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EXCHANGE RATE VARIABILITY AND EXPORTS: EVIDENCE FROM TEXTILE AND SPORTS GOODS INDUSTRIES OF PAKISTAN

Tufail Nawaz[1]
Aziz Javed[2]
AmanUllah[3]

Abstract: *The present study is different from previous studies in several aspects. Firstly, two different major sectors (Textile & Sports exports) of Pakistan exports are chosen to calculate the impact of exchange rate variability on these specific sectors instead of taking aggregate exports. Secondly, the aim of the study is not only to calculate effect of exchange rate variability on two sectors exports but also to check either two different sectors are affected same or different with this variation. Thirdly, annual data is taken for all the variables to check the correlation and to examine the impact of exchange rate variability on exports. This research also views the short-run characteristics by which exports meet on their long-run balance. This research is important since it has effects for the selection of exchange rate program and performs of interchange rate plan. Our commercial goods can contend besides endure in the international industry, on offering uniform-playing arena. Another slowing aspect is the failing of controlling department's involved to develop a quick return program of sales tax. Simple regression model is used to examine the impact of exchange rate variability on Textile and sports goods exports individually as well as on aggregate of these two sectors of Pakistani Export. Results revealed a significant impact of exchange rate variability on Pakistani exports*

Keywords: *Exchange Rate Variability, Textile Exports, Sports Goods Exports, GDP, CPI*

[1]Author is Lecturer in Institute of Business Administration, Gomal University, Dera Ismail Khan, Pakistan, E. Mail: tufail.nawaz@gmail.com
[2] Author is Assistant Professor in Institute of Business Administration, Gomal University, Dera Ismail Khan, Pakistan, E. Mail: azizjaved73@gmail.com
[3] Author is Assistant Professor in Institute of Business Administration, Gomal University, Dera Ismail Khan, Pakistan, E. Mail: amanu_khattak@hotmail.com

1. Introduction

In 1982, like other developing countries, Pakistan also moved towards floating exchange rate system. Reason behind this decision was enhancing bilateral trades with all trading countries of the world. Consequently, it was also predicted to produce greater regional and product variation of Pakistani exports. However, this move is also likely to cause movements in exchange rate and could impact the exports. For example, on an entire schedule, the actual trade development in Pakistan was about 5.09 % during the period (1982:1 to 2000:4) with a conventional difference of 26.77. The amount of development in actual exchange rate was only a quarter %, with a conventional difference of 8.26 during the same interval. During the decade of 1980s (1982:1 to 1990:4), the amount of development in actual exchange rate was minimum, i.e. 0.02 % and the variation had been reduced with a conventional difference of 7.16.

The amount of growth in real exports was greater during this interval (6.27 % with a conventional difference of 28.64) compared to amount of development noticed during overall research interval. It indicated a damaging connection between variations in exchange rate and development in actual exports. It means that the variation in exchange rate towards downwards is causing appreciation in exports of Pakistan. The same behavior of exchange rate variation with exports volume was also noticed during 1990 to 2000 instead of introducing financial and economic reforms in the country for attracting investors and enhancing exports volume of the Pakistan. For example, during this interval the development in actual exchange rate is almost half with an increased conventional difference of 9.20, whereas the development in actual exports declined to 4.05 % with a conventional difference of 25.34. It again validates a damaging connection between exchange rate variation and trade development in Pakistan as seen in other developing countries (Grobar, 1993; Hassan & Tufte, 1998).

Current study is conducted to examine the cause and effect association of two major Pakistani exports sectors i.e. textile and sports goods exports with exchange rate variability, GDP and CPI. Previously, mostly aggregate export function is examined (e.g. Arize, 1990; Faini, 1994; Bobeica, Esteves, Rua & Staehr, 2016). The main weakness of this approach is that it failed to allow us to know that either all the factors affecting exports remain same across different categories are varied (Hussain, Hussain & Alam, 2020). So present study is minute attempt to narrow this gap by examining either the effect of exchange rate variability, GDP and CPI on two different sectors remain same or varied.

