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What Determines the Profitability of Business Firms in Pakistan

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Abstract

The purpose of this research is to examine the impact or the relationships between some internal i.e. Debt to equity and Capital adequacy and external factors i.e. Tax rate, Interest rate and inflation rate, on the Profitability of the firm. Top 30 big firm's data will be analyzed from 2012 to 2017 registered under the Pakistan stock exchange Commission. The panel regression technique, fixed affects and random affect technique is used to find out the impact variables on the Profitability of the firm. It has been stated that any company's long-term survival depends largely on its ability to be profitable. Although maximizing profits is the main goal of all commercial ventures, the factors that influence profitability in emerging nations have received little attention. In this study, the profitability of publicly manufacturing companies in Pakistan is examined.

Determinant of firms' profitability is important to understand for decision-making process in business entity regarding maximization of profit and competitive advantage over the competitors. Determinant of the firms discloses the risk and reward associated with it in the market. In addition, it helps in building up an organization's sustainability and provides knowledge about the Future. Different types of tests are run to get maximum output from the variables and its impact on the business entity.

Keywords: debt to equity ratio, tax rate, interest rate, inflation rate

1. Introduction

1.1 Introduction

The primary goal of any organization is to achieve desired goals in aggressive condition for doing this; the company must develop, maintain, and implement the strategies so that it can increase the profitability growth of the company. This can be done by investigating the External and Internal factors of the company profitability or growth of the company. The quality and efficiency of managerially upon their capacity to distinguish those components that can give prompt benefits to the company.

Benefits are one of the key segments in the modern development procedures since benefits impacts venture decision, development of the business and course of the exchange and consequently have solid effect on limit profitability, productivity, efficiency (Uctum, 1995).

According to the previous researches the productivity of an association is self-absorbed by a few elements. These elements incorporate essentials inner to every association and a few outer powers, which impact the profitability (Anii et al (2012). Identification of the elements, which control profitability, is still one of the major concerns for the researches. Various past researchers find the elements that impact the benefit of the firm, including working capital interest rate, inflation rate, leverage and another factor.

This study contributes to the literature by using the profitability as depended variable and the impact of independent variables on it like inflation capital adequacy, taxes etc. Further to link it with the Pakistan economy so that we can find clear impact of determinants of the firm Profitability.

1.2 Research Questions

Q1: What is impact of long term Debt to Equity on net income.

Q2: What is impact of total debt to asset ratio on net income

Q3: What is impact of Risk on the net income.

Q4: What is impact of Inflation Rate on net income.

Q5: What is impact of Taxes on net income.

Q6: What is impact of Inflation Rate on net income.

1.3 Hypotheses

H1: There is a significance impact of long term Debt to Equity net income.

H2: There is a significance impact of total debt to asset ratio on net income

H3: There is a significance impact of Risk on the net income.

H4: There is a significance impact of Inflation Rate on net income

H5: There is a significance impact of Taxes on net income.

H6: There is a significance impact of Inflation Rate on net income.

1.4 Research Objectives / Aim

The main objective of this study is to evaluate and identify how Firm determinants are affecting the firm’s Profit especially in the Manufacturing Industry of Pakistan. This project will definitely tell us about the significance of Firm’s determinants and its impacts on the Firm's Profit. On the other hand, it also helps to find out the importance of the firm's determinants with respect to size of firm.

The significance of this study is entrenched from the manufacturing companies listed in Pakistan stock exchange. This study tries to find out the influence of Capital adequacy, Tax, Interest rate, Debt to equity ratio on the Profitability of the manufacturing companies.

1.5 Problem Statement

While studying literature, it was found that there is huge confusion about the factor, which affects the profitability of the firm. However, there are several contradictions, that either, factor affects the firm profitability or not. Additionally, multiple studies are evolving which have diverse results regarding the Factors affecting the profitability. For example, the study of Sadia Ali Mirza and Attiya Javed (2013) who elucidates that various studies have been led to discover different money related and non-monetary components that can help or have unfavorable an effect on the execution/Profitability of the firm. Yet at the same time, no single model has been made to show the accurate impact on the Profitability of the Firm. There is inadequate research and on-going disclosure of issue of execution of firms. There is broader hole, particularly because of developing economies like Pakistan, because a large portion of the exploration done depends on the information from created economies like China, Malaysia.

On the other hand, it was found that there is impact of Firm determinants on the profitability of the Firm, including size, working capital, employee experience, age of the business, number of employees, and management decisions.

