

## DIRECTION OF INDIA'S EXPORTS

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Dr. MATHANRAJ. T\*

SARANYA.C\*\*

### ABSTRACT

*Exports of a country plays a vital role in the growth of an economy. The development of this sector is an indicator of the economic strength of a country. It helps in raising productivity, generating employment and also supports other sectors of the Indian economy. (i) To analyze the trends and growth rate of Direction of India's Exports during 1991-92 to 2016-17. (ii) To study the growth performance of India's Export to India's Export to Various Regional Groups. (iii) To identify the India's Export to OPEC, OECD, EU, Developing countries, SAARC and African countries. The present study is based upon the time series secondary data collected from various published sources of Government Agencies from Directorate General of Commercial Intelligence and Statistics, Handbook of Statistics on Indian economy, Reserve Bank of India (RBI), Govt. of India. The analysis was done by the use of SPSS and Excel. The data were analyzed using descriptive statistics such as tables. Similarly, an attempt is made in this part to present collected data through line graph, bar diagram. Linear Model has been applied to analyze the trends and growth rate of Direction of India's Exports. Semi Log Model and Compound Growth Rate has been applied study the trends and growth rate of India's Export to Various Regional Groups From 1991-92 to 2016-17.*

**Keywords:** India's Exports, Linear Model, Semi Log Model.

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### INTRODUCTION

Foreign trade occupied an important place in any economy and its role in the world economy has increased over the past 69 years. (Paul Krugman, 1999). It is very crucial for

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\* Researcher, Department of Economics, Scott Christian College (Autonomous), Nagercoil-629003 Affiliated to ManonmaniamSundaranar University, Tirunelveli-12, Tamil Nadu, India

\*\* Research Scholar, Department of Economics, Scott Christian College (Autonomous), Nagercoil- 629003, Affiliated to ManonmaniamSundaranar University, Tirunelveli-12, Tamil Nadu, India Email id: drmathantraj@gmail.com

a country's economic development as it has made an increasingly significant contribution to economic growth and substantially to the economic welfare of the people. The foreign trade of a country consists of inward and outward movement of goods and services, which results into outflow and inflow of foreign exchange from one country to another country. No country in the world possesses the adequate facilities for economical production of all the goods and services that are consumed by its people. This implies that no country is self-sufficient in the sense that no country can produce all the goods that it needs. Hence, the need to trade with each other arises. Economies of scale and international specialization which is also the fruits of scientific and technological progress in the world would become more easily accessible through foreign trade (Agarwal, 1975). Developing countries need more goods to feed a rapidly growing population. Exports can be a leading sector in growth. It clearly implies that increased earnings from higher marketability of a country's commodities in the international market would stimulate the indigenous industrial activity within the country. This in turn brings many distinct benefits, viz., greater utilization of resources, larger employment opportunities, more foreign exchange, etc. It was thus considered that foreign trade would make an impressive contribution to a country's development; hence it is considered to be not simply a device for achieving productive efficiency; but also, an engine of growth. International trade has now become a vital part of development strategy and it can be an effective instrument of economic growth, employment generation and poverty alleviation in an economy. Export plays a substantial role in the economic development of all the developed and developing economies. With the growth of international organizations like WTO, UNCTAD, ASEAN, etc., world trade is growing at a very fast rate. Direction of trade means a study of the countries to whom the exports are made and from whom the imports are made. This paper has discussed trends and growth rate of direction of India's exports during 1991-92 to 2016-17.

#### **SIGNIFICANCE FOR THE STUDY**

International trade is the engine of economic growth in any country. Following the liberalization of Indian economy in 1991, exports and imports of India have been growing tremendously. But the value of imports is still larger than the value of exports. Thus there is a need to boost the growth rate of India. Export is very important for the growth of economy as it leads to the gaining of foreign exchange which helps in the growth of the economy. More growth of the economy leads to more prosperous nation. The study brings into light the trends and growth rate of direction of India's exports. At present, global trade is a vital part of development approach and it can be

valuable instrument of poverty reduction create more employment, increases output, earns foreign currency, financial development, and mobilizes of domestic resources and saving optimally so that the economic benefits reach to the wider group of people (Mathanraj.T 2019). It would be helpful for the policymaker to enact suitable policies for encouraging trade. This study will also be helpful for the upcoming researcher in the field of International economics.

### **OBJECTIVES OF THE STUDY**

- ✚ To analyze the trends and growth rate of direction of India's exports during 1991-92 to 2016-17.
- ✚ To study the growth performance of India's Export to India's Export to Various Regional Groups.
- ✚ To identify the India's Export to OPEC, OECD, EU, Developing countries, SAARC and African countries.

### **RESEARCH METHODOLOGY**

The present study is based upon the time series secondary data collected from various published sources of Government Agencies from Directorate General of Commercial Intelligence and Statistics, Handbook of Statistics on Indian economy, Reserve Bank of India (RBI), Govt. of India. The analysis was done by the use of SPSS and Excel. The data were analyzed using descriptive statistics such as tables. Similarly, an attempt is made in this part to present collected data through line graph, bar diagram. Linear Model has been applied to analyze the trends and growth rate of Direction of India's Exports. Semi Log Model and Compound Growth Rate has been applied study the trends and growth rate of India's Export to various regional groups from 1991-92 to 2016-17.

### **TOOLS OF USED THE STUDY**

The researcher had analyzed the collected data with the basic objectives of the study in mind. Some of the tools involved in the study include

1. Linear model
2. Semi-log Model and compound growth rate
3. 'T' test

### **LINEAR MODEL**

Further the researcher has used percentage and the simple linear growth rate model. The linear growth rate model

$$Y = a + b_t$$

Where, Y - Dependent variable, T – Time, 'a' and 'b' are the parameters. The linear growth rate is obtained from the 'b' value.

### SEMI LOG MODEL AND COMPOUND GROWTH RATE

Further the researcher has used the Semi log model, in order to compute the Instantaneous Growth Rate and the Compounded Annual Growth Rate (CAGR) the Semi-log is used and was computed using the following models.

If  $Y_t$  = Variable at time t and  $Y_1$  = initial year value of the variable, simple compounding is explained as

$$\log Y = a + b_t$$

$$CGR = (\text{Anti log } b - 1)100$$

### 'T' TEST

$$b_1 - b_2$$

$$t = \frac{b_1 - b_2}{\sqrt{(S.E. b_1)^2 + (S.E. b_2)^2}}$$

Here  $b_1$  represented the slope coefficient obtained in the regression model, which was estimated for the study period and  $b_2$  was the slope coefficient obtained in the regression model estimated for the study period S.E. is the standard error.

