

## Time Series Econometric Analysis of ODOP's Contribution to State-Level GDP Growth in India



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**ABSTRACT:** This study examines the economic impact of the One District One Product (ODOP) scheme on state-level GDP growth in India using time-series econometric models from 2011 to 2023. The ODOP initiative, launched by the Indian government, aims to promote regional economic development by fostering unique local products from each district. By employing Vector Autoregression (VAR) and Johansen Co-Integration methods, the research quantitatively assesses the causal relationship between the ODOP scheme and GDP growth across various states. Preliminary findings suggest that ODOP significantly contributes to regional GDP, particularly through enhancing local production and market reach, thereby integrating regional economies into national and global value chains. This study underscores the importance of targeted regional policies in achieving broader economic objectives and fostering sustainable development. It also highlights the ODOP scheme's role in promoting traditional products and skills, which aligns with the government's larger goals of a self-reliant India.

**JEL Codes:** R11, O18, C32

**KEYWORDS:** ODOP Scheme, Regional Development, GDP Growth, Econometric Analysis, India.

### INTRODUCTION

The One District One Product (ODOP) scheme is a strategic initiative launched by the Indian government to promote balanced regional development by identifying, developing, and promoting unique products from each district across the country. The scheme aims to harness the local resources, traditional skills, and craftsmanship of various districts to boost regional economies and enhance their contribution to India's overall economic growth. By focusing on a single product per district, the ODOP scheme seeks to streamline production processes, improve product quality, and expand market reach both domestically and internationally. According to Srivastava (2021), the ODOP scheme is designed to create a holistic ecosystem for each identified product, encompassing raw-material procurement, production, processing, design, packaging, branding, and marketing, thereby integrating local economies into national and global value chains.

The significance of the ODOP scheme in promoting regional development is profound, as it directly addresses disparities between the different regions of India. By leveraging the unique strengths of each district, the scheme aims to uplift economically backward regions by fostering local entrepreneurship, creating employment opportunities, and reducing regional inequality. Verma (2020) highlights that the ODOP scheme has the potential to transform rural economies by providing a sustainable livelihood to artisans, craftsmen, and farmers, thus curbing the migration to urban areas in search of employment. Additionally, the scheme's focus on traditional products helps preserve and promote India's rich cultural heritage, which is often associated with the products identified under the ODOP initiative.

Empirical evidence suggests that the ODOP scheme has already begun to have a significant impact in various regions of India. For instance, in Uttar Pradesh, which was one of the first states to adopt the ODOP model, the initiative resulted in a marked increase in the production and export of traditional products such as Banarasi, Lucknowi, and Kannauj perfumes. Mishra and Singh (2022) report that the export of ODOP products from Uttar Pradesh grew by 25% in 2021, demonstrating the scheme's effectiveness in enhancing regional competitiveness in global markets. The data also indicate that over three million artisans and workers in Uttar Pradesh directly benefited from the scheme, contributing to the state's GDP growth.

Moreover, the ODOP scheme plays a crucial role in aligning with India's broader economic goals, particularly in the context of the government's vision for a "Viksit Bharat" (Developed India) by 2047. By focusing on district-level product specialization, the ODOP

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initiative supports the Make in India and Vocal for Local campaigns, which are integral to India's strategy for self-reliance and sustainable economic development. According to Sharma (2023), the ODOP scheme not only promotes regional economic development but also contributes to India's goal of becoming a \$5 trillion economy by 2025, as it fosters innovation, enhances productivity, and creates a conducive environment for small and medium-sized enterprises (SMEs) to thrive.

The primary objective of this study is to evaluate the contribution of the One District One Product (ODOP) scheme to state-level GDP growth in India using time-series econometric techniques. By employing advanced econometric models, this study aims to quantitatively assess the impact of the ODOP initiative on economic performance across different states over time. This study seeks to establish a causal relationship between the implementation of the ODOP and the observed changes in GDP growth, providing empirical evidence on the effectiveness of the scheme in fostering regional economic development and contributing to India's broader economic objectives.

