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ROLE OF BUSINESS AGE, SCALE & RISK IN DEBT FINANCING CHOICES FOR THE PAKISTANI TEXTILE & APPAREL INDUSTRY

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Abstract

The motivation for this research enquiry is to identify the role of the business age, size and risk for the choice of debt financing in the textile and apparel sector of Pakistan along with other controlled factors. The textile and apparel sector of Pakistan comprises 464 listed entities as the targeted population while the study randomly finalized 60 firms as the sample after carefully analyzing the required information from the financial statements during the annual revenue streams of 2013-2019. The predicted variable for this research enquiry is measured by short, long and total-debt ratios while the predictor variables include the business age, firm's scale and risk. In addition, the research includes tax shield, tangibility, liquidity, profitability, and growth as the controlling factors. The study estimated that the choice of total-debt ratio is strongly affected by business age, size and risk alongwith tax shield, tangibility, liquidity and profitability while the choice of short-term debt ratio mainly depends upon the firm's scale and age along with the tax shield. In addition, the choice of long-term debt ratio is strongly explained by the firm's scale and age along with the tax shield, liquidity and profitability. The estimated evidence provides management with the implications for the textile and apparel sector of Pakistan to consider as significant factors in deciding the debt financing choice of this sector. The estimated evidence of this research enquiry applies to the non-financial textile sector only and cannot be generalized to the financial sector. Future research may enhance the financing choice towards the inclusion of equity financing with the same set of variables.

JEL classification: B23, B26, B41, C23, C58, G11, G32

Keywords: Debt Financing Choice, Business age, Firm's scale, Risk, Textile industry, Pakistan

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Introduction

In Pakistan, the business of textiles is the major accumulating industry. Pakistan is the 8th highest exporter of its material items in Asia. There is an 8.5% contribution of the material division in Pakistan's GDP. In addition, the textile industry employs about forty-five percent of the total work-force in Pakistan. There are a lot of different factors used by scholars around the globe to check the effect on debt financing choices (Nadeem Ahmed Sheikh, 2017; Nadeem_Ahmed Sheikh & Wang, 2011; Li & Stathis, 2017; Öhman & Yazdanfar, 2017). Similarly the short-term debt ratio is the debt which is returnable within one year divided by the total assets measured on the basis of book value while the long-term debt is the debt which is returnable after one year divided by total assets (Hall, Hutchinson, & Michaelas, 2010; Öhman & Yazdanfar, 2017). Similarly, the term debt is used as the proportion of total assets by (Maria & Rogão, 2009). In the same way, the debt was measured with short-term-debt ratio as well as with long-term debt ratio as a proportion of book value of equity (Renato, 2017). Likewise, the long-term as well as the word short-term debt ratios were used as proportion of the sum of total debt and equity by (Abor & Biekpe, 2009). Both dependent variables were calculated also with the proportion of short-term debt ratio over total capital and long-term debt ratio over total capital (Abor, 2007).

The size is defined as the natural log of net sales or total assets (Ehalaiye, Botica-Redmayne, & Laswad, 2017; Öhman & Yazdanfar, 2017; Seo, Eun Kyoo Kim, & Sharma, 2017). On the other hand, the term firm's age was calculated by taking the natural log for the number of years since a firm started its business operations as per (Öhman & Yazdanfar, 2017; Sardo & Serrasqueir, 2017; Zélia _Serrasqueiro, 2011). Similarly, the business growth is described as the percentage change in sales (Nadeem Ahmed Sheikh, 2011; Koralun-Bereźnicka, 2017; Öhman & Yazdanfar, 2017; Sardo & Serrasqueir, 2017). On the other hand, firm's growth was calculated on the basis of yearly change in sales of total assets as used by (Seo et al., 2017). Profitability is measured as profits after tax and interest over total assets of firms followed by (Abor, 2007; Nadeem Ahmed Sheikh, 2017; Koksal__& Orman, 2015; Maria Silva Serrasqueiro & Cristina Rêgo Rogão, 2009; Öhman & Yazdanfar, 2017).Liquidity is described as the ratio of current assets to total assets as used by(Nadeem Ahmed Sheikh, 2011; Alipour, Farhad Seddigh Mohammadi, & Derakhshan, 2015; Öhman & Yazdanfar, 2017).Similarly, the term tangibility is measured by considering the fixed assets as a proportion of total assets as per (Kokosal_& Orman, 2015; Öhman & Yazdanfar, 2017; Sardo & Serrasqueir, 2017). Tax shields are defined as depreciation over total assets (Nadeem_Ahmed Sheikh & Wang, 2011; Öhman & Yazdanfar, 2017; Zélia Serrasqueiro, 2011). Finally, the term "business risk", is measured by considering the absolute % change in EBIT as per (Alipour *et al., 2*015; Chadha & Sharma, 2015; Sardo & Serrasqueir, 2017).

The pecking order hypothesis says that short-term debt is favored over long-term debt ratio while in some cases, as per requirement, the short-term debt ratio can be substituted with long-term debt ratio as per (Öhman & Yazdanfar, 2017).The efficient market approach has been criticized because of the imperfect market. Financial markets are neither efficient nor perfect in accordance with Myers & Malouf, 1984). Under trade-off theory the best capital structure is linked using a trade-off among the effect of the benefit of tax, borrowings, bankruptcy and agency costs. A company's best capital arrangement is linked to the trade-off among the effects of the tax advantages (Chen, Jiang, & Lin, 2014; Sardo & Serrasqueir, 2017). Figure 1 indicates the conceptual design applied in this research investigation as follows:

Textile firms have vital importance in Pakistan's development in the global market. In recent years, the share of Pakistan in the international market of textiles has decreased from 2.2 percent to 1.7 percent, with a boost to 3.3 percent from 1.9 by India and to 4.7 percent from 3.4 noted by Bangladesh (www.thenews.com.pk, www.pp.brecorder.com, www.nation.com.pk). Cost of production and an energy crisis are increasing day by day. There is a very big problem of lacking investment in research and development expenses. Hence, as a result, firms may face a big financial loss.

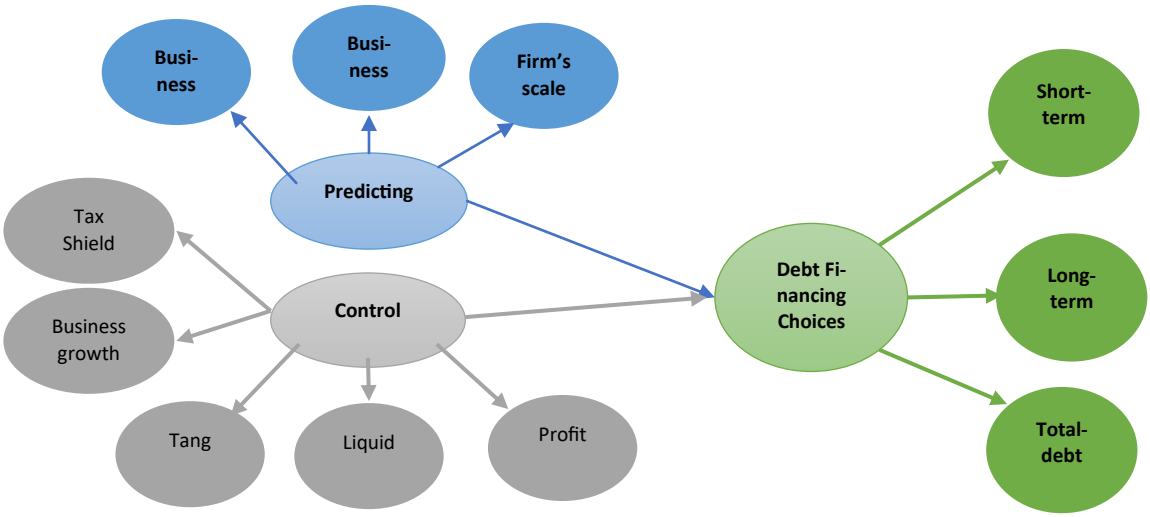
The present research examination needed to achieve the following research aims:

