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Pakistan's International Competitiveness over Asia and Europe

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Abstract

This study investigates Pakistan's trading competitiveness over her trading partners using Revealed Comparative Advantage (RCA) Index, proposed by Balassa (1965). The study aims to determine competitive position of Pakistan vis-à-vis to eight Asian economies and nine European economies in some sixteen industries from 2003 to 2013.The paper intends to explore new potential markets where Pakistan could have a distinct comparative advantage over her trading partners. The industries in which Pakistan has higher revealed comparative advantage over other countries and is not currently exporting, they would be new potential markets.

Result shows that Pakistan has significantly higher RCA in low value added goods. The criteria are that in those sectors where Pakistan has higher RCA and currently not exporting would be the new potential and profitable markets in the selected goods. It is recommended that Pakistan should diversify exports both in terms of markets as well as nature of goods export and would pursue those markets and sectors that provide comparatively higher margins and have more favorable terms of trade.

Keywords: exports, new markets, Pakistan, revealed comparative advantage

1. Introduction

The share of Pakistan in world merchandise trade has always been very low. Both in terms of dollar value and as a percentage of global trade, it has always been quite insignificant, alarming this dismal trade is still decreasing due to a number of reasons, specifically due to lack of required international specialization level. Pakistan's merchandize trade-to-GDP ratio, the sum of merchandise exports and imports divided by the value of GDP, has reduced to 29.7 percent in 2014 from 32.5 percent in 2011, according to World Bank Data base Pakistan's exports have been stagnant for the last few years, wavering around US$ 24-25billion. Pakistan's share remained stagnant at 0.15 percent. In 2001 Pakistan's share in global textile and clothing trade was 2.2 percent that has gradually declined to 1.66 percent. Similarly, in 2005 Bangladesh's share in global textile and clothing market was less than Pakistan, it is now 2.5 times higher, The dynamics of our exports has one more

pitfall other than that it is dismally low, the basket of exported goods are same and concentrated to the same few countries. The nature and composition of exported goods and their direction would quite irresponsive to the changing competitive advantage and profit margin. Exports are based on low value-added agriculture and manufacturing goods. Agriculture is back-bone of economy contributing 21.4 percent to GDP and employing 45 percent of total labor force. Agriculture contributes major share in exports earnings, directly and indirectly through textile sector and a major source of providing basic raw material to industrial sector. The standard trade theories and empirical studies urges achievement of internationally competitive specialization level with relatively abundant production factor intensive industries.

The liberalization of international trade after WTO in 1995 bought inevitable wave of competition among nations for maintaining and increasing their exports. The specialized, quality oriented and cost-efficient products replaced relatively less specialize domestic goods. International competition urges need for achievement of higher specialization level in goods with comparative advantage to ensure its long run existence.

As a follower of infant-industry argument, Pakistan has maintained highly protective policies in order to protect domestic producers from international competition until late 1990s. These highly protective policies were intends to make and give enough time to less prepared domestic investors to prepare themselves for far-advanced producers of other trading countries, to make innovation and invention to become specialized, to focus on value-addition and tolearn from experience. However not a single objective was achieved through this anti-liberalized policies. These prolong protective polices results in distortion of competitive behavior of domestic production sectors and trade remained confined with few developed economies. The macroeconomic instability and miss managements farther aggravate its productivity and specialization level of domestic production sectors. The expansion of export is preliminary requisites for achievement of required specialization level.

The trade and current account deficit significantly deteriorated after openness of domestic economy for international competition in 2002. Greenaway et. al. (2002) found significant negative impact of trade liberalization on economic growth of developing economies including Pakistan. The imports as a result of liberalization increased significantly, whereas, exports are showing persistently sluggish growth. This dual impact of increasing imports and decreasing exports exacerbate balance of trade.

The main markets for export of Pakistan are Europe and other developed economies, whereas, trade remained significantly lower with regional economies. Traditional trade theories argue achievement of specialization level in production and export, of goods with relatively higher comparative advantage for mutually beneficial trade. Pakistan should investigate comparative advantage in major exports with respect to its trading partners and redefine trade policy based on relative specialization level.

