

A Detailed Analysis Of Export Of Commercial Services From India Across Various Subsectors Under Mode 1

Author: Suravi Kar Roy

Designation: Faculty

Affiliation: Department Of Economics, Heramba Chandra College, Kolkata

Email:suravikarroy@gmail.com

Abstract: Mode 1, or Cross-Border Supply, plays an essential role in India's services export strategy, encompassing services such as IT and telemedicine without physical movement. It generated over \$325.3 billion (ministry of commerce) in 2022-23, thereby contributing significantly to GDP growth and improving India's standing as a global service hub attributed by its skilled workforce. This study aims to evaluate the performance of commercial services exports under Mode 1 from India, analyze the relationship between commercial services (Millions of US \$) exports and GDP Per Capita, and investigate their empirical relationship using secondary data from the World Trade Organisation and World Bank. Findings include a substantial growth of 565.8% in total service exports from 2005 to 2022, with a positive correlation between GDP Per Capita and commercial service exports during this period, except for postal and courier services and information services. The regression analysis indicates statistically significant positive coefficients for most of the service subsectors, suggesting that the export of services under mode 1 boosts up India's GDP Per Capita. Regulatory barriers, high compliance costs, and fierce global competition are some of the difficulties facing India's Mode 1 service exports, which are essential to the realization of Viksit Bharat 2047 goals.

Keywords: Detailed, Export, Services, India, Subsectors

Introduction:

Mode 1, or Cross-Border Supply, is defined as the export of services from one country to another without the physical movement of the supplier or consumer. It entails offering services—like IT services, remote consulting, or telemedicine—across national boundaries, frequently in the form of digital content. This method is very much effective because it removes the need for travel expenses, local office setup, and visas. Mode 1 (Cross-Border Supply) is vital for India's services export strategy, facilitating the delivery of IT, BPO, and consultancy services remotely constituting 47% of software and 25% of business services exports. This mode contributes significantly to over \$325.3 billion in annual service exports (2022-23), which boosts up economic growth and foreign exchange reserves. Important sectors using Mode 1 include IT-BPM, telecommunications, and professional consultancy. India's skilled and cost-effective labourforce gives it a competitive edge, positioning it as a worldwide centre for remote services, essential for reaching the target of \$1 trillion in service exports by 2030. Mode 1, the cross-border supply of services, improves India's GDP per capita through high-value foreign exchange earnings, generation of skilled jobs, and a strong services sector that represents approximately 55% of India's Gross Value Added (GVA). Digital services have surged at an 11.61% CAGR since 2005, now forming an important part of exports and increasing national income. Evaluating the performance of Mode 1 (cross-border) service exports in India is critical in order to sustain high economic growth, as it drives foreign exchange earnings, identifies competitiveness in ITES/BPO sectors, and directs the structure of the policy for digital trade infrastructure, thereby enabling the country to adapt to rising global competition, optimize exchange rate impacts, and foster skill-based employment. In this context it is pertinent to study the following objectives:

Objectives of the study:

This paper seeks to

1. Study the performance of commercial services export under mode 1 across various subsectors from India in 2005 and also compare its growth in 2022.
2. Analyse diagrammatically the association relation between Commercial services export under mode 1 across various subsectors and GDP Per Capita of India (2005 to 2022).
3. Investigate the empirical relation between Commercial services export under mode 1 across various subsectors and GDP Per Capita of India (2005 to 2022).

Datasource And Methodology:

In this paper secondary data from World Trade Organisation for commercial services export (Millions of US \$) and World Bank for data on GDP Per Capita (constant 2015 US\$) has been used. Using data for 2005 to 2022 graphical analysis and pictorial presentations have been made using Column chart and Scatter diagrams in order to portray the performance of service export from India across various subsectors under mode 1 and their association with GDP Per Capita. Also empirical regression of GDP Per Capita (constant 2015 US\$) upon commercial services export across various subsectors under mode 1 have been carried out. Additionally, theoretical analysis of the problems faced by services export under mode 1 have been discussed. MS EXCEL Software has been used for empirical analysis of data and for pictorial presentations.