1) to analyse whether age, size and risk matter in debt financing of the textile sector of Pakistan along with other control variables,
2) to solve the problem of the decision of long-term and short-term debt ratios in debt financing.

By keeping in view the above research aims, the following research questions are to be analysed statistically:

1) What are determinants of the short-term debt ratio in textile firms of Pakistan?
2) What are the determinants of the long-term debt ratio in textile firms of Pakistan?
3) Does size, age or risk matter in debt financing decision?

Figure 1: Conceptual Design



Source: Own work

Literature review

The literature elaborates separately factors like age, non-debt tax shields, firm scale, risk, growth opportunities, profitability, tangibility and liquidity by providing the summarized details of each. This study is relevant to debt financing and its determinants in Pakistan's textile industry.

Firm scale

The results and findings illustrate that firm scale has a positive significant association with debt by use of techniques of panel data on fixed effects, pooled OLS ordinary least square and random effects in Islamic and conventional banks of Pakistan (Nadeem Ahmed Sheikh, 2017). The findings also indicated that debt shows positive significant relation with firm scale using the multiple regression model in textile firms of India (Chadha & Sharma, 2015). Besides, the results show that it has a negative significant association among firm size and debt using the OLS regression model (Alipour et al., 2015). Similarly, the results and findings related to size indicates a positive significant association with long-term and short-term debt using regression modelling in SMEs in sub-Saharan Africa from 1998-2003 (Abor & Biekpe, 2009). Likewise, the firm's scale has a positive significant association with short-term debt ratio and negatively significant with long-term debt ratio using ordinary least square method estimation regression model on small and medium enterprises from 2009-2012 (Öhman & Yazdanfar, 2017). In addition, another study found a positive significant relationship among firm scale and short-term debt ratio and positive significant association among firm scale and long-term debt ratio using econometric modelling in small and medium enterprises (Zélia Serrasqueiro, 2011). Finally, a positive significant relationship among firm scale and long-term and short-term debt using cross-sectional regression modelling was found by (Hall et al., 2010).

Buisness age

The studies related to business age found some diverse evidence such as the business age has a positive significant association with debt as shown by (Zélia Serrasqueiro, 2011). However, the business age has a negative significant association with debt according to (Kumar, Colombage, & Rao, 2017). The findings of another study indicate that there is a negative significant association among business age and debt as per (Mac An & Brian Lucey, 2010). Further, business age has a negative significant association with short-term debt ratio& positive significantly along with long-term debt ratio as per (Öhman & Yazdanfar, 2017). Likewise, a positive significant association among business age and short-term debt as well as long-term debt was found by (Zélia Serrasqueiro, 2011). Finally, business age has a positive significant association with long-term and short-term debt according to (Abor & Biekpe, 2009).

Business growth

Business growth has a positive significant association with debt as shown by the findings of (Zélia_Serrasqueiro, 2011). In contrast, business growth has negative insignificant association with debt as estimated by (Nadeem Ahmed Sheikh, 2011). Similarly, business growth was found to have a negative significant association with debt (Nadeem Ahmed Sheikh, 2017). Similar negative results were also shown by the findings of (Nadeem__Ahmed Sheikh & Wang, 2011; Chen et al., 2014; Koralun-Bereźnicka, 2017; González Méndez, 2014; Sung, Park, & Young Par, 2015). In contrast, business growth was found to have a positive significant association with long-term and short-term debt as per the conclusive evidence of (Abor & Biekpe, 2009). Similarly, business growth was found to have a positive significant with short-term debt ratio and positive significant impact on long-term debt ratio as per (Öhman & Yazdanfar, 2017). Finally, a positive significant relationship among short-term debt as well as long-term debt ratio and firm growth was found by (Zélia Serrasqueiro, 2011).

Business profitability

The theory of pecking order suggests that the companies preferred to employ internal financing when they have determined debt divided by equity in the case where external finance is needed. Profitability has a positive significant association with debt (Chen et al., 2014; Sardo & Serrasqueir, 2017). Next, profitability has a negative significant association with debt as per the study of (Nadeem Ahmed Sheikh, 2017; Öhman & Yazdanfar, 2017). Likewise, the profitability has negative significant with long-term debt ratio and negative significant impact with short -term debt ratio as indicated by the findings of (Öhman & Yazdanfar, 2017). Also, a positive significant association among short-term debt as well as long-term debt and business profitability was found by (Zélia__Serrasqueiro, 2011; Hall, 2010). Finally, business profitability has a positive significant association with long-term and short-term debt as per the findings of (Abor & Biekpe, 2009).

Business liquidity

It was observed that liquidity has a negative significant association with debt as per (Nadeem Ahmed Sheikh, 2017). Similarly, the liquidity has negative insignificant association with debt as per (Koralun-Bereźnicka, 2017). Likewise, the business liquidity was found be significantly negative for short as well as long term debt finance as per (Ohman & Yazdanfar, 2017). Finally, another study concluded with the negative and statistically significant asso-(long + short) as per the study of (Alipour et al., 2015).

Business tangibility

The tangibility had a negative significant association with debt using panel data modelling in the European firms (Sheikh, 2017; Sheikh & Wang, 2011; Koralun-Bereźnicka, 2017). Likewise, the tangibility was found to be a negative significant association along with debt as indicated by (Viviani, 2008; Koksal__& Orman, 2015; Sardo & Serrasqueir, 2017). Similarly, the tangibility was found to be negative significantly with short-term debt ratio and positive significantly along with long-term debt ratio as indicated by the findings of (Öhman & Yazdanfar, 2017; Sardo & Serrasqueir, 2017). Next, the tangibility was found to have a positive significant association with long-term and short-term debt (Abor & Biekpe, 2009). Finally, a positive significant association among short-term debt ratio and tangibility and positive significant association among long-term debt ratio and tangibility were observed by (Zélia Serrasqueiro, 2011).

Firm's tax-shield

The tax shields had a positive significant association with debt using panel data modelling in the European firms (Chen et al., 2014; Koralun-Bereźnicka, 2017; Koksal & Orman, 2015). Further, the tax shields had a negative significant association along with debt as indicated by (Méndez, 2014). Likewise, the tax-shield had a negative insignificant association according to (Sheikh, 2011). In contrast, the tax-shield had a positive significance with short-term debt ratio and negative significance with long-term debt ratio as indicated by the findings of (Öhman & Yazdanfar, 2017). Finally, a positive significant association among NDTS and short-term debt ratio as well as with long-term debt ratio were estimated by (Serrasqueiro, 2011).

