

India's Leather and Manufactures Export in the Scenario of WTO: An Analysis Trend and Structural Shift

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Trade is considered as the engine of growth. For a developing country like India trade plays an important role for achieving the target of sustainable development. One of the major export articles for India is leather and leather manufactures (India accounts for approximately two percent of the world trade). So it will be prudent in this light to check the present status of India's leather and manufactures export.

In this paper author has considered the problems of the Indian Leather Industry and has suggested the possible solution to these problems. Author has used Poirier's (1974) spline function approach to estimate the growth rate of leather and leather manufactures export during pre- and post-WTO period. Instability in export earnings is measured by using Cuddy-Della Valle (1978) index.

Key Words: leather and leather manufactures export; Poirier's spline function approach; Cuddy-Della Valle Index; pre- and post-WTO phase

JEL Classification: Q17, Q13

Overview

INTRODUCTION

India is recognized as one of the fastest growing countries in the world and in the world economy trade always plays an important role for achieving the target of higher rate of growth. In fact the importance of trade is so much that it is recognized as an 'engine of growth.' In this light it is important to analyse the performance of any country in world market, particularly for a developing country like India. Once India was mainly the exporter of agricultural and allied products but after independence, India has become the exporter of agricultural and allied products as well as industrial and manufacturing products. Particularly after the trade openness there were massive changes in the export structure of India. After the WTO agreement the trade structure of India had changed significantly.

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The major exported articles for India have now become manufactured goods, gems and jewellery, handicrafts. Among the manufactured goods, the most important are leather and leather manufactures, engineering goods and textile and textile products. So it will be prudent to analyse the effect of WTO on the export of leather and manufactures.

RATIONALE OF STUDY

India accounts for approximately two percent of the world trade in leather and leather products. In order to have a first track growth in the international business India's Council for Leather Export (CLE) has taken a number of initiatives. For achieving this objective an action plan has been chalked out by the miracle trios, namely, The Central Leather Research Institute (CLRT), the Fashion Technology and Development Institute (FTDI) and CLE. The action plan has not only taken care of the growing international demand but also suggested measures to face Indian leather industry's major competitors in Asia, like, China, Indonesia, Korea and Taiwan. At the same time, CLE is trying to make a dent in new markers. Focus countries include the Latin American countries, Israel and Japan. Japan is the fifth largest importer of leather and leather products in the world. CLE aims at raising India's share in Japan's total import of leather and leather products. Italy is yet another favoured export destination for Indian leather industry. Through joint ventures with Indian companies, CLE has helped bring in Italian leather footwear manufacturers to set up export production bases in India. India is the second largest footwear producer in the world. It accounts for 20% of India's total export of leather and leather products. Major markets include the UK, USA, Germany, Italy, France, Netherlands, Canada, Sweden and Russia. Around 64% footwear exported from India goes to UK, USA and Germany.

The Indian leather industry is the 8th largest foreign exchange earner and has constantly been upgrading structure of its exports from raw hides and skin to value added products and is presently achieving 80% of total exports in finished leather products. The footwear segment is the pride of India's leather industry, and is ranked second in the world next to China. Record shows 60% increase in India's footwear production in the last five years. India mainly concentrated on gents' footwear production rather than women's footwear in case of footwear production. From April–February 2008–2009 the export of leather and leather products touched US \$3337.33 million against US \$3248.73 million in the corresponding period of last year. But like any other industry of India leather

industry also suffers from some problems. The export of leather and leather goods touched \$1.24 billion in 2007–2008, went down to \$959 million in 2008–2009 and is expected to further reduce to \$833 million in 2009–2010, showing a reduction of \$407 million in two years. The falls in exports were 21.39% during 2008–2009 and 18% in 2009–2010. The export of leather decreased 7.57%, leather garments declined 12.53%, leather gloves 37% and export of other leather products declined to about 31.60%. Presently, the leather industry is facing several problems such as:

1. Government failed to make a strategy to keep balance between the demand for livestock product for the citizens and for industry and exporters. As the number of animals did not increase to meet the domestic demand, the Government allowed export of animals, and thus smuggling of livestock is also going on.
2. The main reasons for the decline in export are increase in cost of production, high bank rate and law and order situation. The skin supply has also reduced to 20%. Leather exports declined from \$1.24 billion in 2007–2008 to \$900 million in 2009–2010. Export of sausage casings, made from animal intestines, earned \$25 million to \$30 million per annum, is also reducing, due to decreasing livestock availability.
3. The tanning industry also faced the problem of funds because the funds allocated under the Strategic Trade Policy Frame Work (STPF) 2009–2012 and notified under Trade Policy 2009–2010 were not being released.

