SUSTAINABILITY OF THE SERVICE SECTOR OF INDIA

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Abstract

The paper examined the linear and non-linear trends of the share of the service sector as a percentage of GDP in India during 1960-2021 using the Regression Analysis and the Hamilton Regression Filter Model. It also studied the relationship between the service sector share and FDI, trade, total debt service and Inflation in India during 1970-2021. The paper verified the convergence of net state value added in services of Indian states from 2004/05-2021/22. The paper found a significant upward linear trend, and in non-linear cases, the share of the services showed cycles, cyclical trends and seasonal variations. The share of the service sector positively affects trade, total debt service, inflation of the economy and FDI. The net state value added in services showed significant Sigma convergence and insignificant Beta convergence from 2004/05-2021/22.

JEL: *C22, E60, O11, O14, L80*

Keywords*: Beta and Sigma convergence, Causality, Cyclical trend, Net state value added in services, Service sector share*

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INTRODUCTION

In the economic transformation, the service sector plays a vital role in adequate regulation and international trade in developing countries. Trade in services plays an important role in economic transformation, employment creation and value addition, enabling countries to diversify and upgrade their economies, including through integration into global value chains. The service sector is not only the dominant sector in the GDP of India but has also attracted significant foreign investment, contributed significantly to exports, and provided large-scale employment.

Manufacturing-led development is considered a prominent way of economic development traditionally. However, recently, the services sector has accounted for an average of 55 per cent of GDP and 45 per cent of employment in developing economies (Bundervoet et al., 2022). Nevertheless, the deindustrialisation with low employment potentiality of the service sector raises doubts about service-led growth where the informal sector, personal services and public administration activities showed limited productivity improvements. The question is whether shifting labour from agriculture directly to services confers the same benefits in terms of productivity growth and living standards as the more conventional path of shifting labour from agriculture to manufacturing in the early stages of economic development.

In India, there prevails divergence among the sub-sectors of services, which is destroying the fruits of service-led growth, although the Indian service sector has high labour productivity. It was examined and verified that high-income elasticity of demand and increased input usage of services by other sectors have played an important part in elevating services growth. According to Sethi & Gott (2016), India and China continued to occupy the top two spots in the Global Service Location Index (GSLI) while they obtained major gains in educational skills, cultural adaptability and financial attractiveness.

The pessimistic view of the service sector is so important as Buera & Kaboski (2012) emphasise the importance of the demand-driven growth of the skill-intensive service industry in the post-1950s US economy. In recent years, as Hsieh & Rossi-Hansberg (2019) express that ICT has triggered an industrial revolution in the service sector, which generated huge productivity growth in mature economies during the last few decades which was supported by Eckert et al. (2020) who argue that productivity growth in ICT service industries has created a wide urban-rural gap in the United States.

The unprecedented growth of the service sector of India has raised new aspects of economic thoughts that have led to a paradigm shift in service-led growth and also the question of the sustainability of the growth of the service sector. Can this high growth of the service sector solve the major macroeconomic problems of developing economies? To answer this, this paper attempts to examine the patterns of trends in the service sector

of India during 1960-2021, a convergence of state net value added in services during the 2004/05-2021/22 period and the impact of foreign direct investment, trade, debt service and inflation rate on service sector share in India from 1970-2021.

LITERATURE REVIEW

There are a number of researches were done on service sector-led growth. Shah (1987), Mitra (1988) and Bhattacharya & Mitra (1989; 1990) raise questions about service-led growth, which may imply inflation, income distribution and balance of payments problems because income (employment) may grow faster than employment (income) in the organised (unorganised) services. Even income from the service sector is growing much in excess of the demand generated for the services by the commodity sector.

Banga (2006) noted that the service sector of India has recorded unprecedented growth in the last decades, but its employment potential has not grown proportionately. The manufacturing growth has less implication on service-led growth because its share in GDP and trade could not produce the desired level of employment, and employment elasticity has declined as a result of a rise in labour productivity.

