

## COMPARISON OF GROWTH AND STRUCTURE OF INDIA'S GEMS AND JEWELLERY EXPORTS AND ITS SUB-CATEGORIES SINCE 1991

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### ABSTRACT

*The present paper is devoted to analyse the comparison of growth and structure of the India's total exports, manufactured exports, gems and jewellery exports and its sub-categories for the whole of the study period (1990-91 to 2017-18). The study of structure is divided into two parts: product concentration and country concentration, in order to have an idea about product-wise and country-wise changes throughout the study period. Further, the analysis of the structural shifts in the gems and jewellery exports and its sub- categories (product-wise and destination-wise) are done in order to study the comparison of growth and structure of the India' gems and jewellery exports and its sub-categories.*

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**Keywords:** *Gems and Jewellery, Exports, Manufactured, Structure, Product, Country.*

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### Introduction

The present paper is devoted to analyse the growth and structure of the India's total exports, manufactured exports, gems and jewellery exports and its sub-categories for the whole of the study period (1990-91 to 2017-18) and also for the sub- periods (1990-91 to 1999-00; 2000-01 to 2009-10; 2010-11 to 2017-18; 1990-91 to 2006-07; 2007-08 to 2017-18) have been considered to find growth rates. This paper also attempted to analyse the structural changes taking place in the types and value of the India's gems and jewellery exports and its sub-categories. The study of structure studies product concentration, in order to have an idea about product-wise changes throughout the study period. Further, the analysis of the structural shifts in the gems and jewellery exports and its sub- categories (product-wise) are done in order to study the changes in composition and direction of the India' gems and jewellery exports and its sub-categories. While measuring their growth performance, the sub- periods 1990-91 to 1999-00, 2000-01 to 2009-10 and 2010-11 to 2017-18 reflects the decade wise growth performance. The sub-periods 1990-1991 to 2006-2007 and 2007-2008 to 2017-2018 reveals the growth performance during pre and post global financial crisis in the year 2008. In the end, this paper will compare the growth and structure of India's gems and jewellery exports and its sub-categories for a period of 28 years, i.e., 1990-91 to 2017-18. In the present study, exports of gems and jewellery are classified into eight categories based on the Reports of Gems and Jewellery Export Promotion Council (GJEPC). These are as follows:

- Cut and Polished Diamonds
- Gold Jewellery
- Coloured Gemstones.
- Pearls
- Non-Gold Jewellery.
- Costume/Fashion Jewellery
- Synthetic Stones, and
- Rough Diamonds.

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## Review of Literature

Various national and international studies based on India's total exports and exports of different products (including gems and jewellery) were reviewed. Also, studies based on methodology (used in present study) were searched and reviewed as under:

**Sau (1976)** estimated the price differentials charged by trading countries engaged in trade with India and China. The relative price indices and shares of trading countries were calculated for two years (1968 and 1970-71), in case of India and for four years in case of China (1964, 1966, 1968 and 1970). The data sources were DGCI&S, Government of India and IDE, Foreign Trade of China, Tokyo. As per the study, in case of India, the highest values for relative price index for imports and exports were 2.218 and 1.626 respectively, while the lowest values were 0.826 and 0.847 for imports and exports respectively. The paper concluded that USSR, Iran, Japan, U.S.A., U.K., Canada and West Germany were the major trading partners of India. It was observed that the price of imports from USSR became favourable to India but turns expensive from Iran, U.K. and West Germany and increased the degree of over pricing of their commodities which were imported by India. Also, U.S.A. continued with the moderate level of overpricing for India. China had major trade relations with Hong Kong, USSR, Japan, France and U.K. during the years 1964, 1966, 1968 and 1970. The data acquired revealed that China exports to 120 countries and imported from 80 countries. It was revealed that exports of China to Indonesia were quantitatively nil in 1970 as against 3.8% in 1964. For China, Japan appeared to maintain the weighted price index for both exports and imports around one. Also, Japan was the single largest partner of China followed by Canada for exports and the major proportion of imports comes from Hong Kong for China. It was depicted that Chinese export price index was more widely dispersed than that of India's export price index.

**Gonclaves & Reinaldo (1987)** discussed the experience of Latin America concerning the effect of export expansion and import liberalization on the process of economic growth of the region for the time period 1970-1980. The clustering exercise was undertaken and the variables used for forming the four clusters were population, GDP percapita, the share of agriculture in GDP, Investment ratio, employment in agriculture, employment in industry, elementary school registration and high school registration. Cluster I includes Brazil and Mexico, Cluster II includes Argentina, Chile, Columbia, Costa Rica, Peru and Uruguay. Cluster III was formed by Bolivia, Ecuador, Gautemala. ClusterIV consists of Panama and Venezuela. The study found that the marginal propensity to import and the import income elasticity are particularly important in determining the value of the multipliers and the balance of payments constrained output growth rates. The study also found that distinct combinations of export-import ratios and marginal propensity to import in economies with very different economic structure may result in similar values for the super-multiplier. The study also indicated that the highest output growth rates among Latin American economies were associated with the lowest import income elasticity and marginal propensity to import.

**Nayyar (1987)** studied the India's Export Performance for the time period (1970-85). The study attempted to evaluate India's export performance in the recent past examining the underlying factors and assessing the relative importance of domestic and foreign constraints. The study sourced the data from DGCI&S, Calcutta. It found that the impressive growth in exports between 1970 and 1978 was attributable to an unusual combination of external and internal factors. While internal factors such as, the decrease in the rate of growth of agricultural production leading to a decline in the volume of exports of primary commodities on the one hand, and on the other, the increasing internal demand for manufactured goods industrial which made the export of goods less worthwhile for individual firms, contributed to the slowing down of export growth, external factors which came into operation in the 1980s helped to sustain the adverse trend. The author suggested that with the steady increase in protectionism in the industrialised countries and with the near-stagnation in international trade flows leading to fierce price and non-price competition, the pressure of external factors on manufactured exports from India will accentuate.

**Sathe, Dhanmanjiri and Sunil Agarwal (1997)** examined the export intensities of a sample of Indian industries and import intensity of their exports. He also examined Net Foreign Inflow Rate (NFIR) and Direct Cost of Technology Imports (DCTR). The study period was 1989-90 to 1992-93. The data sources were Directorate General of Foreign Trade (DGFT), WITS and few internet sources. The sample consisted of 1521 manufacturing companies, aggregated into 96 industries and four sectors. It is concluded that import intensity of exports has declined (from 10.9% in 1989-90 to 8.9% in 1992-93) for the study period. The share of imported raw material in total raw material consumed has fallen over period which towards import substitution. The correlation coefficient between exports and imported raw material consumed has fallen over study period (from 0.64 to 0.59).The high import intensities are

observed in chemical and capital goods industries. The NFIR has increased for the sample during study period (from 89% to 91%) and it was highest for traditional exports and lowest for diamond cutting/trading. The DCTR has also increased slightly for study period (from 1.15 to 1.65). The number of industries spending more than 1% of their sales on technology imports also increased over the period.

**Gidadhbli (1999)** identified the trends, economic factors and composition of imports and Exports between India and Russia for the period 1991-92 to 1999-00. The data sources were DGCIS, Calcutta, Government of India. The study considered the disintegration of Soviet Union to see the impact on trade ties of Indo-Russia. Economically, Indo-Russia trade turnover declined over the considered period which showed a lack of stability for both India's exports to and Imports from Russia. For the period 1991-98, India recorded positive trade balance with Russia and Indian exports were increased by 45% to Russia for the year 1997-98. The study showed that tea, coffee, tobacco, drugs and cotton fabrics/garments accounted for about 50 to 67 % of Russia's total exports in 1997-98. Also, Russia's trade destined to CIS (Commonwealth of Independent States), whereas the other trade partners of Russia were U.S.A., China, South Korea, turkey, Cuba and Brazil. Russia was emerged as the exporter of raw material and importer of the finished goods for the considered time period. It was observed that India accepted the Russian proposal for repayment of half of its rupee debt in terms of goods such as food, medicines and computers in 1998, while Russia gave priority to release rupee funds for imports of tea, tobacco, medicines and Soyabean. The paper inferred that Russia was benefitted by the debt repayment funds allocation by the few Indian exporters. The study concluded that economic cooperation with Russia could be promoted by India through exploring joint ventures in areas such as agro-processing, pharmaceuticals and consumer goods production.