Discussion, Analysis And Results:

In order to study the performance of commercial services export under mode 1 across various subsectors from India in 2005 and compare its growth in 2022 a column chart has been prepared presented below:

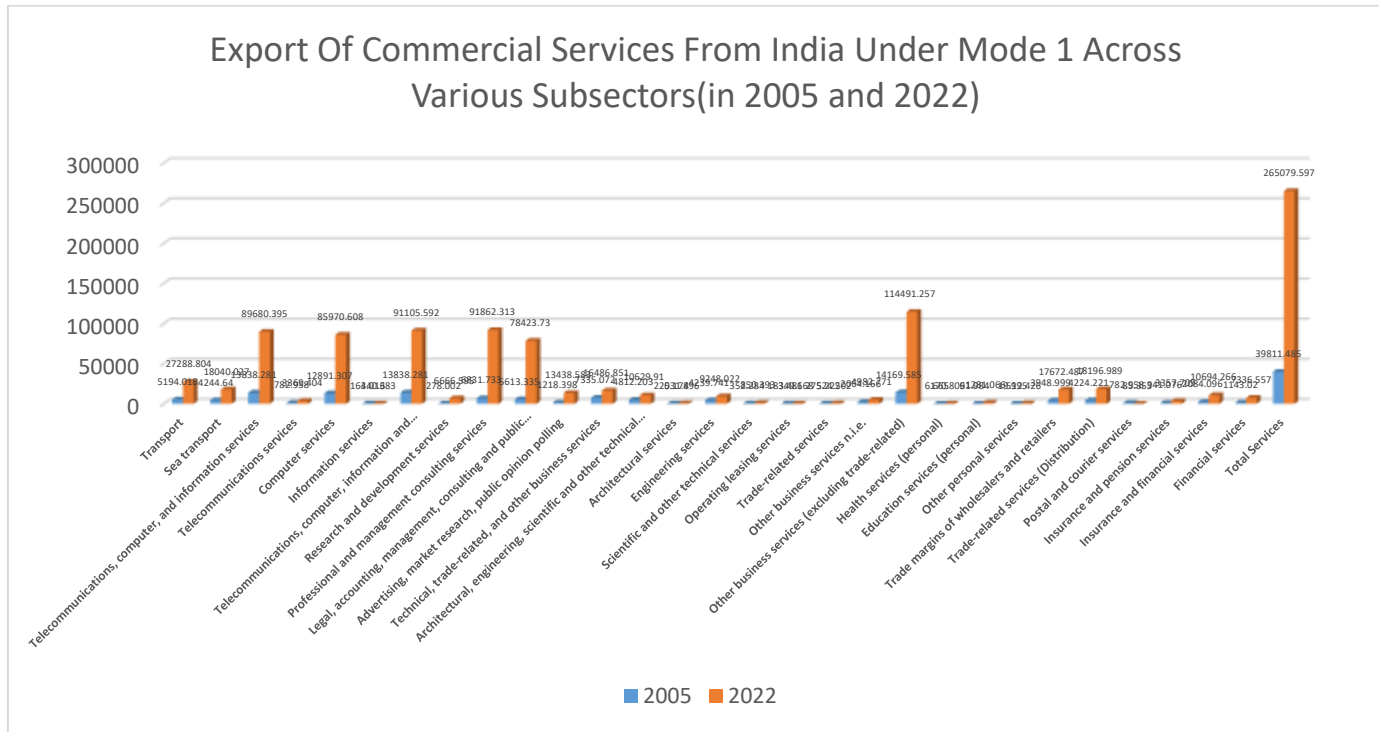


Fig 1. Export Of Commercial Services From India Under Mode 1 Across Various Subsectors (in 2005 and 2022)

Datasource: World Trade Organisation

Other business services (excluding trade-related) had been highest in 2005 among all the service subsectors, followed by Telecommunications, computer, information and audiovisual services, Telecommunications, computer, and information services, Computer services respectively. In 2022 Other business services (excluding trade-related) continued to be the highest followed by Professional and management consulting services, Telecommunications, computer, information and audiovisual services, Telecommunications, computer, and information services, computer services respectively. Total export of services have grown by around 565.8% increasing from 39811.485 Million US dollar in 2005 to 265079.597 Million US dollar in 2022. Export of Health services (personal) (6.665 Million US Dollar) had been lowest in 2005. Postal and courier services (85.353 Million US Dollar).

