

EXCHANGE RATE INSTABILITY AND SECTORAL EXPORTS: EVIDENCE FROM PAKISTAN *

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Abstract

Exports of a country is one of the main factors indicating economic health of a country and fluctuating exchange rates and relative price can significantly affect the level of exports and it is an alarming situation for a country when its exports are affected by exchange rate volatility. Impact of exchange rate volatility and relative price on trade has been a heated debate in the field of finance and most of work has been done on aggregate and bilateral trade. Few researches are found on product basis especially in the scenario of Pakistan. This research will provide an overview of the exports of 13 different products from Pakistan. Secondary data is used to analyze the impact of exchange rate instability on the exports of different products from Pakistan to all over the world. Significance of the study depends on the right choice of estimation method. We use auto regressive distributive lags (ARDL) method to check the relationship of two main variables. Glass, meat and paper & board products show that relative price affects negatively to exports so Government should make policies to strengthen the exports of these three products. Government can provide subsidies on these products in order to boost up the exports and make these products competitive in international market. Under the shadow of our results we conclude that exchange rate volatility has significant negative relationship with the exports of food processing machinery, grapes, meat and petroleum products so government needs to be focused on it when exchange rate are highly instable. Iron & steel bars show short run negative impact of exchange rate however this impact is adjusted in the long run.

Keywords: Exchange Rate; Instability; Sectoral Exports; ARDL; Pakistan.

INTRODUCTION

After the termination of the Bretton Wood Agreement (1973), major economies of the world started shifting their exchange rate regime from fix to floating exchange rate system.

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At that time researchers were much more concerned about the impact of this new system on international trade. Since then, effect of exchange rate uncertainty and relative price on volume of international trade has been a heated debate in the field of international finance (Abrams, 1980; Cushman, 1983; Kenen & Rodrik, 1986; Bailey, Tavlas, & Ulan, 1986; and Hooper & Kohlhagen, 1978). A conventional criticism of flexible exchange rate system is that exchange rate uncertainty increases with flexible exchange rate which causes international trade to decrease.

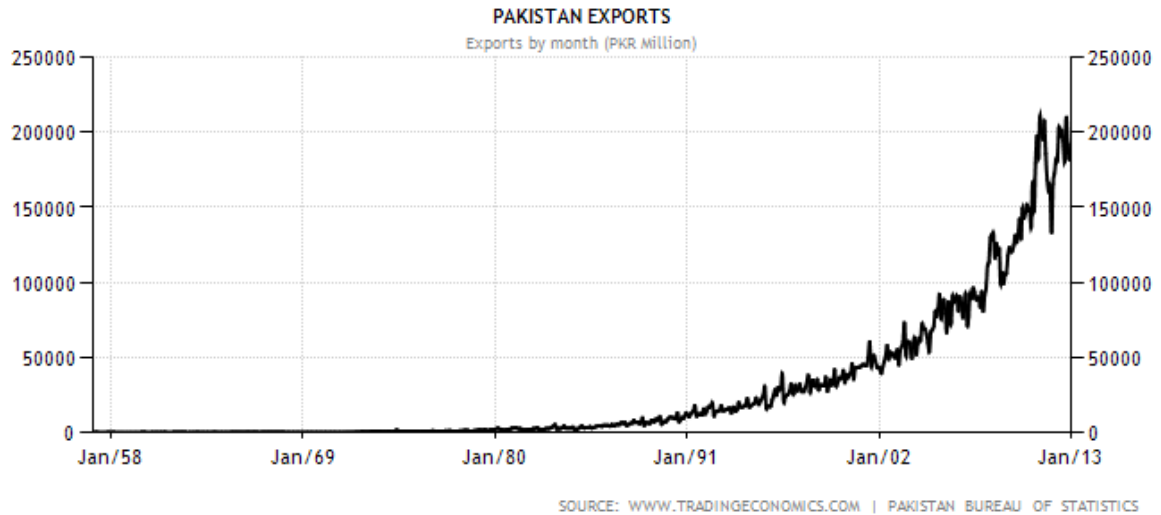
The studies analyzing the effect of exchange rate uncertainty on trade post mixed results due to different methodology, time periods, econometric techniques, measures of volatility and sample countries they use for their analysis (Medhora, 1990; Chowdhury, 1993; Aristotelous, 2001; Caporale & Doroodian, 1994; Doğanlar, 2002; and Doroodian, 1999).

