# Exports of Pakistan in European markets (EU27) :A Constant Market Share Analysis

Arsalan Ahmed, Dr Shahida Wizarat

**Abstract**— In the present day scenario of reductions in tariff levels and non-tariff barriers, rising trade deficit and falling reserves are major economic issues for economies like Pakistan. The aim of this study is to analyze the Exports of Pakistan in European markets (EU27) with respect to global economic conditions by using the methodology of Constant Market Share (CMS) analysis and suggest policies that can increase exports thus increasing foreign exchange for the economy. The CMS technique is being used to separate the impact emanating from the world trade effect, the commodity composition effect, the market distribution effect and the competitiveness effect. Panel data is used for the period 2003 to 2012 (yearly). All the data have been collected from a published source of the International Trade Centre (ITC).

**Index Terms**— Exports, Pakistan, EU, International Trade, Competitiveness, CMS, Growth

## 1 INTRODUCTION

IN the context of the current global economic scenario it is widely known that "The level of exports of a country represents an indicator of economic development" (Bhagwati 1973). A positive and significant correlation between exports and economic growth has been observed (Dutt and Ghosh 1996) . Muhammad and Saeed (2005) found a highly significant correlation between the Gross Domestic Product and exports in Pakistan for the period of 1970 to 2004, and a non-significant correlation between the growth of Gross Domestic Product and the growth of exports. They also suggested a positive Granger causal relationship from export to economic growth in the long-run. Their study rejected the hypothesis that exports and GDP are not co-integrated. For a good economic stability a good Export growth is an important ingredient, Exports growth not only related to the economic stability it's also play a key role in the distribution of income and wealth in a country. If there is a Fluctuation in export earnings for a country it produces uncertainties in an economy which lead to then negative effect on the level and efficiency of investment in the country and also increases the inflation, causes the result as negative impact on economic growth. Regardless of what commodities a country exports, raw materials or finished goods, exports of the commodities provide a strong pillar to the international trade. Exporting some specific goods and services to the international markets supports the country to establish a specific economic environment that increases demand and production of that commodity. Currently, due to the importance of exports at internationally, countries are integrating exports growth objectives in their foreign policy, the countries are allowing favorable trade agreements with several nations may be with them which are mutually useful to all parties.

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Therefore, government policies are designed to encourage expansion in exports by using various incentives such as, export subsidies, tax holidays etc. Promoting an export oriented economy has several rewards, but in literature it is also found the exports with all its positive impact, it is quite a vulnerable thing. Due to numerous factors, such as a steep downfall in the demand of the entire world market, unpredictable rise and fall of the foreign exchange market, new technologies, and decreasing mounts of production. So it's necessary for the exporting countries to increase economic activity through human capital and technology improvements and diversify its products to new foreign markets to absorb the subsequent increase in supply.

### 1.1 World`s Exports

In 2012the world has been experiencing an export's value of 18 trillion US$. Figure.1 shows that the in the last ten years (2001-2012) the world exports has been jumped from 6.12 trillion US$ to 17.98 trillion US$ with an increasing rate of 18%, this high increasing rate of exports shows that the in 20th century across the globe , countries are focusing on their exports at the large magnitude.

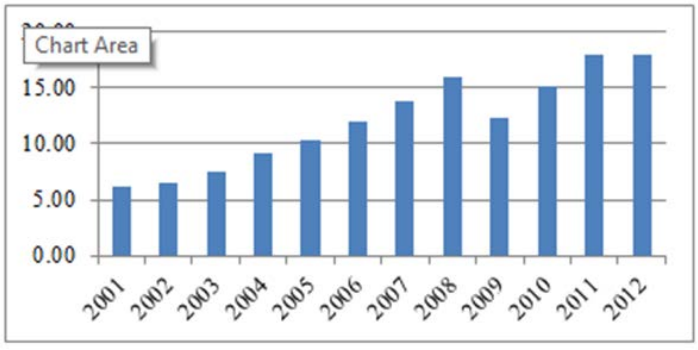


Figure 1: Total Value of World`s Exports (U$ Trillion)

Accoeding to the Figure 2 among the last ten years 2003-2004 have the highest export growth of about 21.2%, while 2008-2009 have -22.9% due to the global crises. Also since 2011 the growth of exports is stagnant at 18 trillion US$.

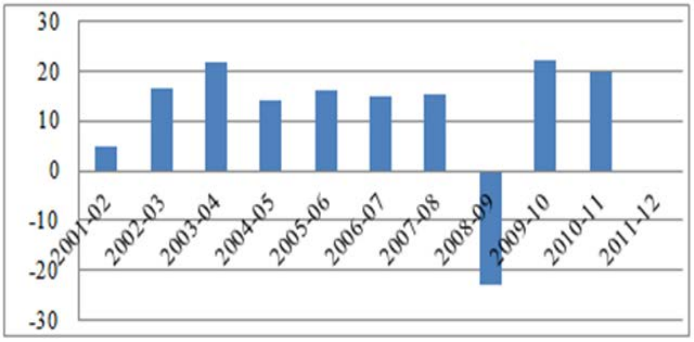


Figure 2: Percentage Change in Total Value Of World`s Exports

Top 10 exporters (2012) of the world include China (11.4%), United States of America (8.6%), Germany (7.9%), Japan (4.4%), France (3.1%), Netherlands (3.1%), Republic of Korea (3%), Russian Federation (2.9%), Italy (2.8%) and Hong Kong (2.7%). Internationally the total share of top 10 exporting countries is more than 50% of total world exports. In the recent Era, nations like China and Japan are having a greater share in world export, due to very strong and potent export industry, they had captured the this large world exports share because of their ability to meet global demands for cheap export goods.

### 1.2 Export`s Growth Of Asian Region

Asia is the largest continent in the world, currently aggregate exports of Asian countries is approximately 7.2 trillion US$ which is 40% of total world exports. Asia has been relying mostly on exports to the advanced economies. Figure 3 shows that in the last twelve years (2001-2012) exports increased from 1.79 trillion to 7.22 trillion reflecting a growth rate of 25% annually.