India's export of leather and leather goods have increased over the last five years. Exports rose from \$1.88 billion in 2002–2003 to \$3.48 billion in 2007–2008, showing an annual growth rate of 11.91%. But in 2008 the growth rate decreased to 1.5% with exports adding up to just \$3.53 billion in 2008–2009. The target for 2009–2010 was fixed at \$4 billion, but with the huge cancellation of orders especially from the US and EU which are the top markets it is feared that there would be a 25% fall in export. Beside this, India projected an export target at \$5 billion for 2011–2012 and of \$7 billion for 2013–2014, with domestic sales of \$5 billion. In fact, leather is the eighth largest foreign exchange earner for India.

Indian leather industry is moving towards an unprecedented crisis with the slowdown of global economy. The leather export sector which witnessed a growth 20 percent in the first half of 2009 got dented by the global slowdown in the subsequent months. The main reason behind this was the decline in orders from western markets, mainly, the US and UK.

The two biggest markets for Indian leather export firms are US and European Union, which stand at 65 percent and 25 percent respectively in terms of India's export share of leather products.

The post-liberalization era has opened up enough opportunities for the Indian leather industry. India's share in the global trade in leather is around 3 percent and that of China is 20 percent. The government of India has also been making significant effort to promote rapid advancement of the industry. With generous export earnings, employment potential, and growth rate, the Indian leather industry turns out as the 10th largest sector among the Indian manufacturing sector. The Leather Industry in India occupies a significant place in Indian economy. Leather and its products were amongst the top ten export earners for the country and is the 10th largest among the Indian manufacturing sector. The major production clusters of the industry are Kanpur, Agra, Kolkata and Chennai and it mainly organized as tanning and finishing. Under such circumstances it will be prudent to analyse the present status of Indian leather and manufactures export.

OBJECTIVES OF THE STUDY

This paper intends to study the relation between changes in the policy regimes during period from 1987–1988 to 2005–2006 and export growth of leather and manufactures of India. This paper makes an attempt to provide a comprehensive analysis of the trends in India's external trade in leather and manufactures. Again the signing of the Final Act of the Uruguay Round by member nations of GATT in April 1994 paved the way for the setting up of the World Trade Organization. An agreement to this effect was signed by 104 members and India was among them. The WTO agreement came into force from January 1, 1995. Thus this paper intends to study the effect of WTO on India's export of leather and leather manufactures to the other country as well as on total export of manufactured goods. Accordingly, the perceived objectives of the study are as follows:

- To examine the trends in external trade in leather and manufactures.
- To estimate the growth rate of leather and manufactures export during pre-WTO and post-WTO period.
- To compare the growth rate of leather and manufactures export with total exports of agricultural and allied products.
- To estimate the product and market concentrations in the external trade.

- Finally, to highlights policy options emerging from study.

The paper is organized so as to investigate each objective in turn. Namely, after a short survey of the literature in section 2, we present data and methodology in section 3. Section 4 outlines analysis of estimated results. Section 5 concludes.

Some Major Empirical Works: Related Literature

In this broad conceptual background, this paper makes an attempt to provide a comprehensive analysis of India's tea export in the scenario of trade openness. A considerable number of studies have attempted to explain empirically the nature of relationship between economic growth and export instability.

Chand and Tiwari (1991) estimated growth and instability of Indian exports and imports of agricultural commodities. Talwar (2002) estimated the instabilities of export earnings of selected groups and selected commodities and all the commodities from the period 1974–1975 to 1989–1990. Goyal, Pandey, and Singh (2000) examined the magnitude, causes and effects of instability of agricultural export earnings of India for the period 1979 to 1989. The analysis of the effects of export earnings instability on economic growth of developing countries has long interested economists for several reasons (Aiello 1999a).

A considerable number of studies have attempted to explain empirically the exact nature of the relationship between economic growths and export instability. Mac Bean (1966), Knudsen and Parnes (1975), Lam (1980), Knudsen and Yotopoulos (1976), Yotopoulos and Nugent (1976), and Saovides (1984) find a positive relationship between export instability and economic growth of a country. Whereas Coppock (1962) and Ozler and Harringan (1988) find a negative relationship between export instability and economic growth. Finally, Cristian (1983) and Sinha (1999) find no relationship between export instability an economic growth. Piana (2001) explained that balance of trade that is the difference between exports and imports of a country is clearly the first to be influenced by export dynamics.

Alag (2002), Singh and Goyal (2005), and Asopa (2008) in their articles focused on the competitiveness of tea trade in the World and highlights the importance of Indian tea industry. Dutta (2007) in his article investigated about the strengths and weaknesses of Indian tea industry. He also suggested several policy prescriptions for increasing the export

of tea from India. Aiello (1999b) pointed out another reason for the attention development economists have devoted to this line of research is the fact that policy makers, despite the uncertainty surrounding the theoretical framework on this issue, have joined forces with that part of the academic world, which sees instability of earnings from exports as a serious problems. Hicks (2009) in his article discussed about the current status of the global tea production. At the same time he also discussed about the future development of global tea production and tea products.

