

Organizational financial characteristics and financial performance of manufacturing companies in Rwanda

Sebashyitsi Donat¹, Rusibana Claude²

¹Department, Accounting and Finance, Mount Kenya University, (MKU), Rwanda

²Department, Accounting and Finance, University of Kigali (UoK), Rwanda

Abstract: This study examines the effect of organization financial characteristics on organization performance, for manufacturing organizations in developing countries. The researcher used a survey data from UTEXRWA, which was not used before for the same purpose. The researcher examined the differences decisions of organizational financial characteristics and how it affects the financial performance in manufacturing companies in Rwanda. In accordance with the theory, the importance of organizational financial characteristics of tangibility, profitability, organization risk, growth and size of organization have been seen in effecting the firm's financial performance. With these characteristics, Manufacturing companies using their financial characteristics, have easy access to finance, thus they have highly to financial performance, measured by ROA, ROE, Net profit Margin. The researcher used a multiple regression model represented by ordinary least squares (OLS) as a technique to examine the effect of organizational financial characteristics on organizations financial performance using audited financial statements of UTEXRWA. The research design used was explanatory research design to show the causal effect of organizational financial characteristics and financial performance. Respondents received the interview guide to support the data collected using documentary to strengthen the data collected from the secondary data; the sample size was selected in UTEXRWA from employees, shareholders and Board of Directors. The study observed ethical consideration with respect to information provided; the information consents were treated with privacy, confidentiality with researcher responsibility. To ensure the validity of research data, researcher used use only audited and certified audit reports that present the auditor's independence view and interview guide was pre-tested and retested for the validity and reliability. The findings revealed that organizational financial characteristics were positively and significant to financial performance of UTEXRWA, the researcher made recommendations. The Government and the Private Sector, as well as suggestions for further studies.

Background: The performance of any organization not only plays the role to increase the market value of that specific organization but also leads towards the growth of the whole industry, which ultimately leads towards the overall prosperity of the economy. Assessing the determinants of performance of insurers has gained the importance in the corporate finance literature because as intermediaries, these companies not only provide the mechanism of risk transfer, but also helps to channelize the funds in an appropriate way to support the business activities in the economy. However, it has received little attention particularly in developing economies (Ahmed et al, 2011). The subject of financial performance has received significant attention from scholars in the various areas of business and strategic management. It has also been the primary concern of business practitioners in all types of organizations since financial performance has implications to organization's health and ultimately its survival. High performance reflects management effectiveness and efficiency in making use of company's resources and this in turn contributes to the country's economy at manufacturing (Naser, and Mokhtar, 2004). Performance is a difficult concept, in terms of both definition and measurement. It has been defined as the result of activity, and the appropriate measure selected to assess corporate performance is considered to depend on the type of organization to be evaluated, and the objectives to be achieved through that evaluation. Researchers in the strategic management field have offered a variety of models for analyzing financial performance. Researchers have suggested that studies on financial performance should include multiple criteria analysis.

Materials and Methods: The research adopted descriptive and cross-sectional research designs. The descriptive design refers to a set of methods and procedure that describe variables (Mugenda and Mugenda, 2003). This research design involved gathering data that describe events and then organizes, tabulates, depicts, and describes the data. This design also helps in collecting qualitative data to provide a great depth of responses resulting in a better and elaborate understanding of the phenomenon under study. Descriptive research design portrays the variables by answering who, what, and how questions. According to Mugenda and Mugenda (2004), descriptive design is a process of collecting quantitative and qualitative data in order to test question or to answer the questions of the current status of the subject under study. Descriptive research was used to describe the general characteristic of the study population and show the relationship between the dependent and independent variables. The research design deemed to establish the effects of organization financial characteristics on organization financial performance of manufacturing companies in Rwanda. We applied a

cross-sectional ordinary least-square (OLS) regression model to verify the test the question presented in the preceding introduction.

Results: profitability measured by the net profit after tax has a positively significant regression coefficient on firm leverage and firm performance. This suggests that highly profitability firms are more likely to use short-term leverage, long-term leverage, for financing their investments than the low profitability firms.

Tangibility measured by the net fixed asset has a positive significant regression coefficient on leverage and firm performance; this suggests that highly tangibility firms are more likely to use leverage for financing their investments than the low tangibility firms. Tangibility has a positive significant regression coefficient on firm performance; this suggests that highly tangibility firms are more likely to perform better than firm with fewer tangible assets. Risk has a negative significant regression coefficient on leverage. This suggests that highly risk firms are not more likely to use leverage for financing their investments than the low risk firms. Sales Growth has a positive significant regression coefficient on leverage and on performance, which suggests that highly sales growth firms are more likely to use short-term, long-term, and total leverage for financing their investments than the low sales growth firms. This suggests that high sales growth firms are more likely to use market leverage for financing their investments than the low growth firms. Firm liquidity has positive significant regression coefficient leverage. This suggests that highly liquid firms are more likely to use short-term leverage and long-term debt for financing their investments than the low liquid firms.

Conclusion: Based on the results analysis of each questions testing, overall, our conclusions. Return on Asset is positively related the firm characteristics and leverage. This suggests that high long-term debt and short-term debts are more likely to affect positively the return on assets.

Key Word: Organizational financial characteristics, Financial performance, Manufacturing companies,

Date of Submission: 04-09-2020

Date of Acceptance: 19-09-2020

I. Introduction

Theoretical basis for arguing that organization financial characteristics are related to financial performance can be found in the traditional neoclassical view of the organization and the concept of economies of scale. Economies of scale may occur for various reasons such as financial; better interest rates and better discount rate to larger organizations, organizational; specialization and division of labor, and technical; division of high fixed costs across large number of units. Thus, a positive relationship between organization size and profitability is expected. A negative relationship between organization size and profitability is noted in the alternative theories of the organization, which suggest that large organizations come under the control of managers pursuing self-interested goals and therefore profit maximization as the organization's objective function may be replaced by managerial utility maximization function. Studies on the effect of organization financial characteristics on organization performance have generated mixed results ranging from those supporting a positive relationship to those opposing it. A positive relationship between organization size and performance was found by Vijayakumar and Tamizhselvan (2010). In their study, they used different measures of size (sales and total assets) and performance (profit margin and profit on total assets). Majumdar (1997) investigated the impact that organization size has on profitability and productivity of an organization. While controlling for other variables that can influence organization performance, he found evidence that larger organizations are less productive but more profitable. Pottier (2007), examine the determinants of private debt holdings in the manufacturing industry. The results suggest that larger insurers, insurers with higher financial quality, mutual insurers, publicly traded insurers, and insurers with greater cash holdings are more prevalent lenders in the private debt market. Other studies have been carried out on manufacturing in Rwanda by Khamallah (1984), Angima (1987) and Wairegi (2004) on manufacturing in Rwanda, the adequacy of manufacturing and strategic responses by manufacturing companies in Rwanda. Despite the current manufacturing companies' development, no studies were conducted to determine the performance of manufacturing companies in Rwanda. The determinants of performance have been studied in corporate finance literature from the last several decades but none has been done on manufacturing companies. The study relating to the relationship of organization characteristics and financial performance of manufacturing industries provides an important data for comparing determinants of performance of manufacturing companies between developed and developing economies. Thus, the significance of this study is to fill the gap in understanding the determinants of financial performance for manufacturing companies in Rwanda. The research was guided by the following research objectives and questions

- i) To examine the financial characteristics of UTEXRWA in its operations
- ii) To examine the factors that affect the financial performance of UTEXRWA
- iii) To determine the relationship between organization financial characteristic and financial performance of UTEXRWA.

Research questions

- i) Is there any factor that affects the financial characteristic of UTEXRWA?
- ii) What are the determinants of financial performance of UTEXRWA?
- iii) Is there any throw relationship between organizational financial characteristic and financial performance of UTEXRWA?