1.1 Exchange Rate in Pakistan

Exchange rate competitiveness is considered as major element affecting economic performance of any country (Javed, Ali & Ahmed, 2016). The appreciation and depreciation in home currency is mainly determined by the movement of exchange rate (Raza & Afshan, 2017). The exchange rate industry was below tight management in 1980's became opened and comparatively starts in 90's. Providing and requirement of international exchange became the platform for dedication of exchange rate in marketplace. After release of program of handled drift for dedication of Pakistani exchange rate for foreign currency, the price of rupee decreased by round about 230% during 9 decades interval beginning from year 1982 to

year 1996. In this duration, the yearly ratio of rupee devaluation varied from lowest of 2.3 percent to highest possible of 28.28 percent. The sailing exchange rate program was the reason of loss of the Pakistani foreign exchange price during 1980's. In this duration, rupee was undervalued by Condition Economical institution of Pakistan at plenty of duration of requirement only by a few Paisas (Mahmood et al. 2011).

The record of exchange rate reveals an ongoing pattern of depreciation each season since year 1983/3 with the rupee dropping significant value in some decades as opposed to previous decades. It missed 17 percent in year 1996/7 as opposed to value in 1995/6 and for a second time nearly 16 percent in year 1998/9 over the season before. It has missing price every season since 1982 apart from the previous financial season for which we have information year 2002/3. In year2002/3, the rupee has valued in price against the United States money mechanical bull riding the previously pattern. The factors are the activities and improvements since 1998. Several aspects and activities happened since then which have keeping on Pakistan's economic system in an essential way, on foreign currency dealing supplies and on the exchange rate (Mahmood et al. 2011).

1.2 GDP Growth Rate in Pakistan

Without administratively balanced position, growing objectives cannot be attained. In very beginning after freedom, farming was the top industry contributing almost 53.2 % to the total GDP and was adding to financial development of Pakistan. However, its contribution decreased to 23.3 percent in the 2003-04 financial year yet this sector was still the major contributing sector with 1/4th shares in GDP of Pakistan. Production industry shares to GDP improved from 7.8 percent during 1949 to 1950 to 18.9 percent in the financial season 2003-2004 (Mahmood et al. 2011). GNP growing rate dropped in the interval year 1970 to year 1977, but growing rate of GNP stayed on regular more than 7 percent yearly afterward. This growing rate sustained until financial season 1985-1986. Alternation in governmental situation of the nation is the reason of this deviation in growing rate drifts of GNP. In this duration, two times of Martial law, greater growing rate in Pakistan GNP has been noticed.

However, latterly, due to political instability, decrease in Gross National Product (GNP) was also observed. It doesn't indicate that improvement in financial growth is only connected with Martial Law but it can also be concluded that political stability is necessary for financial growth (Mahmood et al. 2011). The share of business industry in GDP has improved to 18.4% from 11.9%. This appreciation indicates that wholesale business industry was the 3rd largest industry contributing to the Gross Domestic Product (GDP) of Pakistan. Only the outcome of farming industry has no improved, but outcome of total areas has expanded as time passed. Similarly, increase in amount share of business industry shows that its growing rate stayed greater than the farming industry, the share of which is on decreasing part (Mahmood et al. 2011).

1.3 Exports of Pakistan

Pakistan major exports include textile, rice, sports goods, cotton fibers, fruits, cement, surgical instruments, leather goods, meat, chicken, seafood, vegetables, carpets, salts and

processed food items (Rehman, Jingdong & Hussain, 2016). In year 1975 total transfer and trade of Pakistan was Rs.53,185 thousands which improved to Rs.212,019 thousands at the end of 1985 only in ten years duration. Though, Pakistan's economic system was not shut one, but was not so open too. In these ten decades, total 300 percent international trade development was revealed. In 1995 it jumped to Rs.619,882 thousands and to Rs.2,130,061 in 2005. The determine displays that inside a period 1985 to 1995 rate of development of awareness was high as matched to last ten decades period which further improved during 1995-2005 (Mahmood et al. 2011). More than 75percentPakistan'simports were made up of only eight goods during the financial year 2002 to 2003. There is an improving trend in Pakistani transfer with the passing time. This transfer determines includes both customer products investment products, but customer products transfer is improving quicker than the imports of investment products (Mahmood et al. 2011).