Diagrammatic Analysis of the association relation between Commercial services export under mode 1 across various subsectors and Gross Domestic Product Per Capita of India (for the period 2005 to 2022):

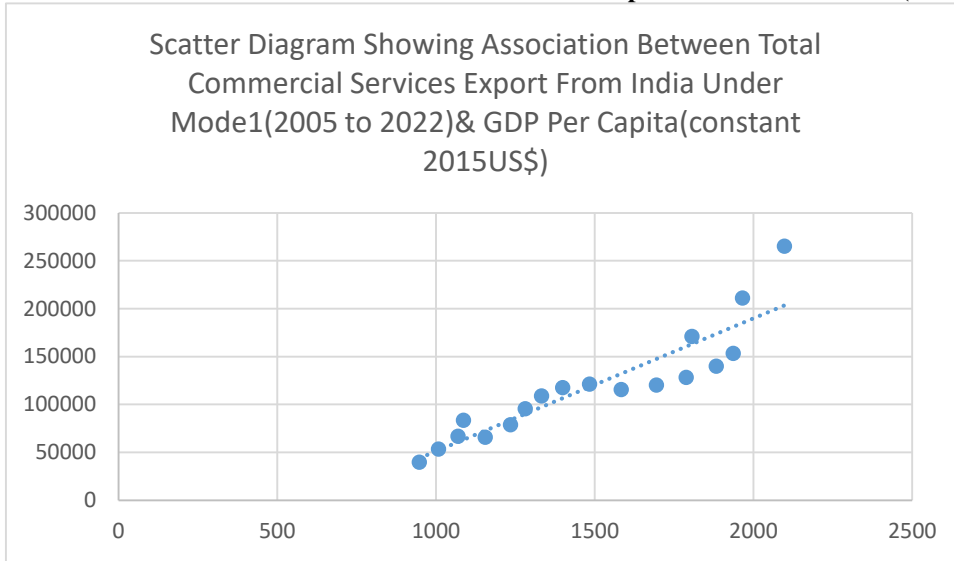
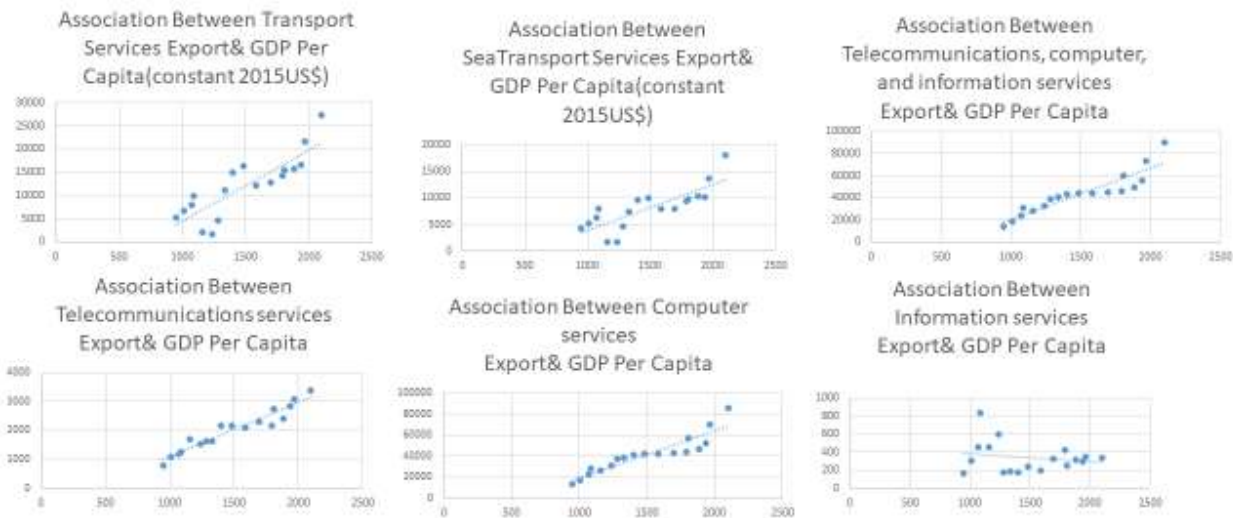