In an interview in *Business Standard* (2008), Zackria Sait, Chairman of the Indian Finished Leather Manufactures and Exporters Association, accused global slowdown for 20 percent fall in the order volume of leather from India in 2008. Habib Hussain, Chairman Council for Leather Exports, mentioned that Indian leather industry needed a long term project for the all round development of Indian leather industry (Gupta 2009).

Sabir (2010) discussed several reasons for the decline in the exports leather and leather goods from India to different countries. In his article he also mentioned the weaknesses as well as the strengths of the Indian leather industry and also made several recommendations for the long term development of the Indian leather industry.

Talwar (2010) in his article gave an overview of Indian leather industry. He discussed about the employment opportunities, growth aspects, strength, weaknesses etc. of the Indian leather exports as well as about Indian leather industry. At the end he proposed some strategies for the development of leather industry.

Kumar (2010) in his article mentioned several reasons in liberalization era especially after 2008–2009. According to him global financial meltdown is responsible for this. He also suggested several measures for recovery from this situation. An article by Adhikary and Maity (2010) followed the same method for explaining the trend in the change in the rate of growth of tea export from India by dividing the entire study period into two regimes. Keeping all these studies in mind author now returns back to the said objectives. Finally, like any other research work author will also indicate the line of the future research.

Data and Methodology

DATA

This study is exclusively based on secondary data. The analysis is based on the data for the 19 years period (1987–1988 to 2005–2006) on the value

of exports of leather and leather manufactures and the data were collected from 'Hand Book of Statistics on Indian Economy'. For the comparative analysis the 9 years period from 1987–1988 to 1995–1996 considered as the pre WTO phase where as the 10 years period from 1996–1997 to 2005–2006 represents the post-WTO phase. We consider 1987–1988 to 1995–1996 as Regime 1 and 1996–97 to 2005–2006 as Regime 2.

METHODOLOGY

Growth Rate

In order to derive a more realistic assessment of the trends, nominal values of leather and manufactures-export in US million dollars are taken. Following Poirier's (1974) spline function approach, the trend in the growth of several variables of interest is looked into for different regimes. Assuming a linear time trend, the postulated model is

$$\begin{aligned} \text{Regime 1: } \ln Y_t &= \alpha_1 + \beta_1 t + u_t \text{ for } 1987-1988 < t \leq 1995-1996 \\ \text{Regime 2: } \ln Y_t &= \alpha_2 + \beta_2 t + u_t \text{ for } 1995-1996 < t \leq 2005-2006 \end{aligned} \quad (1)$$

Let us define the following variables:

$$w_{1t} = t; \quad w_{2t} = \begin{cases} 0 & \text{if } t \leq 1995-1996 \\ t - 1995 & \text{if } 1995-1996 < t \end{cases}, \quad (2)$$

and reparameterise the function as:

$$\ln Y_t = \alpha_1 + \delta_1 w_{1t} + \delta_2 w_{2t} + u_t, \quad (3)$$

The expression $[\exp(\beta_i) - 1] \cdot 100$ will yield the percentage growth rate for the *i*-th regime

(*i* = 1, 2), where $\beta_1 = \delta_1$ and $\beta_2 = \delta_1 + \delta_2$. Equation (3) will be used to compute the growth rates of desired variables for different regimes. The variables that capture the growth rates in the period prior to and posterior to WTO are w_{1t} and w_{2t} respectively.

The growth rate for the entire period 1987–1988 to 2005–2006 will be computed by using the equation as

$$\ln Y_t = \alpha + \beta_t + U_t. \quad (4)$$

Measurement of Instability

This section looks at the measures used to evaluate the export earning and instability in the quantity Indian tea exported abroad. Author uses here

Cuddy-Della Valle (1978) index of instability to measure the instability in export earnings. The Cuddy-Della Valle index is defined as

$$I_x = cv \sqrt{1 - \bar{R}^2}, \quad (5)$$

where cv is the coefficient of variation and \bar{R}^2 is the corrected or the adjusted coefficient of multiple determination of the trend function that best fits the series of export earnings. If F -test is significant at 5 percent level, the index is calculated by selecting trend function (linear or log linear) having the highest \bar{R}^2 . If $\bar{R}^2 < 0$, then unadjusted R^2 is chosen.

Stationarity

For the purpose of estimation it is required that data should be stationary. Otherwise the estimators will not be reliable for prediction and policy prescription. Thus author feels that test of stationarity of the time series data used in for the analysis is necessary. Therefore author has used the 'Phillips Perron' non-parametric test to test the presence of unit root in the time series data and the hypothesis of absence of unit root or non-stationarity has been accepted at 5 percent level.

Result and Discussion

In this section author will empirically analyze the research result. All the tables are estimated from the secondary data on exports of leather and leather manufactures and the used methodology has already been explained in section three.