**Kutty (2001)** identified the recent trends in domestic production, imports of cashew nuts and exports of cashew kernel and cashew nut shell liquid for the period of eleven years, i.e., 1990-91 to 2000-01. The data sources were DGCI & S, Kolkata, Cashew Export Promotion Council of India, Cochin & Directorate of Cashew Nut Development, Cochin. The study revealed that Indian Cashew industry exports to more than 60 countries in the world. The share of Indian Cashew industry in the total export earning and total import bill on average accounted for 1.3% and 0.55% during 1990-91 to 2000-01. The study showed that the supply of cashew nut including domestic and imports grew by a growth rate of 7.55% for the considered period. Also, an extension of cashew cultivation and an increase in productivity lead to an upward trend in cashew nut production. India's cashew kernel imports and exports grew by 10.22% and 6.25% respectively for the considered period. India imported cashew nuts from Tanzania (30.29%), Guinear Bissau (14.1%), Ivory Coast (13.37%) and rest from other countries. The growth of exports of cashew nut shell liquid showed a declining trend in terms of volume from 1990-91 to 1995-96 and increasing trends from 1996-97 to 2000-01. Indian exports of cashew nut shell liquid mainly directed to U.S.A., Japan, U.K., Korea Republic and rest to the other countries. The study expressed that exports and imports of Indian cashew nuts face problems because exporting countries abroad established their own processing units and started exporting to other countries such as Brazil which captured the significant share of U.S.A. and Canada due to lower prices of Brazilian cashews.

**Padhan (2004)** used the time- series analysis to investigate the relationship between exports and economic growth in India over the period, 1950-51 to 2000-01. The study found the evidence of co-integration to establish a long run relationship between export and economic growth with the help of Johansen and Johansen Juselius co integration tests. The study also reveals that there is a unidirectional Granger causality between exports and economic growth of India and exports have a direct impact on economic growth of India.

**Seshadri (2009)** studied the sectoral performance of India's exports and imports and changing pattern of India's external trade with other countries under the period of eight years, i.e., 2000-01 to 2007-08. The data sources were System on Foreign Trade Performance analysis, Export-Import Data Bank and press release on India's foreign Trade. It was observed that India's total merchandise trade to GDP had risen to 38.6% and the export performance of certain items had undergone a change such as the share of engineering goods, Gems and Jewellery and textiles had increased from the base period 2000-01 to the year 2007-08. Import basket of India had included Petroleum products, machinery and transport equipment for the considered time periods. During the period under study, U.S. remained the major trading partner of India followed by China. The study had shown that the exports to developing countries had increased from 43.56% in 2000-01 to 58.16% in 2007-08, while the majority of imports sourced from developing countries went upto 61.18% in 2007-08. The other countries such as Africa and Latin America had shown expanded share in India's trade. The study concluded that the major share was registered by developing countries in India's trade for the considered period. After the major shares

recorded by U.S.A. and China, the other countries such as Asian countries, U.A.E., Singapore and Saudi Arabia had recorded major shares during 2007-08. The countries shown potential were listed as Nigeria, Tanzania, Mauritius, Chile, Mexico and Columbia. Also, Sri Lanka and Korea had shown expanded trade in India's external trade.

**Nataraj and Tondon (2011)** studied the export structure of China for the period of six years, i.e., 2001 to 2006 and evaluated of export diversification and changed sectoral composition of exports. The study used Standard International Trade Classification (SITC) that adopted the structure of Harmonised System (HS) during the study period 2001-06. The study had segregated the exports of China into five factors such as:

- Skill comprised of those industries that based on requirement of skilled or unskilled manpower;
- Scale refers to small, medium and large companies,
- Endowment factor segregate on basis of labour- and capital-intensive industries,
- Technology content used to access low, medium or high technology and
- Segregation based on stage of production includes raw material, semi-finished or finished items.

The basic methodology distinguished the main groups according to their factor content were taken from UNCTAD classification. The data were collected from UN Comtrade Database. The study revealed that China had a huge trade deficit in primary products and high technology intensive products over the two annual periods of 2002 and 2006, whereas it has recorded negative trade balance for natural trade products in 2002 but it turned positive in 2006. It was observed that China had the trade surplus in human capital for low, medium and high human capital-intensive products. China had registered an overall trade surplus with its major trading partners, i.e., ASEAN-4, NIES-4 (Newly Industrialised Economies), Japan, EU-25, other countries and U.S.A. respectively. ASEAN-4 covered Indonesia, Malaysia, Philippines and Thailand. NIE-4 covered Honk Kong, South Korea, Singapore and Taiwan. At the individual level, China had the trade deficit with ASEAN-4 and Japan whereas trade surplus with EU-25, NIES-4, and U.S.A. for two periods 2002 and 2006. The study depicted that China was dependent on suppliers of primary products from ASEAN-4 and U.S.A. for the years 2002 and 2006. It was observed that the share of high technology products were high for NIES-4 (44.8%) and ASEAN-4 (38.1%) and low for Japan (25.8%). The imports of primary products were low from EU-25 (6.7%), Japan (4%) and NIES- 4 (5.4%), while high technology intensive products were mainly imported from the above mentioned countries and U.S.A. The major finding of the study was that the share of high-tech manufacturers had increased, whereas the share of unskilled labour products had declined during 2001-06.

#### **Objectives**

- To analyse the growth and structure of India's gems and jewellery exports and its sub-categories.
- To compare the growth and structure of India's gems and jewellery exports and its sub-categories.

#### **Methodology**

Data for gems and jewellery trade taken from secondary sources analysed by growth rates, structure, concentration, competition and gravity model with the help of appropriate methods. The methodology used for this purpose is explained below:

- **Growth Rates of India's Gems and Jewellery Exports and it's Categories/sub Categories**

Growth rates refer to the amount of increase that a specific variable has gained within a specific period and context. In order to find out the Growth Rates of India's gems and jewellery exports and it's sub- categories, the Annual Average Growth Rates worked out. The growth rates will be calculated by fitting the exponential function of the type:

$$Y_t = ab^t e^u$$

Transforming the above equation into linear form:

$$\log y_t = \log a + t \log b + u \log e$$

Where,  $Y_t$  = value of dependent variable in the year  $t$

$t$  = trend variable

$u$  = disturbance term

$a$  and  $b$  = constants

For the estimated value of regression coefficient 'b' the compound growth rate 'r' was calculated as following:

$$r (\%) = (b^t - 1) \times 100$$

Where,  $t$  = estimated value of b.

The Growth rates calculated for whole of the study period (1990-91 to 2016-17) and also for the sub-periods:- (a)1991-92 to 2000-01, (b)2001-02 to 2010-11, (c)2011-12 to 2016-17, (d)1991-92 to 1995-96, (e)1996-97 to 2000-01, (f)2001-02 to 2005-06, (g)2006-07 to 2010-11, (h) 1992 to 1997, (i) 1997 to 2002, (j) 2002 to 2007, (k) 2009 to 2014, (l) 2015 to 2018.

#### • **Structure of India's Gems and Jewellery Exports**

For analysing the structure, following shares are calculated:

- At all points of study period (1990-91 to 2017-18):
  - The shares of gems and jewellery exports in total exports.
  - The share of gems and jewellery exports in G.D.P.
  - The share of sub-categories in total gems and Jewellery exports.
  - The share of sub-categories in total exports.
  - The share of sub-categories in G.D.P.
- At selected points of study period (1991-92, 1995-96, 2000-01, 2005-06, 2009-10, 2010-11, 2011-12, 2012-13, 2013-14, 2014-15, 2015-16, 2016-17 and 2017-18).
  - The shares of gems and jewellery exports in total exports.
  - The share of gems and jewellery exports in G.D.P.
  - The share of sub-categories in total gems and jewellery exports.
  - The share of sub-categories in total exports.
  - The share of sub-categories in G.D.P.

#### **Growth of India's Total Exports, Manufactured Exports, Gems and Jewellery Export**

In the present era, the export performance of a country is determined by the growth in the world demand. The key to viable balance of payment is strong and sustained export growth as well as an efficient import substitution (Kaur and Gopal, 2016). The manufacturing sector is major contributor to employment and growth of an economy. The Gems and Jewellery industry is crucial to the Indian manufacturing sector given its role in large-scale employment generation, foreign exchange earnings through exports, and value addition. The industry provides direct employment to roughly 2.5 million people and has the potential to generate employment opportunities of around 0.7-1.5 million over the next five years (ASSOCHAM Report, 2016).