Eichengreen & Gupta (2011) estimate the share of the service sector as a percentage of GDP for 17 OECD countries during 1970-2005 and found that the share of Group I (traditional services) in GDP has declined over time while its share in employment has not. Group II (hybrid) services have accounted for a growing share of GDP and an even more rapidly growing share of economy-wide employment. Group III (modern) services have accounted for increased shares of both GDP and employment over time. In modern high-tech services, labour productivity exceeds labour productivity economy-wide, and there is no sign of changes over time in the gap relative to economy-wide labour productivity.

Gill & Sharma (2013) examine the heterogeneity in the labour share of the service sector across major Indian States using the 66th round of National Sample Survey Organisation data and found that there are considerable variations, interstate as well as intra-sector, in the share of the service sector in the labour force. Except for Kerala, the primary sector still continues to be the largest in terms of employment share. The wholesale and retail trade subsector of the service sector employed the maximum labour force, followed by the transport and storage subsector. On the other hand, financial services, health services and social services sub-sectors have the least labour share across states.

Hajra & Hajra (2015) show that the income elasticity of the services is greater than one as against less than one in the agriculture and industrial sectors. It implies that demand led to growth in services without corresponding growth in agricultural and industrial sectors. Considering production linkages, authors find that the use of agricultural and industrial inputs in the service sector has increased from 1968/69-2003/04, which implies

that the supply side bottlenecks will creep up, leading towards price escalation, which in turn wipe out the advantage of the service sector in the international market.

Deshamukhya & Roy (2016) verify the dynamics of economic growth within the service sector in North East India from1991-2014 and found a significant variation across different states of the region, with Mizoram being the highest-growing state, Nagaland has experienced positive growth for most of the sub-sectors, whereas Arunachal Pradesh has shown negative growth. There is a poor contribution from transport, trade and banking sub-sectors for most of the states. Authors observe partial convergence of output among the states in the region, but service sectors of all states showed a divergence.

Deshamukhya et al. (2020) examine the impact of the service sector on the economic growth of North East India, analysing the linkage between service and non-service using the Granger Causality Test under the Vector Error Correction Mechanism during 1991-2017 and found a significant and positive impact for the states of North East India but the linkage involving service and non-service sector is relatively poor for the states of North East India.

Kumar (2020) examines the regression results of sigma convergence and indicates that the agriculture sector, service sector, Net State Domestic Product and Per Capita Income of all 23 states exhibited a tendency of divergence. In the service sector, all the states diverged, and the value of the Beta coefficient was 0.219. A positive value of beta describes the divergence tendency among all the states of the service sector from 1980-1981 to 2019-2020.

The study shows that the service sector is increasingly driving economic transformation, despite the focus of the policymakers on manufacturing and finds that services increasingly boost productivity growth across all sectors. As a result, it can help to diversify exports and growth engines across the developing world. It signals a potential future that policymakers would ignore at their peril (Nayyar et al., 2021).

Talreja & Dasgupta (2022) examine the role of services in the growth process of India using the concept of inter-sectoral linkages to compare with the role of manufacturing. Input-output linkages and time series analysis reveal that services have been much less integrated in India’s production structure than manufacturing. They are also less important in generating indirect employment spillovers through sectoral linkages, compared with manufacturing. Service sector growth is found to be autonomously driven by final demand and, therefore, less dependent on its interconnections with the rest of the economy from the production side. The findings of the paper also indicate that service sector growth has stimulated manufacturing growth but not vice versa.

METHODOLOGY

The linear trend line or the growth rate has been calculated by applying the semi-log regression model, which is expressed below.

$\log(y_i) = \alpha + \beta * t + u_i$ where y_i is the dependent variable, t is the independent variable, α and β are constants (β is the estimator), $u_i =$ random error.

The bivariate double-log regression model has been fitted in the following fashion.

$\log(y_i) = \alpha + \beta \log(x_i) + u_i$ where y_i is the dependent variable and x_i is the independent variable, α and β (β is the estimator) are constants and u_i is random error. For all values of $i = 1,2, \ldots \ldots \ldots \ldots \ldots n$.