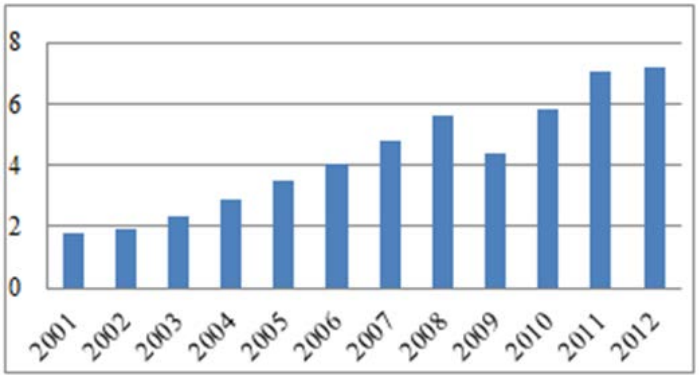


Figure 3: Total Value of Asian Exports (US$ Trillion)

Asia experienced the highest growth rate of 33% in 2009-10 due to increase in exports from China, while in 2008-09 Asia faced a negative growth rate of -22.38 due to the global economic crisis, export led growth model led to enormous expansion and economic prosperity in these economies. China captured a large share of the Asian commodity market with a share of 28% of total Asian exports, India is also on the way to becoming a strong trading partner as its exports to Malaysia, Vietnam and Indonesia are growing significantly. In 2012 the top exporters of Asia (with their share in total Asian exports) are China (28.25%), Japan (11.07%), Republic of Korea (7.59%), Hong Kong (6.83%), Singapore (5.65%), Saudi Arabia (5.06%), Chinese Taipei (4.18%), India (4.02), Thailand (3.19%) and Malaysia (3.14%).

### 1.3 Export`s Growth Of South Asia Region.

South Asia is the Southern region of the Asian continent, and has historically remained attracted to the rest of the world for trade activities, due to the availability of seaports in South Asia. In 2012 total exports from South Asian countries are to the tune of US$ 351 billion which is 1.6% of total world exports. South Asian countries established the South Asian Association for Regional Cooperation (SAARC), the objectives of which include promotion of exports in the Southern Asian region. Figure 4 shown that in the last twelve years (2001-2012) exports from South Asia increased from US$ 49 billion to US$ 351 billion reflecting a growth rate of 55% annually. South Asia registered the highest growth rate of 38% in 2002-03, while in 2008-09 Asia faced a negative growth rate of -3.51% due to the global economic crises. There are four major exporting countries in South Asia. India is the leading exporter with an export share of 83% of total exports, while both Pakistan and Bangladesh have 7% share. Other countries have 1% of total exports.

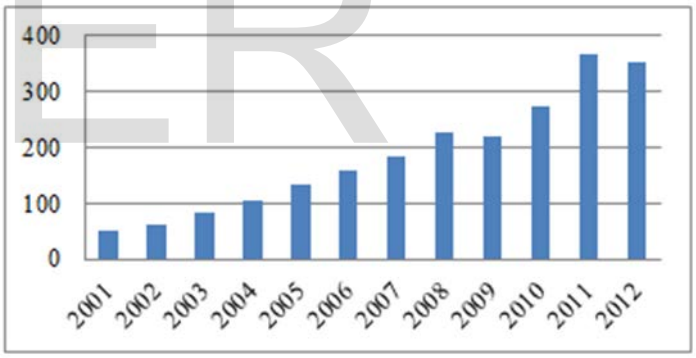


Figure 4: Total Value of South Asian Exports (US$ Billion)

### 1.4 Export`s Growth Performance: Case Of Pakistan

According to Imran and Adeela (2012) globalization had a positive impact on exports from Pakistan. Currently (2012) the total value of exports are around 24 US$ billion and imports 44US$ billion. Figure 5 shows that since 2003 the highest growth rate in exports from Pakistan was 22% in 2009-10, while in 2008-09 Pakistan had a negative growth rate of -13% due to the global economic crises and decreased demand for Pakistani exports to Europe and the USA. Unfortunately, Pakistan has not experienced significant growth of exports as compared with other countries. According to the Pakistan Bureau of Statistic (2012) a trade deficit of US$ 1517 million was recorded in April of 2012.

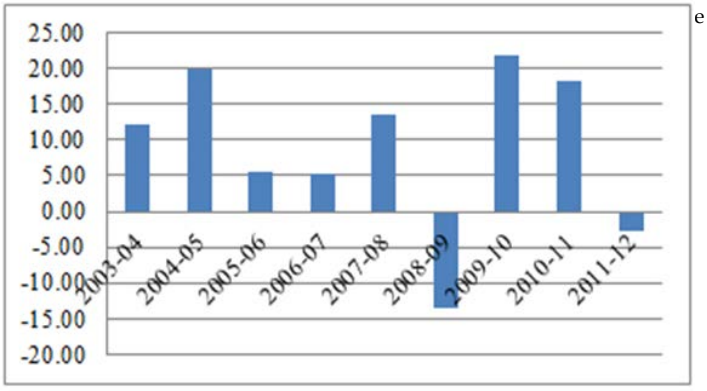


Figure 5: Percentage Change in Exports of Pakistan

Historically, from 2003 to 2012, Pakistan's balance of trade averaged US$ -818.6000 million (trade deficit) reaching an all-time high of 9.6000 million USD in August 2003 and a record low of US$ -1878.0000 million in October of 2008. Figure 6 presents the trend in Pakistan's exports and imports, reflecting that since 2003 the gap between exports and imports has become wider. Pakistan is a member of several international organizations such as the ECO (Economic Cooperation Organization), SAFTA (South Asian Free Trade Area), WIPO (World Intellectual Property Organization) and WTO (World Trade Organization). Major trading partners of Pakistan are European Union, China, Kuwait, Saudi Arabia, UAE, United States and Malaysia etc.

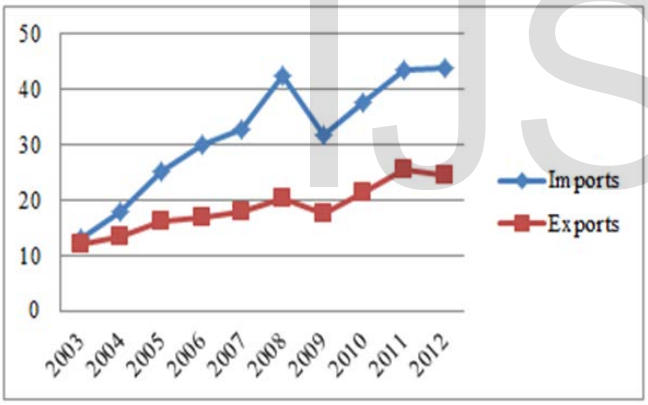


Figure 6: Import/Export Value of Pakistan

Apart from the positive exports growth rate the trades balance of Pakistan (Figure 2) remained negative during the last ten years. Since 2003 trade gap between exports and imports increased from -1.1 US$ billion (2003) to -19.2 US$ billion (2012) reflecting that although exports increased but imports increased at a higher rate, may be due to the reduction of tariff and non-tariff barriers across the world. Pakistan should therefore needs to focus on increasing its exports in order to utilize the benefits of reduction of tariff and non-tariff barriers in the international markets.