1.4 Research Objectives

Besides the academic objective of the research, there are some other objectives of this research:

1. The main objective of the study is to examine the impact of exchange rate variability on export in Pakistan.

2. Determine whether/ or not the impact of exchange rate variability on major exports differ.

1.5 Significance of the study

This research will make three major contributions.

1. Firstly, it will be applicable to Pakistan as a new case study which will enhance the policy formulation for the promotion of exports and provide building block for future related studies.
2. Secondly, it will extend the exciting empirical literature by incorporating the effect of exchange rate variability in foreign exchange market, in addition t• inter-Bank foreign currency market.
3. Thirdly, this study will extend the analysis of the effect of exchange rate variability on Pakistan exports by considering different aspects of headlines and underlines consumer prices indices.

1.6 Research Questions

This study is a minute attempt to answer some basic research questions:

1. Does Exchange Rate Variability positively impact the Exports in Pakistan?
2. Does Exchange Rate Variability positively impact the textile Exports of Pakistan?
3. Does Exchange Rate Variability positively impact the sports goods Exports in Pakistan?

2. The Literature Review

2.1 Attitudes toward risk and uncertainty

Exchange rate uncertainty inversely impacts business volume of any country (Hooper & Kohlhagen, 1978). It denotes that the instability of exchange rate, cause reduction in foreign business of the country. However, it depends upon the nature of the dealing parties too. If the dealing party is risk averse, then the uncertainty in exchange rate may cause in declining the deal. On other side, if they are risk takers then they may go ahead and may take the advantage of this uncertainty by expecting maximum return (De Grauwe, 1988). Also, if they are neutral to risk then there may be effect on the business deal.

De Grauwe (1988) explained that if exporters were at a very threatening disadvantage, they would be worried about the worst possible consequences. So, if the threat of returns becomes very risky, unfavorable exporters will improve their business activities to avoid a drastic reduction in business revenue. Conversely, if producers are under a slight threat, they will produce less for export, because if the exchange rate threat is large, they will negatively affect the small application of expected business returns and are less concerned with extreme consequences. Recently, Barkolus et al. (2002) use a display extraction structure to evaluate the consequences of revenue uncertainty on the quantity and variation of business movements. In design, the question of return comes from three relevant sources. It is a noisy indication of a general microstructure bump, a fundamental principle that creates a yield procedure, or policy improvement. They show that the direction and scale of the maximum trading activity of hazardous substances depends on the cause of the suspicion. Their reasoning is that forex prices collide multiple times, so the provider does not have complete details about the behavior of the upcoming return amount in the multipurpose exchange amount program.

2.2 Availability of hedging opportunity

Broil (1994) also views the economic actions of threat adverse globalized companies who take part in the international trading atmosphere by generating in an international nation and promoting overseas. Without developed industry, return amount vagueness results a decrease of the development in international trade. Whenever, an emerging industry integrated, the decisive process is different as they concentrate over their return (Broil, 1994). International companies belong to developed countries may see positive relationship between return on investment and international business volume with already occupying marketplaces. Conversely, previous researchers recommended forward return industry, the 'separation property' keeps, i.e., the maximum outcome intensity is separate of both the submission of return amount and the broker's behavior to the threat.

Hair (1995) provided a design for a threatened harmful importer that maximizes predicted application in an aggressive atmosphere. Brokers face multiple threats arising from concerns about exchange rates and imported product prices. Hair (1995) shows that the contact of fluctuations in returns and avoidance to risk relates to the association of international trade and the expected foreign exchange revenue generated from this international trade. If the cost is identified as exceeding the upcoming rate of return (backward) in the predicted Forex trading, the effect is negative. If the predicted identification return amount is less than the future exchange amount, the effect is uncertain. There may be various causes behind not choosing the options of fully protecting their foreign exchange in forward financial markets (Cote, 1994). Like, most of the currencies that make up the country and the leading industry for long-term business contracts may simply not exist. As it continues, security costs will soar to higher costs. In such a situation, the opportunities to be secured in leading industries will depend on the currency being presented and the nature of the enterprise.