### DIRECTION OF INDIA'S EXPORTS

The direction of exports refers to the various regional groups and commodity-wise India's export. This chapter examines the various groups, OPEC countries (Oil Producing and Exporting countries), OECD countries (Organization for Economic Co-operation and Development), European Union countries (EU), Asia and Oceania countries, North America countries, Developing countries, SAARC countries (South Asian Association for Regional Co-operation), other Asian developing countries and African countries in exports from India.

**TABLE NO.1.1 INDIA'S EXPORT TO VARIOUS REGIONAL GROUPS FROM 1991-92 TO 2016-17 (US\$ Million)**

Countries	1991-92	1995-96	2000-01	2005-06	2010-11	2015-16	2016-17
OPEC Countries	1561.8	3079	4850	15242.2	47812.1	46236	45309.9
OECD Countries	10337	17705.1	23473.6	45836.9	83448.3	101102.5	104930.6

Eastern Europe	1952.7	1340	1317.8	1980.4	2715.9	2438.5	2820.2
Developing Countries	3587.1	9198.4	13012.6	39736.4	101730	109171	120216.2

**Source:** Directorate General of Commercial Intelligence and Statistics (DGCI&S)

The Table No.1.1 shows that India's export to developing countries has increased from \$3,587.1 million US dollar in 1991-92 to \$39,736.4 million US dollar in 2005-06 and \$1, 20,216.2 million US dollar in 2016-17. India's export to OECD Countries has increased from \$10,337 million US dollar in 1991-92 to \$45836.9 million US dollar in 2005-06 then to \$1, 04,930.6 million US dollar in 2016-17. India's export of OPEC has increased from \$1,561.8 million US dollar in 1991-92 to \$47812.1 million US dollar in 2010-11 finally decreased to \$45,309.9 million US dollar in 2016-17. India's export of Eastern Europe has declined from \$1952.7 million US dollar in 1991-92 to \$1,317.8 million US dollar in 2000-01 then improved to \$2715.9 million US dollar in 2010-11 and finally to \$2,820.2 million US dollar in 2016-17.

**TABLE NO.1.2. TREND AND GROWTH RATE OF INDIA'S EXPORT TO VARIOUS REGIONAL GROUP DURING 1991-92 TO 2016-17**

Variable	Linear Model				Semi log Model				CG R
	a	b	t	R <sup>2</sup>	a	b	t	R <sup>2</sup>	
OPEC	26822.60 (37671.74)	4912.79 (2439.33)	2.014	0.145	7.047 (0.236)	0.175 (0.015)	11.489	0.846	19.2
OECD Countries	- 11309.37 (4807.47)	4512.29 (311.29)	14.495	0.897	9.125 (0.057)	0.103 (0.004)	28.047	0.970	10.9
Eastern Europe	665.668 (214.82)	97.663 (13.910)	7.021	0.659	6.811 (0.100)	0.051 (0.006)	7.781	0.704	5.2
Developing Countries	29190.83 (7873.47)	5953.30 (509.82)	11.677	0.850	8.116 (0.097)	0.157 (0.006)	24.894	0.963	17.0

**Source:** Calculated by the researcher (Figures in bracket indicate Standard Error)

It is found from Table No.1.2 that the t values of the trend co-efficient were found to be statistically significant at one per cent level. The R<sup>2</sup> values were also found to be satisfactory. Among the India's export to various regional group countries, Developing

Countries had highest annual average export value of US \$5953.30 million per year. OPEC held the second largest annual average export value of US \$4912.79 million per annum. The third rank was secured by OECD which had the average annual export value of US \$4512.29 million per annum and Eastern Europe had the lowest annual average export value of US \$97.66 million per year. As far as the growth rate of the exports of various regional groups exporting countries was concerned, OPEC had the top most growth rate of 17.5 per cent per year; developing countries had the second largest export growth rate of 15.7 per cent per year. The third place was secured by OECD which had the export growth rate of 10.3 per cent per year. The lowest export growth rates were witnessed in Eastern Europe which has 5.1 per cent per annum. Regarding the compound growth rate of exports were concerned, OPEC had the highest compound growth rate of 19.2 per cent per annum and Eastern Europe had the lowest compound growth rate of 5.2 per cent per annum.

**TABLE NO.1.3. INDIA'S EXPORT TO OPEC COUNTRIES FROM 1991-92 TO 2016-17(US\$ Million)**

<b>Countries</b>	<b>1991-92</b>	<b>1995-96</b>	<b>2000-01</b>	<b>2005-06</b>	<b>2010-11</b>	<b>2015-16</b>	<b>2016-17</b>
Iran	122.5	155.0	227.0	1188.3	2488.3	2776.8	2392.3
Iraq	0.0	0.6	84.0	155.9	674.9	999.8	1115.7
Kuwait	52.3	135.5	199.1	513.7	1854.0	1245.4	1494.2
Saudi Arabia	351.3	482.3	822.9	1809.8	4674.1	6385.7	5136.3
UAE	738.5	1428.3	2597.5	8591.8	33770.3	30295.5	31233.6
Eastern Europe	1952.7	1340.0	1317.8	1980.4	2715.9	2438.5	2820.2
Russia	1640.0	1045.0	889.0	733.1	1691.4	1593.3	1931.7
OPEC	1561.8	3079	4850.0	15242.2	47812.1	46236.0	45309.9

**Source:** Directorate General of Commercial Intelligence and Statistics

The Table No.1.3 reveals among the OPEC countries, UAE went up from \$738.5 million US dollar in 1991-92 to \$8,591.8 million US dollar in 2005-06 and \$31,233.6 million US dollar in 2016-17. India's export to Saudi Arabia improved from \$351.3 million US dollar in 1991-92 then gradually increased to \$6,385.7 million US dollar in 2015-16 and finally fell down to \$5,136.3 million US dollar in 2016-17. India's export to Iran increased from \$1, 22.5 million US dollar in 1991-92 to \$1,188.3 million US dollar in 2005-06 and \$2,392.3 million US dollar in 2016-17. India's export to Iraq increased from \$0.0 million US dollar in 1991-92 to \$155.9 million US dollar in 2005-06 and it reached to \$1,115.7 million US dollar in 2016-17.