It was claimed Corporate organization practices are the structures and practices that immediate how a business component sets its objectives, makes approaches and plans, screens and reports its execution, and manage its danger (Reddy,2010). Those Specialists are likewise of the view that great corporate administration rehearses improving the execution of the firm (Chugh et al., 2009).

Unfortunately, the debate between either the Firm determinants have constructive or uncooperative impact on the benefits of the Firm are not is a like a marathon. There are some studied which are in favor of positive relation and wise versa. While considering this, this study will try to find out either, there is any Impact.

2. Literature Review

2.1 Over View of Determinants of Firms' Profitability

The part of the project reflects the study of former information that provided a podium for this project to observe and identify the impact of determinants on the profit of the firm. According to Sidra Ali Mirza and Attiyai Javed (2014), the research paper indicates the monetary execution of the firm and financial indicators, corporate administration, Risk administration, possession structure and Capital structure. They try to test various determinants, which affect the profitability and performance e of the firm. Their study examines the profitability of the firm and its numerous determinants of 60 corporate firms recorded is the Karachi stock trade. The data of 60 non-financial firms listed in the stock exchange were taken for the test. The sample of data contains nine companies from manufacturing industry, four companies from cement industry, 6 Companies from Food industry etc. The Firm profitability or firm performance was considered as dependent variable and Debt to Equity ratio, Size of the firm and seven other Factors as an independent variable. The researcher runs the correlation to find out the Correlation between the dependent and independent variables. As a conclusion of their result, they found that Debt to Equity ratio is a performance measurable factor of the firm.

2.2 Determinants of Firms' Profitability in Non- financial Industry

Research conducted by Ali Saleh Alarussi and Sami Mohammed Alhaderi, (2018) indicates that there are many factors which can influence the profitability of the firm in many ways .The research was conducted on the non-financial industry, in which the data of only 120 companies was taken which are listed in bursa Malaysia .WC, Firm size, liquidity and leverage was independent variables and firm performance was considered as dependent variable .The regression analysis test was run and the results shows that there is a strong relationship between the Firm size (Total sale),working Capital and Company efficiency and effectiveness. The result also shows the inverse relationship between the Leverage ratio and Debt to equity ratio and liquidity ratio has no significance with profitability.

2.3 Determinants of Firms' Profitability on Conversion Standard

Furthermore, in a similar study, Swagatika Nanda and Ajay Kumar Panda, (2018) seen that the Firm particular factors and conversion standard are very applicable in clarifying the Profitability of the firm. Further size and liquidity empower the productivity and use debilitates benefit of the firm. The examination further reason that a conversion standard in the short run can't build the productivity of the firm though it expands the benefit of the firm over the long haul as an ostensible rate is considerately influencing the gainfulness of the firm .More ever the investigation includes that the ostensible swapping scale is more useful than the free factors clarify the gainfulness is superior to anything the genuine conversion standard if there should arise an occurrence of Indian assembling firm industry. Furthermore, according to Shilpi Tyagi and D.K. Nauriyal, (2017). The Study has discovered that send out force, A&M power, the company's market control and more grounded patent routine sham have practiced positive effect on productivity. The negative and factually critical impact of

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R&D power and stuff import force focuses to the need for organizations to embrace reasonable venture ways. The test was run on topmost 91 Indian Pharmaceutical companies registered in the Indian stock exchange market over the period of 2000 to 2013.The examination proposes that organizations square the measure expected to give careful consideration to advance them in task consumptions, advancement and advancing uses and enhance their fare introduction, as a part of the semi-permanent strategy.

2.4 Determinants of Firms' Profitability with the Help of Size of the Firm, Age, Employee Experience

The study conducted by Darush Yazdanfar, (2013) in which he tries to find out the variables which affect the Profitability of the firm applying the apparently irrelevant relapse technique to an expansive example approximately 87500 perception were taken from four distinct businesses. The size of the firm, Age, Employee experience was considered as an independent variables and profitability as a dependent variable .The correlation examination test was rushed to reveal the effect of the components on the productivity of the firm. This investigation further inferred that firm size, logged benefit, development, efficiency emphatically impact the productivity of the firm and age and industry connection contrarily affect the gainfulness of the firm.