2.3 Production and sales flexibility

In addition to development diversity, a part of the diversity lies in where the product is sold. Broil and Eckwert (1999) shows that global companies with huge domestic industrial platforms can benefit from a comeback monetary move by redistributing product sales between home and international industries. Broil and Eckwert (1999) recommends the design of threatened global companies at the expense of producing products for sale in the home and international industries. The only source of doubt is the comeback amount and the company makes manufacturing choices before this doubt is resolved. However, the company's choice of where to sell its products (home or industry abroad) is based on its versatility and understanding of the comeback amount. The company's objective is to maximize the projected application of local foreign exchange revenues that are completely concave, improved and doubled.

Under these assumptions, Broil and Eckwert (1999) confirmed that a company's dispatching technology is the same as entering into an optional contract. Household expenses can be viewed as the 'strike price' of real business options, as the household industry is sure to return and does not depend on the exchange rate. The company will trade when the comeback amount is profitable. As in the standard selection cost concept, the value of the selection (export options) increases as more benefits are received from real resources (benefits of international trade). Therefore, a larger amount of return motion improves the potential benefits of business worldwide and makes manufacturing more successful. At the same time, companies face high threat visibility when the amount of comeback is unpredictable and tends to reduce the number of manufacturing and businesses. Broli and Eckwert (1999) explain that when the comparative threat avoidance level is lower than unity, the company's common number of businesses has improved return amount volatility. One of the key assumptions in the design to get this summary is that a violation of the law on the cost of one means that the assumptions and international industry are subdivided to mean that arbitrage is difficult or unprofitable.

2.4 Presence of adjustment costs

Theoretical modeling of the link between recent exchange rate movements and business is the "new open economy macroeconomics" that digest rational stiffness, the micro-base of decision-making processes, time-to-time skills, and the impact of market frameworks on global business. In the general equilibrium system, the basic principles which results a variation in the amount of revenue may also be a cause of effecting other macro-economic variables. Like, as a result of financial development, the foreign exchange devaluation in the home country increases transfer prices and decreases income, but if the requirements arising from financial development increase, some or all of the effects of the return devaluation may be balanced (Clark et al. 2004; Alvi, et al., 2019). This may be why the yield between exchange rate variability and business is uncertain in limited stability structures because of ignoring other relevant macro-economic elements which may also cause an effect on this relationship. At this level, a common equilibrium design can take other macro-economic variables under consideration to better show the link between revenue volatility and the business. It features more truth about the association of exchange

rate movement with the business, whether the refund movement affects the business, or whether the business affects the refund movement.

2.5 Impact of exchange rate volatility on trade

Ostfeld and Rogoff (2001) also provide an investigation into the predicted outcomes and the impact of exchange threats on business by increasing the "new open economy macroeconomic framework". They recommend a two-country design with a probabilistic environment where the threat of returns affects the cost of making decisions for individual manufacturers and thus the forecast results and global business flow. Ostfeld and Rogoff (2001) modeled the nominal costs set by monopoly manufacturers under uncertainty, showing that greater fluctuations in returns will result in less predicted outcomes and less intake in both countries, leading to a decrease in business size. The extent of this impact depends on the size of the comparison by country, the change in intake, the efficiency surprise, the covariance between the intake phase and the household currency, the covariance between the exchange amount and the household (foreign) efficiency surprise, and the covariance between the intake phase and the intake phase. One of the striking features of their research is that changes in the highest quality of threats can be a very important source of yield shift.

However, this design indicates that the investment market is repetitive and consequently the current account is always stable, which can be viewed as impractical in real life. Sercu and Uppal (2003) developed a common stability stochastic donation economy system that endogenously identifies the yield and price of economic securities. They believe that the product market is segmented and there is a shift in purchasing power equality. The segmentation of the commodity market is represented by the cost of shipping goods by country. By comparison, the market is believed to be full and fully integrated. Thus, this model makes it possible to invest and secure the economy across borders. They found that in these general stability settings, the impact of return shifts on businesses around the world can be positive or negative, based on real sources of improved yield volatility. If the proceeds movement is due to improved donation movement, the projected number of projects will improve. On the one hand, if the high cost of the worldwide business increases the movement of the return amount, the business will decrease.