### 1.5 Statement Of Problem.

At the world level Pakistan is standing at the 70th position with an export of US$ 25 billion, while its neighboring countries are enjoying much higher positions, such as China (2nd position) and India (17 position). Also in the Asian region Pakistan is not even contributing 1% share in total Asian exports to the world. The case of South Asian exports also shows that Pakistan has only 7% of the total share of South Asian exports. A country like Pakistan which relies heavily on foreign exchange inflows for the sake of neutralizing the adverse pressure on the exchange rate, is dependent on two main sources, remittances and exports. Remittances for the last many years have been a key source of foreign exchange earnings, but are an unstable source and indirectly increase imports through a rise in consumption. Therefore, exports are the vital ingredient for economic growth. But the above facts and figures show that exports from Pakistan are not up to our potential, therefore it is important to analyze exports from Pakistan at the micro level and suggest some recommendation to the Government of Pakistan to enhance exports. A number of studies discussed in literature have analyzed exports of Pakistan, rather analayzing the total exports of Pakistan outwardly this paper is mainly focus on the exports of pakistan to EuropeanUnion (EU27) as it is a major exports market for Pakistan, Although many studies has been conduted the analysis of exports of pakistan to EU27 but none have analyzed Pakistan's exports to the EuropeanUnion (EU27) through the methodology of Constant Market Share Analysis. The present study is the first to analyze Pakistan's exports to the EU27 by using the CMS framework. Table 1 shows bilateral trade between Pakistan and the EU27.

According to Table 1 during the last ten years Pakistan`s exports to EU27 increased from US$ 3.44 billion (2003) to

TABLE 1
BILATERAL TRADE BETWEEN PAKISTAN AND EUROPEAN UNION (EU27)

| Years | Exports of Pakistan to EU27 ( in US$ billions) | % Share of Exports of Pakistan to EU27 in total Exports of Pakistan | Imports of Pakistan From EU27 ( in US$ billions) | % Share of Imports of Pakistan from EU27 in total Imports of Pakistan |
|---|---|---|---|---|
| 2003 | 3.44 | 28.84 | 2.22 | 17.02 |
| 2004 | 4.04 | 30.20 | 2.73 | 15.20 |
| 2005 | 4.27 | 26.61 | 4.42 | 17.63 |
| 2006 | 4.54 | 26.83 | 4.94 | 16.57 |
| 2007 | 4.78 | 26.81 | 4.77 | 14.63 |
| 2008 | 5.21 | 25.69 | 5.76 | 13.60 |
| 2009 | 4.32 | 24.60 | 5.10 | 16.14 |
| 2010 | 5.21 | 24.31 | 4.31 | 11.49 |
| 2011 | 6.34 | 25.00 | 4.55 | 10.44 |
| 2012 | 5.30 | 21.53 | 4.49 | 10.25 |
| 2013 | 6.26 | 24.94 | 4.44 | 10.14 |

US$6.26 billion (2013) while imports from EU27 to Pakistan increased from US$2.22 billion (2003) to US$ 4.44billion (2013) during the same period. Besides, the % share of exports to EU27 in total exports from Pakistan is declined to 24.94 %(2013) from28.84% (2003) also the % share of imports from EU27 in total imports into Pakistan decreased to 10.14 %

(2013) from 17.02%(2003) .

## 2 Literature Review

Following Tyszynski (1951) Leamer and Stern (1970) developed and modified this technique, which was further modified by Jepma (1986). Clipa, P. (2013) studied the competitiveness of Romanian exports by applying the methodology of the constant market share; the study disaggregated change into: the relative market share (VRC), competitiveness effect (CE), structural effect (SE). Rudy and Masaru (2012) employed constant market share (Leamer and Stern; 1970) analysis and revealed comparative advantage indicators to identify the export structure and competitiveness in Indonesia's manufacturing sectors for the period 1987-2008, by using two- to three-digit SITC commodity level data. According to Rudy (2012), after the decline in oil price in the mid-1980s, Indonesia used export promotion (EP) strategy instead of import substitution industrialization (ISI) strategy due to which its natural resource intensive (NRI) exports reached a peak of 68%. The study concluded that world export growth is the major factor that drives Indonesian exports, while there is a continuous negative contribution of the commodity composition effect, indicating commodity composition as the main problem for Indonesian manufactured exports. They also suggested that Indonesia needs to focus on high technology-embedded commodities as compared to other commodities. Finicelli, A. et al. (2008) examined the evolution of export shares of industrial and emerging market economies at disaggregated level for 1985-2003. The study quantified the contribution of the geographical and sectoral specialization through the constant market share analysis approach. In comparison to emerging countries with the industrial countries, the study found out that emerging economies have strong export growth as compared to the industrial countries. The study also shows that the among the emerging economies, China has a strong export growth, increasing its market shares across sectors and destinations due to its competitiveness, while industrial countries benefited from specialization in fast-growing sectors (high-tech) or destinations (Asia). Cheptea. et al. (2005) used Constant Market Share Analysis by incorporating the econometric shift-share decomposition of export growth. They broke the export growth of the European countries into geographical composition, a sectoral composition and competitiveness. The study shows that European countries have lost less market share in high-technology products in developing countries as compared with the developed countries. The study also revealed that in 1995 to 2009 the EU-27 survived the competition from emerging countries better than the US and Japan. Avinger and Nanda (2011) studied international competitiveness of India's manufactured exports using Constant Market Share (Leamer and Stern; 1970) to measure the competitiveness of Indian manufactured exports, (which is about 70 % of total Indian exports) and causes of growth in manufacturing exports for the period 1990-2005. According to Avinger and Nanda (2011) world trade growth has positively supported Indian exports, while the market distribution effect is unfavorable. India therefore needs some diversification with respect to markets. Also manufactured exports of India continued to be competitive, and non-manufactured exports were uncompetitive. Panayiotis. et al. (2010) investigated the performance of Greek exports by Constant Market Share Analysis, using panel data on bilateral trade by product categories and found that the degree of specialization of Greek exports is relatively high as compared to the other countries. Moreover, in commodity categories (mechanical equipment, manufactured metallurgy products, paper and glass etc.) Greece has a competitive potential and can increase its exports by concentrating on non-price factors. In the case of Pakistan Wizarat, Khurram and Kamran (2009) conducted a study by using Constant market share analysis. According to the study the rate of growth of demand for Pakistani exports has not been slower than the average growth rate of world exports. They found world trade effect in 2002-03, Market Distribution Effect positive for all the years except 1998-99-2000, due to income and trade policies in the importing countries. The Commodity Composition Effect (CCE) is positive for all the years' except 2001-2002. Rashid et al (2012) used the firm level survey data and found a shortage of skilled labor, insufficient energy supply, market imperfections and weaknesses in physical infrastructure as the key impediments to achieving export competitiveness. Amjad et. al. (2012) described the problem faced by exporters of Pakistan to utilize the full competitive potential in the international market. The study finds that the main problems are the shortage of skilled labor in textiles, chemicals, and hosiery/bed linen as there is low quality of education in labor, the energy crisis that is, non-availability of cheap fuel, especially electricity that is important for exporters to boost exports, institutional rigidities, market imperfections and weaknesses in physical infrastructure. Shah. et.al. (2011) studied the performance of small and medium enterprises in export growth and its impact on Pakistan's economy. The study used 300 SME units and showed that 45% of rural Sindh has contributed to SMEs, and through proper marketing of their products this quantity can be increased. Furthermore, small medium enterprises exports are concentrated in labor-intensive sub-sectors, so that low wages are an important factor for increasing competitiveness in the national and international markets. The study suggested that policy should be designed in such a way that the benefits of government service should be fully utilized by these SMEs firms. Naseeb Zada (2011) examined the determinants of exports for Pakistan. The study used Generalized Methods of Moments (GMM) and found that exports from Pakistan are sensitive to changes in world demand and world prices on the demand side. On the supply side, price and income elasticities are low. And the demand for exports is relatively higher for countries in NAFTA, European Union and Middle East regions. Safana and Masood (2011) studied the long run equilibrium relationship and the direction of causality between international trade, financial development and economic growth for Pakistan. They found unidirectional causality from international trade to economic growth and from financial development to international trade.