**TABLE NO.1.4. TREND AND GROWTH RATE OF INDIA'S EXPORT TO OPEC COUNTRIES FROM 1991-92 TO 2016-17**

Variable	Linear Model				Semi log Model				CGR
	a	b	t	R <sup>2</sup>	a	b	t	R <sup>2</sup>	
OPEC	26822.60 (37671.74)	4912.79 5 (2439.33)	2.01 4	0.14 5	7.047 (0.236)	0.175 (0.015)	11.48 9	0.84 6	19.2
Iran	-783.142 (268.996)	161.109 (17.418)	9.25 0	0.78 1	4.308 (0.168)	0.166 (0.11)	15.21 9	0.90 6	18.0
Iraq	-287.878 (76.272)	46.819 (4.939)	9.48 0	0.88 8	-	-	-	-	-
Kuwait	-225.571 (94.298)	59.654 (6.106)	9.77 0	0.79 9	4.199 (0.099)	0.128 (0.006)	19.93 9	0.94 3	13.6
Saudi Arabia	-1895.44 (816.355)	374.292 (52.861)	7.08 1	0.67 6	5.504 (0.128)	0.144 (0.0089)	17.41 5	0.92 7	15.5
UAE	-7829.82 (11263.067)	1974.07 6 (729.310)	2.70 7	0.23 4	6.331 (0.245)	0.184 (0.016)	11.62 9	0.84 9	20.2
Eastern Europe	665.668 (214.824)	97.663 (13.910)	7.02 1	0.67 3	6.811 (0.100)	0.006 (0.100)	7.781	0.71 6	5.2
Russia	528.986 (164.215)	46.430 (10.633)	4.36 6	0.44 3	6.464 (0.131)	0.037 (0.009)	4.327	0.43 8	3.7

**Source:** Calculated by the researcher (Figures in bracket indicate Standard Error)

It is observed from the Table No.1.4 that the t values of the trend co-efficient were found to be statistically significant at one per cent level. The R<sup>2</sup> values were also found to be satisfactory. Among the India's export to OPEC countries, UAE had the

highest annual average export value of US \$1,974.07 million per year. Saudi Arabia held the second largest annual average export value of US \$374.29 million per annum. The third rank was secured by Iran which had the average annual export value of US \$161.10 million per year followed by Kuwait (US \$59.65 million) per annum. Iraq had the lowest annual average export value of US \$ 46.81 million per year. As far as the growth rate of the exports of OPEC countries was concerned, UAE has the topmost growth rate of 18.4 per cent per year, Iran had the second largest export growth rate of 16.6 per cent per year, and Saudi Arabia held the third place in export growth rate of 14.4 per cent per year. The lowest export growth rate was witnessed in Kuwait which had 12.8 per cent per annum. Regarding the compound growth rate of exports, UAE had the highest compound growth rate of 20.2 per cent per annum. Kuwait had the lowest compound growth rate of 13.6 per cent per year.

**TABLE NO.1.5. INDIA'S EXPORT TO OECD COUNTRIES FROM 1991-92 TO 2016-17(US\$ Million)**

<b>Countries</b>	<b>1991-92</b>	<b>1995-96</b>	<b>2000-01</b>	<b>2005-06</b>	<b>2010-11</b>	<b>2015-16</b>	<b>2016-17</b>
OECD Countries	10337	17705	23473	45836	83448	101102	104930
European Union	4826	8708	10410	22385	46123	44726	47599
North America	3109	5825	9961	18374	26634	42452	44322
Asia and Oceania	1878	2651	2263	3444	6991	8238	7128
Other OECD	522	519	837	1632	3638	5685	5880

**Source:** Directorate General of Commercial Intelligence and Statistics

From the Table No.1.5 that the OECD countries from, 1991-92 to 2016-17 European Union increased from \$4,826 million US dollar in 1991-92 to \$22,385 million US dollar in 2005-06 and \$47,599 million US dollar in 2016-17. India's export to North America accelerated from \$3,109 million US dollar in 1991-92 to \$26,634 million US dollar in 2010-11 and \$44,322 million US dollar in 2016-17. India's export to Asia and Oceania increased from \$1,878 million US dollar in 1991-92 to \$3,444 million US dollar in 2005-06 then to \$7,128 million US dollar in 2016-17. India's export to other OECD countries improved from \$522 million US dollar in 1991-92 to \$5,685 million US dollar in 2015-16 and finally reached to \$5880 million US dollar in 2016-17.



**TABLE NO.1.6. TREND AND GROWTH RATE OF INDIA'S EXPORT TO  
OECD COUNTRIES  
FROM 1991-92 TO 2016-17**

Variable	Linear Model				Semi log Model				CGR
	a	b	t	R <sup>2</sup>	a	b	t	R <sup>2</sup>	
OECD Countries	11309.37 1 (4807.47 2)	4512.29 0 (311.295 )	14.49 5	0.89 7	9.125 (0.057 )	0.103 (0.004 )	28.04 7	0.97 0	10.9
European Union	- 5483.314 (2545.63 1)	2199.01 2 (164.836 )	13.34 1	0.88 1	8.350 (0.078 )	0.106 (0.005 )	20.95 1	0.94 8	11.2
North America	- 4892.714 (1830.05 3)	1752.61 0 (118.500 )	14.79 0	0.90 1	8.081 (0.041 )	0.108 (0.003 )	40.47 6	0.98 6	11.4
Asia and Oceania	152.474 (513.962)	308.925 (33.280)	9.283	0.78 2	7.245 (0.093 )	0.071 (0.006 )	11.69 1	0.85 1	7.3
Other OECD	- 1084.526 (397.264)	251.477 (25.724)	9.776	0.79 9	5.730 (0.111 )	0.118 (0.007 )	16.39 8	0.91 8	12.5

**Source:** Calculated by the researcher (Figures in bracket indicate Standard Error)

Table No.1.6 depicts that the t values of the trend co-efficient were found to be statistically significant at one per cent level. The R<sup>2</sup> values were also found to be satisfactory. Among the India's export to OECD countries, European Union had the highest annual average export value of US \$2,199.01 million per year; North America had the second largest annual average export value of US \$1,752.61 million per annum. The third rank was secured by Asia and Oceania which had the average annual export value of US \$308.92 million per year. Other OECD had the lowest annual average export

value of US \$251.47million per year. As far as the growth rate of the exports of OECD countries concerned, other OECD had the topmost growth rate of 11.8 per cent per year, North America had the second largest export growth rate of 10.8 per cent per year, European Union held the third place in export growth rate of 10.6 per cent per year. The lowest export growth rate was witnessed in Asia and Oceania which had 7.1per cent per annum. Regarding the compound growth rate of exports, other OECD had the highest compound growth rate of 12.5 per cent per annum and Asia and Oceania had the lowest compound growth rate of 7.3 per cent per year.