A research was conducted by L. Jay Bourgeois III, AdamGanz, AndrewGonce, KeithNedell, (2014). The purpose of study was to find out the impact of different factors on the profitability of the firm. Moreover, rank-arrange postings, histograms, and direct relapses test was run to find out the results. The comparisons of firms in the Fortune 1000 yield four results, two that are confirmatory, and that two are new. According to their analysis industries dissent wide in performance, despite the cash metric utilized, and there is an emotional refinement between inside industry fluctuation (high) and between-industry change (low). Truth be told, high-performing organizations in less beneficial ventures commonly squash low-performing organizations in extra gainful businesses. In spite of past examination, the paper demonstrates that ventures move relative position after some time: enterprises with the best please value in one year normally aren't best in coming about years; and, in opposition to IO hypothesis, the paper finds that fixation is certifiably not a dependable indicator of benefit. Sales, and ROA were independent variables and profitability was dependent variables. As the result of their study, they concluded that there is no accurate indicator, which shows the proper or clear impact on the profitability of the firm.

2.5 Determinants of Firms' Profitability in Diversified Business and Foreign Ownership

The study conducted by Richard Pompeii and Daniel Shapiro, (1980) in the research concluded that there are some variables like foreign ownership, diversified business has impact on the profitability of the firm. The foreign ownership, Firm size, diversified business and foreign control were taken as independent variables and profitability as a dependent variable. Test was run on the sample of 40 top industrial firms in Canada. The results of their research were not up to marks they conclude that increasing firm size isn't associated with higher profitableness, larger corporations do seem to have the experience long stability, and therefore, the relationship between firm size and diversification is positive, however weak. Business factors are much more important than firm size in deciding inter-firm variations in diversification, implying that diversification is not undertaken as a method to stabilize profits by all massive corporations. Introduction mounting international proof suggests that giant corporations are not a lot of Profitability.

2.6 Profitability of Firms in Banks

The study was conducted by Maria Teresa Medeiros Garcia and Joko Pedro Silva Martins Guerrier, (2015). The motivation behind investigation was to discover the determinants of the bank's benefit. The test was on 27 universal banks in Portugal the data of banks was used from 2002 to 2011. Ordinary least squares estimation with fixed effects using three measures of profitability, the return on average assets, the return on average equity and the net interest margin. A few autonomous factors were incorporated concerning both bank-particular and macroeconomic and industry-particular qualities, which have not been considered in past examinations. What's more, the sub-test somewhere in the range of 2008 and 2011 was considered for relative investigation. Because of the test, some external factors like interest rate and taxes have significant impact on the profitability of the banks.

2.7 Determinants of Firms' Profitability in Small Firms

A research was conducted by Christ belle Allen, (1970). The purpose of this study was to find out the impact of some independent variables on the profitability of the firm, Various test and measure we're taken to find out accurate impact of the determinants .The test was conducted on 300 small firms supported by ICFC during the period of 1960 to 1968.Growth in Assets, Turnover and profit before tax was the independent variables and profitability was considered as a dependent variable .The method of measuring growth which has been employed obviously involves some degree of approximation, but the general picture that emerges is reasonably clear. There are difficult questions of varying methods in the underlying valuation of assets, of varying methods of depreciation, and of the correct treatment of bank borrowing.

As indicated by the Elisa Menicucci, Guido Paolucci, (2016). There are numerous components that impact the gainfulness of the banks, to examine the connection between bank-specific characteristics and benefit in European keeping money area to discover the job of inward factors in achieving high profitability. Are lapse investigation is based on an unequal board informational index l information set comprising 175 perceptions of 35 top European banks over the period 2009-2013. To this end, the empirical data is gathered from Bank scope and an exhaustive arrangement of inner attributes is examined. All the determinant factors incorporated into the model have measurably noteworthy impact son European banks' gainfulness. In any case, the impacts are not uniform crosswise over benefit measures. Relapse discoveries uncover that size and capital proportion are critical organization level determinants of bank productivity in Europe, while higher credit misfortune arrangements result in lower gainfulness levels. Discoveries additionally recommend that keep money with higher stores and credits proportion will in general be gainful however; the effects on benefit are factually inconsequential now and again.

3. Methodology

3.1 Method and Data Collection

The study is based on the entire Manufacturing firm's industry in Pakistan; with a predominant focus on the secondary data — collected by using the annual five years report of Big 30 Firms — available on the Pakistan stock exchange website, which, emphasis on what is the impact of firm's determinants on the profitability of the firm.