## 3 Methodology

In international trade, exports growth analysis has been per-

formed by many social scientists through various methodologies. The technique of constant market share analysis was first invented and used by H. Tyszynski in his article "World Trade in Manufactured Commodities, 1899-1950" (1951).According to him due to industrialization the demand for manufactured exports increases. After that many studies have been conducted to develop this methodology. In 1970 Leamer and Stern developed and modified this technique, Jepma (1986) modified it further. In Leaner and Stern (1970) the main assumption is that a country`s export share in the world market should remain unchanged over a one year period. The analysis is performed by decomposing total export growth performance in four categories; first, the world trade effect (WTE) which shows how much the overall world export growth affects Pakistan's export growth. Second, the commodity composition effect (CCE) which analyses the concentration of exports goods. Third, the market distribution effect (MDE) which measures the concentration and diversification of Pakistan's exports with respect to markets. And fourth, the competitiveness effect (CE) that captures the price effect in international markets for Pakistani exports.

### 3.1 Explanation Of Variables

$X^1$ = Value of Pakistan's total exports in the base year
$X^2$ = Value of Pakistan's total exports in the current year
$X_i^1$ = Value of Pakistan's total exports of commodity (i) in the base year
$X_i^2$ = Value of Pakistan's total exports of commodity (i) in the current year
$X_{ij}^1$ = Value of Pakistan's total exports of commodity (i) in the base year to country (j)
$X_{ij}^2$ = Value of Pakistan's total exports of commodity (i) in the current year to country (j)
r: percentage increase/decrease in total world exports from the base year to the current year
$r_i$: percentage increase /decrease in world exports of commodity (i) from the base year to the current year
$r_{ij}$ : percentage increase/decrease in world exports of commodity (i) to country j from the base year to the current year

### 3.2 The Model

With the division of exports into $i^{th}$ commodities and $j^{th}$ markets, the equation representing the total change in exports from Pakistan can be written as:

$\Delta X_{ij}=X_{ij}^2- X_{ij}^1$

$\Delta X_{ij} =r_{ij}*X_{ij}^1- r_i*X_{ij}^1+X_{ij}^2- X_{ij}^1$

$\Delta X_{ij} =r_{ij}*X_{ij}^1+ ( X_{ij}^2- X_{ij}^1 - r_{ij}*X_{ij}^1)$

Appling Summation to the above equation for aggregating Pakistan's export growth,

$\sum\sum\Delta X_{ij} = \sum\sum r_{ij} X_{ij}^1+\sum\sum( X_{ij}^2- X_{ij}^1 - r_{ij} X_{ij}^1)$

To obtain the world export growth effect on the $i^{th}$ commodity in the $j^{th}$ markets for Pakistan's exports, addition and subtraction of the term r and $r_i$ is being done in equation as A\addition and subtraction of the terms r and ri at the same time does not affect the equation`s equilibrium.

$\Delta X= \sum\sum(r - r - r_i- r_i+ r_{ij} ) X_{ij}^1+\sum\sum(X_{ij}^2- X_{ij}^1 - r_{ij}*X_{ij}^1)$

$\Delta X= \sum\sum(r*X_{ij} - r* X_{ij}^1 + r_i* X_{ij}^1 - r_i* X_{ij}^1+r_{ij}* X_{ij}^1) + \sum\sum(X_{ij}^2- X_{ij}^1 - r_{ij}* X_{ij}^1)$

$\Delta X= \sum\sum(r* X_{ij}^1) + \sum\sum( r_i*X_{ij}-r* X_{ij}^1) + \sum\sum( r_{ij}* X_{ij}^1- r_i* X_{ij}^1 )+ \sum\sum(X_{ij}^2- X_{ij}^1 - r_{ij}*X_{ij}^1)$

$\Delta X= \sum\sum(r*X_{ij}^1 ) + \sum\sum[( r_i -r)*X_{ij}^1] + \sum\sum[( r_{ij}- r_i)*X_{ij}^1 ]+ \sum\sum(X_{ij}^2- X_{ij}^1 - r_{ij}*X_{ij}^1)$

$\Delta X= \sum(r* X_i^1 ) + \sum[( r_i -r)* X_i^1] + \sum\sum[( r_{ij}- r_i)*X_{ij}^1X_{ij}^1 ]+ \sum\sum(X_{ij}^2- X_{ij}^1 - r_{ij}*X_{ij}^1)$

$\Delta X= r*X^1 + \sum[( r_i -r)*X_i^1] + \sum\sum[( r_{ij}- r_i)*X_{ij}^1 ]+ \sum\sum(X_{ij}^2- X_{ij}^1 - r_{ij}*X_{ij}^1)$

The final equation represents the three level analyses, where the growth of Pakistan's exports has been divided into four parts. The first part is shown by the term $r*X^1$ explains the growth of Pakistan's export with respect to the general rise in world exports, the second part represented by the term $\sum [( r_i -r)*X_i^1]$ shows the commodity composition of Pakistan's export. The third part shown by the term $\sum\sum[( r_{ij}- r_i)*X_{ij}^1 ]$ represents the market distribution of Pakistan's exports and the fourth part is the unexplained residual term, indicating the competitiveness effect. This indicates the differences between the actual export increase and the hypothetical increase if Pakistan had maintained its share of export of each commodity group to each country.