**TABLE NO.1.7. INDIA'S EXPORT TO EUROPEAN UNION FROM 1991-92 TO 2016-17(US\$ Million)**

<b>Countries</b>	<b>1991-92</b>	<b>1995-96</b>	<b>2000-01</b>	<b>2005-06</b>	<b>2010-11</b>	<b>2015-16</b>	<b>2016-17</b>
Belgium	666	1120	1470	2871	5782	5091	5664
France	425	747	1020	2079	5199	4635	5375
Germany	1269	1977	1907	3586	6745	7110	7243
Italy	580	1014	1308	2519	4543	4224	4944
Netherlands	372	769	880	2474	7674	4731	5057
UK	1138	2010	2298	5059	7307	8863	8576
E Union	4826	8708	10410	22385	46123	44726	47599

**Source:** Directorate General of Commercial Intelligence and Statistics

The Table No.1.7 reveals that the export to, UK increased from \$1,138 million US dollar in 1991-92 to \$5,059 million US dollar in 2005-06 then to \$8,576 million US dollar in 2016-17. India's export to Germany has improved from \$1,269 million US dollar in 1991-92 to \$6,745 million US dollar in 2010-11 and \$7,243 million US dollar in 2016-17. India's export to Belgium accelerated from \$666 million US dollar in 1991-92 to \$5,091million US dollar in to \$5,664 million US dollar in 2016-17. India's export to Italy enlarged from \$580 million US dollar in 1991-92 to \$1,308 million US dollar in and it reached to \$4, 944 million US dollar in 2016-17.

**TABLE NO.1.8. TREND AND GROWTH RATE OF INDIA'S EXPORT TO EUROPEAN UNION FROM 1991-92 TO 2016-17**

Variable	Linear Model				Semi log Model				CG R
	a	b	t	R <sup>2</sup>	A	b	t	R <sup>2</sup>	
Belgium	-419.144 (318.495)	252.965 (20.623)	12.26 6	0.86 2	6.418 (0.075 )	0.098 (0.005 )	20.23 5	0.94 5	10.3
France	-719.506 (265.566)	225.110 (17.196)	13.09 1	0.87 7	5.876 (0.067 )	0.113 (0.004 )	26.11 4	0.96 6	12.0
Germany	-114.197 (368.617)	299.874 (23.869)	12.56 3	0.86 8	6.982 (0.078 )	0.081 (0.005 )	16.10 1	0.91 5	8.5
Italy	-286.149 (213.537)	209.989 (13.827)	15.18 7	0.90 6	6.279 (0.075 )	0.097 (0.005 )	20.07 8	0.94 4	10.2
Netherlan ds	- 1370.601 (720.071)	346.119 (46.626)	7.423	0.69 7	5.750 (0.153 )	0.135 (0.010 )	13.61 5	0.88 5	14.4
UK	-478.359 (374.829)	378.575 (24.271)	15.59 8	0.91 0	6.955 (0.067 )	0.092 (0.004 )	21.27 3	0.95 0	9.7
E Union	- 5483.314 (2545.63 1)	2199.01 2 (164.83 6)	13.34 1	0.88 1	8.350 (0.078 )	0.106 (0.005 )	20.95 1	0.94 8	11.2

**Source:** Calculated by the researcher (Figures in bracket indicate Standard Error)

From the above Table No.1.8 it could be known that the t values of the trend coefficient were found to be statistically significant at one per cent level. The R<sup>2</sup> values were also found to be satisfactory. Among the India's export to European Union countries, UK had the highest annual average export value of US \$378.57 million per year. Netherlands had the second largest annual average export value of US \$ 346.11

million per annum. The third rank was secured by Germany which has the average annual export value of US \$299.87 million per year followed by Belgium (US \$252.96 million), France (US \$225.11 million) per annum. Italy had the lowest annual average export value of US \$ 209.98 million per year. As far as the growth rate of the exports of European Union exporting countries concerned, Netherlands had the topmost growth rate of 13.5 per cent per year, France has the second largest export growth rate of 11.3 per cent per year, and Belgium held the third place in export growth rate of 9.8 per cent per year. The lowest export growth rate was witnessed in Germany which had 8.1 per cent per annum. Regarding the compound growth rate of exports, Netherlands had the highest compound growth rate of 14.4 per cent per annum. Germany had the lowest compound growth rate of 8.5 per cent per year.

**TABLE NO.1.9. INDIA'S EXPORT TO ASIA AND OCEANIA FROM 1991-92 TO 2016-17 (US\$ Million)**

Countries	1991-92	1995-96	2000-01	2005-06	2010-11	2015-16	2016-17
Australia	202	375	405	821	1712	3268	2964
Japan	1651	2215	1794	2481	5088	4662	3853
Asia and Oceania	1878	2651	2263	3444	6991	8238	7128

**Source:** Directorate General of Commercial Intelligence and Statistics

The Table No.1.9 gives an idea that the Asia and Oceania countries, Japan improved from \$1,651 million US dollar in 1991-92 to \$2,215 million US dollar in 1995-96 then declined to \$1,794 million US dollar in 2000-01, again increased to \$5,088 million US dollar in 2010-11 and finally decelerated to \$3,853 million US dollar in 2016-17. India's export to Australia increased from \$202 million US dollar in 1991-92 to \$821 million US dollar in 2005-06 and to \$2,964 million US dollar in 2016-17.

**TABLE NO.1.10. TREND AND GROWTH RATE OF INDIA'S EXPORT TO ASIA AND OCEANIA FROM DURING 1991-92 TO 2016-17**

Variable	Linear Model				Semi log Model				CGR
	A	b	t	R <sup>2</sup>	a	b	t	R <sup>2</sup>	
Australia	-448.043 (161.487)	117.331 (10.457)	11.22 1	0.84 0	5.128 (0.074)	0.114 (0.005)	23.90 3	0.96 0	12.1
Japan	622.430 (399.762)	179.303 (25.886)	6.927	0.66 7	7.129 (0.105)	0.056 (0.007)	8.337	0.74 3	5.8

	)	)			)	)			
Asia and Oceania	152.474 (513.962 )	308.925 (33.280 )	9.283	0.78 2	7.245 (0.093 )	0.071 (0.006 )	11.69 1	0.85 1	7.3

**Source:** Calculated by the researcher (Figures in bracket indicate Standard Error)

From the above Table No.1.10 it could be known that the t values of the trend coefficient were found to be statistically significant at one per cent level. The  $R^2$  values were also found to be satisfactory. Among the India's export to Asia and Oceania countries, Japan had the highest annual average export value of US \$179.30 million per year; Australia had the lowest annual average export value of US \$117.33 million per year. As far as the growth rate of the exports of Asia and Oceania exporting countries concerned, Australia had the topmost growth rate of 11.4 per cent per year. The lowest export growth rate was witnessed in Japan which had 5.6 per cent per annum. Regarding the compound growth rate of exports, Australia had the highest compound growth rate of 12.1 per cent per annum. Japan had the lowest compound growth rate of 5.8 per cent per year.