Fig.2 Scatter Diagram Showing Association Between Total Commercial Services Export From India Under Mode1(2005 to 2022)& GDP Per Capita(constant 2015US\$)

Datasource: World Trade Organisation And World Bank

Scatter Diagrams Showing Association Between Commercial service export from India and GDP Per capita



Datasource: World Trade Organisation And World Bank

Fig 3:Scatter Diagram Showing Association Between Commercial Service (Transport,Sea Transport,Telecommunications,Computer,and Information ,Telecommunications,Computer services, information services)Export From India(2005-2022) and GDP Per Capita

Scatter Diagrams Showing Association Between Commercial service export from India and GDP Per capita

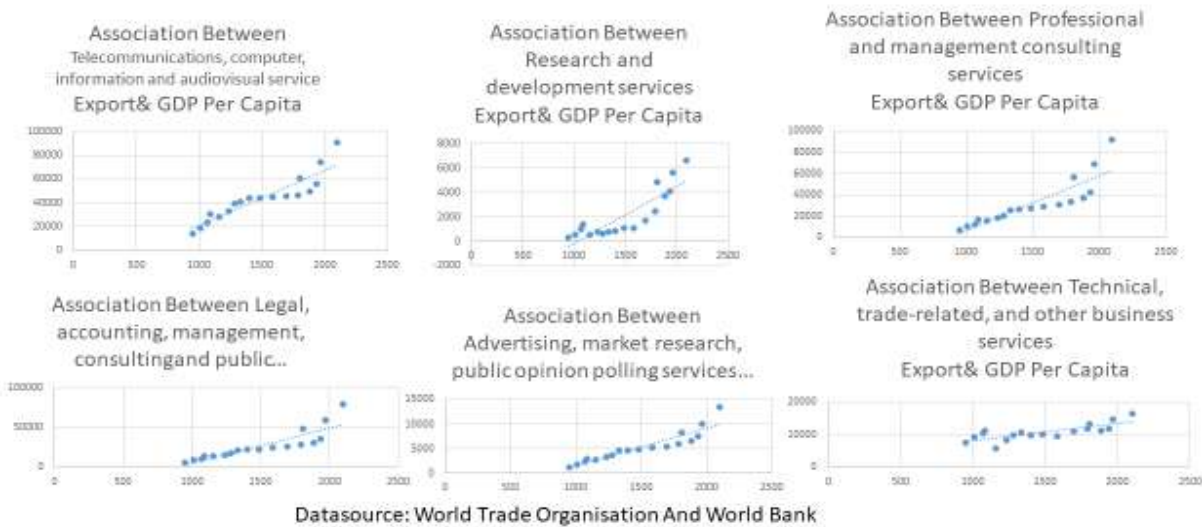


Fig 4: Scatter Diagram Showing Association Between Commercial Service (Telecommunications, Computer, and Information and Audiovisual, Research and Development, Professional and Management Consulting, Legal, accounting, management, consulting, Advertising, market research, public opinion polling, Technical, trade-related and other business services) Export From India (2005-2022) and GDP Per Capita

Scatter Diagrams Showing Association Between Commercial service export from India and GDP Per capita