Theoretical studies envisage that lower level of trade results from increased volatility in exchange rates under the assumption that traders are risk-averse. For example, Clark (1973) shows that reduction in international trade is caused by increased exchange rate variability. Many studies have attempted to measure the depressing impact of exchange rate volatility on trade but majority of these are unable to provide significant evidence on the relationship between exchange rate volatility and international trade volume (Medhora, 1990 and Aristotelous, 2001).

Figure 1 shows the exports of Pakistan from 1957 – 2012. Overall, exports of Pakistan increased after 1980's when Pakistan decided to change its exchange rate regime and pegged its currency with dollar. Figure 1 shows that there is fluctuation in exports which can be due to exchange rate oscillation or it can be due to high rates of our products as compare to the world. Increasing pattern in exports of Pakistan can be due to increase in world demand due to which exports of Pakistan also increase.

FIGURE 1

Visual Presentation of Pakistan's Exports 1957-2012



From 1957 – 2012, average exports of Pakistan are Rs. 27616.95 Million. Pakistan reaches to highest exports in March 2011 Rs. 210208 Million and touches lower level Rs. 51 Million in April 1958. Pakistan’s exports are highly concentrated with few products and markets. Major exports of Pakistan are bed wear, rugs & carpets (8% of total exports), cotton and knitwear (28%), and rice (8%) other includes fish, sports goods, fruits & vegetables and leather etc. Pakistan’s major exporting partners are United States (15% of total exports), UAE (10%), China (9%), Afghanistan (9.5%), UK (3%) and Germany (2%).

Exchange rate regime plays vital role and can affect the exports of a country. Pakistan had been using fixed exchange rate regime since 1973 but after the termination of Bretton Wood Agreement (1973) Pakistan pegged its currency with dollar. After a struggle of one decade to retain the pegged exchange rate system Government authorities decided to adopt floating exchange rate system in 1982. In the beginning of 1980’s Pak Rupee was imposed to manage float and from the basket of different currencies rupee was pegged with US dollar being a secure currency. During 1998 Pakistan had to face financial restrictions due to nuclear endeavors and as a consequence Pakistani authorities decided to use multiple exchange rate system. At that time Pakistan had three rates (I) Official Rate pegged with US dollar (II) Floating Interbank rate (III) Composite Rate is mixture of the above two. In 2000 after the recovery from financial distress Pakistan has been following floating exchange rate system. Arize, Osang, & Slottje (2008) reported that study on exchange rate risk is very important for the countries which have shifted from fix to floating exchange rate regime.

Husain (2006) analyzed various key determinants for the selection of right exchange rate system for the country and documented that floating exchange rate regime is most appropriate system for Pakistan.

The importance of this study can be viewed in such a way that aggregate exports of Pakistan increase day by day but when we pay attention on exports of different commodities they show increase/decrease as compared to previous years so exploring the impact of exchange rate volatility and relative price on exports of different products can help us in finding the most adversely affected product. This research is important in two ways. Firstly in this study we try to find the relationship of exchange rate volatility with 13 different products which is not included in (Aftab& Abbas, 2012) research. Secondly it will describe the relationship of exports with relative prices that can provide some rationale decision making for exports. Results of this research are expected to formulate policies that could help the exporting firms to find better export opportunities for the specific commodity.

Keeping the above idea in our minds, we formulate the following research question:

- What could be better/optimal criteria for Pakistan to export specific product during period of highly volatile exchange rates?

This research describes the rationale decision making for the exports of 13 products from Pakistan. Section 1 gives us a brief overview of the topic normally called motivation of the research, research question, contribution of study and findings. Section 2 describes the review of literature. This will help us to build understanding about the topic. Section 3 relates to research design and methodology which describes collection of data, data sources, time span of study, sample products, estimation techniques in research normally called methodology, research hypothesis and research model. Section 4 gives us results of augmented dickey fuller test, bound testing, long run estimation and short run error correction model and interpretation of results. Section 6 concludes this topic.