**TABLE NO.1.11. INDIA'S EXPORT TO NORTH AMERICA FROM 1991-92 TO 2016-17(US\$ Million)**

Countries	1991-92	1995-96	2000-01	2005-06	2010-11	2015-16	2016-17
Canada	188	305	656	1021	1347	2057	2008
USA	2921	5520	9305	17353	25286	40394	42314
North America	3109	5825	9961	18374	26634	42452	44322

**Source:** Directorate General of Commercial Intelligence and Statistics

It is observed that the Table No. 1.11 reveals that the North America countries from USA accelerated from \$2,921 million US dollar in 1991-92 to \$25,286 million US dollar in 2010-11 and to \$42,314 million US dollar in 2016-17. India's export to Canada improved from \$188 million US dollar in 1991-92 to \$1,021 million US dollar in and finally to \$2,008 million US dollar in 2016-17.

**TABLE NO.1.12. TREND AND GROWTH RATE OF INDIA'S EXPORT TO NORTH AMERICA FROM 1991-92 TO 2016-17**

Variable	Linear Model				Semi log Model				CG R
	a	b	t	R <sup>2</sup>	a	b	t	R <sup>2</sup>	
Canada	-157.638 (77.459)	86.381 (5.016)	17.22 2	0.92 5	5.263 (0.058 )	0.103 (0.004 )	27.31 6	0.96 9	10.8
USA	-4735.106 (1760.528 )	1666.23 1 (113.998 )	14.61 6	0.89 9	8.019 (0.041 )	0.108 (0.003 )	40.62 5	0.98 6	11.4
North America	-4892.714 (1830.053 )	1752.61 0 (118.500 )	14.79 0	0.90 1	8.081 (0.041 )	0.108 (0.003 )	40.47 6	0.98 6	11.4

**Source:** Calculated by the researcher (Figures in bracket indicate Standard Error)

From the above Table No.1.12 it could be known that the t values of the trend coefficient were found to be statistically significant at one per cent level. The R<sup>2</sup> values were also found to be satisfactory. Among the India's export to North America countries, USA had the highest annual average export value of US \$1,666.23 million per annum, Canada had the lowest annual average export value of US \$86.38 million per year. As far as the growth rate of the exports of North America countries concerned, USA had the topmost growth rate of 10.8 per cent per year. The lowest export growth rate was witnessed in Canada which had 10.3 per cent per annum. Regarding the Compound growth rate of exports, USA had the highest compound growth rate of 11.4 per cent per annum. Canada had the lowest compound growth rate of 10.8 per cent per year.

**TABLE NO.1.13. INDIA'S EXPORT TO DEVELOPING COUNTRIES FROM 1991-92 TO 2016-17**

Countries	1991-92	1995-96	2000-01	2005-06	2010-11	2015-16	2016-17
Asian Countries	3016.4	7307.8	10037.9	30981.2	75759.2	76497.5	88559.8
Other Asian Developing Countries	2394.9	5587.2	8109.4	25433.5	64122.8	58611	69555.7

African Countries	441.3	1512.7	1956.4	5699	15880.4	21378.4	19915.7
Latin American Countries	129.5	377.9	1018.2	3056.2	10090.1	11295	11740.6
Developing Countries	3587.1	9198.4	13012.6	39736.4	101730	109171	120216

**Source:** Directorate General of Commercial Intelligence and Statistics

Table No.1.13 shows that among the developing countries, Asia increased from \$3016.4 million US dollar in 1991-92 to \$30,981.2 million US dollar in 2005-06 and \$88559.8 million US dollar in 2016-17. India's export to other Asian Developing Countries accelerated from \$2,394.9 million US dollar in 1991-92 to \$64,122.8 million US dollar in 2010-11 then declined to \$58,611 million US dollar in 2015-16 finally, improved to \$69,555.7 million US dollar in 2016-17. India's export to Africa went up from \$441.3 million US dollar in 1991-92 to \$5,699 million US dollar in 2005-06 then to \$19,915.7 million US dollar in 2016-17. India's export to Latin American Countries improved from \$129.5 million US dollar in 1991-92 to \$1,09,171 million US dollar in 2015-16 and it reaches to \$1,20,216 million US dollar in 2016-17.

**TABLE NO.1.14. TREND AND GROWTH RATE OF INDIA'S EXPORT TO DEVELOPING COUNTRIES FROM 1991-92 TO 2016-17**

Variable	Linear Model				Semi log Model				CG R
	a	b	T	R <sup>2</sup>	a	b	t	R <sup>2</sup>	
Developing Countries	77073.99 (32292.60)	8483.43 (1553.37)	5.46 1	0.74 9	9.301 (0.370)	0.103 (0.018)	5.76 9	0.76 9	10.8
Asia Countries	47106.91 (22761.36)	5127.87 (1094.89)	5.23 1	0.73 2	9.151 (0.356)	0.095 (0.017)	5.54 2	0.75 4	10.0
Other Asian Developing Countries	31613.28 (21752.84)	4348.06 (1046.38)	4.15 5	0.63 3	9.065 (0.399)	0.089 (0.019)	4.65 2	0.68 4	9.3
Africa Countries	18881.35 (6897.29)	1754.65 (331.782)	5.28 9	0.73 7	7.164 (0.435)	0.121 (0.021)	5.78 1	0.77 0	12.9

Latin American Countries	11336.66 (4605.65)	1020.89 (221.54)	4.60 8	0.68 0	6.335 (0.495)	0.132 (0.024)	5.54 8	0.75 5	14.1
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**Source:** Calculated by the researcher (Figures in bracket indicate Standard Error)

From the above Table No.1.14 it could be known that the t values of the trend coefficient were found to be statistically significant at one per cent level. The  $R^2$  values were also found to be satisfactory. Among the India's export to developing countries, Asia had the highest annual average export value of US \$5,127.87 million per year. Other Asian Countries had the second largest annual average export value of US \$4,348.06 million per annum. The third rank was secured by Africa which had the average annual export value of US \$1,754.65 million per year Latin American Countries had the lowest annual average export value of US \$1,020.89 million per year. As far as the growth rate of the exports of developing exporting countries concerned, Latin American had the topmost growth rate of 13.2 per cent per year, Africa had the second largest export growth rate of 12.1 per cent per year, Asia secured third place in export growth rate of 9.5 per cent per year. The lowest export growth rate was witnessed in Other Asian Countries which had 8.9 per cent per annum. Regarding the Compound growth rate of exports, Latin American had the highest compound growth rate of 14.1 per cent per annum. Other Asian Countries had the lowest compound growth rate of 8.9 per cent per year.