The study uses Panel Regression Technique, Fixed Affected Model and Random Effect technique will be used to find out the clear impact of firm determinants on the profitability. Secondary data is collected using annual five years report of manufacturing industries. In this project deductive approach is used since it only focuses on entire Manufacturing firms in Pakistan, which can be comprehended further. The case will only focus growth and profitability also, on the impact of sustainability of the firm. Additionally, to study in detail, the multiple regression analysis technique will be reviewed and analyzed through reviewing also, by, comparing and contrasting financial statements and all the financial data collected from Pakistan Stock Exchanges websites.

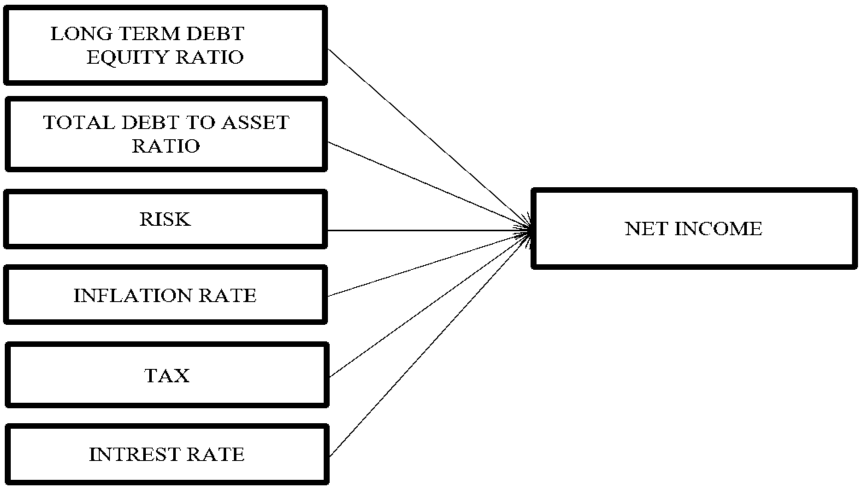
3.2 Sample Size

30 top big manufacturing firms registered under the Pakistan Stock Exchange or K.E.S.C 100 Stock Exchange. The model for this study follows one used by Nanda, S., & Panda, A. K. (2018) to explain the impact of firm determinants on the profitability.

3.3 Statistical Technique

Panel regression Technique, Fixed Affected Model and Random Effect technique will be used to find out the clear impact of determinants of the firm.

3.4 Research Design



The model of this study follows one used by Nanda, S.,& Panda, A.K.(2018) to explain the impact of firm determinant on the profitability.

3.5 Model Specification

Based on the objectives, the study employed the Panel regression technique, fixed affected Model and random effect technique will be used to find out the clear impact of determinant of firm. (Tax rate, Interest rate, Long-term debt to equity, risk, total debt to asset) as the independent variables and Net income as the dependent variable.

$$NETINCOME_{it} = \alpha + \beta_1 LTDER_{it} + \beta_2 TDAR_{it} + \beta_3 R_{it} + \beta_4 IR_{it} + \beta_5 T_{it} + \beta_6 IR_{it} + \ell$$

4. Data Analysis and Results

4.1 Descriptive Analysis

To analyze the data where there is any impact of independent variables on net income or not statistical tests were run. According to the results of the collected data with the help of SPSS & E-views through Co-relation, PSL model, FE Model and RE Model different results were attained. These results are divided into two parts first is Spss Correlation matrix model and other is E-views model.

4.2 Results

The results of descriptive analysis and correlations are listed below in table 1. The result shows that mean values of net income, long term debt to equity ratio, total debt to asset ratio, risk, inflation rate, interest rate, tax have positive mean values .Stock return has the mean value of 12.36299 and standard deviation is of 9.621877.

Table 1. Correlation Matrix

	Mean	S.D	NET INCOME	LTDER	TDAR	R	IR	T	IR
NET INCOME	12.36299	9.621877	1						
LTDER	37.2493	42.13802	-.214**	1					
TDAR	49.2881	20.10467	-.371**	.602**	1				
R	3.9224	1.53308	.864**	-0.051	-.354**	1			
IR	5.5040	2.14852	-0.137	0.052	0.064	-0.066	1		
T	32.80	1.475	-0.100	0.071	0.039	-0.064	.836**	1	
IR	7.3440	1.82608	-0.123	0.058	0.052	-0.068	.971**	.909**	1
N	150	150	150	150	150	150	150	150	150

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4.3 Correlation Matrix

If we talk about correlation matrix, net income is negative and significantly correlated with interest rate with the correlation value of -0.123; similarly, long-term debt to equity is significant but negatively correlated risk and positively correlated with total debt to asset, inflation rate, tax and interest rate since the sig values are -.051, 0.602, 0.052, 0.071 and 0.058. Moreover, total debt to asset is negative but significantly correlated with risk with each other as the correlation value is -.354. Respectively risk and inflation rate is significantly correlated with each other but have negative relation, as the correlation value is -0.066. Moreover, inflation rate and tax are positive and significantly correlated with each other as the correlation value is 0.836. On the other hand, tax and interest rate is positive and significantly correlated with each as the correlation value is 0.909.

