

## **Comparative Advantage of Leather Industry in Pakistan with Selected Asian Economies**

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**ABSTRACT:** The aim of this paper is to analyze the trade specialization in the leather products between some selected Asian economies, with particular focus on Pakistan. For which, a measure of Revealed Comparative Advantage (RCA Balassa Index) is used. The analysis shows that Pakistan has a high comparative advantage in leather products over all the selected economies during the period of study. The paper highlights the problems faced by the leather industry and identifies some immediate policy action to be taken to improve the performance of the leather industry in the light of evidence.

**Keywords:** Revealed Comparative advantage; Balassa Index; Exports; Skill Specialization

**JEL Classifications:** F10; F11; F12; F19

### **1. Introduction**

With the current global integration, the world export patterns are changing fast as a result of reduction in trade barriers and technological advancements. Such increase in the international trade is leading the countries to get productive gains and enjoy the comparative advantage over other countries. Asian economies such as China and India are enjoying a notable growth in changing circumstances across the world. Pakistan also has great potential for higher growth however the political threats, socio economic environment and lack of updated technologies are obstruction in the way of progress.

Some sectors of Pakistan economy have shown a good performance in terms of production and exports. Leather industry, including leather products, is the second largest export earning sector after textiles. Currently, this sector is contributing around \$700 million a year but has the potential to multiply volume of exports with the improvement of quality and diversification in different range of products, specially garments and footwear. Basically, it is a job-oriented sector providing employment to a very large segment of the society besides earning foreign exchange for the country. Currently, Pakistan's leather industry is contributing significantly to the national exports and a major foreign exchange earners. About ninety percent of its products are exported in finished form.

Comparative advantage is the term used to describe the tendency for countries to export those commodities that they are relatively adroit at producing, *vis-à-vis* the rest of the world. In other words, if a country can produce a good at a lower relative cost than other countries, then with international trade, that country should devote more of its scarce resources to the production of that good. Through trade, that country can obtain other goods at a lower price (opportunity cost), in exchange for the good in which it has a comparative advantage. It is possible to “reveal” a country’s comparative advantage using a variety of techniques, as proposed by Balassa (1965).

This paper seeks to determine comparative advantage by using data on international trade to compare exports in leather industry of Pakistan with the rest of the world. It finds the answer to the question that countries that have a comparative advantage in the production of a good should be found

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to export a higher proportion of that good relative to other countries, so, *who has revealed comparative advantage in the global market, Pakistan or China?*

After this introduction, section 2 discusses recent literature on the issue; section 3 presents some facts about the leather industry of the selected economies; section 4 highlights methodology to estimate RCA; section 5 analyses the results. Section 6 concludes and recommends some policy actions.

## **2. Literature Review**

Several studies have been undertaken using the concept of revealed comparative advantage. A majority of these studies use data on export shares. Balassa (1977) has undertaken an analysis of the pattern of comparative advantage of industrial countries for the period 1953 to 1971. Balassa's results show that while the extent of export diversification tends to increase with the degree of technological development a reversal takes place at higher levels. Yeats (1997) studies the possible distortions in trade patterns on account of discriminatory trade barriers. He uses the index of revealed comparative advantage in conjunction with the changes in the regional orientation of exports to identify any apparent inefficiency in trade patterns for the Mercosur group of countries.

The RCA measure provides signal on the movement in a region's comparative advantage. Richardson and Zhang (1999) have used the Balassa index of RCA for the U.S to analyze the patterns of variation across time, sectors and regions. They find the patterns to differ across different parts of the world and for different aggregation levels of the trade data. Differences are due to geographical immediacy of trading partners and per capita income. The influence of these factors varies over time and across sectors. Bender and Li (2002) employed the revealed comparative advantage indices to observe the related changes in export pattern among different Asian and Latin American regions. They examined that changes in the export pattern are associated with shifts in comparative advantage among regions.