Multiple regression analysis was used for relating macro-economic variables with the share of service sector in India using the model given below.

$$y = \alpha + \beta_1 W_1 + \beta_2 W_2 + \beta_3 W_3 + \beta_4 W_4 + u_i \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

where $y =$ share of service sector as a % of GDP, $W_1 =$ trade as a % of GDP $[\frac{export+import}{GDP} \times 100]$, $W_2 =$ total debt service as a % of GDP, $W_3 =$ CPI (2010 = 100), $W_4 =$FDI as a % of GDP, β_i are the coefficients to be estimated, α is the constant, and $u_i =$ random error.

Hamilton's (2018) regression filter model has been applied for decomposition to cycle, cyclical trend and seasonal variations of the service sector share. The model is given below.

$$y_{t+8} = \alpha_0 + \alpha_1 y_t + \alpha_2 y_{t-1} + \alpha_3 y_{t-2} + \alpha_4 y_{t-3} + v_{t+8} \ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

where $y =$ variable to be regressed.

Or,

$$v_{t+8} = y_{t+8} - (\acute{\alpha}_0 + \acute{\alpha}_1 y_t + \acute{\alpha}_2 y_{t-1} + \acute{\alpha}_3 y_{t-2} + \acute{\alpha}_4 y_{t-3}) \ldots\ldots\ldots\ldots\ldots\ldots (3)$$

So,

$$y_t = \alpha_0 + \alpha_1 y_{t+8} + \alpha_2 y_{t+9} + \alpha_3 y_{t+10} + \alpha_4 y_{t+11} + v_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots (4)$$

Therefore,

$$v_t = y_t - (\acute{\alpha}_0 + \acute{\alpha}_1 y_{t+8} + \acute{\alpha}_2 y_{t+9} + \acute{\alpha}_3 y_{t+10} + \acute{\alpha}_4 y_{t+11}) \ldots\ldots\ldots\ldots\ldots\ldots (5)$$

where $\acute{\alpha}_i$ are estimated.

$v_{t+h} = y_{t+h} - y_t$ is the difference i.e., how the series changes over h periods. For h = 8, the filter $1 - L^h$ wipes out any cycle with frequencies of exactly one year and thus takes out both long-run long trends as well as any strictly seasonal components.

It also applies random walk: $y_t = y_{t-1} - \varepsilon_t$ where $d = 1$ and $\omega^{th} = \varepsilon_{t+h} + \varepsilon_{t+h-1} + \cdots + \varepsilon_{t+1}$

The regression filter reduces to a difference filter when applied to a random walk. Hamilton suggested $h = 8$ for business cycles and $h = 20$ for studies in financial cycles. Regression y_t converges in large samples to $\alpha_i = 1$ and all other $\alpha_j = 0$. Thus, the forecast error is $v_{t+h} = y_{t+h} - y_t$.

The residual equation v_t can be decomposed into trend, cycle and seasonally adjusted through SEATS/TRAMO or STL methods or through census X-13 packages. The STL method is developed by Cleveland, Cleveland, McRae and Terpenning (1990).

Sala-i-Martin's(1995) model was used to show Beta and Sigma convergences of net state value added in services. The model is given below.

Estimate

$$\gamma_{i,t,t+T} = \alpha - \beta\, log(y_{i,t}) + \varepsilon_{i,t} \quad \text{.....(6)}$$

Where $\gamma_{i,t,t+T} = \log(y_{i,t+T}/y_{i,t})/T$ is the growth rate of y_i between t and $t+T$ and $\log(y_{i,t})$ is the log of i[th] economy's growth rate of y_i at time t and if $\beta > 0$, then we have β convergence. If σ is the dispersion of their growth then y_i tends to decrease over time i.e., if $\sigma_{t+T} < \sigma_t$, then σ convergence exists where σ_t = Standard Deviation of $log(y_{i,t})$ across i (where α =constant).

The causality test was done by using the Granger model (1969).