The compound annual growth rates of India's total exports, manufactured exports, gems and jewellery exports for various study periods are shown in Table 2.1. India's total exports increased at the rate of 14.63 per cent, whereas India's manufactured exports and gems and jewellery exports grew at the rates of 14.65 per cent and 14.66 per cent respectively for the study period 1990-1991 to 2017-2018. The growth of total exports of India declined from 17.54 per cent to 11.46 per cent for the sub periods 1990-1991 to 2006-2007 and 2007-2008 to 2017-2018 respectively. Likewise, India's exports of manufactured goods recorded decline from 17.04 per cent to 14.18 per cent for the foresaid period. The growth rates of India's gems and jewellery exports recorded decline from 17.33 percent to 11.77 percent due to global financial crisis of 2007-2008 which also impacted global trade (Economic survey, 2009 and Shelburne, 2010). The decade wise comparison also recorded the decline in total exports, manufactured exports and gems and jewellery exports of India. During the sub periods of 1990-91 to 1999-00 and 2000-2001 to 2009-2010, the total exports of India grew at the rate of 20.56 percent and 19.51 percent which was slightly higher than the growth rates of manufactured exports, (i.e., 18.21 per cent and 17.01 per cent respectively) and gems and jewellery exports, (i.e., 19.86 percent and 15.52 percent respectively). During the sub periods 2010-2011 to 2017-2018 (i.e., another decade period), India's growth rate of total exports, manufactured exports and gems and jewellery exports declined to 6.09 per cent, 11.99 percent and 3.93 per cent respectively. It is observed that the India's total exports, manufactured exports and gems and jewellery exports registered lower growth rates in the last decade as compared to the first two decades of the study period. As per RBI report, 2019, the performance of India's manufacturing sector over the past few years has been dismal, its sectoral growth had stagnated to just 11 percent and there is urgent need of more than just a policy overhaul and there is a hope for uptick in credit flow to key manufacturing industries.

### **Growth of Sub –Categories of India’s Gems & Jewellery Exports**

The analysis of growth rates of sub-categories of India’s gems and jewellery exports for study period and considered sub periods as follows:

- **Cut & Polished Diamonds**

The exports of cut & polished diamonds grew at the rate of 13.39 per cent during the whole of the study period (i.e., 1990-1991 to 2017-2018) and it registered as the third highest growing sub-category of the India’s gems and jewellery exports. During the sub-period 1990-1991 to 2006-2007, the compound annual growth rate was 31.71 per cent which declined to 4.47 percent during the period 2007-2008 to 2017-2018 mainly due to global financial crisis in the year 2007-2008. The decade wise comparison recorded the fall in growth rate from 41.01 per cent during 1990-91 to 1999-00 to 18.59 percent for 2000-01 to 2009-2010 and further to 1.29 per cent during the period 2010-2011 to 2017-2018.

- **Gold Jewellery**

The overall growth rate of exports of gold for the study period 1990-1991 to 2017-2018 was 23.23 per cent and it occupied the position of second highest growth sub-category of the India’s gems and jewellery exports. The exports of this sub-category of gems and jewellery grew at 26.64 per cent during the sub-period 1990-1991 to 2006-2007, later it reduce to 8.09 per cent during the sub-period 2007-2008 to 2017-2018. During the decade period 1990-91 to 1999-00, gold’s exports grew at 28.38 per cent after which, it recorded the growth rate of 26.94 per cent for the decade 2000-2001 to 2009-2010 and it further declined to 2.82 percent during the decade 2010-11 to 2017-18.

- **Coloured Gemstones**

The exports of coloured gemstones grew at 9.09 per cent during the study period 1990-1991 to 2017-2018. The coloured gemstones exports recorded the positive growth rate (10.71 per cent) for the sub-period 1990-1991 to 2006-2007 but slowed down to 7.53 per cent in the subsequent sub-period 2007-2008 to 2017-2018. The decade-wise growth analysis of coloured gemstones exports showed that decade-wise comparisons of the study period, it grew positively high at 16.12 percent during first decade (i.e., 1990-91 to 1999-00), declined to 5.89 percent during the second decade (i.e., 2000-01 to 2009-10) and further to 3.74 percent in the last decade (2010-11 to 2017-18).

- **Pearls**

The exports of pearls grew at 3.03 per cent during the study period 1990-1991 to 2017-2018. Pearls exports recorded the growth rate at 1.45 per cent during the sub-period 1990-1991 to 2006-2007. The growth increased to 7.51 per cent during the subsequent sub-period 2007-2008 to 2017-2018. Decade wise, it grew at 5.18 percent during the first decade (i.e., 1990-91 to 1999-00) and recorded negative growth rate (-0.39) during the second decade (i.e., 2000-01 to 2009-10) but increased to 8.32 percent during the last decade (i.e., 2010-11 to 2017-18) during post global financial crisis. This indicates about the increasing importance of pearls as sub- category of gems and jewellery exports of India.

- **Non-Gold Jewellery**

As compared to other categories of gems and jewellery exports, the exports of non- gold jewellery recorded the highest growth rate (i.e., 23.95 per cent) during the study period i.e., 1990-1991 to 2017-2018. The exports of this sub-category grew at an impressive rate of 28.81 per cent during the sub-period 1990-1991 to 2006-2007, thereafter it decreased to 12.35 per cent during the sub-period 2007-2008 to 2017-2018. However the effect of higher non- gold prices prevailed in the year 2008 seem to had a persistent impact on the gems and jewellery exports (RBI monthly bulletin, May 2009). During the first decade, i.e., 1990-91 to 1999-00, non-gold exports recorded the highly positive growth rate (35.67 per cent) whereas during the second decade period, (i.e., 2000-2001 to 2017-2018) it declined to 20.93 per cent and during the last decade, (i.e., 2010-11 to 2017-18), it abruptly declined to 3.74 percent.

- **Synthetic Stones**

The exports of synthetic stones grew at 4.67 per cent during the study period 1990-1991 to 2017-2018. For the sub-period 1990-1991 to 2006-2007, the exports of this category grew at a high rate of 35.87 per cent after which it grew at rate of 11.43 per cent during the sub-period 2007-2008 to 2017-2018. During the sub-period 199-91 to 1999-00, the growth rate of synthetic stones was 27.95 per cent while in the following sub-period 2000-01 to 2009-2010, it declined to -3.97 per cent and in the last decade (i.e., 2010-11 to 2017-18), its growth rate enlarged to 9.31 percent.

- **Costume/ Fashion Jewellery**

The overall growth rate of exports of costume/ fashion jewellery for the study period 1990-1991 to 2017-2018 was 12.29 percent. The exports of this sub-category of gems and jewellery grew at 16.99 per cent during the sub-period 1990-1991 to 2006-2007, later it reduced to 14.06 per cent during the sub-period 2007-2008 to 2017-2018. During the decade of 1990-91 to 1999-00, costume/fashion jewellery exports grew at 25.69 percent after which, it abruptly declined and recorded the negative growth rate of -0.51 percent for the decade 2000-01 to 2009-10 but growth improved and recorded at 4.67 percent during 2010-11 to 2017-18.

- **Rough Diamonds**

The exports of rough diamonds grew at the rate of 12.39 percent during whole of the study period (i.e., 1990-1991 to 2017-2018). During the sub-period 1990-1991 to 2006-2007, the growth rate was 15.36 per cent which declined to 9.73 per cent during the period 2007-2008 to 2017-2018 mainly due to global financial crisis for the year 2007-2008. The decade wise comparison recorded the fall in growth rate from 18.58 per cent in 1990-91 to 1999-00 to 11.96 per cent during the period 2000-01 to 2009-10 to 5.81 percent in 2010-11 to 2017-18.

