



A MECHANISM FOR ASSESSING FACTORS AFFECTING THE COMPETITIVENESS OF TEXTILE COMPANIES

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Abstract

This paper studies the factors affecting the competitiveness of textile companies in Uzbekistan, in the research 5 companies' data from 2016-2020 is used. According to the results several conclusions are made. Our variable of interest is statistically significant to the competitiveness of the textile company. According to the results the bigger size companies are less competitive, it can be explained by inefficient use of the resources of the companies. Investment has a positive relationship with the competitiveness, according to the data of the analyzed companies, the one with more investment is more competitive than the others. The most important research contributions is the using the ICT usage as a variable to check. The results show that there is a positive relationship between ICT usage and competitiveness, therefore companies should increase the usage of ICT in production.

Keywords: Competitiveness, Textile Companies, Textile Industry, Assessment, Regression, Uzbekistan

INTRODUCTION

One of the best approaches to assessing the factors that affect the competitiveness of any industry is to use regression analysis. Regression analysis refers to a method of mathematically sorting variables that may have an impact. The importance of regression analysis for the industry is that it helps to determine which factors matter most, which ones can be ignored, and how these factors interact with each other. The importance of regression

analysis is that it provides a powerful statistical technique that enables a business to explore the relationship between two or more variables of interest.

The importance of regression analysis is that it's all about data: data means numbers and numbers that actually determine the competitiveness of an industry. The advantage of regression analysis is that it can allow you to essentially compute numbers to help you make better decisions for the industry now and in the future. Predictive regression technique means examining the relationships between data points, which can help you:

- Predict short and long term sales.
- Learn about profitability.
- Understand supply and demand.
- Explore and understand how different variables affect competitiveness.

The predictive regression technique involves examining the relationship between two different variables, known as the dependent and independent variables. Suppose we want to assess the factors that influence the competitiveness of a textile company. First of all, we need to designate one indicator that reflects the competitiveness of the industry. Other variables that we would like to test for influence will be independent variables.

In accordance with the regression that we used in the analytical part of our thesis, we have selected variables, the influence of which will be tested using regression analysis.

The question is, how can we select variables? The variables cannot be taken randomly because the software that checks the relationships cannot understand the industry specification, so before running the regression, it is necessary to do the appropriate research to run the regression.

In our study, we conducted several literature reviews to select the appropriate variables. First, we assigned a return on assets (ROA) dependent variable that reflects the competitiveness of a textile company, this variable should increase over time and be a measure of competitiveness relative to other textile companies. Therefore, we believe that ROA is the best indicator of competitiveness.

After that, several independent variables were taken:

Financial leverage [1]

In theory, the firm benefits from the use of debt because the payment of interest is not taxed, and this can lead to an increase in the value of the firm. It is known that the management seeks either to invest free funds in promising projects, or to pay dividends to shareholders. However, shareholders are trying to raise debt to discipline managers through adherence to existing fixed payments. In addition, banks usually apply financial terms for borrowing firms (for example, a fixed debt-to-asset ratio). The guidance is designed to fulfill these conditions and it

can improve the efficiency of the firm. Another point is that there is an obligation to disclose information about the firm's activities to debt holders.

Liquidity [2]

Liquidity management is an important area for an organization. It includes the processes involved in planning and controlling the assets of an organization. An organization's cost and commitment provide direct information on profitability. Liquidity can be defined as assets that can be converted into payments to an organization if needed. One of the important variables for measuring liquidity is the return on assets and the company's quick liquidity ratio. The factor is focused on profit, which can ensure the stability of business operations. If a company's liquidity is declining due to current capital, this will provide information about the firm's current working capital. The financial sector faces problems related to liquidity management, where there are two sides to solving problems. One of the directions is related to the creation of investments. This is done through bonds, which store clients' money and increase the amount available for investment.

Production asset [3]

Each enterprise needs investments to acquire fixed assets that are used over a longer period. The money invested in these assets is called "long-term funds" or "fixed assets". Also, the business needs funds for short-term purposes to finance current activities. Investments in short-term assets such as cash, inventories, debtors, etc. are called "short-term funds" or "working capital". "Working capital" can be divided into the funds needed to run the day-to-day operations of the business smoothly. Working capital management is just as important as long-term financial investment management.

Firm size [4]

The high-volume firm was large in size, giving it a competitive advantage over smaller firms because they had the potential to improve productivity. Thanks to high productivity, firms have achieved economies of scale as well as economies of scale. Firm size is considered an important issue in determining the nature of a company's relationships within and outside its operating environment, and the growing influence of multinational corporations around the world provides a clear example of the importance of size and the role they can play in the corporate environment (Abiodun, 2013).