The model is as follows:

Assume the OLS regression model:

$$y_i = \alpha_0 + \sum_{j=1}^{m} \alpha_j y_{i-j} + \sum_{j=1}^{m} \beta_j x_{i-j} + \varepsilon_i \quad \text{.....(7)}$$

Where y_i is the variable the α_j and β_j are the regression coefficients and ε_i is the error term. H_0 null hypothesis:

$$H_0: \beta_1 = \beta_2 = \cdots = \beta_m = 0$$

We can say that *x* Granger-causes y when the null hypothesis is rejected.

The data on the share of the service sector as a percentage of GDP in India from 1960-2021, trade as a percentage of GDP, FDI as a percentage of GDP, and total debt service as percentage of GDP were collected from the World Bank. The data on CPI (2010=100) during 1970-2021 were collected from UNCTAD. The data on the net state value-added in-service sector of all states in India from 2004/05-2021/22 were taken from the Reserve Bank of India.

RESULTS AND DISCUSSION

Nature of Trends

The linear trend line of the service sector share in GDP in India during 1960-2021 has been increasing at the rate of 0.583% per year significantly at 1% level. The estimated trend line is given below:

$$log(y) = 3.495 + 0.005836t + u_i \quad \text{.....(8)}$$

(214.19)* (12.95)*

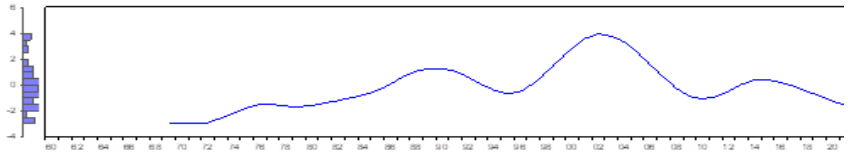
$R^2 = 0.736$, F = 167.88*, DW = 0.168, n = 62, y = net value added in services a % of GDP in India. t = year, * = significant at 1% level.

The Hamilton (2018) regression filter model for decomposition revealed that service sector share of India consists of many upswings and downswings during the study period from 1960-2021(see Figure 1) in which it is observed that in panel 1, the cycle has 12 peaks and 11 troughs and in panel 2, cyclical trend showed 4 peaks and 3 troughs where a longer period from 1970-1990 showed upswing and then started shorter periods of upswings and downswings respectively although a long tail of downswing is prevalent since 2002. Inverse V-Shaped seasonal variation is observed in panel 3 where its amplitudes have been widening gradually.

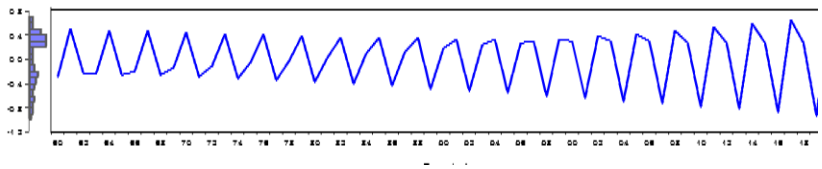
Figure 1: Decomposition of Service Sector Share

Panel-1: Cycles

Panel-2: Cyclical Trend



Panel-3: Seasonal Variation



Source: Author's calculations

Service Sector Share and its Determinants

The estimated multiple regression equation of the service sector share as percentage of GDP with trade, total debt service, consumer price index, and FDI of India from 1970-2021 is given below:

$$y = 32.549 + 0.1117W_1 + 0.7857W_2 + 0.0483W_3 + 0.6262W_4 \text{ …..……. (9)}$$

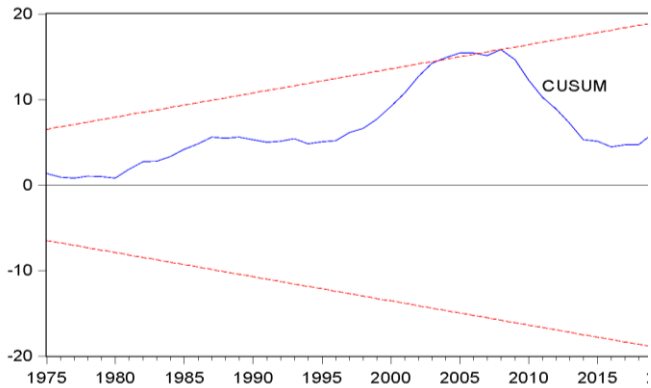
(55.96)* (3.55)* (3.65)* (7.58)* (1.32)