### **Growth of Manufactured Exports, Total Exports and Gems and Jewellery Exports for Policy Effectiveness**

During the years 1992 to 1997, manufactured exports grew at the rate of 25.2 percent whereas total exports and gems and jewellery exports grew at the rate of 24.5 percent and 19.2 percent respectively. For the years 1997 to 2002, manufactured exports, total exports and gems and jewellery exports grew at the rate of 23.4 percent, 22.1 percent and 17.08 percent respectively whereas for the sub-period 2002-07, manufactured exports, total exports and gems and jewellery exports grew at the rate of 22.8 percent, 21.5 percent and 19.8 percent respectively. During the sub-period 2009-14, manufactured exports, total exports and gems and jewellery exports grew at the rate of 14.4 percent, 13.7 percent and 14.1 percent respectively. In the end, for the three years 2015 to 2018, manufactured exports, total exports and gems and jewellery exports grew at the rate of 13.9 percent, 13.4 percent and 12.2 percent respectively.

### **Comparative Analysis of Growth of India's Gems and Jewellery Exports and its sub-Categories**

The growth performance of the sub-categories of the gems and jewellery exports such as gold jewellery and non- gold jewellery exports have grown at rate of around 20 percent or more for the study period taken as the whole. The other products i.e., rough diamonds, costume/fashion jewellery, cut & polished diamonds and coloured gemstones have grown at the rate more than 5 percent but less than 20 percent for the considered study period. The categories of pearls and synthetic stones showed the growth rate less than 5 percent for the study period 1990-1991 to 2017-2018. During the sub-period 1990-1991 to 2006-2007, the sub- categories gold, non- gold, synthetic stones and cut & polished diamonds recorded highly positive growth as compared to the sub-categories coloured gemstones, pearls, costume/ fashion jewellery and rough diamonds. During the sub-period 2007-2008 to 2017-2018, the growth of all the sub-categories declined abruptly.

To get the realistic view of the sub-categories of gems and jewellery exports, decade wise analysis and comparison have been done. During sub-period 1990-91 to 1999-00, the exports of all the sub-categories of gems and jewellery recorded high growth rates i.e., more than 15 per cent except pearls exports. During sub-period 2000-01 to 2009-10, the exports of the gold, non- gold, cut & polished diamonds and rough diamonds recorded high growth rates ( more than 10 percent) whereas the sub-category coloured gemstones recorded low growth rate ( 5.89 percent) and the sub- categories pearls, synthetic stones and costume/ fashion jewellery recorded negative growth rates. It is noticeable that the growth rate of India's exports of all sub-categories was less than 10 percent during the sub-period 2010-11 to 2017-2018. The slow-down in the trade of the gems and jewellery exports was mainly due to European sovereign debt crisis in 2008, along with the financial crisis of 2007-2008 and the great depression of 2008 (Sarangi 2014, Viswanathan 2010 and Rajesh 2018). The rise in prices of gems and jewellery exports because of the inflationary rate in India, increase in the transport cost and the war or conflict results in the reduction of exports of gems and jewellery products from India (Rediff, 2003 and India today, 2022).

The sub-categories of India's gems and jewellery exports registered higher than 20% growth are identified as high growth sub-categories. Similarly, sub-categories recorded more than 5 percent are identified as medium growth and less than 5 percent are identified as low growth sub-categories.

High Growth Sub-Categories (growth rate more than 20 percent): Gold Jewellery (23.23 percent), Non-Gold Jewellery (23.95 percent).

Medium Growth Sub- Categories (growth rate of more than 5 percent but less than 18 percent): Cut & Polished Diamonds (13.39 percent), Costume/ Fashion Jewellery (12.29 percent), Rough Diamonds (12.39 percent) and Coloured Gemstones (9.09 percent).

Low Growth Sub- Categories (growth rate less than 5 percent): Synthetic Stones (4.67 percent) and Pearls (3.03 percent).

The comparative analysis of India's gems and jewellery exports, total exports and manufactured exports throughout the study period 1990-91 to 2017-18 showed that their growth performance was almost identical and they grew at a rate of around 14.5%. The growth analysis further showed that in order to achieve sustained growth in total exports, gems and jewellery exports have a great potential to improve the position of India's manufactured export

#### **Structure of India's Gems and Jewellery Exports (Commodity-Wise)**

The structure of India's exports of gems and jewellery has undergone a significant change with growth and changing structure of Indian economy. In the present chapter, the changes in the structure of exports of gems and jewellery of India have been analyzed by measuring the percentage shares of gems and jewellery exports in India's total exports, manufactured exports and GDP at all points of study period 1990-1991 to 2017-2018. For the detailed analysis, the shares of all sub-categories out of Total Exports (TE), Manufacturing Exports (ME) and Gems & Jewellery Exports (GJE) at all points of study period have also been calculated.

#### **Shares of Total Exports, Manufactured Exports and Gems and Jewellery Exports in GDP**

As per table 2.3, India's total exports are increasing continuously for all the years of the study period (Rs.32527.28crores in 1990-91 to Rs.1926735 crores in 2017-18). The values of manufactured exports and gems and jewellery exports are also increasing for the whole of the study period (Rs.26092 crores in 1990-91 to Rs.1583672 crores in 2017-18 in case of manufactured exports) and (Rs.5360 crores in 1990-91 to Rs.242148 crores in 2017-18 in case of gems and jewellery exports). The value of GDP is also increasing for the whole of the study period ( Rs.598701 crores in 1990-91 to Rs. 1346788 crores in 2017-18). The share of exports in country's GDP gives an idea about relative contribution in given country's income. The percentage share of India's total exports in GDP fluctuated between 5.43 percent and 10.02 percent for the years 1990-91 to 2003-04. Thereafter, it increased to 15.83 percent in 2008-09, but due to global economic slowdown, the share declined to 13.84 percent in 2009-10. Further, it recovered and increased to 18.08 percent in the year 2013-14, but started declining and reached to 14.31 percent in 2017-18.

The percentage share of manufactured exports in GDP fluctuated between 4.36 percent and 8.31percent for the years1990-91 to 2002-03 and it stabilized around 9percent for four years (2004-05 to 2007-08). The share of manufactured exports in GDP registered around 10percent for the years 2009-10 to 2012-13. Further, the share fluctuated between 11.09 percent to 12.98 percent during 2013-14 to 2017-18.

The percentage share of gems & jewellery exports in GDP is also increasing but at a slow pace from 0.89 percent to 2.36 percent for the years 1990-91 to 2004-05. Thereafter, it again declined to 1.8 percent in 2008-09, but it increased to 2.64percent in 2011-12. For the rest of the years (2012-13 to 2016-17), the share of gems & jewellery exports in GDP fluctuated between 2 percent to 2.5percent but declined to 1.79 percent in 2017-18. The shares of total exports, manufactured exports and gems and jewellery exports in GDP recorded a significant contribution in India's GDP for the study period. The shares of manufactured exports, gems and jewellery exports and total exports are likely to decline year on year owing to choppy global economies, high import duty on gold and diamonds, and liquidity crunch in the sector (GJEPC Report, 2016-17).

#### **Shares of Manufactured Exports and Gems & Jewellery Exports in Total Exports**

The percentage share of manufactured exports in total exports registered between 60 to 80 percent for the whole of the study period (1990-91 to 2017-18). In the initial years, share registered as 80.21 percent in 1990-91, then it started declining and registered at the level of 77.64 percent in 1998-99. After that, manufactured exports registered a share of 80.93 percent in total exports during 1999-00but started declining and registered a share of 71.71 percent in 2014-15. During the last year (i.e., 2017-18) of study period, share of India's manufactured exports in total exports registered an increase and reached to 82.19 percent in 2017-18.



The share of India's gems and jewellery exports in total exports registered between 11 to 22 percent for the whole of the study period (1990-91 to 2017-18). In the initial years (1990-91 to 1995-96), the share registered between 16 percent to 18 percent except the year 1993-94 ( i.e., 18.55 percent). After this, it declined for the year 1996-97 but increased continuously for the years 1997-98 to 1999-00 and reached at its highest level of 22.11 percent. Further, it fluctuated between 16 percent to 19 percent upto the year 2005-06. For the rest of the years, the shares of gems and jewellery exports in total exports fluctuated between 11.38 percent to 16 percent except 2009-10 to 2010-11. During 2017-18, the share witnessed a declining trend and recorded at the level of 12.57 percent in 2017-18.

The share of India's gems and jewellery exports in manufactured exports registered between 16 to 27 percent for the whole of the study period (1990-91 to 2017-18). The share has been remained more than 20 percent throughout the study period except for the years 2008-09 and 2014-15 to 2017-18. During last five years, the shares of gems and jewellery exports in manufactured exports showed a decline with some stability.