Table 2. Business Impact Analysis

Variable	**Model 1 (Net Income) PLS model**	**Model 2 (Net Income) FE model**	**Model 3 (Net Income) RE model**
C	18.489 (.4544)	15.466 (.6255)	15.05300 (0.5421)
LTDER	0.01144 (0.00000)	0.021131 (0.0095)	0.013025 (0.0006)
TDAR	0.02666 (0.1534)	0.056532 (0.0230)	0.031179 (0.9988)
R	0.26981 (0.0000)	0.714161 (0.0058)	0.326335 (0.0000)
IR	0.82805 (0.776)	0.678696 (0.1290)	0.669931 (0.0396)
T	0.7041 (0.9013)	0.572860 (0.7467)	0.569324 (0.9062)
IR	1.2892 (0.3070)	1.047260 (0.5024)	1.041414 (0.2375)
Adjusted R2	0.7788	0.856195	0.643094
F-Statistics	86.090	25.66604	44.54489
DW-Statistics	1.9408	3.084692	2.357435
Hausman Test $\chi 2$			1.00 (0.00)

The estimation result of relationship between dependent variables and net income has been listed above in Table no. II.

4.4 Results

This table includes six independent variables — long term debt to equity ratio, Total debt to asset ratio, Risk, Interest rate, Tax, Inflation rate. According to Hausman test since the p, value is greater than 0.05 test is insignificant therefore; random effect model is more precise. in Model 1 that is panel least squares elucidates that there is a significant relationship between long term debt to equity ratio and risk on the net income of manufacturing industries Pakistan listed in Pakistan stock exchange. While on the other hand, total debt to asset ratio, inflation rate, tax and interest rate has p-value greater than 0.05, which shows that there is insignificant relationship between total debt to asset, inflation rate, interest rate and tax on the net income of manufacturing industries in Pakistan listed in Pakistan stock exchange. Additionally This support the study of Sidra Ali mirza and Attiya javed (2014) that indicates that there is a significant effect of total debt to equity ratio on the net income of the organization.

In Model 2, it is found that the FE model is also not more suitable than the RE model because the hausman test was insignificant. Model 2 —fixed effect model— elucidates that there is an insignificant difference of inflation rate, tax and interest rate on net income of manufacturing industries in Pakistan listed in Pakistan stock exchange.

In model 3, since the Hausman test is insignificant, Random Effect model is more precise. Resultantly, there is a significant effect long-term debt to equity ratio, inflation rate and risk on net income of manufacturing industries in Pakistan listed in Pakistan stock exchange; since the p-value is 0.0006, 0.0096 and 0.000, which is less than 0.05. ($p<0.05$). On the other hand, adjusted R2 is 64.03 %, which shows that there is consistency in data and fewer variations. This over laps the study of Ibhrahim Odusanya, Olumuyiwa Ganiyu Yinusa,Bamidele.M. (2002) indicates that there is a significant link between interest rate and net income and but not a significant relationship is found amid interest rate and net income.

Moreover, in model 3, total debt to asset ratio, interest rate and tax have p-value greater than 0.05, which shows that there is insignificant relationship between total debt to asset ratio, interest rate and tax on net income of manufacturing industries in Pakistan listed in Pakistan stock exchange.

4.5 Results on the Basis of Hypothesis

Since the p value of long-term debt to equity ratio (LTDER), Risk (R) and inflation rate (IR) is less than 0.05; therefore, there is a significant impact of long-term debt to equity, risk and inflation rate on net income. Resultantly, H1, H3 and H4 are accepted. On the other hand total debt to asset, tax and interest rate have p-value greater than 0.05 therefore H2, H5 and H6 are rejected.

