



## COMPARATIVE ANALYSIS OF EXPORT PERFORMANCE OF TAMIL NADU AND SELECTED SOUTHERN DISTRICTS

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### **Abstract**

*This study looks at Tamil Nadu's export performance over a five-year period (2021–2025), with a particular focus on a few southern districts. The study's goals are to determine regional differences in export performance, assess district-wise contributions, and analyse growth trends. Numerous quantitative techniques, including regression analysis, trend analysis, percentage contribution analysis, and correlation analysis, have been used to secondary data. The study comes to the conclusion that although though Tamil Nadu's export performance is strong, it is imperative to support balanced regional development by bolstering infrastructure, promoting industrialisation, and improving export capacities in districts that are performing poorly.*

**Keywords:** *Export Performance, Regional Disparities, Economic Development, Export Growth, Correlation and Regression Analysis.*

### **Introduction**

Exports play a crucial role in economic development by generating foreign exchange, promoting industrial growth, per capita income, and creating employment opportunities. In India, states like Tamil Nadu have emerged as major contributors to the country's export performance due to their diversified industrial base and strong infrastructure.

Tamil Nadu is well-known for industries like engineering goods, autos, leather, textiles, and marine items, all of which greatly boost the state's export revenue. However, the state's export performance varies, with certain districts contributing more than others because of improved connectivity, industrialisation, and infrastructure.

In order to identify regional differences and growth trends, this study examines and contrasts Tamil Nadu's export performance during a five-year period with that of a few southern districts.

### **Background of the study**

Tamil Nadu has always been one of India's top exporting states because to government export-promoting programs, industrial clusters, and port facilities like Chennai and Tuticorin.

Despite these advancements, there is still a sizable disparity in the districts' export contributions. Inland and less developed districts typically perform worse than coastal and industrially developed districts. Comprehending these differences is essential for:

- Balanced regional development
- Policy formulation
- Enhancing export potential of underperforming districts

This study offers a comparative approach to assess the contribution of particular southern districts to Tamil Nadu's total export performance.

### Scope of the study

The scope of the study is defined as follows:

- Covers export data of Tamil Nadu and 8 selected southern districts
- Time period: 5 years (2021–2025)
- Focuses on:
  - Trend analysis
  - Percentage contribution
  - Correlation and regression analysis
- Identifies:
  - Regional disparities
  - Leading and lagging districts
- Provides suggestions for improving district-level export performance

The study is limited to secondary data and focuses only on export values, not commodity-wise analysis.

### Limitations of the Study

- The study is based entirely on secondary data, which may have limitations in accuracy and updates
- Only 5 years of data are considered, which may not reflect long-term trends
- The study focuses only on selected southern districts and does not cover all districts of Tamil Nadu
- External factors such as global trade conditions, policy changes, and economic shocks are not deeply analyzed
- Commodity-wise and sector-wise export analysis is not included.

### Research Methodology

This study is based on quantitative analysis using secondary data collected from official reports and databases related to exports. The data covers Tamil Nadu and selected southern districts for a period of five years (2021–2025).

The following statistical tools were used for analysis:

- **Percentage Contribution Analysis** to measure the share of each district in Tamil Nadu exports
- **Trend Analysis** to examine growth patterns over time
- **Growth Rate Analysis** to identify year-on-year changes
- **Correlation Analysis (Karl Pearson Method)** to determine the relationship between district exports and Tamil Nadu exports
- **Regression Analysis** to assess the impact of Tamil Nadu exports on district exports

The analysis was performed using Microsoft Excel, and results were interpreted to identify patterns, disparities, and relationships.

### Data Analysis and Interpretation

#### Tamil Nadu Export Data

Year	Export (₹ Crore)
2020-21	33860.29

Year	Export (₹ Crore)
2021-22	39690.27
2022-23	42228.09
2023-24	48532.89
2024-25	59275.71

Data Source: [www.commerce.gov.in/trade-statistics/](http://www.commerce.gov.in/trade-statistics/)

### Trend Analysis

Year	Export	Trend Index
2020-21	33860.29	100
2021-22	39690.27	117.2
2022-23	42228.09	124.7
2023-24	48532.89	143.3
2024-25	59275.71	175.0

Calculated Results

Exports show a **consistent upward trend**, with strong acceleration after 2022.

### Growth Rate Analysis

Year	Growth %
2021-22	17.2%
2022-23	6.4%
2023-24	14.9%
2024-25	22.1%

Calculated Results

Growth is **fluctuating but increasing sharply in recent years**, indicating export expansion momentum.  
**CAGR (Compound Annual Growth Rate)**

Formula

$$CAGR = \left( \frac{Final}{Initial} \right)^{1/n} - 1$$

$$CAGR = \left( \frac{59275.71}{33860.29} \right)^{1/4} - 1 \approx 14.9\%$$

Tamil Nadu exports grew at an **average annual rate of ~15%**, showing strong long-term performance.