2.6 Scientific Literary works

Coes (1981) evaluated this problem on the basis of Hooper-Kohlhagen (1978) research using yearly data. Coes (1981) investigates Brazil exports (as a percentage of the total value added) in 9 primary and 13 production areas for 1965-74. His outcome indicated that the important reduction in exchange rate doubt in the Brazil economic system during the creeping peg interval might have provided as much as the changes in prices toward describe the greater awareness of the economic system after 1968. Rana (1983) research is the most thorough research in perspective of creating nations. I have achieved the same results regarding the transfer amounts of a number of South east Parts of Asia some of which are also included in the Bahamani- Oskooee (1984) example. Rana (1983) estimated the exchange needs function for each country in the example. He

identified that the improve in come back quantity threat has an essential negative effect on exchange quantities. He did not assess company quantities in the same way although they are likely to be of higher attention. Kabir (1988) used the traditional regression style to analyze the Bangladesh company need function. I have found evidence for income inelastic need for exports.

Empirical research "focuses on growing developing countries and uses time-series information to support speculation about the damage to exchange rate volatility businesses.

Arize et al. (2001; 2008) and Dognalar (2002)'examine the link between exports and exchange rate movements in a growing and evolving financial system. However, this research focuses on the impact of real effective exchange rate movements on the country's full exports, not on bilateral business. Khan (1986) considered trade terms, actual GNP of industrial countries, actual interest levels in international investment markets, and the impact of investment movements on Pakistan's actual exchange rate from 1977 to 1984. We evaluated the response of the cost and the price of foreign currency Variety of excitement, they also decided that the cost range response to excitement in the short term was not in the direction of balancing the exchange rate response and keeping the actual exchange rate the same, but in the long run. Thus, they speculated that purchasing power equality (PPP) was not maintained in the short term, and several scientists remitted from abroad to have a vital impact on the Pakistani economic system. In between, we implemented a three-step minimal fragment (3SLS) valuation strategy to calculate the remittance result multiplier to be around 2.5, or Rs. If your remittance increases by 1,000, your GNP will improve to around Rs. 25,000 depending on the result.

3. Research Methodology

3.1 Approach

The study, applying econometric techniques investigated the impact of exchange rate variability on exports of Pakistan using secondary data. This study based on Time Series Data from 1995-2010.

3.2 Data Collection

3.2.1 Data Sources and Variable Definitions

The data is annually and spans the time period 1995 to 2010. Time series data is examined in this study i.e. Exports (Both Textile & Sports goods), Exchange Rate, GDP and CPI are collected from the different monthly Statistical Bulletins issued by State Bank of Pakistan. All variables are measured in real values in the base of 2000. Also, natural logarithms are taken of all variables for approximating growth differences.

The variables are constructed as follows:

A. Exports: Exports (both sectors Textile & Sports goods) are measured in domestic currency and data is obtained from monthly statistical bulletins issued by State Bank of Pakistan. Exports are taken as Dependent Variable.

B. Exchange Rate: Nominal Exchange Rate is used to calculate the impact of exchange rate variability on exports and data is collected from monthly statistical bulletins issued by State Bank of Pakistan. Exchange Rate is taken as an Independent variable.

C. GDP: GDP can be calculated by adding the values of total finished goods and services produced in an economy during a particular period. Taxes are also added in the value of GDP whereas subsidies (not added to the value

of production), given to the industries are subtracted from the GDP value. Here in present study real GDP is utilized and data is obtained from monthly statistical bulletins issued by State Bank of Pakistan. GDP is taken as an Independent variable.

D. CPI: Consumer Price Index is also used in this study to calculate the impact of exchange rate variability on exports and data is obtained from monthly statistical bulletins issued by State Bank of Pakistan. CPI is taken as an Independent variable.