Theoretical and conceptual framework

Traditional Theory

This theory holds that there exists an optimal of leverage. The implication is that minimizing the cost of capital when the optimal of debt capital is employed maximizes the value of the organization (Brealey and Myer 1998). It's based on the argument that at low s of debt, increased leverage doesn't increase the cost of debt hence the replacement of an expensive source of capital (equity) with a cheaper source (debt) translates to an increase in the value of the organization. It's this that creates borrowing incentives to organizations. Brealey and Myers (1998) observe that this argument holds because investors who hold debt are informed of the increased risk at 'moderate' debt s and will continue demanding the same return on debt. They argue that it' sonly at 'excessive' debt s that they demand a higher return. Alexander (1963) better explains the fact that debt funds are cheaper than equity funds carries the clear implication that the cost of debt plus the cost of equity together on weighted basis will be less than the cost of equity, which existed on equity before debt financing; that's the weighted average costs of capital will decrease with the use of debt. The validity of the traditional view is questioned on the ground that the market value of the organization depends upon its net operating income and risk attached to it. The form of financing doesn't change net operating income nor the risk attached to it but simply the way in which the income is distributed between equity holders and debt holders (Brealey& Myers 1998). Modigliani& Miller (1958), criticize the traditional view on the ground that the assumption that the cost of equity remains unaffected leverage up to some reasonable limit does not provide sufficient justification for such an assumption. They do not really add very much to the riskiness of the share.

Resource Based Theory

This theory addresses performance differences between organizations using asymmetries in knowledge (Chen, 1996). At the corporate strategy, theoretical interest in economies of scope and transaction costs focus on the role of corporate resources in determining the industrial and geographical boundaries of the organizations' activities. At the business strategy, explorations of the relationships between resources, competition and profitability include the analysis of competitive imitation, the appropriate of returns to innovations, and the role of imperfect information in creating profitability differences between competing organizations.

An organization's ability to earn a rate of profit in excess of its cost of capital depends upon the attractiveness of the industry in which it is located and its establishment of competitive advantage over rivals. Industrial organization economics emphasizes industry attractiveness as the primary basis for superior profitability, the implication being that strategic management is concerned primarily with seeking favorable industry environments, locating attractive segments and strategic groups within industries and moderating competitive pressures by influencing industry structure and competitors behavior. Thus, a resource based theory of the organization entails a knowledge based perspective.

Pecking Order Theory

This theory explains why internal finance is much more popular than external finance and why debt is classified as the most attractive external finance option. Pecking order refers to a hierarchy of financing beginning with retained earnings followed by debt financing and finally external equity financing. The theory basically suggests that companies with high profitability may use less debt than other companies because they have less need to raise funds externally and because debt is the 'cheapest' and most 'attractive' external option when compared to other methods of capital raising. Donaldson followed by Myers suggests that management follows a preference ordering when it comes to financing.

First, internal financing of investment opportunities is preferred because it avoids the outside scrutiny of suppliers of capital and also there no floatation costs associated with the use of retained earnings. Secondly, straight debt is preferred. Not only does debt result in less intrusion in management by suppliers of capital, but floatation costs are less than with other types of external financing. Also asymmetric information and financial signaling considerations come into play. The third in order of preference is preferred stock, which carries some features of debt.

This is followed by various hybrid securities such as convertible bonds. Finally the least desirable security to issue is straight equity. The investors are the most intrusive, floatation costs are highest and there's likelihood to be an adverse signaling effect.

However, Pecking order question suggests that corporations don't have a well throughout leverage. Rather a company finances overtime with the method providing the least resistance to management and there's little capital market discipline on management's behavior.

Agency Theory

According to the Agency theory developed by Jensen and Meckling, agency costs arise from conflicts of interest between shareholders and managers of the company. Agency costs are defined as the sum of monitoring costs incurred by the principal, bonding costs incurred by the agent, and residual loss. Lower agency costs are associated with better performances and thus higher organization values, all other things being equal. Agency theory states that management and owners have different interests (Jensen and Meckling, 1976). Companies that separate the functions of management and ownership will be susceptible to agency conflicts (Lambert, 2001). They show that regardless of who makes the monitoring expenditures, the cost is borne by stake holders. Debt holders, anticipating monitoring costs, charge higher interest. The higher the probable monitoring costs, the higher the interest rate and the lower the value of the organization to its shareholders all other things being the same. There are three types of agency costs which can help explain the relevance of capital structure.

Asset substitute effect: as debt to equity increases, management has an increased incentive to undertake risky projects. This is because if the project is successful, shareholders get all the upside, where as if it is unsuccessful, debt holders get all the downside. If the projects are undertaken, there's a chance of organization value decreasing and a wealth transfer from debt holders to shareholders. Underinvestment problem: if debt is risky, the gain from the project will accrue to debt holders rather than shareholders. Thus, management has an incentive to reject positive net present value projects, even though they have the potential to increase organization value. Free cash flow: unless free cash flow is given back to investors, management has an incentive to destroy organization value through empire building and perks etc. Increasing leverage imposes financial discipline on management.

Complete protection would require the specification of extremely detailed protective covenants and extra ordinary enforcement costs. As residual owners of the organization, the stockholders have an incentive to see that monitoring costs are minimized up to a point. Monitoring costs may limit the amount of debt that's optimal for an organization to issue. It's likely that beyond a point the amount of monitoring required by debt holders increases with the amount of debt outstanding. When there's little or no debt, lenders may engage in only limited monitoring. Costs associated with protective covenants are substantial and rise with the amount of debt financing. Shareholders incur monitoring costs to ensure manager's actions are based on maximizing the organization's value. Jensen and Meckling (1976) noted that with increasing costs associated with higher s of debt and equity an optimal combination of debt and equity might exist that minimizes total agency costs.

II. Material and Methods

Study Design: The research adopted descriptive and cross-sectional research designs, Descriptive research was used to describe the general characteristic of the study population and show the relationship between the dependent and independent variables. The research design deemed to establish the effects of organization financial characteristics on organization financial performance of manufacturing companies in Rwanda. The cross-sectional ordinary least-square (OLS) regression model used to verify the and test the variables in the research questions.

Study Location: The research was carried out in Rwanda, Gasabo District, UTEXRWA, textile industry in Rwanda

Study Duration: The researcher investigated the organization's financial characteristics and organization's performance in the form of the period of 2010 to 2019. The period was selected because it is in this range whereby the company shown a good financial performance and the researcher wants to see whether the financial performance was due to the firm characteristics

Sample size: The secondary financial data were used and only 4 selected company managers, Board of Directors representative and company managers were interviewed to gather their view on how the firm characteristics impacted the financial performance of the firm.

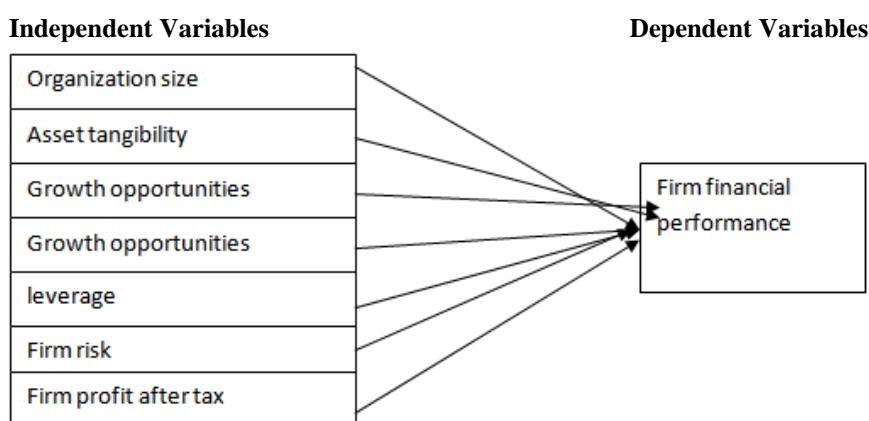
Sample size calculation: The sample size was estimated on the basis of a single experience in the firm and the role played in understanding the financial performance. The target population from which were selected based on our judgement to understand the topic. We assumed that the confidence interval of 5% and confidence level of 95%.