The analysis of the structure of gems and jewellery exports (commodity-wise) is further classified into following three categories in order to get the clear picture of sub-categories of gems and jewellery exports during the study period.

- **Low and Constant Sub-Categories:** Those sub-categories of gems and jewellery exports whose share in India's gems and jewellery exports are very low and have continued to be low throughout the study period are considered as low and constant sub-categories (i.e., less than 15 percent).
- **Leading Categories:** Those sub-categories of gems and jewellery exports recording highest shares listed at second or third position throughout the study period are considered as leading sub-categories (i.e., 75 percent).
- **Lagging Categories:** Those sub-categories of gems and jewellery exports whose share has generally declined over time are considered as lagging categories.

There are three sub-categories of gems and jewellery exports that are low and constant are non-gold jewelry exports, synthetic stones exports and rough diamonds exports throughout the study period (i.e., from 1990-91 to 2017-18). The leading sub-categories consists of cut & polished diamonds and gold jewellery exports showed the leading share for given study period. The cut & polished diamonds exports were the only product which India was exporting with highest share. The lagging sub-categories include costume/fashion jewellery, pearls and coloured gemstones exports which showed the fluctuating shares in gems and jewellery exports in India for the study period.

#### **Comparison of Growth and Structure of India's Gems and Jewellery Exports and its sub-categories**

Thus, the analysis of growth and structure of exports of gems and jewellery (commodity-wise as well as destination-wise) reveals the gems and jewellery sector as one of the most important sectors contributing in Indian exports. The sub-category of cut & polished diamonds shows the highest share in India's gems and jewellery exports and more than 10 % growth rate (13.39 %) throughout the study period. The exports of gold are grown at more than 20 per cent rate and experienced the second highest share in total gems and jewellery exports. The sub-category of exports of coloured gemstones grew at 9.09 per cent rate for the study period (1990-1991 to 2017-2018) and are also showing the third highest shares in gems and jewellery exports (i.e., referred to leading category). Exports of gems and jewellery such as pearls, synthetic stones and costume/fashion jewellery exports which are included in middle category with growth less than 20 per cent and are also part of lagging categories under structure analysis. Non- Gold exports is an important sub-category of gems and jewellery exports and it also one of the essential contributors for economic and social development. The categories non-gold exports and rough diamonds exports grew at the rate of 23.95 percent and 12.39 percent has low and constant shares in the India's gems and jewellery exports and showed the fluctuating trend throughout the study period 1990-1991 to 2017-2018.

As per table 2.11, the sub-category **Gold** exports revealed high growth and had a leading share in gems and jewellery exports of India whereas **Non-Gold** exports recorded high potential growth but had a low and constant share in India's gems and jewellery exports. The sub-category **Cut & Polished diamonds** exports registered middle growth and had a leading share in gems and jewellery exports of India whereas **Costume/Fashion Jewellery** exports recorded middle growth and had a lagging share in gems and jewellery exports of India. The sub-category **Coloured Gemstones exports** recorded middle

growth but had a lagging share in gems and jewellery exports of India whereas **Rough Diamonds** exports registered middle growth and had a low and constant share in gems and jewellery exports of India. The sub-category **Synthetic Stones** exports recorded low growth and also had a low and constant share in gems and jewellery exports of India whereas **Pearls** exports registered low growth and had a lagging share in gems and jewellery exports of India. In the end, the sub-categories non-gold, costume/fashion jewellery, coloured gemstones and rough diamonds needs more concentration in the formulation of policies as these sub-categories got a potential to grow in the future but had a lagging share in gems and jewellery exports of India.

**Table 1: Compound Annual Growth Rates of India's Total Exports, Manufactured Exports and Gems and Jewellery Exports and its sub-categories:**

Commodity Exports /Period	1990-91 to 2017-18	1990-91 to 1999-00	2000-01 to 2009-10	2010-11 to 2017-18	1990-91 to 2006-07	2007-08 to 2017-18
Rough Diamonds	12.39	18.58	11.96	5.81	15.36	9.73
Gold Jewellery	23.23	28.38	26.94	2.82	26.64	10.92
Coloured Gemstones	9.09	16.12	5.89	3.74	10.71	7.53
Pearls	3.03	5.18	-0.39	8.32	1.45	7.51
Non- Gold Jewellery	23.95	35.67	20.93	3.74	28.81	12.35
Synthetic stones	4.67	27.95	-3.97	9.31	35.87	11.43
Costume/ Fashion Jewellery	12.29	25.69	-0.51	4.67	16.99	14.06
Cut & Polished Diamonds	13.39	41.01	18.59	1.29	31.71	4.47
Gems & Jewellery Exports	14.66	19.86	15.52	3.93	17.33	11.77
Manufactured Exports	14.65	18.21	17.01	11.99	17.04	14.18
Total Exports	14.63	20.56	19.51	6.09	17.54	11.46

**Table 2: Compound Annual Growth Rates of India's Total Exports, Manufactured Exports and Gems and Jewellery Exports for Policy Effectiveness**

Exports/Period	1992-97	1997-02	2002-07	2009-14	2015-18
Manufactured Exports	25.2	23.4	22.8	14.4	13.9
Total Exports	24.5	22.1	24.5	13.7	13.4
Gems and Jewellery Exports	19.2	17.1	19.8	14.1	12.1

**Table 3: India's Total Exports (TE), Manufactured Exports (ME), Gems and Jewellery Exports (GJE) and their shares and percentage changes (1990-91 to 2017-18**

Years	TE (in crores)	GJE (in crores)	ME (in crores)	GDP (in crores)	TE/GDP*100	ME/GDP*100	GJE/GDP*100	ME/TE*100	GJE/TE*100	GJE/TE*100	%age change in ME	%age change in GJE	%age change in TE
1990-91	32527.28	5360	26092	598701	5.43	4.36	0.89	80.21	16.48	20.54	-	-	-
1991-92	44041.81	7234	32413	614235	7.17	5.28	1.18	73.59	16.42	22.32	24.22	34.96	35.39
1992-93	53688.00	9503	40660	704523	7.62	5.77	1.35	75.73	17.71	23.37	25.44	31.36	21.91
1993-94	69748.85	12943	52245	818628	8.52	6.38	1.58	74.91	18.55	24.77	28.49	36.19	29.91
1994-95	82673.00	14637	64067	956704	8.64	6.69	1.53	77.49	17.71	22.85	22.62	13.09	18.53
1995-96	106353.40	18145	79433	1119567	9.49	7.09	1.62	74.69	17.06	22.84	23.98	23.97	28.64
1996-97	118817.30	18521	87377	1302876	9.12	6.71	1.42	73.54	15.58	21.19	10.01	22.07	11.72
1997-98	130100.60	20559	98660	1448723	8.98	6.81	1.42	75.83	15.81	20.84	12.91	11.01	9.49
1998-99	139751.80	26038	108506	1669608	8.37	6.49	1.55	77.64	18.63	23.99	9.98	26.65	7.42
1999-00	159095.20	35171	128761	1859624	8.55	6.92	1.89	80.93	22.11	27.31	18.67	35.07	13.84
2000-01	201356.50	35273	156858	2001721	10.06	7.84	1.76	77.91	17.52	22.49	21.82	0.29	26.56
2001-02	209018.00	35862	159146	2177243	9.61	7.31	1.64	76.14	17.15	22.53	21.45	1.67	3.81
2002-03	255137.30	44232	194765	2345089	10.88	8.31	1.89	76.33	17.33	22.71	22.38	23.34	22.06
2003-04	293366.80	55726	222829	2926341	10.02	7.61	1.90	75.95	18.99	25.01	14.41	25.98	14.98
2004-05	375339.50	70239	272872	2971812	12.63	9.18	2.36	72.71	18.71	25.74	22.45	26.04	27.94
2005-06	456417.90	73583.24	321261	3390915	13.46	9.47	2.17	70.39	16.12	22.91	17.73	4.76	21.60
2006-07	571779.30	77430.24	384261	3954210	14.46	9.72	1.96	67.21	13.54	20.15	19.61	5.23	25.27
2007-08	655863.50	84181.96	414599	4583214	14.31	9.05	1.83	63.21	12.83	20.31	7.89	8.72	14.71
2008-09	839978.00	95610.31	566402	5304432	15.83	10.68	1.81	67.43	11.38	16.88	36.61	13.57	28.07
2009-10	845534.00	139056.4	654656	6109316	13.84	10.71	2.27	77.42	16.44	21.24	15.58	45.44	0.66
2010-11	1142922.00	192795	719863	7552008	15.13	9.53	2.55	62.98	16.87	26.78	9.96	38.64	35.17
2011-12	1465919.00	221950	888599	8395823	17.46	10.58	2.64	60.62	15.14	24.98	23.44	15.12	28.26
2012-13	1634319.00	234210	995441	9392601	17.40	10.59	2.49	60.91	14.33	23.53	12.02	5.52	11.48
2013-14	1894182.00	250340	1162383	10476623	18.08	11.09	2.38	61.36	13.22	21.53	16.77	6.89	15.91
2014-15	1896450.00	252210	1359988	10527674	18.01	12.92	2.39	71.71	13.29	18.54	16.99	0.75	0.12
2015-16	1716380.00	257420	1426758	11386145	15.07	12.53	2.26	83.13	14.99	18.04	4.91	2.06	-9.49
2016-17	1849430.00	290900	1543276	12196006	15.16	12.65	2.38	83.45	15.73	18.85	8.17	13.01	7.75
2017-18	1926735.00	242148	1583672	1346788	14.31	11.76	1.79	82.19	12.57	15.29	2.62	-16.76	4.18

