermath GFC, many studies have investigated the role of corporate governance quality on stock liquidity (Ali et al., 2017, 2018; Nadarajah et al., 2018; Biswas, 2020; Zilin et al., 2020, Berglund, 2020; Hunjra et al., 2020). The common findings among the studies unveil that firms with better corporate governance structures and higher level of information transparency tend to have high stock liquidity. More specifically, since transparency is essential for corporate governance, the earlier evidence have also highlighted positive influence of information transparency on stock value and liquidity (Healy & Wahlen, 1999; Bloomfield & Wilks, 2000; Heflin et al., 2005; Dang et al., 2020). Moreover, conventional wisdom suggests that increase level of public information improves market liquidity (Balakrishnan, 2020). In addition, recently the role of information transparency has been widely recognized as lack of transparent information about financial instruments and overvalued financial assets is considered as one of the major reasons for financial turmoil in 2007-08.

Extant evidence entails that earning smoothing, accounting standards, audit choice, market analyst, family holdings, ownership structure, information asymmetry, and governance mechanisms can be indicative measures of transparency (Barth et al., 2008; Lang et al., 2012). Evidence suggests that firms with higher transparency level experience less liquidity volatility and extreme liquidity events (Lang & Maffett, 2011). More importantly, the relationship between transparency and stock liquidity is significantly dependent upon various institutional and firm level factors. Lang et al. (2012) argue that the association between transparency and stock liquidity significantly varies due to country, firm and time period variation factors. Accordingly, the underlying linkages between transparency and institutional quality are not generalizable across stock markets, since markets vary in terms of specific regulations and institutional quality. In view of this, we specifically investigate the impact of information transparency on stock liquidity in Pakistan Stock Exchange (PSX). The market microstructure of the stock market in Pakistan substantially varies from developed stock markets in many ways. Despite the fact that the market has gone under major regulatory changes to promote market liberalization and integration with global markets, still, the stock market has high ownership concentration, weak governance environment, less developed trading mechanisms and low litigation risk. Keeping all this in view, surprisingly little coverage has been assigned to study the linkages between transparency and stock liquidity in Pakistan. In addition, as an emerging market PSX holds a great potential to attract foreign investment into the economy. Specifically, recently foreign investors seeking high returns and diversification opportunities have fueled stock market growth in Pakistan. For example, back in 2016 aggregate market index offered 47 % annual return to investors and resultantly Pakistan Stock Exchange (PSX) was included in Morgan Stanley's emerging market Index. Thus, in order to fill the theoretical void in the literature, this study aims to study the relationship between transparency and stock liquidity at firm level.

The paper contributes to the literature of information transparency and stock liquidity in Pakistan in several ways. First, we investigate the impact of firm transparency on stock liquidity during extreme market events, such as GFC 2007-08. In past few studies have explored the impact of political news on stock market outcomes in Pakistan, where more pronounced impact of political events is found as compared to economic events (Nazir et al., 2011; Mahmood et al., 2014). However, in this study we do not focus on particular economic and political events rather in accordance with global studies the study unveils the association between transparency and stock liquidity during the period of GFC. Following the similar studies the study uses liquidity skewness and the liquidity black hole as a proxy of extreme market events. Second, the study also examines the impact of transparency on liquidity commonality. In this way study addresses the dearth of literature in emerging markets documenting the corporate governance determinants of stock commonality. Finally, we also investigate the influence of liquidity volatility, extreme market events and liquidity commonality on firm value in Pakistan stock market.

The reminder of the paper is organized as follows: Section 2 reviews the related literature. Section 3 describes the methodology employed in the study. Section 4 presents the analysis and results obtained. The last section concludes the paper with policy implications.

2. Literature Review and Hypothesis Development

2.1: Firm Transparency and Stock Liquidity

Information transparency is considered as a crucial link between corporate governance quality and stock liquidity. Higher information transparency prevents opportunistic and concealing information disclosures. More importantly, information transparency reduces problems related to information asymmetry and adverse selection, thus resulting in increased stock liquidity. A large number of studies have investigated the role of external governance on stock liquidity in different stock markets with varying level of regulatory environments (Bacidore & Sofianos 2002; Brockman & Chung 2003; Chung 2006; Eleswarapu & Venkataraman 2006; Quah et al., 2020; Shyu et al., 2020). However, the focus of this study is on the impact of internal governance mechanisms on stock liquidity. Earlier literature describes the significant role of auditor's quality, auditing fees, reporting standards, and analyst forecasts on firm transparency. Yu (2005) reason that firms in compliance with big 4 auditors are assumed to be less opaque. The big 4 auditors are assumed to be indicative of higher corporate governance quality and information transparency. Fan and Wong (2005) argue that auditors have significant role in establishing strong corporate governance structure and eliminating agency related problems.

A line of literature supports earning management as a more meaningful measure of the transparency (Barth et al., 2008; M. Lang & Maffett, 2011; M. Lang et al., 2012; Ngo & Varela, 2014; Ajina & Habib, 2020). Review of the literature on earning management reveals two divergent opinions. Firstly, earning management is considered as positive market signal because it allows the managers to smooth earnings to control the extreme variability in cash flows. However, the second view terms it manipulative behavior to retain investors (Takasu & Nakano, 2014). Studies have shown that firms with higher accounting quality and information disclosure report stable earnings management (Barth et al., 2008).

2.2: Stock Liquidity during Extreme Market Events

Earlier research has shown that stock liquidity can be significantly influenced by market liquidity. During GFC 2007-08 stocks became so illiquid that capital markets evaporated overnight (Beardsley et al., 2012; Tran et al., 2018). The crisis period are often referred as extreme market events. The extreme market events imply a situation in which the whole market experiences extreme liquidity constraints (Vayanos, 2004). Normally, investors show restraint to purchase illiquid stocks. On the contrary, investors only prefer to purchase illiquid stocks (Acharya & Pedersen, 2003). In the same way, a number of studies have found that illiquidity caused by information asymmetry can negatively impact stock returns (Paper et al., 2012). .

Review of the earlier literature unveils two proxies employed to capture extreme market events include liquidity skewness and liquidity black hole. Liquidity skewness as proxy of extreme market event is introduced by the work of M. Lang et al. (2011) and M. Lang and Maffett (2011). The notion of liquidity skewness is grounded in the concept of liquidity premia. Vayanos (2004) argues that Investor's preference for return is attributable to the market circumstances. During volatile times, liquidity level for most of the stocks decreases and investor's expectation for higher returns increase. This phenomenon is known liquidity premia where investor's willingness for returns is associated with liquidity volatility of the asset. Secondly, liquidity black hole implies a situation when liquidity evaporates from the market (Morris & Shin, 2004). Liquidity has subsequent impact on investor behavior. In a liquid market, investor can easily trade asset without minimal trading costs. On the contrary, illiquid market compels investors to unwillingly lower the price of stock in case to further sell it. Few studies have shown that liquidity black holes can be associated with the transparency of the stocks and stocks with lower transparency encounter higher liquidity black holes (M. Lang & Maffett, 2011 M. Lang et al., 2012).

2.3: Stock Commonality

A wide range of studies document the determinants of liquidity commonality. A stock's liquidity is vulnerable to market liquidity. Empirical evidence shows that liquidity co-movements are reported to be higher in countries with poor governance mechanisms (Jin & Myers, 2004). Financial development has a profound influence on commonality of liquidity. Markets with low or moderate investor protection laws experience higher stock commonality (Morck et al., 2000). Commonly, managers distort the earning of firm to give a positive signal in the market. Moreover, managers also reserve a portion of earnings to fund bad times. This manipulation in earnings raises risks about investor rights (Jin & Myers, 2004). Earlier research has also shown that liquidity commonality is more pronounced effects in less-developed financial markets (Jin & Myers, 2004; Chelley-Steeley et al., 2013; Morck et al., 2000). Further, empirical evidence also suggests that apart from governance mechanism, transparency can have pronounced effect on liquidity commonality. The argument is grounded in the notion that transparent stocks are more liquid.

2.4: Hypothesis Formulation

Based on the above discussed review of literature, following research hypotheses are formulated for this study.

H_1: There is significant relationship between the stock transparency and stock liquidity.

H_2: There is significant relationship between stock transparency and extreme market events.

H_3: There is a significant relationship between stock transparency and liquidity commonality.

H_4: The liquidity volatility, commonality of liquidity, and extreme market events have significant negative relationship with firm value.

3. Data and Methodology

3.1:Data

The initial sample of the study comprised of all non-financial companies listed on KSE-100 index (top 100 capitalized firms in PSX). However, the final sample was reduced to 40 non-financial firms because of data availability issues. Since, in most cases the data before 2009 was not available or accessible for firms dropped from the final sample. The study covers the time period of 2005-2018. The sample duration is divided into two parts, where first 5 years (2005 – 2009) are used as the base years and the final construct comprised of last 9 years (2010 – 2018). The data for the financial variables is extracted from annual financial statements and stock prices are obtained from data portal of PSX. We do not report the summary statistics for sake of brevity.

3.2: Variable Definition

In order to verify our four hypotheses, we use five different dependent variables, which are tested separately. Firstly, stock liquidity is defined as the standard deviation of Daily Amihud Price Index (DPI). A large number of studies have used Amihud's DPI because it helps in measuring liquidity of the stock by eliminating the price effect (Amihud, 2000). Following equation drives the Amihud DPI:

$$\frac{|\text{Return}|}{(\text{Price})(\text{Volume})} \qquad \textbf{(1)}$$

In equation 1, return refers to the change in the daily returns of the stocks. The change in return is divided by the product of price of stock and the total volume of stock traded on a particular day. In this way, Amihud DPI is derived for the time period of 2010 to 2018. The annual standard deviation of Amihud's DPI represents stock liquidity for a year. Secondly, two proxies are used to estimate extreme market events. The first measure employed is the liquidity skewness, which is defined as the annual skewness of Amihud's DPI. Highly skewed DPI refers to the condition where the trading costs rise enormously due to illiquidity in the market. Also, liquidity black holes are used as the second proxy to measure extreme market events. Liquidity black hole is measured as the total number of trading days in a year in which the stock DPI was 50 times greater than the market level DPI (Lang & Maffett, 2011). The KSE-100 index is used to proxy aggregate market level. Furthermore, earlier studies (Morck et al., 2000; Jin & Myers, 2004; Karolyi et al., 2009) use R^2 from the following regression equation to proxy of commonality of liquidity:

$$\%\Delta DPI_{i,d} = \alpha_i + \beta_{i1}\,\%\Delta DPI_{m,d-1} + \beta_{i2}\,\%\Delta DPI_{m,d1} + \beta_{i3}\,\%\Delta DPI_{m,d+1} + \varepsilon_{id} \qquad \textbf{(2)}$$

In equation 2 dependent variable is the percentage change in the DPI of stock i on the day d. Regressors include percentage change in the market DPI for previous day, current day and next day respectively.

Finally, the last dependent variable firm value is proxied by Tobin's Q ratio and the ratio is defined in the following equation:

$$\frac{\text{Total Assets} + (\text{Market Value Stock} - \text{Book Value of Stock})}{\text{Total Assets}} \qquad \textbf{(3)}$$

The independent variable transparency is tested using two different measures. Firstly, earning management is used as proxy of transparency (Dechow et al., 1995; Leuz et al., 2003). Earning management is considered as the correlation between accruals and cash flow from operations. Theoretically, managers use accruals for future performances, where negative correlation will depict earning smoothing. Accruals are obtained from the following equation:

ACC = (□CA - □CL - □Cash) + (□Short Debt – Depreciation) **(4)**

Equation 4 is calculated as change in the current assets minus the change in the current liabilities minus the change in cash in hand which is then added to the difference between the changes in short term debt and depreciation. Further, deducting accruals from net income before extra-ordinary items gives the cash flow from operations. The second proxy used to proxy transparency includes big-4 auditors. It is taken as a dummy variable, where if a firm is audited by the big 4 audit firms it is labeled as 1 otherwise 0. Finally, the control variables used in our empirical model include Leverage (LEV), Market Value (MV), Book value (BV), Firm Size (SIZE) and Loss Frequency (LOSS).

Table 1: Variables and their Constructs

Variables Explanation		
Variable Names	**Abbreviation**	**Measurement**
	Dependent variables	
Liquidity Volatility	LIQVOL	Standard Deviation of Annual Daily Amihud Price Index.
Liquidity Skewness	LIQSK	Skewness of Annual Daily Amihud Price Index.
Liquidity Black Holes	LBH	Percentage of Days in a year during which the DPI is 50 times greater than the overall market liquidity.
Commonality of Liquidity	COM	R^2 from regression equation run on annual DPI.
TOBIN Q	TOB	$\frac{Total\ Assets + (Market\ Value\ Stock - Book\ Value\ of\ Stock)}{Total\ Assets}$
	Independent variables	
Earning Smoothing	EARSMTH	$\frac{STD\ ACCRUALS}{STD\ Cash\ Flow\ from\ Operations}$
Big-4 Auditors	BIG	If a firm has BIG-4 Auditors
	Control Variables	
Leverage	LEV	$\frac{Total\ Assets}{Total\ Liabilites}$
Market Value	MV	Total Ordinary Shares Outstanding x Market Price
Book Value	BV	Total Ordinary Shares Outstanding x Book Price
Size	SIZE	Natural Log of Total Assets
LOSS Frequency	LOSS	Number of years during which stock experiences loss from previous 4 years
	Additional Variables	
Net Income Before Extra-Ordinary Items	NIBEI	Net Income Before Interest and Taxes – Depreciation for the Year
Accruals	ACCR	ACC = (ΔCA - ΔCL - ΔCash) + (ΔShort Debt – Depreciation)
Cash Flow from Operations	CFO	NIBEI - Accruals

3.4: Empirical Models

In order to test our proposed hypotheses we formulate our final equations, which are tested using OLS and GLS estimation technique following the earlier studies (M. Lang & Maffett, 2011 M. Lang et al., 2012) and presented as follows:

$$\text{LIQVOL} = \alpha_i + \beta_1 \text{EARSMTH} + \beta_2 \text{LEV} + \beta_3 \text{MV} + \beta_4 \text{BV} + \beta_5 \text{Size} + \beta_6 \text{LOSS} + \varepsilon_{it} \quad \textbf{(5)}$$

$$\text{LIQVOL} = \alpha_i + \beta_1 \text{EARSMTH} + \beta_2 \text{LEV} + \beta_3 \text{MV} + \beta_4 \text{BV} + \beta_5 \text{Size} + \beta_6 \text{LOSS} + \beta_7 \text{DUM BIG} + \varepsilon_{it} \quad \textbf{(6)}$$

In order to verify our first hypothesis and model the relationship between stock liquidity volatility and transparency, we estimate equation (5) and (6) with stock liquidity volatility as dependent variable. In the first model we take earning smoothing as an independent variable, whereas in the second model earning smoothing and big 4 auditors are taken as predictors. In addition, the control variables in the model include leverage, market value, book value, firm size, and loss frequency. Hausman test is used to decide between random effects and fixed effects[1].

