

# India's Export of Services During 2010/11-2021/22: Growth Aspect

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**Abstract:** *The 1991 reforms of the Indian economy have been associated with the expansion of the service sector in India. India's services traded have been categorised by RBI as Non-factor services comprising of transportation, travel, insurance, G.n.i.e. and Miscellaneous. The Miscellaneous services have been categorised under nine heads from 2010-11. Service sector has attracted significant foreign investment, contributed significantly to exports and has provided large-scale employment and has played a dominant role in India's GDP. The growth rates of export of services over the years between 2010/11-2021/22 have varied. They are often related to economic growth of the country. High export growth rates of services have led to several positive outcomes for the economy as a whole. The aspect of growth has been studied with the help of growth rate formula. The concept of Growth Divergence Index (GDI) has been used here to study the variability in the growth rates of export of items of services over the study period. The analysis is based on secondary data collected from Economic Survey. The data source is Reserve Bank of India.*

**Keywords:** trade, export, services, growth, divergence

**JEL Classification:** F 10, F 14, F 43, L 80.

## 1. Introduction

The growth rate of export of services over the years between 2010/11-2021/22 has varied. These growth rates are often related to economic growth of the country. High export growth rates of services brings with it higher export revenues and hence high foreign exchange earnings. This further leads to higher domestic production and hence higher employment rate for the country. The growth rates of export of services are important for economic growth of India since trade in services hold a good portion of trade and contribution to country's GDP is also big. In 2021-22, India's services export crossed US\$ 250 billion milestone and reached to US\$ 254 billion registering a growth rate of about 23 per cent over 2020-21 period. Government of India has approved the 'Action Plan for Champion Sectors in Services' to give focused attention to 12 identified Champion Services Sectors, namely, Information Technology & Information Technology enabled Services, Tourism & Hospitality Services, Medical Value Travel, Transport & Logistics Services, Accounting and Finance Services, Audio Visual Services, Legal Services, Communication Services, Construction and Related Engineering Services, Environmental Services, Financial Services and Education Services as reported by Ministry Of Commerce and Industry, Department of commerce in its Annual Report 2022-23.

The total study is structured as follows; the objectives of the study are shown under section 2. Section 3 reveals some relevant literature on the related topics. The methodology and estimates of research work are explained under section 4 and section 5 respectively. The conclusion and recommendation of the study is under section 6.

## 2. Objectives of the Study

The objectives of this paper are as follows:

- To examine the growth rates of export of different items of services during 2010/11-2021/22
- To examine the Growth Divergence Index (GDI<sub>E</sub>) of export of different items of services during 2010/11-2021/22

## 3. Literature Survey

Various empirical studies are available in respect of growth and instability in trade in services by India. However, few of the most significant ones are highlighted below.

Pramod R. Botre has mentioned that India's foreign trade has a vital role in the economic development of the country. Trade policy for the year 2015-20 announced in April 2015, the Government set up a framework for increasing export of goods and services as well as generation of employment and increasing value addition in the country, in line with the "Make in India" and "Digital India" programme. India's New Foreign Trade Policy of 2015-20 has initiated the process of improvement in technology, promoting export and lessening transaction cost. This policy has paved the way towards achieving "Make in India".

P. Amarjothi, has focused on International Trade Policy 2015-20 which has introduced two new schemes, namely 'Merchandise Exports from India Scheme' for export of specified goods to specified markets and 'Services Exports from India Scheme' for increasing exports of notified services. The researcher has commented that for increasing exports of notified services Duty credit scrip's are issued under MEIS and SEIS and the goods imported against these scrips are fully transferable. The new Foreign Trade Policy 2015-2020 (FTP 2015-20) has been designed product wise and location wise and tried to maximize the foreign trade from the country. The Foreign Trade Policy (FTP) has been designed by including long term and medium-term strategy

to boost overall growth of India’s foreign trade by enhancing trade competitiveness as is commented by the researcher.