Firm's degree of risk

The risk has a negative significant association with debt as indicated by (Alipour et al., 2015). In contrast, the risk has a positive significant association with debt (Chen et al., 2014). Likewise, the risk was found to be positive with short-term debt ratio and positive significantly with long-term debt ratio as indicated by the findings of (Chen et al., 2014). Similarly, a positive significant association among risk and short-term debt ratio and positive significant association among risk and long-term debt ratio were observed (Serrasqueiro, 2011). Finally, the risk has a negative significant association with long-term and short-term debt (Abor & Biekpe, 2009).

Research methodology

This section comprises the nature and type of data that was used in the present study along with the data collection techniques and sources. In addition, it also comprises the dependent and independent variables along with their definitions and measurements. Furthermore, it comprises the model used in the current study along with techniques.

Nature and source of data

The basic motive for this study is to identify the role of the business age, size and risk for the choice of debt financing in the textile and apparel sector of Pakistan along with other controlled factors. The textile and apparel sector of Pakistan comprises 464 listed entities as the targeted population while the study randomly finalized 60 firms as the sample after carefully analyzing the required information from the financial statements during the annual revenue streams of 2013-2019. The predicted variable for this research enquiry is measured by short, long and total-debt ratios while the predictor variables include the business age, firm scale and risk. The detailed description of dependent, independent and controlled variables including their measurements, data sources, literature sources including the expected signs are given in Table 1 on the following page.

Table 1: Variable description and measurements

Variables & Types	Symbols	Measurements	Expected Signs	Data Source	Literature Source
Dependent					
Total-debt ratio	TDR	"Total-debt ratios as the proportion of Total assets"		Financial Statements	(Nadeem Ahmed Sheikh, 2017; Nadeem_Ahmed Sheikh & Wang, 2011; Koralun-Bereźnicka, 2017; González Méndez, 2014; Zélia_Serrasqueiro, 2011)
Short-term debt ratio	SDR	"Short-term debts as a proportion of total assets"		Financial Statements	(Hall et al., 2010; Öhman & Yazdanfar, 2017)
Long-term debt ratio	LDR	"Long-term debts as a proportion of total assets"		Financial Statements	(Hall_et al., 2010; Öhman & Yazdanfar, 2017)
Independent					
Firm's scale	FS	"Natural log of total assets"	**Positive**	Financial Statements	(Ehalaiye et al., 2017; Öhman & Yazdanfar, 2017 ; Seo et al., 2017)
Business age	FA	"Natural log of the number of operating years of the company till now"	**Negative**	Financial Statements	(Öhman & Yazdanfar, 2017 ; Sardo & Serrasqueir, 2017; Zélia_Serrasqueiro, 2011)
Business risk	FR	"Absolute number of % variation of EBIT"	**Negative**	Financial Statements	(Alipour et al., 2015; Chadha & K. Sharma, 2015; Sardo & Serrasqueir, 2017)
Controlled					
Business growth	FG	"Percentage change in Sales"	**Positive**	Financial Statements	(Nadeem Ahmed Sheikh, 2011; Koralun-Bereźnicka, 2017; Öhman & Yazdanfar, 2017 ; Sardo & Serrasqueir, 2017)

Business profitability	FP	"EBIT as % of Total Assets"	**Negative**	Financial Statements	(Abor, 2007; Nadeem Ahmed Sheikh, 2017; Kokosal & Orman, 2015; _Silva Serrasqueiro & Rêgo Rogão, 2009; Öhman & Yazdanfar, 2017)
Business liquidity	FL	"Proportion of Current Assets in Total assets"	**Negative**	Financial Statements	(Nadeem Ahmed Sheikh, 2011; Alipour et al., 2015; Öhman & Yazdanfar, 2017)
Business tangibility	FT	"Proportion of Tangible Fixed Assets in Total Assets"	**Negative**	Financial Statements	(Kokosal_& Orman, 2015; Öhman & Yazdanfar, 2017 ; Sardo & Serrasqueir, 2017)
Firm's Tax-shield	FTS	"Depreciation as the proportion of Total asset's value"	**Positive**	Financial Statements	(Nadeem_Ahmed Sheikh & Wang, 2011; Öhman & Yazdanfar, 2017 ; Zélia Serrasqueiro, 2011)

Source: Own work

Modelling the variables

The study requires the economic as well as the econometric modelling for the entire set of variables in the following manner.

Economic model

The economic model of the study is as follows:

DFC = ***f*** (FS, FA, FR, FG, FP, FL, FT, FTS)

Where, DFC = Debt Financing Choice, which can be replaced by Total-debt ratio (TDR), Short-term debt ratio (SDR) and Long-term debt ratio (LDR).

Econometric models

The econometric model comprising the dependent and independent variables of the study is formed in the following way.

The first econometric model is formed by taking the total-debt ratio as the dependent variable to show debt financing choice by considering the firm's scale, business age, and business risk as the main independent variables and business growth, business profitability, business liquidity, business tangibility and business tax shield as the control variables. This model is as follows:

$$TDR = \alpha + \beta_1 (Firm's\ scale) + \beta_2 (Business\ age) + \beta_3 (Business\ risk) + \beta_4 (Business\ growth) + \beta_5 (Business\ profitability) + \beta_6 (Business\ liquidity) + \beta_7 (Business\ tangibility) + \beta_8 (Business\ tax\ shield) + \varepsilon$$

The second econometric model is formed by taking the long-term debt ratio as the dependent variable to show debt financing choice by considering the firm's scale, business age, and business risk as the main independent variables and business growth, business profitability, business liquidity, business tangibility and business tax shield as the control variables. This model is as follows:

$$LDR = \alpha + \beta_1 (Firm's\ scale) + \beta_2 (Business\ age) + \beta_3 (Business\ risk) + \beta_4 (Business\ growth) + \beta_5 (Business\ profitability) + \beta_6 (Business\ liquidity) + \beta_7 (Business\ tangibility) + \beta_8 (Business\ tax\ shield) + \varepsilon$$

The third econometric model is formed by taking the short-term debt ratio as the dependent variable to show debt financing choice by considering the firm's scale, business age, and business risk as the main independent variables and business growth, business profitability, business liquidity, business tangibility and business tax shield as the control variables. This model is as follows:

$$SDR = \alpha + \beta_1 (Firm's\ scale) + \beta_2 (Business\ age) + \beta_3 (Business\ risk) + \beta_4 (Business\ growth) + \beta_5 (Business\ profitability) + \beta_6 (Business\ liquidity) + \beta_7 (Business\ tangibility) + \beta_8 (Business\ tax\ shield) + \varepsilon$$

Hypotheses of the study

As per the majority of findings in the past as well as per the expected signs of the study, the following set of hypotheses are formed in order to analyze the statistical procedures.