R^2 = 0.939, F =181.58*, DW = 0.762, AIC = 3.51, SC = 3.70, n = 52

where y = share of service sector as % of GDP, W_1 = trade as % GDP, W_2= total debt service as % of GDP, W_3 = consumer price index (2010=100), and W_4= FDI as % of GDP, * = significant at 5% level.

The above estimated regression equation states that the share of service sector in India is positively related with trade, total debt service, inflation significantly at 5% level. The FDI has positive impact on the share of service sector but this relationship is statistically insignificant. This estimated equation showed high R^2 with significant F statistic with low AIC and SC although it has low DW for which auto-correlation problem arises. The model is quite stable since the path of the residual cumulative sum passes through the significant level of ± 5% which is depicted in Figure 2.

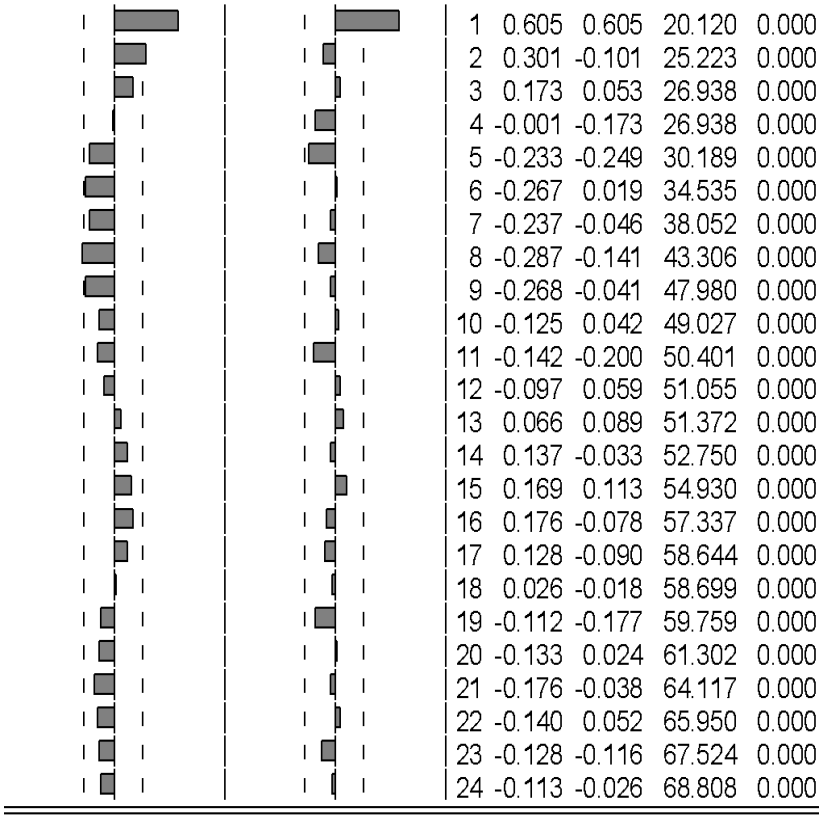
Figure 2: Stability of the Relation



Source: Author's calculations

The residual test (Figure 3) of the estimated equation during 1970-2021 in India has revealed auto-correlation and partial auto-correlation, which are shown empirically in columns 4 and 5, and their figures have been shown in columns 1 and 2, respectively. Since their values range from minus to positive values randomly. This proves the existence of an auto-correlation problem. Their Q stat has been shown probabilities of 1%. Thus, no auto-correlation at H_0 is rejected. The test also proved that the share of the service sector during 1970-2021 contains seasonal variations.