Procedure methodology

The list of all variables data to be collected were identified with their financial indicators to measure them. The data were collected and presented in Excel based on the variables and sorted by their years of presentation. The data collected, was then after transferred in E-views for presentation and analysis

Statistical analysis

Data was analyzed using E-views. After collecting data using annual financial reports, I did a data entry into the econometric data analysis package E-views 7.0, each company have given a representative number of which was valued and labeled to make the analysis meaning full and cross checking. Different methods envisaged for this research. The research checked the validity and reliability of the published information on the various websites of the manufacturing companies to be studied, using randomization and regression techniques and multifactor analysis and accordingly interpret them. The study used quantitative approach and qualitative. Data analysis was compiled and analyzed using descriptive and inferential analysis. Multiple regression analysis was used for applications involving the use of independent variable and dependent variable (organization performance).



Measurement of study variables

No	Variable	Measurement
1	Performance	Composite measure of profitability ratios
2	Tangibility	Net fixed asset to total asset
3	Opportunity Growth	The assets of current year minus the previous year asset over the assets of the current year.
4	Organization Risk	Variance of stock returns
5	Taxation	NOL /profit carry forwards/assets
6	Organization Size	Natural logarithm of total assets
7	Organization Age	Number of years since incorporation/LTD
8	Net profit	Operating income before depreciation/Total Assets
9	Macroeconomic Conditions	Growth in profit after tax or growth rate
10	Leverage	Total debt/total equity

III. Results

Descriptive statistics of intervening variables

As presented in the table as the results indicates the mean, maximum and minimum statistics makes little economic sense. However, a standard deviation of 0.55 indicates differences in taxation between the periods under the study.

Business environment has a mean of 0.31. This result is slightly lower compared to a mean of 0.055 obtained from Song (2005). The same applies to the standard deviation from his research, which was 0.048 and about 0.012 higher than what can be detected in this sample.

Macroeconomic factors in this comparison shows mean of 54 percent, maximum of 99. percent and the minimum of 8 percent, while the standard deviation is 19.8 percent which is less than the expected firms' characteristics as found by Song (2005).

This result is slightly lower compared to a mean of 0.055 obtained from Song (2005). The same applies to the standard deviation from his research, which is 0.048 and about 0.012 higher than what can be detected in this sample.

Table. 1 : Descriptive statistics of intervening variables

	RETURN_ON_ASSET	TAXATION	BUSINESS ENV	MACR.FACTORS
Mean	2.388053	8.950013	21.16192	0.540666
Median	2.184711	9.005405	21.15299	0.560000
Maximum	7.170146	9.382868	23.63872	0.990000
Minimum	0.005373	6.214066	19.72645	0.080000
Std. Dev.	1.448689	0.310746	0.551007	0.198067
Skewness	0.751224	-2.079944	0.638557	-0.238277
Kurtosis	2.923353	15.74446	4.324278	2.650118
Jarque-Bera	43.28421	3437.258	64.73299	6.684590
Probability	0.000000	0.000000	0.000000	0.035356
Sum	1096.116	4108.056	9713.322	248.1656
Sum Sq. Dev.	961.2049	44.22592	139.0528	17.96751

Source: Descriptive statistics 2019

Descriptive statistics of independent variables

Firm leverage defined as long term-solvency ratio that address the firm ‘s long run ability to meet its obligation (Hillier *et al.*, 2010). The variable considers the main variable to express the firm’s characteristics

The Table 4.3 reveals a mean of 8.864 or 884 percent of leverage, with the maximum and minimum of 7.17 and 0.0053 respectively. This implies that the Production in Rwanda, are high leveraged in long term to finance their projects and operations. And because of the advantage of economies of scale and bargaining power with creditors, Production in Rwanda bear lower costs in issuing debt and equity compared with other firms, Michaela ‘s *et al.*, (1999) in his study found that the Production in Rwanda are to be short term financed at 70 percent. The mean of our sampled firm is in greater to standard norm of financing because as discussed by Michaela ‘s *et al.* (1999), who found that Production in Rwanda are to be financed at 70 percent. The long-term debts represent a mean of 8.788 with a maximum and minimum of 10.03 and 6.46 respectively. The standard deviation is 0.36 which reasonable according to the findings of Henderson *et al.*, (2006) mentions several reasons for why firms would choose to raise capital in globally rather than in their home country, including risk sharing, lower cost of capital and potentially lower transaction costs. They find evidence that firms are to be long term financed at an average of at least 30 percent of their operations.

Table 2: Descriptive statistics of Dependent Variables

	RETURN_ON_ASSET	FIRM LEVERAGE
Mean	2.388053	8.788867
Median	2.184711	8.824345
Maximum	7.170146	10.03421
Minimum	0.005373	6.467543
Std. Dev.	1.448689	0.363598
Skewness	0.751224	-0.689643
Kurtosis	2.923353	6.903902
Jarque-Bera	43.28421	327.8577
Probability	0.000000	0.000000
Sum	1096.116	4034.090
Sum Sq. Dev.	961.2049	60.54912

Source: Descriptive statistics (2019)

Descriptive statistics of firm characteristics

There is an amount of possible firm characteristics choice. This makes it challenging to decide which are the most important and how to establish a good model to measure the different variables and their degree of significance (Harris & Raviv, 1991). However, there is still some consensus amongst researchers that there exist some common factors. The two theories described in chapter 2, mostly agrees on the factors that determines how a company is finances. However, the assumptions and expectations on the extent and direction of how the factors affect firm’s characteristics differ between the theories. According to this study, the characteristics are presented and statistically analyzed in the table

As presented in table, the average value of the performance ratios measured by ROA, sample Production in Rwanda in UTEXRWA is 2.38 percent (0.0238), this implies sample UTEXRWA on average earned a net income of 2.38 percent of total asset with a maximum and minimum value of 7.17 and 0.0053. The standard deviation is 1.44 percent from the average value, which reflects the presence of moderate variation among across the sampled UTEXRWA. On the other hand, the average value of the sample UTEXRWA’ sales

growth is 948 percent (mean=9.48) which measured by sales of the previous year minus the sales of the current year divided by the sales of the previous year.

The sales growth of the sample Rwandan Production in Rwanda on average 948 percent (mean=9.48) as measured by annual change of total sales. The maximum value of annual change of total sales among the sample Production in Rwanda is 10.56 maximum and the minimum value is 7.79. It shows a standard deviation of 0.52 from the mean value.

The amount of mean and standard deviation of tangibility of asset of Rwandan UTEXRWA has the value of 9.04 and .029 respectively. This implies the sample period of Rwanda Production in Rwanda generate revenue from fixed asset 904 percent

The amount of mean and standard deviation of firm age is 20.25 and 4.409 respectively with maximum value 32 and minimum value 14 of UTEXRWA in Rwanda. This implies low deviation from the mean value.

The average value of firm liquidity is 66.8 percent (mean=0.668), with maximum and minimum of 6.0 and 0.40 respectively and the standard deviation of 0.88. This implies that the Production in In Rwanda are not affected by the high inflation.

The amount of mean and standard deviation of Profitability of UTEXRWA in Rwanda is 9.47 and 0.31 respectively. The maximum and minimum being 9.90 and 6.73 respectively imply that UTEXRWA are earning profit and can also pay tax.

Table 3: Descriptive statistics of firm characteristics

	ROA	SALES_G RO	TOTAL_ASS	TANGIBILITY	FIRM_AGE	FIRM LIQUIDITY	PROFITABILIT Y
Mean	2.388053	9.481841	9.190505	9.044998	20.25490	0.668367	9.472892
Median	2.184711	9.655835	9.186626	9.040282	19.00000	0.520000	9.528284
Maximum	7.170146	10.56806	10.26616	10.26003	32.00000	6.000000	9.905746
Minimum	0.005373	7.790770	8.567088	8.037282	14.00000	0.040000	6.736945
Std. Dev.	1.448689	0.528592	0.239299	0.298379	4.409987	0.880789	0.310746
Skewness	0.751224	-1.205862	0.638557	0.413609	1.201294	4.705166	-2.079944
Kurtosis	2.923353	3.960074	4.324278	3.814522	3.441880	25.19323	15.74446
Jarque-Bera	43.28421	128.8673	64.73299	25.77545	114.1320	11113.42	3437.258
Probability	0.000000	0.000000	0.000000	0.000003	0.000000	0.000000	0.000000
Sum	1096.116	4352.165	4218.442	4151.654	9297.000	306.7806	4348.057
Sum.Sq. Dev.	961.2049	127.9694	26.22699	40.77588	8907.176	355.3111	44.22592

Source: Research data (2018)

Correlation Analysis

Correlation test is common carrying out in research that relate with regression was to determine whether co linearity exist among the independent variable employed in the work or not, because it is capable of distorting the true picture of the relationship of dependent variable and independent variable. The most widely-used type of correlation coefficient is Pearson r, also called linear or product moment correlation.