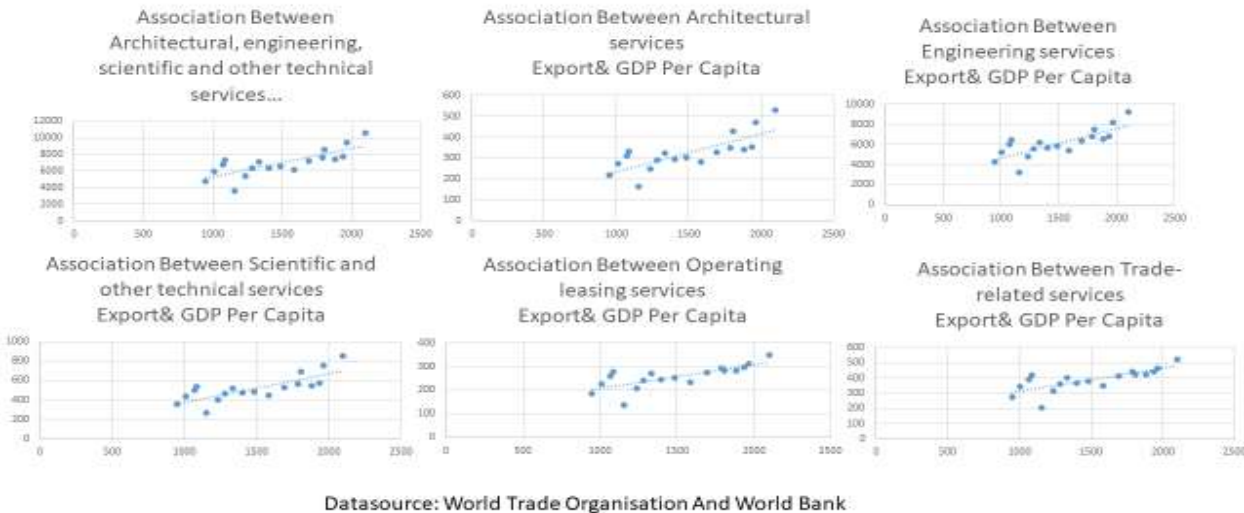


Fig 5: Scatter Diagram Showing Association Between Commercial Service (Architectural, Engineering, scientific and other technical services, Architectural services, engineering services, scientific and other technical services, operating leasing services, trade related services) Export From India (2005-2022) and GDP Per Capita

Scatter Diagrams Showing Association Between Commercial service export from India and GDP Per capita