### 3.3 Data Sources and Definition

Data was taken from the International Trade Centre (ITC). ITC has a joint mandate with the World Trade Organization (WTO) and the United Nations and focuses solely on trade development for developing and transition economies. Detailed data on countries export performance, key imports and foreign investment, grouped by product and service categories (HS and BOP) are available on the ITC website (http://www.intracen.org/country/Pakistan/). Among the various trade data classifications, the Harmonized System (HS Code) at 4 digit level will be used for this study. The HS Code is a commodity classification system introduced by the World Customs Organization (WCO) to harmonize international trade by creating a coding system that is globally acceptable. The four digit HS code is broken down into two parts. The first two digits (HS-2) identify the chapter the goods are classified into, e.g. 09 = Coffee, Tea, Maté and Spices. The next two digits (HS-4) identify groupings within that chapter, e.g. 0902 = Tea, whether or unflavored. Also the selected Commodities have 70% share in total exports of Pakistan (see Appendix-A).

## 4. Results and Discussion

The CMS Analysis is applied on a yearly basis from 2003-2012. According to the results (Table.2) World Trade Effect (WTE) was the major factor in the export growth of Pakistan and it also remains positive throughout the period 2003-2012, except 2008-09 when the WTE was negative. The Commodity Composition Effect (CCE) has shown a negative trend for the whole period (2003-12) and its magnitude was less than 1 billion US$, however in 2008-09 the CCE was positive with a high magnitude of 1090 million US$. The results also illustrate that Market Distribution Effect for Pakistan's exports to EU27 fluctuated in both negative and positive directions, but in most of the year for the whole period of 2003-12 it remain negative Conversily, the Competitiveness Effect (CME) on the exports growth of Pakistan showed oscillation in both positive

and negative values; however, in most of the year for the whole period of 2003-12 it remain Positive.

### 4.1 World Trade Effect

According to the results (Figure 7) Pakistan manufactured exports are affected positively by world export growth

TABLE 2

DECOMPOSITION OF TOTAL EXPORTS GROWTH OF THE PAKISTAN`S MANUFACTURED EXPORTS TO EU27 THROUGH CMS ANALYSIS (MILLIONS US$)

| | World Trade Effect | Commodity Composition Effect | Market Distribution Effect | Competitiveness Effect |
|---|---|---|---|---|
| 2003-04 | 2600 | -730 | 61.1 | 83.2 |
| 2004-05 | 1890 | -400 | -194.5 | 222.0 |
| 2005-06 | 2560 | -890 | -2.4 | 7.9 |
| 2006-07 | 2540 | -490 | 177.3 | -184.4 |
| 2007-08 | 2770 | -210 | -71.5 | 184.9 |
| 2008-09 | -4640 | 1090 | -47.4 | -38.6 |
| 2009-10 | 3860 | -310 | -361.1 | 508.6 |
| 2010-11 | 3980 | -360 | 92.3 | 245.0 |
| 2011-12 | 180 | -500 | -636.4 | -123.6 |

throughout the years except 2008-2009. In the consecutive years 2009-10 and 2010-11 Pakistan experienced a healthy world trade effect of 3.86 billion US$ and 3.93 billion US$ respectively. The average value of the world trade effect is around 1.8 billion US$ for the last ten years, while in 2011-2012 the value of world trade effect was about 0.18 billion US$

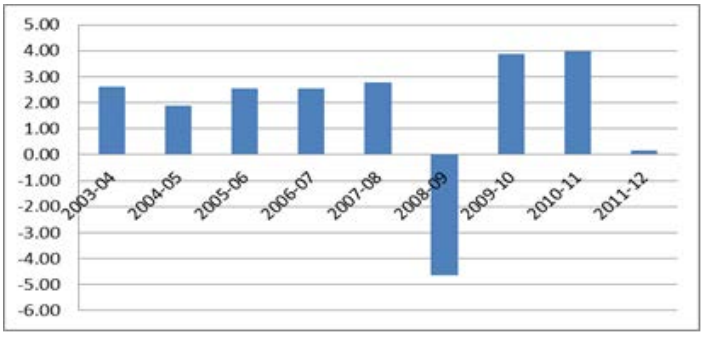


Figure 7: World Trade Effect (US$ Billion)

Our results show that among the four factors (World Trade Effect, Commodity Composition Effect, Market Distribution Effect and Competitiveness Effect) world trade effect is the most dominant. The average value of the world trade effect is around 1.8 billion US$ for the last ten years. At the aggregate level Pakistan`s exports are positively affected by world export growth, since 2003 the value of WTE fluctuated between -4.6 to 4 but this fluctuation mostly remained positive for Pakistan's exports. One major reason for the positive effect of world export growth on Pakistan`s exports may be because the world average growth rate was fluctuating, but was always positive throughout the period.

### 4.2 Commodity Composition Effect

Commodity Composition Effect (CCE) shows concentration in the composition of exported goods. The results of the CMS analysis show that the Commodity Compositions Effect remained negative for Pakistan's exports throughout the period except 2008-2009 (Figure 8). In that year the value of Commodity Composition Effect was 1.09 billion US$. The most negative value (effect) of commodity composition was recorded at -0.89 billion US$ in 2005-06. While in the year 2011-12 there was a negative affect emanating from the Commodity Composition Effect to the tune of -0.50 billion US$.

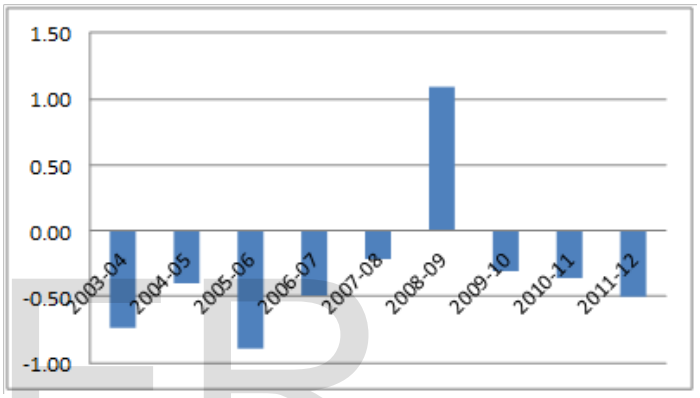


Figure 8: Commodity Composition Effect (US$ Billion)