EXTERNAL TRADE OF COFFEE

First we will consider the salient features of external trade of leather from India to different countries during the 19-year periods. Table 1 illustrates the following points:

- The percentage share of leather export in the total export shows a declining trend at times and an increasing trend at other times. From 1987–1988 to 1989–1990 the leather exports show a decreasing trend, again during 1991–1992 to 1993–1994 also shows a declining trend.
- 1994–1995 is the period in which maximum percentage share value was obtained.
- No trend can be fitted for the subsequent years. In other words during 1995–1996 to 2005–2006 we would not be able to find out any

TABLE 1

Export of leather and manufactures	Year	(1)	(2)	(3)
	1987-1988	964.4	8195.1	11.768
NOTES Column headings are as follows: (1) export value of leather and manufactures, (2) total value of export of manufactured products, (3) value of leather and manufactures (export as % of total exports of manufactured products). Author's own calculations based on different issues of the <i>Handbook of Statistics on the Indian Economy</i> (http://dbie.rbi.org.in).	1988-1989	1051.0	10110.3	10.395
	1989-1990	1171.5	11971.5	9.786
	1990-1991	1449.2	12996.4	11.151
	1991-1992	1268.8	13148.4	9.650
	1992-1993	1277.5	14038.8	9.100
	1993-1994	1299.5	16656.7	7.802
	1994-1995	1610.6	10404.4	15.480
	1995-1996	1752.2	23747.0	7.397
	1996-1997	1605.8	24613.4	6.524
	1997-1998	1657.7	26546.6	6.244
	1998-1999	1660.7	2579.5	6.439
	1999-2000	1590.2	29714.4	5.352
	2000-2001	1944.4	34335.2	5.663
	2001-2002	1910.1	33369.7	5.724
	2002-2003	1848.3	40244.5	4.593
	2003-2004	2163.0	48492.1	4.461
	2004-2005	2421.6	60730.7	3.987
	2005-2006	2623.8	71815.7	3.654

trend in the percentage share of the export of leather of the total export of manufactured goods.

Next in our analysis we will consider the mean value of the exports of leather and manufactures from India to different countries and we will also consider the consistency of the export of leather and manufactures from India to different countries during the study period.

MEAN AND CONSISTENCY OF LEATHER AND LEATHER MANUFACTURES EXPORTS

The discussion of the mean and consistency of leather and leather manufactures is done in table 2. Table 2 provides the mean level of exports and consistency in the level of exports of leather and leather items by India in different years. The mean value of exports of leather and leather manufactures from India shows a wide fluctuation. The table shows the average exports of leather and leather products was lowest in the year

TABLE 2
Exports of leather and man-
ufactures in different years
(from India to different coun-
tries) (USD million)

NOTES Column headings
are as follows: (1) mean, (2)
standard deviation, (3) co-
efficient of variation. Au-
thor's own calculations
based on different issues
of the *Handbook of Statis-
tics on the Indian Economy*
(<http://dbie.rbi.org.in>).

Year	Export of leather and manufactures		
	(2)	(3)	(4)
1987–1988	87.673	68.857	78.538
1988–1989	95.555	77.055	80.639
1989–1990	106.500	85.216	80.015
1990–1991	131.736	109.543	83.153
1991–1992	115.345	90.147	78.154
1992–1993	116.136	93.794	80.762
1993–1994	118.127	106.868	90.469
1994–1995	146.427	126.120	86.132
1995–1996	159.291	135.590	85.121
1996–1997	145.973	126.596	86.726
1997–1998	150.609	120.550	80.042
1998–1999	150.982	122.888	81.393
1999–2000	144.573	115.758	80.069
2000–2001	176.745	131.413	74.352
2001–2002	173.655	127.515	73.430
2002–2003	168.054	119.647	71.196
2003–2004	196.645	141.846	72.133
2004–2005	220.136	165.308	75.094
2005–2006	237.809	180.287	75.812

1987–1988. From 1987–1988 it shows more or less an increasing trend up to 1995–1996. Then it shows fluctuating trend up to 2002–2003. After that the average export of leather and leather products from India to world market increases. From the table it follows that the highest average leather and leather products export was obtained in the year 2005–2006, but what is important is that two years after the WTO agreement the exports of leather and leather products started to show raising trend. Lower the value of CV, more consistent will be the result. Table 2 reveals that the value of CVs is very high which indicates inconsistency in the value of export of leather and leather products. The highest value of CV is obtained for the year 1993–1994, whereas the lowest value of CV is obtained for 2002–2003. What is important is that in the post-WTO phase the export of leather and leather products shows more consistency than in the pre WTO phase.