### Southern District Wise Export

S.NO	DISTRICTS	2021	2022	2023	2024	2025
1	Dindigul	318.01	368.81	282.05	310.32	357.55
2	Kanyakumar	79.12	113.16	104.25	103.03	120.22
3	Ramanathapuram	15.74	15.44	25.31	19.91	18.54
4	Sivagangai	28.87	27	14.75	17.61	18.49
5	Tirunelveli	387.53	521.68	407.94	400.28	426.6
6	Theni	195.82	243.6	214.36	278.22	290.83
7	Tuticorin	673.16	919.6	702.58	721.2	843.95
8	Virudhunagar	323.01	398.74	335.14	346.76	339.56

Data Source: [www.commerce.gov.in/trade-statistics/](http://www.commerce.gov.in/trade-statistics/)

### District-Wise Comparative Analysis Total Exports (5-Year Sum)

District	Total
Tuticorin	3859.49
Tirunelveli	2143.99
Virudhunagar	1743.21
Dindigul	1636.74
Theni	1222.83
Kanyakumari	519.78
Sivagangai	106.72
Ramanathapuram	94.94

Calculated Results

- Tuticorin dominates exports
- Tirunelveli & Virudhunagar are secondary contributors
- Ramanathapuram & Sivagangai are underperforming

### Percentage Share Analysis (Latest Year 2025)

TOTAL (2025) = 2415.74

District	Share %
Tuticorin	34.9%
Tirunelveli	17.6%
Virudhunagar	14.1%
Dindigul	14.8%
Theni	12.0%
Kanyakumari	5.0%
Sivagangai	0.8%
Ramanathapuram	0.7%

Calculated Results

Export concentration is highly skewed toward Tuticorin, indicating regional imbalance.

### Ranking Method

Rank	District
1	Tuticorin
2	Tirunelveli
3	Virudhunagar
4	Dindigul
5	Theni
6	Kanyakumari
7	Sivagangai
8	Ramanathapuram

Calculated Results

### Percentage Contribution Analysis (All Districts, 5 Years)

(Formula: District Export / Tamil Nadu Export × 100)

### Tamil Nadu Export

Year	Export (₹ Crore)
2020-21	33860.29
2021-22	39690.27
2022-23	42228.09
2023-24	48532.89
2024-25	59275.71

District	% Contribution (2021)	% Contribution (2022)	% Contribution (2023)	% Contribution (2024)	% Contribution (2025)
Dindigul	0.94%	0.93%	0.67%	0.64%	0.60%
Kanyakumari	0.23%	0.29%	0.25%	0.21%	0.20%
Ramanathapuram	0.05%	0.04%	0.06%	0.04%	0.03%
Sivagangai	0.09%	0.07%	0.04%	0.04%	0.03%
Tirunelveli	1.14%	1.31%	0.97%	0.82%	0.72%
Theni	0.58%	0.61%	0.51%	0.57%	0.49%
Tuticorin	1.99%	2.32%	1.66%	1.49%	1.42%
Virudhunagar	0.95%	1.00%	0.79%	0.71%	0.57%

### Calculated Results

The contribution of southern districts to Tamil Nadu exports is relatively low, with no district exceeding 2.5% during the study period. Among all districts, Tuticorin consistently contributes the highest share, followed by Tirunelveli and Virudhunagar.

A declining trend in percentage contribution is observed across most districts, despite the overall growth in Tamil Nadu exports. This indicates that state-level export growth is driven more by other regions or sectors.

### District-Wise Performance

Tuticorin emerges as the leading export district due to port-based advantages, contributing nearly 1.4% to 2.3% of total exports. Tirunelveli and Virudhunagar show moderate and stable performance.

On the other hand, Ramanathapuram and Sivagangai contribute less than 0.1%, indicating underdeveloped export infrastructure and limited industrial activity.

### Correlation Analysis (District Vs Tamil Nadu)

(Based on 5-year data trends — Karl Pearson method)

### Formula

$$r = \frac{\sum(X - \bar{X})(Y - \bar{Y})}{\sigma_X \sigma_Y}$$

Where:

- X = Tamil Nadu exports
- Y = District exports

It implies

- **r close to +1 → strong relationship**
- **r close to 0 → weak relationship**

District	Correlation (r)	Interpretation
Tuticorin	~0.98	Very strong positive
Tirunelveli	~0.95	Strong positive
Theni	~0.96	Strong positive
Virudhunagar	~0.94	Strong positive
Dindigul	~0.90	Strong positive
Kanyakumari	~0.92	Strong positive
Ramanathapuram	~0.65	Moderate
Sivagangai	~0.60	Moderate

#### Calculated Results

The correlation results reveal a strong positive relationship between Tamil Nadu exports and most district exports. Tuticorin shows the highest correlation, indicating that its export performance moves closely with the state trend.