Figure 3: Autocorrelation Problem



Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
		1	0.605	0.605	20.120	0.000
		2	0.301	-0.101	25.223	0.000
		3	0.173	0.053	26.938	0.000
		4	-0.001	-0.173	26.938	0.000
		5	-0.233	-0.249	30.189	0.000
		6	-0.267	0.019	34.535	0.000
		7	-0.237	-0.046	38.052	0.000
		8	-0.287	-0.141	43.306	0.000
		9	-0.268	-0.041	47.980	0.000
		10	-0.125	0.042	49.027	0.000
		11	-0.142	-0.200	50.401	0.000
		12	-0.097	0.059	51.055	0.000
		13	0.066	0.089	51.372	0.000
		14	0.137	-0.033	52.750	0.000
		15	0.169	0.113	54.930	0.000
		16	0.176	-0.078	57.337	0.000
		17	0.128	-0.090	58.644	0.000
		18	0.026	-0.018	58.699	0.000
		19	-0.112	-0.177	59.759	0.000
		20	-0.133	0.024	61.302	0.000
		21	-0.176	-0.038	64.117	0.000
		22	-0.140	0.052	65.950	0.000
		23	-0.128	-0.116	67.524	0.000
		24	-0.113	-0.026	68.808	0.000

Source: Author's calculations

The Breusch-Godfrey serial correlation LM test has been also assured that no auto-correlation is rejected showing the values of F, R^2 and χ^2 (2) respectively. The values are shown in Table 1.

Table 1: Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	14.67213	Prob. F(2,45)	0.0000
Obs*R-squared	20.5248	Prob. Chi-Square(2)	0.0000

Source: Author's calculations

Moreover, the Granger-Causality test proved that the share of service sector as a % of GDP has bi-directional causality with trade as % of GDP, but has no causality with other variables in our area of study (assuming under lag 2). The values of observations, F statistic and probability are given in Table 2.

Table 2: Granger-Causality

Null Hypothesis:	Observations	F-Statistic	Probability
W_1 does not Granger Cause y	60	3.32399	0.0434
y does not Granger Cause W_1		3.97630	0.0244
W_2 does not Granger Cause y	50	0.37761	0.6877
y does not Granger Cause W_2		0.22326	0.8008
W_3 does not Granger Cause y	60	1.93029	0.1548
y does not Granger Cause W_3		1.39298	0.2570
W_4 does not Granger Cause y	50	0.13709	0.8723
y does not Granger Cause w_4		3.04087	0.0577

Source: Author's calculations

Convergence Analysis

Following Sala-i-Martin (1995), assume, $x_i =$ all the growth rates of net state value added in services of all states (33) during 2004/05-2021/22 (which is called β) and $Y_i =$ four years averages of initial values of net state value added in services of all states during 2004/05-2021/22. If the estimated coefficient of the linear relationship of the two variables is negative with significant t test statistic, then the Beta convergence hypothesis is satisfied.

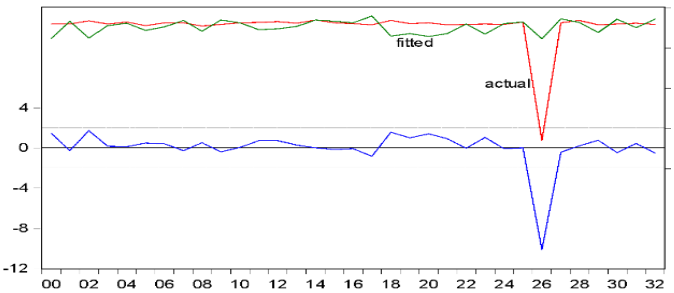
$$log(x) = -3.6674 + 0.3989\, log(y) + u_i \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (10)$$

(-1.198) (1.90)*

$R^2 = 0.104$, F = 3.610, DW = 1.87, n = 33* = significant at 10% level, $u_i =$ random error

Therefore, there is no Beta convergence of net state value added in services among 33 states of India during the specified period at 5% level of significance. It is plotted in Figure 4 given below:

Figure 4: Beta Convergence



Source: Author's calculations

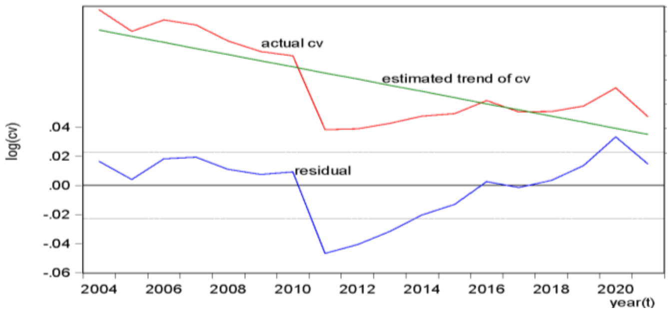
The estimated trend line of sigma convergence of the net state value-added in the service sector of India during 2004/05-2021/22 is given below.

$$log(CV) = 0.18605 - 0.005057t + u_i \text{..................................} (11)$$

(16.72)* (-4.92)*

$R^2 = 0.602$, F = 24.21*, * = significant at 5% level, DW = 0.609, n = 18, CV = coefficient of variation of all net state value added in the service sector of India which is called Sigma (σ). Since the trend line of Sigma is decreasing at the rate of 0.505% per year significantly, then Sigma (σ) convergence is satisfied for the states' service sector. In Figure 5, the sigma convergence is shown below:

Figure 5: Sigma Convergence



Source: Author's calculations

Table 3: Values of Beta

Name of the state	Value of Beta (β)	R^2	Name of the state	Value of Beta (β)	R^2
Andaman & Nicobar Islands	10.87	0.95	Maharashtra	10.19	0.97
Andhra Pradesh	10.80	0.98	Manipur	15.77	0.96
Arunachal Pradesh	15.06	0.97	Meghalaya	11.28	0.98
Assam	10.90	0.97	Mizoram	12.51	0.98
Bihar	13.31	0.97	Nagaland	10.13	0.98
Chandigarh	9.34	0.95	Odisha	10.29	0.96
Chhattisgarh	12.10	0.97	Puducherry	11.06	0.97
Delhi	12.12	0.97	Punjab	10.46	0.95
Goa	8.81	0.93	Rajasthan	13.30	0.98
Gujarat	10.42	0.98	Sikkim	0.00	NA
Haryana	12.41	0.97	Tamil Nadu	12.00	0.98
Himachal Pradesh	12.72	0.97	Telangana	15.48	0.98
Jammu & Kashmir	13.91	0.97	Tripura	10.08	0.98
Jharkhand	11.54	0.97	Uttar Pradesh	10.99	0.97
Karnataka	16.03	0.98	Uttarakhand	11.62	0.94
Kerala	12.27	0.98	West Bengal	10.49	0.98
Madhya Pradesh	11.48	0.99			

Source: Author's calculations

In Table 3 all the values of Beta i.e., growth rate of net state value added in services and their R^2 values of 33 states have been given and also Table 4 incorporated the values of the coefficient of variation of all the states during the period from 2004/05-2021/22.

Table 4: Values of Sigma

Year	Coefficient of variation of all states (Sigma, σ)
2004	1.2185
2005	1.197
2006	1.2082
2007	1.2035
2008	1.1875
2009	1.1772
2010	1.1735
2011	1.1041
2012	1.1051
2013	1.1096
2014	1.1164
2015	1.1189
2016	1.1308
2017	1.1204
2018	1.1205
2019	1.1259
2020	1.1426
2021	1.1161

Source: Author's calculations

The trend of long-run service sector shares as a percentage of GDP is found to be cyclical in India during the study period, including seasonal variation, which is justified by autocorrelation and partial autocorrelation. The observations from regression equations and the Granger Causality test differ marginally, which can be reduced partially if the auto-correlation problem is eliminated for which seasonal variation might be reduced and more one-way causalities from debt-service ratio and inflation rate to service sector share will be the possible outcome. The sustainable development in India should require feasibility of significant Beta and Sigma convergence criteria of all states' net value added of service sector. The unequal development among Indian states produces these divergences.