TABLE 3 Export of leather and manufactures and share of export of leather and manufactures in total export of manufactured products to different countries from India (USD million)

Country	(1)	(2)	(3)	(4)	(5)	(6)
France	81.405	24.560	30.170	4.941	0.491	9.937
Germany	313.490	54.186	17.285	19.779	3.837	19.399
Hong Kong	87.226	75.690	86.775	4.687	2.865	61.127
Italy	192.305	60.759	31.595	11.561	1.340	11.591
Netherland	40.095	18.369	45.814	2.328	0.551	23.668
Portugal	25.126	9.369	37.288	1.494	0.285	19.076
Russia	68.979	67.456	97.801	5.448	6.217	114.115
Spain	68.911	55.976	81.229	3.681	2.129	57.838
UK	204.042	62.942	30.848	12.293	1.425	11.592
USA	237.847	63.583	26.733	14.553	2.502	17.192
Other	325.926	131.996	40.499	19.217	2.480	12.905

NOTES Export of leather and manufactures from India to different countries: (1) mean, (2) standard deviation, (3) coefficient of variation; Share of export of leather and manufactures in total export of manufactured goods: (4) mean, (5) standard deviation, (6) coefficient of variation. Author's own calculations based on different issues of the *Handbook of Statistics on the Indian Economy* (<http://dbie.rbi.org.in>).

Next we consider table 3, in which we have considered the mean and consistency of export of leather and manufactures from India to different countries. This table also provides the mean level of export and consistency of the country wise share of export of leather and manufactures in total export of India. It reveals that the average value of export of leather and manufactures from India to other countries varies widely from one country to the other. The highest average value of leather and manufactures export from India is obtained in the case of Germany and the cv of leather and leather manufactures export for Germany is 17.285 percent (the lowest cv in the table). On the other hand the smallest average value of leather and leather manufactures export is obtained for Portugal and cv is 37.288 percent that is not very high, which indicates moderate inconsistency in the export of leather and leather manufactures from India to Portugal. In the case of Russia the average value of leather and leather manufactures export is 68.979 and cv is 97.801 percent (the highest cv of the table), which indicates high consistency, in the export of leather and leather manufactures from India to Russia. In the case of Germany we obtain consistent export result.

More or less same result is obtained in the case of the share of export of leather and leather manufactures in total export of manufactured goods from India to other countries. The highest value of average export is obtained in case of Germany, 19.779 percent and the corresponding value of CV is 19.399 percent and consequently shows high consistency. The lowest value of CV is obtained for France 9.937 percent and the corresponding value of mean is 4.941. The smaller value of CV indicates consistency in the share of export of leather and leather manufactures in total export of manufactured goods from India to different countries. The highest value of CV of the share of exports of leather and leather manufactures in total export of manufactured goods from India is obtained for Russia, 114.115 percent but the mean value of export is only 5.448. In case of Portugal lowest average value of export is obtained and CV is also not so high, 19.076 percent, which indicates moderate consistency in export.

We could have used Chow Test but it suffers from the arbitrariness in the choice of switching point. Switching point should be selected by some statistical criteria. Thus, in order to identify the structural break we have conducted CUSUM and CUSUMSQ test. The test indicates that there is a break in the year 1995–1996. So, we can consider the effect of WTO on India's export of leather and leather manufactures.

GROWTH AND INSTABILITY IN EXPORT OF LEATHER AND LEATHER MANUFACTURES

We next consider the discussion of table 4, which provides the aggregate level of composition and trends in the external trade in leather and leather manufactures and the instability measure by Cuddy-Della Valle index. In this table we have discussed the growth rate of the export of leather and leather manufactures from India to different countries by dividing the entire time period into two different regimes, namely, Regimes 1 and 2. Regime 1 is considered as pre-WTO phase and Regime 2 as post-WTO phase. The details discussion of the division of entire time period into two different regimes is already done in section three. First of all we consider the growth analysis of leather and leather manufactures.

GROWTH ANALYSIS OF LEATHER AND LEATHER MANUFACTURES EXPORTS

It is important to understand the growth rate and stability of export of leather and leather manufactures exports from India to different countries during the period of nineteen years of the time periods that com-

TABLE 4 Growth rate and instability of export of leather and manufactures from India to different countries

Country	(1)	(2)	(3)	(4)	(5)	(6)
France	4.477436	4.750897	0.045655	0.798359	30.170	26.95718
Germany	8.047106	-1.617390	0.015963	0.626117	17.285	13.67720
Hong Kong	9.553380	16.78892	0.133614	0.894655	86.775	82.07718
Italy	6.594692	4.885282	0.053419	0.783004	31.595	27.95763
Netherland	10.943090	7.730236	0.084824	0.958650	45.814	44.85680
Portugal	8.095374	6.173001	0.066272	0.834855	37.288	34.07019
Russia	-15.498900	-21.643000	-0.218604	0.846869	97.801	90.00185
Spain	18.437720	15.683760	0.154251	0.972330	81.229	80.09731
UK	7.688143	4.574557	0.054986	0.900397	30.848	29.27144
USA	13.531430	0.015554	0.043875	0.913811	26.733	25.55500
Other	6.904385	6.640079	0.065340	0.905756	40.499	38.54339