Source: Author's Calculations

**Table 4: India's percentage shares of sub-categories in Gems and Jewellery Exports (GJE), Manufactured Exports (ME) and total exports (TE) (1990-91 to 2017-18)**

Years	Share of C&P Diamonds Exports			Share of Gold jewellery			Share of Coloured Gemstones Exports			Share of Pearls Exports		
	GJE	ME	TE	GJE	ME	TE	GJE	ME	TE	GJE	ME	TE
1990-91	88.41	18.16	14.57	6.79	1.39	1.12	3.88	0.79	0.64	0.15	0.03	0.02
1991-92	85.19	19.01	13.99	10.37	2.31	1.71	3.55	0.79	0.58	0.14	0.03	0.02
1992-93	87.51	20.45	15.49	8.88	2.07	1.57	2.84	0.66	0.51	0.11	0.02	0.01
1993-94	88.15	21.84	16.36	8.09	2.19	1.65	2.41	0.59	0.45	0.12	0.03	0.02
1994-95	85.89	19.62	15.21	10.38	2.37	1.84	3.02	0.69	0.53	0.11	0.02	0.02
1995-96	85.43	19.51	14.57	10.41	2.38	1.77	2.69	0.61	0.46	0.11	0.02	0.02
1996-97	80.53	17.07	12.55	14.23	3.02	2.22	2.59	0.55	0.41	0.07	0.01	0.01
1997-98	80.64	16.81	12.74	15.06	3.14	2.38	2.38	0.49	0.38	0.07	0.01	0.01
1998-99	80.93	19.42	15.08	13.61	3.26	2.53	2.87	0.69	0.53	0.06	0.01	0.01
1999-00	81.62	22.29	18.04	13.34	3.64	2.95	2.52	0.69	0.56	0.05	0.02	0.02
2000-01	79.49	17.88	13.93	14.79	3.33	2.59	2.62	0.59	0.46	0.03	0.01	0.02
2001-02	79.04	17.81	13.56	15.44	3.48	2.65	2.42	0.54	0.41	0.03	0.01	0.01
2002-03	77.54	17.61	13.44	16.51	3.74	2.86	2.09	0.47	0.36	0.04	0.01	0.01
2003-04	71.04	17.77	13.49	21.99	5.49	4.17	1.47	0.36	0.28	0.03	0.02	0.01
2004-05	71.29	18.35	13.34	24.17	6.22	4.52	1.23	0.32	0.23	0.02	0.01	0.01
2005-06	70.84	16.22	11.42	23.24	5.32	3.74	1.41	0.32	0.22	0.01	0.01	0.01
2006-07	63.58	12.81	8.61	30.36	6.12	4.11	1.44	0.29	0.19	0.01	0.01	0.02
2007-08	67.89	13.78	8.71	26.58	5.39	3.41	1.32	0.27	0.17	0.02	0.02	0.01
2008-09	61.49	10.38	6.99	32.38	5.46	3.68	1.25	0.21	0.14	0.02	0.01	0.02
2009-10	61.94	13.15	10.18	32.93	6.99	5.42	0.98	0.21	0.16	0.01	0.01	0.01
2010-11	68.68	18.39	11.58	27.39	7.33	4.62	0.89	0.24	0.15	0.02	0.01	0.02
2011-12	65.72	16.41	9.95	30.55	7.63	4.62	0.82	0.21	0.12	0.01	0.01	0.01
2012-13	65.27	15.35	9.35	30.81	7.25	4.41	0.85	0.19	0.12	0.02	0.01	0.02
2013-14	66.63	14.35	8.81	29.62	6.38	3.91	0.83	0.18	0.11	0.01	0.02	0.01
2014-15	65.93	12.23	8.77	29.98	5.56	3.98	0.86	0.16	0.11	0.01	0.01	0.01
2015-16	65.03	11.73	9.75	30.67	5.53	4.61	0.88	0.16	0.13	0.01	0.01	0.02
2016-17	68.85	12.98	10.83	27.28	5.14	4.29	0.79	0.15	0.12	0.01	0.01	0.01
2017-18	54.67	8.36	6.87	26.11	3.99	3.28	0.87	0.13	0.11	0.01	0.02	0.01

Source: Author's calculations

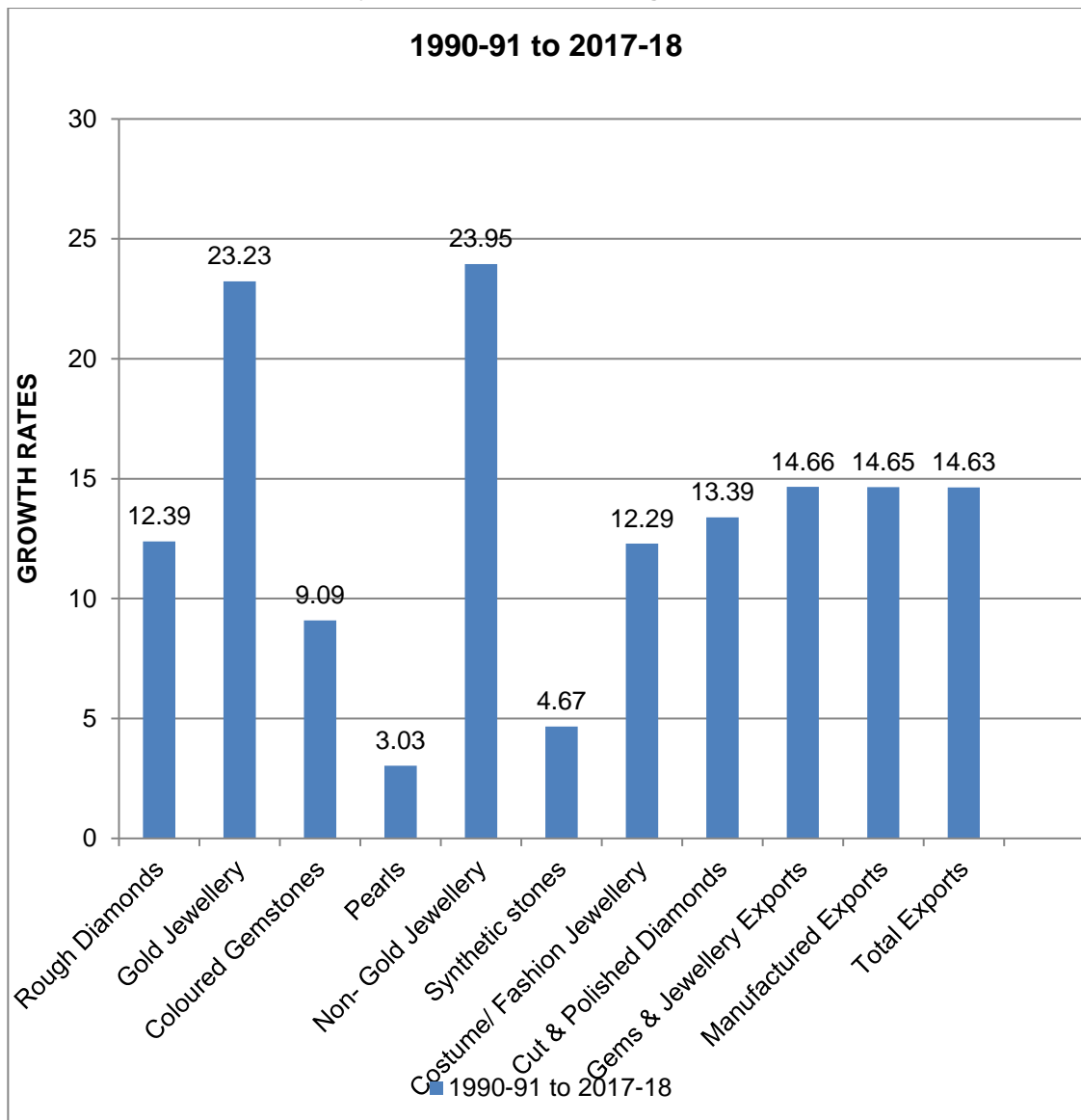
**Table 4: India's Percentage shares of sub-categories in Gems and Jewellery Exports (GJE), Manufactured Exports (ME) and Total Exports (TE)(1990-91 to 2017-18)**