Investments [5]

The analysis of investment in fixed assets is a matter of paramount importance in corporate finance and in the economy. The assessment of new industrial opportunities is often associated with the assessment of economic data that is used to prepare pro forma financial

statements, the purpose of which is to collect a large amount of information in an economically efficient manner.

Export

The reason for choosing exports as one of the factors of the firm's competitiveness, since Girma et al. (2004) confirmed that a domestic firm gained a competitive advantage by exporting over non-exporting firms. Exports have helped improve product quality by meeting international quality standards, and have helped the firm take advantage of economies of scale and economies of scale.

ICT use

Moreover, current economic trends show that the role of ICT is also very important for the competitiveness of the textile industry (not just the textile industry). Since the integration between departments must be continuous and fast, this will reduce costs and increase the efficiency of companies. Therefore, we included ICT use as one independent variable.

MATERIALS AND METHODS

Study adopted a descriptive research design. The data was collected from a survey of 4 textile companies using data from 2015 to 2020.

Independent financial factors

1. Leverage: The ratio of total debt to total equity was used, which showed how many times debt financing was provided versus equity financing.
2. Production assets: the ratio of the total amount of fixed assets to the total amount of assets was used, which provided the percentage of production assets in the total structure of assets.
3. Liquidity: the ratio of current assets to current liabilities was used, which showed how many times the firm was able to pay the most current financial liability.
4. Investment: The ratio of total investment to total assets was used, which described the percentage of investment in total assets that helped the firm solve liquidity problems and also provided an income stream.
5. Firm size: The logarithm of total assets reveals the size of the firm's business. A higher value means that the firm had a larger asset base, which was indicative of large business transactions conducted by the firm.

Independent non-financial factor

1. Market share: The logarithm of net total sales reflects the market information obtained by the firm. Higher value means that the firm has more market share than its competitors.

2. Export: A dummy variable was used for export. One for an exporting firm and zero for a non-exporting firm.
3. Use of ICT: This variable refers to how companies use information technology in manufacturing. Measured by survey results on a Likert scale of 1 to 7.

Dependent variable

Return on Assets: The ratio of net income before tax to total assets was used to provide information on how efficiently the firm was using total assets and return on assets. The value of this coefficient showed the firm's profitability as an indicator of competitiveness.

Regression Model

$$ROA = \beta_0 + \beta_1 FinLev + \beta_2 ProAsset + \beta_3 Liquidity + \beta_4 Inv + \beta_5 FirmSize + \beta_6 MarShare + \beta_7 Exporting + \beta_8 ITUsage$$