NOTES Rate of growth of export of leather and manufactures from India to different countries: (1) Regime 1 (1988 to 1995–1996), (2) Regime 2 (1997 to 2005–2006), (3) entire regime (1988 to 2005–2006); Measure of instability of the export of leather and manufactures from India to different countries: (4) \bar{R}^2 , (5) coefficient of variation, (6) I_x Cuddy-Della Valle index. Author's own calculations based on different issues of the *Handbook of Statistics on the Indian Economy* (<http://dbie.rbi.org.in>).

prises pre-WTO and post-WTO phases. Table 4 provides the summary. The estimated growth rates of export exhibited disparate trends during the two regimes. The annual average growth rate in the total value of export decreased from 8.047106 to -1.61739 percent during the post-WTO phase in case of Germany. But the growth rate shows an increasing trend for the entire period for Germany. Surprisingly for all the countries export growth rate was higher but had decreased during the post-WTO phase, except for Hong Kong. It is rather paradoxical to note that the growth rate of export of leather and leather manufactures from India to different countries showed a declining trend for the developed countries. Russia for the entire 19 years period and all the other countries showed increasing trend. For the countries USA, UK, Germany rate of growth of export are 0.015554 percent, 4.574557 percent and -1.61739 percent respectively during post-WTO phase. For these countries the rates of growth of export during pre-WTO phase were 13.53143 percent, 7.688143 percent and 8.047106 percent respectively. Another important observation is that all the countries showed declining trend in the export growth rate during

post-wto phase as compared to post-wto phase, except Hong Kong. During pre- and post-wto phase the highest rate of growth of export of leather and leather manufactures from India was obtained for the same country Spain, and the rate of growth of exports are 18.43772 percent and 15.68376 percent respectively. The same result holds for the entire period and the rate of growth of export of leather and leather manufactures from India to Spain was 0.154251 percent. Comparing the growth rate rates of export of leather and leather manufactures from India between Regime 1 and Regime 2 we see all the countries showed a decline the growth rate from Regime 1 to Regime 2, except Hong Kong. From this we can conclude that wto agreement failed to affect positively the leather and manufactures export from India to other countries. Another distinguishing feature is that during the entire period of 19 years, the positive rates of growth were obtained for all the countries except for Russia. For Russia the rate of growth for the entire period is negative and the corresponding rate was -0.218664 percent.

From the above discussion, it may be concluded that the four largest leather and manufactures importing countries from India are Spain, Hong Kong, Netherland and Portugal. There could be many more reasons for growth in export like stable export demand, global competitive prices etc.

Instability of Leather and Leather Manufactures Exports

The instability in export discourages investment in the production of the commodity, limits the economic horizon and destroys the sense of continuity, which is necessary for planning production (Chand and Tiwari 1991). The policy makers for formulating product export promotion and investment policies. The cv , \bar{R}^2 and instability indices (modified cv) for export of tea are shown in table 4. Appropriate instability indices for export of leather and leather manufactures, based on the criterion discussed in methodology section are presented in table 4. It is clear from the table that instability indices for export of leather and leather manufactures from India to other countries, were highest for Russia (90.00185%), indicating that Russia was most vulnerable importer of leather and leather manufactures from India. Next highest instability was observed in case of Hong Kong (82.07718%) followed by Spain (80.09731%). For Germany (13.6772%) least instability was recorded in terms of export earnings. USA (25.55500%) and France (26.95718%) recorded next least in line of instability in value of export of leather and leather manufactures.

TABLE 5 Growth rate and instability in the share of export of leather and manufactures in total export of manufactured products from India to other countries

Country	(1)	(2)	(3)	(4)	(5)	(6)
France	-0.856770	0.516853	0.000426	-0.082803	9.937	10.34023
Germany	2.530641	-5.593930	-0.029266	0.897542	19.399	6.209438
Hong Kong	3.960115	12.068520	0.088384	0.791486	61.127	27.91263
Italy	1.152483	0.645906	0.008190	0.049595	11.591	11.29992
Netherland	5.278870	3.375973	0.039595	0.808018	23.668	10.37031
Portugal	2.576547	1.881577	0.021042	0.307726	19.076	15.87181
Russia	-19.813100	-24.810100	-0.263834	0.883100	114.115	39.01665
Spain	12.390860	11.007910	0.109021	0.966399	57.838	10.60204
UK	2.190107	0.347741	0.009757	0.211870	11.592	10.29099
USA	7.735069	-4.026990	-0.001355	0.752328	17.192	8.555883
Other	1.446365	2.329776	0.020110	0.816762	12.905	5.524154

NOTES Rate of growth of export of leather and manufactures in the share of export of manufactured products from India to different countries: (1) Regime 1 (1988 to 1995–1996), (2) Regime 2 (1997 to 2005–2006), (3) entire regime (1988 to 2005–2006); Measure of instability of the export of leather and manufactures in total export of manufactured products from India to different countries: (4) \bar{R}^2 , (5) coefficient of variation, (6) I_x Cuddy-Della Valle index. Author's own calculations based on different issues of the *Handbook of Statistics on the Indian Economy* (<http://dbie.rbi.org.in>).