H_1 : *The debt financing choice should be positively influenced by firm scale in the textile and apparel sector of Pakistan.*

H_2 : *Business age should denote the debt financing choice in the textile and apparel sector of Pakistan.*

H_3 : *The degree of business risk should play its part in discouraging the debt financing choice in the textile and apparel sector of Pakistan.*

H_4 : *Business growth should encourage the debt financing choices in the textile and apparel sector of Pakistan.*

H_5 : *Business profitability should have a negated link with debt financing choices in the textile and apparel sector of Pakistan.*

H_6 : *A firm's enhanced liquidity position should discourage the debt financing choices in the textile and apparel sector of Pakistan.*

H_7 : *The debt financing choice should be positively influenced by firm scale.*

H_8 : *A firm's good tangibility should also discourage the choice of debt financing in the textile and apparel sector of Pakistan.*

H_9 : *The tax shield should have a positive influence on debt financing choices in the textile and apparel sector of Pakistan.*

Estimation methods

Based on the econometric model, expected signs of independent and controlled variables of the study as well as the established set of hypotheses, the research investigation required the estimations by means of descriptive stats, correlation matrix and regression using OLS as the method of estimations. For this purpose, SPSS software was utilized.

Data analysis and discussion of results

The research investigation required the examination of the role of the business age, size and risk for the choice of debt financing in the textile and apparel sector of Pakistan along-with other controlled factors. For this purpose, the study randomly finalized 60 firms as the sample after carefully analyzing the required information from the financial financial statements during the annual revenue streams of 2013-2019. The predicted variable for this research enquiry is measured by short, long and total-debt ratios while the predictor variables include the business age, firm scale and risk. The estimation was done with the help of SPSS. It includes the descriptive statistics, correlation matrix and regression using OLS as the method of estimations. The detailed interpretations and estimated results of each set of analysis is elaborated under their specific head.

Descriptive stats

The descriptive stats basically summarize the data for the required set of variables in the form of mean, standard deviations, minimum and maximum values. The estimated results of descriptive stats are reported in Table 2 as follows:

Table 2: Descriptive stats

	N	Minimum	Maximum	Mean	Std. Deviation
Total-debt ratio	420	.001	16.40	1.90	2.99
Short-term debt ratio	420	.004	10.51	.59	1.10
Long-term debt ratio	420	.000	10.66	.47	1.16
Firm scale	420	5.29	17.81	1.42	2.08
Business age	420	1.10	4.25	3.37	.49
Business risk	420	-77.44	22.48	-.53	5.11
Business growth	420	-.99	123.78	.44	6.18
Business profitability	420	-2.15	12.22	.11	.97
Business liquidity	420	.000	36.73	1.54	2.99
Business tangibility	420	.000	7.19	1.04	.81
Business tax shield	420	-.11	.78	.04	.05

Source: Authors' estimations with the help of SPSS

The descriptive statistics indicates the standard deviation and mean, of the factors used in the study. The average total-debt ratio elaborates more debt than assets. It is 1.89 showing 1.89 debt against 1 unit of asset. The average mean for long-term debt ratio is 0.46 and short-term debt ratio is 0.59. Business scale is 1.42 mean respectively which are very close to each other. The business scale is measured as log of total assets. The mean for age is 3.19 and for log of age is 3.37. Average profitability ratio of the textile sector is 10.5% and average growth rate is 4.38%. Current assets are almost three times more than current liabilities which implies that liquidity ratio is very high at 1.54 per unit. The mean of tangibility ratio is 1.03 and tax shields is 4%. The textile sector faced risk of -52.7% on average.

Correlation analysis

The correlation basically shows the strength and direction of two variables in the form of coefficient of correlation. The correlation matrix is reported as Table 3 as follows:

Table 3: Correlation Matrix

	TDR	*SDR*	*LDR*	*FS*	*FA*	*FG*	*FP*	*FL*	*FT*	*FTS*	*Risk*
TDR	1										
SDR	0.41	1									
LDR	0.41	0.14	1								
FS	-0.36	-0.00	-0.01	1							
FA	-0.08	-0.13	-0.10	0.24	1						
FG	-0.03	-0.03	-0.00	-0.02	0.05	1					
FP	0.22	-0.07	0.75	0.06	0.18	-0.01	1				
FL	-0.17	-0.13	-0.10	-0.04	-0.00	-0.01	-0.02	1			
FT	0.35	0.42	0.03	-0.24	-0.04	-0.08	-0.13	-0.18	1		
FTS	0.18	0.48	-0.02	0.06	-0.07	-0.02	-0.13	-0.06	0.29	1	
FR	-0.07	0.01	0.03	0.04	-0.01	0.00	0.04	0.04	0.07	-0.02	1

Source: Authors' estimations with the help of SPSS

Almost the total of the resulted correlations are statistically significant at 1% and 5% level. The results added the correlation coefficients among independent variables are small, which indicates that there is no risk of multi collinearity. Firm's scale has highly and negatively correlated with total-debt ratio at 1 %. Growth and age has negative insignificant association with total-debt ratio. Profitability has highly significant positive association with total-debt ratio. Liquidity is negatively associated with total-debt ratio and correlation is highly significant at 1% level of significance. Tax shields and tangibility have highly significant association with total-debt ratio and the association is positive. Risk is weakly negative with total-debt ratio. Firm scale is negatively and highly correlated with short-term debt ratio at 5 %. STD is highly strongly and negatively associated with age at a level of 1% of significance. STD is weakly negative with growth and profitability. STD is negatively interacting with liquidity and positively interacts with tangibility and tax shields, highly correlated with all of them at 1% significance level. The correlation among STD and risk is insignificant and negative. Firm scale is negatively and highly correlated with long-term debt ratio at 1%. LTD is highly strongly and negatively associated without significance at any level. LTD is weakly negatively correlated with growth and positively interacts with profitability at 1%. LTD negatively interacts with liquidity and positively interacts with tangibility and tax shields, highly correlated with all of them at 1% significance level. The correlation among LTD and risk is insignificant and negative.

Regression estimations

The present research is meant to explain the debt financing choices by means of a set of independent variables like firm scale, business age, and business risk as well as a set of controlled variables like business growth, business profitability, business liquidity, business tangi-

tangibility and business tax shield by way of OLS as the method of estimation. The overall procedure was done using SPSS software, while the OLS model was estimated separately for Total-debt ratio (TDR), Short-term debt ratio (SDR) and Long-term debt ratio (LDR) as the dependent variables.

Table 4.1: Model Summery (TDR)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.577[a]	.333	.318	2.4738645

a. Predictors: (Constant), risk, Growth, Tax. Shields, Size, liquidity, Profitability, tangibility, Age

Source: Own elaboration

The table indicates the regression model analysis of this study using total debt ratio. Overall the model is statistically significant using total-debt ratio as the dependent variable in Pakistan's textile industry R is showing association 0.577 which is the overall value of correlation. The r-square estimate is 0.333 which elaborates that the independent variables of this model are 33.3% responsible in explaining the dependent variable which elaborates that 66.7% are other factors which may change or effect the dependent variable.