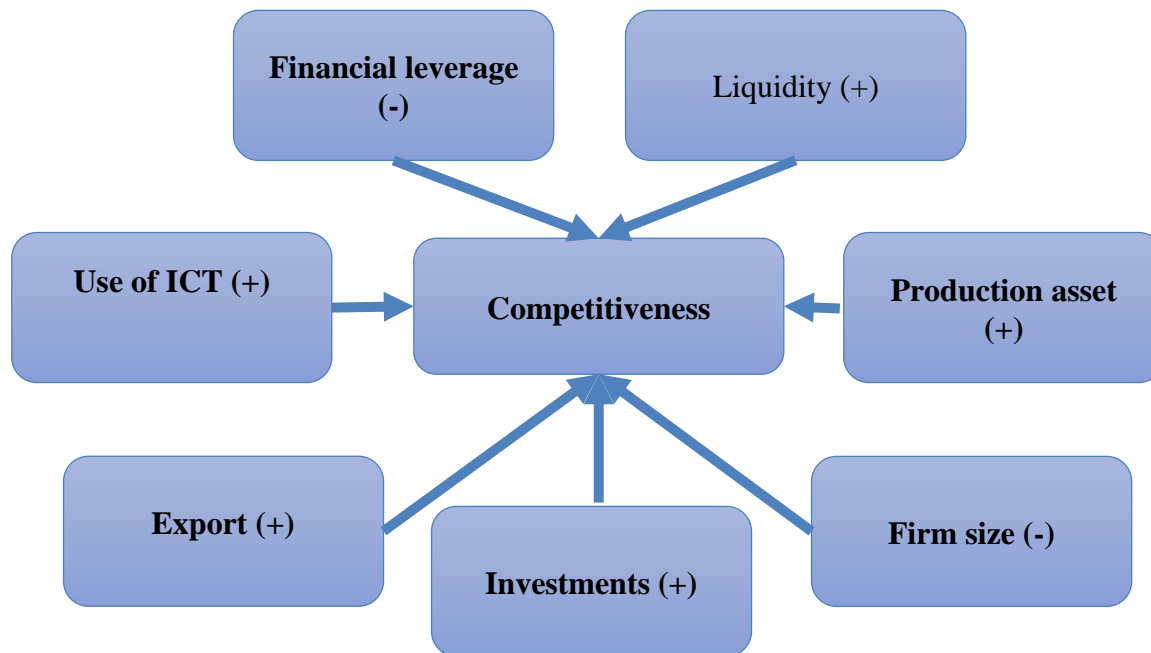


Figure 1 Model for assessing factors affecting the competitiveness of the textile industry

In the figure, you can see the variables that can affect the competitiveness of the firm. With this model, we can assess the impact of variables, the direction of impact and the level of its significance.

The + and - signs in brackets indicate the direction of exposure, that is, the - sign indicates a negative relationship, the + sign indicates a positive relationship between the independent and dependent variable[6].

The sign of the regression coefficient indicates whether there is a positive or negative correlation between each independent variable and the dependent variable. A positive coefficient indicates that as the value of the independent variable increases, the mean of the dependent variable also tends to increase. A negative coefficient suggests that as the independent variable increases, the dependent variable tends to decrease.

The coefficient value shows how much the mean of the dependent variable changes when shifted by one unit in the independent variable while keeping the other variables in the model constant. This property of keeping other variables constant is critical because it allows you to evaluate the impact of each variable separately from the others.

The coefficients in your statistical production are estimates of the actual parameters of the population. To obtain unbiased estimates of coefficients that have minimal variance and to be able to trust the p values, your model must satisfy the seven classic OLS linear regression assumptions.

Statisticians consider regression coefficients as non-standardized effect size because they show the strength of the relationship between variables using values that preserve the natural units of the dependent variable.

Once the regression results are obtained, textile companies must select statistically significant variables, then look for signs, and then take action to improve the company's competitiveness.

RESULTS

The key goal of regression analysis is to isolate the relationship between each independent variable and the dependent variable. The interpretation of the regression coefficient is that it is the average change in the dependent variable for each unit of change in the independent variable when all other explanatory variables remain constant. This last part is critical to our discussion of multicollinearity. There is no multicollinearity here.

Table 1 Inferential Statistics

<i>VARIABLES</i>	Model 1
<i>Financial leverage</i>	1.031*** (0.268)
<i>Production asset</i>	0.114 (0.156)
<i>Liquidity</i>	0.0140 (0.0483)

<i>Investments</i>	0.228**	Table 1...
	(0.0905)	
<i>Firm size</i>	-0.132**	
	(0.0528)	
<i>Market share</i>	0.0541**	
	(0.0180)	
<i>Export</i>	-0.0360*	
	(0.0178)	
<i>Use of ICT</i>	0.0262*	
	(0.0112)	
<i>Constant</i>	0.0141	
	(0.162)	
<i>Observations</i>	16	
<i>R-squared</i>	0.921	
<i>Standard errors in parentheses</i>		
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$		

Because leverage has a t value of 2.49 and is significant in all models, it is statistically significant for ROA. A one-unit increase in leverage results in a 1% increase in ROA. Across all models, investment has a statistically significant positive value. A 1% increase in investment amount results in a 0.22 percent increase in ROA. However, firm size has a negative relationship with ROA, which makes sense given that larger firms generate less revenue. When a company has a sizable market share, it also has a sizable ROA. The export potential of a business has a negative relationship with the return on assets; this can be explained by the fact that exports are either more expensive or the company will export at a discount to enter the global market. ICTs have a positive correlation with return on investment for businesses, which means that as businesses increase their use of ICTs, their return on investment ratios increase as well.

CONCLUSIONS

Competitiveness of firms can be measured by ROA, the company with higher ROA can be considered to be more competitive than the other one.

According to the results the bigger size companies are less competitive, it can be explained by inefficient use of the resources of the companies.

Investment has a positive relationship with the competitiveness, according to the data of the analyzed companies, the one with more investment is more competitive than the others

The most important research contributions is the using the ICT usage as a variable to check. The results show that there is a positive relationship between ICT usage and competitiveness, therefore companies should increase the usage of ICT in production. The research will further expand 100 textile companies in Uzbekistan

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