

An Analysis of Total Export and Import of Gems & Jewellery Sector of India and Its Relation to the Foreign Trade of India(2014-19)

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Abstract

The gems & jewellery sector, fastest-growing sector of India is crucial to the Indian economy, as it contributes 6-7 % to the GDP of the country. The sector plays a significant role in employment generation and also extensively contributes towards the enhancement of foreign exchange reserves and helps in the economic progression of the country.

This paper is an attempt to analyze the relationship between the total export and import of gems and jewellery of India with the total export and import of India.

The study highlight the challenges of the sector which includes competition in the international market from countries like China, Thailand and Israel, unorganized sector, dependency on imports, changing trends in the international markets, rise in import duty, lack of financial support from the government, high cost of transportation, lack of modern technology and also shows the strength such as cheap and skilled labour of the sector and mentions initiatives taken by the government of India such as opening up Common Facility Centers, Special Notified Zones, Gold Monetization Scheme, 100% FDI Policy to boost the sector.

The paper also suggests the significant areas that need immediate attention for the industry to achieve its full potential which are enhanced designs, products, quality, standard, enabling policies, skill development, improved working conditions, innovation, modern technology, financial support that can be the key to achieve great heights.

The study makes use of statistical techniques such as percentage analysis, y-o-y growth analysis and correlation coefficient analysis to analyze the relationship between the total export and imports of gems and jewellery sector of India and total exports and imports from India during the last 5 years (2014-15 to 2018-19). And the data for the analysis have been taken from the authenticated secondary sources. The results show a weak positive relationship between the total export of gems and jewellery sector of India and total exports from India and a strong positive relationship between the total import of gems and jewellery sector of India and total import of India during the last 5 years.

Keywords: Gems & Jewellery, India, Export, Import, Indian economy, Correlation

The gems & jewellery sector of India has rapidly emerged as one of the leading export-oriented sectors in India. The sector is crucial to the Indian economy, as it contributes 6-7 % to the country's Gross Domestic product (GDP) and is a major contributor to the total foreign exchange reserve of a country. It also plays a significant role in employment generation, currently the sector employs a 4.64 million people in the country. It has made a brilliant global impact averaging a growth of nearly 15 % each year over the last decade. The gems & jewellery sector continue to be a part of India's top 5 commodities of export & imports over the last decade.

Emerging from relatively humble beginnings of a small and unorganized sector in the 1950 & 60s, today's it has contributed 12 % to India's total merchandise exports and 13% to India's total imports in the financial year 2018-19. UAE, Hongkong, USA are among the major exporters of Indian gems & jewellery.

India holds 5th rank in gems & jewellery world trade with 6.4% share while the other major exporters are Switzerland with 13.1%, Hong Kong with 11%, USA with 10.3% & U.K with 7.6%. (Source UN ComTrade 2018).

The sector has shown a tremendous growth over a period of 50 years and the total exports of the sector has been continuously increasing since then. The increasing growth rates in the gems and jewelry sector has helped to reduce the negative trade balance in the last many years and moving towards a positive trade balance with total exports of the sector during the year 2018-19 stands at US\$ 40,190 Million and total imports of the sector stand at US \$ 64,666 Million.

Despite such escalating demand from all over the world, the industry faces certain fundamentals & regulatory

challenges which limit achievements of its full potential. Gems & jewellery exports have been recording a decelerating trend since last 5 years on account of various domestic as well as international challenges such as competition in the international market from countries like China, Thailand, Israel and others, unorganized sector, dependency on imports, changing trends in the international markets, rise in import duty, lack of financial support from the government, high cost of transportation, lack of modern technology all these issues have resulted gems & jewellery exports to degrow but despite of these challenges, sector has number of strengths and has a huge potential to grow which could contribute in a larger way to the growth of the industry and to the economy as a whole.

The government of India has undertaken a lot of initiatives such as opening up Common Facility Centers, Special Notified Zones, Gold Monetization Scheme, 100% FDI Policy to boost the sector with the full support of the government the growth of this sector is guaranteed.

Objectives

To analysis the exports of gems and jewellery and compare it with total export of India during 2014-15 to 2018-19.

To analysis the imports of gems and jewellery and compare it with total import of India during 2014-15 to 2018-19.

An Analysis Of Exports And Import Of Gems & Jewellery Sector Of India

Trends in exports of gems & jewellery vis-à-vis total exports from India (2014-15 to 2018-19)

The Table no. 1 analysis the share of exports of gems & jewellery sector in the total exports of India during the last 5 years i.e. from financial year 2014-15 to 2018-19.