This study therefore investigates Pakistan's comparative advantage in major products over Asian and European countries. The aim is to examine competitiveness of selected selectors and determination of new potential markets based on comparative advantage and actual trade flow. Revealed comparative advantage index proposed by Balassa (1965) is used for determination of relative competitiveness.

This paper comprises four sections. Following introduction in section I, sections II discuss review of selected empirical literature. Section III explains methodology and results, whereas, section IV concludes the study by providing policy recommendations.

2. Literature Review

Fundamental trade theories argue that trade between two countries brings economic prosperity to both countries, if trade is based on comparative advantage. Nations could be better off by exporting commodities with relatively higher comparative advantage and import commodities with relative comparative disadvantage. Accordingly labor abundance nations should specialize and export labor intensive goods, whereas capital abundance nations specialize and export capital intensive goods. David Recardo 1885 presented concept of comparative advantage for mutual beneficial trade, based on labor theory of value. However, he failed to provide practically measureable indices for comparative advantage. Balassa (1965) presented indirect method for calculation of comparative advantage based on export competitiveness. Assuming that export competitiveness reveals differences in relative factor endowment.

Balassa (1979) explained changing pattern in manufactured goods, using revealed comparative advantage. He obtained RCA indices using regression analysis for ascertaining relative impact of physical and labor capital on RCA. Results show that inter country export differential is positively explained by relative change in human and physical capital.

Balassa and Noland (1989) observed change in comparative advantage between Japan and United States, using revealed comparative advantage of 57 primary and 167 manufactured goods for the period of 1967-1983. Result shows that Japan has significantly transformed from unskilled labor intensive to capital intensive goods whereas USA has maintained its specialization level.

Bender and Li (2002) observed revealed comparative advantage of manufacturing sector of various Asian and Latin American countries, for the period of 1981 to 1997, for determination of their respective specialization level. Results showed that despite of strong performance of exports East Asian economies are losing their specialization level with respect to Southeast Asian and Latin American countries.

In Pakistan, there are few notable studies regarding examination of specialization level of exports. Mahmood (2000) examined export specialization of non-agriculture production sectors of Pakistan, from 1990 to2000, using revealed comparative advantage. He explored relative position of different nonagricultural production sectors.

Mahmood and Nishat (2005) observed revealed comparative advantage of footwear industry with respect to China and India. Results showed that Pakistan has comparative disadvantage over selected countries. They argue high growth potential in footwear industry of Pakistan.

Yousuf (2009) investigated past trend and future prospect of competitiveness in manufacturing sector of Pakistan using revealed comparative advantage index. He examined impact of trade liberalization reforms of 1998 on export structure of manufactured goods. The result shows the pattern of specialization level of Pakistan's exports and found that liberalizations reforms have not changed its export composition.

3. Methodology

The revealed comparative advantage introduced by Balassa (1965) pertains relative export performance of particular commodity reveals its comparative advantage. The word reveal is thus derived from idea that commodity trade pattern reveals inter country differences in relative factor endowment.

This study investigates Pakistan's revealed comparative advantage in selected exports of agriculture and manufacturing sector with respect to Asian and European economies, using 4-digit HS data obtained from United Nation commodity trade database. The index presented by Balassa (1965) for measurement of comparative advantage is presented as:

$$RCA = \frac{Exp_{i.P}}{Exp_{t,d}} \Big/ \frac{Exp_{ip}}{Exp_{t,p}} \qquad (1)$$

Where: RCA is Pakistan's revealed comparative in selected exports over selected partner: $Exp_{i.P}$ is Pakistan's export of good "i":$Exp_{t,P}$ Pakistan's total exports, Exp_{ip} is partners' export of commodity 'i', whereas Exp_{tp} is its total exports. The value RCA > 1 indicate that Pakistan has revealed comparative advantage over selected partner, in commodity *'i'* whereas, RCA < 1 indicates comparative disadvantage. The obtained indices are than compared with actual export flow to identify new potential markets for selected exports.

The annual data form 2004 to 2010, used in this studyis taken from World Bank and United Nations (UN) commodity trade database. The data of exports of desire commodities are collected from UN commodity trade database (http://comtrade.un.org), whereas, data of total export is taken from World Development Indicators (WDI) published by 'The World Bank'.