**TABLE NO.1.15. INDIA'S EXPORT TO SAARC COUNTRIES FROM 1991-92 TO 2016-17**

Countries	1991-92	1995-96	2000-01	2005-06	2010-11	2015-16	2016-17
Afghanistan	0	0	0	142.7	421.6	524.8	507.5
Bangladesh	324	1049.1	935	1664.4	3237.9	5694.5	6695.8
Bhutan	1.2	17.2	1.1	99.2	175.9	408.3	489.1
Maldives	4.9	15.7	24.6	67.6	100	178.1	198.2
Nepal	77.1	160	140.8	860	2166.4	3676.6	5362.1
Pakistan	40.1	76.8	186.8	689.2	2031.3	2109.2	1832.3
Sri Lanka	174.2	401.7	640.1	2024.7	3503.4	5295.1	3919.1
SAARC	621.5	1720.6	1928.5	5547.6	11636.5	17886.5	19004.1

**Source:** Directorate General of Commercial Intelligence and Statistics (DGCI &S)



The Table No.1.15 shows that SAARC countries, Bangladesh accelerated from \$324 million US dollar in 1991-92 to \$1,049.1 million US dollar in 1995-96 then decreased to \$935 million US dollar in 2000-01 again increased to \$3,237.9 million US dollar in 2010-11 and to \$6,695.8 million US dollar in 2016-17. India's export to Nepal increased from \$77.1 million US dollar in 1991-92 to \$2,166.4 million US dollar in 2005-06 then to \$5,362.1 million US dollar in 2016-17. India's export to Sri Lanka went up from \$174.2 million US dollar in 1991-92 to \$2,024.7 million US dollar in 2010-11 and to \$3,919.1 million US dollar in 2016-17. India's export to Maldives improved from \$4.9 million US dollar in 1991-92 to \$100 million US dollar in 2000-01 finally to \$198.2 million US dollar in 2016-17.

**TABLE NO.1.16. TREND AND GROWTH RATE OF INDIA'S EXPORT TO SAARC COUNTRIES FROM 1991-92 TO 2016-17**

Variable	Linear Model				Semi log Model				CG R
	a	b	t	R <sup>2</sup>	a	b	t	R <sup>2</sup>	
Afghanistan	-235.001 (129.251)	30.835 (6.217)	4.959	0.711	3.880 (0.460)	0.099 (0.022)	4.478	0.667	10.4
Bangladesh	- 6297.162 (1049.77)	503.66 6 (50.498)	9.974	0.909	5.378 (0.280)	0.137 (0.013)	10.18 6	0.912	14.7
Bhutan	-550.125 (74.413)	37.813 (3.580)	10.56 4	0.918	1.426 (0.337)	0.185 (0.016)	11.39 6	0.929	20.3
Maldives	-90.179 (36.293)	10.156 (1.746)	5.818	0.772	2.945 (0.292)	0.086 (0.014)	6.148	0.791	9.0
Nepal	- 5337.857 (727.90)	388.76 8 (35.015)	11.10 3	0.925	4.363 (0.234)	0.164 0.011 ( )	14.57 3	0.955	17.8

Pakistan	-3.488 (573.95)	84.359 (27.609 )	3.055	0.483	6.168 (0.431)	0.061 (0.02 1)	2.932	0.46 2	6.3
Sri Lanka	-2979.60 (1527.61 )	2979.6 0 (1527.6 )	4.412	0.661	6.250 (0.368)	0.092 (0.01 8)	5.208	0.73 1	9.6
SAARC	15493.67 (2624.03 )	1379.8 12 126.22)	10.93 1	0.923	6.966 (0.229)	0.117 (0.01 1)	10.65 7	0.91 9	12.5

**Source:** Calculated by the researcher (Figures in bracket indicate Standard Error)

From the above Table No.1.16 it could be known that the t values of the trend coefficient were found to be statistically significant at one per cent level. The  $R^2$  values were also found to be satisfactory. Among the India's export to SAARC countries, Sri Lanka had the highest annual average export value of US \$2979.60 million per year. Bangladesh had the second largest annual average export value of US \$503.6 million per annum. The third rank was secured by Nepal which had the average annual export value of US \$388.76 million per year followed by Pakistan (US \$84.35 million), Bhutan (US \$37.81 million) and Afghanistan (US \$30.83 million) per annum. Maldives had the lowest annual average export value of US \$10.15 million per year. As far as the growth rate of the exports of SAARC countries concerned, Bhutan had the topmost growth rate of 18.5 per cent per year, Nepal had the second largest export growth rate of 16.4 per cent per year, Bangladesh held the third place in export growth rate of 13.7 per cent per year, followed by Afghanistan (9.9 per cent), Sri Lanka (9.2 per cent) and Maldives (8.6 per cent) per year. The lowest export growth rate was witnessed in Pakistan which had 6.1 per cent per annum. Regarding the Compound growth rate of exports, Bhutan had the highest compound growth rate of 20.3 per cent per annum. Pakistan had the lowest compound growth rate of 6.3 per cent per year.

**TABLE NO 1.17. INDIA'S EXPORT TO OTHER ASIAN DEVELOPING COUNTRIES  
FROM 1991-92 TO 2016-17**

<b>Countries</b>	<b>1991-92</b>	<b>1995-96</b>	<b>2000-01</b>	<b>2005-06</b>	<b>2010-11</b>	<b>2015-16</b>	<b>2016-17</b>
China	48.2	332.7	831.3	6759.1	15454.3	9043.9	10207.1
Hong Kong	614.3	1821.4	2640.9	4471.3	10323.9	12162.9	14141.9
South Korea	238.7	448.3	450.8	1827.2	3723.4	3548.5	4237.8
Malaysia	202.4	393.2	608.2	1161.9	3879.8	3689.9	5230.8
Singapore	388.8	901.6	877.1	5425.3	9817.6	7732.8	9561.7
Thailand	198.6	472.9	530.1	1075.3	2270.8	3012.7	3173.0
Indonesia	146.7	662.4	399.8	1380.2	5689.9	2839.4	3500.6
Other Asian Developing Countries	2394.9	5587.2	8109.4	25433.5	64122.8	58611	69555.7

**Source:** Directorate General of Commercial Intelligence and Statistics

The Table No.1.17 indicates India's export to other Asian Developing exporting countries; Hong Kong has improved from \$614.3 million US dollar in 1991-92 to \$4471.3 million US dollar in 2005-06 then to \$14,141.9 million US dollar in 2016-17. India's export to China accelerated from \$48.2 million US dollar in 1991-92 to \$831.3 million US dollar in 2000-01 then to \$15,454.3 million US dollar in 2010-11 then declined to \$10,207.1million US dollar in 2016-17. India's export of Singapore amplified from \$388.8 million US dollar in 1991-92 to \$877.1 million US dollar in 2000-01 then to \$7,732.8 million US dollar in 2015-16 and to \$9,564.7 million US dollar in 2016-17. India's export of Thailand increased from \$198.6 million US dollar in 1991-92 to \$2,270.8 million US dollar in 2010-11 and it reached to \$3,173.0 million US dollar in 2016-17.