To establish the relationship between stock transparency and extreme market events, we use two proxies of extreme events, which include liquidity skewness and liquidity black holes. Following models are estimated to predict the underlying relationship:

$$\mathrm{LIQSK} = \alpha_i + \beta_1 \mathrm{EARSMTH} + \beta_2\,\mathrm{LEV} + \beta_3\,\mathrm{MV} + \beta_4 \mathrm{BV} + \beta_5\,\mathrm{Size} + \beta_6\,\mathrm{LOSS} + \varepsilon_{it} \quad \textbf{(7)}$$

$$\mathrm{LBH} = \alpha_i + \beta_1 \mathrm{EARSMTH} + \beta_2\,\mathrm{LEV} + \beta_3\,\mathrm{MV} + \beta_4 \mathrm{BV} + \beta_5\,\mathrm{Size} + \beta_6\,\mathrm{LOSS} + \varepsilon_{it} \quad \textbf{(8)}$$

The third hypothesis of the study tests the association between stock transparency and liquidity commonality. For this purpose, we use R^2 from regression equation (2) as a proxy of liquidity commonality. The below model is employed to establish the relationship:

$$\mathrm{COM} = \alpha_i + \beta_1 \mathrm{EARSMTH} + \beta_2\,\mathrm{LEV} + \beta_3\,\mathrm{MV} + \beta_4 \mathrm{BV} + \beta_5\,\mathrm{Size} + \beta_6\,\mathrm{LOSS} + \varepsilon_{it} \quad \textbf{(9)}$$

Finally, to demonstrate the impact of stock liquidity, extreme market events and liquidity commonality on firm value we estimate equation (10). Tobin's Q is employed as proxy of firm value.

$$\mathrm{TOB} = \alpha_i + \beta_1 \mathrm{LIQVOL} + \beta_2\,\mathrm{LIQSK} + \beta_3\,\mathrm{LBH} + \beta_4 \mathrm{COM} + \beta_5\,\mathrm{LEV} + \beta_6\,\mathrm{MV} + \beta_7 \mathrm{BV} + \beta_8\,\mathrm{SIZE} + \beta_9 \mathrm{LOSS} + \varepsilon_{it} \quad \textbf{(10)}$$

4. Results and Discussion

4.1: Correlation Analysis

The correlation matrix is presented in the table 2. The results show negative correlation between income smoothing and liquidity black hole, liquidity volatility, and liquidity skewness. However, we find weak association between earning smoothing and liquidity skewness. The results imply that lower level of the income smoothing results in reduced stock liquidity and extreme market events. On the other hand, we find positive association between income smoothing and liquidity commonality. In addition, we note the co-movement between income smoothing and leverage is negative, which suggests that firms with higher earning management tend to have lower debt. We also observe positive association of earning smoothing with firm size and book value. Finally, we report negative correlation between income

[1] It is to be noted that we only disclose the results of earning smoothing as proxy of stock transparency in results section because we do not find significant impact of big 4 auditors on stock transparency in any of our models.

smoothing and market value of the firm. The results are somewhat similar to argument of to Leuz et al. (2003) as they suggest that earning management reduces investor confidence.

The results of correlation analysis show negative association between firm performance and liquidity skewness, liquidity commonality and earning management, whereas, positive correlation between firm performance and stock liquidity is noted. In accordance with earlier studies we also observe positive association between stock liquidity volatility and extreme market events (Piccoli et al., 2017a, b)

Table 2: Correlation Matrix

	TOBQ	LBH	LIQV	LIQS	COM	EAR	LEV	MV	BM	Size	LOSS
TOBQ	—										
LBH	0.0607	—									
LIQV	0.1000	0.1440	—								
LIQSK	(0.0543)	(0.3348)	(0.0196)	—							
COM	(0.0753)	(0.0007)	(0.0189)	(0.0251)	—						
EAR	(0.0932)	(0.0205)	(0.2553)	(0.0002)	0.0588	—					
LEV	0.2454	0.4871	0.2586	(0.0958)	(0.0181)	(0.2283)	—				
MV	0.3866	(0.1570)	(0.0488)	(0.1172)	(0.0547)	(0.0294)	(0.1703)	—			
BV	(0.3481)	(0.2741)	(0.7984)	0.1040	0.0236	0.2614	(0.4740)	(0.0042)	—		
SIZE	0.0579	(0.1392)	(0.0862)	0.0689	(0.0260)	0.0532	(0.1694)	0.2034	0.0919	—	
LOSS	(0.1286)	0.1723	0.2002	(0.0630)	(0.0076)	(0.1745)	0.5406	(0.2163)	(0.2363)	(0.1639)	—

Note: Values in parenthesis represent negative relationship.

4.2: Empirical Results and Findings

The table 3 illustrates the results obtained from testing our first hypothesis using OLS and GLS random effects model. Since the Hausman test supported the use of random effects model, we skip the results estimated through GLS Fixed effects model. The estimations clearly reinforce our research hypothesis as we observe significant negative relationship between earning smoothing and stock liquidity in PSX. The results indicate that the insiders' effort to mask the financial performance of the firm negatively affects the stock liquidity. Moreover, higher earning smoothing (low firm transparency) is considered as a negative signal by market participants and reduces the investor confidence. In consequences, the firm experiences drop in the stock liquidity. The findings of the study are in line with earlier evidence which suggest that higher earning smoothing causes lower liquidity and investor confidence because of heightened information asymmetry (Leuz et al., 2003; Ajina & Habib, 2017). In addition, the findings also somewhat similar to the evidence presented by Lang et al. (2012), which maintains that higher level of transparency reduces stock liquidity volatility. The results also highlight significant negative relationship between stock liquidity volatility and leverage, market value and book value, whereas positive association is noted with loss frequency.

Table 3: Liquidity Volatility and Transparency

LIQVOL	OLS	GLS (RE)
EARSMTH	-.9386**	-.8762**
	(.4758)	(0.6793)
LEV	-2.2867***	-1.881***
	(.4221)	(.7334)
MV	-1.48e-11**	-1.55e-11**
	(0.0000)	(1.02e-11)
BV	-.7112***	-.7829**
	(.0306)	(.0418)
SIZE	-.3043	.1284
	(.8106)	(.8946)
LOSS	*.4065***	.1045
	(.1739)	(.2765)

Note: The table depicts OLS and GLS random effect regression results. The table presents Coefficient values and the robust standard errors in parenthesis. Significance of the relationship is represented by the steric, where, *** indicates p <0.01, ** p <0.05, and * p<0.10 (all of them are two sided).

The table 4 concludes the results related to our second hypothesis[1]. The obtained results confirm our second hypothesis, which means there is significant relationship between stock transparency and extreme market events. Moreover, the results clearly show positive significant relationship between liquidity black holes and earning smoothing. The findings imply that higher level of earning smoothing leads to increased prospects of extreme market events, whereas enhanced transparency helps reduces tail risk in PSX. Our findings follow Lang and Maffett (2011), who also show that increased transparency is positively associated with fewer illiquid extreme market events.

Table 4: Liquidity Black hole and Transparency

LBH	OLS	GLS (FE)
EARSMTH	8.7844*	2.6601*
	(4.6415)	(4.3232)
LEV	33.6864***	26.984***
	(4.1178)	(4.6670)*
MV	-1.14e-10*	-1.08e-10*
	(6.81e-11)	(6.50e-11)
BV	-.4255	.2445
	(.2992)	(.2663)
SIZE	-8.5667	-7.4760
	(7.9065)	(5.6930)
LOSS	-4.0666**	-.8982
	(1.6966)	(1.7600)

[1] Here, once again our results estimated using OLS and GLS models report lack of significant relationship between liquidity skewness and earning smoothing. Thus, we do not disclose the results in our main findings.

Note: The table includes OLS and GLS fixed effect regression analysis. The table presents coefficient values and the robust standard errors in parenthesis. Significance of the relationship is represented by the steric, where, *** indicates p <0.01, ** p <0.05, and * p<0.10 (all of them are two sided).

The table 5 presents the results of our third hypothesis. The learned results are rather surprising and divergent from the previous international evidence, which suggests that enhanced corporate transparency reduces the stock commonality (Deng et al., 2018). Moreover, liquidity commonality increases in the markets with weak and opaque economic and financial environments (Moshirian et al., 2017). In addition, lack of transparency and opaque information environment causes lower investor confidence and results in higher liquidity commonality. However, our results can be explained by studies that suggest liquidity is time-varying and varies across counties (Rösch & Kaserer, 2014). In particular, Karolyi et al. (2012) also found liquidity commonality is pronounced in markets with large number of international investors and more connected trading activity. In the same way stock market in Pakistan has relatively fewer international investors and less global integration. Also, liquidity commonality in PSX might also be influenced by country specific cultural and behavioral factors.

Table 5: Liquidity Commonality and Transparency

COM	OLS	GLS (FE)
EARSMTH	.0097 (.0107)	.0071 (.0152)
LEV	-.0018 (.0095)	.0014 (.0164)
MV	-1.40e-13 (1.58e-13)	-1.10e-13 (2.29e-13)
BV	.0000 (.0006)	-.0001 (.0009)
SIZE	-.0068 (.0183)	-.0038 (.0200)
LOSS	-.0002 (.0039)	-.0038 (.0061)

Note: The table includes OLS, and GLS, fixed effects regression analysis. The table presents Coefficient values and the robust standard errors in parenthesis. Significance of the relationship is represented by the steric, where, *** indicates p <0.01, ** p <0.05, and * p<0.10 (all of them are two sided).

Table 6: Impact of Liquidity Volatility, Extreme Market Events and Liquidity Commonality on Firm Value

TOB	OLS	GLS (FE)
LIQVOL	-.0129***	-.0075***
	(.0028)	(.0020)
LIQSK	.0014	-.0044*
	(.0034)	(.0026)
LBH	-.0005*	-.0013***
	(.0003)	(.0003)
COM	-.1298	.0026
	(.1256)	(.0932)
LEV	.1181***	.1052***
	(.0242)	(.0268)
MV	2.67e-12***	3.83e-12***
	(3.62e-13)	(3.57e-13)
BV	-.0171***	-.0098***
	(.0025)	(.0021)
SIZE	.0030	-.0434
	(.0410)	(.0308)
LOSS	-.0453***	-.0384***
	(.0089)	(.0094)

Note: The table includes OLS and GLS fixed effects regression analysis. The table presents Coefficient values and the robust standard errors in parenthesis. Significance of the relationship is represented by the steric, where, *** indicates p <0.01, ** p <0.05, and * p<0.10 (all of them are two sided).

The table 6 reports the results related to our final hypothesis. First, the findings of the study unveil significant negative relationship between firm value and stock liquidity volatility. The findings replicate the earlier evidence that suggests increased stock transparency reduces stock liquidity volatility (Lang & Maffett, 2011). It can be inferred from the results that when market becomes illiquid, subsequently firm value decreases in PSX. Also, higher level of information transparency eliminates information asymmetries between management and firm outsiders and results in higher stock liquidity. In consequences, enhanced stock liquidity positively influences firm value in PSX. The findings are also reinforced by the conclusions of Lang et al., (2012), which recommend positive influence of increased stock liquidity on Tobin's Q (firm value). Second, we note from the results significant negative relationship between firm value and extreme market events. The findings showcase the negative influence of illiquid events on firm value. However, our findings show lack of significant association between liquidity skewness on firm value. In addition, once again surprisingly we fail to find significant relationship between firm value and liquidity commonality which can be considered bizarre in view of the findings of earlier evidence.

5. Conclusion

The study aims to estimate the impact of transparency on stock liquidity. In addition, the study also addresses the wider aspects of stock liquidity by considering extreme market events and liquidity commonality and their respective relationship with transparency. Finally, we evaluate the influence of different liquidity features on overall firm value. In accordance with earlier research this study uses auditor choice and earning smoothing as proxies for stock transparency. Stock liquidity is proxied by stock liquidity volatility, liquidity black holes, liquidity skewness and liquidity commonality. Also, Tobin's Q captures the firm value. Estimations are carried out using Ordinary Least Squares (OLS) and Generalized Least Squares (GLS) models.

The findings show earning smoothing and efforts to mask the financial performance of the firm is perceived as a negative signal by investors and portfolio managers. The findings are reinforces by the earlier evidence that argues that higher level of earning smoothing is indicative of less information transparency and weak corporate governance quality. Moreover, our findings do not support the view that earning smoothing provides immense confidence to the investors because market participants perceives smoothing of income as signal of less volatility and stable earnings. Also, our findings reject anecdotal evidence that indicates managers in Pakistan retain a portion of excess returns for future performance through accruals, which gives confidence to investors for investing in such stocks. In addition, earning smoothing is also positively linked with illiquid events, which suggests that higher level of earning smoothing increases the likelihood of extreme market events. However, the second proxy of stock transparency auditor choice fails to establish significant association with stock liquidity. Finally, the findings also highlight the crucial role of stock liquidity measures for the overall firm value in Pakistan stock market because liquidity volatility and extreme market lower firm value.

The findings of the study hold interesting implications for future academic research and regulations. The evidence highlights that in the presence of effective and transparent regulations, stock market in Pakistan can serve as an effective channel to enhance firms' liquidity and value. Moreover, new regulations and mechanisms to promote information transparency increases investors' confidence and subsequently positively impacts market volume and performance. In addition, regulations aiming to improve information environment and corporate transparency can serve as catalyst to attract foreign investors in Pakistan. Finally, considering the corporate culture in Pakistan using auditor choice as a proxy of information transparency needs to be re-examined since the relationship between transparency and stock liquidity may not be accurately captured through this proxy.

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Human Resource in Digital Age: Significance of Human Resource Information System for Higher Education Institutions of Pakistan

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Abstract:

In today's digital age, HR departments have assumed the role of business partners, necessitating the need for integration of technology with HR functions. Consequently, use of manual systems to perform HR functions of recruitment, compensation, performance appraisal, etc. can adversely affect the productivity of organizations. A large number of organizations have adopted Human Resource Information System (HRIS) to enhance the efficiency of HR departments. Recognizing the expanding role of HRIS and exponential growth in education sector of Pakistan, this research focuses on exploring motivators behind implementation of HRIS in higher education institutions, role of HRIS in improving productivity of higher education institutions, and the challenges attached to HRIS. This qualitative research examines user experiences of HR professionals from seven Pakistani higher education institutions, out of which three are completely automated, one is partially automated, and three are operating on manual HR systems. The research concludes that HRIS is perceived as an invaluable technology for improving the efficiency of higher education institutions in general and their HR departments in particular. Higher education institutions that are currently using HRIS consider it a vital technology, while institutions that are not using HRIS maintain a positive attitude towards it and want to implement it.

Keywords: Human Resource Information System (HRIS), Human Resource Management (HRM), Electronic Human Resource Management (e-HRM), HR Professionals, Higher Education Institutions (HEIs)

1. Introduction

1.1: Background

Human Resource Management (HRM) is an essential component for managing any organization. The role of Human Resource (HR) is not only critical in industries that provide services, such as banking, healthcare, retail and transportation, but is also crucial for the education sector, particularly Higher Education Institutions (HEIs).

Over the last decade, the exponential growth of higher education in Pakistan has transformed the operations of most universities. In 2017-18, there were a total of 186 public and private sector universities with 56.9 thousand faculty members, while the total number of students enrolled in HEIs was 1.6 million.

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This number has increased by 7.7% from the previous year. The number of students and human capital in universities is expected to continue increasing at a rapid rate in the future, thereby, necessitating the use of technology to manage daily operations (Ministry of Federal Education & Professional Training, 2019).

With the growth of universities in Pakistan and the expanding role of HR, HRM can no longer be performed manually in an effective manner and the use of Human Resource Information Systems (HRIS) has become imperative. The increasing popularity of HRIS can be credited to the growing use of technology around the world. In other words, interactions between employees and new technologies have a direct impact on the productivity of organizations (Dixit, 2017). HRIS, defined as a computer-based application for processing information pertaining to employees, is a combination of hardware and software that assists the HR department of an organization (Chauhan et al, 2011). HRIS is an inter-disciplinary subject that consists of two key components: Human Resource Management and Information Technology. It increases the overall productivity of employees and offers a number of benefits to organizations (Kavanagh, Thite, & Johnson, 2012). In a research conducted to analyze the role of computer-based information systems in improving quality of work at higher education institutions, the researchers concluded that individuals and data will become the future direction of development in strategic management systems, both in industrial and education sectors (Naik & Reddy, 2017).

The significance of HRIS can be attributed to streamlining processes and procedures of storing and retrieving employee information in an organization. The effective implementation of this software will improve HR planning through faster information processing and feedback. The firms will be able to make accurate decisions related to Human resource of an organization thus reducing the overall administrative cost. (Mostari, 2018). The use of HRIS for the basic and advanced HR functions can assist organizations to gain competitive advantage over their rivals. (Eleyana, 2020).

1.2: Research Problem and Research Gap

In this digital era, the education sector of developing countries of the world such as Pakistan is still confined to manual HR practices that act as a roadblock in their successful operation. Despite the paradigm shift in HR practices across the world, research on significance and adoption of HRIS has remained limited, particularly in the context of Pakistan (Ahmer, 2013). Literature shows that Higher education institutions around the globe are now increasingly investing in implementation of HRIS to automate functions related to HR such as recruitment, training and development, performance appraisal, compensation etc. However, despite the benefits of HRIS, the extent to which this system has been put into practice in higher education institutions of Pakistan has hardly been explored.

