

DETERMINANTS OF EXPORT FLUCTUATIONS IN PAKISTAN

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Abstract

Export is an activity of sending goods to another country for sale. The firms can consider export under the circumstances like when the cost of production in the foreign market is high; the volume of sales in the foreign market is not enough to break even, the foreign market is not a long term market. In research methodology we find out our results from the relationship of export. Export effects on import, crude oil prices, foreign exchange. To provide prospective results we discussed the impact of crude oil prices. Research technique will help understand the export fluctuations. It will be a quantitative research based on secondary data. We will use statistical tools for research results. Statistical tools are linear regression analysis and correlation analysis. Linear regression is used to find strength of relationship between independent variables and dependent variables. The p-value for each term tests the null hypothesis that the coefficient is equal to zero (no effect). Here P value is 1.492E-08 which is approximately equal to zero. It indicates that it is statistically significant if less than 5%. It means export depends on Oil prices, Foreign exchange reserves and Import.

Key words: Oil prices, Foreign exchange reserves and Import.

INTRODUCTION

Export is an activity in which products are made or grown domestically but shipped and sold abroad (Griffin & Ebert, 1995). Export is an activity of sending goods to another country for sale. The firms can consider export under the circumstances like when the cost of production in the foreign market is high, the volume of sales in the foreign market is not enough to break even, the foreign market is not a long term market, the product may not have enough life to justify huge direct investments and the political factors are not exchange rate of Indian rupee against US dollar. The exchange rate volatility was negatively and significantly associated with exports in select ASEAN countries (Mohammad, Nair, & Jusoff, 2009); the study found by applying the model developed by Sekkat and Varoudakis (2000) that incorporated more variables to control the impact of the exchange rate variables on export trends in the selected ASEAN economies. Few researchers have used the exchange rate regimes or change in exchange rate regimes to find out the impact of exchange rate regimes (fluctuations) in export performance of textile industries. Studies have been carried out on the export performance of textile industry on the impact of exchange rate on exports in the managed exchange rate system after the Bangladesh government adopted managed exchange rate regime in 1979 abandoning fixed exchange rate regime.

LITERATURE REVIEW

A large number of theoretical and empirical studies indicated the relationships between critical factors, export success and performance (Aaby & Slater, 1989; Cavusgil & Zou, 1994; Javalgi, White & Lee, 2000; Leonidou, Katsikeas, & Samiee, 2002; Morgan, Kaleka & Katsikeas, 2004). The international literature can be divided into three groups which are the structural factors, management factors of the firm and incentives and obstacles in the process of internationalization (Bonaccorsi, 1992). The structural factors include size, age, management systems (JIT, TQM, CE), organization and technology profiles, Research and Development (R&D) intensity etc. The management factors which are essentially those referring to entrepreneurial and management characteristics, include export expectations profitability, risk and cost; decision maker's level of education and amount of experience; attitudes towards risk taking, etc. The intensives and obstacles in the process of internationalization consist of competitive pressure, negative domestic trends, availability of information, etc. This study may be included in the first group. Firm size is one of the most acknowledged determinants of a firm's profits in terms of its effect on competitive market power in a given industry (Beard & Dess, 1981). Most empirical research (Buzzell & Gale, 1987; Geringer et al., 2000; Ravens craft, 1983;) has shown that a positive relationship exists between firm size and profitability. Several studies also explored the relationships between firm size and export performance. For instance, a study by Piercy, Kaleka, and Katsikeas (1998) indicates that firm size has a positive impact on export performance. However, other studies report that export success is not significantly influenced by firm size (e.g. Diamantopoulos & Inglis, 1988) or it is modestly or conditionally influenced by size. The relationship between capital expenditure (capital intensity) and performance has been well supported in several studies (Ravens craft, 1983). Especially, from the interaction model, Ravens craft's empirical results reinforce the notion that capital intensity is an important determinant of profitability, reflecting barriers to entry in a particular industry.

RESEARCH METHODOLOGY

In research methodology we find out our results from the relationship of export. Export effects on import, crude oil prices, foreign exchange. To provide prospective results we discussed the impact of crude oil prices.

Research Design

This research work is designed in such a way that it helps to understand the export. It will be a quantitative research based on secondary data. We will use statistical tools for research results.

Variables

Two type's variables are used.

Dependent variable

Export

Independent variable

Oil prices, Foreign exchange reserves, Import.

Sample of research

In this research use export for the period 2001 to 2016, and use yearly data

Secondary source of data

In this research 2 type data are used, secondary source of data and other source is economic survey. Secondary source of data means that the data which is already used for any other purpose. Crude oil prices data has been taken from World Bank website.

Sample selection criteria

In this research we studied the relationship between crude oil price, Import, Export and Foreign Exchange. Therefore this research will also work on yearly based data from (2001 to 2016)

Period of study

The period of study is 16 years (from 2001 to Dec 2016) of both independent variables and dependent variables.

Research technique

Research technique will help understand the export fluctuations. It will be a quantitative research based on secondary data. We will use statistical tools for research results.

Research tools

Statistical tools are linear regression analysis and correlation analysis. Linear regression is used to find strength of relationship between independent variables and dependent variables. The general form of each type regression analysis is

Linear regression line: $Y = a + bX + U$

X= independent variable (oil prices, import, foreign exchange)

Y=dependent variables (Export)

a = the intercept

b = the slop coefficient

u = regression residual

H0: there is no positive relationship between dependent variables and independent variables.

H1: there is positive relationship between dependent variables and independent variables.