### 4.3 Market Distribution Effect.

According to the results (Figure 9) MDE for EU27 (European Union), Pakistani exports mainly remained negative throughout the period of 2003-2012. The only positive values were recorded in 2003-04, 2006-07 and 2010-11 with magnitudes of 61.1million US$, 177.3 million US$ and 92.3 million US$ respectively. Aslo The negative MDE of EU27 had a large magnitude of (-) 194.5 million US$ (2004-05), (-) 361.1 million US$

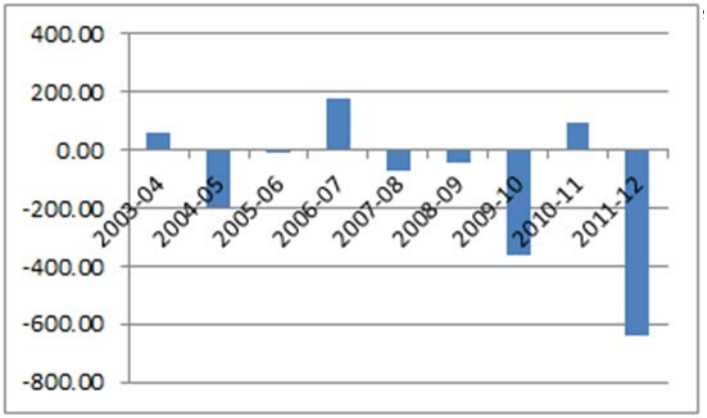


Figure 9: Market Distrbution Effect of EU27 (US$ Millions)

### 4.4 Competitiveness Effect

The results (Figure 10) show that the CME for EU27 was positive with a higher magnitude, while in some years the value

became negative. The positive value of high magnitude for EU27 was recorded in 2004-05, 2009-10 and 2010-11 which were of 222 million US$, 508 million US$ and 245 million US$ respectively. While the high negative value was recorded in 2006-07 and 2011-12, which were (-) 184 million US$ and (-) 123 million US$ respectively. The average share of EU27 in total exports from Pakistan was 26.01%, so the CME for EU27 strongly affects total exports from Pakistan.

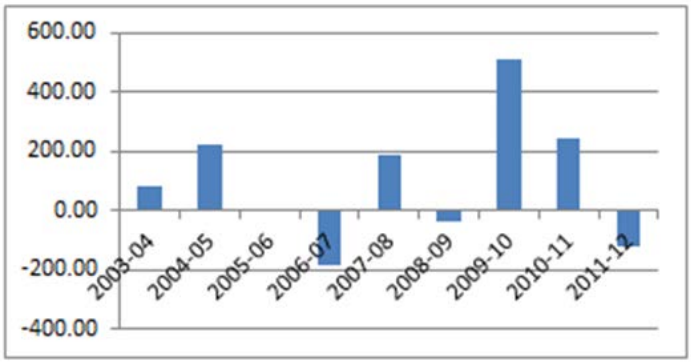


Figure 10: Competitiveness Effect of EU27 (US$ Millions)

## 5 Policy Recommendation

Based on the finding of this research, following policy recommendations are being made to the Government of Pakistan to improve the growth of exports.

1. In order to stimulate exports from Pakistan, the government should diversify exports from lower world demanded products to relatively faster growing world demanded products, for that the required diversification is from the commodities (with HS 4 digits code) such as 1006, 4203, 5205, 5208, 5209, 5210, 5212, 6105, 6203, 6302and 6307 to other commodities (with HS 4 digits code) such as 1001, 1302, 2207, 2610, 6103, 6104 and 9404. It is noted that most of Pakistan's exports under these groups are outputs of agriculture based industries and the demand for these tends to be low so the government should consider the expansion of manufactured based more advanced end-products with higher value addition.

2. The study also showed that commodities 2710 (Petroleum oils, not crude), 6105 (men shirts, knitted or crocheted), 6116 (gloves, mittens and mitts, knitted or crocheted), 7306 (tubes, pipes and hollow profiles of iron or steel, nes) and 7404 (copper waste and scrap) have not only a good share in the exports of Pakistan but their demand in the international market is also stable. The growth of these exports can promote export growth of Pakistan at the aggregate level more significantly.

3. In the case of EU27(See Table 4), Pakistan should focus on the commodity categories '47 (Pulp of wood, fibrous cellulosic material, waste etc.), 17 (Sugars and sugar confectionery), 20 (Vegetable, fruit, nut, etc. food preparations), 30 (Pharmaceutical products), 13 (Lac, gums, resins, vegetable saps and extracts nes), 08 (Edible fruit, nuts, peel of citrus fruit, melons), 53 (Vegetable textile fibres nes, paper yarn, woven fabric), 95 (Toys, games, sports requisites), 48 (Paper and paperboard, articles of pulp, paper and board), 87 (Vehicles other than railway, tramway), 76 (Aluminium and articles thereof), 70 (Glass and glassware), 62 (Articles of apparel, accessories, not knit or crochet) and 52 (Cotton) because these commodities have 68.8% share in total EU27 imports from the world, while Pakistan has only 33.8% share (in which only two commodities), 62 (Articles of apparel, accessories, not knit or crochet) and 52 (Cotton) have 28% share) in exports of these to EU27 (see Table 3).

## 6 Conculsion

1. World Trade Effect (WTE) has a high positive impact on total export growth of Pakistan, while the Commodity Composition Effect (CCE), Market Distribution Effect (MDE) are causing problems for Pakistan's exports growth since their impact on growth has been negative almost throughout the period 2003-12 except for a few years. Moreover, the Competitiveness Effects (CME) has shown both positive and negative impacts.

2. The main factor for the negative CCE is that Pakistan's exports are mainly concentrated among eleven (4 digit disaggregated) major commodities (products), as is shown in Table 3. These eleven commodities (4 digit disaggregated) which contain 45% -50% share of total exports from Pakistan, while at the same time these products have low growth rate in the world as compared to other commodities, which results in a negative Commodity Composition Effect (CCE).

3. Market Distribution Effect (MDE) measures the concentration and diversification of Pakistan's exports with respect to the importing country. In the case of EU27 the MDE is mostly negative. Since the commodities which have 89.3% share in total exports from Pakistan to EU27, are 13.3 % in total EU27 imports from the world (see Table- 5), which shows that the commodities exported by Pakistan do not have great demand in these countries, especially 63 (Other made textile articles, sets, worn clothing etc.), 61 (articles of apparel, accessories, knit or crochet, 62 (articles of apparel, accessories, not knit or crochet, 52 (cotton),42 (articles of leather, animal gut, harness, travel goods), which holds 75% share in total exports from Pakistan to EU27, have only 3.8% share in total imports to EU27 from the world. This shows that the commodities which are exported to the EU27 from Pakistan do not have high growth demand in the EU27 markets, so Pakistan has to diversify its exports.