Recognizing this gap and the potential for research in this area, this paper attempts to discover the significance of HRIS by extracting the current scenario of its usage in higher education institutions of

Pakistan. The primary focus of this research is to explore the experiences of HR professionals, determine how HRIS facilitates them, and identify if HRIS enhances or reduces the overall operations and efficiency of higher education institutions. In addition, this research will dig out the reasons behind limitations attached to incorporating and using HRIS in higher education institutions.

1.3: Research Objectives

The following are the objectives of this research:

- To discover the motivators that lead to the implementation of HRIS in universities
- To explore the overall HRIS usage experience of HR professionals in universities
- To identify the change in performance of HR professionals after the implementation of HRIS
- To investigate the reasons behind the mismatch between expected use and actual use of HRIS in universities
- To determine the significance of HRIS in universities

2. Literature Review

The dominance of information technology across the world has resulted in substantial economic and cultural transformations. Due to these advancements in digital era, the internal operations of organizations, mainly the practices of HRM, have revolutionized significantly. Most organizations are moving from conventional HR management to modern approaches of HR since they have been exposed to an immediate need of aligning their policies and strategies with the digitalized labor market. (Battista & Parry, 2019). A research by Hussain, Wallace, & Cornelius (2007) indicates that HRIS adds value to small and medium-sized organizations as well. Therefore, HRIS enhances the productivity of all types of organizations, regardless of their size or scale of operations. Recognizing the gravity of this need, organizations are moving their practices of recruitment, training, appraisal and compensation etc. to electronic mediums (Strohmeier & Stefan, 2014).

In order to achieve a competitive edge over other organizations, the use of information technology and software for managing human resource has become inevitable (Erdoğmuş & Esen, 2011). The revolutionizing HR practices worldwide have indicated an urgent need for the collaboration of HR with IT. Many organizations have shifted from traditional HR practices to electronic HRM; however, this shift in HR practices does not necessarily mean replacement of traditional ways of recruitment, compensation, appraisal and other functions of HR. A number of companies have converted to performing human resource functions online with the help of implementing intranet within their organizations, while some of them have changed their work practices using other technological aspects such as virtual teams (Sharma & Shukla, 2013). On the other hand, Patel (2015) states that integration of technology and human resource is essential to carry out HR functions proficiently.

In a research conducted to examine the perception of stakeholders' in Spanish public sector universities regarding the significance, advantages and disadvantages of transferring human resource data to HRIS, it was discovered that university stakeholders' believed transferring of human resource data to an automated system was relevant and much-needed. Findings revealed that prompt response, clear communication and hassle-free access to data were the major advantages of employing a human resource information system at a university. On the other hand, inadequate finances and lack of continuous support from the management of the university were perceived as the main disadvantages of implementing human resource information systems in Spanish public universities. However, the findings confirmed that a well-managed human resource information system helps in increasing the productivity of employees in universities. (Ramirez & Tejada, 2020). HRIS improves HR planning by facilitating the strategic, tactical and functional decisions of HR in an organization. A research conducted to study the role of HRIS on operational efficacy of corporations in Bangladesh investigated five functions of the system, namely: recruitment and selection, compensation, performance evaluation, communication and job analysis. The research indicated that all the five selected functions of HRIS had a positive impact on the operational efficacy and the impact of HRIS is highest for the HR functions of recruitment and selection. (Selvaraj & Rengamani, 2018)

In 2008, a study conducted on the role of HRIS in higher education institutions found that the use of HRIS will allow universities to store an overall profile of their employees along with their positive and negative qualities. As a result, HR departments can design personalized training and development programs for employees. This will not only lead to universities placing right individuals on the right jobs, but will also improve the culture of learning, reduce wastage of time and operational costs associated with having wrong people at the wrong place. The study concluded that the rapid growth of higher education institutions necessitated a powerful business solution for smooth operations in the future (Rawat, 2008).

The significance of HRIS in a service sector cannot be denied, however, the actual usage of HRIS in universities is limited to data maintenance and data processing only. In the tertiary education sector, traditional HR functions are performed manually and no significant change has been identified in the recent times. Recruitment and training, being the most significant functions of HR, portrayed no major change even after implementation of HRIS, revealing the downside of HRIS implementation. Although HRIS seems to be a promising technological advancement, but its use in the education sector has been found to be limited, thereby, demonstrating that the system is not being fully utilized by the education sector (Jaafar, Rezaeian, Tabarsa, Otarkhani, & Nezafati, 2017).

In the context of Pakistan, a research carried out in 2016 discovered that gender played no part in forming people's perception of HRIS; however, designations and positions played a significant role in individuals accepting or resisting the adoption of HRIS in their organizations. The research discovered that most HR professionals in Pakistan resist the implementation of HRIS, whereas, the HR professionals working in the education sector recognize that HRIS can facilitate their work. Therefore, the education sector is more likely to accept the adoption of HRIS as compared to other sectors in Pakistan. The research concluded that lack of acceptance due to fear of change in the junior staff was the most significant challenge faced by organizations across all sectors in Pakistan (Khan et al., 2016). On the other hand, another study conducted to determine the barriers of HRIS ranked the various challenges of HRIS and discovered that lack of acceptance by senior management was perceived to be the most significant challenge faced by universities (Bamel, et al., 2014).

A research investigating the benefits of HRIS for universities discovered that the most important issue that universities were facing before the implementation of HRIS was retrieving and analyzing staff data. Through the help of a comprehensive information system, a range of HR functions that HR departments of universities had historically found challenging to perform were now being performed with ease on routine basis. The research found that after the implementation of HRIS, employee relations improved with top management because HRIS assisted universities in producing accurate and simple annual appraisal forms, tracking voluntary and involuntary turnover, tracking employee birthdays and past experiences etc. The research also found that universities were utilizing HRIS for training and development of faculty members by maintaining a record of faculty trainings and identifying which faculty members needed to attend trainings. In addition, universities were benefitting from the ease of performing mathematical functions related to salary and compensation of employees (Hooten, 2013).

Investigating the impact of HRIS on job satisfaction and turnover of employees, a research revealed that a sudden implementation of HRIS can be considered a threat by employees, thereby reducing their job satisfaction and increasing their turnover rate. However, findings revealed that employees believed they would welcome HRIS if it was adopted gradually and they were provided adequate training on how to use it, which would in turn increase their job satisfaction and decrease their turnover intention. Thus, if applied properly, HRIS can positively increase the overall performance of employees. (Shahreki, 2019)

A Kenyan research collected data from employees working in Human Resource, Finance and Information Technology departments of two universities in Kenya. The study revealed that the major challenge in implementation of HRIS for universities is the resistance of employees to switch to a computerized system. Other challenges included high costs of implementing and maintaining an HRIS system and shortage of skilled employees using an HRIS system for their daily tasks related to HR. The study concluded that while the benefits of HRIS may outweigh its challenges, the resulting productivity from use of HRIS depends on the acceptance level of employees in universities. The most notable elements that resulted in ineffective and inaccurate implementation of HRIS in higher education institutions are mostly associated with humans and not the system itself. These challenges include shortage of funds to adopt the complete system, high costs of deploying and maintaining the system, inadequate knowledge of application developers and lack of support from senior managers. The study also revealed that inadequate planning from the institution as a whole and departments in particular resulted in mismatch between overall employee coordination in the higher education institutions (Kananu & Nyakego, 2016).

2.1: Theoretical Framework

Although no particular model has been found to determine the significance of HRIS, inspiration can be taken from historical models established by researchers in literature. The theory of Technology Acceptance Model (TAM), coined by David (1989), and the theory of Diffusion of Innovation, developed by Rogers (1995), form the basis of this research.

The theory of TAM can be used to understand the adoption of HRIS. According to this theory, there is a strong association between behavior and usefulness of technology. This means that individuals working at organizations will adopt HRIS if they perceive it to be simpler compared to manual practices of HR (David, 1989).

The theory of Diffusion of Innovation by (Rogers, 1995) explains how innovation spreads. It further determines the reasons and the rate at which new technology and ideas expand overtime. This theory encompasses five characteristics that affect the adoption of new technology. These characteristics are: relative advantage (HRIS will be adopted by individuals if they perceive it to be relatively advantageous in terms of its usefulness, economic value and efficiency), compatibility (the system is consistent with the existing needs of users), degree of complexity (the extent to which the system is easy to use compared to manual practices), triability (universities can have a pilot or testing phase before complete implementation of HRIS) and observability (the degree to which people can observe the results of HRIS before adopting it for their HR practices).

3. Materials and Methods

3.1: Research Design

In this research, interpretivism philosophy has been used with an inductive approach followed by an exploratory research strategy. This combination has been used to explore the phenomenon of HRIS and how HR professionals of higher education institutions interpret their experiences. The inductive approach has been applied to extract the meaning associated with HRIS from the perspective of HR professionals.

3.2: Participants and Sampling

The participants of this research included HR professionals possessing at least three years of relevant experience at a higher education institution of Pakistan. Non-probability purposive sampling technique has been used to select the respondents. HR professionals of universities in Karachi were requested to take part in the interviews and data was collected from those who agreed to respond.

3.3: Data Collection Procedure

Data was collected with the help of semi-structured interviews. The questions asked from each respondent and the order of questions asked varied depending upon the answers of respondents. Additional questions were asked from respondents of some universities to probe further information about HRIS and modules used in their universities. The time duration of interviews was kept flexible in order to extract additional information from respondents. The average duration of interviews was 30 minutes; however, the longest interview lasted for 1.5 hours. The interview protocol consisted of approximately thirteen to fifteen questions which were based on previous researches (Bamel et. al, 2014; Alshibly, 2011) and were developed according to the objectives and research questions of this research. The initial questions of the interview protocol were based on the demographical characteristics of participants, while the remaining questions explored the motivators that lead to implementation of HRIS in universities, the overall HRIS user interaction experience and change in performance after using HRIS. Since HRIS has a wide variety of functions and applications, the interview protocol also included questions that investigated the actual and expected use of HRIS in universities, the extent to which HRIS was used for functions related to HR, and the challenges associated with HRIS.

3.4: Validity and Reliability

The face validity of interview protocol was determined by getting an approval of the instrument by a research expert and a domain expert. Since the sample of this research was HR professionals working at universities, all the respondents fit the criteria and were identified as the most reliable source of gathering information regarding HRIS.

3.5: Plan of Analysis

After the collection of primary data from semi-structured interviews conducted at universities, the responses were transcribed and a thematic analysis was applied to extract relevant insights that would assist in achieving research objectives and answering research questions. During the process of analysis, codes were first assigned to transcribed interviews. After this, the coded data was sorted and sifted to explore similar themes and identify patterns in the collected data. Through this process, relevant information was sorted out into categories (Miles, Huberman, & Saldana, 2014). Memoing was also used to amalgamate the significance of HRIS as perceived by HR professionals.

4. Results and Discussion

Table 1 summarizes the codes and themes derived from interviews of HR professionals working at higher education institutions. The thematic analysis matrix of HR professionals working at higher education institutions has been tabulated in Table 2, which was developed from the responses after completing the processes of coding, sorting and sifting.

Table 1: Codes and Themes Derived from Interviews of HR Professionals

Codes	Sources	Themes
Year 2006	2	HRIS adoption
Year 2008	1	
Year 2018	1	
Time and attendance	7	Current status of HR automation
Leave and short leave record	4	
Payroll	3	
Employee data	4	
Student portal	6	
Almost all functions except training	3	
Daily rosters	2	
Recruitment	2	
Yes, continuous upgrades required	1	Need for automation
Yes, need to automate recruitment and training	1	
Yes, need to integrate stand-alone applications	1	
Yes	2	
No, most functions have already been automated	1	
No, we don't need automation	1	
Requirements of the regulatory bodies	1	Reasons for automation
Lack of coordination between campuses and departments	3	
Costs of labor and keeping data are high	1	
Manual data can be manipulated	1	
Manual HR practices waste time and energy	3	
Shortage of HR staff	1	
Minimizes manual paperwork	4	Motivators behind implementation of HRIS
Saves time and energy	5	
Reduces workload	3	
Improves integration and communication across the institution	2	
Facilitates easy approvals	1	
Saves cost and space	2	
Reduces errors	5	
Allows easy access to data	2	
Increases accuracy and transparency of records	1	
Increases productivity and efficiency	3	
Reduces job burnout	1	
Highly satisfied	2	User satisfaction
Satisfied	1	
Moderate	1	
Not satisfied	1	
Satisfied with manual system	1	
Yes	4	Streamlining of processes
Yes, it will once implemented	2	
No, it will not even if implemented	1	
Time and attendance	7	Utility of HRIS for HR functions
Payroll and compensation	3	
Recruitment	2	
Appraisals	1	

Employee data	4	
Leave record	4	
Student portals	6	
Scheduling	2	
Marvelous	1	Information quality
Very Good	1	
Good	2	
Room for improvement	1	
Will improve once implemented	1	
If implemented, for faculty it will improve but for management it won't improve	1	
Shows salary trends	1	Benefits derived
Facilitates recruitment process	2	
Maintains employee data	6	
Improves satisfaction, productivity and efficiency of employees	6	
Saves time and costs	6	
Reduces paperwork and workload	6	
Reduces errors	6	
Improves reliability and accuracy of data	4	
Provides real-time and quick dissemination of information	2	
Allows quick retrieval of data	1	
Facilitates easy appraisals	1	
Yes	4	Improved efficiency
If modules are integrated, it will	1	
It definitely will once implemented	1	
No, will not be perfect even if implemented	1	
Equal	3	Actual vs expected use
Not equal	1	
Not equal, HR department does not use the module developed for them	1	
Yes, in the beginning by management	1	Employee resistance
Yes, a little	1	
No	1	
Yes, expected in the beginning	2	
Yes, expected	1	
Yes	3	Employee familiarity with modules
Mostly	1	
No	1	
Department coordinators are trained	1	Training support
Trainers are trained	1	
Regular trainings provided	1	
Orientation session given	1	
Time-consuming implementation	2	Challenges associated with HRIS
Employee resistance and acceptance	2	
Costs of modules and maintenance	3	
Risk of disclosure (confidential information)	1	
None, all challenges are opportunities to improve	1	
Time-consuming training	1	
Top management is not willing to implement	1	
Regular upgrades required	1	Room for improvement in HRIS
No, it is okay	1	
Yes	2	
Should go for complete automation	1	

Should implement	1	
Should not implement	1	
Highly Satisfactory	1	System quality
Satisfactory	1	
Average	2	
Should be free from errors when implemented	1	

Table 2: Thematic Analysis Matrix of HR Professionals

S#	Themes	University A	University B	University C	University D	University E	University F	University G
1	Technology Adoption	2008	2006	2006	2018	-	-	-
2	Software used	Education ERP and CMS	CMS	ERP	Oracle	FPSERV, LimeSurvey, ReadyCore,CBA, E-Tests, TMS, LMS	Excel	Oracle CMS (Examination, accounts and academics)
3	Current status of HR automation	All HR functions except training	Employee data, scheduling, attendance, leave applications, student portal	Almost all functions	Attendance, time management, scheduling, payroll (to some extent), student portal	Attendance, employee data, student records, Time in and Time out, employee surveys, student portal	Biometric attendance	Biometric attendance, student portal
4	Need for Automation	Standards remain same, upgrades required	Yes	No, all updated.	Yes, Recruitment and training	Standalone apps are there, integration required	Yes	No
5	Reasons for Automation	Updates as per requirement of regulatory bodies	Lack of coordination, high costs of labor and keeping data	Manual data can be manipulated	Time saving	Paper work, Time and effort	Shortage of HR staff	-
6	Motivators behind implementation of HRIS	Mistakes, paper work, no integration, no accessibility	Lack of efficiency & productivity, cost, job burnout	Paper work, errors in payroll, no transparency, long processes	Time, effort, space, errors	Paper work, approvals take time	Incorrect data entered manually	Inadequate data, errors
7	Satisfaction with use of HRIS	Highly satisfied	Moderate	Highly satisfied	Satisfied, should move to full automation	Not Satisfied, HR should use the system developed for them	-	Satisfied with manual system
8	Streamlining processes through HRIS	Definitely	Yes	Yes	Yes	Yes it will	It will if implemented	It won't even if implemented
9	Utility of HRIS for various HR functions	Attendance, Recruitment, Compensation, employee data, Appraisals	Attendance, leave records, employee records, student portal	Attendance Recruitment, HR data, Appraisals, compensation	Leave records, HR data, attendance, payroll	None, stand-alone modules are there	-	-
10	Information Quality	Very good	Marvelous	Good	Good	Room for improvement	Will improve	For faculty it will improve, for management it won't (if implemented)
11	Benefits derived from HRIS	Salary trends, easy recruitment, tracking employees data, employee	Efficiency, productivity, reliability of data, employee satisfaction, cost effective	Quick information dissemination, quick approvals, cost effective	Transparency, efficiency, talent management	If used, Transparency, quick data retrieval, Accurate records, time	If used, decreased HR workload, tracking employees, easy	Accurate data, time saving but HR personnel will still be required

		satisfaction, cost				saving	appraisals	
12	Improved efficiency	Yes	Yes	Yes	Yes	It will if integrated	-	Will not be perfect even if implemented
13	Actual versus expected use of HRIS	Equal	Equal	Equal	Not Equal	Not Equal, HR dept. does not use the module developed	-	-
14	Employee resistance	Yes in beginning management did. Faculty was fine	Little bit	No	No	They might in beginning	They will if software is implemented	They will
15	Familiarity with modules	Yes	Yes	Mostly	Yes	-	-	-
16	Training support provided	Coordinators are trained	Trainers are trained	Yes regularly	Yes, orientation session is given	-	-	-
17	Challenges associated with HRIS	Time consuming implementation, cost, employee resistance	People acceptance	Privacy issues, maintenance cost	None	Training will take time	Costly implementatio n and maintenance	Top management is not willing to implement
18	Room for improvement in HRIS	Upgrades required	No, it is okay	Yes	Yes	Should go for complete automation	Should implement it	Should not implement
19	System quality	Satisfactory	Average	Highly Satisfactory	Average	-	When implemented, should be free from errors	-

4.1: Higher Education Institutions Using HRIS

This research examined user experiences of HR professionals from seven Pakistani higher education institutions, out of which three were completely automated, one was partially automated, and three were operating on manual HR systems.