Table: 1

(US\$ Million)

Year	Total Exports of G & J	Total Exports of India	% share of G & J sector in total export of India
2014-2015	41266	310,338	13 %
2015-2016	39283	262,290	15 %
2016-2017	43413	275,852	16 %
2017-2018	41544	303,526	14 %
2018-2019	40190	331,020	12 %

Source: Annual reports of Gems & Jewellery Export Promotion Council and Ministry of Commerce & Industry (figures are rounded off to next nearest unit)

Observations: The total export of gems and jewellery stood at US\$ 41266 mn in the f.y. 2014-15 and the total export of India stood at US \$ 310,338 in the same f.y., accounted for 13% in total exports of India. In the f.y. 2015-16 the total export of Gems and Jewellery stood at 15% of the total export from India but as we look at the value, the total export of gems & jewellery declined from US\$ 41266 mn in the f.y. 2014-15 to US\$ 39,283 mn in the f.y. 2015-16.

In the f.y. 2016-17 the sector again bounced back and reached the value at US\$ 43413 mn by contributing 16% to

the total exports of India. And in the following years 2017-18 and 2018-19 the sector has remained more or less stable at 14% as an average of last 5 years with some variations.

Trends in total imports of gems & jewellery vis-à-vis total import of India (2014-15 to 2018-19)

The table no. 1.1 analysis the share of imports of gems & jewellery sector in the total imports of India during the last 5 years i.e. from financial year 2014-15 to 2018-19.

Table: 1.1

(US\$ Million)

Year	Total Import of G & J	Total Import of India	% share of g & j sector in Total Import of India
2014-2015	62351	448,033	14 %
2015-2016	56509	381,008	15 %
2016-2017	53739	384,357	14 %
2017-2018	74668	465,581	16 %
2018-2019	64666	507,436	13 %

Source: Annual reports of Gems & Jewellery Export Promotion Council and Ministry of Commerce & Industry

(figures are rounded off to next nearest unit)

Observations: The total import of gems and jewellery stood at US\$ 62351 mn in the f.y. 2014-15 by contributing around 14% to the total imports of India. Further likewise in the total export of gems & jewellery in the f.y. 2015-16, the import also declined from US\$ 62351 mn in the f.y. 2014-15 to US\$ 56509 mn in the f.y. 2015-16 but as mentioned in the third column of the above table the percentage share of total import of gems & jewellery has increased from 14% to 15 % during the same f.y. again in the f.y. 2016-17 the sector value decreased to US\$ 53739 from US\$ 56509 mn in the f.y. 2015-16 but again the sector bounced back by showing positive growth and accounted for US\$ 74668 mn

by value and further declined in the f.y. 2018-19 to US\$ 64666 mn. On an average during the last 5 years the sector remained stable by showing an average growth of 14.5 %.

Analysis of average annual growth in export of gems & jewellery sector vis-à-vis total exports from India (2014-15 to 2018-19)

The table no. 2 analysis the average annual growth rate of exports of gems & jewellery sector from India vis- a- vis average annual growth rate of total exports from India.

Table: 2

(US\$ Million)

Year	Total Exports of G & J	% growth over previous F.Y.	Total Exports of India	% growth over previous F.Y.
2014-2015	41266	-0.29 %	310,338	-1.29 %
2015-2016	39283	-4.80 %	262,290	-15.48 %
2016-2017	43413	10.51 %	275,852	5.17 %
2017-2018	41544	-4.30 %	303,526	10.03 %
2018-2019	40190	-3.25 %	331,020	9.05 %

Source: Annual reports of Gems & Jewellery Export Promotion Council and Ministry of Commerce & Industry

Observation: For calculating the percentage growth over the previous f.y. for the year 2014 -15 the value for the f.y. 2013-14 has taken at US\$ 41389 mn for the total exports of gems and jewellery and US\$ 314,405 mn for total exports from India. In the 2014-15 the sector showed a negative growth -0.29% over the previous f.y. and the total exports from India have also showed a negative growth at -1.29% in the same f.y.