Anurag. Maurya & Madan Lal, have tried 1. to measure the growth of service exports for pre and post reform period, 2. to measure the instability of service exports 3.to identify trend in instability index over the study period 4. to identify and compare the trend in instability index for pre and post reform period. The study analyses the service trade of different categories of services during the period 1980 to 2013 in accordance of BPM5. Samples of service include exports of aggregate services, commercial services, travel, transportation and other commercial services. The service exports have recorded a significant growth across the different categories of services from 1980 to 2013. The overall instability trend is found negative and significant.

Economic survey, 2008-09, “Trade Policy” has reported that the 2008-09 global financial crises have affected the demand for transportation service worldwide. The export growth rate of Miscellaneous services has risen to 22.35 during 2000/01-2008/09. The most significant contributors of this rise are 1991-92 reforms in Telecommunication and IT, focus on export promotion, government policy and facilitation. The import growth rate of Transportation services have been 13.35 during 2000/01-2009/10. According to the survey, the factors attributing to this growth rate are liberalisation of Indian economy, increase in trade volume, robust supply side reforms and technological advancement.

Economic Survey, 2010-12, ‘Services Sector’ has reported that during this period of study, the growth rate of transportation services of India has been high due to government policies favouring exports, trade liberalisation policies, growth in Indian port infrastructure, increasing demand for logistic.

Economic Survey, 2021-22, “External Sector,” also reports that India has maintained its remarkable performance in world services trade in post pandemic situation. This has been achieved due to computer, business and transportation services that constitute more than 80 per cent of total services exports.

Economic Survey 2022-23. “External Sector: Watchful and Hopeful.” has reported that for India, the share of trade as a percentage of GDP has been showing an increasing trend, being above 40 per cent since 2005 (except 2020 being the pandemic year). In case of trade in services India maintained its dominance in the world services trade in FY22.

**4. Methodology**

The study is based on secondary data collected from Economic Survey. The data source is Reserve Bank of India. The values of exports of services by India are in current US \$ million. To adjust inflation, we have used Consumer Price Index (CPI) where base period is considered as 2010. The current values of export of all the years under study are divided by CPI of the corresponding year of study and then multiplied by 100 to get the values at constant prices.

**4.1 Computation of growth rate of export of items of services during 2010/11-2021/22**

For estimation of trends, the exponential functional form has been used. The aspect of growth has been studied with the help of growth rate formula

$$Y_t = ae^{bt} \dots\dots\dots(1)$$

where a and b are two constants to be estimated, t= time measured in years, Y is the relevant variable (export or import values at constant price)

Logarithmic transformation of equation (1) linearises the form as:

$$\log Y_t = A + b t \dots\dots\dots(2)$$

A= log a, where the annual growth rate of Y<sub>t</sub> obtained from equation (2) is

g<sub>t</sub> = d log Y<sub>t</sub> / dt = b<sub>t</sub> which is not dependent on time. The exponential form gives constant annual compound growth rate.

An interesting point is to be focused here that b indicates growth rate till time become continuous in equation (1) or (2). For estimation, discrete time series are taken. To avoid this discrepancy related to time, a little adjustment is made. For discrete case, the growth rate (g) is calculated in the following way.

Let us take the values of Y<sub>t</sub> for t = 1,2,3.....,T are Y<sub>1</sub>, Y<sub>2</sub>, Y<sub>3</sub>,.....,Y<sub>T</sub>. Let us assume that the initial value of Y<sub>t</sub> is Y<sub>0</sub>. Then,

$$Y_1 = Y_0 + Y_0 g = Y_0(1 + g)$$

$$Y_2 = Y_1 + Y_1 g = Y_0(1 + g)^2$$

.....

$$Y_T = Y_0(1 + g)^T$$

In general,

$$Y_t = Y_0(1 + g)^t \dots\dots\dots(3)$$

Taking logarithm of both sides of equation (3), we get ,

$$\log Y_t = \log Y_0 + t \log (1 + g)$$

$$\log Y_t = A + b^* t \dots\dots\dots(4)$$

Where, log Y<sub>0</sub> = A (constant)

and log (1+g) = b\* (constant)

It is to be noted that equations (2) and (4) look similar, but b and b\* are not identical. Here, b is the rate of growth and b\* = log (1+g) is the growth factor.