4. Results

4.1 Revealed Comparative Advantage over Asia

The RCA of major exports of Pakistan with Asian economies is presented in table1 and graph in appendix. Result shows that Pakistan has relatively higher revealed competitiveness in lower value added major exports. Raw hides & skin, cereals, salts & sulfur, cotton and textile articles shows respectively higher comparative advantage, whereas, highest disadvantage is observe in ceramics, inorganic chemicals and glasses.

The disaggregated analysis of RCA shows that Pakistan has RCA over Bangladesh overall exports except *inorganic chemicals, footwear and ceramic goods*. Salt and sulfur shows high comparative advantage. It has RCA over Sri Lanka in selected exports expect *inorganic chemicals, ceramics and toys & sports goods*. Raw hides and skin shows high revealed comparative advantage. It has RCA over China in selected exports except *Fruits, inorganic chemicals, organic chemicals, footwear, ceramics and glass*. Highest RCA is observed in raw hides and skins. It has RCA over Hong Kong in selected exports except *fruits, inorganic chemicals, organic chemicals, footwear, ceramics, glass and furniture*. Highest competitiveness is observed in cereals. Pakistan has observed RCA over Malaysia in selected exports, except *fruits, inorganic chemicals, organic chemicals, ceramics, and glass*. Cereals and hides and skins respectively show high specialization level. It has high RCA over selected exports over Japan, *except organic chemicals, inorganic chemicals, glasses and ceramics*. Highest competitiveness is observed in cereals. It has RCA over Philippines in selected exports, except *dairy products, fruits, ceramics, glasses and toys & sports goods*. Highest specialization level is observed in raw hides and skins. It has RCA

over Singapore in selected exports, except *inorganic chemicals, organic chemicals and glasses*. Highest specialization is observed in cereals. Pakistan has RCA over Indonesia in selected exports except *fruits, inorganic chemicals, organic chemicals, footwear, ceramics, and glasses*. Highest RCA is observed in raw hides and skins.

The result shows that Pakistan has higher RCA over competing Asian economies in agriculture and related exports. Cereals, raw hides & skins, and salts & sulfur shows respectively high revealed comparative advantage, whereas, inorganic and organic chemicals, and ceramics shows respectively high disadvantage.

Table 1: Pakistan's RCA over Asian Economies

	Bangladesh	Sri Lanka	China	Hong Kong	Malaysia	Japan	Philippine	Indonesia
Fishes	0.19	0.5	1.7	7.15	3.03	6.98	1.44	0.51
Dairy Products	19.08	6.71	3.4	3.47	1.18	66.57	0.84	1.08
Fruits	9.26	1.63	0.15	0.64	0.29	2.86	0.62	0.24
Cereals	48.76	69.38	45.38	34.34	68.76	52.04	55.17	43.46
Beverages	13.07	16.77	6.59	4.08	3.65	18.6	6.71	16.77
Inorganic Chemicals	0.2	0.83	0.09	0.5	0.39	0.15	1.2	0.21
Organic Chemicals	23.28	3.74	0.14	0.57	0.18	0.09	1.12	0.16
Hides and Skins	24.82	58.77	76.72	72.01	26.25	16.79	69.7	53.26
Cotton	9.36	19.68	62.1	11.25	56.79	75.61	57.73	22.99
Carpets	41.34	9.13	19.55	65.59	91.03	57.9	17.76	29.55
Textile Article	5.06	20.26	0.3	92.23	97.92	94.7	107.55	72.05
Foot Wear	0.7	1.6	0.46	0.28	6.12	63.66	7.49	0.35
Ceramics	0.27	0.1	0.11	0.6	0.44	0.31	0.46	0.26
Glass	8.07	1.5	0.15	0.38	0.23	0.15	0.28	0.22
Salts	277.42	12.3	5.56	63.6	10.26	17.46	13.36	6.19
Furniture	11.08	2.87	0.56	0.3	6.62	2.65	4.66	4.9
Toys and Sports	4.03	0.77	5.08	4.89	11.87	79.35	0.62	3.78

Source: Authors' Calculations

4.2 Revealed Comparative Advantage over European Countries

Pakistan's RCA over European economies also shows similar specialization pattern i.e. high specialization over low values added agriculture goods and disadvantage over value added and manufactured goods. Table 2 and graph in appendix shows Pakistan's RCA over European economies.