$\alpha = 5\%$

Decision criteria

Reject H0, if p value is less than α . Or 'accept' H0 if p value is greater than α .

The standard for analysis will depend on 95% level of significance. In results of regression if a P values is less than α . It means, if the correlation among the variables will be more than 95 than relationship will be accepted otherwise rejected. On the other hand, correlation analysis is also helpful to find out the results of the studies. Correlation analysis will clearly show the positivity or negativity of the relationship between the variable. Therefore, analyzing this situation there will be ease of understanding the result of analysis.

Correlation analysis

Correlation is a term that refers to the strength of a relationship between two variables. A strong or high correlation means that two or more variables have a strong relationship with each other while a weak or low correlation means that the variables are hardly related. Correlation coefficients can range from -1.00 to +1.00. The value of -1.00 represents a perfect negative correlation while a value of +1.00 represents a perfect positive correlation, a value of 0.00 means that there is no relationship between the variables being tested. The most widely used type of correlation coefficient is the Pearson r, which is also referred to as linear or product-moment correlation. This analysis assumes that the two variables being analyzed are measured on at least interval scales. The coefficient is calculated by taking the covariance of the two variables and dividing it by the product of their standard deviations.

ANALYSIS

In this chapter discussed the approach to find out the results of our studying regarding the relationship between export and import, crude oil prices and foreign exchange. This chapter discussed the empirical finding and results of study. This chapter also provides for results. On the basis of previous discussion all obtained knowledge and practical implication has been applied to this chapter. To provide the prospective results, different writers have discussed the impact of export on import, crude oil prices, foreign exchange. Different international and Pakistani writers used different research tools and techniques to study the relationship and interdependency of different dependent variables and independent variables.

Methods for analysis

This paper is about the relationship between export and import, crude oil prices, and foreign exchange. To determine the relationship and interdependency of both types of variables, correlation analysis will tell about positive, negative, weak or strong relationship between the variables. On the other hand, linear regression will define the extension of relationship between both types of variables.

Further explanation of this, it will define if change in crude oil prices there will be also a change in import, export, and foreign exchange. With all techniques and tools this research thesis applies the techniques with given references for the purpose of finding results of discussion this portion of paper explain the tools and techniques used. In other words research methodology described that how we achieved the results of relationship between exports, import, foreign exchange and crude oil at international level.

Interpreting the Regression results;

A value of +1.00 implies that the relationship between variables Y (Export) and X (import, oil prices, foreign exchange) is perfectly linear, with all data points lying on a line for which Y increases and X increases. Conversely, a negative value of implies that all data points lie on a line for which Y decreases as X increases. A statistical measure that attempts to determine the strength of the relationship between one dependent variable, here Export (usually denoted by Y) and a series of other changing variables here Import, foreign exchange, oil prices (known as independent variables).

R-squared

R-squared is a statistical measure of how close the data are to the fitted regression line. It is also known as the coefficient of determination, or the coefficient of multiple determinations for multiple regressions. The definition of R-squared is fairly straight-forward; it is the percentage of the response variable variation that is explained by a linear model. Or: $R\text{-squared} = \frac{\text{Explained variation}}{\text{Total variation}}$ R-squared is always between 0 and 100%: 0% indicates that the model explains none of the variability of the response data around its mean. 100% indicates that the model explains all the variability of the response data around its mean. Here, the value of R square is 0.55 means 55% variation is explained In general, the higher the R-squared, the better the model fits your data. However, there are important conditions for this guideline that I'll talk about both in this post and my next post.

Interpreting Adjusted R Square

Our first indicator of generalizability is the adjusted R Square value, which is adjusted for the number of variables included in the regression equation. This is used to estimate the expected shrinkage in R Square that would not generalize to the population because our solution is over-fitted to the data set by including too many independent variables. If the adjusted R Square value is much lower than the R Square value, it is an indication that our regression equation may be over-fitted to the sample, and of limited generalizing. The value of R Square and Adjusted R Square are 55% and

44%, it is good to have the values of R square than 60% .This also tells that how much output variable’s variance is explained by the input variable’s variance. The adjusted R square explains the accuracy of regression equation. After that F significance value 0.018 which is approximately to zero tells that the results are not by chance, in other words there is zero probability of “by chance” results

Interpretation of P-Values in Linear Regression Analysis

The p-value for each term tests the null hypothesis that the coefficient is equal to zero (no effect). A low p-value (< 0.05) indicates that you can reject the null hypothesis. In other words, a predictor that has a low p-value is likely to be a meaningful addition to your model because changes in the predictor's value are related to changes in the response variable. Conversely, a larger (insignificant) p-value suggests that changes in the predictor are not associated with changes in the response. Here P value is 1.492E-08 which is approximately equal to zero. It indicates that it is statistically significant if less than 5%. It means export depends on Oil prices, Foreign exchange reserves and Import.

**SUMMARY
OUTPUT**

<i>Regression Statistics</i>	
Multiple R	0.744363
R Square	0.554077
Adjusted R Square	0.442596
Standard Error	1.091616
Observations	16

ANOVA				
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>
Regression	3	17.76768104	5.92256	4.970150075
Residual	12	14.29951271	1.191626	
Total	15	32.06719375		
	Coefficients	Standard Error	t Stat	P-value
Intercept	18.33975	1.376303667	13.32537	1.49269E-08
Oil prices	-0.03637	0.013167491	-2.76205	0.017213507
Foreign Exchange	-2.8E-09	1.71729E-09	-1.60973	0.133431918
Import	-0.02458	0.023004896	-1.0685	0.306318405

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