LITERATURE REVIEW

Relationship of exchange rate and international trade is ambiguous till yet, many empirical studies evidence that exchange rate has significant negative impact on trade counter to this other reported that it has no effect on trade or affect positively. Previous work can be categorized into different type of trade flows, proxies used for the measurement of exchange rate volatility, trade models and econometric techniques.

In past most of the work is done on aggregate trade and bilateral trade flow but most of the work related to sectoral trade has been done in last decade. Empirical researcher post mixed results for sectoral trade with exchange rate volatility and relative prices (exchange rates).

Aftab & Abbas (2012) concluded that exchange rate instability has significant negative relationship with sectoral exports of Pakistan except waxes & animal oils, aircraft, vehicle & transport equipment and arms & ammunition however the signs of coefficients are negative. Relative price also show significant negative relationship for all the sectors except animal and vegetables fats and oil, mineral product, textile and textile articles, footwear and works of arts, antiques however the sign of coefficients were also negative. Negative signs show that decrease in demand for exports is due to an increase in relative price. Serenis & Serenis (2010) studied the impact of exchange rate on chemical sector (organic and in-organic chemicals) in eleven EU countries. He found that Netherland & Portugal have significant positive relationship while Italy has negative for in-organic chemicals. All other countries show insignificant results for chemical sector. De Vita and Abbott (2004) investigated bilateral trade of UK with 14 EU and the sectors of trade under consideration were total manufactures, food, basic material and service and he come across with the result that service sector show significant negative impact of exchange rate volatility all other sector (manufacturing, food, basic material) has insignificant negative results with respect to exchange rate. Coefficient of relative price show significant negative relationship with trade for total manufacture, food, beverages & tobacco but insignificant positive impact for basic material and services. He also concluded that Denmark, Germany and Sweden show significant negative relationship of exchange rate volatility with trade while relative prices for Austria, Denmark, Finland, Germany, Greece, Italy, Spain and Sweden show significant negative association while all other countries show insignificant negative and positive results.

Bredin (2003) investigate the Irish exports function with European countries for short and long run. He analysed sectors SITC 0-4, SITC 5-8 and SITC 0-8 and find out that relative price, income and exchange rate volatility show significant positive relationship for long run but in short run exchange rate volatility show insignificant but positive and negative signs while relative price show significant and insignificant negative signs. Doyle (2001) investigated the relationship of volatile exchange rate with the sectoral exports of Ireland to UK over the period of 1979 to 1992. Using error correction and cointegration techniques he concludes that aggregate exports of Ireland to UK show positive impact but when we study the impact on SITC two digit sector it shows mixed results positive as well as negative. Chou (2000) investigated that using error correction model exchange rate variability has significant negative effect on exports of goods manufactured, minerals, but not on exports of foodstuff, tobacco and beverages. Conversely by ARDL model exports of industrial minerals show significant positive impact. Belanger (1992) investigated the impact of exchange rate volatility on US imports from Canada and find out that there is no impact of exchange rate volatility on the imports of food, automotive goods, industrial supplies and consumer goods. We cannot ignore the importance of aggregate trade and its relationship with exchange rate volatility as it gives us broader picture for trade. Arize (1997) argued that in each of G-7 countries exchange rate volatility shows negative relationship with exports in short run and long run. These results were due to the decision of market participants to allocate resources in local or international market. Arize, Malindretos, & Kasibhatla (2003) explored that profits of the firms were uncertain due to the variability in exchange rate which minimized the advantages of international trade and due to less availability of forward markets or high cost of hedging in LDC's exports diminish in short and long run. The results of G-7 countries and LDC's are consistent in nature. Chowdhury (1993) estimates that exchange rate uncertainty exerts negative influence on exports of all G-7 countries, if market participants are conscious about risk then trade activities decrease which cause the change in demand & supply to reduce risk and therefore affect the prices. Medhora (1990) exposed that there is no connection of exchange rate oscillation on the imports of West African Monetary Union. He argued that results of early studies after floating exchange rate regime were tentative due to following reasons i.e. relationship and trading contracts were not changed sharply with the

change in exchange rate system, forward market was not efficient and ambiguities about new system for trade. He also described that trade can be hurt even forward market is available due to multiple problems. First, transaction cost to avail hedging instrument is high. Second, sometime it is not possible for the firm to ascertain the accurate amount and timing for foreign exchange transaction. Third, Forward contract are incomplete in terms of length of cover offered.