According to Brooks (2008), if it is stated that y and x are correlated, it means that y and x are being treated in completely symmetrical way. Thus, it is not implied that changes in x cause changes in y or indeed that changes in y cause change in x rather, it is simply stated that there is evidence for a linear relationship between the two variables, and that movements in the two are on average related to an extent given by the correlation coefficient. Correlation coefficient between two variables ranges from +1, (i.e. perfect positive relationship) to -1 (i.e. perfect negative relationship). It also defined as dependence of one variable upon another.

Based on the Pearson correlation independent variables; capital structure, sales growth, Non Tax Shield, size, firm risk of the firm, tangibility of fixed assets, firm age and firm liquidity of the firm as independent variable while the performance as measured Return on asset(ROA) as dependent variable. The significance calculated for each for correlation is a primary source of information about the reliability of the correlation.

Autocorrelation requires probabilistic independence of the errors. This assumption means that information on some of the errors provides no information on other errors. For time series data this assumption is often violated. This is because of a property called autocorrelation (Van Horne, 1998). Test of autocorrelation aims to examine whether in a linear regression model has correlation between trouble errors in the period t with an error in the period t-1 (before). One of the methods that can be used to detect autocorrelation is the Durbin Watson (DW). DW value shows that there is no autocorrelation in regression model.

In Field (2008), Durbin Watson test statistic, a test for correlation between errors. Specifically, it tests whether adjacent residuals are correlated. In short, this option is important for testing whether the assumption of independent errors is tenable. The test statistic can vary between 0 and 4 with a value of 2 meaning that the

residuals are uncorrelated. A value greater than 2 indicates a negative correlation between adjacent residuals whereas a value below 2 indicates a positive correlation. The size of the DW statistic depends upon the number of predictors in the model, and the number of observations. As a conservative rule of thumb, Field (2009) suggested that, values less than 1 or greater than 3 gave definitely be cause for concern, however values closer to 2 may still be problematic depending on the sample and the figures in the study. Wong and Hiew (2005) state that the correlation coefficient value (r) ranges from 0.10 to 0.29 is considered weak; from 0.30 to 0.49 is considered medium, and from 0.50 to 1.0 is considered strong. Field (2005) however, warns that correlation coefficient should not go beyond 0.8 to avoid multi co linearity. The following table provides the summary of the correlation. Therefore, the table below presents the correlations among the variables, which data taken from balance sheet and income statement of Rwanda UTEXRWA during the period 2005-2013. This analysis helped to know how variables are interrelated each other. The analysis has shown that total asset and net fixed asset are highly correlated at 0.94 or 94 percent which is a high level of co linearity. This explained by the fact that in total asset, the net fixed asset is included. The independent variables being short term debt and long-term debt are not correlated a lot. As indicated in the table the long-term debt and short-term debt are positively related but not at a high percentage. The table reveals that the long-term debts are related positively to the short-term debt at 55.2 percent of 0.55 and the correlation between short term debt and long-term debt of 0.65. this is explained by the reason that if a company has got a short term loan and the loan does not help the business to run its operation, the company will try to think on how, it can also acquire long term debt to finance its operations by given the saver-spenders collateral. If the company has a short-term credit, the same company may have got long term loan. Other variables are not auto-correlated.

To continue testing the auto-correlation the total Assets were removed because it has higher co linearity with the Net fixed asset of 94 percent.

Table 4 : Correlation analysis of Variables

	ROA	PRO	LIQ	F.A	F.R	F.S	LEV	TAN	S.G	NTS
ROA	1.00									
PRO	0.57	1.00								
LIQ	-0.16	-0.38	1.00							
F.A	-0.18	0.02	-0.02	1.00						
F.R	0.01	0.00	0.27	0.02	1.00					
F.S	-0.45	0.32	-0.19	0.30	-0.05	1.00				
LEV	-0.43	0.32	-0.18	0.28	-0.04	0.96	1.00			
TAN	-0.44	0.28	-0.12	0.34	-0.04	0.94	0.90	1.00		
S.G	0.36	0.66	-0.38	0.18	-0.04	0.30	0.29	0.30	1.00	
NTS	0.57	1.00	-0.38	0.02	0.00	0.32	0.32	0.28	0.66	1.00

Source: Research data (2019)

Multiple Regression Analysis

Multiple regression analysis was used to test the questions (H₀₁, H₀₂, H₀₃, H₀₄, H₀₅, H₀₆, Multiple regression analysis is used to analyze the relationship between a single dependent variable and several independent variables (Hair *et al.*, 2005). Multiple regression analysis was therefore used as it is considered an appropriate technique for this study.

A regression is an advanced approach to evaluate the relationship between variables and it is the most common tool used in applied economics (Koop, 2013). The main objective of a regression analysis is to investigate how the value of the dependent variable (Y) changes when the value of one of the independent variables (X₁, X₂, X₃,...,X_k) changes by one unit. A simple regression model analyses the linear relationship between two variables, while a multiple regression model takes into account that the independent variables can affect each other and jointly affect the dependent variable the summary of the results of the multiple regression analysis of the control variables is presented in the table 4.5 below.

The regression model presented in the table 4.5 analysis the multiple regression analysis of control variables. It shows that Firm size and Non-Tax Shield are significant with p>0.000 while firm Risk is not because p< 0.3454. Therefore, the R- squared is explaining well the control variable at 87.6 percent and adjusted R-squared 85.7 percent to be relevant in the model although Durbin Watson statistic is low with 0.992 while the expected coefficient would approach 2 or being in range between 2 and 4 (Montgomery, 2001), this show that there is autocorrelation between control variables. The test of Durbin Watson is needed to transform the data and remove the autocorrelation.

Table 5: Multiple Regression Analysis of intervening variables:

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TAXATION	-0.184623	0.195445	-0.944628	0.3454
BUSINESS ENV	-1.995052	0.096293	-20.71846	0.0000
MACRO FACTOR	3.391202	0.659823	5.139559	0.0000
Constant	14.35570	4.370940	3.284351	0.0011
R-squared	0.876515	Mean dependent var		2.388053
Adjusted R-squared	0.857541	S.D. dependent var		1.448689
S.E. of regression	0.546789	Akaike info criterion		1.755532
Sum squared resid	118.6945	Schwarz criterion		2.313269
Log likelihood	-340.8946	Hannan-Quinn criter.		1.975177
F-statistic	46.19612	Durbin-Watson stat		0.992019
Prob(F-statistic)	0.000000			

Source: Research data (2019)

To continue testing the autocorrelation, the formula of transformation of variables, $DW=1 - DW/2=1 - 0.99/2=0.505$, in transforming data using 0.505 coefficients, the Durbin Watson became 2.274 which is an acceptable coefficient

The results shown in the table 4.6 indicate that firm risk, firm size and Non Tax Shield ($\beta = 0.029887, -2.239370$ and 4.894573 respectively with $p > 0.0245, > 0.0000$, and > 0.0000 respectively). Since the p-value is greater than 0.0245, 0.000 and 0.000 for firm risk, firm size and Non Tax Shield respectively, there is a positive effect of firm risk, firm size and Non Tax Shield on firm performance. This means that firms with higher profitability have high risk, UTEXRWA and are non-tax shield firms. This was confirmed by Durand and Coeuderoy, (2001) who have found firm's size, firm risk and Non Tax Shield to be positively related to the firm's performance, as bankruptcy costs decrease with size. Thus, a firm's size, risk and Non Tax Shield are expected to have a positive influence on a firm's performance ROA.