Yue (2001) uses the RCA index to demonstrate the fact that China has changed its export pattern to coincide with its comparative advantage and that there are distinct differences in export patterns between the coastal regions and the interiors in China. Akhtar et al., (2008) have analyzed the performance of footwear industry of Pakistan and made its comparison with China and India. The revealed comparative advantage index has been employed to analyze exports of footwear industry classification. Their estimated results highlight the pattern of comparative advantage in the footwear sector for the time period 1996 to 2006. Pakistan's footwear industry shift from disadvantage situation to comparative advantage indicates that there is a potential in this sector for higher growth and the industry can become a source of higher exports earnings. Hanif and Jafri (2006) construct Balassa's Revealed Comparative Advantage (RCA) index for the textile sector of Pakistan. They examine the role of access to external finance on the country's textile exports competitiveness and show that greater access to external finance has a strong positive impact in the improvement of country's textile sector competitiveness.

Utkulu and Seymen (2004) analyzed the sectoral competitiveness and the pattern of trade flows from Turkey to European Union, using different measures of Revealed Comparative Advantage including Balassa Index. On the other hand Batra and Khan (2005) analyzed Revealed Comparative Advantage (RCA) considering structural change across sectors and product using Indian and Chinese data. They employed Balassa's (1965) measure of relative export performance by country and industry.

Another study that used the revealed comparative advantage (RCA) approach by Mahmood (2005) explores export specialization of Pakistan's non-agriculture production sectors during 1990-2000 and that how the relative position of different non-agricultural production sectors in Pakistan revealed comparative advantage. It also identifies those non-agricultural export categories, in which Pakistan is losing, gaining or maintaining its export competitiveness. The above mentioned empirical studies on revealed comparative advantage provide evidence that the literature focuses more on the measurement of the revealed comparative advantage for different sectors of economies. In this study we focus on to do the same for the leather industry of Pakistan.

### 3. Pakistan's Leather Industry: Some Recent Facts and Problems

Export value of leather products in 2009 increased to US\$132.183 million compared to US\$194.193 million in 2002 i.e. an increase of 20%. For India the increase in value is 99% while china's footwear export value grew by 162% in the same period (Table 1).

In the years 2006 and 2009, Pakistan's leather products export value grew by 22.34% and 7.38% respectively. However, in the same years, china's leather products exports growth rate increased by 10.95% and 13.27% whereas India witnessed a 8.13% and 12.44% growth rates respectively in 2006 and 2009 (Table 2).

**Table 1. Exports Performance of Selected Asian Economies in leather Products**

Exports of Leather Products (USD thousands)			
Years	Pakistan	China	India
2002	194,393	17,987,315	2,018,714
2003	151,,005	19,883,291	1,941,820
2004	188,836	23,615,063	2,297,914
2005	154,719	26,862,523	2,546,196
2006	161,322	32,038,616	2,881,437
2007	207,719	35,976,581	3,136,263
2007	122,424	40,855,493	3,545,205
2009	132,183	47,108,796	4,048,891