Table 4.2: ANOVA (TDR)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1252.822	9	139.202	22.745	.000[a]
	Residual	2509.202	410	6.120		
	Total	3762.024	419			

a. Predictors: (Constant), risk, Growth, Tax. Shields, Size, liquidity, Profitability, tangibility, Age

b. Dependent Variable: Total-debt ratio

Source: Own elaboration

The ANOVA table is showing sum of squares and mean square values of regression and residuals. F value is 22.745. P value is 0.000 which elaborates fitness of model.

Table 4.3: Coefficient's estimates (TDR)

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	*(Constant)*	10.959	1.884		5.818	.000
	Firm's scale	-.471	.063	-.326	-7.439	.000
	Business age	-1.526	.700	-.248	-2.179	.030
	Business risk	-.042	.024	-.072	-1.773	.077
	Business growth	-.007	.020	-.015	-.364	.716
	Business profitability	.898	.129	.291	6.950	.000
	Business liquidity	-.134	.042	-.134	-3.200	.001
	Business tangibility	.934	.168	.252	5.564	.000
	Business tax shield	9.155	2.417	.164	3.788	.000

Dependent Variable: Total-debt ratio (TDR)

Source: Own elaboration

This table identifies that total debt-ratio is statistically powerful at 1% means negative association with corporation size and admits the H_0. The co-efficient beta value of this association is -0.326 showing that if firm size is enhanced by a single-unit the value of total-debt ratio will be decreased by 0.326 value and if value of firm size is decreased by a single-unit the value of total-debt ratio will be enhanced by 0.326 units. In another sense, there is inverse association among total-debt ratio and firm size, if firm size is enhanced by 100% the total-debt ratio will have be decreased by36.1% and if firm size is decreased by100% the total-debt ratio will be boosted by 36.1%.The association among total-debt ratio and firm size is also shown by the below mentioned researchers (A. Doukas & Zhou, 2011; Alipour *et al*., 2015; _Serrasqueiro & Rogão, 2009). The results show that small textile firms do not have any other way except to rely on debt. They have to focus on loans to meet their needs and requirements. This shows the importance of personnel resources and assets of firms. The above table identifies that total-debt ratio is significant at 10% showing positive association with firm age and accepts the H_0. The co-efficient beta value of this association is 0.224 showing that if firm age is enhanced by a single-unit the value of total-debt ratio is enhanced by 0.224 of a unit and if value of firm age is decreased by a single-unit the value of total-debt ratio will be decreased by 0.224 units. In another sense, there is direct association among total-debt ratio and firm age, if firm age is enhanced by 100% the total-debt ratio will been hanced by 22.4% and if firm age is decreased by100% the total-debt ratio will be reduced by 22.4%. The association among total-debt ratio and firm age was also noted by other researchers (Serrasqueiro, 2011).This association shows that need of debt for textile firms is not equal at the start or at any point of time. Retained earnings can also be used as a source of funding in the future. So, as age increased the need for total-debt ratio is also increased to meet demand. The regression table identifies that total-debt ratio is insignificant which means negative association with corporation growth and admits the H_0. The co-efficient Beta value of this association is -0.015 showing that if firm growth is enhanced by a single-unit the value of total-debt ratio will be decreased by 0.015 units and if value of firm growth decreased by single-unit the value of total-debt ratio will be enhanced by 0.015 units. In another sense, there is inverse association among total-debt ratio and firm growth, if firm growth is enhanced by 100% the total-debt ratio will have decreased by1.5% and if firm growth is decreased by100% the total-debt ratio will be boosted by1.5%. The association among total-debt ratio and firm growth is also as per the following researchers (Nadeem Ahmed Sheikh, 2011) (Nadeem_Ahmed Sheikh & Wang, 2011; Chen et al., 2014; Koralun-Bereźnicka, 2017; González Méndez, 2014; Sung et al., 2015). The findings of (Nadeem Ahmed Sheikh, 2017) described that growth has negative insignificant association with debt by use of techniques of panel data which show that fixed effects, pooled OLS ordinary least square and random effects in Islamic and conventional banks of Pakistan. The results are also confirmed with "pecking-order-theory". The association is due to the reason that growth opportunities give incentives to managers to invest more and try to increase wealth of shareholders instead of debt holders. The table identifies that total-debts is statistically powerful at 1% showing positive association with firm profitability and accepts the H_0. The co-efficient Beta value of this association is 0.291 showing that if firm profitability is enhanced by a single-unit the value of total-debt ratio be enhanced by 0.291 unit and if value of firm profitability decreased by a single-unit the value of total-debt ratio will be decreased by0.291 units. In other words, there is direct association among total-debt ratio and firm profitability, if firm profitability is enhanced by 100% the total-debt ratio will been hanced by 22.4% and if firm profitability is decreased by100% the total-debt ratio will be reduced to 22.4%. The association among total-debt ratio and firm profitability is also as per the following researchers (Chen et al., 2014; Sardo & Serrasqueir, 2017). This significant positive association is due to the fact that the trade-off concept recommends a positive effect among debt and profitability since greater profitability increases the usage of debt and gives an opportunity to companies to get the advantage of tax brackets on installments of interest.

This table identifies that total-debt ratio is statistically powerful at 1% which means negative association with corporation liquidity and admits the H_1. The co-efficient beta value of this association is -0.134 showing that if firm liquidity is enhanced by a single-unit the value of total-debt ratio will be decreased by 0.134 units and if value of firm liquidity decreased by a single-unit the value of total-debt ratio will be enhanced by 0.134 units. In other words, there is inverse association among total-debt ratio and firm liquidity, if firm liquidity is enhanced by 100% the total-debt ratio will be decreased by13.4% and if firm liquidity is decreased by100% the total-debt ratio will be boosted by13.4%. The association among total-debt ratio and firm liquidity is shown by the below mentioned researchers also (Nadeem Ahmed Sheikh, 2017). The results of (Koralun-Bereźnicka, 2017) show that liquidity has negative insignificant association with debt using panel data modelling among European firms. The results confirm that the textile firms get finance for business activities following the financing array implied by the "pecking-order-