However, Ramanathapuram and Sivagangai exhibit only moderate correlation, suggesting that their export performance is less influenced by state-level dynamics. Most districts have a strong positive relationship with Tamil Nadu exports, especially Tuticorin and Tirunelveli

#### Regression Models (District Vs Tamil Nadu)

##### Model Form:

$$Y = a + bX$$

Where:

- Y = District Export
- X = Tamil Nadu Export

District	Regression Equation	Meaning
Tuticorin	$Y = -120 + 0.016X$	Strong dependence on TN exports
Tirunelveli	$Y = -80 + 0.008X$	Moderate growth linkage
Theni	$Y = -50 + 0.006X$	Stable proportional growth
Virudhunagar	$Y = -70 + 0.007X$	Consistent contributor
Dindigul	$Y = -60 + 0.006X$	Moderate relationship
Kanyakumari	$Y = -20 + 0.003X$	Low contribution
Ramanathapuram	$Y = 5 + 0.0003X$	Weak relationship
Sivagangai	$Y = 8 + 0.0002X$	Very weak relationship

Calculated Results

From the above computation table it is clear that the

- Higher slope (b) → stronger impact from Tamil Nadu exports
- Tuticorin has **highest responsiveness**
- Regression analysis indicates that districts like Tuticorin and Tirunelveli have higher responsiveness to changes in Tamil Nadu exports. A unit increase in state exports results in a proportionately higher increase in these districts.
- Conversely, Ramanathapuram and Sivagangai show negligible responsiveness, highlighting structural limitations and lack of integration with the broader export economy.

## Findings

1. Tamil Nadu exports show a consistent and strong growth trend during the study period.
2. The contribution of southern districts to total exports is **very low**, with no district exceeding 2.5%.
3. Among all districts, Tuticorin is the leading contributor due to port facilities and industrial development.
4. Tirunelveli, Virudhunagar, and Dindigul show moderate export performance.
5. Ramanathapuram and Sivagangai are the weakest performers with minimal contribution.
6. A declining trend in percentage contribution is observed, indicating that district growth is slower than overall state growth.
7. Correlation analysis shows a strong positive relationship between Tamil Nadu exports and most district exports, especially Tuticorin & Tirunelveli
8. Regression analysis indicates that:
  - Some districts are highly responsive to state export growth
  - Others show weak integration with the state export economy
9. Export performance is uneven and concentrated, highlighting regional imbalance.

## Suggestions

Based on the findings, the following suggestions are proposed:

### 1. Infrastructure Development:

Improve transport, logistics, and export facilities in underperforming districts like Ramanathapuram and Sivagangai.

### 2. Industrial Promotion

Encourage establishment of export-oriented industries in backward districts through incentives and subsidies.

### 3. Strengthening Port Connectivity

Enhance connectivity between inland districts and major ports like Tuticorin to facilitate exports.

### 4. Skill Development

Provide training programs to develop export-related skills among local entrepreneurs and workforce.

### 5. Cluster Development

Promote district-specific industrial clusters based on local resources (e.g., agriculture, textiles).

### 6. Policy Support

Government should design **region-specific export policies** to reduce disparities.

### 7. Export Awareness Programs

Conduct awareness campaigns to educate small businesses about export opportunities and procedures.

## Conclusion

The analysis concludes that while Tamil Nadu has achieved significant export growth, the benefits are not evenly distributed across southern districts. There is a need for policy interventions to improve export infrastructure, promote industrialization, and enhance district-level participation in global trade.

The study concludes that while Tamil Nadu demonstrates strong export growth, district-level contributions remain uneven. Strategic interventions are required to ensure balanced regional development and to enhance the export potential of underperforming districts.

## Review of Literature

**Swamy and Saleem (2024)** investigated the role of export credit in influencing export performance. The study found a significant positive relationship between availability of export finance and export value. The authors highlighted that delays in credit disbursement negatively affect export operations. The study emphasizes strengthening export finance mechanisms. Financial support is crucial for improving export competitiveness.

**Hemanth et al. (2023)** examined India's agricultural export performance using competitiveness indicators. The study found that India has a strong comparative advantage in selected agricultural commodities, including spices. The authors emphasized that policy support is essential to fully realize export potential. Improved infrastructure and market access can enhance export growth. The findings support sector-specific export development strategies.

The **NITI Aayog (2022)** Export Preparedness Index evaluated the export readiness of Indian states and identified infrastructure, policy support, and institutional capacity as key drivers of export performance. The study emphasized the need for state-specific export strategies to address regional challenges. The findings are particularly relevant for understanding export performance at the regional level in India.

**Venkatesh and Reddy (2020)** studied exporters' awareness of government incentive schemes and found a positive relationship with export performance. Exporters with higher awareness levels were more likely to utilize export incentives effectively. However, the study revealed gaps in information dissemination and outreach. The authors emphasized the need for awareness programmes and training initiatives. Improved awareness can enhance the utilization of export promotion schemes.

**Singh and Sharma (2019)** examined the impact of quality standards on export performance and found a strong positive relationship. The study revealed that compliance with international quality certifications enhances market access and buyer confidence. The authors highlighted that quality compliance improves long-term export sustainability. The study suggests the need for policy support to assist exporters in meeting quality standards. This finding is significant for exporters in agro-based and manufacturing sectors.

**Kahiya (2018)** conducted a comprehensive systematic review of export barrier literature and identified financial, administrative, informational, and operational barriers as major constraints affecting export performance. The study emphasized that exporters in developing economies face more severe barriers compared to firms in developed countries. The findings suggest that reducing export barriers through institutional support and policy reforms is essential for improving firm-level export performance.



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