3.3 Data Analysis Tools

Chain base method is used to examine the impact of exchange rate variability on exports. For statistically significant results SPSS 15 version is used to analyze data.

3.4 Model Specification

The simplest model is used to calculate the impact of exchange rate variability on textile exports, Sports goods exports and the aggregate of both sectors (Mustafa et al. 2004; Alvi, et al., 2020).

$$LnYtext=\alpha+\beta1LnX1+\beta2lLnX2+\beta3lLnX3+\mu \quad (1)$$

Where

LnYtext=Textile Exports of Pakistan
LnX1= Exchange Rate
LnX2=GDP
LnX3 =CPI

$$LnYsportgoods =\alpha+\beta1LnX1+\beta2LnX2+\beta3LnX3+\mu \quad (2)$$

Where

LnYsportgoods=Sports goods Exports of Pakistan
LnX1=Exchange Rate
LnX2 =GDP
LnX3 =CPI

$$LnYtextsportgoods =\alpha+\beta1LnX1+\beta2LnX2+\beta3LnX3+\mu \quad (3)$$

Where

LnYtextsportgoods=Textile and Sports goods Exports of Pakistan
LnX1 = Exchange Rate
LnX2 = GDP
LnX3 = CPI

4. Data Analysis

4.1 Regression analysis and discussion

The objective of the study is to calculate impact of Exchange rate variability on Exports. As Regression Model is used to calculate the impact of exchange rate variability on exports so this portion of chapter contains regression analysis and its interpretation.

4.1.1 Descriptive Statistics on Textile Exports

The table indicates descriptive statistics of Textile sector of Pakistan for the year 1995 to 2010.

The regression analysis was performed to check the effect of exchange rate, GDP, and CPI on Textile exports of Pakistan for the period of 1995 to 2010. The table -1 indicates the Mean and standard deviation values of Textile Exports, GDP, Exchange Rate, and CPI respectively with N indicating the number of observation (15.8046 and 0.27454 of textile exports, 15.4181 and 0.60811 of GDP, 4.0167 and .24107 of exchange rate and 5.1376 and 0.27947 of CPI)

Table: 4.1.1

	Mean	Std. Deviation	N
Logtextile	15.8046	.27454	15
Loggdp	15.4181	.60811	15
Logexch	4.0167	.24107	15
Logcpi	5.1375	.27947	15

4.1.2 Correlation of Textile Exports

Pearson correlation is applied to check the strength of association between study variables. The table shows that textile, GDP and exchange rate are positively correlated. The correlation between textile and GDP, Textile and Exchange rate and textile and CPI is 0.937, 0.768 and -0.442 respectively. It is evident that textile, GDP and exchange rate are positively correlated and there correlation is statistically significant at 5%. Whereas textile and CPI are negatively correlated and is statistically significant at 5%. N shows number of observations.

Table 4.1.2

		logtextile	Loggdp	logexch	logcpi
Pearson Correlation	logtextile	1.000	.937	.768	-.442
	loggdp	.937	1.000	.914	-.217
	logexch	.768	.914	1.000	-.066
	logcpi	-.442	-.217	-.066	1.000
Sig. (1-tailed)	logtextile	.	.000	.000	.050
	loggdp	.000	.	.000	.219
	logexch	.000	.000	.	.408
	logcpi	.050	.219	.408	.
N	logtextile	15	15	15	15
	loggdp	15	15	15	15
	logexch	15	15	15	15
	logcpi	15	15	15	15

4.1.3 Model Summary of textile Exports

Table: 4.1.3

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.979(a)	.958	.947	.06320

Predictors: (Constant), logcpi, logexch, loggdp

In the above table the "R^2" value i.e. 0.958 revealed that independent variables describe 95.8% of the changeability of dependent variable. In this case, the adjusted R-squared indicates that about 95% of the variability is accounted for by the model. A larger sample size will normally result in a smaller SE (while SD is not directly affected by sample size)

4.1.4 ANOVA(b) of Textile Exports

Table: 4.1.4

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.011	3	.337	84.401	.000(a)
	Residual	.044	11	.004		
	Total	1.055	14			

Predictors (Constant), logcpi, logexch, loggdp
Dependent Variable: logtextile

In regression model F-value of F-test is also measured to check the model significance level. If the F-value of zero is three decimal places, the model is statistically significant. The table with F-value 0.000 shows that model is statistically significant.