Years	share of Non Gold Jewellery Exports			share of Synthetic Stones Exports			share of Costume/Fashion Jewellery Exports			share of Rough Diamonds Exports		
	GJE	ME	TE	GJE	ME	TE	GJE	ME	TE	GJE	ME	TE
1990-91	0.28	0.06	0.05	0	0	0	0.04	0.01	0.01	0	0	0
1991-92	0.34	0.07	0.06	0.01	0.01	0.02	0.04	0.01	0.01	0	0	0
1992-93	0.31	0.07	0.05	0.02	0.01	0.01	0.13	0.02	0.02	0	0	0
1993-94	0.18	0.04	0.03	0.01	0.01	0.02	0.14	0.03	0.02	0	0	0
1994-95	0.24	0.05	0.04	0.05	0.02	0.02	0.14	0.03	0.02	0	0	0
1995-96	0.46	0.11	0.08	0.07	0.01	0.02	0.09	0.02	0.01	0.58	0.13	0.09
1996-97	0.56	0.12	0.08	0.05	0.01	0.01	0.11	0.02	0.02	1.69	0.36	0.26
1997-98	0.63	0.13	0.09	0.04	0.01	0.01	0.06	0.01	0.01	0.87	0.18	0.14
1998-99	0.93	0.22	0.17	0.04	0.02	0.02	0.08	0.02	0.01	1.31	0.31	0.24
1999-00	0.59	0.16	0.13	0.03	0.01	0.01	0.07	0.02	0.02	1.65	0.45	0.36
2000-01	0.72	0.16	0.13	0.02	0.01	0.01	0.12	0.03	0.02	2.02	0.45	0.35
2001-02	0.85	0.19	0.14	0.03	0.01	0.02	0.13	0.03	0.02	1.88	0.43	0.32
2002-03	0.93	0.21	0.16	0.01	0.01	0.01	0.11	0.02	0.01	2.63	0.59	0.45
2003-04	0.82	0.21	0.15	0.01	0.02	0.01	0.08	0.02	0.01	4.39	1.09	0.83
2004-05	0.82	0.21	0.15	0.01	0.01	0.02	0.06	0.01	0.02	2.28	0.58	0.42
2005-06	0.87	0.21	0.14	0.01	0.02	0.01	0.07	0.02	0.01	3.39	0.77	0.54
2006-07	1.02	0.21	0.14	0.02	0.01	0.01	0.04	0.01	0.01	3.29	0.66	0.44
2007-08	1.09	0.22	0.14	0.01	0.02	0.01	0.03	0.01	0.01	2.71	0.55	0.35
2008-09	0.91	0.15	0.11	0.01	0.01	0.02	0.04	0.01	0.01	3.63	0.61	0.41
2009-10	1.41	0.29	0.23	0.02	0.01	0.01	0.05	0.01	0.01	2.53	0.54	0.42
2010-11	1.04	0.27	0.17	0.01	0.01	0.02	0.04	0.01	0.01	1.93	0.52	0.33
2011-12	1.13	0.28	0.17	0.01	0.01	0.01	0.04	0.01	0.02	1.72	0.43	0.26
2012-13	1.21	0.28	0.17	0.02	0.01	0.01	0.04	0.02	0.01	1.72	0.41	0.25
2013-14	1.19	0.26	0.15	0.01	0.02	0.01	0.05	0.01	0.01	1.67	0.36	0.22
2014-15	1.26	0.23	0.16	0.01	0.01	0.02	0.04	0.01	0.02	1.91	0.35	0.25
2015-16	1.32	0.24	0.19	0.02	0.02	0.01	0.04	0.01	0.01	1.92	0.35	0.29
2016-17	1.24	0.23	0.19	0.01	0.01	0.01	0.05	0.01	0.01	1.78	0.33	0.28
2017-18	0.91	0.14	0.11	0.02	0.01	0.01	0.04	0.01	0.01	1.29	0.19	0.16

Source: Author's calculations

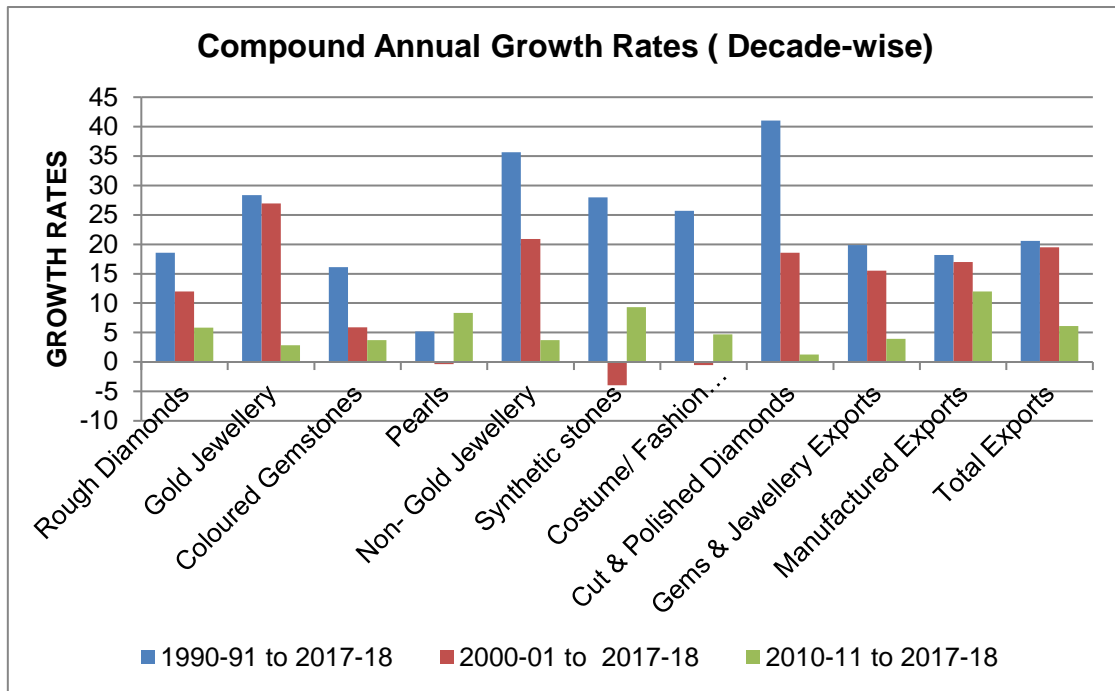
**Table 5: Category-wise comparison of Growth and Share in Gems and Jewellery Exports**

Sub-categories of Gems and Jewellery Exports	Level of Growth	Share in gems and Jewellery Exports
Gold	High growth	Leading share
Non-Gold	High growth	Low & constant share
Cut & Polished Diamonds	Medium growth	Leading share
Costume/ Fashion Jewellery	Medium growth	Lagging share
Coloured Gemstones	Medium growth	Lagging share
Rough Diamonds	Medium growth	Low & constant share
Synthetic Stones	Low growth	Low & constant share
Pearls	Low growth	Lagging share

**Figure 1: Compound Annual Growth Rates of India's Total Exports, Manufactured Exports and Gems and Jewellery Exports and its sub-categories (1990-91 to 2017-18)**