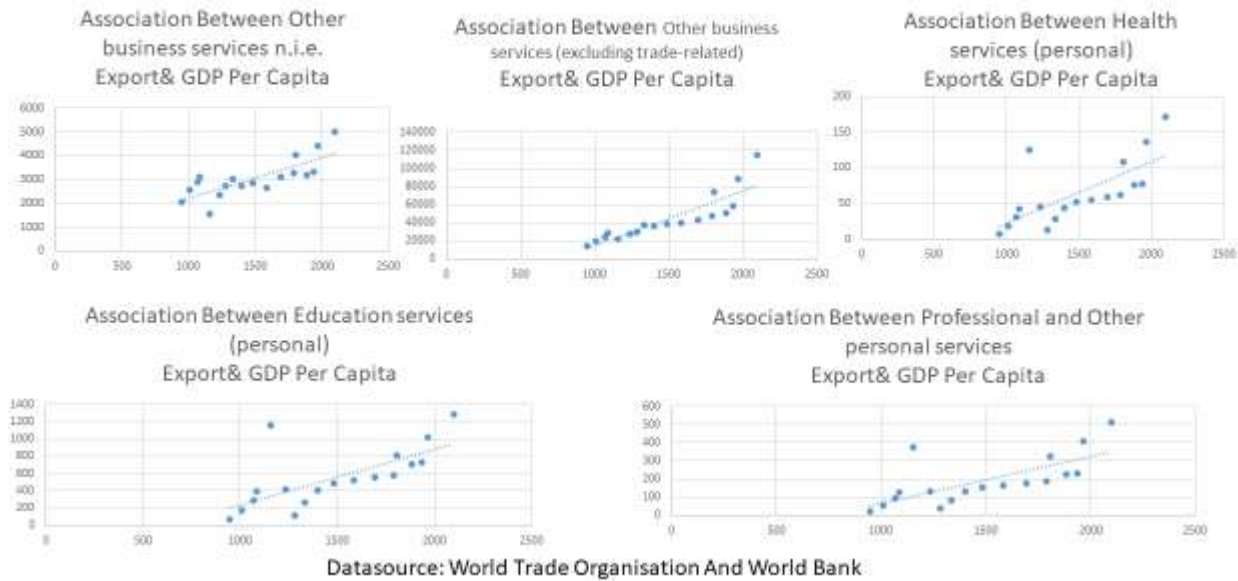


Fig 6: Scatter Diagram Showing Association Between Commercial Service (Other business services n.i.e., other business services excluding trade related, health, education services, Professional and other personal services) Export From India (2005-2022) and GDP Per Capita

Scatter Diagrams Showing Association Between Commercial service export from India and GDP Per capita

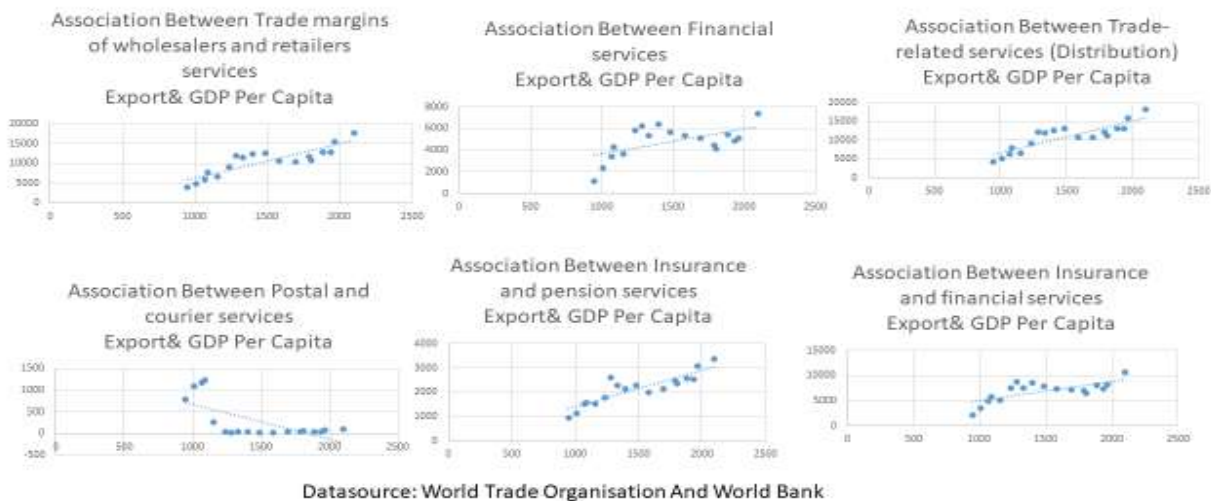


Fig 7: Scatter Diagram Showing Association Between Commercial Service (Margins of wholesalers and retailers, financial, trade related (distribution), Postal and courier, insurance and pension, insurance and financial) Export From India (2005-2022) and GDP Per Capita

For all the service subsectors the scatter diagrams reveal that the association between GDP Per Capita and Export of commercial services have been positive for the period (2005 to 2022). Only for Postal and Courier Services and information services we find that there is negative association.