Table 5: Regression analysis for direct effect of control variables on the ROA

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TAXATION	0.029887	0.088067	0.339368	0.0245
BUSINESS ENVIR	-2.239370	0.081005	-27.64486	0.0000
MACRO FACTOR	4.894573	0.358165	13.66568	0.0000
Constant	2.577294	1.463389	1.761183	0.0791
R-squared	0.865710	Mean dependent var		1.067713
Adjusted R-squared	0.842490	S.D. dependent var		0.954623
S.E. of regression	0.378866	Akaike info criterion		1.033809
Sum squared resid	49.80822	Schwarz criterion		1.633533
Log likelihood	-149.8971	Hannan-Quinn criter.		1.271122
F-statistic	37.28280	Durbin-Watson stat		2.274237
Prob(F-statistic)	0.000000			

Source: Research data (2019)

Tests of Questions

The first objective of the study was to establish the effect of firm characteristics and firm performance. In testing the model I, the question one and two were combined in one model

There is a relationship between firm characteristics and firm performance.

This question is tested combining the question one, two, three and four because they were tested in one model because the all are factors that determine the firm's characteristics and they have one dependent variable. These questions were tested presented in the table 4. 7 below: The table 4.7 indicates that firm size is significant at 5 percent. The coefficient is -1.933 and p-value 0.000. According to the studies (Orser, Hogarth-Scott, & Riding 2000), using Canadian firms using changes in gross revenue to reflect performance. They find a positive effect for a firm's size support the arguments that size reflects greater diversification, economies of scale production, greater access to new technology and cheaper sources of funds. Besides, of those, (Shergill

&Sarkaria 1999) using data of Indian firm also confirm a positive relationship between a firm's size and financial performance.

However, according to the study, Moen, (1999) for a Norwegian company finds that export performance is not subject to the firm's size (employment). He finds that small firms are just as successful as Production in Rwanda and the main competitive advantages are their products and technology. The table indicates a positive relationship between firm risk and financial performance, the coefficient is 0.133488 and p-value=0.0347. Many studies investigate the relationship between risk and profitability. Among others (Shergill & Sarkaria 1999) using the data of Indian firms, they confirm the positive relationship between a firm's risk and financial Performance, (Dewan, Shi, &Gurbaxani 2007) using the Fortune 1000 and the total firm value to reflect performance, (Loudon 2006) for 15 markets, comprising a mix of developed and emerging markets using equity returns.

According the table 4.7 shows that sales growth is significant at a coefficient of 0.019672 and p-value is 0.008 according to Brush, Bromiley, &Hendricks, (2000) in the light of free cash flow question, they conducted in Maryland-USA found a strong positive relationship between sales growth and a firm 's financial performance in terms of stockholders' returns and return on assets. Additionally, for the top 500 Australian UTEXRWA. In addition of this Hutchinson and Gul, (2006) they found that firms with high investment opportunities are associated with lower agency costs and better return on equity.

According to Amidu,(2007), using return on equity and return on assets for Ghana, finds support for the fact that growing firms have a prospect of generating more returns for the owners. The table 4.7 is showing that firm tangibility is positively affecting the financial performance with a coefficient of -0.482224 and p-value is 0.0197. According to shergill and sarkaria, (1999) investigates the impacts industry and firm characteristics on the firm- level financial performance for the period 1980-1990 and cover 171 Indian firms in twenty-one industry the groups. They are using the difference between the firm's performance rates and the market average, ROE, ROA and others. They find that capital intensity is positively related to the financial performance. They use two sets of measures to reflect the financial performance: Return on equity and return on assets as indicators for a firm's profitability on one hand, and growth in sales, growth in dividends, and growth in net total assets as measures for growth on the other hand.

Table 6: Direct effect of firm characteristics and firm performance

Dependent Variable: FIRM_PERFORMANCE

Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TAXATION	2.606623	0.475888	5.477382	0.0000
FIRM_SIZE	-1.854475	0.182904	-10.13906	0.0000
BUSINESS ENV	0.496335	0.166631	2.978643	0.0031
PROFITABILITY	2.120240	0.557741	3.801481	0.0002
LIQUIDITY	-0.499896	0.126275	-3.958785	0.0001
SALES_GROWTH	0.348553	0.105633	3.299678	0.0011
TANGIBILITY	-0.661675	0.321848	-2.055864	0.0405
C	6.770891	1.794292	3.773572	0.0002
R-squared	0.934621	Mean dependent var		2.411263
Adjusted R-squared	0.923974	S.D. dependent var		1.452640
S.E. of regression	0.400534	Akaike info criterion		1.138944
Sum squared resid	56.14962	Schwarz criterion		1.709173
Log likelihood	-174.3445	Hannan-Quinn criter.		1.364585
F-statistic	87.77932	Durbin-Watson stat		1.363286
Prob(F-statistic)	0.000000			

Source: Research Data (2019)

The second objective was to assess the significant of leverage on the relationship between firm size, firm tangibility, firm profitability, firm tangibility and firm liquidity on financial performance.

This was tested first by testing first the effect of firm characteristics on firm leverage, which is presented in the table 4.8

The table 4.9 reveals that firm risk is not significant on short term debt. $p < 0.7794$, this indicates that firms with operating risk are exposed to the bankruptcy and cannot be granted short term debt. According to the

study conducted by Saeed, (2013) firms with more operating risk are not affected by the short term debts, but with if the Production in Rwanda have the collateral, they can finance they operations using long term debts.

The firm Size is significant with short term debt. The reason behind is that Production in Rwanda will have less risk because they are more diversified and have more stable cash flow and then their reputation and credibility from the financial institutions increase. They may need future cash flow to finance they short term investment. The table 4.8 indicates that firm size is Significant. $p=0.0000$

The sales growth and net fixed assets are significant at $p>0.05$ and $p>0.0116$ respectively. This indicates that Production in Rwanda with sales growth tends to take short term debts to increase their production and the debt will be matured when the production is sold to consumers. This indicate also that the Production in Rwanda will prefer to take short term debts if they have a shortage of cash that may be needed in the production and selling process. Having enough net fixed assets, the net fixed assets guaranteed the financial institution that the firms have the ability and of repaying the debt. Bayeh (2011) in his study confirmed that there is a positive relationship between sales growth and short-term debt.

The table 4.9 shows that firm risk, Non-Tax Shield, firm liquidity and Profitability are insignificants at 5 percent. $p<0.7794$, $p<0.1684$, $p<0.0992$ and $p<0.19768$ respectively.

This shows that firm with operating risk, they tend to take short term debts, but du the risks that affect the business, the financial institutions refuse to lend them, according to Shibru(2012) who is investigated the relationship between short term leverage and firm risk, he found that there is a negative relationship between firm risk and short term debt ratio. When the company wants to pay tax, they do not need to borrow, the tax is declared from the net income before interest and tax. When the company has declared a loss, the tax is hold in the next fiscal year. In addition to, Eitemanet *al.*, (2013) states that other when the firms want to finance its tax paying, there is no need of borrowing short term debts, because the cost of capital is greater to the penalties and fine that the tax collectors may charge the firm which default the tax payment.

Profitability measured by the Profitability is insignificant because $p<0.1968$. This indicates that firms with high profitability ratio have less risk of bankruptcy and financial distress. Moreover, it predicts a negative relationship between earnings after tax and short-term debts, as UTEXRWA prefer to finance themselves through retained earnings.