4. We find that 95 (Toys, games, sports requisites), 08 (Edible fruit, nuts, peel of citrus fruit, melons) have 5.2% share in total imports of EU27 from the world, Pakistan is already expoting these commodities to EU27 but the shre of these commodities in total exports of Pakistan to EU27 is very small (3.7%) so it will be boost the exports significantly if Pakistan concentarte espically on the exports of these commodities.

## APPENDIX-A

HS 4 digits code Commodity Name

6302 Bed, table, toilet and kitchen linens
1006 Rice
5205 Cotton yarn (not sewing thread) 85% or more cotton, not retail
2710 Petroleum oils, not crude
6203 Men's suits, jackets, trousers etc. & shorts
5209 Woven cotton fabrics, 85% or more cotton, weight over 200 g/m2
5208 Woven cotton fabrics, 85% or more cotton, weight less than 200 g/m2
1001 Wheat and muslin
4203 Articles of apparel & clothing access, of leather or composition leather
6105 Men's shirts, knitted or crocheted
6204 Women's suits, jackets, dresses skirts etc. & shorts
'5210 Woven cotton fabrics, less than 85% cotton, mixed with manmade fibers
2523 Cements, Portland, aluminous, slag, super sulfate & similar hydraulic c
7113 Articles of jewelry & parts thereof
5513 Woven fabric of synthetic staple fib (< 85% of such fiber),mixed with cotton (wt.
6307 Made up articles nes, including dress patterns
5201 Cotton, not carded or combed
1101 Wheat or muslin flour
6103 Men's suits, jackets, trousers etc. & shorts, knit/crochet
6109 T-shirts, single and other vests, knitted or crocheted
9018 Electro-medical apparatus (electro-cardiographs, infra-red ray app, sy
6115 Panty hose, tights, stockings & other hosiery, knitted or crocheted
3907 Polyacetal, polyether, epoxide resin, polycarbonate, etc., in primary form
5212 Woven fabrics of cotton, nes
2207 Ethyl alcohol & other spirits (if under natured then higher than 80% by
9506 Articles & equip for gymnastics, athletics, or sports/outdoor games nes
4113 Leather further prepared after tanning or crusting ""incl. parchment-dressed leather"", of
4107 Leather of other animals, o/t leather of hd no 41.08/41.09
1516 Animal or veg. fats, oils & factose, hydrogenated
0303 Fish, frozen, whole
5211 Woven fabric of cotton, less than 85%,mxd with manmade fiber, weight >200
0805 Citrus fruit, fresh or dried
6104 Women's suits, dresses, skirt etc. & short, knit/crochet
5701 Carpets and other textile floor covering knotted
6303 Curtains, drapes & interior blinds
6116 Gloves, mittens and mitts, knitted or crocheted
5514 Woven fabric of synthetic staple fib (> 85% of such fiber), mixed with cotton (wt.
0804 Dates, figs, pineapples, mangoes, avocadoes, guavas
6110 Jerseys, pullovers, cardigans, etc., knitted or crocheted
7306 Tubes, pipes and hollow profiles of iron or steel, nes
2610 Chromium ores and concentrates
0701 Potatoes
9404 Mattress supports; mattresses, quilts, etc.
3004 Medicament mixtures (not 3002, 3005, 3006), put in dosage
7404 Copper waste and scrap
6403 Footwear, upper of leather
6106 Women's blouses & shirts, knitted or crocheted
1302 Vegetable saps & extracts
6306 Tents& camping goods, tarpaulins, sails for boats, etc.
0201 Meat of bovine animals, fresh or chilled

TABLE 3
SHARE OF COMMODITIES IN THE TOTAL EXPORTS OF PAKISTAN

| HS Code | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1006 | 5.3 | 5.1 | 6.8 | 6.8 | 6.4 | 12.0 | 10.1 | 10.6 | 8.1 | 7.6 |
| 4203 | 3.5 | 3.5 | 3.9 | 3.7 | 3.7 | 3.7 | 3.1 | 2.8 | 2.6 | 2.6 |
| ***Aggregate*** | ***8.8*** | ***8.6*** | ***10.7*** | ***10.5*** | ***10.2*** | ***15.7*** | ***13.3*** | ***13.4*** | ***10.7*** | ***10.2*** |
| | | | | | | | | | | |
| 5205 | 8.0 | 8.1 | 7.6 | 8.4 | 7.8 | 5.9 | 7.3 | 7.6 | 7.7 | 8.5 |
| 5208 | 5.8 | 4.3 | 4.5 | 4.2 | 3.7 | 3.8 | 3.1 | 3.1 | 3.1 | 3.0 |
| 5209 | 0.5 | 0.7 | 0.6 | 1.5 | 2.1 | 2.8 | 3.1 | 3.3 | 3.7 | 4.4 |
| 5210 | 3.2 | 4.0 | 4.6 | 3.7 | 3.0 | 3.4 | 2.1 | 1.9 | 2.1 | 2.0 |
| 5212 | 2.4 | 3.7 | 2.8 | 2.4 | 1.7 | 0.8 | 1.0 | 0.9 | 1.0 | 0.9 |
| ***Aggregate*** | ***19.9*** | ***20.9*** | ***20.1*** | ***20.2*** | ***18.4*** | ***16.6*** | ***16.5*** | ***16.9*** | ***17.6*** | ***18.8*** |
| | | | | | | | | | | |
| 6105 | 4.6 | 4.7 | 3.8 | 4.1 | 3.4 | 2.8 | 2.7 | 2.7 | 2.5 | 2.2 |
| 6203 | 3.5 | 2.9 | 3.7 | 3.7 | 4.0 | 3.9 | 4.0 | 4.0 | 3.7 | 3.7 |
| 6302 | 15.6 | 13.5 | 15.9 | 16.1 | 14.4 | 12.5 | 13.6 | 12.3 | 11.2 | 10.2 |
| 6307 | 1.9 | 1.5 | 1.6 | 1.5 | 1.7 | 1.6 | 1.5 | 1.6 | 1.5 | 1.5 |
| ***Aggregate*** | ***25.7*** | ***22.6*** | ***25.1*** | ***25.4*** | ***23.5*** | ***20.8*** | ***21.8*** | ***20.6*** | ***18.9*** | ***17.7*** |