Further in 2015-16 the total export of India fell drastically from US\$ 310338 mn to US\$ 262,290 mn showing a negative growth of -15.48%, whereas the total exports of gems and jewellery also showed negative growth at -4.80%. Then in f.y. 2016-17 the sector jumped to US\$

43413 showing a growth of 10.51% over the previous f.y. and also the total exports of India revived and accounted for 5.17% growth. In the f.y. 2017-18 and 2018-19 the sector showed a negative growth by -4.30% and -3.25% respectively, on the other hand the total exports from India has grown to 10.3% in 9.05% respectively.

Analysis of average annual growth in import of gems & jewellery sector vis-à-vis total import of India (2014-15 to 2018-19)

The table no. 2.1 analysis the average annual growth rate of import of gems & jewellery sector from India vis- a- vis average annual growth rate of total import from India.

Table: 2.1

(US\$ Million)

Year	Total import of G & J	% growth over previous F.Y.	Total import of India	% growth over previous F.Y.
2014-2015	62351	6.69 %	448,033	-0.48 %
2015-2016	56509	-9.36 %	381,008	-14.95 %
2016-2017	53739	-4.90 %	384,357	0.87 %
2017-2018	74668	38.94 %	465,581	21.13 %
2018-2019	64666	-13.39 %	507,436	8.98 %

Source: Annual reports of Gems & Jewellery Export Promotion Council and Ministry of Commerce & Industry

Observation: For calculating the percentage growth over the previous f.y. for the year 2014 -15 the value for the f.y. 2013-14 has taken at US\$ 58436 mn for the total import of gems and jewellery and US\$ 450,200 mn for total import of India. During the f.y. 2014-15 the total import of gems and jewellery has increased by 6.69% over the previous f.y., whereas the total import of India has decreased by -0.48%. Again in the f.y. 2015-16 the total import of India declined drastically and fell down by -14.95% and the total import of gems and jewellery also registered a decline of -9.36%.

In the f.y. 2017-18 the sector jumped to an increase of 38.94% and the total imports of India grew by 21.13% but in the f.y. 2018-19 the total import of gems and jewellery again declined by -13.39% and on the other hand the total Import of India show growth of 8.98%.

Research Methodology

Sources of Data: The current study uses a secondary data which has been collected from various authenticated sources such as reports and publications of Department of Commerce, Government of India, Gems & Jewellery

Export Promotion Council, DGCI&S, Kolkata and UN ComTrade.

Tools & Techniques used: Percentage analysis, y-o-y growth analysis, correlation coefficient analysis.

Time period of the study: The study covers data of last 5 years i.e. from 2014-15 to 2018-19.

Hypothesis:

Ho: There is no positive relation between total exports of gems and jewellery and total exports of India.

H1: There is a positive relation between total exports of gems and jewellery and total exports of India.

Ho: There is no positive relation between total imports of gems and jewellery and total imports of India.

H1: There is a positive relation between total imports of gems and jewellery and total imports of India.

Karl's Pearson coefficient for correlation

The Karl's Pearson coefficient for correlation has been

applied to check the correlation between the export & import of Gems & Jewellery sector of India with the total export and import of India. Correlation coefficient denoted by the term 'r' is used to calculate the degree and direction of relationship between the two variables. The value of r

always lies between +1 & -1.

In the table below the strength of association between the two variables can be seen:

Strength of association	Positive	Negative
Strong	0.5 to 1.0	-0.5 to -1.0
Average	0.3 to 0.5	-0.3 to -0.5
Weak	0.1 to 0.3	-0.1 to -0.3

Correlation between average annual growth in the exports of gems & jewellery sector vis-à-vis total exports from India (2014-15 to 2018-19)

X = Average annual growth rate of export of gems and

jewellery sector

Y = Average annual growth rate of total merchandise exports from India

Table: 3

Year	% growth over previous F.Y. (X)	% growth over previous F.Y. (Y)	XY	X ²	Y ²
2014-2015	-0.29 %	-1.29 %	0.37	0.0841	1.66
2015-2016	-4.80 %	-15.48 %	74.30	23.04	239.63
2016-2017	10.51 %	5.17 %	54.33	110.46	26.72
2017-2018	-4.30 %	10.03 %	-43.12	18.49	100.60
2018-2019	-3.25 %	9.05 %	-29.41	10.56	81.90
Total	-2.13	7.48	56.47	162.63	450.52

$$\begin{aligned}
 r &= \frac{\Sigma XY - \frac{\Sigma X \Sigma Y}{N}}{\sqrt{\left[\Sigma X^2 - \frac{(\Sigma X)^2}{N} \right] \left[\Sigma Y^2 - \frac{(\Sigma Y)^2}{N} \right]}} \\
 &= \frac{56.47 - \frac{(-2.13)(7.48)}{5}}{\sqrt{\left[162.63 - \frac{(-2.13)^2}{5} \right] \left[450.52 - \frac{(7.48)^2}{5} \right]}} \\
 &= \frac{59.65}{\sqrt{161.72} * \sqrt{439.33}} \\
 &= \frac{59.65}{266.40} = 0.223
 \end{aligned}$$