Table 7: Regression analysis of firm leverage and firm characteristics

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FIRM_SIZE	0.337382	0.012304	27.42052	0.0000
BUSIN ENVI	-0.001391	0.004961	-0.280294	0.7794
MACROEC FACT	-0.063006	0.045646	-1.380327	0.1684
SALES_GROWTH	0.017808	0.009281	1.918818	0.0500
TANGIBILITY	0.051200	0.020186	2.536410	0.0116
FIRM LIQUIDITY	0.005389	0.003260	1.653119	0.0992
PROFITABILITY	0.018827	0.014557	1.293345	0.1968
Constant	0.944280	0.077563	12.17429	0.0000
R-squared	0.987321	Mean dependent var		4.385831
Adjusted R-squared	0.984955	S.D. dependent var		0.137151
S.E. of regression	0.016823	Akaike info criterion		-5.187101
Sum squared resid	0.097068	Schwarz criterion		-4.548051
Log likelihood	1123.169	Hannan-Quinn criter.		-4.934227
F-statistic	417.3358	Durbin-Watson stat		1.842776
Prob(F-statistic)	0.000000			

Table 8: Regression Analysis of the Firm characteristics on firm performance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TAXATION	2.492197	0.475876	5.237075	0.0000
FIRM_SIZE	-1.304607	0.304623	-4.282688	0.0000
BUSINESS ENV	0.504197	0.165709	3.042659	0.0025
PROFITABILITY	2.230664	0.556699	4.006947	0.0001
FIRM LIQUIDITY	-0.499381	0.125549	-3.977587	0.0001
SALES_GROWTH	0.350666	0.105029	3.338750	0.0009
TANGIBILITY	-0.708140	0.320662	-2.208369	0.0279

LEVERAGE	-0.498996	0.221778	-2.249983	0.0251
C	4.619679	2.024025	2.282422	0.0231
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.935556	Mean dependent var	2.411263	
Adjusted R-squared	0.924846	S.D. dependent var	1.452640	
S.E. of regression	0.398230	Akaike info criterion	1.129444	
Sum squared resid	55.34679	Schwarz criterion	1.709505	
Log likelihood	-171.4066	Hannan-Quinn criter.	1.358976	
F-statistic	87.35445	Durbin-Watson stat	1.406981	
Prob(F-statistic)	0.000000			

Source: Research data (2019)

In assessing the relationship between firm leverage and firm performance, firm leverage is the combination of long-term debts and short-term debts. The analysis is presented in the table 4.10 and indicates the relationship between firm leverage and firm performance.

The table 4.10 indicates that there is a positive relationship between short term debt and firm performance. The coefficient of relationship is -2.987375 and the p-value is 0.0378, this might indicate that firm with shortage of cash can take short term bet to finance the operating and financing activities of the firms.

The pecking order theory of firm's characteristics shows that if a firm is profitable, then it is more likely that financing would be from internal sources rather than external sources. In other words, firms tend to use internally generated funds first and then resort to external financing. This implies that profitable firms will have less amount of leverage (Myers and Majluf, 1984). By this profitable firms that have access to retained profits can rely on them as opposed to depending on outside sources (debt). In developing countries most of studies like, Antoniou et al, (2002) and Bevan and Dan bolt (2002), Booth et al, (2001), Pandey (2001), Wiwattanakantang (1999), Chen (2003) and Al-Sakran (2001) all found a positive relationship between short term ratios and profitability. Therefore, it is expected that there is positive impacts between short term leverage performance.

In this section the effect of each variable tested under this study is discussed and analyzed based on the theoretical predictions, prior empirical studies and question formulated for this study.

Firm leverage (Long Term Debt +Short Term Debt)

As presented in table, data results for the analysis method of fixed effects model results show a positive and significant impact on profitability of firm industry with a regression coefficient of 0.427125, P-value of 0.0166. This result can be interpreted in this way that increase high long-term leverages in UTEXRWA in Rwanda would lead to high performance. In other words, debt level is less then optimized level and does not have any comparison to advantages of tax shield; incensement of financial distress costs has not more significance. Therefore, this study confirms a positive relationship and then accepts the previous question that there is positive relationship between firm long-term leverage and performance of the firm. Theoretical prediction yields no conclusion for the relationship between long term leverage and performance. Trade off models argues that profitable firms have great needs to shield income from corporate tax and should borrow more than less than profitable firms. While pecking order Models theory suggests an inverse relationship between leverage and profitability of the firm. Firms are assumed to prefer internal financing to external financing in a pecking order frame work. This preference leads firms to use retained earning first as investment funds and move to external financing only when retaining earnings are insufficient. This result has been consistent with Jensen (1986) that if firm leverage acts as a bonding device in terms of forcing managers to commit free cash flows to service debt, then higher debt will lead to lower funds available for managers in profitable investments and then lower performance (Singh & Faircloth 2005). Also, Shegill & sarkaria (1999) suggest that the negative relationship between firm leverage and profitability might be due to the interest expenses related to debt, stating that if a firm is highly levered and its rate of return on the company's assets is lower than the cost of debt capital, this will lead to lower profitability. However, most of empirical studies confirm the negative relationship between leverage and profitability of the firm such as: Titman & Wessel's(1988), Rajan and Zingales (1999), Wald (1999) etc. in this thesis, researcher use return on assets (measures as income after interest and tax over total assets) as a proxy for profitability of the firm. This positive relationship suggests that possibly firm in Rwanda are employing a adequately level of leverage in their capital

structures thus positively influencing performance. Higher leverage ratios lead to higher debt, which then gives the ability of the firm to take on lower risky projects which may also be profitable, Chang and Aikleng (2004). The study results are consistent with the cross-sectional study of (Gleason & Mathur, 2000), who. Confirms a positive relationship for financial performance measures for 14 European countries including the UK, France and Germany. They use total debt, ROA, pre-tax profit margin and growth in sales. The results also support those in the cross-sectional study by Singh & Faircloth (2005) for US Manufacturing firms which indicate a strong positive relationship between leverage (total debt to total assets) and level of R&D expenditure, which then inversely affects the performance. Higher leverage leads to greater long-term capital investments and that in turn leads to higher corporate performance.

In addition, researcher results are consistent with the study of (changAikLeng 2004), who finds that gearing ratio (total debt to total capital) has a positive effect on earnings performance (return on equity and dividend payout) for Malaysian listed UTEXRWA. He states that highly geared firms have statically significant higher financial returns and assert that debt give the ability of the firm to take on more projects which may be profitable.

Sales Growth

As we have seen from fixed effects analysis method this study confirms that sales Growth has positive impact on performance of UTEXRWA in Rwanda. The fixed effect estimation regression result shows significant positive relationship between sales growths of sampled UTEXRWA in Rwanda and their performance ratio with a regression coefficient of 0.049, t-statistic of and p-value of 0.028.

Trade-off theory considers sales growth as an indicator for the firm success; these firms are stronger to face financial distress. Firms with good sales have a good reputation in getting funds, easier access to the finance markets and reflected in better performance for these firms. According to the agency theory perspective, firms with high sales growth opportunities have lower agency costs. These firms might have lower debt ratios due to the fear of debt holders those firms may forgo valuable investment opportunities and expropriate wealth to their benefit, and this outcome would be reflected in lower agency costs (Hutchinson & Gul 2006). Another reason according to the agency theory is that the growth opportunities a manager 's use power. This can be treated as an advantage for the company in that these managers use this power to the firm 's performance, although they increase their own wealth at the same time. Additionally, high-sales growth firms have easier access to the finance market, and this can be translated in higher performance, because UTEXRWA are more likely to lend to UTEXRWA presenting a superior growth rate or having future valuable sales growth opportunities (Chen, 2004).

Firm size

The result from fixed effect model shows that firm size has a positive and significant relationship to financial performance of Production in Rwanda. Therefore, the researcher accepts the previous question that there is such a relationship. A possible reason for such relationship in this study for UTEXRWA, it is very important for a company to be in order to have superior performance. The fixed effect estimation result reveals there is significant positive relationship between size and performance of sampled Rwandan UTEXRWA with a regression coefficient of 1.061718 and P-value of 0.0213. The significance of firm size on firm performance indicates that Production in Rwanda can earn higher returns compared to smaller firms, most probably as a result of diversification of investment and economies of scale. This result is consistent with previous findings such as Tian and Zeitun (2007) and Gleason *et al.*, (2000). Earlier studies supports that firm 's size may have an effect on its performance. Production in Rwanda enjoys number of capabilities such as economies of scale which may influence financial performance such as Frank and Goyal, (2003). Size is calculated by taking log of total assets and incorporated in the model to the effects of firm size on profitability of the firms. The result shows that greater value of total assets enhances the firm performance and is also evident from earlier researches. Those who find a positive relationship between firm 's size and profitability support the arguments of trade-off theory that size reflects greater diversification, economies of scale production, greater access to new technology and cheaper sources of funds.