4.1.5 Coefficients(a) of textile Exports

Table: 4.1.5

Model		Unstand. Coefficients		Stand. Coefficients	t	Signif.
		B	Stand. Error	Beta	B	Stand. Error
1	(Constant)	9.911	.737		13.455	.000

	Loggdp	.558	.074	1.237	7.526	.000
	Logexch	-.427	.183	-.375	-2.331	.040
	Logcpi	-.195	.066	-.198	-2.962	.013

Dependent Variable: logtextile

A multiple regression was run to predict textile exports from GDP, Exchange Rate and CPI. All these three variables predicted significantly textile exports with the values of 0.000, 0.040 and 0.013 respectively.Here in this table we are concern with B (Unsta. coefficient) which measures the regression coefficient.

4.2.1Descriptive Statistics of Sports goods Exports

The table indicates descriptive statistics of Textile sector of Pakistan for the year 1995 to 2010.

The regression analysis was performed to examine the impact of Exchange rate, GDP, and CPI on Sports exports of Pakistan for the period of 1995 to 2010. The table -1 indicates the Mean and standard deviation of Sports Exports, GDP, Exchange Rate, and CPI respectively with N indicating the number of observation (12.6076 and 0.11837 of sports exports, 15.4181 and 0.60811 of GDP. 4.0167 and .24107 of exchange rate and 5.1375 and 0.27947 of CPI).

Table: 4.2.1

	Mean	Std. Deviation	N
Logsports	12.6076	.11837	15
loggdp	15.4181	.60811	15
logexch	4.0167	.24107	15
logcpi	5.1375	.27947	15

4.2.2 Correlation of Sports goods Exports

Pearson correlation is applied to check the correlation among variables for calculating the impact of exchange rate variability on Sports Exports. The table shows that Sports Exports, GDP and Exchange rate are positively correlated but there correlation is weak which is 0.071 and 0.079 respectively and is statistically insignificant at 5%. Whereas table shows negatively correlation between sports exports and CPI exist which is -0.439 and is statistically significant at 5%. N shows number of observations.

Correlations of sports

Table: 4.2.2

		logsports	Loggdp	logexch	logcpi
Pearson Correlation	Logsports	1.000	.071	.079	-.439
	Loggdp	.071	1.000	.914	-.217
	Logexch	.079	.914	1.000	-.066

	Logcpi	-.439	-.217	-.066	1.000
Sig. (1-tailed)	Logsports	.	.400	.390	.051
	Loggdp	.400	.	.000	.219
	Logexch	.390	.000	.	.408
	Logcpi	.051	.219	.408	.
N	Logsports	15	15	15	15
	Loggdp	15	15	15	15
	Logexch	15	15	15	15
	Logcpi	15	15	15	15

4.2.3 Model Summary of sports goods exports

Table: 4.2.3

Model	R	R^2	Adjtd. R Square	Stand. Error of the Estimate
1	.479(a)	.230	.020	.11721

Predictors: (Constant), logcpi, logexch, loggdp

In the table the "**R**" value is 47.9% indicates not too much good level of prediction. Similarly, value of R-square explains 23% variability of dependent variable. Adjusted R-Square indicates only 2% of the variability accounted for by the model.

4.2.4 ANOVA(b) of sports goods exports

Table: 4.2.4

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.045	3	.015	1.093	.393(a)
	Residual	.151	11	.014		
	Total	.196	14			

Predictors: (Constant), logcpi, logexch, loggdp
Dependent Variable: logsports

F-value in the table is 0.393 indicates that the model is not statistically significant to calculate the impact of exchange rate variability on sports exports.