McKenzie(1999) explored while investigating the relationship of exchange rate volatility on aggregate trade the results of individual country cannot be extracted and there is high possibility that studying the countries on bilateral level one country shows positive results and another country shows negative result but these impacts are expected to be cancelled in aggregate level and it can hide the true results of individual economies. Therefore, it is difficult to fetch true results on aggregate levels. Klaassen (2004) & Clark (2004) states that prior studies post mixed results on aggregate trade due to the aggregation bias. Many empirical researchers put their attention to explore this topic from bilateral trade as the impact of exchange rate volatility on trade can be better viewed across different trading partners. Importance of bilateral trade cannot be ignored as it shows the independent results of each country.

De Vita & Abbott (2004) examine that US exports are widely associated with foreign income coefficient however price has minimal effect but exchange rate volatility shows significant but different results for Mexico, UK, Germany, Canada and Japan, he analyses that there is a negative association of exports with exchange rate instability for Mexico, Germany and UK but positive for Japan and insignificant for Canada.

RESEARCH METHODOLOGY

Significance of the study depends on the right choice of estimation method for the research. Prior studies used OLS method to analyze the time series data (Hooper & Kohlhagen, 1978; Pozo, 1992) but these studies were unable to produce conclusive results. Time series data sometimes show non-stationary; therefore it may be possible that analysis through ordinary regression give spurious results. This methodological issue has led the

researchers to apply more sophisticated econometric technique i.e. Johansen co-integration, Engle Granger method of co-integration (Chou, 2000; Doğanlar, 2002). Above mentioned techniques require that variable should be stationary at same level if variables are not stationary at same level then most recommended approach is Autoregressive distributed lags (ARDL).

First step to deal with time series data is to check whether data is stationary or not, whether all variables are stationary at level, at first difference or at second difference because it will help researcher to choose appropriate technique for the research. Various tests are used to check the stationary of the series i.e. Dickey Fuller Test, Augmented Dickey Fuller Test, Phillip Perron Test and KPSS. We use Augmented Dickey Fuller Test to check whether data is stationary at I(0) or I(1). Selection of econometric technique depends on results of ADF test. If all variables are stationary at the same level then we can apply co integration. If variables are not stationary at the same level then we can use ARDL approach.

To check the long run relationship of our model which is not stationary at the same level, we use ARDL approach. Autoregressive distributed lags (ARDL) model has been in use since decades but now days it is very important instrument to check the long run relationship in time series data. Basic ARDL model is

$$Y_t = \alpha + \beta_0 Y_{t-1} + \beta_1 X_t + \beta_2 X_{t-1} + \varepsilon_t$$

Where ε_t is error term. This model is called autoregressive because dependent variable is explained by its lagged value and there are also successive lags of independent variables.

Major benefit of ARDL approach is that it can work well even the variables are not stationary at the same level and we can also use different lag lengths of our variables. In order to apply ARDL approach we need to pay special attention on the results of unit root test because if there are some variables which are stationary at I (2) then it can invalidate our model and we remain unsuccessful to fetch the true results. Perform the bound test to check the presence of long run relationship. If value of F-statistics is above the upper value of bound it means that there is long run relationship if F-statistics lies between the bound, it is inconclusive and if it lies below the bound then we cannot say that there is a long run relationship between variables. To check the short run impact we apply error correction

model. Error correction model do not rectify error in another model. ECM describes the rate at which dependent variable come back to equilibrium after a variation in independent variables.