Interpretation of the results: It can be concluded from the above value of 'r=0.223' that there is a weak positive correlation between the average annual growth rate of the exports of Gems & Jewellery sector of India and average annual growth rate of the total exports from India during the last 5 years. Hence, we reject the null hypothesis "There is no positive relation between total exports of gems & jewellery and the total export of India" and accept the alternative hypothesis because the value of "r" is positive and shows a weak relation between the two variable and it

has been also observed that the exports of gems & jewellery is independent of the total exports from India.

Correlation between average annual growth in the import of gems & jewellery sector vis-à-vis total import of India (2014-15 to 2018-19)

XI = Average annual growth rate of import of gems and jewellery sector

YI = Average annual growth rate of total import of India

Table: 3.1

Year	% growth over previous F.Y. (XI)	% growth over previous F.Y. (YI)	XIYI	XI ²	YI ²
2014-2015	6.69 %	-0.48 %	-3.21	44.75	0.23
2015-2016	-9.36 %	-14.95 %	139.93	87.60	223.50
2016-2017	-4.90 %	0.87 %	-4.26	24.01	0.75
2017-2018	38.94 %	21.13 %	822.80	1516.32	446.47
2018-2019	-13.39 %	8.98 %	-120.24	179.29	80.64
Total:	17.98	15.55	835.01	1851.99	751.60

$$\begin{aligned}
 r &= \frac{835.01 - \frac{(17.98)(15.55)}{5}}{\sqrt{\left[1851.99 - \frac{17.98^2}{5}\right] \left[751.60 - \frac{(15.55)^2}{5}\right]}} \\
 &= \frac{779.1}{42.27 * 26.51} \\
 &= \frac{779.1}{1120.5} = \mathbf{0.695}
 \end{aligned}$$

Interpretation of the results: It can be concluded from the above value of 'r=0.695' that there is a strong positive correlation between the average annual growth rate of the import of gems & jewellery sector of India and average annual growth rate of the total import of India during the last 5 years. Hence, we reject the null hypothesis "There is no positive relation between total import of gems &

jewellery and total import of India" and accept the alternative hypothesis because the value of "r" is positive but shows a strong positive relation between the two and it has been also observed that the import of gems & jewellery is independent of the total import of India.

Conclusion And Suggestions

The above research uses the Karl's Pearson correlation of coefficient, which indicates the positive relationship between (i) the total export of gems & jewellery of India and the total exports of India (ii) the total imports of gems & jewellery of India and the total imports of India but these variables are independent in nature and do not increase or decrease with the same rate.

The study, therefore also observes that the gems & jewellery sector of India have been recording a decelerating trend since last 5 years on account of various domestic as well as international challenges such as competition in the international market from countries like China, Thailand, Israel and others, dependency on imports, changing trends in the international markets, rise in import duty, lack of financial institutions, high cost of transportation, lack of modern technology and a sector being highly unorganized, fragmented with only 15-20% players being organized is one of the main challenges but despite of these challenges sector has number of strengths such as efficient craftsmanship and low rate of labour but again being labour intensive is no longer a competitive advantage, there is a dire need to pay attention to the other issues of the sector.

However, India's gems & jewellery is expected to continue to grow. The government has taken numbers of initiatives such as opening up Common Facility Centers, Special Notified Zones, Gold Monetization Scheme, 100% FDI Policy in order to boost the sector.

The significant areas that need immediate attention for the industry to achieve its full potential are: enhanced designs, products, quality, standard, enabling policies, skill development, improved working conditions, innovation, modern technology can be the key to achieve great heights.

Challenges have been a part & parcel of any business and gems & jewellery industry is no stranger to it. But it is suggested that to catch up with the new trends in the global market the government must ease the credit facilities to the exporters, raw material being the necessity must be easily available at a reasonable rate and in adequate quantity, the agencies associated with this business should work close with the government to educate the labour and exporters about the latest trends in the international market.

The sector promises a huge potential to grow which could contribute in a larger way to the growth of the industry and to the economy as a whole.

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