4.1.1: Motivators

For all the institutions that were using HRIS, the functions of attendance, leave records and employee data were regularly updated on the system. Most of these institutions had integrated a payroll module of HRIS with their attendance and leave records. However, University B revealed that payroll and compensation had not been integrated with the system. A major finding from the universities that were using HRIS was the absence of integration between training and development and HRIS. Although some universities claimed that they had integrated all HR functions with HRIS, but probing them further revealed that the function of training and development had not been added to their HRIS. Therefore, training needs based on the qualifications, experience and job descriptions of the employees, were not being identified by the HRIS they were using. In addition, it was discovered that half of them desired further automation in their HR department. Except for the respondent of University C, most HR professionals were of the opinion that more modules needed to be integrated with HRIS. A professional from University A expressed this need in the following words:

“The standard modules of all the systems remain the same and cannot be changed. However, policies keep changing, and based on new requirements, the system is updated on a regular basis. For example, PEC has recently introduced a regulation for universities to implement Outcome Based Education (OBE) system. This system entails giving complete information regarding the performance of students and their evaluations etc. Now, this is a new requirement and we need to mold the system to fulfill this requirement. The basic system will not change but some upgrades will be made as per requirements of the regulatory authorities.”

Hence, although University A was of the opinion that their system was fully automated and completely integrated, they recognized the need for upgradation and customization as per changes in policies and requirements of the regulatory bodies.

When probed about the motivators behind implementation of HRIS in their institutions, majority of the respondents indicated that errors in entering data on excel sheets were very common in manual operations of HR. Moreover, respondents highlighted that manual HR practices consumed a lot of time, space and energy of the HR department in particular and employees in general. When HR was operating manually, departments were functioning independently and there was no integration between them. As a result, a serious communication gap existed between various departments and the top management felt the need to bridge this gap by getting an integrated system developed to connect all departments and employees of the institution. A professional from University A emphasized:

“If the data of human resource is maintained on excel sheets, then that data can only be accessed by the HR department and other departments of the institution cannot access it. If the faculty or staff members are unable to view the current status of their data such as attendance, then they feel frustrated because of gap in communication.”

Integration of data and smooth flow of communication between all departments are essential factors when it comes to improving the overall performance and efficiency of an institution. The HR professional of University B revealed another problem associated with manual operations of HR:

“The most important aspect of manual HR operations is job burnout. HR employees maintain records of the entire institution and have a heavy workload due to which they get stressed out and feel pressurized.”

Therefore, the interviews discovered that piles of paperwork, gap in communication, lack of efficiency, job burnout of HR employees and errors in manual practices were the major motivators behind implementation of HRIS in higher education institutions of Pakistan.

4.1.2: User experience

When HR professionals were asked about their experience of using HRIS, majority of them stated that they were either moderately or highly satisfied with the system. However, no one expressed their dissatisfaction with the use of HRIS. An HR professional from University D said:

> *"I am relatively satisfied with the current HR applications because they have simplified our work. Complete automation is what we should now aim for."*

This statement indicated that the university was utilizing HRIS for administrative or limited functions of HR and the users wanted complete automation of HR in addition to full integration of various modules with HRIS.

In addition, the respondents stated that HRIS had streamlined the processes of HR to a great extent. When queried about the specific functions of HR that had been integrated with the system, the common functions that all respondents mentioned were attendance and leave records. University A and University C utilized HRIS to assist the process of recruitment as well. Apart from University B, all universities that were using HRIS had integrated the payroll module with their systems. To facilitate interaction between faculty members and students, all universities were found to be using a student portal as well.

4.1.3: Change in performance

Discussing the change in performance after implementation of HRIS, all respondents agreed on the positive role of HRIS in improving the general productivity and efficiency of employees. They also believed that implementation of HRIS had triggered a significant improvement in the flow of information across the institution. Owing to HRIS enabling transparency of data, respondents were of the opinion that employees were now aware and mindful of their attendance, leaves, evaluations, appraisals and other information pertaining to HR. When probed about the benefits derived by higher education institutions from the use of HRIS, a respondent from University C stated:

> *"One benefit of HRIS is that this system is cost-effective because it saves labor cost. In the absence of HRIS, I would have to hire many people to maintain employee data and manage files. However, now we manage data with one click of a button, so this is a major benefit of HRIS. Other than that, it is beneficial for not only the HR department but the entire institution, particularly the faculty members because they no longer have to run here and there for approvals."*

The HR professionals of other universities that were using HRIS also considered cost-effectiveness, reduction in wastage of time, reliability of data, efficiency of employees and satisfaction of users to be the major benefits of HRIS.

4.1.4: Mismatch of use

Most HR professionals indicated that faculty members and officers used HRIS for all the functions it had been originally implemented for. An HR professional of University B revealed:

> *"The faculty members and officers use it for all the functions. The non-teaching staff, however, does not use it and we don't expect them to use it either because they are not proficient at using computers."*

Two universities that were using HRIS claimed that they faced no resistance from employees when it came to using HRIS, while the other two stated that some employees hesitated in the beginning. A professional from University A revealed that the transition of faculty members from manual practices to HRIS was smooth; however, some senior employees expressed their reluctance in using technology. He added:

> *"When we implemented the biometric attendance system, some senior employees had problems. They did not want to put thumb impressions to register their daily attendance. However, later on, they were convinced by the Vice Chancellor regarding the benefits of using technology. The system helps in checking the time-in and time-out status of employees and other relevant information. Although we started moving towards adopting technology in 2008, the time and attendance system was introduced in 2013."*

The HR professionals of the universities believed that faculty members and employees were familiar with all the modules of HRIS that they were using. Discussing the significance of providing trainings to users, they highlighted that trainings were either provided to all employees through orientation sessions or to trainers/coordinators of each department who could further train other colleagues and faculty members.

When inquired about the challenges associated with HRIS, the HR professional of University D stated that the university faced no major challenge and considered all challenges to be opportunities for growth. In contrast, the other three universities that were using HRIS considered cost of implementation, cost of maintenance and employee resistance as significant barriers associated with HRIS. A professional from University C emphasized that breach of privacy due to disclosure of confidential information stored on the system was a major challenge associated with HRIS by saying:

> *"After the implementation of HRIS, everyone is aware of everything which is good because it ensures transparency, but then again, it is also an issue because there is no privacy now."*

4.1.5: Significance

While determining the overall significance of HRIS for higher education institutions that were already using it, it was discovered that HR professionals were completely or moderately satisfied with the current HRIS of their universities. In addition, they considered the system quality to be either high or average. University B and University D expressed their satisfaction with the current HRIS they were using, but stressed that there was a lot of room for improvement as well as addition and integration of more HR modules.

4.2: Higher Education Institutions Not Using HRIS

Although three out of the seven universities understudy were not using a proper HRIS, all of them revealed that they were endeavoring to develop an automated system to facilitate their HR processes in the near future.

4.2.1: Motivators

The three universities that were not using HRIS maintained a positive attitude towards it and wanted to adopt it. However, all of them were already using a biometric attendance system to register the daily attendance of employees. University E, a partially automated university, had automated a number of stand-alone modules to assist the operations of various departments, but was found to have absence of integration between modules. A professional from University E stated:

> *"We are currently using several customized applications to facilitate various functions of the university. To evaluate the performance of faculty members, we are using a survey application called LimeSurvey. The reports of the mid-semester and end-semester feedback provided by students on the survey application are then generated through another framework called ReadyCore. This framework includes information pertaining to students as well such as the status of defaulters and graduates. The major academic application that we are using is called CBA. It has modules for students, classes, courses etc. and is integrated with other applications such as Time Management System (TMS) to track the time and attendance of employees and to allow them to keep a track of their monthly attendance and hours logged on campus."*

The interviews revealed that University E was using several automated applications for various departments and had developed a customized module for the HR department as well; however, the HR

Manager of the university revealed that the staff of his department was not using it because they were comfortable with the manual practices of HR.

When inquired about the need for automation of HR functions, all universities were of the opinion that there was a need to automate more functions because manual practices consumed a lot of time and effort. However, University G claimed that there was no need for automation of any function. A professional from University G expressed this in the following words:

> *"Total automation in HR is possible but it comes with a lot of drawbacks. If we automated everything in HR, what will be the role of HR managers and HR staff? They will lose their jobs. The IT department of our university is capable of developing an automated system, but our top management is not interested in implementing the system right now."*

It was discovered that the IT department of University G had developed a basic system for faculty members and employees, but the system was not being used because the top management of the university was not in favor of automation.

4.2.2: User experience

Most universities that were not using HRIS recognized that the implementation of HRIS will help to streamline processes of their HR. The major problems being faced by the HR professionals who were not using HRIS included huge quantities of paperwork, communication problems, difficult retrieval of data, lower efficiency, job exhaustion of HR staff and mistakes in manual practices of HR.

4.2.3: Change in performance

When the respondents were asked about the potential benefits of HRIS for their institutions, they stated that it can assist their institutions in maintaining accurate data of employees due to fewer chances of human errors in entering data. Moreover, the respondents highlighted that HRIS can reduce the workload of HR professionals to a great extent and facilitate easy retrieval of data and history of employees. On the other hand, a professional from University G marginalized the benefits of HRIS by stating that use of HRIS cannot change the performance of HR staff because they will then have the added workload of looking after the system and bearing its costs.

4.2.4: Mismatch of use

All the professionals of universities that were not using HRIS revealed that implementation of HRIS will lead to resistance from employees because they are comfortable with manual practices since years. They also believed that costs associated with the implementation of HRIS and training of employees on how to use the system will be major challenges if the system is implemented in their institutions. A professional from University G identified the university's major challenge in the following words:

> *"Top management will not support technology. The system is ready and our IT department is willing to implement it but the management is resisting the deployment of this system for faculty members."*

The interviews revealed that, except for University G, the top management of all universities that were not using HRIS supported the use of technology and recognized the need for automation.

4.2.5 Significance: Professionals from two out of three universities that were not using HRIS wanted HRIS to be implemented as soon as possible and were endeavoring to develop it; however, University G was of the opinion that HRIS was not needed and should not be implemented because it cannot work in isolation and the need for HR professionals will exist even after implementing a technology-based HR system.

5. Conclusion, Recommendations and Areas for Future Research

5.1: Conclusion

With the growth of technology and immense competition in the education sector, it is tough for higher education institutions of Pakistan to survive without the use of information systems in their daily operations. This paper aimed to explore the extent of HRIS usage and the benefits and challenges it brings to the higher education institutions of Pakistan. The results of this research indicated that out of the seven universities understudy, three were using HRIS for basic functions of HR, while others were either partially using HRIS, using customized modules for each department, or using manual HR methods for maintaining employee data, recruitment, appraisals, trainings and payroll.

After conducting a qualitative analysis of responses, it can be established that higher education institutions of Pakistan are endeavoring to move from traditional practices to contemporary methods of HR by using technology for their routine HR operations. However, in agreement with the research of Sharma & Shukla (2013), some universities indicated that the shift in methods does not mean that manual practices will become obsolete and combining technology-based HR with traditional practices can yield fruitful results for higher education institutions.

In agreement with Hussain, Wallace & Cornelius (2007), this research revealed that HRIS enhances the productivity of all types of institutions, regardless of their size or scale of operations, as three out of the four universities that were using HRIS were small or medium-sized institutions with a limited number of faculty members and students. Moreover, this research reinforces the findings of Jaafar, Rezaeian, Tabarsa, Otarkhani & Nezafati (2017) that revealed the education sector mainly utilizes HRIS for administrative purposes. The analysis of the universities studied in this research revealed that universities were utilizing HRIS for basic functions of HR such as recruitment, payroll, time and attendance management, while training and development and appraisals were major functions of HR that universities were performing manually.

Another interesting finding of this research was that a professional of one university acknowledged that the university had a bureaucratic culture due to which the top management was not supportive of HRIS. However, interviews were conducted at two other universities with a similar bureaucratic culture and HR professionals of both these universities were of the opinion that the top management supports implementation of technology and is willing to switch to a technology-based HR system in the near future. Hence, the research discovered that the culture of an institution does not have an impact on the willingness of top management to implement technology in the institution.

This research also found that most universities, including the universities that regularly used HRIS, have not integrated the training and development function with HRIS. In addition, although HRIS can be used for succession planning, the HR departments of universities do not recognize this function of HR. If HRIS is used to facilitate succession planning, institutions can benefit from placing right people at the right jobs and have the most appropriate replacements for individuals leaving the institutions. Since HRIS encompasses storage of employee data, it can be used to identify individuals who can fill up important positions. Identified individuals can then be prepared and trained by the institutions before the need arises. As a result, the institutions in general and employees in particular can both benefit.

Finally, this research also concluded that from the perspective of HR professionals, easy access to employee data, reduced workload, enhanced communication and improved productivity were the major benefits of HRIS. The most significant challenges identified by HR professionals included employee resistance in accepting computer-based systems, the need for regular upgrades, and maintenance costs of the system.

5.2: Recommendations

Based on the findings of this research, the following recommendations are proposed:

1. None of the universities that were using HRIS mentioned training as an integrated application of HRIS. Training and development is an essential function of HR that should be incorporated into HRIS of higher education institutions. Similarly, succession planning and talent management should be integrated with HRIS. If used for succession planning and talent management, the system, based on ages, qualifications and experiences of individuals, can identify and select the most suitable individuals for vacant positions in an institution.

2. According to the findings of this research, in addition to large-scale institutions, a number of small-scale institutions are also using HRIS for routine functions of HR. Hence, small universities should try to implement HRIS in order to facilitate their work and enhance the general efficiency of their employees and HR departments. They can start by using limited functions of this system and then make a gradual move towards implementation of full-scale HRIS.
3. Universities that are using HRIS for administrative functions only, such as registering daily attendance or maintaining leave records, should start utilizing the system to its full potential. Since the cost of implementation has already been incurred, the HR departments should utilize HRIS for strategic functions and decision-making in order to get returns from this investment.

5.3: Areas for Future Research

1. Similar research can be conducted from the point of view of faculty members working at higher education institutions in order to determine their preferences of HR practices and the problems they face while using manual or automated HR systems.
2. This study involved collecting data about HRIS through interviews of respondents working at various universities in the first phase and exploring the collected data to determine the significance of HRIS for higher education institutions in the second phase. However, a subsequent quantitative research can be carried out on the basis of responses of this qualitative research.
3. This research focuses on private sector higher education institutions of Pakistan. A future research can be conducted with the perspective of drawing conclusions on the differences in significance of HRIS for private and public sector higher education institutions.
4. Although, in this research, major differences in perceptions were not found among people of different ages, qualifications and cultural backgrounds, however, some respondents indicated that people with no knowledge of IT might resist the use of HRIS. Hence, a detailed research on the significance of HRIS based on the demographics of users can be carried out in the future.
5. Since one limitation of this research was lack of access to universities outside of Pakistan, a future research with an intention to approach universities in other countries can be carried out.