EMPIRICAL MODEL

$$\ln E_x = \beta_0 + \beta_1 \ln RP + \beta_2 \ln Y + \beta_3 V + e$$

Here E_x is volume of exports of particular sectors during limited time period [(Poon, Choong, & Habibullah, 2005), (De Vita, 2004) and (Chowdhury, 1993)]. RP is Relative price, it has different method to measure but according to this research most appropriate method is the ratio of domestic exports price in US \$ / US export price in US \$ (Aftab& Abbas, 2012). Y describes the income; earlier studies documents different ways to gauge income but we use GDP current as a proxy of Income. De Vita, (2004) also use GDP as proxy of income for sectoral analysis. V is the volatility in exchange rates. Prior studies use both real and nominal exchange rates and there is no restriction to use any specific exchange rate. We use nominal exchange rate in our research and volatility is measured by twelve month moving average standard deviation. Based on the above mentioned literature review it is expected that coefficients of $\beta_1 < 0$, $\beta_2 > 0$ and β_3 is unexpected as in past there are mixed results for it.

Secondary data is used to analyze the impact of exchange rate instability on the exports of different products from Pakistan to all over the world. Products under the research are clay & others, cotton, crude chemicals, food processing machinery, glass, grapes, iron & steel bars, meat, paper & board products, petroleum products, rice, textile products and wool. Annual data of above mentioned products from 1981 to 2011 is used in this study. This data will help us to fetch the true picture of the exports of different products from Pakistan and its relationship with exchange rates volatility, relative prices and country's income. Databases of World Bank, International Financial Statistics of International Monetary Fund and World Integrated Trade Solutions are used for our concerned variable. Value of exports and its weights were taken by World Integrated Trade Solution, GDP data was retrieved from World Bank website and monthly data of nominal exchange rates was gathered from IMF

International Financial Statistics (IFS). Relative Price is calculated from the weights and values of exports of Pakistan and United States.

RESULTS

Unit Root Test

TABLE 1

Unit Root Test of all Products by Augmented Dickey Fuller Test

Products	Exports	Relative Price	Income	Volatility
Clay and others	I(1)*	I(1)***	I(1)*	I(0)*
Cotton	I(1)*	I(0)*	I(1)*	I(0)*
Crude Chemicals	I(0)***	I(1)*	I(1)*	I(0)*
Food Processing Machinery	I(1)*	I(1)*	I(1)**	I(0)*
Glass	I(1)*	I(0)**	I(1)**	I(0)*
Grapes	I(1)**	I(1)*	I(1)*	I(0)*
Iron and Steel Bars	I(0)*	I(0)*	I(1)*	I(0)*
Meat	I(1)**	I(2)*	I(1)*	I(0)*
Paper and Board Products	I(1)*	I(0)**	I(1)*	I(0)*
Petroleum Products	I(1)*	I(1)*	I(1)*	I(0)*
Rice	I(1)***	I(0)*	I(1)*	I(0)*
Textile Products	I(1)*	I(0)*	I(1)*	I(0)*
Wool	I(0)***	I(1)*	I(1)*	I(0)*

*, ** and *** denotes 1, 5 and 10% significance

We apply Augmented Dickey-Fuller test to check whether data is stationary or not. I (0) describes that variable is stationary at level while I (1) depicts the stationarity of the series at first difference. We check the stationarity at 1, 5 and 10 percent significance level. Cotton products show that value of exports and income is stationary at first difference while relative price and exchange rate volatility is stationary at level. All variables for iron and steel bars

are stationary at level except income which is stationary at first difference. The above mentioned table shows the stationarity for clay and others, crude chemicals, food processing machinery, glass, grapes, meat, paper and board products, petroleum products, textile products and wool.

Bound Testing Approach

TABLE 2
Bound Testing Approach

Products	F	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
Clay and others (3,0,0,0)	15.70*	4.38	5.61	3.22	4.38	2.71	3.80
Cotton (1,0,1,2)	6.21*	4.38	5.61	3.22	4.38	2.71	3.80
Crude Chemicals (0,0,0,2)	2.81	4.38	5.61	3.22	4.38	2.71	3.80
Food Processing Machinery (1,2,1,0)	5.14**	4.38	5.61	3.22	4.38	2.71	3.80
Glass (1,0,0,2)	9.53*	4.38	5.61	3.22	4.38	2.71	3.80
Grapes (1,0,0,0)	28.68*	4.38	5.61	3.22	4.38	2.71	3.80
Iron and Steel Bars (1,2,0,2)	14.99*	4.38	5.61	3.22	4.38	2.71	3.80
Meat (3,1,0,0)	22.55*	4.38	5.61	3.22	4.38	2.71	3.80
Paper and Board Products (1,0,0,0)	15.49*	4.38	5.61	3.22	4.38	2.71	3.80
Petroleum Products (1,0,0,3)	41.55*	4.38	5.61	3.22	4.38	2.71	3.80
Rice (0,0,0,0)	0.754	5.31	6.41	4.06	5.72	3.48	4.46
Textile Products (1,0,0,0)	72.93*	5.31	6.414	4.066	5.719	3.484	4.458
Wool (1,3,0,0)	8.80*	4.38	5.615	3.219	4.378	2.71	3.80