For this, the growth rate is calculated as:

$$g = e^{b^*} - 1 \dots\dots\dots(5)$$

For computing compound growth rate, the adjustment defined in equation (5) is made carefully. Otherwise, estimation error in equation (4) may occur.

**4.2 Computation of Growth Divergence of export of items of services during 2010/11-2021/22:**

In growth economics, balanced growth is defined as a state where all the sectors of the economy grow at the same constant rate. Statistically, it implies that sectoral growth rates coincide with the overall growth rate. Otherwise, the

problems of unbalanced growth crop up. The sectors grow at different rates and the overall growth rate differs from the sectoral rates. Such growth divergence may be viewed in the present context in alternative ways:

In this case, the Coefficient of Variation (C V) has been used as a system index for growth divergence. The Growth Divergence Index of Export ( $GDI_E$ ) is defined as

$$GDI_E = \{1/n (\sum_{i=1}^n (g_{iE} - g_E)^2)\}^{1/2} / g_E \dots \dots \dots (6)$$

Where,  $g_E$  = overall annual compound growth rate of export

$g_{iE}$  = annual compound growth rate of individual item of export

$n$  = number of items of export

The divergence index takes the minimum value of zero when export grows at the same constant rate for all the items of services. Any deviation from the minimum value reflects the presence of growth divergence among the items of services traded.

### 5.1. Estimates: Export Growth Analysis during 2010/11-2021/22

During 2010/11-2021/22, a mixed trend of growth rates of exports has been noticed from estimates in the Table below. Overall growth rate has been a mere and insignificant at 0.41% ( $|t| = 0.725 < 2$  at 5% level of significance) with only 5% of the variations being explained. Estimates of thirteen items of services have been found with miscellaneous services being sub-divided into nine items. Other than miscellaneous services, all four services have shown negative export growth rates: travel (-7.13%), transportation (-0.80), insurance and pension services (-2.76%) and G.n.i.e (-1.78%). Travel services show a statistically significant negative growth trend. Transportation services have registered a slight negative growth with statistically insignificant statistic ( $|t|=0.569 < 2$  at 5% level of significance) with merely 3% of the variations being explained. Explanatory power of the time trend has been very poor. Both insurance and pension services and G.n.i.e have experienced negative statistically significant growth rates. These negative growth rates mostly have occurred due to Covid-19 pandemic and the resulting global lockdowns. Among miscellaneous services the highest growth rate of 14.91% has been achieved by personal, cultural and recreational services with strong statistical significance ( $|t| = 5.351 > 2$  at 5% level of significance). Here, 74% of the variations are being explained with R square being 0.74. This highest growth rate attributes to the factors like tourism which has promoted India's cultural heritage and tourist attractions globally. Exporting Indian content through digital platforms and collaborating with other countries on cultural projects, festivals may have played vital role in this growth rate (Pant et al 2024). This has been followed by Manufacturing services on physical inputs owned by others with significant growth rate of 12.75% ( $|t| = 3.933 > 2$  at 5% level of significance). Time trend has strongly explained 66% of the variations. India's deeper integration into world value chains has played an important role in boosting manufacturing service export by enhancing manufacturing capabilities and service offerings (Economic Survey, 2023-24). Charges for use of intellectual property n.i.e has