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How Employee Behavior And Job Stress Affect Work-Life Balance Of Faculty Members Of Karachi: Multi-Group Analysis Between Private And Public Sector Universities

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Abstract

The study aimed to identify the impact of workplace stress and employee behavior impairs the work-life balance of faculty members of Higher Education Institutes in Karachi, Pakistan's. This study has included mono-method quantitative survey research design. The study has collected 386 sample responses from faculty members using purposive sampling technique. The results of comparison parametric test showed that there is a statistically significant and positive difference of opinion between the faculty members of private and public sector higher education institutes in regards to the effect of employee behavior on work-life balance. However, the comparison results showed no difference of opinion between the faculty members of private and public sector higher education institutes in regards to the effect of workplace stress on work-life balance. Work-life balance rates today as one of the most important attributes of the workforce second only to wages, and workers who believe they have a better work-life balance tend to work more than staff that are overworked. These are some of the many ways by which managers can encourage work-life balance without jeopardizing productivity or efficiency at work.

Keywords: Work-Life Balance, Employee Behavior, Job Stress, Higher Education Institutes, Multi-Group Analysis.

1. Introduction

Increasing job demands and job stress remain a major concern lately because of the increased reach of jobs. Extended work hours and escalated job responsibilities become more common in the workplace. In contrast, adjustments are also made in the family because there are more single parent families and more dual career, and working adults who are the breadwinners for their elders and youngsters(Razak, Yusof, Azidin, Latif, & Ismail, 2014). Moreover, work stress is caused through irrelevant or unmatched job requirements and needs of a worker. Both employees and organizations reveal work stress as a physical and psychological concept because it influences workers and leads to health issues and work family conflict. Similarly, work stress leads to high labor turnover, low quality work

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life, high absenteeism, and low productivity(Chang, Zhou, Wang, & de Pablos Heredero, 2017). Job stress is categorically revealed as a negative reaction people experience due to excess demands or pressure imposed on them at work. Thereby, work demand and time are the factors that influence work stress mostly (Ayudhya, Prouska, & Beauregard, 2017). However, employee behavior is increasingly focused in highly competitive environment of workplace. The positive behavior of employee in the context of organization is generally referred from organizational citizenship behavior. For instance, employees are intended to assist their colleague on the job duties, staying late at office and taking additional job activities and volunteering to train newcomers(Ghosh, 2016). Indeed, job performance of an employee and organizational effectiveness can be hampered through high level of stress (Husin, Ghazali, Abdullah, & Hadi, 2017). The association of stress and employees performance is highly researched because it leads to less willingness and lower job performance.

Though, workplace stress has not been considered as recent issue in the literature but it still has significant importance for research due to instable economic situations, limitation of sacred resources, fierce competition, human rights and work-life balance (Selye, 1956; Yao, Fan, Guo, & Li, 2014). Work-life balance (WLB) leads to the expectations of people of how well working and non-work roles match together and are handled in line with their personal life values, objectives, and goals structure (Haar, Sune, Russo, & Ollier-Malaterre, 2019). In the recent times, stress management becomes critical challenge for individuals and companies both. Its significance can be understood by recent literature that emphasized on understanding implications and consequences of workplace stress that ultimately increases work-life conflicts, well-beings of the individuals and organizational performance in the larger context (Gillespie, Walsh, Winefield, Dua, & Stough, 2001; Hayes, Douglas, & Bonner, 2015; Karkoulian, Srour, & Sinan, 2016; Razak et al., 2014; Ross & Vasantha, 2014). This rapid economic growth, together with a huge population, means that Asian jobs constitute a substantial portion of the global working population, demonstrating the significance of Asian economies for study and practice. There has been little emphasis on this field of study on the Asian population, amid rising longitudinal studies on work-life research in the West (Le, Newman, Menzies, Zheng, & Fermelis, 2020). Furthermore, recent empirical and theoretical literature supported the argument that workplace stress and employee behavior have significant implications for work-life balance (Razak et al., 2014; Singh, 2013; Yadav & Yadav, 2014). Also, employee behavior normally emerges from unusual work environment, lack of peer and supervisory support, long working hours and low motivation perspectives at the workplace (Colligan & Higgins, 2006; Ferguson, 2012; Othman, Lamin, & Othman, 2014; Rahimić, Resić, & Kožo, 2012; Yao et al., 2014).

Though, the empirical literature significant contributes in this context but the nexus between workplace stress, employee behavior and WLB has lacked in evidence in recent literature. Therein, the current study has undergone in conducting and identifying importance of studying the imperatives of workplace stress and employee behavior towards work-life balance in the context of higher education institutes of Karachi, Pakistan.

2. Literature Review

2.1: Conservation of Resources Theory

Conservation of resources (Niessen, Mäder, Stride, & Jimmieson) theory starts with the principle that people struggle in order to acquire, keep on holding, cultivate and secure the things that they value greatly (Brotheridge & Lee, 2002). The theory of COR presents a perception that intelligence has a natural development and partiality where it heavily weights the loss of resources and lightly weights the gains of resources (Freedy & Hobfoll, 1994). In regard to this, according to Hobfoll (2001) the conservative of resources theory argues that pressure manifests (a) when the main resource is endangered, (b) when the main resource is lost, or (c) when the main resource is not gained even after significant attempts to achieve it. The theory of COR is basically a motivational theory elaborates how the humans behave on the basis of the evolutionary requirement to obtain and protect the resources needed to survive, that is a behavior related to human genetics. Similar to social animals, obtaining and protecting the particular strengths and the bonds of society are human traits (Hobfoll, 2011). However, humans are capable of creating means that would guarantee their survival and have proper means of communication as an advantage, helping in social bonding and survival. Therefore, humans possess an important tool that not only helps in countering stress but also the means of reserving the resources to address their future needs.

2.2: Workplace Stress/Job Stress and Work-Life Balance

Chaudhry (2012) also investigated the association among Occupational tension and diversity in Pakistani universities. The study findings showed significant variance in faculty members with diverse age groups concerning their perceived stress level. Giauque, Anderfuhren-Biget, and Varone (2019) explored whether job opportunities influence the stress and associated turnover intentions of workers participating in professional intergovernmental organizations. Within the unique working environments of multinational organizations, it contextualizes the job resources and demands model. Johari, Tan, and Zulkarnain (2017) inspected the impact of workload, WLB and autonomy on job performance amongst teachers. Study findings stated the autonomy and WLB had an effect on participants' job performance. On the other hand, there was no significant work-load action among school teachers on job results. Duong, Hussain, and Subramaniam (2020) explored the difficulties faced by women working in multinational corporations in Vietnam regarding the benefits of work-life balance. The research is intended to unfold the variables affecting female workers who have encountered work and life imbalances. Noor (2011) examined the association between the observed WLB satisfaction among the academicians of Malaysian public higher education and their turnover intentions. The outcomes indicated that perceived WLB satisfaction was associated with the negative intentions of leaving the organization. Kumari (2012) also measured the

WLB according to the employees' perception and its association with the satisfaction of jobs. A noteworthy gap was found between the perceptions of male and female respondents with respect to different factors of WLB. Rehman and Azam Roomi (2012) explored different factors that impact women's family roles and work in the cultural and socio-economic environment of Pakistan. The outcomes of the analysis showed that WLB was the significant factor among several factors at the time of starting a new business as well.

In pressure work environment and stressful routine, the chances of reduction in job satisfaction, organizational commitment and increase in burnout are high (Dryson, Scragg, Metcalf, & Baker, 1996). According to (Kundaragi & Kadakol, 2015) increase in level of stress is equal to lack of well-being, specifically when a person lacks to achieve effective strategies in order to cope up with the stress (Miller, Buckholdt, & Shaw, 2008). Prominently, lower level of work-life conflict and satisfaction in WLB, both are connected with the nonworking consequences including, family performance and leisure, marital and family satisfaction (Armstrong, Atkin-Plunk, & Wells, 2015; Saeed & Farooqi, 2014). As per the statement of Neumann et al. (2017) stress at workplace is related to the supposed threats and demand at workplace or it is similar to the uncomfortable experience of an employee at workplace. Therefore, we hypothesize that:

H1: Workplace stress has significant effect on WLB.

2.3: Employee Behavior and Work-Life Balance

Wirtz, Nachreiner, and Rolfes (2011) studied relationship between the working Sundays and WLB using the logistic regression models. Study reports revealed that serving on one or two Sundays in a month is related to the increased likelihood of health disability. Although working on Saturdays has become common again; whereas, working Sundays may negatively influence the WLB of the employees. Chawla and Sondhi (2011) examined WLB as a field of concern and investigation for the organization and individuals. The results indicated that job autonomy, organizational commitment and perceived work are considered strong contributors for the employees. Thamrin and Riyanto (2020) Investigated the interaction between WLB practices on the performance of employees and the mediating impact of job satisfaction in the relationship between work-life balance practices and the performance of employees in East Malaysia among doctors and nurses. Warraich, Ahmed, Nawaz, and Khoso (2014) also examined the effect of Stress on Job Performance with the context of Workers. The findings found that task tension, workload and inadequate supervision compensation are the key triggers of worker stress and this stress reduces their productivity and performance. Gudep (2019) explored the links between flexible work structures (FWS), organizational commitment (OC), work-life balance (WLB) and job satisfaction (JS) for teaching workers in the United Arab Emirates (UAE).

Previous researches have also focused on this prospect and the results of those researches showed that WLB has a positive relation with the performance of the employee and organizational performance (McCarthy, Darcy, & Grady, 2010). Moreover, this positive relation proved to have some notable results like having a low level of turnover of employees, increase in performance and also more satisfaction of the job (Ahmad, Hussain, Saleem, Qureshi, & Mufti, 2015). It also increases the in-role performance that is when a specific task is given to the employee and it is completed by the employee with more accuracy (Annink et al., 2016). The better psychological experience and the wellbeing of the employee in their life helps in doing the work with more concentration which eventually results in improve performance (Armstrong et al., 2015). Also according to (Direnzo, Greenhaus, & Weer, 2015) The difficulties and disputes in the partnership between work and family may have a detrimental effect on the success of both in-role and out-of-role workers. Therefore, this study hypothesized that:

H2: Employee behavior has significant effect on WLB.

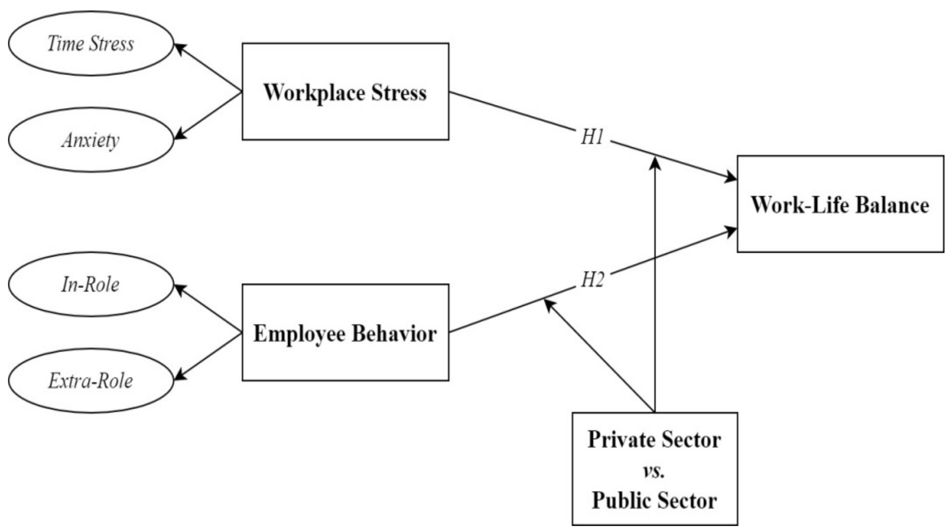

Figure 1: Research Framework

3. Methodology

The research centered on the permanent faculty of institutions of higher education in Pakistan's Karachi region. The research aimed to obtain 384 survey responses from the target community focused on a confidence interval of 95 per cent for quantitative analysis. In sampling technique, a fragment is extracted from the population in order to conduct the research, the results of which, to an extent can be generalized for the target population. The sampling strategy consists primarily of two separate forms known as probability sampling and the impossible sampling (Kumar & Phrommathed, 2005; Newman & Benz, 1998). The most popular methodology of data sampling is the methodology of ease non-probability sampling. It is a method where the sample data is collected from a population that is accessible or is in proximity to the researcher while also having adequate information of the study domain (Kumar & Phrommathed, 2005; Newman & Benz, 1998; Peffers, Tuunanen, Rothenberger, & Chatterjee, 2007). In this research, the sampling technique applied is the purposive sampling.. In order to collect the data quantitative questionnaire based on five-point Likert scale rating was adapted from (Schepers, Falk, Ruyter, Jong, & Hammerschmidt, 2012; Shukla & Srivastava, 2016). Due to the study being quantitative in nature, data was collected using the quantitative data, survey questionnaires were used for collecting the respondents results. The PLS-SEM is used more commonly to assess the cause and effect relationship between the variables of the study (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014). Using the PLS-SEM is significantly more advantageous in terms that it includes the cross loadings and the HTMT ratio, also known as the Heterotrait-Monotrait ratio, in the discriminant validity compared to other techniques that do not provide these ratios (Henseler, Ringle, & Sarstedt, 2015; Wong, 2013). PLS-SEM also provides accurate results when the relationship is analyzed among the research variables (Hair, Matthews, Matthews, & Sarstedt, 2017; Hair, Ringle, & Sarstedt, 2011). Hence, the study has adopted the PLS-SEM as the technique of data analysis.

The definition of Popular Method Variance (CMV) implies that it is a bogus or incorrect variance process that is related or due to the measurement system which may be attributed to certain systems for which the measurements are meant to reflect (P. M. Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The CMV could be diagnosed using Harman single-factor method. Therefore, the technique used for diagnosing CMV in this study was Harman single-factor method. In this technique the measures are included into exploratory factor analysis in order to determine such necessary factors that could help to find variance in these measures (Krishnaveni & Deepa, 2013). Hence, the threshold of total CMV of all the measures as recommended by (Krishnaveni & Deepa, 2013; P. M. Podsakoff et al., 2003) should be less than 50 percent and the study has 26.188 percent CMV. Therefore, no evidence of CMV has been found in the study.

4. Data Analysis

4.1:Data Screening

The current study has none missing values in the dataset. Univariate outlier could be detected using the Z-score value of ±3.29 (Tabachnick & Fidell, 2007). The sample of dataset was consisted of 403 responses and it remained 403 because there were no univariate outliers detected in the study. Multivariate outliers could consist because of incorrect entry and failure to propose codes regarding missing values (Hair, Black, Babin, & Anderson, 2010). Hence, these outliers could be detected using Mahalanobis Distance (D2) with the cutoff value of 0.001 (Tabachnick & Fidell, 2007). Hence, 403 responses were retrieved from target population and the current study has detected 17 multivariate outliers and thus the final dataset used for data analysis was 386 responses.

4.2: Demographic Profile of the Respondents

The table showed that there were a total of 386 respondents that participated in the study. Of the 386 respondents, 193 (50 percent) were males and 193 (50 percent) were females. Also, 117 (30.3

percent) were single, 264 (68.4 percent) were married, 4 (1 percent) were divorced and 1 (0.3 percent) were widow. In the age group, 118 (30.6 percent) were 21 – 30 years old, 177 (45.9 percent) were 31- 40 years old, 61 (15.8 percent) were 41 – 50 years old and 30 (7.8 percent) were more than 50 years old. In education, 94 (24.4 percent) were masters or equivalent, 165 (42.7 percent) were M Phil or equivalent, 108 (28 percent) were Doctorate and 19 (4.9 percent) were Post-Doc. Moreover, in teaching experience, 53 (13.7 percent) had 1 – 3 years' experience, 109 (28.2 percent) had 4 – 6 years' experience, 59 (15.3 percent) had 7 – 9 years' experience and 143 (37 percent) had 10 years and above experience. In context of monthly income, 12 (3.1 percent) earned Rs. 25000 and below, 116 (30.1 percent) earned between Rs. 25001 – Rs.50000 and 124 (32.1 percent) earned above Rs. 100000. Lastly, 150 (38.9 percent) were in public sector and 236 (61.1 percent) were in private sector.