theory". Moreover, the great cost of increasing funds also restricted the Pakistani textile firms to depending on internally generated funds. The above table identifies that total-debt ratio is statistically powerful at 1% showing positive association with firm tangibility and accepts the H_0.The co-efficient Beta value of this association is 0.252 showing that if firm tangibility is enhanced by a single-unit the value of total-debt ratio will be enhanced by 0.252 of a unit and if value of firm tangibility decreased by a single-unit the value of total-debt ratio will be decreased by0.252 units. In other words, there is direct association among total-debt ratio and firm tangibility, if firm tangibility is enhanced by 100% the total-debt ratio will be enhanced by 25.2% and if firm tangibility is decreased by100% the total-debt ratio will be reduced to 25.2%. The association among total-debt ratio and firm tangibility is also as per the following researchers (Viviani, 2008;Ksal_& Orman, 2015; Sardo & Serrasqueir, 2017). The finding is due to the implication of agency hypothesis which states that the trend of executives to use more than the best level of advantages may yield an opposite association among debt levels and tangible assets. The pecking order concept also expects a negative association among tangible assets and debt. This table identifies that total-debt ratio is statistically powerful at 1% showing positive association with firm tax shields and accepts the H_1. The co-efficient beta value of this association is -0.164 showing that if firm tax shield is enhanced by a single-unit the value of total-debt ratio will be decreased by 0.164 units and if value of firm tax shields decreased by a single-unit the value of total-debt ratio will be enhanced by 0.164 units. In other words, there is inverse association among total-debt ratio and firm tax shields, if firm tax shields are enhanced by 100% the total-debt ratio will have decreased by16.4% and if firm tax shields are decreased by100% the total-debt ratio will be boosted by16.4%. The association among total-debt ratio and firm tax shields is shown by the below mentioned researchers also(Chen *et al*., 2014; Koralun-Bereźnicka, 2017; Ksal_& Orman, 2015). The resulting signs are matched with suggestions of "trade-off-theory". This shows that debt level increased with increase of taxes due to the fact that debt is a tax-deductible variable. This table identifies that total-debt ratio is statistically powerful at 10% which means negative association with company risk and accepts the H_1. The co-efficient Beta value of this association is -0.072 showing that if firm risk is enhanced by a single-unit the value of total-debt ratio will be decreased by 0.072 units and if value of firm risk decreased by a single-unit the value of total-debt ratio will be enhanced by 0.072 units. In other words, there is inverse association among total-debt ratio and firm risk, if firm risk is enhanced by 100% the total-debt ratio will have decreased by7.2% and if firm risk is decreased by 100% the total-debt ratio will be boosted by7.2%. The association among total-debt ratio and firm risk is shown by the below mentioned researchers also (Alipour *et al*., 2015).This negative association among risk and debt is due to firms having greater risk trying to neglect use of external finance and in its place depending on internal finance to save the firm from insolvency.

Table 5.1: Model Summery (SDR)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
2	.576[a]	.331	.318	.9108547

Predictors: (Constant), risk, Growth, Tax. Shields, Size, liquidity, Profitability, Age, tangibility

Source: Own elaboration

The table indicates regression model analysis for short-term debt ratio. Overall, the model is statistically significant by use of short-term debt ratio as the dependent variable in Pakistan's textile industry. R is showing association 0.576 which is the overall value of correlation. The r-square estimate is 0.331 that shows the independent variables in this model are 33.1% explaining the dependent variable which elaborates that 66.9% are the other factors which may change or effect the dependent variable

Table 5.2: ANOVA (SDR)

Model		Sum of Squares	df	Mean Square	F	Sig.
2	Regression	169.085	8	21.136	25.475	.000[a]
	Residual	340.989	411	.830		
	Total	510.074	419			

a. Predictors: (Constant), risk, Growth, Tax. Shields, Size1, liquidity, Profitability, Age, tangibility

b. Dependent Variable: Short-term debt ratio

Source: Own elaboration

Table 5.3: Coefficient's estimates (SDR)

		Unstandardized Coefficients		Standardized Coefficients		
	Model	**B**	**Std. Error**	**Beta**	**t**	**Sig.**
2	***(Constant)***	-.451	.345		-1.306	.192
	Firm's scale	.041	.023	.078	1.773	.077
	Business age	-.009	.003	-.114	-2.652	.008
	Business risk	-.003	.009	-.014	-.353	.724
	Business growth	.003	.007	.014	.351	.726
	Business profitability	.041	.048	.036	.861	.390
	Business liquidity	-.017	.015	-.045	-1.085	.278
	Business tangibility	.438	.062	.321	7.088	.000
	Business tax shield	7.612	.888	.370	8.577	.000

a. Dependent Variable: Short-term debt ratio

Source: Own elaboration

The ANOVA table is showing sum of squares and mean square values of regression and residuals. F value is 22.745. P value is 0.000 which elaborates fitness of model.

This table reports that the short-term debt ratio is statistically powerful at 10% showing positive association with firm size and accepts the H_1. The co-efficient beta value of this association is 0.078 showing that if firm size is enhanced by a single-unit the value of short-term debt ratio will be enhanced by 0.078 unit and if value of firm size decreased by a single-unit the value of short-term debt ratio will be decreased by0.078 units. In other words, there is direct association among short-term debt ratio and firm size, if firm size is enhanced by 100% the short-term debt ratio will been hanced by 7.8% and if firm size is decreased by100% the short-term debt ratio will be reduced to 7.8%. The association among firm size and short-term debt ratio is shown by the below mentioned researchers also (Abor & Biekpe, 2009; Öhman & Yazdanfar, 2017; Serrasqueiro, 2011; Hall__et al., 2010). This association is due to the reason that the larger firms may easily show a short-term debt ratio and recover. The

need for current assets is fulfilled by short-term financing. Moreover, small and medium enterprises have been much effected by short-term debt ratio in the textile sector. Similarly, the short-term debt ratio is statistically powerful at 1% which means negative association with corporation age and admits the $H_{1.}$ The co-efficient beta value of this association is 0.114 showing that if firm age is enhanced by a single-unit the value of short-term debt ratio will be decreased by 0.114 units and if value of firm age decreased by a single-unit the value of short-term debt ratio will be enhanced by 0.114 units. In other words, there is inverse association among short-term debt ratio and firm age, if firm age is enhanced by 100% the short-term debt ratio will be reduced to 11.4% and if firm age is decreased by 100% the short-term debt ratio will be boosted by11.4%. The association among business age and short-term debt ratio is also as per the following researchers as (Öhman & Yazdanfar, 2017). This association is due to the fact that older textile firms in Pakistan use less debt because they depend upon internally generated funds with the passage of time. Likewise, the short-term debt ratio is insignificant showing positive association with firm growth and accepts the $H_{1.}$ The co-efficient beta value of this association is -0.014 showing that if firm growth is enhanced by a single-unit the value of short-term debt ratio will be enhanced by 0.014 unit and if value of firm growth decreased by a single-unit the value of short-term debt ratio will be decreased by 0.014 units. In other words, there is direct association among company growth and short-term debt ratio, if firm growth is enhanced by 100% the short-term debt ratio will been hanced by 1.4% and if firm growth is decreased by100% the short-term debt ratio will be decreased by 1.4%. The association among a corporation's growth and short-term debt ratio is also as per the following researchers (Abor & Biekpe, 2009; Öhman & Yazdanfar, 2017 ; Serrasqueiro, 2011). The findings may be due to the realization that firms use investments to maximize wealth of shareholders instead of debt holders. In addition to it, the short-term debt ratio is insignificant showing positive association with firm profitability and accepts the $H_{0.}$ The co-efficient Beta value of this association is 0.036 showing that if firm profitability is enhanced by a single-unit the value of short -term debt ratio will be enhanced by 0.036 unit and if value of firm profitability decreased by a single-unit the value of short-term debt ratio will be decreased by 0.036 units. In other words, there is direct association among short-term debt ratio and firm profitability, if firm profitability is enhanced by 100% the short-term debt ratio will been hanced by 3.6% and if firm profitability is decreased by100% the short-term debt ratio will be reduced to 3.6%. The association among a corporation's profitability and short-term debt ratio is also as per the following researchers(Abor & Biekpe, 2009; Serrasqueiro, 2011). The results are also confirmed by the trade-off concept. The trade-off hypothesis proposes a positive association among profitability and short-term debt ratio because of the fact that greater profitability increases the usage of debt and gives an opportunity to companies to get the advantage of tax brackets in interest installments. Profitable firms have better access to financing as compared to non-profitable firms.