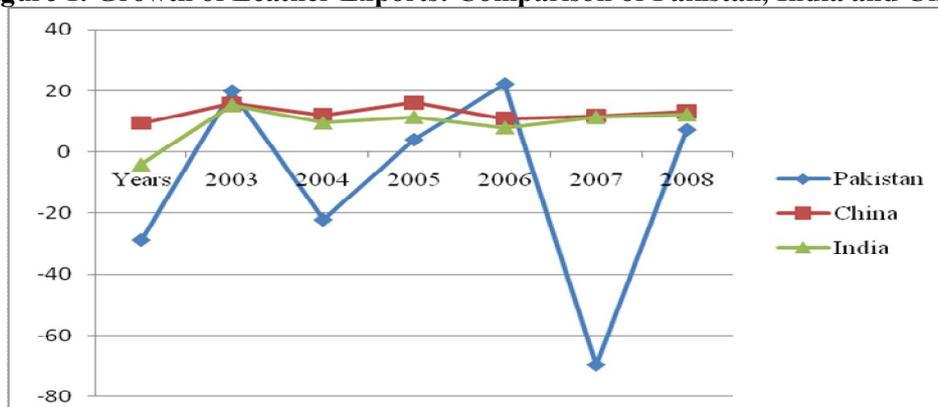
Source: ITC, COMTRADE data

**Table 2. Growth in the Value of leather products Exports**

Growth of exports in value (%)			
Years	Pakistan	China	India
2003	-28.73	9.54	-3.96
2004	20.03	15.80	15.50
2005	-22.05	12.09	9.75
2006	4.09	16.16	11.63
2007	22.34	10.95	8.13
2008	-69.67	11.94	11.54
2009	7.38	13.27	12.44

Source: ITC, COMTRADE data

**Figure 1. Growth of Leather Exports: Comparison of Pakistan, India and China**



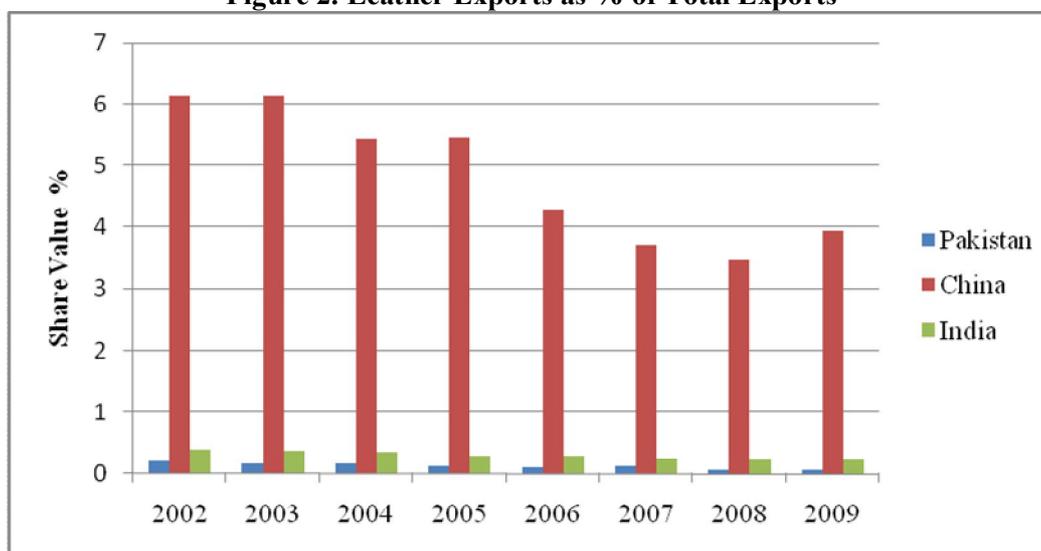
Pakistan’s leather products exports showed negative and positive growth in value from 2002 to 2009 with similar trend in India and China. Pakistan’s leather products exports showed highest growth of 22.34% in 2007 (figure 1). While, India and China’s leather products exports showed highest growth of 15.50% and 16.16% in 2004 and 2006 respectively.

**Table 3. Leather Exports Shares in Total Exports & world’s total leather Exports**

Years	Pakistan		China		India	
	As share of total domestic exports	As share of total world exports (%)	As share of total domestic exports	As share of total world exports (%)	As share of total domestic exports	As share of total world exports (%)
2002	0.20	0.69	6.13	19.83	0.40	2.03
2003	0.17	0.72	6.12	20.66	0.37	2.01
2004	0.17	0.73	5.42	22.11	0.36	2.15
2005	0.13	0.74	5.45	22.63	0.30	2.14
2006	0.11	0.89	4.26	24.87	0.28	2.23
2007	0.13	0.80	3.71	25.50	0.25	2.22
2008	0.07	0.75	3.46	25.82	0.22	2.24
2009	0.07	0.76	3.93	27.75	0.23	2.36

Source: ITC, COMTRADE data

**Figure 2. Leather Exports as % of Total Exports**



The share of Pakistan’s leather exports in the world’s total leather exports is about 0.75% while it is 2.38% for India and 27.76% for China in the year 2009. Leather exports share in Pakistan’s total exports fell to 0.07% in 2008 from 0.21% in 2002. India’s leather exports account for about 0.22% of total exports while for China the same is 3.93% in the year 2009 (figure 2, table 3).