4.3: Measurement Model

Following table 1 provides result of measurement model.

Table 1: Measurement Model

Constructs	Items	Loadings	Prob.	Alpha	CR	AVE
Anxiety	AI1	0.787	0.000	0.784	0.861	0.607
	AI2	0.775	0.000			
	AI3	0.760	0.000			
	AI4	0.794	0.000			
Extra role performance	ER1	0.886	0.000	0.915	0.941	0.798
	ER2	0.922	0.000			
	ER3	0.911	0.000			
	ER4	0.853	0.000			
In-role performance	IR1	0.780	0.000	0.866	0.909	0.715
	IR2	0.817	0.000			
	IR3	0.894	0.000			
	IR4	0.886	0.000			
Time stress	TS1	0.757	0.000	0.718	0.826	0.543
	TS2	0.737	0.000			
	TS3	0.769	0.000			
	TS4	0.682	0.000			
Work-life balance	WLB1	0.781	0.000	0.835	0.902	0.755
	WLB3	0.929	0.000			
	WLB4	0.890	0.000			

As recommended by Hair, Hult, Ringle, and Sarstedt (2016) the factor loadings greater than 0.70 should be retained, whereas loadings greater than 0.40 and smaller than 0.70 can be retained on the basis of convergent validity and all measures should be statistically significant at 95 percent confidence interval. In the above table, all the latent constructs and their respective measures/indicators have achieved recommended cut-off values. Furthermore, Hair et al. (2017) It was proposed that the Cronbach Alpha be greater than 0.70, composite durability greater than 0.80 and AVE greater than 0.50. The table shows that the convergent validity was obtained on all latent constructs.

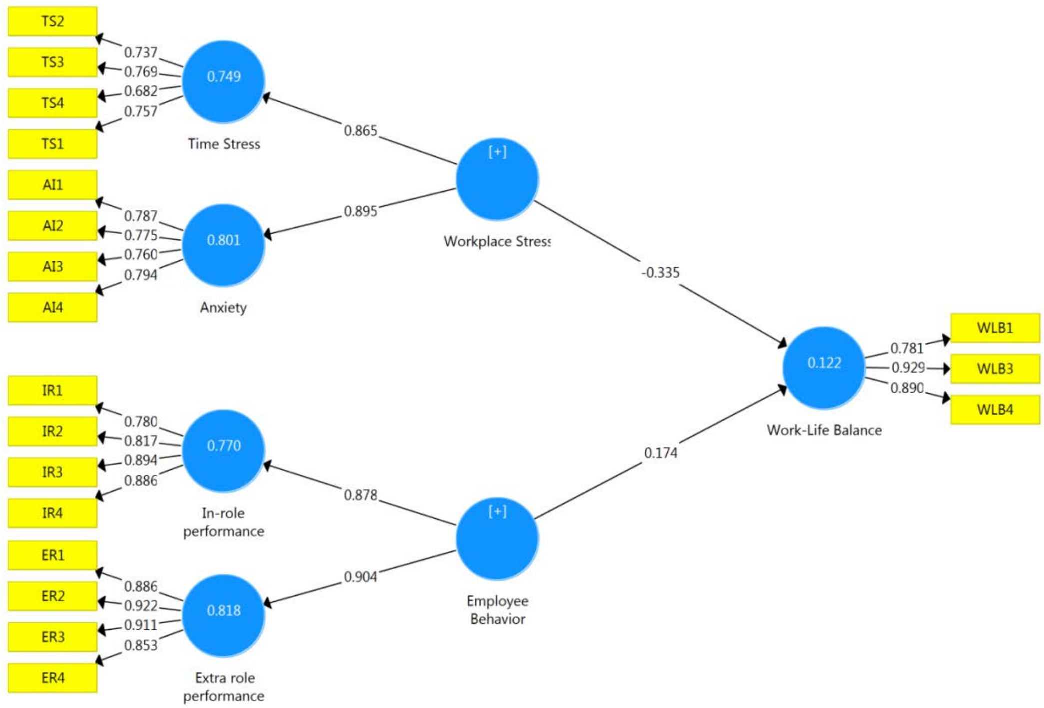

Figure 2: PLS Algorithm using SmartPLS version 3.2.8

Table 2: Discriminant Validity using Fornell and Larcker (1981) Criterion

	Anxiety	Extra role performance	In-role performance	Time stress	Work-life balance
Anxiety	**0.779**				
Extra role performance	0.116	**0.893**			
In-role performance	0.128	0.589	**0.846**		
Time stress	0.551	0.180	0.141	**0.737**	
WLB	-0.256	0.079	0.126	-0.280	**0.869**

The table showed that the diagonal values are the square root of AVE of respective latent constructs, while the values below are the coefficients of correlation; however, the diagonal bold values showed that all the constructs are found different from other constructs as the bold coefficients were greater in their respective horizontal and vertical settings (Hair et al., 2016).

Table 3: Discriminant Validity using Cross loadings

	Anxiety	Extra role performance	In-role performance	Time Stress	Work-Life Balance
AI1	**0.787**	0.073	0.106	0.374	-0.150
AI2	**0.775**	0.189	0.202	0.527	-0.152
AI3	**0.760**	0.015	-0.023	0.401	-0.259
AI4	**0.794**	0.075	0.104	0.405	-0.241
ER1	0.173	**0.886**	0.539	0.207	0.049
ER2	0.078	**0.922**	0.539	0.173	0.058
ER3	0.106	**0.911**	0.555	0.149	0.067
ER4	0.056	**0.853**	0.469	0.110	0.112

IR1	0.103	0.402	**0.780**	0.132	0.071
IR2	0.136	0.426	**0.817**	0.194	0.132
IR3	0.139	0.543	**0.894**	0.111	0.097
IR4	0.062	0.597	**0.886**	0.057	0.125
TS1	0.401	0.110	0.089	**0.757**	-0.165
TS2	0.355	0.042	0.109	**0.737**	-0.194
TS3	0.413	0.238	0.177	**0.769**	-0.206
TS4	0.451	0.132	0.038	**0.682**	-0.260
WLB1	-0.178	0.081	0.151	-0.204	**0.781**
WLB3	-0.256	0.063	0.117	-0.246	**0.929**
WLB4	-0.228	0.064	0.067	-0.277	**0.890**

As recommended by (Hair, Gabriel, & Patel, 2014), all constructs should have loadings greater in their own respective constructs. The table showed that the values in bold were greater compared to their outer loadings in the other constructs; therefore, discriminant validity has been achieved using the crossloadings. The following table shows the result of HTMT ratio.

Table 4: Discriminant Validity using HTMT Ratio

	Anxiety	**Extra role performance**	**In-role performance**	**Time stress**	**Work-life balance**
Anxiety					
Extra role performance	0.142				
In-role performance	0.176	0.653			
Time stress	0.729	0.229	0.184		
WLB	0.316	0.093	0.151	0.361	

The recommended (Henseler, Hubona, & Ray, 2016; Henseler et al., 2015) threshold value of HTMT should be smaller than 0.85. The above table showed that the HTMT ratio was found in the interaction between the anxiety and time stress (0.729), hence; the discriminant validity using HTMT ratio has been achieved.

4.4: Structural Model

4.1. Higher-Order Constructs

It was found that the employee behavior was significantly related to the extra role performance (0.904, $P < 0.01$) and the in-role performance (0.878, $P < 0.01$). Furthermore, It was found that the workplace stress was significantly relating to the anxiety (0.895, $P < 0.01$) and time stress (0.865, $P < 0.01$).

4.1.1Hypothesis-Testing using PLS-MGA

The following table 5 shows result of multi-group analysis using PLS-SEM for estimating the difference of opinion between private sector and public sector faculty members of higher education institutions of Karachi, Pakistan.

Table 5: Multi-Group Analysis using PLS-MGA

	Private	Public	Comparison
Employee Behavior → Work-Life Balance	0.269**	-0.055	0.324**
Workplace Stress → WLB	-0.306**	-0.415**	0.108

*** significant at 0.01 level.*

The results have shown that employee behavior has positively significant effect on WLB (0.269, $p < 0.01$) in private sector HEIs but it has negatively insignificant effect on work-life balance (-0.055, $p > 0.05$) in public sector HEIs. Similarly, workplace stress has negatively significant effect on WLB in both private sector HEIs (-0.306, $p < 0.01$) and public sector HEIs (-0.415, $p < 0.01$) of Karachi, Pakistan. However, the results of comparison parametric test showed that there is a statistically significant and positive difference (0.324, $p < 0.05$) of opinion between the faculty members of private sector HEIs and public sector HEIs in regards to the effect of employee behavior on WLB. This result showed that faculty members of private sector HEIs have strong consideration towards employee behavior and WLB relationship as compared to faculty members of public sector HEIs. However, the comparison results showed no difference of opinion (0.108, $p > 0.05$) between the faculty members of private sector HEIs and public sector HEIs in regards to the effect of workplace stress on WLB. This result postulated that both type of faculty members have similar observation and perspective about the adverse consequences of workplace stress on WLB in the higher education institutions of Karachi, Pakistan.

Table 6: Predictive Relevance

	R Square	R Square Adjusted	Q Square
Work-Life Balance	0.122	0.117	0.085

It was found that the latent variable of WLB was being predicted up to 12.2 percent as denoted by R-square value.(Cohen, 1988; Falk & Miller, 1992) recommended R2 values of R2 to be equal or greater to 0.10, with R2 of 0.26 being substantial, 0.13 as moderate and 0.02 as weak, hence, the R2 value was weak to moderate. Also, it showed the Q2 was greater than absolute, (Hair, Ringle, & Sarstedt, 2013) indicated the Q2 value at 0.02 being weak, 0.15 being moderate and 0.35 being strong, hence, the value of 0.085 shows that the Q2 value obtained has weak to moderate level.

5. Discussions

The study results found that the connotation between work stress and WLB is significantly negative. In other words, there is a strong negative association between work-life harmony and work-stress. That is, changes in one equation are closely correlated with changes in another (Zaheer, Islam, & Darakhshan, 2016). (N. P. Podsakoff, LePine, & LePine, 2007) also found the significantly negative association between the work stress and WLB. Work-related stress has impacts on job happiness, workplace effectiveness, mental and physical health, absenteeism and economic cost, greater impact on families which ultimately affect workforce performance.(Ross & Vasantha, 2014). Work-life balance has been defined as 'satisfaction and good functioning at work and at home with minimal tension. As such it is often characterized as' the absence of unreasonable amounts of stress between work and non-work demands.(Shankar & Bhatnagar, 2010)

Manzoor, Usman, & Naseem, (2011) have studied the Pakistan's university lecturers on job stress and job satisfaction and indicated that work is an essential part of life and that frustration with it has a detrimental impact on quality of life. (Winefield et al., 2003) researched Australian university faculty members and held focus groups on job stress. Among academic staff, they found higher tension than in general staff. Some workers said stress at work has an adverse effect on their personal and professional lives. (Bhatti, Hashmi, Raza, Shaikh, & Shafiq, 2011) studied job stress at the university faculty and concluded that task burden, position uncertainty, management role, success pressure, and interaction with others have been included in this workplace stress factors. The study shows that there is significant negative relationship between job stress and job satisfaction, and members of the faculty are not satisfied with wages.

A survey by (Sengupta & Sengupta, 2018) further reported that Indian workers rate as the top three causes of tension uncertain or inconsistent job requirements (40%), poor staffing (lack of support, unequal workload or group performance) (38%) and lack of work-life balance (38%). Furthermore, (Yusoff & Khan, 2013) Concluded the stressors involve homework program, management structure, partnership with others, assignment instability, achievement pressure and workload, low pay issues due to student and career conflicts, lack of physical help, academic problems, instructor self-efficiency novices, job results, amount of students in college, marital status and experience, confusion of job outcomes e.g. organizational commitment and jobs.

Moreover study has found that the effect of employee behavior on work-life balance was supported by (Kalleberg, 2009). (Winefield et al., 2003) found that academic job tension is high due to the disparity between job demands and sensitivity. As both time and focus are required, academic staff involved in research and teaching will generate a contrasting scenario. Tiredness, sleeping problem, and concentration are the symptoms found among lecturers. These are more visible when more workload is expected to attract external research funds. Education and adequate therapy failures contribute to the extent of stress at work when workers struggle to deal with difficult conditions (Jepson & Forrest, 2006). Work overload is one of the most demanding tasks that employees face today (Anderson & Pulich, 2001).

(Kyriacou, 1987) found that another stressor that influences well-being and success is favoritism. (Klockars, Ivković, & Haberfeld, 2007) stated that lack of administrative support leads to fatigue, burnout and work changes. (Billingsley, 2004) argued that stress happens to teachers as they try to hold more sessions, paperwork, and more documents to pay for themselves.(Imam, Qureshi, & Khan, 2011) The concluded that long hours of work owing to increased workload may have an inverse impact on workplace satisfaction as this condition interferes with one's wellbeing at work and at home. The inability to strike the right balance in terms of effort and compensation is strongly associated with the loss of task management and lack of energy to satisfy personal needs and dedication. The difference in both would often result in exhaustion, weak results and a diminished quality of life.(Goyal & Arora, 2012)

In comparison, when work management is tight, tight-demand workers don't automatically result in tension. Alternatively, feelings of accomplishment and success will occur when expectations for work and job management are strong.(Fernet, Guay, & Senécal, 2004). (Brymer, Perrewe, & Johns, 1991) Similarly, it concluded that stress management systems which offer employees greater control over their job responsibilities play an important role in reducing stress. As (Ryan & Deci, 2001) argued, the psychological impact of managing job demands helps to reduce tension and is related to feelings of well-being and happiness. On the other hand, where workers have autonomy and control over their work schedules, or the scope to choose specific working hours, this has a positive effect not only on work-life balance, but also on the health and well-being of workers. Research carried out by (Beauregard & Henry, 2009) indicates that those workers who were more positive to the initiatives of their employer to promote work-life balance have showed a much lower intention to leave the company, greater confidence in their institution, a tendency to suggest it as a place to work and greater overall job satisfaction. There is substantial evidence to conclude that neglect of loss of social care will contribute to poor health, whereas when it occurs it promotes wellbeing and acts as a shield against negative effects of stress.(Wainwright & Calnan, 2002). At the same time, career growth is a significant source of stress for university teachers, with the most challenging causes being the disparity between person aspirations and university aspirations that that lead to delayed career advancement, loss of social support and weak working climate.(Ofoegbu & Nwadiani, 2006). It reported that teaching should be recognized as a technical occupation, and that teachers should be encouraged to tackle inspiration, happiness and stress-related problems among those in this profession(Pearson & Moomaw, 2005).

6. Conclusion

The study aimed to identify the impact of Workplace pressures and employees behavior impair the WLB of workers and also to identify internal and external factors affecting the WLB of workers in Karachi, Pakistan's Higher Education Institutes. The results have shown that employee behavior has positively significant effect on work-life balance in private sector higher education institutes. The results of comparison parametric test showed that there is a statistically significant and positive difference of opinion between the faculty members of private and public sector higher education institutes in regards to the effect of employee behavior on work-life balance. Furthermore, the comparison results showed no difference of opinion between the faculty members of private and public sector higher education institutes in regards to the effect of workplace stress on work-life balance. The study collected 386 responses of faculty member working Karachi and analyzed the collected data suing PLS-SEM technique. The study provides significant suggestions to the managers of the higher education providing institutes in Karachi. Besides contribution to the theoretical importance of WLB, the paper also had certain limitations on a demographical level and many other aspects which can be incorporated in future studies.

Improving workplace satisfaction will improve overall wellbeing and general well-being. It can also help improve their productivity, enthusiasm and overall job satisfaction, resulting in better organizational results. Businesses should help employees do their work. If your employee struggles to find the optimal balance between work and leisure, try these effective strategies for work-life balance. Firstly, Human Resource department of University must be in the best position to promote workplace support and strategies to minimize interrelated stressors and develop workers resilience. Secondly, a supervisor's help has been shown to be more relevant to work-related issues than family support, just as a spouse's encouragement is more likely to be helpful to personal life-related stress.