recorded a positive and statistically significant growth rate of 8.98% and the t statistic confirms statistical significance ( $|t| = 4.869 > 2$  at 5% level of significance) with as much as 70% of the variations being explained. The factors playing role are strengthening of India's property rights regime, modernisation of Intellectual Property offices, digitalization of records has improved efficiency and reliability of IP services in the country (International Trade Administration, 2024). This has been followed by construction services with a positive and significant growth rate of 8.87% ( $|t|=5.380 > 2$  at 5% level of significance) with 74% of the variations being explained with R square= 0.74. Other n.i.e (including Environmental Services, Scientific and Technical Services, Professional and Technical Services and Other Services involving Transcription services and Translation Services) has a positive growth rate of 4.71%. This growth is statistically insignificant ( $|t| = 0.830 < 2$  at 5% level of significance). R square being very low at 0.06, only 6% of the variations has been explained. This growth is due to diversification of service exports by India during 2010/11-2021/22. New areas of services like professional, scientific, research and development have shown significant growth (Economic Survey, 2023-24). India has emerged as a hub for Global Capability Centers handling complex tasks of designing, analysis, R&D. This has also contributed to growth of Other.n.i.e services (DGCIS, 2021-22). Other business services (including technical and professional services, research and development services, management consulting services, market research and analysis, legal services, accounting and auditing services) has witnessed a positive significant growth rate of 2.43% ( $|t|=3.757 > 2$  at 5% level of significance). 56% of the variations have been explained. This growth rate has been due to increased demand, supportive government policies, technological advancements that has paved the way for diversification of services offered by India to the global market (Economic Survey, 2021-22). Telecommunication, computer, information services have registered a modest growth rate of 0.60% but the t statistic indicates statistical insignificance ( $|t|=1.231 < 2$  at 5% level of significance) with a low 13% explanation in variations by the trend. This growth rate can be attributed to the factors like, global demand for IT and IT enabled services, global shift towards digitalization, accelerated by COVID-19 pandemic, have led to an increase in demand for telecommunication, information services. Government's initiatives, policies favouring further development of this service (RBI Bulletin, 2024). Maintenance and repair services show a negative and insignificant growth rate of -0.93% ( $|t|=-0.450 < 2$  at 5% level of significance). The explanatory power of the trend has been very low with R square = 0.02. Financial services (including financial advisory services, banking services, insurance services, asset management services) has showcased the lowest negative growth rate of -7.41% with highly significant t-statistic ( $|t|= 8.620 < 2$  at 5% level of significance), during the time period. The trend has a strong explanatory power of explaining 88% of the variations. This negative growth rate may be due to global financial crisis and uncertainty during that period of time. Financial services exhibit a relative comparative disadvantage compared to IT sector. It is globally less competitive which limits its export potential. The high regulatory barriers also stand in the path of growth of export of this service. The overall export

growth rate during 2010/11-2021/22 has been insignificant at 0.41% ( $|t| = 0.725 < 2$  at 5% level of significance) with only 5% of the variations being explained.

**5.2. Estimate of Growth Divergence Index (GDI<sub>E</sub>) of Export during 2010/11-2021/22:**

**Growth Divergence Index (GDI<sub>E</sub>) of Export** has been high at 1746.09 during 2010/11-2021/22 implying that the variation in the growth rate of items of export of services has been abnormally high during the study period as has been found from estimates in the Table cited below. It varies between 14.91 (Personal, cultural and recreational services) and -7.41 (Financial services). After Covid-19 pandemic situation with disrupted trade, 2021/22 has been seen as a recovery phase with uneven sectoral recovery across different items of services, rapid expansion of service exports and business services (Economic Survey, 2021-22). The GDI has revealed substantial inter-sectoral variation in growth performance over the study period.

**6. Conclusion and Recommendation:**

Over the study period, it has been observed that the export growth rates of different items of services have been fluctuating. Overall growth rate of export has been very low and insignificant during 2010/11-2021/22. Miscellaneous services have been playing the key role in both export and import of services by India. The Foreign Trade Policy 2015-2020 and 2021-26 have aimed to promote and increase India’s share in global service trade. India’s cost advantage in software service delivery has also been a favourable factor. Positive trade balance in services throughout the study period is a very good sign for the growth of the country as a whole. Thus the aspect of growth in export of services play very crucial role in the economic growth of the country as a whole. India should focus more on improving the overall growth rate of export of all items of services and reduction in variability of export growth rate for achieving higher economic growth.