Comparison of instability indices for the different leather and manufactures importing countries from India, some of the developed countries like, France, USA, UK and Germany showed stability in the value of import of leather and leather manufactures from India.

GROWTH RATE AND INSTABILITY IN THE SHARE OF EXPORT OF LEATHER AND LEATHER MANUFACTURES IN TOTAL EXPORT OF MANUFACTURED PRODUCTS

We are now going to consider the analysis of the growth rate and instability for the share of export of leather and manufactures in total export of manufactured products. The entire thing is represented in table 5.

First of all we consider the analysis of growth rate.

Growth Analysis of the Share of Export of Leather and Leather Manufactures in Total Export of Manufactured Products

The highest rate of growth of in pre WTO phase is obtained for Spain (12.39086%). Spain was followed by USA (7.735069%) and Netherland

(7.735069%). At the same time the lowest rate of growth during the pre-WTO phase were obtained for Russia (-19.81310%), France (-0.85677%) and Italy (1.15283%). During the post-WTO phase the highest rate of growth were obtained for Hong Kong (12.06852%), Spain (11.00791%) and Netherland (3.375973%). But the surprising result was that in the pre-WTO phase we obtained negative growth rate for France where as during post-WTO phase it turned into a positive growth rate. The opposite result was obtained in the case of USA, where the rate of growth turned from positive to negative. The three countries for which we obtained lowest growth rate during the post-WTO phase were Russia, Germany and USA. What is paradoxical here is that USA which was the second largest exporter in the pre-WTO phase turned as the third lowest exporter in the post-WTO phase. From the table we can conclude that some of the most developed countries showed a declining trend in the growth rate of export of leather and leather manufactures in total export of manufactured products during post-WTO phase. For the entire study period the developed countries like Germany, Russia, and USA showed a declining trend. In fact table 5 reveals that the top three exporting (leather and leather manufactures in terms of manufactured products) countries were Spain, Hong Kong and Netherland.

Instability

It is clear from the table that instability index, was highest for Russia (39.01665%) indicating that leather and leather manufactures was most vulnerable commodity in terms of export of manufactured products. Next highest instability was observed for Hong Kong (27.91263%), followed by Portugal (15.87181%) and Italy (11.29992%).

The least instability in terms of export of leather and leather manufactures in the total export of manufactured products were recorded for Germany (6.209438%), followed by UK (10.29099%) and Netherland (10.37031%). From the above analysis we can conclude that developed countries showed stability in the export of leather and leather manufactures in the total export of manufactured products.

Empirical Analysis

With the slowdown of global economy Indian leather industry is moving towards an unprecedented crisis. During 2009 Indian leather industry experienced a growth of 20 percent but after that global slowdown dented the growth rate in the subsequent months. The main reason behind this

is the decline in orders from Western markets, especially the US and UK. The two biggest markets for Indian leather export firms are the European Union and the US; they share 65 percent and 25 percent respectively of India's export share of leather products. Global recession caused a poor take-off of leather goods at fashionable stores across the US and Europe in the recent time. The recession in the West has hurt many of the smaller units and most unfortunately, these smaller units also faced the liquidity problem. Another problem of the leather industry is that the small-scale and medium-scale units, however, are fragmented and often face problems relating to hygiene, pollution, control and quality standards.

There are certain organizations such as the people for the Ethical Treatment of Animals (PETA) which are carrying out global campaigns, highlighting the pathetic condition in which animals are kept, or transported, discouraging some fashion houses from buying leather products from India. These types of campaigning are also creating obstacles for the exports of Indian leather and leather items in the developed countries. Another problem faced by the exporters is that the exporters have seen their consignment being rejected by buyers in Europe and US because of the presence of restricted substances. As pointed out by Mr Vinod Kumar, manager, leather testing, TUV SUD South Asia, that nearly 25 percent – 30 percent of lots is being rejected annually due to non-compliance to testing standards. It may so happen that in some cases an entire order worth over \$1 million has been rejected by a buyer, leaving the exporter to bear all the cost and this is simply because not all lots in the consignment were tested for all quality and eco-parameters. Now, in order to ensure quality products of the international standard, the small-scale units have to invest significantly. But, instead of investing for maintaining the quality of the products, some unscrupulous exporters prefer cutting corners to save costs. These types of actions on the part of the exporters result in the loss of the brand equity of Indian leather exporters.