In order to check the existence of long run relationship we developed the null hypothesis that there is no relationship between dependent variable and explanatory variables. Null hypothesis is tested using bound testing approach. Calculated value of F-statistics is compared with upper and lower bounds devised by Narayan (2005). If calculated value is above the upper bound it shows the existence of long run relationship and we reject our null hypothesis of no relationship. If it falls below the lower limit then we cannot reject our null hypothesis and if it lies between lower and upper bound then it is inconclusive. From above table it is found that clay & others, cotton, glass, grapes, iron & steel bars, meat, paper & board products, petroleum products, textile and wool has long run relationship at 1 percent significance while food processing machinery shows relationship at 5 percent level of significant. Crude chemical is in between the upper and lower bound for 10 percent and rice has no relationship even at 10 percent. F-statistics for clay & others, cotton, crude chemicals, food processing machinery, glass, grapes, iron & steel bars, meat, paper & board products, petroleum products and wool is checked with intercept and no trend but F-statistics for textile products is checked with intercept and trend table by Narayan (2005).

Long Run Estimation

TABLE 3
Long Run Estimation

Products	Intercept	Relative Price	Income	Volatility
Clay and others (3,0,0,0,)	-43.98* (9.29)	0.101 (0.19)	2.255* (0.37)	-0.107 (0.07)
Cotton (1,0,1,2)	45.13*** (21.91)	0.077 (0.74)	-1.135 (0.94)	0.153 (0.34)
Food Processing Machinery (1,2,1,0)	-59.23*** (30.13)	-0.489 (0.32)	3.045** (1.22)	-0.641** (0.29)
Glass (1,0,0,2)	-43.59 (32.97)	-0.708*** (0.37)	2.120 (1.36)	0.429*** (0.23)
Grapes (1,0,0,0)	-54.37** (20.41)	4.421 (2.49)	2.796* (0.84)	-0.297** (0.14)
Iron and Steel Bars (1,2,0,2)	-157.86 (195.68)	10.697 (15.82)	6.941 (7.83)	0.778 (2.55)
Meat	-104.02* (20.41)	-2.153** (0.37)	4.775* (0.84)	-0.129*** (0.14)

Products	Intercept	Relative Price	Income	Volatility
(3,1,0,0)	(8.55)	(0.843)	(0.34)	(0.07)
Paper and Board Products	-61.16*	-1.007**	3.027*	-0.114
(1,0,0,0)	(16.06)	(0.43)	(0.64)	(0.12)
Petroleum Products	-35.00*	5.964	2.122*	-0.348**
(1,0,0,3)	(9.03)	(1.95)	(0.36)	(0.13)
Textile Products	57.40	-0.333	-1.695	-0.007
(1,0,0,0)	(43.65)	(1.63)	(1.84)	(0.07)
Wool	32.51*	-2.201	-0.790	0.022
(1,3,0,0)	(9.29)	(1.61)	(0.36)	(0.07)

*, ** and *** denotes 1, 5 and 10% significance

In this table we report the results of all estimated equations for exports. We hereby found that all variables are not significant for every products, relative price is the ratio of per unit exports price of Pakistan with per unit exports price of United States in US \$. Glass, meat and paper & board products show that relative price affects negatively. It means our prices for these products are higher than the prices of US which makes our products less competitive as compared to the products of United States and all other products show insignificant positive and negative signs. Food processing machinery, meat, grapes, and petroleum products are negatively affected by exchange rate fluctuation but glass shows significant positive impact. Clay and others, crude chemicals show insignificant negative results and cotton, iron & steel bars and wool show insignificant positive results for exchange rate instability. Almost all the products show that with an increase in income, exports of products also increase specially clay & others, food processing machinery, grapes, meat, paper & board products and petroleum products show significant positive impact on exports.