For that potential work-life stressors and employee well-being, it could be advised to use person-centered stress management strategies. Examples include offering relaxation / care exercise courses, facilitating wellness and delivering facilities, such as gymnasiums, supporting safe living and healthier food decisions, and advice. Because it has been seen that high stress levels rise in turnover and poor morale, colleges need to be mindful of the possibly negative consequences of stress at work.

Lastly, WLB rates today as one of the most important attributes of the workforce second only to wages, and workers who believe they have a better work-life balance tend to work more than staff that are overworked. These are some of the many ways by which managers can encourage work-life balance without jeopardizing productivity or efficiency at work.

7. Future Recommendations

Future studies must closely investigate the disparate impact on employee well-being of HRM activities, since only some of them can play a beneficial role in coping with stress. In either hand, the facilitation of work-family change and the maintenance of a supportive partnership environment should be considered by HR administrators, as both could lead to tension reduction and the goal to minimize turnover. In addition to building an organizational culture that encourages workers to operate confidently, they should consider concentrating their efforts on designing specialized services to facilitate expatriate family adaptation.

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Determining the Entrepreneurial Intentions of Youth/ Generation Z: A Study of Youth Intent towards Entrepreneurship

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Abstract

The present study is an attempt to explore and analyze the entrepreneurial intentions of Gen-Z. Since technological advancement and emergence of new business model has enabled individuals to be their own boss. Youth are considered backbone of a country and play a vigorous role in the development of a country. Unlike other countries, Pakistani youth comprises more than half of the country's population. Therefore, current study intended to determine the effect of particular entrepreneurial traits on behavioral intention of youth or Generation Z of Pakistan towards entrepreneurship. To achieve these objectives, positivism research paradigm with deductive reasoning were applied. For the purpose of data collection self-administered questionnaires were distributed by using Non-probabilistic sampling technique. Initially 400 questionnaires were distributed among University Students and after careful scrutiny only 300 were considered as a sample of the study. Several statistical tests were applied by using SPSS and Smart-PLS. Results revealed that attitude and perceived behavioral control are significantly associated with entrepreneurial intentions of youth while social norms exhibit insignificant impact. However self-efficacy reveals a significant mediating effect on relationship between entrepreneurial opportunity and entrepreneurial intentions. Further, theoretical, and practical implications are presented to understand the relationship.

Key Words: Entrepreneurial intention, Attitude, Perceived Behavioral Control, Social Norms, Self-Efficacy, Entrepreneurial opportunity

1. Introduction

Previous studies have categorized generation into six broader classifications i.e., Veterans/builders/traditionalists, baby-boomers, Generation X, Generation Y/ Millennial, Generation Z, and Generation Alpha/ Facebook generation. These different generations have different behavioral traits which outline their workplace preferences and expectations and where they bring unique benefits to the organization they also places different demands. (Struckell, 2019) define millennial as technology savvy generation and explained the characteristics of millennial i.e. narcissism, overconfidence, impatience, low trust, work-life balance etc. As explained by (Otieno & Nyambegera, 2019) generation Z differ from their ancestors i.e. millennial in characteristics e.g. they are highly determined, involved, goal oriented, value adaptability and flexibility etc. As there is a constant flux in the generational shift at the workplace, old approaches of people management are also going out dated and global changes are now paving the

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ways for new generation Z (Tang, 2019) that are considered as absolutely different from previous generations in every aspect. Several researches suggested that they become important as they have a significant impact on socio-economic, cultural, and political factors and also changing global dynamics are shaping their behaviors and values. Hence there are numerous factors and predictors of behavioral intentions towards entrepreneurship. Most studied factors are social norms, attitude toward career choice, perceived behavioral control, entrepreneurial opportunities, entrepreneurial education, legacy, and risk etc.

As several studies paid considerable attention to technology adoption and innovation by Generation Z and their infusion in the markets and businesses however a few studies focused on entrepreneurial intentions of these digital natives (Titko, Svirina, Skvarciany, & Shina, 2020). The millennial and post millennial generation brings a different set of traits with them that require new dynamics in the organizational settings (Otieno & Nyambegera, 2019). Moreover, past studies mostly focuses on attitude of millennial generation towards entrepreneurship, while there are hardly some studies which consider intentions of Generation Z or both towards entrepreneurship. Most of the previous studies focus on the difference between the behavioral intentions of different generations and the most studied generation is millennial who are considered as digital natives. Early studies frequently emphases on the factors that contributed towards the success of an individual as an entrepreneur (Mohd, Tuan, & Mamun, 2019). However, this paper focuses on behavioral intentions of generation Z towards entrepreneurship as they either already entered their prime years or going to enter in a few years, hence it is important to study their values and differences in their preferences as they are going to take offices and business. Besides, according to HDR 2019 report by UNDP indicates that youth comprises 64 percent of the total population of Pakistan. As youth is considered as backbone of a country and have the power to change a country's future, it also makes it imperative to study this generation's attitude that will contribute to country economy in future. The topic of entrepreneurship is not only significant to us and Gen-Z but also to the academic society and therefore the study will engender a fresh perspective in terms of Gen-Z intentions.

To summarize, we are embarking to advance the literature of entrepreneurship and generations by considering Gen-Z intentions towards entrepreneurship in South Asian context. The rest of the paper is organized as follows: in literature review section, construct definitions, theoretical background and hypothesis are developed. In methodology section, the procedure and inferential techniques are addressed. And finally, the paper discusses the results and implications.

2. Literature Review

2.1: Attitude towards Entrepreneurship

Ajzen and Madden in 1986 first discussed attitude as a measure of someone's positive or negative assessment of a certain behavior. A large stream of literature often referred attitude towards the emotions, beliefs or opinions about someone or something or the way someone behave towards something caused by such feelings. (Jena, 2020) described attitude as the habitual approaches that individuals use to react towards a certain situation and can be positive, negative and sometimes neutral while entrepreneurial attitude as the perception about entrepreneurship and the costs linked with self-employment. (Mohd, Tuan, Mamun, Ahmad, & Ibrahim, 2019) elucidate attitude towards entrepreneurship as the desire of the person to be an entrepreneur which leads towards the entrepreneurial intention. They also revealed that certain characteristics dictate the attitudes towards new start-ups. Similarly (Ndungu, 2019) shown that different factors such as education, culture, infrastructure, availability of resources, business license acquiring processes etc. affect the behavior of people towards entrepreneurship. Moreover, (Kusumawardhany, 2020) discussed that the individual's insight of his/her desirability to be self-employed shows its attitude towards entrepreneurship. To our understanding and study we define attitude towards entrepreneurship as the opinion or the view of an individual that he/she possess about having a start-up business or want to be self-employed.

2.2: Perceived Behavioral Control

Perceived behavioral control abbreviated as PBC is often referred as the perception of a person to be an entrepreneur. (Ndungu, 2019) defined PBC as the perception of an individual about his/her ability to execute certain behavior. While (Bazan et al., 2019) discussed it as the predominant, super ordinate element which is make up by the observed self-determination and social support. (Ahmad, Ramayah, & Mahmud, 2019) elaborate PBC as the way person behave in a certain manner in a certain situation as well as his/her confidence towards performing that behavior. Likewise, (Mohd, Tuan, Mamun, et al., 2019) described it as the feelings of individuals about their capabilities to perform certain function which depends upon their knowledge, notion of challenges, and experiences related to that behavior. Moreover (Middermann & Kratzer, 2020) demarcated PBC as the perceived viability to accomplish a certain behavior. So for current study we define perceived behavior control as the perception of an individual about his/her capabilities to perform entrepreneurial activities or his confidence upon himself to take action to take initiative of a start-up.

2.3: Subjective Norms

Ajzen and Fishman in 1980 first used the term of subjective norms to determine the intention of a person towards something and defined it as the perception of an individual about the social stresses to do an activity or not. Past studies suggested that it is about the beliefs of what other people that are linked and important to that person think and perceive a certain behavior and judge about those beliefs. For instance (Dedi Purwana, Sadat, & Wibowo, 2019) referred subjective norms towards entrepreneurial intensions as the perception of individuals about the importance of others matters in their choice to be an entrepreneur. Moreover, (Yousif et al., 2019) defined it as the professed social pressure from the important one another, for instance friends, family members, role models, etc. to execute a performance. Similarly (Ahmad et al., 2019) cited subjective norms as the social acceptance to involve in a certain behavior that are influenced by the conduct of specific individuals, teams, groups and linkages who are significant to that individual. In current work, we use subjective norms as the variable that make the entrepreneurial intention of individuals and define it as the social pressure by the people who are important to an individual to engage in the entrepreneurial activities.

2.4: Entrepreneurial Opportunities

Opportunities in entrepreneurial context are often referred as the ideas of new venture and depend on the resource availability. (Bhowmick, 2019) explicated opportunity as a perception attached with internationalizing an entrepreneur. While previous researches defined opportunities as “situations in which goods, services, raw materials, markets and organizing methods can be introduced through the formation of new means, ends, and means-end relationships. (Clark & Ramachandran, 2018) suggested that opportunities are the loosely defined market requirements or idle resources and talents that need to be explored. Whereas most of the previous studies discussed opportunity in entrepreneurship literature by the terms opportunity recognition, opportunity identification, and opportunity exploitation. (Gray et al., 2018) conferred opportunity recognition as the activities involved in discovering, identifying new business ideas and are an outcome of search, cognition and creative behaviors. Similarly (Chen et al., 2019) discussed that resources can better help an entrepreneur in identification of opportunity in the market. While (Patel, 2019) discussed opportunity recognition as the process of identifying the knowledge and gaps which have commercialization prospective. According to (Jones & Barnir, 2018) opportunities are always present, and just it is needed that someone discover and observe them. To current research opportunity is the idea of an individual to start a venture with the available resources by recognizing its scope and need in the market.

2.5: Self-Efficacy

Several studies present self-efficacy as the most influencing variable that effects the belief of an individual on his/her capabilities to perform certain courses of actions. (Leon, 2018) conferred self-efficacy as the confidence on individual’s to consolidate and implement a set of actions to achieve a goal. Whereas (Gray et al., 2018) defined it as the utilization of information and capabilities that an individual possesses. Study of (Nowiński, Haddoud, & Wlkp, 2019) referred self-acknowledgement as the perception of one about his/her skills and knowledge to plan and implement certain activities needed to achieve a targeted outcome. (Bazan et al., 2019) discussed that it is the self-efficacy which make a person perception to start performing practical towards new business ideas. While (Middermann & Kratzer, 2020) defined it as the individual’s perception of performance ability and opinion to control his/her actions. In this research, self-efficacy is referred to as the individual’s confident on his/her capabilities to engage and perform activities which are required to start a new business.

2.6: Entrepreneurial Intention

Ajzen (1991) discussed the construct of entrepreneurial intention as the willingness and effort put by the individuals to plan and perform certain actions. (Niroula & Bajracharya, 2019) defined it as the goal to start a new venture. Studies of (Yousif et al., 2019) conferred entrepreneurial intent as the planning and thinking of starting a new venture in future. (Ahmad et al., 2019) cited it as the mental state which leads a person towards a start-up. While (Elliott & Mavriplis, 2020) argued that it is not just a state of mind or merely a wish but an obvious decision or choice to start a new business which ultimately leads to entrepreneurial activity. (Liu & Chen, 2019) study revealed entrepreneurial intention as the driving force that shape the attitude of potential business persons and make them realize of the business opportunities. Hence we can define entrepreneurial intention as the will of a person towards planning a new venture and then execute that plan with maximum efforts to make it successful.

3. Theoretical Framework and Hypothesis Development

3.1: Attitude towards entrepreneurship and entrepreneurial intention of Gen. Z

As numerous studies discussed several internal and external factors built an individual's view or attitude towards the entrepreneurship, (Ndungu, 2019) studies revealed that different factors and challenges influence the attitude of youngsters and found that a positive attitude leads to start a business while negative attitude impede the entrepreneurial activities. Similarly (Agolla, 2019) discussed that an encouraging attitude towards entrepreneurship is positively linked with entrepreneurial intentions of youth as the they preferred to be their own bosses. Also (Kusumawardhany, 2020) discussed different attitudinal factors like financial risk aversion, resource availability, importance given to autonomy etc. significantly impact the attitude of individuals. (Yousif et al., 2019) in line with the previous researches also suggested it as the strong predictor of entrepreneurial intention. Also (Mohd, Tuan, Mamun, et al., 2019) revealed that individual with positive attitudes are more likely to pursue self-employment and there is a positive relationship between attitude and entrepreneurial intention. Hence it is hypothesized that;

H1: attitude towards entrepreneurship has a positive impact on the entrepreneurial intentions of youth.

3.2. Perceived behavioral control and intention of Gen. Z towards entrepreneurship

A large stream of literature exhibited perceived behavioral control as the second most important predictor of intentions towards entrepreneurship Similarly (Yousif et al., 2019) argued that PBC significantly impact the entrepreneurial intentions. Also (Ezeh, 2019) study undergraduate students reveal a positive significant impact of perceived behavior control on the intent to start a new venture. Moreover (Agolla, 2019; Mohd, Tuan, Mamun, et al., 2019) also found a significant positive relationship between the perceived behavioral control and entrepreneurial intentions. Therefore it is hypothesized that;

H2: perceived behavioral control positively influence the intentions of youth/ generation z towards entrepreneurship.

3.3: Subjective norms and intention of Gen. Z towards entrepreneurship

Previous studies revealed contrary outcomes on the relationship between subjective norms and entrepreneurial intentions (Ezeh, 2019). While most of the previous literature discussed the indirect effect on entrepreneurial intentions and several empirical studies found it a weak and insignificant forecaster of entrepreneurial intent. (Yousif et al., 2019) found a positive impact of social pressures on millennial's attitude but (Middermann & Kratzer, 2020) discussed that because of the risk factor involved in entrepreneurial activities social norms effect negatively on the intentions to be engage in it. However (Roy, Schlosser, & Pasek, 2019) found a weak positive relationship between social norms and entrepreneurial intentions. (Ephrem, Namatovu, & Basalirwa, 2019) correspondingly discussed a favorable relationship between the subjective norms and entrepreneurial intentions. On the basis of the following literature the study proposed;

H3: a positive yet insignificant impact of social norms on the entrepreneurial intent of youngsters.

3.4: Relationship of entrepreneurial opportunities with the entrepreneurial self-efficacy

Opportunities both opportunity recognition and exploitation play an important role in paving a person's intensions towards entrepreneurship. According to (Adom & Affum-osei, 2019) entrepreneurial intentions significantly affect the cognitive capability of a person to identify the opportunities of ambitious entrepreneurs. Study revealed detailed criteria for the evaluation and selection of opportunities (Elahe, Rastkhiz, & Dehkordi, 2018). However studies have shown that youth with strong educational background (Turulja, Agic, & Veselinovic, 2020) and strong family legacy of entrepreneurship (Allan Discua Cruz, 2020) are likely more intended towards entrepreneurship as strong knowledge make them cognitive of the markets gaps while family legacy create and communicate opportunities for them. Moreover, (Gray et al., 2018) study exhibited a significant impact of entrepreneurial opportunities on the entrepreneurial intentions of youth. Therefore it is hypothesized that;

H4: opportunities significantly impact the entrepreneurial self-efficacy of youth.

3.5: Relationship between self-efficacy and entrepreneurial intentions

Bazan et al., (2019) revealed self-efficacy as the main precursor to entrepreneurial intention. While studying student's intension towards entrepreneurship (Cramen Camelo-Ordaz, Juan Pablo Dianez-Gonzalez, 2016; Isiwu & Onwuka, 2017) revealed that students with greater level of efficacy towards the performance of a certain task related to entrepreneurship exhibit high level of business intent. Similarly (Turulja et al., 2020) studies exhibits a higher level of entrepreneurial intention in the students who demonstrates a positive attitude towards their education and skill development which boost their self-efficacy towards entrepreneurship and consequently their intent towards new ventures. Past studies discussed self-efficacy as the most significant element that impact the individual's beliefs about their capacities to perform. Hence it is hypothesized that;

H5: self-efficacy plays a significant role in performing entrepreneurial activities.