Result shows that in Europe, Pakistan has RCA over Belgium in selected exports except *dairy products, fruits, inorganic chemicals, organic chemicals, footwear, ceramics, and glasses*. Highest revealed comparative advantage is observed in raw hides and skins. It has RCA over Denmark and France in selected exports except *dairy products, fruits, inorganic*

chemicals, organic chemicals, ceramics and glasses. High RCA is observed in raw hides and skins. It has revealed specialization level over Norway in selected exports except *fruits, inorganic and organic chemicals, and glasses*, whereas, highest RCA is observed in cereals. It has RCA over United Kingdom, Germany, Austria, Switzerland, Sweden and Hungry in selected exports except *dairy products, fruits, beverages, inorganic & organic chemicals, ceramics and glasses*. Raw hides and skins show highest RCA in selected partners except Sweden in which highest RCA is observed in cereals. Interestingly Pakistan's revealed competitiveness in selected exports is relatively greater in Asia as compare to European economies. Raw hides and skins show highest comparative advantage in both regions due to lack of domestic facility of value addition.

Table 2: Pakistan's RCA over European Economies

	Belgium	Denmark	France	Norway	UK	Germany	Austria	Switzerland	Sweden
Dairy Products	0.2	0.07	0.14	1.65	0.47	0.23	0.24	0.8	0.44
Fruits	0.46	0.03	0.5	0.69	0.61	0.39	0.22	0.23	0.7
Cereals	12.1	14.79	11.42	23.49	39.8	18.2	18.23	50.37	65.1
Beverages	1.19	0.89	0.25	12.16	0.36	1.76	0.56	1.32	1.73
Inorganic Chemicals	0.1	0.74	0.08	0.14	0.12	0.11	0.27	0.26	0.21
Organic Chemicals	0.04	0.2	0.11	0.42	0.08	0.11	0.31	0.32	0.03
Hides and Skins	33.01	56.71	39.92	35.5	97.5	53.31	71.34	71.05	98.97
Cotton	84.1	69.31	80.02	75.75	72.2	53.01	70.08	44.6	78.59
Carpets	1.65	5.62	15.76	667.98	10.7	20.14	14.64	26.38	13.09
Textile Article	65.3	59.49	118.1	58.83	87.6	58.1	92.71	69.19	91.01
Foot Wear	0.84	1.14	1.99	31.73	2.48	2.55	1.08	6.05	5.05
Ceramics	0.4	0.38	0.29	2.25	0.29	0.23	0.31	0.46	1.23
Glass	0.11	0.12	0.11	0.92	0.25	0.17	0.11	0.23	0.25
Salts	4.61	6.1	7.35	4.72	7.09	8.2	6.23	11.96	53.13
Furniture	1.03	13.83	2.07	151.2	17.1	7.9	6.5	10.81	138.31
Toys and Sports	3.84	2.94	4.35	19.67	3.19	3.17	1.43	4.94	6.02

Source: Authors' Calculation

4.3 New Markets for Exports

The RCA indices are used as a guide to identify new attractive markets for exports of goods that are advantages to Pakistan. The obtained RCA indices are compared with actual export flow, if Pakistan has higher RCA in any good with respect to trading partner and it is not exporting, it would be new potential market. The table 3 shows new markets for selected exports.

The result shows that Pakistan has new market for dairy product in Norway, Bangladesh

and Indonesia as it is not exporting dairy products despites of having RCA. Similarly it has new market for Beverages in Sweden, Bangladesh, and Japan. It has new market for footwear in Germany. It has new markets for salts and sulfur in Denmark, France, Norway, Singapore, and Philippines. Interestingly majority of these new markets belong to Asia, which indicates that foreign trade of Pakistan is significantly lower with regional and near economies.