**References**

[1] Amarjothi, P. “Effective Analysis of International Trade Policy of India”, *IJIRT*, vol. 8, no.9, 2022, pp.86-88

[2] Botre, R. Pramod. “A Study on Foreign Trade in India: An Overview”, *Pune Research Scholar*, vol. 4, no. 5, pp.1-11, Aradhya International Publication

[3] DGCIS, 2021-22, “Selected Statistics of Foreign Trade of India”.

[4] Economic survey 2010-11, International Trade”

[5] Economic survey 2021-22, “External Sector.”

[6] Economic Survey 2022-23, “External Sector: Watchful and Hopeful.”

[7] Economic survey 2023-24, “External Sector: Stability Amid Plenty”.

[8] Fortune India, 2022, “Rising IPR imports draining India’s forex; 2021 outgo at \$8.6 billion”.

[9] Gopalakrishnan, A. &Mahalakshmi, A. “A Study on Impact of Foreign Trade in India in The Post Liberalisation Era.” *International Journal of Economics*, vol. 6, no. 3, 2018, pp.1-7

[10] IMF e Library, 2022

[11] Kumari, Jyoti. “Export, Import and Economic Growth in India: A Study”. *Management Dynamics*, vol.14, no.1, April 2014, pp.62-73

[12] Maurya, Anurag. & Lal, Madan. “Growth and Instability in India’s Service Exports: A Policy Period Analysis.” *Review of Professional Management*, Volume-17, Issue-1 (January-June, 2019), pp.92-100, <DOI No. 10.20968/rpm/2019/v17/i1/145654>

[13] Rajasekhar et al, “Contributory pension schemes for the poor: Issues and Ways forward” Working papers 377, Institute of Social and Economic Change,2016.

[14] RBI Bulletin, 2024.

**Table: Export Growth Rate**

Variables	2010/11- 2021/22		
	Coefficient (t stat)	R square	g (%)
Travel	-0.074 (-2.115)*	0.31	-7.13
Transportation	-0.008 (-0.569)*	0.03	-0.80
Insurance & Pension Services	-0.028 (-2.790)*	0.44	-2.76
G.n.i.e.	-0.018 (-2.515)*	0.39	-1.78
Miscellaneous	-	-	-
Construction	0.085 (5.380)*	0.74	8.87
Maintenance and repair services n.i.e	-0.009 (-0.450)*	0.02	-0.93
Manufacturing services on physical inputs owned by others	0.120 (3.933)*	0.66	12.75
Financial services	-0.077 (-8.620)*	0.88	-7.41
Charges for use of intellectual property n.i.e	0.086 (4.869)*	0.70	8.98
Telecommunication, Computer, Information services	0.006 (1.231)*	0.13	0.60
Other business services	0.024 (3.757)*	0.58	2.43
Personal, cultural and recreational services	0.139 (5.351)*	0.74	14.91
Other.n.i.e	0.046 (0.830)*	0.06	4.71
ALL	0.004 (0.725)*	0.05	0.41
GDI			1746.09

**Source: Reserve Bank of India, Computed by Author Note: g (%) = growth rate in percentage G.n.i.e.- Government not included elsewhere Other. n. i. e - Environmental Services, Scientific and Technical Services, Professional and Technical Services and Other Services involving Transcription services and Translation Services. RBI has classified Miscellaneous**

services into nine heads from 2010-11 since the use of Balance of Payments Manual 6 for computing Balance of Payments for India. All values of export are in US \$ million and have been converted to constant prices using CPI (2010=100).

( )\* indicates t - stat values significant at 5% level.