**TABLE NO.1.18. TREND AND GROWTH RATE OF INDIA'S EXPORT TO OTHER ASIAN DEVELOPING COUNTRIES FROM 1991-92 TO 2016-17**

Variable	Linear Model				Semi log Model				CG R
	a	b	t	R <sup>2</sup>	a	b	t	R <sup>2</sup>	
China	5217.313 (5760.10)	315.519 (277.080)	1.13 9	0.11 5	8.678 (0.481 )	0.032 (0.023 )	1.37 3	0.15 9	3.2
Hong Kong	- 9611.445 (2182.59)	949.027 (104.990)	9.03 9	0.89 1	6.862 (0.277 )	0.110 (0.013 )	8.26 2	0.87 2	11.6
South Korea	-118.455 (953.740)	182.369 (45.878)	3.97 5	0.61 2	6.963 (0.316 )	0.059 (0.015 )	3.85 8	0.59 8	6.0
Malaysia	- 3460.298 (1234.51 4)	341.806 (59.384)	5.75 6	0.76 8	5.638 (0.480 )	0.119 (0.023 )	5.15 0	0.72 6	12.6
Singapore	683.747 (5301.37)	431.319 (255.013)	1.69 1	0.22 2	8.053 (0.495 )	0.052 (0.024 )	2.16 7	0.32 0	5.3
Thailand	-2103.36 (812.991)	225.767 (39.108)	5.77 3	0.76 9	5.684 (0.333 )	0.101 (0.016 )	6.33 1	0.80 0	10.7
Indonesia	-851.042 (2713.85)	221.617 (130.545)	1.69 8	0.22 4	6.481 (0.702 )	0.080 (0.034 )	2.35 5	0.35 7	8.3
Other Asian Developing Countries	31613.28 (21752.8 4)	4348.065 (1046.38 3)	4.15 5	0.63 3	9.065 (0.399 )	0.089 (0.019 )	4.65 2	0.68 4	9.3

**Source:** Calculated by the researcher (Figures in bracket indicate Standard Error)

From the above Table No.1.18 it could be known that the t values of the trend coefficient were found to be statistically significant at one per cent level. The R<sup>2</sup> values

were also found to be satisfactory. Among the India's export to other Asian developing countries, Hong Kong had the highest annual average export value of US \$949.02 million per year. Singapore had the second largest annual average export value of US \$431.31 million per annum. The third rank was secured by Malaysia which had the average annual export value of US \$341.80 million per year, followed by China (US \$315.51 million), Thailand (US \$225.76 million) and Indonesia (US \$221.61 million) per annum. South Korea had the lowest annual average export value of US \$182.36 million per year. As far as the growth rate of the exports of Other Asian developing countries concerned, Malaysia had the topmost growth rate of 11.9 per cent per year, Hong Kong had the second largest export growth rate of 11.0 per cent per year, Thailand secured third place in export growth rate of 10.1 per cent per year, followed by Indonesia (8.0 per cent) South Korea (5.9 per cent) and Singapore (5.2 per cent) per year. The lowest export growth rate was witnessed in China which had 3.2 per cent per annum. Regarding the Compound growth rate of exports, Hong Kong had highest compound growth rate of 11.6 per cent per annum. China had the lowest compound growth rate of 8.5 per cent per year.

**TABLE NO.1.19. INDIA'S EXPORT TO AFRICAN COUNTRIES FROM 1991-92 TO 2016-17**

<b>Countries</b>	<b>1991-92</b>	<b>1995-96</b>	<b>2000-01</b>	<b>2005-06</b>	<b>2010-11</b>	<b>2015-16</b>	<b>2016-17</b>
Benin	10.6	11.3	45.1	96.6	263.2	427.4	452.8
Egypt, Arab Republic	81	164.3	357.5	672.4	1981.1	2332.5	2070.2
Kenya	41.7	245.1	140.9	576.5	2183.3	3021	2198.2
South Africa	0	0	0	1526.9	3925.3	3600	3553.6
Sudan	15.8	30.6	97.8	294.6	488.2	780.6	751.2
Tanzania	48	81.4	102	243.5	1470.8	1649.8	1786.8
Zambia	27.3	35.2	22.5	66.5	118.3	297.5	237.3
Africa	441.3	1512.7	1956.4	5699	15880.4	21378.4	19915.7

**Source:** Directorate General of Commercial Intelligence and Statistics

It can be seen from the Table No.1.19 that African countries, South Africa accelerated from \$1526.9 million US dollar in 2005-06 to \$3925.3 million US dollar in

2010-11 and to \$3553.6 million US dollar in 2016-17. India's export of Kenya increased from \$41.7 million US dollar in 1991-92 to \$576.5 million US dollar in 2005-06 then to \$3,021 million US dollar in 2015-16 declined to \$2,198.2 million US dollar in 2016-17. India's export of Egypt went up from \$81 million US dollar in 1991-92 to \$1981.1 million US dollar in 2010-11 and to \$2,070.2 million US dollar in 2016-17. India's export of Zambia improved from \$27.3 million US dollar in 1991-92 to \$118.3 million US dollar in and it reached to \$237.3 million US dollar in 2016-17.