TABLE 4

| HS | Commodities | % share in total exports of Pakistan to EU27 | % share in total imports of EU27 from the world |
|---|---|---|---|
| '47 | Pulp of wood, fibrous cellulosic material, waste etc. | 0.03 | 13.7 |
| '17 | Sugars and sugar confectionery | 0.5 | 11.8 |
| '20 | Vegetable, fruit, nut, etc. food preparations | 0.3 | 9.9 |
| '30 | Pharmaceutical products | 0.3 | 9.2 |
| '13 | Lac, gums, resins, vegetable saps and extracts nes | 0.4 | 4.0 |
| '08 | Edible fruit, nuts, peel of citrus fruit, melons | 1.7 | 3.5 |
| '53 | Vegetable textile fibres nes, paper yarn, woven fabric | 0.1 | 3.0 |
| '95 | Toys, games, sports requisites | 2.0 | 2.7 |
| '48 | Paper and paperboard, articles of pulp, paper and board | 0.1 | 2.9 |
| '87 | Vehicles other than railway, tramway | 0.2 | 2.0 |
| '76 | Aluminium and articles thereof | 0.1 | 1.7 |
| '70 | Glass and glassware | 0.1 | 1.5 |
| '62 | Articles of apparel, accessories, not knit or crochet | 15.7 | 1.5 |
| '52 | Cotton | 12.3 | 1.4 |
| | Aggregate | 33.8 | 68.8 |

TABLE 5

| HS | Commodities | % share in total exports of Pakistan to EU27 | % share in total imports of EU27 from the world |
|---|---|---|---|
| '63 | Other made textile articles, sets, worn clothing etc. | 24.1 | 0.3 |
| '62 | Articles of apparel, accessories, not knit or crochet | 15.7 | 1.5 |
| '61 | Articles of apparel, accessories, knit or crochet | 15.4 | 0.2 |
| '52 | Cotton | 12.3 | 1.4 |
| '42 | Articles of leather, animal gut, harness, travel goods | 7.6 | 0.4 |
| '10 | Cereals | 2.4 | 0.4 |
| '41 | Raw hides and skins (other than furskins) and leather | 2.0 | 0.2 |
| '95 | Toys, games, sports requisites | 2.0 | 2.7 |
| '90 | Optical, photo, technical, medical, etc. apparatus | 2.5 | 0.7 |
| '55 | Manmade staple fibers | 1.6 | 0.2 |
| '39 | Plastics and articles thereof | 1.1 | 0.8 |
| '22 | Beverages, spirits and vinegar | 0.6 | 0.7 |
| '08 | Edible fruit, nuts, peel of citrus fruit, melons | 1.7 | 3.5 |
| '25 | Salt, sulphur, earth, stone, plaster, lime and cement | 0.3 | 0.3 |
| | Aggregate | 89.3 | 13.3 |

## 7 REFERENCES

1. Amjad,.R ,Ghani,.E , Musleh ud Din, and Mahmood,.T, (2012), "Export Barriers in Pakistan: Results of a Firm-Level Survey", The Lahore Journal of Economics 17 : SE (September 2012): pp. 103–134.
2. Bhagwati, J. N., (1973), "The Theory of Immiserizing Growth: Further Application", In Michael B Connolly and Alexander K. Swoboda, (Eds): International Trade and Money. Toronto: University of Toronto Press.
3. Chaptea A., Gaulier G., Zignago S., (2005). "World Trade Competitiveness: A Disaggregated View by Shift-Share analysis". Working Paper No 2005-23, CEPII: Paris.
4. Clipa. P, (2013) "The Analysis of the Competitiveness of Romanian Exports Using Constant Market Share Method", CES Working Papers, 2012, vol. 4(3a), pages 502 511. http://www.cse.uaic.ro/WorkingPapers/articles/CESWP2012_IV3a_CLI.pdf.
5. Dutt, S. D. and Dipak G., (1996), "The Export Growth Economic Growth Nexus: A Causality Analysis". The Journal of Developing Areas, 30: 167–182.export growth, Review of Economics and Statistics 53, 300–304.
6. Finicelli, A., M. Sbracia and A. Zaghini, (2008), "A Disaggregated Analysis of the Export Performance of Some Industrial and Emerging Countries", MPRA Paper, No. 11000.
7. Imran, Adeela And Aqil (2012) "Impact Of Globalization On Exports Of Pakistan", Science Series Data Report Vol 4, No. 4;Apr 2012,ssdr@sciencerecord.com.
8. Jepma. C.J. (1986). "Extensions and Application Possibilities of the Constant Market Shares Analysis". Rijkusiniversiteit, Groningen.
9. Kaur, A. and Nanda, P. (2011), "Competitiveness of India's Manufactured Exports: A Constant Market Share Analysis", Indian Journal of Economics and Business ISSN: 0972-5784, April-Sept, 2011 Vol.10, Issue: 2-3.
10. Leamer, E.E. and Stern, R.M. (1970), Quantitative International Economics, Boston: Allen & Bacon.
11. Mahmood. A., (2005), "Export Competitiveness and Comparative Advantage of Pakistan's Non-Agricultural Production Sectors: Trends and Analysis", Twentieth Annual General Meeting & Conference, January 10-12, 2005,Pakistan Institute Of Development Economics, Quaid-I-Azam University Campus, Islamabad, Pakistan.
12. Naseeb Zada, Malik Muhammad, Khan Bahadar.(2011) "Determinants of Exports of Pakistan: A Country-wise Disaggregated Analysis.".The Pakistan Development Review, Winter 2011,Vol. 50, No.4 Part II.
13. Pakistan Bureau of Statistic, 2012, www.pbs.gov.pk
14. Panayiotis P., Backinezos, C. and Evangelia A. (May,2010) "Export Performance, Competitiveness And Commodity Composition" ISSN 1109-6691(JEL classification codes: C22; F12; F14; O14) Working Papers, Bank of Greece, Economic Research Department – Special Studies Division.
15. Rashid, et. al., (2012), "Export Barriers in Pakistan: Results of a Firm-Level Survey", The Lahore Journal of Economics , Vol. 17, : pp. 103-134.
16. Shah. et.al. (2011) "Performance of SMEs in Export Growth and Its Impact on Economy of Pakistan", International Journal of Business and Management Vol. 6, No. 7; July 2011, www.ccsenet.org/ijbm
17. Safana ,et al (2011), "Financial Development, International Trade and Economic Growth: Empirical Evidence from Pakistan", Romanian Journal Of Fiscal Policy Volume 2, Issue 2, July - December 2011, Pages 11-19.
18. Tyszynski, H., (1951), "World Trade in Manufactured Commodities, 1899-1950", The Manchester School of Economic and Social Studies, Vol.19, pp222-304.
19. Wizarat.S, Iftikhar.K and Kamran A. N (2009), "Major determinants of export growth", Pakistan Business Review, volume 11 number 2, July 2009