Table 3. Hypothesis assessment summary

S.NO	***Hypothesis of Research***	***P-Value***	***Result based on P-value***	***Empirical conclusion***
H1	The long term debt to equity ratio (LTDER) have a significant impact on net income	0.0006	0.0006<0.05	Accepted
H2	The total debt to asset (TDAR) have a significant impact on the Net income	0.9988	0.9988<0.05	Rejected
H3	The risk (R) have a significant impact on the net income	0.0000	0.000<0.05	Accepted
H4	The inflation rate have a significant impact on the net income	0.0396	0.0396<0.05	Accepted
H5	The tax rate (TR) have significant impact on the net income	0.9062	0.9062<0.05	Rejected
H6	The interest rate (IR) have significant impact on the net income	0.2375	0.2357<0.05	Rejected

5. Discussion

5.1 Discussion

According to the results, it is found that there is significant effect of Micro and Macro variables on the profitability of the top 30 Shariah firms listed in the Pakistan stock exchange. That is there is significant positive relationship between long-term debt to equity ratio, risk, inflation rate and net income of the organization. While on the other, hand there is insignificant relationship between total debt to asset, tax and interest rate. This support the study of Sidra Ali mirza and Attiya javed (2014) that indicates that there is a significant effect of total debt to equity ratio on the net income of the organization . Additionally, there are more evidences like, Ali Saleh Alarussi and Sami Mohammed Alhaderi, (2018) concluded

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that components of net income — working capital, debt to equity ratio, leverage ratio, were independent variables and on the other hand, profitability of the firm was dependent variables. The study shows that there is a positive relation between debt to equity ratio and have significance effect on the net income. From investing events has too small. In addition, another study provides evidences regarding significant effect of total debt to asset ratio that is L. Jay Bourgeois III, AdamGanz, AndrewGonce, KeithNedell, (2014). Identified the no connection between firm's profitability performance and ROA. The result shows that there is no relationship between total debt to asset and net income. Similarly the research conducted by Ibhrahim Odusanya, Olumuyiwa Ganiyu Yinusa, Bamidele.M. (2002) identified there is negative and significant connection between net income. However, the result shows there is significant relationship between inflation rate and net income.

On the other hand, some evidences are contrary to our findings such as, Ibhrahim Odusanya, Olumuyiwa Ganiyu Yinusa,Bamidele.M. (2002) indicates that there is a significant link between interest rate and net income and but not a significant relationship is found amid interest rate and net income. Similarly, Maria Teresa Medeiros Garcia and Joko Pedro Silva Martins Guerrier, (2015) observed that interest rate and tax all has impact income. However, both the variables have insignificant impact on the profitability of the firm.

5.2 Conclusion

The objective of the above research was to determine the profitability of Business Firms in Pakistan. Results would help marketers and experts to implement the policies, ultimately improve their Business Profitability in order to gain competitive advantage and business sustainability. Secondary data has been collected to determine the profitability of Business Firms in Pakistan, Data has been collected by using the annual five years report of big 30 Firms, available on Pakistan Stock Exchange website so that to know the impact of variables on the profitability of Business firms. How effective can be long term debt to equity ratio, total debt to asset ratio, risk, inflation rate, tax, interest rate and its impact on profitability of firms. To talk about the research questions and give a practical response we made six hypotheses, which we tested the impact of six different independent variables on one dependent variable. The outcomes eagerly revealed that variables could have significant as well as in significant impact on profitably of Business Firms in Pakistan. The result of the hypothesis assessment summary shows, there is a significant impact of long term debt to equity, risk and inflation rate while debt to asset, tax and interest rate in significant impact on profitability of the business.

5.3 Implications

According to the international Accounting Standard, long term debt to equity ratio are those activities effect in changes in the composition and net income of the organization So, if there more long term debt to equity ratio resultantly, more will be net income . This is due to the result we have found in our result that there is a significant effect of long-term debt to equity ratio on net income of the manufacturing industries in Pakistan listed in Pakistan stock exchange.

5.4 Limitations

Now let's have a look towards the limitations which were considered while conducting study. Firstly, sample size was restricted to top 30 shariah manufacturing firms of Pakistan and to those firms which were listed only on Pakistan stock exchange. This limitation of the study occurs due to narrowing down the scope of the research study. Secondly, the outliers were removed to as they were manipulating the results. Thirdly, limited number of organizations was taken into consideration.

5.5 Recommendations

This research study is primarily based on the manufacturing sector of Pakistan through convenience sampling that can result in affecting the results of the study. Therefore, it is recommended for future research study to select any other sampling design that could result in minimizing any type of bias. In addition, number of firms should be increased and data should be extended to more than five years to find out more accurate results. Moreover, adding more variables can also be used for future studies.

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