Although the leather and leather products have ample scope for exports in the international market yet the industry was suffering from irritants which are hampering its actual growth. Leather and Leather garment industry of Pakistan is confronted with various challenges to survive in international market. On top of these issues is the use of modern technology for quality products and availability of skilled manpower to cater to the needs of the world market.

Leather garments in Pakistan are made mostly from low grade & medium grade leather. These garments face stiff competition from Chinese & Indian products. Cost of production is also very high

in Pakistan as compared to our competitors like China and India particularly wage differentials and higher energy and inputs prices.

#### **4. Methodology**

The revealed comparative advantage approach is one of the few formal methodologies to measure a country's comparative advantage and disadvantage in a particular industry. Revealed comparative advantage indices (RCA) use the trade pattern to identify the sectors in which an economy has a comparative advantage, by comparing the country of interests' trade profile with the world average. It defines the pattern in comparative advantage by using the trade flows, since this pattern in comparative advantage is revealed by the observed pattern of trade flows, therefore it is called 'revealed comparative advantage'.

To capture the degree of trade specialization of a country, Balassa (1965) suggested the following index of revealed comparative advantage (RCA):

$$RCA_{CL} = \frac{x_{CL}/X_C}{x_{WL}/X_W} \quad (1)$$

- $x_{CL}$ : exports of product  $L$  by country  $C$
- $X_C$ : total exports from country  $C$
- $x_{WL}$  total exports of product  $L$  by rest of the world
- $X_W$ : total exports from world

The RCA index is defined as the ratio of two shares. The numerator is the share of a country's total exports of the questioned commodity in its total exports. The denominator is share of world exports of the same commodity in total world exports. Takes a value between 0 and  $+\infty$ . A country is said to have a revealed comparative advantage if the value exceeds unity. The index is affected by anything that distorts the trade pattern, e.g., trade barriers. On the basis of this index, a country is defined as being specialized in exports of a certain product if its market share in that product is higher than the average or, equivalently, if the weight of the product of the country's exports is higher than its weight of the exports of the reference area. A country reveals comparative advantages in products for which this indicator is higher than 1, showing that its exports of those products are more than expected on the basis of its importance in total exports of the reference area. Major data sources are world development indicators (WDI) developed by World Bank and UN COMTRADE. Time period of the study is 2002-2009.