Table 3: New Markets for Exports

Exports	New Markets
Dairy Product	Norway, Bangladesh, Indonesia
Beverages	Sweden, Bangladesh, Japan
Footwear	Germany
Salts	Denmark, France, Norway, Singapore and Philippines

Source: Authors' Calculation

5. Conclusion

Pakistan has significantly higher revealed comparative advantage in low value-added agriculture and primary goods over selected Asian and European economies. It should get benefit to this advantageous position by specialization in these products and economies of scale in production of these goods in the first place and should go for value-addition to reap the full potential of this comparative advantage.

Exports of raw hides and skins show highest comparative advantage due to export of raw leather without value addition. Value addition in raw hides and skins will develop many exports based labor intensive subsidiary industries like footwear and leather wear.

Foreign trade of Pakistanis highly skewed with few countries and concentrated in a few products. Furthermore, its trade with regional economies is very low. It should attempt to integrate with regional economies on priority, increase the flow of trade with them and expansion of trade with developed economies based on RCA differential. Greater integration into regional and near economies is primary requisite for export expansion.

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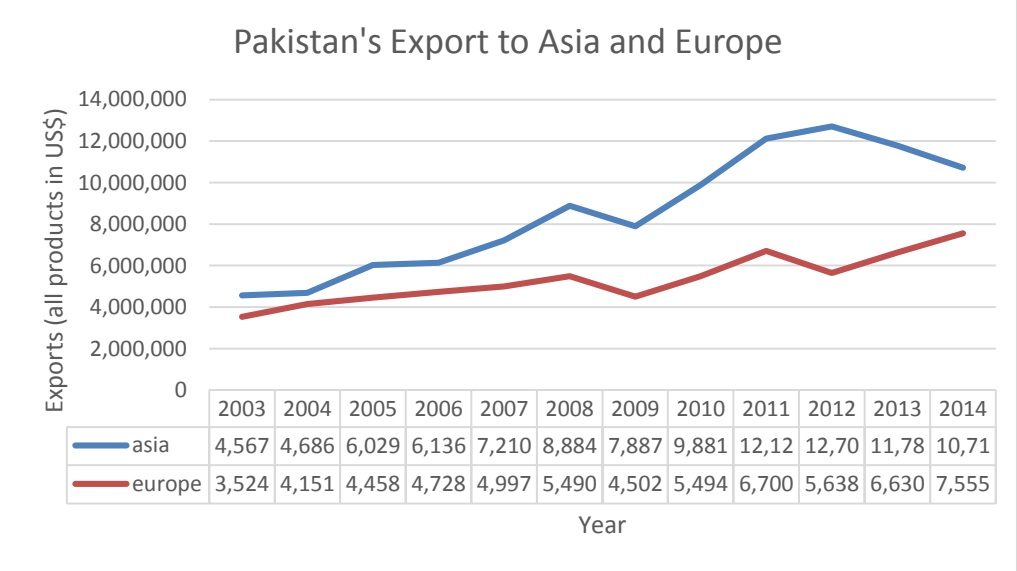
APPENDIX

Table I: Total Export by Economic Categories (Million Rupees)

Year	Total	Primary Commodities	Semi Manufactured Goods	Manufactured Goods
2010-11	2,120,846.70	377,535.80	274,500.40	1,468,810.50
2011-12	2,110,605.50	362,404.40	261,831.40	1,486,369.70
2012-13	2,366,477.80	364,127.00	391,151.30	1,611,199.50
2013-14	2,583,463.20	420,496.30	369,066.10	1,793,900.80
2014-15	2,397,513.00	402,750.30	352,073.70	1,642,689.00

Source: Pakistan Bureau of Statistics

Graph: Trend of Pakistan's Export to Asia and Europe



Source: Authors' Calculation

Table II: Pakistan's Top 10 Exports

Product Groups	Values (US$)	Share in overall Pakistan's Export (%)
Cotton	4,731,369,000	19.1
Other Textiles, Worn Clothing	3,906,465,000	15.8
Knit or Crochet Clothing	2,402,619,000	9.7
Cereals	2,211,315,000	8.9
Clothing (Not Knit or Crochet)	1,984,656,000	8.0
Leather, Animal Gut Articles	742,028,000	3.0
Salt, Sulphur, Stone, Cement	694,237,000	2.8
Oil	647,584,000	2.6
Sugar	439,338,000	1.8
Raw Hides Excluding Furskins	547,508,000	2.2

Source: World Trade Organization