Empirical analysis of relationship between the export of commercial services from India under mode 1 across various subsectors and GDP Per capita:

Regression analysis have been carried out to test the "Commercial Service Export Led Growth Hypothesis" in India under mode 1 across various subsectors for 2005 to 2022. The analysis have been presented below:

Empirical investigation of the hypothesis:

Testing

Ho: service export has no association with GDP per capita against

H1: service export has statistically significant association with GDP per capita

The regression below is run:

$$GDPPC_t = a + b \text{ Export of Service }_t + U_t \quad t=1,2,\dots,18$$

Where, $GDPPC_t$ =GDP Per capita (constant 2015 US\$)in time t

Export of Service $_t$ = service export from India (millions of US \$)in year t

Table 1:Regression Coefficients:

Service	Regression coefficient	t stat	significant at 5% level
Total services	0.141148	2.770503	Yes
Transport services	0.046622	6.384047	Yes
Sea Transport services	0.074663	5.482842	Yes
Telecommunications, computer, and information services	0.018079	9.261377	Yes
Telecommunications services	0.4914	13.67525	Yes
Computer services	0.018687	9.089907	Yes
Information services	-0.41614	-0.78047	No
Telecommunications, computer, information and audiovisual services	0.017723	9.214976	Yes
Research and development services	0.160282	6.941285	Yes
Professional and management consulting services	0.014778	7.192794	Yes
Legal, accounting, management, consulting and public relations	0.017013	6.887152	Yes
Advertising, market research, public opinion polling	0.109831	9.48725	Yes
Technical, trade-related, and other business services	0.113475	5.017788	Yes
Architectural, engineering, scientific and other technical services	0.178269	5.018945	Yes
Architectural services	3.315509	4.9436	Yes
Engineering services	0.206698	5.01438	Yes
Scientific and other technical services	2.072194	4.943604	Yes
Operating leasing services	5.703911	4.587235	Yes
Trade-related services	3.802599	4.587223	Yes
Other business services n.i.e.	0.353655	4.943606	Yes
Other business services (excluding trade-related)	0.012461	7.271262	Yes
Health services (personal)	5.804149	4.028996	Yes
Education services (personal)	0.731635	3.796323	Yes
Other personal services	1.934715	4.028988	Yes
Trade margins of wholesalers and retailers	0.08805	6.902036	Yes
Trade-related services (Distribution)	0.08695	6.969325	Yes
Postal and courier services	-0.55391	-3.64421	Yes
Insurance and pension services	0.514026	7.530581	Yes
Insurance and financial services	0.126501	3.862377	Yes

Financial services	0.141148	2.770503	Yes
--------------------	----------	----------	-----

Table 1:Regression Coefficients

Datasource:WTO and World Bank

An increase in 1 Million \$ in total services, transport, sea transport, Telecommunications, computer, and information services ,Telecommunications services, Computer services, Telecommunications, computer, information and audiovisual services, Research and development services, Professional and management consulting services, Legal, accounting, management, consulting and public relations, Advertising, market research, public opinion polling, Technical, trade-related, and other business services, Architectural, engineering, scientific and other technical services, Architectural services, Engineering services, Scientific and other technical services ,Operating leasing services, Trade-related services, Other business services n.i.e., Other business services (excluding trade-related), Health services (personal), Education services (personal), Other personal services, Trade margins of wholesalers and retailers, Trade-related services (Distribution), Insurance and pension services, Insurance and financial services, financial services would increase GDP Per Capita by \$ 0.046622, \$ 0.018079, \$0.4914, \$ 0.014778, \$ 0.109831, \$0.113475, \$0.178269, \$3.315509, \$0.206698, \$2.072194, \$\$ \$0.353655, \$ 5.804149, \$0.731635, \$1.934715, \$0.08805, \$0.08695,\$ 0.514026, \$0.126501,\$ 0.141148 \$ respectively .The regression coefficients are positive and statistically significant at 5% level.Only for Postal and Courier Services and information services we find that regression coefficient is negative but for information services it is not statistically significant at 5% level.

Problems suffered by India’s Export of Commercial Services under Mode 1 and Remedial Measures:

India's Mode 1 (cross-border supply) service exports face several challenges, including regulatory barriers such as data localization, high compliance costs, data privacy issues, and fierce global competition. India is improving its digital infrastructure, encouraging talent development, negotiating advantageous trade agreements, and simplifying export procedures to address these issues. Important problems include strict foreign data laws, costly compliance, data security risks, inadequate internet connectivity, skills shortages, and lack of awareness among MSMEs regarding international standards. Proposed solutions comprise modernizing digital infrastructure, simplifying restrictive regulatory frameworks, enhancing capacity building, promotion of digital exports, and emphasizing the development of skills in cutting-edge technologies.