Short Run Estimation through Error Correction Model

TABLE 4

Short Run Estimation by Error Correction Model

Products	C	Δ RP	Δ Y	Δ Volatility	ECM(-1)
Clay and others	-34.75**	0.08	1.78**	-0.08	-0.79*
(3,0,0,0,)	(15.25)	(0.14)	(0.72)	(0.06)	(0.25)

Products	C	Δ RP	Δ Y	Δ Volatility	ECM(-1)
Cotton	10.98	0.02	6.29**	0.059	-0.24
(1,0,1,2)	(7.30)	(0.18)	(2.59)	(0.03)	(0.17)
Food Processing Machinery	-35.79	0.16	-7.29	-0.39*	-0.60*
(1,2,1,0)	(18.46)	(0.08)	(4.83)	(0.11)	(0.19)
Glass	-27.49	-0.44**	1.34	-0.19***	-0.63*
(1,0,0,2)	(22.24)	(0.21)	(0.94)	(0.10)	(0.15)
Grapes	-20.68	1.68	1.06***	-0.11***	-0.38*
(1,0,0,0)	(12.28)	(0.82)	(0.56)	(0.059)	(0.16)
Iron and Steel Bars	-16.14	1.21	0.71	-0.20***	-0.10
(1,2,0,2)	(15.29)	(0.42)	(0.65)	(0.11)	(0.14)
Meat	-127.00*	-0.72	5.83*	-0.16***	-1.22*
(3,1,0,0)	(26.76)	(0.83)	(1.21)	(0.09)	(0.25)
Paper and Board Products	-42.97*	-0.71**	2.13*	-0.08	-0.70*
(1,0,0,0)	(0.16)	(0.31)	(0.57)	(0.08)	(0.16)
Petroleum Products	-17.81**	3.03	1.08*	0.06***	-0.51*
(1,0,0,3)	(6.67)	(0.60)	(0.34)	(0.03)	(0.13)
Textile Products	12.83	-0.07	-0.38	-0.001	-
(1,0,0,0)	(11.99)	(0.37)	(0.47)	(0.015)	0.22*
Wool	17.39***	1.89	-0.43	0.012	-0.53*
(1,3,0,0)	(8.81)	(0.63)	(0.26)	(0.04)	(0.18)

Error correction model explains the speed of adjustment of short run variation in long term relationship. In this table ECM of all products is reported that shows the percentage of disequilibrium which is adjusted annually. For clay & others 79 percent disequilibrium is adjusted in next year. Cotton, food processing machinery, glass, grapes, iron & steel bars, paper & board products, petroleum products, textile products and wool show that 24, 60, 63, 38, 10, 70, 50,22 & 53 percent disequilibrium is adjusted in next year while cotton and iron show insignificant results.

CONCLUSION

This research attempts to uncover the relationship of sectoral exports of Pakistan with relative price and exchange rate volatility. Purpose of this research is to come up with the results of individual sectors whether volatile exchange rates are unfavorable for all sectors or it has different relationship with different sectors. The main purpose of this research is to

judge whether relative prices supports our exports or not. Glass, meat and paper & board products show that relative price affects negatively to exports so Government should make policies to strengthen the exports of these three products. Government can provide subsidies on these products in order to boost up the exports and make these products competitive in international market. Under the shadow of our results we conclude that exchange rate volatility has significant negative relationship with the exports of food processing machinery, grapes, meat and petroleum products so government needs to be focused on it when exchange rate are highly instable. Iron & steel bars show short run negative impact of exchange rate however this impact is adjusted in the long run. By providing subsidies government can boost up the exports of these products. Exports of all other products show insignificant negative and positive connection with exchange rate fluctuation which depict that although there is some negative and positive relationship but these impact are unable to affect the exports. Income has positive relationship with exports which shows that with an increase of an income exports of country also increase. Clay & other, food processing machinery, grapes meat, paper & board products and petroleum products show significant positive results while all other sectors show insignificant mixed results.

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