This table identifies that short-term debt ratio is insignificant which means negative association with firm liquidity and admits the $H_{1.}$ The co-efficient beta value of this association is -0.045 showing that if firm liquidity is enhanced by a single-unit the value of short-term debt ratio will be decreased by0.045 units and if value of firm liquidity decreased by a single-unit the value of short-term debt ratio will be enhanced by 0.045 units. In other words, there is inverse association among short-term debt ratio and firm liquidity, if firm liquidity is enhanced by 100% the short-term debt ratio will have decreased by 4.5% and if firm liquidity is decreased by 100% the short-term debt ratio will be boosted by4.5%. The association among short-term debt ratio and firm liquidity is shown by the below mentioned researchers also (Koralun-Bereźnicka, 2017; Öhman & Yazdanfar, 2017).The association is due to the fact that firms with more liquid assets have enough cash and so are less likely to rely on short-term debt ratio financing.

The above table identifies that short-term debt ratio is statistically powerful at 1% showing positive association with firm tangibility and accepts the $H_{0.}$ The co-efficient beta value of this association is 0.321 showing that if firm tangibility is enhanced by a single-unit the value of short-term debt ratio will be enhanced by 0.321 unit and if value of firm tangibility decreased by a single-unit the value of short-term debt ratio will be decreased by 0.321 units. In other words, there is direct association among short-term debt ratio and firm tangibility, if firm tangibility is enhanced by 100% the short-term debt ratio will been hanced by 32.1% and if firm tangibility is decreased by 100% the short-term debt ratio will be reduced to 32.1%. The association among short-term debt ratio and corporation tangibility is also as per the following researchers (Abor & Biekpe, 2009; Serrasqueiro, 2011). This association is due to the fact that if firms have long term tangible assets, they will also need short term financing to meet short term demands. This is also for the firms having more tangible assets so that they can get loans on a collateral/ mortgage basis. This table identifies that short-term debt

ratio is statistically powerful at 1% showing positive association with firm tax shields and accepts the H_1. The coefficient beta value of this association is 0.37 showing that if firm tax shields are enhanced by a single-unit the value of short-term debt ratio will be decreased by 0.37 units and if value of firm tax shields decreased by a single-unit the value of short-term debt ratio will be enhanced by 0.37 units. In other words, there is inverse association among short-term debt ratio and firm tax shields, if firm tax shields are enhanced by 100% the short-term debt ratiowill decrease by 37% and if firm tax shields are decreased by 100% the short-term debt ratio will be boosted by37%. The association among short-term debt ratio and firm tax shields is shown by the below mentioned researchers also (Öhman & Yazdanfar, 2017 ; Serrasqueiro, 2011).The resulting signs are matched with suggestions of the "trade-off-theory". This shows that debt level increased with increase of taxes due to the fact that debt is a tax-deductible variable. The table identifies that short-term debt ratio is insignificant which means negative association with corporation's risk and admits the H_0. The co -efficient beta value of this association is -0.014 showing that if firm risk is enhanced by a single-unit the value of short-term debt ratio will be decreased by 0.014 units and if value of firm risk decreased by a single-unit the value of short-term debt ratio will be enhanced by 0.014 units. In other words, there is inverse association among short-term debt ratio and firm risk, if firm risk is enhanced by 100% the short-term debt ratio will be decreased by 1.4% and if firm risk is decreased by 100% the short-term debt ratio will be boosted by1.4%. The association among short -term debt ratio and firm risk is shown by the below mentioned researchers also (Abor & Biekpe, 2009). This association is due to the fact that firms already facing risk are not provided with debt easily. By contrast, the riskier firms perhaps don't want to increase their risk by more debt saving them from bankruptcy.

Table 6.1: Model Summery (LDR)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
3	.832[a]	.693	.686	.6485305

a. Predictors: (Constant), risk, Growth, Tax. Shields, Size, liquidity, Profitability, tangibility, Age

Source: Own elaboration

The table indicates regression model analysis for long-term debt ratio. Overall, l the model is statistically significant by use of long-term debt ratio as the dependent variable in Pakistan's textile industry. R is showing association 0.832 which is the overall value of correlation. The r-square estimate is 0.693 that shows that the independent variables in this model are 69.3% explaining the dependent variable which elaborates that 30.7% are the other factors which may change or effect the dependent variable.

Table 6.2: ANOVA (LDR)

	Model	Sum of Squares	Df	Mean Square	F	Sig.
3	Regression	389.120	9	43.236	102.797	.000[a]
	Residual	172.443	410	.421		
	Total	561.563	419			

a. Predictors: (Constant), risk, Growth, Tax. Shields, Size, Liquidity, Profitability, Tangibility, Age

b. Dependent Variable: Long-term debt ratio

Source: Own elaboration

The ANOVA table is showing summation of squares and mean square values of regression and residuals. F value is 102.797. P value is 0.000 which elaborates fitness of model.

Table 6.3: Coefficient's estimates (LDR)

		Unstandardized Coefficients		Standardized Coefficients		
	Model	**B**	**Std. Error**	**Beta**	**t**	**Sig.**
3	***(Constant)***	6.211	.573		10.830	.000
	Firm's scale	-.096	.023	-.139	-4.103	.000
	Business age	-1.798	.184	-.756	-9.768	.000
	Business risk	.001	.006	.004	.155	.877
	Business growth	.002	.005	.009	.334	.739
	Business profitability	.886	.037	.743	23.829	.000
	Business liquidity	-.036	.011	-.094	-3.332	.001
	Business tangibility	.056	.048	.039	1.161	.246
	Business tax shield	1.516	.629	.070	2.411	.016