Conclusion:

Mode 1 service exports, in which services cross borders while providers and consumers do remain in their respective locations, play an important role in India's Viksit Bharat 2047 initiative. Projected to reach \$372.3 billion in 2024, these exports substantially enhance foreign exchange earnings, strengthening India's global competitiveness, and supporting economic development through digital and IT services. Key contributions of Mode 1 include generating high-value foreign revenue, developing digital infrastructure, creating knowledge-based employment opportunities for skilled youth without the need for migration, and facilitating India’s strategic integration into global value chains. Additionally, it diversifies exports beyond merchandise, promoting economic stability and positioning India as a hub for global services.

References:

1. Kaur M. (2024), Analysing India’s Trade Competitiveness in Commercial Services with Developed Economies “,Journal of Neonatal Surgery ISSN(Online): 2226-0439 Vol. 13, (2024), pg. 1766 .
2. Thakur, P., Srinivasan,R.(2023),An Analysis Of India’s Exports Of Services:2010-2020, Journal Of Economics And Trade-2023-vol8(issue 2).
3. Mukherjee,A.(2024),Mode 4 Trade Of Services: Trend, Pattern And Future Prospects For India,IPE Journal of Management, ISSN 2249-9040 ,Volume 14, No 2, July-December 2024.
4. Rai ,S.,Choudhary, C.(2022),Investigating Causality Between Service Export and GDP of India, IJFANS International Journal Of Food And Nutritional Sciences ISSN Print 2319 1775 , Journal Volume 11, Issue 10, 2022.
- 5.Eichengreen, B. and Gupta, P. (2012) ,Exports of Services: Indian Experience in Perspective , National Institute of Public Finance and Policy, MPRA Paper No. 37409.
- 6.Mukherjee, A.,Kapoor. A,(2017), India and Trade Facilitation in Services (TFS) Agreement: Concerns and Way Forward, ICRIER Working Paper No. 347,October 2017.
- 7.India’s Export Of ICT-Enabled Services An All-India Survey:2016-2017, Directorate General of Commercial Intelligence and Statistics Ministry of Commerce and Industry Government of India ,JUNE 2018.
- 2.De,P.(2011),Assessing Barriers to Trade in Services,P in India ,RIS Research and Information System for Developing Countries, RIS Discussion Paper -173,may 2011.
- 8.Eichengreen, B. and Gupta, P. (2012) ,Exports of Services: Indian Experience in Perspective , National Institute of Public Finance and Policy, MPRA Paper No. 37409.

9. Anand, R., Kochhar, K., Mishra, S. (2015), Make in India: Which Exports Can Drive the Next Wave of Growth?, IMF Working Paper Asia and Pacific Department.
10. Kumar, P., Mazhar, S.S., Rehman, A.U., Khan, F.S. (2025), An analysis of export of software services in India since 2010: a systematic literature review with future agenda”, International Journal Of Technology, Policy and Management, Vol.25, No.1.
11. Thomas P .M. (2015), Estimation of the Key Economic Determinants of Services Trade: Evidence from India, The Institute for Social and Economic Change, Working paper 348.
12. Prospects For Exports From India, (2019), PHD Research Bureau PHD Chamber of Commerce And Industry.
13. Kowalski, P. and N. Dihel (2009-05-19), “India’s Trade Integration, Realising the Potential”, OECD Trade Policy Papers, No. 88, OECD Publishing, Paris.
14. Achieving USD 1 Trillion Services Exports by 2030: A Roadmap, Confederation of Indian Industry, 2022.
15. Goswami, A.G., Mattoo, A., Saez, S. (2011), Exporting Services: A Developing Country Perspective , Pacific Economic Cooperation Council.

Copyright & License:



© Authors retain the copyright of this article. This work is published under the Creative Commons Attribution 4.0 International License (CC BY 4.0), permitting unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.