The global economic meltdown is another important factor for shrinking the Indian leather industry. Leading players fear a 25 percent – 30 percent drop in export and consequent job losses in the long run. European countries are the biggest importers of Indian leather goods, followed by the US and Australia. There were quite a few export cancellations in the recent past from US and UK. Leather industry is a very labour intensive industry. The organized sector employs around 2.5 million people. If the present trend continues, it may hurt the labour strength of the industry.

The global slowdown has started taking its toll on Indian leather in-

dustry as production is already down and exporters expect around 20 percent fall in their order volume. According to Zackria Sait, chairman of the Indian Finished Leather Manufacturers and Exporters Association, the tanneries were working at 30–40 percent capacity in November 2009 as against 80 percent utilization in November 2008; a higher fall in export volumes would affect the industry adversely. In addition, the European nations have started erecting non-trade barriers, which would increase the costs as well as the degree of problems of the Indian leather industry.

Fluctuations in value of euro and pound sterling are also creating critical situation for Indian leather exporters. According to Habib Hussain, chairman of the Council of Leather Exports (CLE), since nearly 75 percent of the Indian exports are to Europe, the currency fluctuations is a worrisome factor for the industry. There is no doubt that no industry can absorb 10–15 percent currency fluctuation. At the same time Indian exporters are only focusing on the mid and upper segments of the European market and not at the mass segments in other world markets. As a whole we can identify several problems of the leather industry, such as:

1. Lack of warehousing support from the government.
2. International price fluctuations
3. Lack of strong presence in global fashion market.
4. Unawareness of international standard by the unorganized sector of the industry.
5. Difficulty in obtaining bank loans resulting in high cost of private borrowing.
6. Stricter international standards.

Conclusion and Policy Prescription

The post-liberalization era has opened up surfeit opportunities for Indian leather industry. Next, to China, India enjoys the biggest share of the global market. The industry has greater growth potentials. With generous export earnings, employment potentials, growth it turns out as the 10th largest sector among the Indian manufacturing sector. The Indian leather industry absorbs 2.5 million people, of which about 30 percent are women.

But from our analysis it is clear that in recent times leather and leather product exports are passing through a crisis period. The export of leather and leather goods touched \$1.24 billion in 2007–2008, went down to \$959 million in 2008–2009 and was expected to further reduce to \$833 million

in 2009–2010, showing a reduction of \$407 million in two years. The fall in exports was 21.39 percent during 2008–2009 and is expected to fall further to about 18 percent in 2009–2010. The export of leather decreased by 7.5%, leather garments declined 12.53%, leather gloves 37%, and export of other leather products declined to about 31.60%. In the international arena main competitions of India are China, Bangladesh and Pakistan. In order to overcome the situation the Indian exporters demanded that withholding of tax on export of leather be reduced from 1 to 0.5% or government should suspend export development surcharge of 0.25% for at least two years.

There is no doubt that Indian government has over the years liberalized rules relating to the leather industry to encourage exports. It allows duty-free imports of critical components from the manufacture of footwear, garments and other leather goods, duty-free imports of raw, tanned and other varieties of leather, concessional rates for import of equipment and machinery for effluent treatment plants and tannery and foot wear machinery. It also allows 100% foreign ownership in units subject to certain conditions and up to 51 percent foreign ownership is accorded on an automatic approval basis in several areas. The government has also been promoting the setting up of footwear complexes, parks, leather goods, parks and tanning complexes. The Indian exporters also got Rs 2,630 million in grant, under the head of modernization capacity building, and betterment of infrastructure of the sector. The country faced a sharp decline of 28% in leather goods export during 2008–2009. But the true fact is that the leather industry that consisted of thousands of small units working in the unorganized sector is now undergoing changes. The smaller units are keen to acquire the latest technology to take advantage of the growing demand for Indian value-added leather products.

During the 10th Five Year Plan 400 corers was made available for implementation of various schemes under 'Indian Leather Development' which comprises of two programmes: one was Integrated Development of Leather Sector and the second was Infrastructure Strengthening of Leather Sector. At the same time some schemes which were implemented during 9th Five Year Plan, like, Rural Artisans, INTECHMART etc. were decided to continue.

In order to overcome the problems of the leather industry certain proposals from the business community are mentioned below:

1. Increase the equipment of raw hides and skins so as to reduce imports of raw hides and skins.

2. Resourcefully addresses environmental concerns to make the leather units meet severe environmental norms.
3. Establishing training facilities to cater to the demands of the industry which was facing an acute shortage of skilled manpower.
4. The international demand for leather products is shifting from luxury goods to necessary goods. Thus it is important for Indian manufacturers to strike a balance between quality and quantity to cater to the present need. At the Indians producers need to gear up to manufacture goods at competitive prices.
5. The Indian leather goods manufacturers are willing to sit with the government to chart out a joint medium-and long-term plan of action to take the industry ahead.

Some of these proposals are already implemented and some are going to be implemented. So we have to wait for some more time with patience to see what will be the impact of all these policy implementations.

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