a. Dependent Variable: Long-term debt ratio

Source: Own elaboration

The above table indicates that long-term debt ratio is significant at 1% with negative association towards firm scale and admits the H_0. The co-efficient beta value of this association is -0.139 showing that if firm scale is enhanced by a single-unit the value of the long-term debt ratio will be decreased by0.139 units and if value of firm scale decreased by one-unit, the value of the long-term debt ratio will be enhanced by 0.139 units. In contrast, there is an inverse association among the long-term debt ratio and firm scale, if firm size is enhanced by 100% the long-term debt ratio will be decreased by13.9% and if firm scale is decreased by100% the long-term debt ratio will be boosted by13.9%. The similar link among the long-term debt ratio and firm's scale was also documented by (Öhman & Yazdanfar, 2017). The association is due to the fact that firms with larger size focused upon their investment activities while smaller firms focused on long -term debt ratio to increase their size and revenues. The above table illustrates that the long-term debt ratio is highly significant at 1% with positive link to business age and accepts the H_0. The coefficient's value of this link is 0.584 showing that if business age is enhanced by a single-unit the value of the long-term debt ratio will been hanced by 0.584 unit and if value of firm age decreased by a single-unit the value of the long-term debt ratio will be decreased by0.584 units. In other words, there is direct association among business age and the long-term debt ratio, if firm age is enhanced by 100% the long-term debt ratio will been hanced by 58.4% and if firm age is decreased by100% the long-term debt ratio will be reduced to 58.4%. The association among the long-term debt ratio and firm age is also shown by the following researchers (Abor & Biekpe, 2009; Öhman & Yazdanfar, 2017 ; Serrasqueiro, 2011).The regression table identifies that the long-term debt ratiois insignificant showing positive association with firm growth and accepts the H_1. The co-efficient beta value of this association is 0.009 showing that if firm growth is enhanced by a single-unit the value of the long-term debt ratio will be enhanced by 0.009 unit and if value of firm growth decreased by 1-unit, the value of the long-term debt ratio will be decreased by 0.009 units. In contrast, there is direct association among the long-term debt ratio and firm growth, if firm growth is enhanced by 100% the long-term debt ratio will be decreased by 0.9% and if firm growth is decreased by100% the long-term debt ratio will be boosted by 0.9%. The association among the long-term debt ratio and firm growth is also shown by the following researchers (Abor & Biekpe, 2009; Öhman & Yazdanfar, 2017 ; Serrasqueiro, 2011). Growth opportunities are adopted

to increase wealth of shareholders instead of debt holders. So investments are made from retained earnings instead of financing. The table identifies that the long-term debt ratio is statistically powerful at 1% showing positive association with firm profitability and accepts the H_0. The co-efficient beta value of this association is 0.743 showing that if firm profitability is enhanced by a single-unit the value of the long-term debt ratio will be enhanced by 0.743 unit and if value of firm profitability decreased by single-unit the value of the long-term debt ratio will be decreased by0.743 units. In other words, there is direct association among the long-term debt ratio and firm profitability, if firm profitability is enhanced by 100% the long-term debt ratio will been hanced by 74.3% and if firm profitability is decreased by100% the long-term debt ratio will be reduced to 74.3%. The association among the long-term debt ratio and firm profitability is also shown by the following researchers (Abor & Biekpe, 2009; Serrasqueiro, 2011). This association is due to the fact that profitable firms have better options in debt. They rely on debt because they want to get more profit by increasing the capital of company. Profitability has a big percentile effect on long-term debt ratio. This table illustrates that the long-term debt ratio is statistically powerful at 1% which means negative association with firm liquidity and admits the H_1. The co-efficient beta value of this association is -0.094 showing that if firm liquidity is enhanced by a single-unit the value of the long-term debt ratio will be decreased by 0.094 unit and if value of firm liquidity decreased by a single-unit the value of the long-term debt ratio will be enhanced by 0.094 units. In other words, there is inverse association among the long-term debt ratio and firm liquidity, if firm liquidity is enhanced by 100% the long-term debt ratio will be decreased by 9.4% and if firm liquidity is decreased by 100% the long-term debt ratio will be boosted by 9.4%. The association among the long-term debt ratio and firm liquidity is shown by the below mentioned researchers also (Öhman & Yazdanfar, 2017). This result implies simply that textile firms have much cash on hand, so they don't need external financing. The above table identifies that the long-term debt ratio is insignificant showing positive association with firm tangibility and accepts the H_1. The co-efficient beta value of this association is 0.039 showing that if firm tangibility is enhanced by a single-unit the value of the long-term debt ratio will be enhanced by 0.039 unit and if value of firm tangibility decreased by a single-unit the value of the long-term debt ratio will be decreased by0.039 units. In other words, there is direct association among the long-term debt ratio and firm tangibility, if firm tangibility is enhanced by 100% the long-term debt ratio will been hanced by 3.9% and if firm tangibility is decreased by 100% the long-term debt ratio will be reduced to 3.9%. The association among the long-term debt ratio and firm tangibility is also shown by the following researchers (Abor & Biekpe, 2009; Öhman & Yazdanfar, 2017; Serrasqueiro, 2011). This is an insignificant result showing that firms having already long- term tangible assets rely more on short-term debt ratio to meet short term needs i.e. inventory requirements, etc. instead of more long-term debt ratio. This table identifies that the long-term debt ratio is statistically powerful at 5% showing positive association with firm tax shields and accepts the H_1. The co-efficient beta value of this association is 0.070 showing that if firm tax shield is enhanced by a single-unit the value of the long-term debt ratio will be decreased by 0.070 unit and if value of firm tax shields decreased by a single-unit the value of the long-term debt ratio will be enhanced by 0.070 units. In other words, there is inverse association among long-term debt ratio and firm tax shields, if firm tax shields are enhanced by 100% the long-term debt ratio will be decreased by7% and if firm tax shields are decreased by 100% the long-term debt ratio will be boosted by7%. The association among the long-term debt ratio and firm tax shields is shown by the below mentioned researchers also (Zélia Serrasqueiro, 2011). The association is due to the fact that debt is a tax-deductible variable so mostly firms increased debt to avoid taxes. This depends upon the comparison of cost of debt and rate of taxes. This table identifies that the long-term debt ratio is insignificant showing positive association with firm risk and accepts the H_1. The co-efficient beta value of this association is 0.004 showing that if firm risk is enhanced by a single-unit the value of the long-term debt ratio will be enhanced by 0.004 unit and if value of firm risk decreased by a single-unit the value of the long-term debt ratio will be decreased by0.004 units. In other words, there is direct association among the long-term debt ratio and firm risk, if firm risk is enhanced by 100% the long-term debt ratio will be decreased by 0.4% and if firm risk is decreased by100% the long-term debt ratio will be reduced to 0.4%. The association among the long-term debt ratio and firm risk is shown by the below mentioned researchers also (Zélia Serrasqueiro, 2011). This association is due to the fact that firms already facing risk are not provided with debt easily. By contrast, the riskier firms perhaps don't want to increase their risk by more debt saving them from bankruptcy.

Conclusion and recommendations

This research investigation was meant to explain the debt financing choices by means of a set of independent variables like firm scale, business age, and business risk as

well as a set of controlled variables like business growth, business profitability, business liquidity, business tangibility and business tax shield by way of OLS as the method of estimation for companies in the textile and apparel sector of Pakistan. The overall procedure was done using SPSS software, while the OLS model was estimated separately for Total-debt ratio (TDR), Short-term debt ratio (SDR) and Long-term debt ratio (LDR) as the dependent variables. For this purpose, the study randomly finalized 60 firms as the sample after carefully analyzing the required information from the financial statements during the annual revenue streams of 2013-2019. The study estimated that the choice of total-debt ratio is strongly affected by business age, size and risk along with tax shield, tangibility, liquidity and profitability while the choice of short-term debt ratio mainly depends upon firm scale and age along with tax shield. In addition, the choice of long-term debt ratio is strongly explained by the firm's scale and age along with tax shield, liquidity and profitability. The estimated evidence provides management implications for the textile and apparel sector of Pakistan in considering the significant factors in deciding on the debt financing choice of this sector. The estimated evidence of this research enquiry apply to the non-financial textile sector only and cannot be generalized to the financial sector. Future research may enhance the financing choice towards the inclusion of equity financing with the same set of variables.

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