#### **5. Revealed Comparative Advantages Analysis at Aggregate Level**

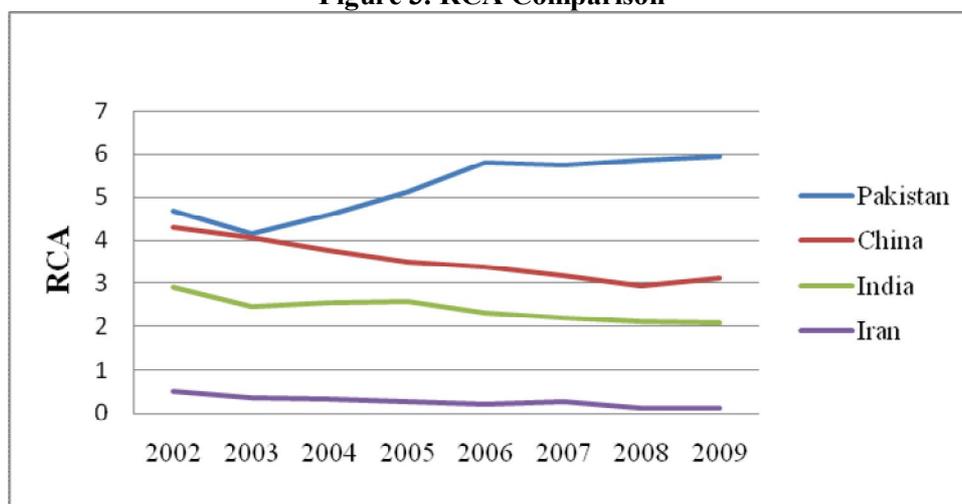
The estimations for the years 2002 to 2009 provide evidence on the movement in the pattern of revealed comparative advantage for Pakistan, China, India and Iran. Pakistan has an increasing movement in comparative advantage in Leather industry. The revealed comparative advantage index is greater than unity ( $RCA > 1$ ) for Pakistan's leather industry and nearly stable over the years. It indicates that Pakistan leather industry has significant potential for growth. It has showed a good export performance that is reflected in changing comparative advantage in this industry. In this study, although we are concerned with the changing pattern in comparative advantage of leather sector in Pakistan, we are also comparing the movement in comparative advantage in leather industry with China, Iran and India. China hold comparative advantage in this sector however China is placed advantageously lower than Pakistan. The RCA indices show that China has comparative advantage in this industry but with the decreasing pattern. India is very much below from Pakistan. India has comparative advantage over rest of the world except Pakistan and China. Iran has no comparative advantage in this sector because its RCA measured through Balassa index is less than unity ( $RCA < 1$ ) for every year.

It clearly shows India and China have comparative advantage with a decreasing pattern of RCA indices. From the estimated results as indicated in table 4 and figure 3, we can assess that Pakistan has potential for higher growth in this sector. As Pakistan has an increasing movement in comparative advantage in leather industry.

**Table 4. Revealed Comparative Advantages Analysis at Aggregate Level**

Year	Pakistan	China	India	Iran
2002	4.68	4.30	2.90	0.52
2003	4.15	4.07	2.47	0.36
2004	4.60	3.77	2.55	0.35
2005	5.12	3.50	2.59	0.27
2006	5.80	3.39	2.32	0.22
2007	5.73	3.18	2.21	0.28
2008	5.86	2.93	2.12	0.13
2009	5.95	3.10	2.09	0.12

**Figure 3. RCA Comparison**



These indicators of RCA are promising and allow us to invest more in this sector to accrue the benefits of this advantage, which may be result of economy of scale, skill specialization and industrial cluster. These results also indicate that Pakistan has gained more comparative advantage in this sector since 2005, whence the Chinese and Indian leather industry has shown comparative disadvantage.

## 6. Conclusions and Recommendations

Leather industry, including leather products, is the second largest export earning sector after textiles. Currently, this sector is contributing around \$700 million a year but has the potential to multiply volume of exports with the improvement of quality and diversification in different range of products, specially garments and footwear. The estimations for the years 2002 to 2009 provide evidence on the movement in the pattern of revealed comparative advantage for Pakistan, China, India and Iran. Pakistan has an increasing movement in comparative advantage in Leather industry. The revealed comparative advantage index is greater than unity for Pakistan's leather industry and nearly stable over the years. There is an immediate need for establishment of a Leather Board in Pakistan which should operate as an independent body and funded by the government from export development fund. Import of machinery and equipment for environmental projects in tanneries should also be allow free from customs duty, sales tax and income tax. Value-added exports like leather garments where there cannot be any further value-addition should be exempt from Export Development Surcharge. Re-export of temporarily imported goods supplied by buyers should be allowed without sight letter of credit or advance payment if supplied as free of cost. The present policy does not provide provision for export of such goods in original and unprocessed form due to cancellation of export order or changes in design/style of the order. In order to give a boost to this major contributor of the national economy, imported tanning machinery and other complimentary goods be given some exemption.

Pakistan's leather industry has also faced a lot of challenges in the recent past, particularly world's concern over child labor, which suddenly affected its output in the early years of this century. Now with new labor laws and regulations, this industry may promise again. Exchange rate is another area which needs stability; exporters should be given due relief as and when exchange rate falls.

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