These studies include Orser, Hogarth-Scott, & Riding (2000), who use the number of employees and growth revenues changes for Canadian firms to find that less than one quarter of sampled business reported revenue increases. Also, those who find a positive relationship supporting the suggestion that investors believe that UTEXRWA are less risky include (Wing & Yiu 1997), who investigate the effect of size (employment) on performance (technical efficiency) for Chinese firms, and (Tsai & wang 2005), who do similar research for the Taiwan stock exchange using R&D performance, the total assets and employment.

Asset tangibility

The question four said that there is a relationship between asset tangibility and performance of UTEXRWA in Rwanda. The fixed effect estimation result, in this study, shows a Statistical significant positive relationship between tangibility of assets and performance of UTEXRWA in Rwanda with a regression coefficient of -0.615883, and $p > 0.0254$. This means that a sampled firm with high ratio of fixed assets to total asset leads higher performance, because in Rwanda lending in financial institutions require fixed assets as collateral to provide debt to those Production in Rwanda. The other reason is the fixed asset of Rwandan insurance firms is able to generate revenue.

Therefore, the researcher accepts the alternative previous question because against theoretical expectations, the relationship between firm 's asset tangibility is positive and significant at 1% level. This shows that firms with high ratio of tangibility have a higher performance ratio. However, the positive relationship between firm 's asset tangibility and performance is consistent with similar findings of previous researchers Osuji & Odita, A (2012). According to the researcher knowledge there is no extensive literature that investigates the relationship between firm 's asset tangibility and profitability of the firm. Another possible reason is that the majority UTEXRWA in Rwanda which are not considered as capital intensive, i.e., those UTEXRWA who they rely mainly on their fixed assets to make their products and services.

Firm risk

The fixed effect estimation result, in this study, shows a statistically significant positive relationship between business risk and performance ratio with a regression coefficient 0.104940, and p-value of 0.0040, which statistically significant positive on performance of UTEXRWA in Rwanda.

The reason for such relationship in the Production in Rwanda is due to the theoretical prediction of the agency theory; the required rate return from investors should be suitable to their risk in the firm. Shareholders will require high return in order to hold the risk related to the bankruptcy and financial distress since the debt holders have the priority in the case of bankruptcy. Also, the debt holders will require such return to hold the risk of agency conflicts with shareholders and management. Among others some of them, (Ser-Haung and Tylor 1992) for the UK stock market report a positive relationship, (loudon 2006) for 15 markets, comprising a mix of developed and emerging markets, (Assaf, 2005) for the Canadian stock exchange and besides of this the previous chapter confirms their relationship.

Table 9: Results summary of relationship between firms' characteristics and ROA

Results summary of relationship between firms' characteristics as independent variable while performance (ROA) of UTEXRWA in Rwanda as dependent variable.

Model I

Variables	Research analysis	Results/	Question prediction	Supported/not Supported
Firm liquidity	P<0.102		-	Supported
Profitability	P<0.329		-	Supported
Tangibility	p>0.009		+	Supported
Sales Growth	p>0.0175		+	Supported
Leverage	P<0.0166		+	Supported

Source: Research Data (2019)

IV. Discussion

Objective one: To examine the financial characteristics of UTEXRWA in its operations

The table 4.10 provide a global picture of UTERWA financial characteristics as defined in the contextual framework table.

The pecking order theory of firm's characteristics shows that if a firm is profitable, then it is more likely that financing would be from internal sources rather than external sources. In other words, firms tend to use internally generated funds first and then resort to external financing. This implies that profitable firms will have less amount of leverage (Myers and Majluf, 1984). By this profitable firms that have access to retained profits can rely on them as opposed to depending on outside sources (debt). In developing countries most of studies like, Antoniou et al, (2002) and Bevan and Dan bolt (2002), Booth et al, (2001), Pandey (2001), Wiwattanakantang (1999), Chen (2003) and Al-Sakran (2001) all found a positive short-term ratios and profitability.

Objective Two: To examine the factors that affect the financial performance of UTEXRWA

According the table 4.7 shows that sales growth is significant at a coefficient of 0.019672 and p-value is 0.008 according to Brush, Bromiley, &Hendricks, (2000) in the light of free cash flow question, they conducted in Maryland-USA found a strong positive relationship between sales growth and a firm 's financial performance in terms of stockholders' returns and return on assets. Additionally, for the top 500 Australian

UTEXRWA. In addition of this Hutchinson and Gul, (2006) they found that firms with high investment opportunities are associated with lower agency costs and better return on equity.

According to Amidu,(2007), using return on equity and return on assets for Ghana, finds support for the fact that growing firms have a prospect of generating more returns for the owners. The table 4.7 is showing that firm tangibility is positively affecting the financial performance with a coefficient of -0.482224 and p-value is 0.0197. According to shergill and sarkaria, (1999) investigates the impacts industry and firm characteristics on the firm- level financial performance for the period 1980-1990 and cover 171 Indian firms in twenty-one industry the groups. They are using the difference between the firm's performance rates and the market average, ROE, ROA and others. They find that capital intensity is positively related to the financial performance. They use two sets of measures to reflect the financial performance: Return on equity and return on assets as indicators for a firm's profitability on one hand, and growth in sales, growth in dividends, and growth in net total assets as measures for growth on the other hand.

Objective Three: To determine the relationship between organization financial characteristic and financial performance of UTEXRWA.

In assessing the relationship between firm characteristic and financial performance of UTEXRWA, we realize that the coefficient of relationship is -2.987375 and the p-value is 0.0378, this might indicate that firm with shortage of cash can take short term bet to finance the operating and financing activities of the firms.

A regression is an advanced approach to evaluate the relationship between variables and it is the most common tool used in applied economics (Koop, 2013). The main objective of a regression analysis is to investigate how the value of the dependent variable (Y) changes when the value of one of the independent variables (X1, X2, X3, ..., Xk) changes by one unit. A simple regression model analyses the linear relationship between two variables, while a multiple regression model takes into account that the independent variables can affect each other and jointly affect the dependent variable the summary of the results of the multiple regression analysis of the control variables is presented in the table 4.5 below.

The regression model presented in the table 4.5 analysis the multiple regression analysis of control variables. It shows that Firm size and Non-Tax Shield are significant with $p > 0.000$ while firm Risk is not because $p < 0.3454$. Therefore, the R- squared is explaining well the control variable at 87.6 percent and adjusted R-squared 85.7 percent to be relevant in the model although Durbin Watson statistic is low with 0.992 while the expected coefficient would approach 2 or being in range between 2 and 4 (Montgomery, 2001), this show that there is autocorrelation between control variables. The test of Durbin Watson is needed to transform the data and remove the autocorrelation.

Therefore, it is expected that there is positive impacts between the company financial characteristics and financial performance.

V. Conclusion

Based on the results analysis of each questions testing, overall, our conclusions are as follow: For question 1, profitability measured by the net profit after tax has a positively significant regression coefficient on firm leverage and firm performance. This suggests that highly profitability firms are more likely to use short-term leverage, long-term leverage, for financing their investments than the low profitability firms. Tangibility measured by the net fixed asset has a positive significant regression coefficient on leverage and firm performance; this suggests that highly tangibility firms are more likely to use leverage for financing their investments than the low tangibility firms. Tangibility has a positive significant regression coefficient on firm performance; this suggests that highly tangibility firms are more likely to perform better than firm with fewer tangible assets. Risk has a negative significant regression coefficient on leverage. This suggests that highly risk firms are not more likely to use leverage for financing their investments than the low risk firms. Sales Growth has a positive significant regression coefficient on leverage and on performance, which suggests that highly sales growth firms are more likely to use short-term, long-term, and total leverage for financing their investments than the low sales growth firms. This suggests that high sales growth firms are more likely to use market leverage for financing their investments than the low growth firms.