4.2.5 Coefficients(a) of sports goods exports

Table: 4.2.5

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	14.228	1.366		10.415	.000
	loggdp	-.096	.138	-.494	-.698	.499
	logexch	.244	.340	.497	.718	.488
	logcpi	-.218	.122	-.514	-1.786	.102

Dependent Variable: logsports

A multiple regression was run to predict sports exports from GDP, Exchange Rate and CPI. All these three variables predicted not significantly sports exports with the values of 0.499, 0.488, and 0.102 respectively. It indicates that there are some other variables beside these variables that can better explain the sports export.

4.2.6 Model Summary of textile & sports goods exports

Table: 4.2.6

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.977(a)	.955	.943	.06350

Predictors: (Constant), logexch, logcpi, loggdp

In the table the "**R**" value is 0.977 indicates a good level of prediction means 97.7%. the R-Square value can be seen in the table is 0.955 that independent variables explain 95.5% of the variability of dependent variable. Adjusted R-Square indicates about 94% variability is accounted for by the model.

4.2.7 ANOVA(b) of textile & sports goods exports

Table: 4.2.7

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.938	3	.313	77.517	.000(a)
	Residual	.044	11	.004		
	Total	.982	14			

Predictors: (Constant), logexch, logcpi, loggdp
Dependent Variable: logtexsports

The table with F-value 0.000 shows that model is statistically significant to calculate the impact of exchange rate variability on textile and sports exports.

4.2.8 Coefficients (a) of textile&sports goods exports

Table: 4.2.8

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	10.226	.740		13.817	.000
	loggdp	.534	.075	1.227	7.170	.000
	logcpi	-.193	.066	-.204	-2.928	.014
	logexch	-.405	.184	-.369	-2.203	.050

Dependent Variable: logtexsports

A multiple regression was run to predict textile and sports exports from GDP, Exchange Rate and CPI. All these three variables predicted significantly textile exports with the values of 0.000, 0.014 and 0.050 respectively.

5. Findings and Recommendations

5.1 Findings and Discussions

Present study was a minute attempt to empirically test the association of exchange rate variability with Pakistan' exports particularly textile and sports goods. Regression model was employed to check the cause and effect association of exchange rate variability on exports, where exports are taken as dependent variable while Exchange rate, GDP and CPI are taken as independent variables. Vast research, finding the association of exchange rate variability and exports, is available however any study examining particularly these two sectors of Pakistan Exports was missing. So for filling this gap, current study is conducted to empirically test the association of exchange rate variability and textile & sports goods exports of Pakistan. First objective of current study was to calculate the effect of exchange rate variability on both, textile and sports goods sectors' exports individually as well as collectively. While second objective was to check either two different sectors of Pakistan exports are affected same or different by exchange rate variability.

Present study findings revealed significant positive associations of exchange rate variability and on textile exports of Pakistan just like the results of (Sercu and Vanhulle, 1992, De Grauwe, 1992). (De Grauwe, 1992). Furthermore, results about sports goods exports shows that exchange rate variability has no significant impact on sports goods exports, like results of Manzur et al., 1992. This area is

suggested to be identified by future researchers. Similarly, results for textile and sports goods exports, both sector aggregate also shows significant positive impact of exchange rate variability on textile and sports goods aggregate exports of Pakistan.

5.2 Contributions of the study

The overall contribution of present study is to provide new evidence of relationship between exchange rate variability and exports of Pakistan to the existing literature. This study has extended previous empirical literature in several dimensions both in terms of methodology and scope. This study is the first to investigate impact of exchange rate variability on two different sectors of exports of Pakistan. Understanding the degree to which exchange rate variability can affect exports is an important issue for export promotion policies. Present study empirically provides to enhance this understanding and therefore fills an important gap in this existing literature.

5.3 Suggestions for future research

First of all, it would be much interesting to check the impact of exchange rate variability on different product categories of exports in bilateral context when data is available. So this will eliminate aggregation bias completely. Theoretical literature put forwarded one of the propositions that the degree and sign of impact of exchange rate variability on exports may also because of the level of competitiveness of the market structure where exporting firm operates. In the light of this proposition, the impact of exchange rate variability on exports of perfectly competitive organization is different from that of monopolistic one. It would be interesting to analyze the relationship between market structure and the impact of exchange rate variability by using firm level data.

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