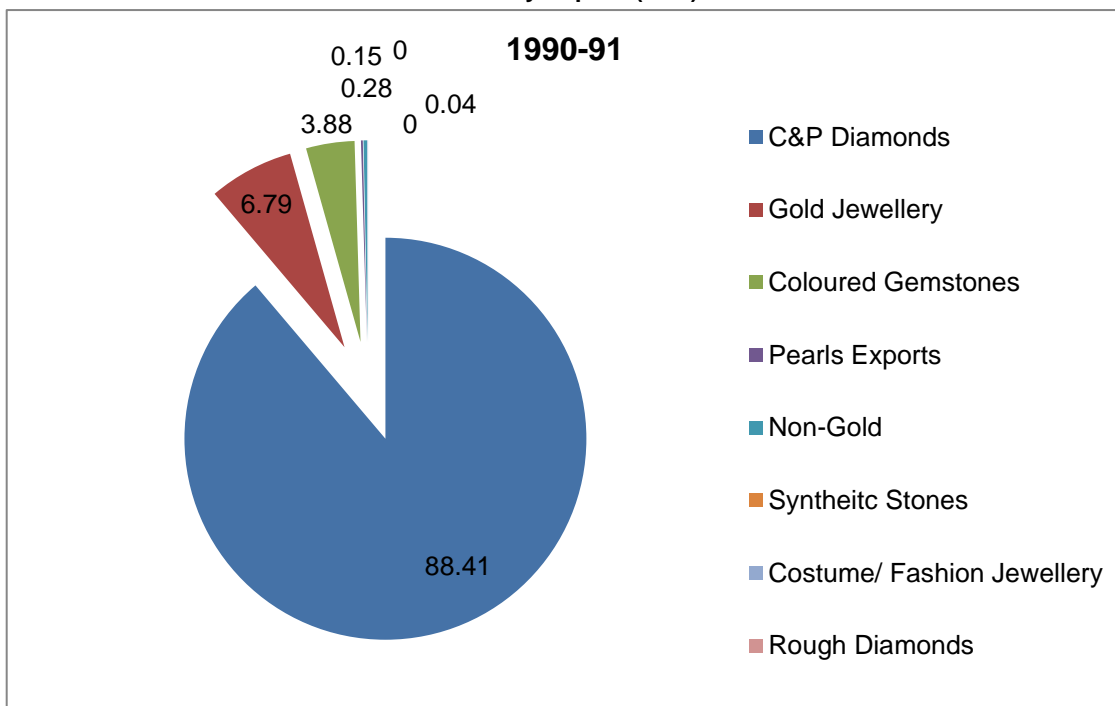
Source: Author's Calculation

**Figure 2: Compound Annual Growth Rates of India's Total Exports, Manufactured Exports and Gems and Jewellery Exports and its sub-categories (Decade-Wise)**



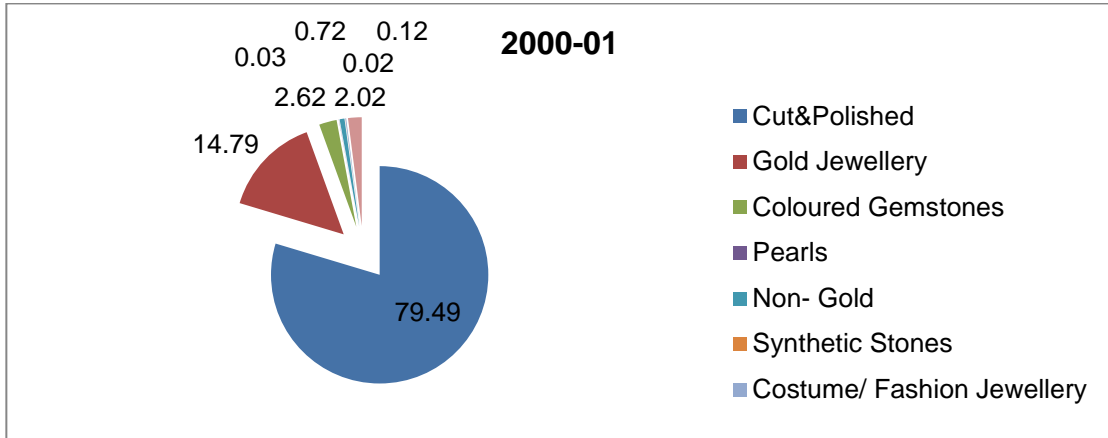
Source: Author's Calculation

**Figure 3: India's Percentage Shares of Sub-Categories in Gems and Jewellery Exports(GJE) in 1990-91**



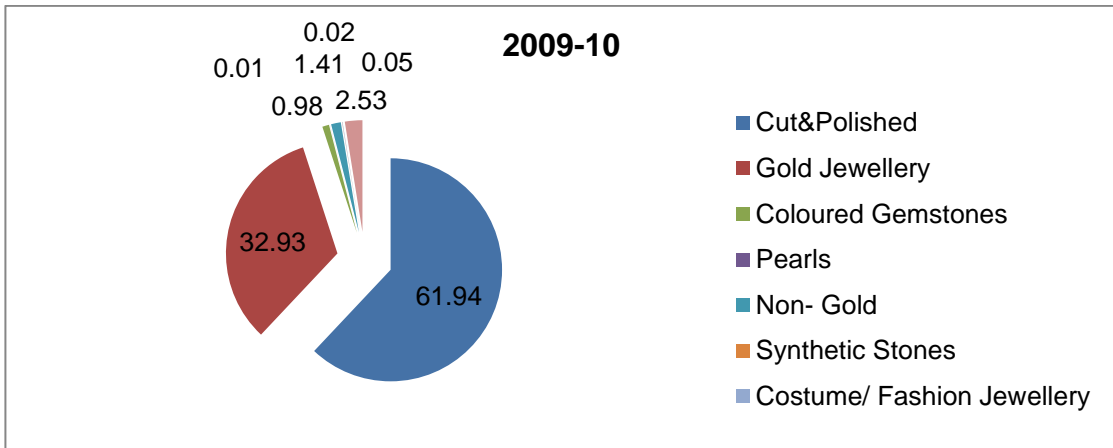
Source: Author's Calculation

**Figure 4: India's Percentage Shares of Sub-Categories in Gems and Jewellery Exports (2000-01)**



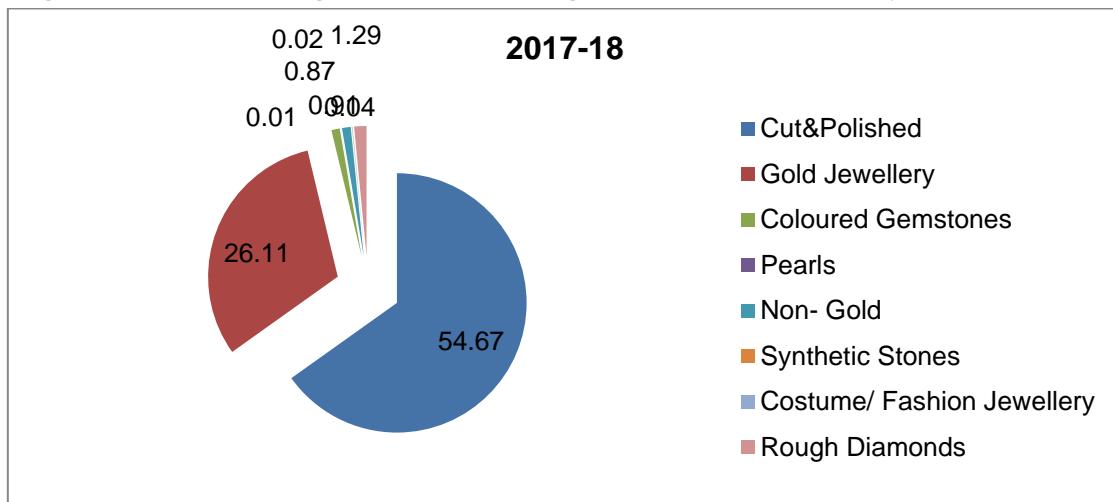
Source: Author's Calculation

**Figure 5: India's Percentage shares of Sub-Categories in Gems and Jewellery Exports (2009-10)**



Source: Author's Calculation

**Figure 6: India's Percentage shares of Sub-Categories in Gems and Jewellery Exports (2017-18)**



Source: Author's Calculation

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