Firm liquidity has positive significant regression coefficient leverage. This suggests that highly liquid firms are more likely to use short-term leverage and long-term debt for financing their investments than the low liquid firms. We can conclude the Return on Asset is positively related the firm characteristics and leverage. This suggests that high long-term debt and short-term debts are more likely to affect positively the return on assets. This result suggests that high deficit firms would not tend to repurchase equity to finance the financing deficit. From the descriptive table, I've seen that the amount of net debt issue is more than net equity issue and it is consistent with regression results. For the augmented model, my result shows a positive coefficient on the relationship between the return on asset and the firm characteristics. However, therefore, I can conclude that our sample of firm prefers external to internal financing and debt to equity if external financing is used. However, firms are limited by their debt capacity constraints and they have to resort to issuing equity. From these results, I

can conclude that our mature and the sample of growth firms prefer external to internal financing and debt to equity if external financing is used. Overall, I find that the pecking order theory describes the financing patterns of growth firms better than mature firms as mature firms are more closely adopted by analysts and are better known to investors, and hence, should suffer less from problems of information asymmetry.

Recommendations

The government to encourage investors to list their UTEXRWA in order to reduce the conflict between shareholders and management. Because to access on long term debts UTEXRWA present the collateral and in case of default, the collateral that belongs to the firms, to be market based rather than being bank based system in financing their investment.

- i. The private sector to encourage firms with lower leverage to take either short term or long-term debts in financing their investment.
- ii. The issue of firm's characteristics is an important strategic financing decision that firms have to make. Therefore, the results of this study provide some useful information about the capital structures of Production in Rwanda in UTEXRWA Index in Rwanda. As a conclusion, it can be stated that the findings show evidence that the pecking order theory and trade-off theory appear to dominate the firms' firm's characteristics in Rwanda. From the results, we can recognize exactly to what extent the Production in Rwanda registered in UTEXRWA choose or mix capital structure, based on the following results:
 - Determinants or firms characteristics in the sector in Rwanda.
 - How Production in Rwanda sector in Rwanda finance their deficit.
 - The impact of choosing firms characteristics on the firm's stock price.
 - What is the choice of firm's characteristics over the firms' life cycle of the firm in Rwanda to finance the investments? So that the firms can make the financial policy to what extent they choose or mix firms characteristics based on the following consideration:
 - Determinant or firms characteristics
 - Hierarchy preference and cost and benefit which need to trade-off
 - The impact on firm stock price
 - Firms life cycle

References

- [1]. Abor, J. (2005a). The effect of capital structure on profitability: an empirical analysis of listed Organizations in Ghana. 6(5), 438-445. *Journal of Risk Finance*, Emerald Group Publishing, 6(5), 438-445.
- [2]. Abor, J. (2005b). The effect of capital structure on profitability: an empirical analysis of listed organizations in Ghana. *The Journal of Risk Finance*, 6(5), 438-445.
- [3]. Abor, J. (2007). Debt policy and performance of SMEs. *Journal of Risk Finance*, 8(4), 364- 379.
- [4]. Akintoye, I. R. (2008). Sensitivity of Performance to Capital Structure. *European Journal of Social Science*, 7(1).. © Centre for Promoting Ideas, USA www.ijhssnet.com 36
- [5]. Barbosa, N., &Louri, H. (2005). Corporate Performance: Does Ownership Matter? A Comparison of Foreign- and Domestic-Owned Organizations in Greece and Portugal. *Review of Industrial Organization*, 27(1),73-102.
- [6]. Barton, S. L., Hill, N. C., & Sundaram, S. (1989). An empirical test of stakeholder theory predictions of capital structure. 18(1), 36-44.
- [7]. Beneish, M. D., & Press, E. (1993). Costs of technical violation of accounting-based debt covenants (Vol. 68, pp. 233-257): JSTOR.
- [8]. Berger, A.N., Bonaccorsi, P, E. (2006). Capital Structure and Organization Performance: A New Approach to Testing Agency Theory and an Application to the Banking Industry. *Journal of Banking and Finance* 30, 1065-1102.
- [9]. Berger, A. N., & di Patti, B. (2006). Capital structure and organization performance: A new approach to testing agency theory and an application to the banking industry (Vol. 30, pp. 1065-1102): Elsevier.
- [10]. Booth, L., Aivazian, V., Demirguc-Kunt, A., & Maksimovic, V. (2001). Capital structures in developing countries. *Journal of Business Finance and Accounting*, 56(1), 87-130.
- [11]. Bradley, M., Jarrell, G. A., & Kim, E. H. (1984). On the existence of an optimal capital structure: Theory and evidence. 39(3), 857-878.
- [12]. Bradley, M., & Roberts, M. R. (2004). The structure and pricing of corporate debt covenants. *Journal of Business Finance and Accounting*.
- [13]. Brammer, S., & Millington, A. (2008). Does It Pay to be Different? An Analysis of The Relationship Between Corporate Social and Financial Performance. *Strategic Management Journal*, 29(12), 1325-1343.
- [14]. Buferna, F., Bangassa, K. & Hodgkinson, L. (2005). Determinants of Capital Structure: Evidence from Libya. *Research Paper Series. Business Finance and Accounting*, 37(1), 121-144.
- [15]. Campello, M., Graham, J. R., & Harvey, C. R. (2010). The Real Effects of Financial Constraints: Evidence from a Financial Crisis. *Journal of Economic* , 97(3),470-487.
- [16]. Castanias, R. (1983). Bankruptcy risk and optimal capital structure. *Journal of Finance*, 38(5),1617-1635.
- [17]. Claessens, S., Djankov, S. & Xu, L. C. (2000). Corporate Performance in the East Asian Financial Crisis. *The World Bank Research Observe*, 15(1), 23-46.
- [18]. Craighead, C., Hult, & Ketchen. (2009). The Effects of Innovation–Cost Strategy, Knowledge, and Action in the Supply Chain on Organization Performance. . *Journal of Operations Management*, 27(5),405-421.
- [19]. Cui, H., & Mak, Y. T. (2002). The Relationship between Managerial Ownership and Organization Performance in High R&D Organizations. . *Journal of Corporate Finance*, 8(4), 313-336.
- [20]. Dhankar, R. S., & Boora, A. S. (1996). Cost of Capital, Optimal Capital Structure, and Value of Organization: All Empirical Study of Indian Companies (Vol. 21, pp. 29-36):

- [21]. Ebaid, I. E. (2009). The Impact of Capital-Structure Choice on Organization Performance: Empirical Evidence from Egypt. *The Journal of Risk Finance*, 10(5), 477-487.
- [22]. Erasmus, P. D. (2008). Evaluating Value Based Financial Performance Measures.
- [23]. Foo, S. M. (2002). An Investigation of The Relationship Between Capital Structure And Corporate Performance In The Trading/Services and Plantation Sector.
- [24]. Fraser, D. R., Zhang, H., & Derashid, C. (2006). Capital Structure and Political Patronage: The Case of Malaysia. *Journal of Banking & Finance*, 30(4), 1291-1308.
- [25]. Friend, I., & Lang, L. H. P. (1988a). An empirical test of the impact of managerial self-interest on corporate capital structure. *Journal of Finance*, 271-281.
- [26]. Gleason, K. C. & LK Mathur; (2000). The Interrelationship between Culture, Capital Structure, and Performance: Evidence from European Retailers. *Journal of Business Research*, 50(2), 185-191.
- [27]. Gonenc, H. (2003) Capital Structure Decisions under Micro Institutional Settings: The Case of Turkey, *Journal of Emerging Market Finance*, 2(1), 57-82.
- [28]. Gunay, S. G. (2002). The Impact of Recent Economic Crisis on the Capital Structure of Turkish Corporations and the Test of Static Trade-Off Theory: Implications for Corporate Governance System.
- [29]. Harris, M., & Raviv, A. (1991). The theory of capital structure. 46(1), 297-355.
- [30]. Heinkel, R., & Zechner, J. (1989). Dynamic capital structure choice: Theory and tests. *Journal of Finance* 44(1), 19-40.
- [31]. Heshmati, A. (2002). The dynamics of capital structure: Evidence from Swedish micro and small organizations [Electronic Version]. *Research in Banking and Finance*, 2, 199-241..
- [32]. Hovakimian, A., Hovakimian, G., & Tehranian, H. (2004a). Determinants of target capital structure: The case of dual debt and equity issues* 1. *Journal of Financial Research*, 71(3), 517-540.

R. Claude, et. al. "Organizational financial characteristics and financial performance of manufacturing companies in Rwanda." *IOSR Journal of Business and Management (IOSR-JBM)*, 22(9), 2020, pp. 42-58.