CONCLUSIONS

The paper concludes that the service sector share in GDP of India grew at the rate of 0.58% per year significantly. In the non-linear trend, the cycle has 12 peaks and 11 troughs, and the cyclical trend showed 4 peaks and 3 troughs including inverse 'V' shaped seasonal variations. The share of service sector in India is positively related with trade, total debt service, inflation and FDI during 1970-2021.The FDI has positive impact on

the share of service sector, but this relationship is statistically insignificant. The estimated regression equation is found a stable model. It has bidirectional causality with trade. The net state value added in services revealed significant Sigma convergence, but it has no Beta convergence during 2004/05-2021/22. Therefore, India's service sector led growth depend on the performance of all states' convergence process as well as the other macroeconomic indicators.

There are several variables such as sub-sectors of service, trade of services, inter-sectoral linkages of all sectors of the economy, fiscal deficit and capital formations, and exchange rate of the economy which can influence the share of the service sector immensely and these are not included in this paper because time series data on all the variables are not available. It needs a separate research paper which will be explored in future. The causes of divergences are excluded in this model because the nature of states' policies differ from one state to another as well as their dispersions of net value addition in service sectors are wide. Although the central goal is to explain the convergence analysis. The traditional regression model can be replaced by adding co-integration and vector error correction mechanism so that there is enough scope for future research in this context.

Policy Considerations

According to the outcome of the model, the target inflation rate and reduction of debt service will be mostly effective in hike the share of the service sector in India. An increase in the positive trade balance is the key policy issue to boost service-led growth in India. In addition to that, to emphasize FDI, India should deregulate key service sub-sectors, like retail, financial services and real estate further to attract FDI in such sub-sectors to promote services that could be tradable because these policies have enough possibilities to be significant FDI impact towards service-led growth. Even, the health and education sectors need sufficient FDI inflows in India which might improve HDI and growth. These investments may be national or international or private. Globalization of services and with transportable, tradable and scalable modern services in India would be able to achieve economically, socially and environmentally sustainable service–led growth (Singh, 2012).

The sector needs coherent policy integration with industrial and agricultural policies under a reform process in a liberalizing manner, especially in retail trade, real estate and outsourcing. Even, reforms of tourism and transportation are urgently required to implement. In this respect, the role of government in economic planning and administration should be strengthened because of the service sector's backward linkages with manufacturing, and the large proportion of un/low-skilled workers in the Indian labour force, policies to promote both the labour-intensive manufacture and the skill-intensive service sectors are vitally needed. It must include infrastructure and education in the reform process.

UNCTAD (2017) emphasized maximising the positive contributions of services as preconditions for which good policies, adequate regulations and strong institutions, together capable of creating an enabling environment for the service economy and trade are needed. So, the Indian service sector should formulate a green environment policy to relate to trade enhancement vis-a-vis WTO regulations and sustainable development goals.

Thoughts that are due to the process of deindustrialisation, the services sector emerged as a major contributor to GDP followed by secondary and primary sectors in recent decades. It has to be emphasized more on modern multifaceted sectors like IT and ITC, and finance.

The strong forward and backward linkages are necessary for inducing impulses from services through various channels and for large intersectoral purchases in many activities where vertical integration is the key policy issue (Hansda, 2001). While Fisher (1935) and Clark (1940) attributed the preponderance of services in the developed world to its level of income, they recognized the low productivity in services as a factor behind the faster employment growth in services than in industry. Fuchs (1965) also came to a similar conclusion for the US economy in the 1960s. Such productivity differentials formed the basis of the well-known 'cost disease' hypothesis of services propounded by Baumol (1967).

Employment potentiality in the service sector has not grown proportionately with the high growth of the service sector and even the employment elasticity has fallen as a result of rising labour productivity which raises doubt about sustainability (Banga, 2006).

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