**TABLE NO.1.20. TREND AND GROWTH RATE OF INDIA'S EXPORT TO AFRICA COUNTRIES FROM 1991-92 TO 2016-17**

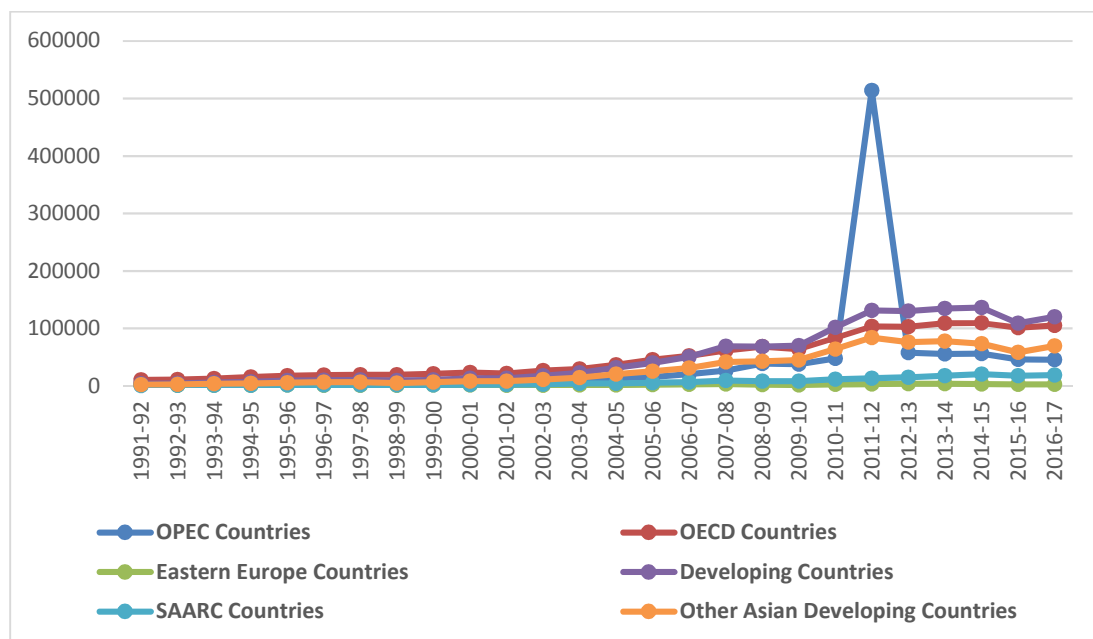
Variable	Linear Model				Semi log Model				CGR
	a	b	t	R <sup>2</sup>	a	b	t	R <sup>2</sup>	
Benin	-481.415 (254.396)	41.680 (12.237)	3.406	0.537	2.874 (0.643)	0.141 (0.031)	4.558	0.675	15.1
Egypt Arab Republic	-1679.983 (799.600)	176.215 (38.463)	4.581	0.677	5.146 (0.494)	0.113 (0.024)	4.775	0.695	12.0
Kenya	-2765.050 (1334.997)	247.640 (64.218)	3.856	0.598	4.947 (0.602)	0.130 (0.029)	34.520	0.668	13.9
South Africa	-2151.452 (1730.855)	274.674 (83.260)	3.299	0.521	6.206 (0.512)	0.091 0.025	3.701	0.578	9.5
Sudan	-450.310 (150.005)	51.557 (7.216)	7.145	0.836	4.459 (0.253)	0.092 (0.012)	7.600	0.852	9.7
Tanzania	-2714.755 (1069.387)	204.253 (51.441)	3.971	0.612	3.001 (0.771)	0.197 (0.037)	5.317	0.739	21.8
Zambia	-315.198 (112.273)	24.945 (5.401)	4.619	0.681	2.250 (0.531)	0.140 (0.026)	5.498	0.751	15.1
Africa	18881.357 (6897.290)	1754.653 (331.782)	5.289	0.737	7.164 (0.435)	0.121 (0.021)	5.781	0.770	12.9

**Source:** Calculated by the researcher (Figures in bracket indicate Standard Error)

From the above Table No.1.20 it could be known that the t values of the trend coefficient were found to be statistically significant at one per cent level. The R<sup>2</sup> values were also found to be satisfactory. Among the African exporting countries, South Africa had the highest annual average export value of US \$274.67 million per year. Kenya had the second largest annual average export value of US \$247.64 million per annum. The third rank was secured by Tanzania which had the average annual export value of US

\$204.25 million per year followed by Egypt (US \$176.21 million), Sudan (US \$51.55 million) and Benin (US \$41.68 million) per annum. Zambia had the lowest annual average export value of US \$24.94 million per year. As far as the growth rate of the exports of African exporting countries concerned, Tanzania had the topmost growth rate of 19.7 per cent per year, Benin had the second largest export growth rate of 14.1 per cent per year, Zambia secured third place in export growth rate of 14.0 per cent per year, followed by Kenya (13.0 per cent), Egypt 11.3 (per cent) and Sudan 9.2 (per cent) per year. The lowest export growth rate was witnessed in South Africa which had 9.1 per cent per annum. Regarding the Compound growth rate of exports, Tanzania had the highest compound growth rate of 21.8 per cent per annum. South Africa had the lowest compound growth rate of 9.5 per cent per year

**FIGURE NO.1.1. DIRECTION OF INDIA'S EXPORTS**



## CONCLUSION

Export is crucial for the growth of economy as it leads to the earning of valuable foreign exchange which helps in the growth of the economy. More growth of the economy leads to more prosperous nation. Exports have evolved a lot since independence. It is important because of its effect on internal trade economic stability of an Indian economy. The study finding the growth rate of the exports of various regional groups exporting countries was concerned, OPEC had the top most growth rate of 17.5

per cent per year. The lowest export growth rates were witnessed in Eastern Europe which has 5.1 per cent per annum. India's Export to OPEC countries was concerned, UAE has the topmost growth rate of 18.4 per cent per year, and the lowest export growth rate was witnessed in Kuwait which had 12.8 per cent per annum. India's Export to European Union exporting countries concerned, Netherlands had the topmost growth rate of 13.5 per cent per year, the lowest export growth rate was witnessed in Germany which had 8.1 per cent per annum. India's Export to Asia and Oceania exporting countries concerned, Australia had the topmost growth rate of 11.4 per cent per year. The lowest export growth rate was witnessed in Japan which had 5.6 per cent per annum. India's Export to North America countries concerned, USA had the topmost growth rate of 10.8 per cent per year. The lowest export growth rate was witnessed in Canada which had 10.3 per cent per annum. India's Export to developing exporting countries concerned, Latin American had the topmost growth rate of 13.2 per cent per year, and the lowest export growth rate was witnessed in Other Asian Countries which had 8.9 per cent per annum. India's Export to SAARC countries concerned, Bhutan had the topmost growth rate of 18.5 per cent per year, the lowest export growth rate was witnessed in Pakistan which had 6.1 per cent per annum. India's Export to Other Asian developing countries concerned, Malaysia had the topmost growth rate of 11.9 per cent per year, the lowest export growth rate was witnessed in China which had 3.2 per cent per annum. India's Export to African exporting countries concerned, Tanzania had the topmost growth rate of 19.7 per cent per year, the lowest export growth rate was witnessed in South Africa which had 9.1 per cent per annum. Finally, Exporters should take the advantage of "Make in India" scheme started by Prime Minister of India. Research and development need to be emphasized upon. Optimum utilization of schemes and resources is required to minimize the trade deficit and make India a productive and prosperous nation. Thus, in order to improve the performance of export sector, policies must be introduced so that the performance of agriculture sector is improved and strengthened in future.

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