3.6: Mediating Role of Self-Efficacy between the entrepreneurial opportunities and intentions of Gen. Z towards entrepreneurship

Various factors are found to be influence the entrepreneurial intention of youngsters among which self-efficacy is found to be very significant. (Elahe et al., 2018) discussed the seven categories of entrepreneurial opportunities and proposed decision criteria for assessment and selection of these opportunities. While (Allan Discua Cruz, 2020) debated on the entrepreneurial legacy that creates opportunities, develop self efficacies of youngsters, and help them recognize the entrepreneurial opportunities. According to (Gray et al., 2018) study revealed that factors like self-efficacy, buoyancy, self-possession significantly impact the opportunity identification process and leads towards entrepreneurial resilience. (Leon, 2018) argues that as the new generation is technology savvy they enhance their self-efficacies through the endless usage and expertise in the technology. Moreover it is found that along with other perceptual factors self-efficacy influence the behavioral intentions of an individual towards performing certain activities (Cramen Camelo-Ordaz, Juan Pablo Dianez-Gonzalez, 2016), for instance entrepreneurship.

H6: self-efficacy mediates the relationship between opportunities recognition/exploitation and entrepreneurial intentions.

3.7. Theories Underpinning the hypothesis

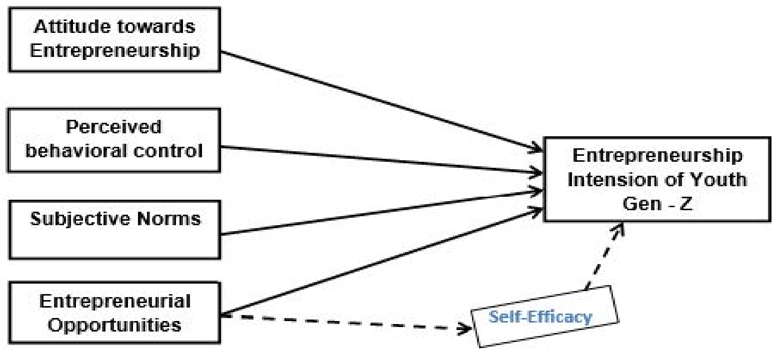
3.7.1: Social Cognitive Theory

Current study is grounded in the cognitive approach to elucidate the relationship between the cognitive or behavioral characteristics and entrepreneurial intentions of youth. The approach is observed to develop from the collaboration of social, psychological and organizational management. Several theories are further developed by using this theory in order to explain a particular behavior towards a certain situation. Past studies also used this theory to explicate the decision making process while making a career choice. (Wood, Robert, 1989) first presented the theory of social cognition in organizational management context. They identified the interaction of various socio-demographic factors such as age, gender, marital status, experiences etc., knowledge and education, and perceptions or attitudes towards certain set of actions. According to researchers all these factors make up the entrepreneurial intentions of individual’s to start or grow a new venture. Theory also posits a significant impact of these influencing factors on the career choices, whereas the magnitude of these perceptions makes up their preferences. Similarly studies also revealed that these factors and most importantly self-efficacy make people to assess, judge and select opportunities of venture formation and development.

3.7.2:Theory of Planned behavior

Theory of planned behavior abbreviated as TBP is the most often used theory to explain the behavioral intentions of individuals towards a certain set of actions. (Ajzen, 1991) proposed TBP which incorporates the influence of attitudes towards intention and motivations. TBP provides an inclusive framework to examine the entrepreneurial aspiration as well as to elucidate the entrepreneurial opportunities. (Middermann & Kratzer, 2020; Ndungu, 2019; Yousif et al., 2019) used theory of planned behavior to explain the behavioral intentions of entrepreneurs. (Yousif et al., 2019) suggested TBP as a “cultural-universal” theory to envision career intention of individuals of any country. Also (Guan, Zhang, Zhao, Jia, & Guan, 2019) supported this theory as its three prospects of behavioral attitude, subjective/social norms, and perceived behavioral control comprehensively analyze the inducing aspects of new generation willingness towards entrepreneurship. Hence on the basis of Social Cognitive Theory, Theory of Planned Behavior, and a sample of individuals an intention-based framework is developed in order to empirically explore the influence of attitude, perceived behavioral control, subjective norms, opportunities mediated by self-efficacy on entrepreneurial intentions.

3.8: Conceptual Framework



4. Methodology

4.1: Research Philosophy/Approach

The present study is designed as empirical study to examine the theory based hypothesized relationships. This work adopted positivist paradigm and deductive reasoning approach. Further non-probability sampling, convenience sampling technique has been used for data collection because of shortage of time and resources. Besides it is also difficult to go for other techniques as of lockdown situation because of Covid-19. Quantitative approach is presumed as it seems appropriate to study the variables for current research, for instance it offers roam to study the variables quantitatively that can further be analyzed through statistical procedure.

4.2: Type of Study

The study is a cross-sectional survey conducted to investigate the impact of attitude, perceived behavioral control, social norms, and entrepreneurial opportunity on intention towards entrepreneurship of millennial. As study is restricted to a specific time frame thus uses a cross section time horizon. The results of the questionnaire were analyzed to draw findings.

4.3: Population

The study sought a sample-frame of students from different universities of twin cities of Pakistan. Participants were informed well about the purpose of study.

a. Sample Size

Sample size of the study is determined following (Joe F. Hair, Sarstedt, Ringle, & Mena, 2012) directions by multiplying the items in the instrument with 10 times. Hence the items in the study are 32 therefore the required sample size is 320. Data for the study were collected between April and May 2020 through a structured questionnaire. Questionnaire was designed to serve the study objectives and hypothesis using the five point Likert scale (strongly disagree, disagree, neutral, agree, and strongly disagree) with the weights 1, 2, 3, 4, 5 respectively.

b. **Measures of Variables**

Measurements of study were taken from the past studies on entrepreneurial intention. A total of 32 items were used to measure the variables in above model at a five point Likert scale. Self-administered questionnaire was designed by adopting following existing scale;

- **Entrepreneurial Intentions**: A 6 item scale is developed from the study of (Niroula & Bajracharya, 2019).
- **Entrepreneurial Self-Efficacy**: We adapted a 6-item scale to study self-efficacy of young entrepreneurs from the work of (Niroula & Bajracharya, 2019).
- **Attitude towards Entrepreneurship**; A 5-item scale is adopted from the study of (Tuan et al., 2019).
- **Perceived Behavioral Control**; A 6-item scale is used to study the PBC of young entrepreneurs from the study of (Tuan et al., 2019)
- **Social Norms:** 3-item scale is adapted from the study of (Tuan et al., 2019)
- **Entrepreneurial Opportunities**: A 6-item scale is adopted from the study of (Mohd, Tuan, & Mamun, 2019)
-

5. Data Analysis and Interpretation

The current work uses PLS-SEM (Partial Least Square-Structured Equation Modelling) to analyze the data as it is most widely applied in research of management sciences because it allows researchers to estimate complex models with numerous constructs and paths without enforcing any distributional assumptions to the records. Also it provides comprehensive methods to test and analyze the results of a selected study (Joseph F. Hair, Risher, Sarstedt, & Ringle, 2019). The first of the valuation of PLS-SEM outcomes involves the examination of measurement models. After which further robustness checks are run to check the validity of the results.

5.1: Reliability and Validity Analysis

As other statistical models provide with some rules of thumbs, PLS-SEM also provide some guidelines that serve as the threshold values to statistical tests. While Cronbach's alpha internal consistency reliability is the most widely accepted reliability indicator however composite reliability is considered more viable criteria for testing internal consistency as shown in table: 5.1. Usually, the acceptable alpha value lies 0.7 to 0.9. Validity analysis of the present study has conducted the confirmatory factor analysis of the partial least square-PLS, model fit construct measurement test, discriminant validity and convergent validity. As the composite reliability is always higher to that of Cronbach's Alpha's value the threshold value is considered significant if ≤ 0.95. For AVE the rule of thumb is a value ≥ 0.5, considered as significant.

Table: 5.1 Construct Reliability and Validity				
	A	**rho_A**	**C R**	**AVE**
AT	0.780	0.811	0.849	0.536
EI	0.818	0.821	0.868	0.525
EO	0.837	0.839	0.880	0.551
PBC	0.802	0.815	0.858	0.503
SE	0.821	0.822	0.870	0.527
SN	0.777	0.798	0.899	0.817

AT; Attitude towards entrepreneurship, EI; Entrepreneurial Intention, EO; Entrepreneurial Opportunity, PBC; Perceived Behavioral Control, SE; Self-Efficacy, SN; Social Norms

5.2: Discriminant Validity

In order to check the discriminant validity there are the several criterions among which Heterotrait-Monotrait Ratio (HTMT) value is the most recommended. The HTMT value for the conceptually similar constructs is recommended as <0.9 while conceptually different constructs it resulted in significant as <0.85. Hence the results of the test validate the disciminant validity of the construct as shown in Table: 5.2.

Table: 5.2 HTMT Criterion						
	AT	**EI**	**EO**	**PBC**	**SE**	**SN**
AT	1	-	-	-	-	-
EI	0.704	1	-	-	-	-
EO	0.809	0.697	1	-	-	-
PBC	0.728	0.695	0.810	1	-	-
SE	0.822	0.808	0.715	0.813	1	-
SN	0.673	0.477	0.722	0.810	0.561	1

5.3: Hypothesis Test

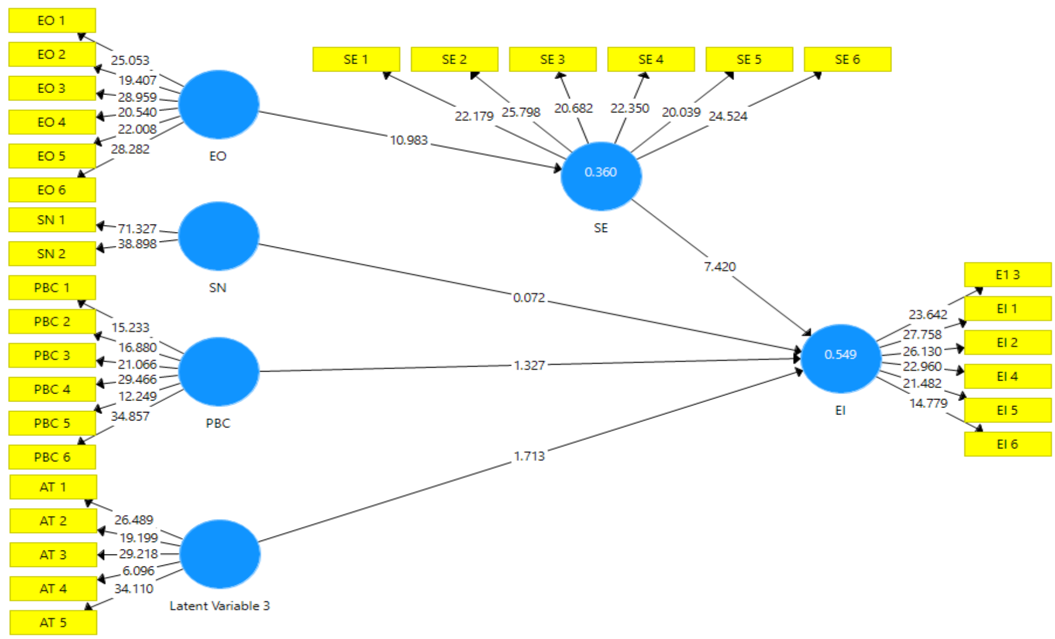
The path coefficient indicates the strength and direction of the relationships. The table: 5.3 reveal the significance of positive influence of indicators. P values in each case lies 0.000, 0.001, 0.044 and 0.041 which all are <0.05.

Table: 5.3 Summary of Hypothesis Test				
	β	**S.D**	**t-values**	**p-values**
EO -> SE	0.600	0.055	10.983	**0.001**
AT-> EI	0.116	0.068	1.713	**0.000**
PBC -> EI	0.106	0.080	1.327	**0.044**
SE -> EI	0.580	0.078	7.420	**0.000**
SN -> EI	-0.003	0.045	0.072	**0.041**

5.4: Structural Equation Modeling (T-Statistics)

The graphical presentation of t-statistics among hypothesized relationships under the structural model are presented in the below diagram.

Figure: 5.1 T-Statistics



5.5: R-squared value of the model

R-squared also known as coefficient of determination is a statistical measure used in regression that is used to indicate the proportion of variance on dependent variable which could be explained by the independent variable as shown in Table: 5.4. The P-value of 0 or greater indicates the positive association

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Table: 5.4
R-Squared Value

	B	S.D	t-statistics	p-values
EI	0.549	0.054	10.157	**0.000**
SE	0.360	0.066	5.491	**0.000**

6. Discussion

The main aim of the study was to examine the influence of behavioral attributes i.e., attitude, perceived behavioral control, self-efficacy, and social norms that contributes towards the entrepreneurial intention among the generation-z as well the opportunities linked with entrepreneurial intention. The study findings revealed that different factors impact differently on the behavioral intentions of youth towards a start-up. Findings provides a detailed insight of the entrepreneurial intention of youth as well as of millennials. As we are more focused in studying youth behaviors hence study find out that two variables i.e. attitude and perceived behavioral control significantly and strongly influence the behavioral cognitions of youngsters to be an entrepreneur in the future. Although (Schlee, Eveland, & Harich, 2019) conferred a change in the attitudes of millennials and generation-z yet these findings did not find any change in behavioral factors and are consistent with several past studies of (Kusumawardhany, 2020; Liu & Chen, 2019; Mohd, Tuan, & Mamun, 2019). However, the study revealed an insignificant yet negative impact of social pressures on the entrepreneurial intentions in line with (Middermann & Kratzer, 2020) because of the risk factor involved in starting a venture. While (Ephrem et al., 2019) also find out a negative relationship of perceived subjective norms on the entrepreneurial intentions as these social stressors effect the psychological capital which consequently lowers the intention towards entrepreneurship. Moreover, literature revealed that self-efficacy has a significant influence in pursuing entrepreneurial career. In consistent with (Bux, 2013; Elliott & Mavriplis, 2020) self-efficacy found out as significantly impact the behavioral intentions of youth towards entrepreneurship. While (Allan Discua Cruz, 2020) debated on the entrepreneurial legacy that creates opportunities, develop self-efficacies of youngsters, and help them recognize the entrepreneurial opportunities the current study found that it significantly and positively mediates the relation between the entrepreneurial opportunity and intention.

7. Conclusion

To conclude, the study investigated influence of certain variables e.g., attitude, perceived behavioral control, social/subjective norms, and opportunities, on behavioral intent of youth towards entrepreneurship. This study explored how these factors influence the intention to start a new venture. Three out of four variables found to positively impact the intentions of youth to enterprise. As predicted the results reveals that majority of Gen-Z individuals are intended to become entrepreneur. The practical repercussions of current study provide a meaningful understanding to academic, progressive scholars and professionals who are interested in understanding the pre-startup behaviors in venture creation. The study also suggested the ways to promote the involvement in start-ups. Also, the study contributes towards theory of TBP by expanding its practice and including opportunity factor to it that has a positive impact on aspiration of young entrepreneurs. Overall, the authors are assured about the contributions it made towards literature and suggested need for future study that will contribute to the better understanding of context.

8. Recommendations

The present work is centered on Gen-Z intentions towards entrepreneurship, future studies may consider the Gen-Y and Facebook generation. A comparative analysis may also provide better insights towards entrepreneurship intentions. For potential studies It is important to determine the validity of the current model and outcomes across the times regardless of the youth from urban or rural areas. Further it will be of great interest to take a deeper insight of other impelling factors like psychological capital, risk propensity, business education, technological factors etc. that can impact the behavioral intention to start a venture. Hence the study recommends future scholars to study these factors in relation with the availability of resources towards pursuing an entrepreneurial career. Besides the study uses quantitative method to investigate the aspects, however future studies may add with qualitative methods like interviews and conduct open-ended questionnaires so that these behavioral intentions towards entrepreneurship can be studied deeply.

9. Limitations

Despite some theoretical and practical contributions, the study also has limitations. The study has only considered the Gen-Z respondents and with the sample size of 300 and use of non-probabilistic sampling method, we are therefore unable to conclude that whether the results are generalizable to the whole Gen-Z population or not. Also because of the locality constraint and geographical distance the current work only studied the respondents from twin cities Pakistan. Hence the objectivity of the research remains limited because of these specificities.

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