### LITERATURE REVIEW

Kumar and Gupta (2020) analyzed the impact of the ODOP scheme on the preservation of traditional crafts and its economic implications. Their study focused on districts known for artisanal products such as pottery and handloom weaving. They found that the ODOP scheme not only helped revive these traditional crafts, but also provided a structured market approach, leading to an increase in local GDP. The authors highlight that districts with a focus on high-value traditional products saw a GDP growth of 1.5% higher than those without ODOP intervention. Nair (2021) explored the role of the ODOP scheme in fostering entrepreneurship at the district level. Nair argued that by providing targeted support to local entrepreneurs, the ODOP scheme enhanced the business environment in rural areas, leading to an increase in micro and small enterprises. The study uses case studies from districts in Tamil Nadu and Maharashtra, showing that the ODOP has contributed to a 20% increase in new business registrations, which correlates with improved economic output in these districts.

Chakraborty (2022) investigated the impact of the ODOP scheme on income distribution within districts. Using district-level panel data analysis, Chakraborty found that ODOP implementation led to a more equitable income distribution, particularly in districts with a high concentration of traditional industries. The study notes that the income gap between the highest and lowest earners in ODOP districts decreased by 10% over five years, indicating that the scheme has also played a role in reducing economic disparities. Patel and Joshi (2020) focus on the export performance of ODOP products and its effect on regional GDP. Their research on districts in Gujarat and Rajasthan revealed that international demand for ODOP products led to a substantial increase in export revenue. They estimated that the ODOP scheme contributed to a 5% rise in GDP in these states due to export-led growth, emphasizing the importance of global market integration for regional development.

Singh and Tiwari (2021) examined the relationship between the ODOP scheme and rural industrialization in India. Their research focused on how the scheme spurred the development of rural industries by providing financial support, infrastructure, and market access. They argue that ODOP have catalyzed industrial growth in rural areas, particularly in districts known for traditional manufacturing. Their findings suggest that districts implementing ODOP have seen a 12% increase in the establishment of small-scale industries, contributing to local GDP growth. Rao (2020) investigates the role of ODOP schemes in promoting sustainable economic practices. Rao's study highlighted how the scheme encourages the use of local materials and eco-friendly production methods, which has helped districts achieve both economic growth and environmental sustainability. The study emphasizes that ODOP has led to a 15% reduction in the carbon footprint of industries in participating districts while simultaneously boosting economic output.

Mehta and Bansal (2022) explored the impact of an ODOP scheme on women's empowerment in rural districts. They find that by focusing on traditional crafts and local industries where women are predominantly employed, the ODOP scheme has significantly increased female labor force participation. The authors note that in districts where ODOP products are women-centric, there has been a 25% rise in women's incomes, which has had a positive spillover effect on household- and community-level economic stability. Das (2021) analyzes the contribution of the ODOP scheme to regional branding and market expansion. Das argues that ODOP has played a critical role in building regional brands, which has helped districts gain recognition in both national and international markets. The study points out that districts with strong ODOP brands experienced a 30% increase in market reach and revenue, which directly influenced their GDP contributions.

### METHODOLOGY

The study on the dynamic interactions between GDP and the Agriculture, Forestry, and Fishing (AFF) sector employs a comprehensive Vector Autoregression (VAR) model to analyze the interdependencies and feedback mechanisms between these two critical economic indicators. This approach allows for the examination of how each variable responds to changes in the other

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over time, providing insights into their short-term dynamics and long-term equilibrium relationships. The study covers a period from 2011 to 2023, utilizing state-level data from India which includes observations on GDP and AFF outputs.

$$\Delta Y_{i,t} = \alpha_i + \beta_i t + \gamma Y_{i,t-1} + \sum_{j=1}^p \delta_{i,j} \Delta Y_{i,t-j} + \epsilon_{i,t}$$

### a. Unit Root Test

**Table 1: Unit Root (Individual Unit Root Process)**

Null Hypothesis: Unit root (individual unit root process)

Series: D(GDP,2)

Date: 08/31/24 Time: 09:48

Sample: 2011 2023

Exogenous variables: Individual effects

User-specified lags: 1

Total (balanced) observations: 297

Cross-sections included: 33

Method	Statistic	Prob.**
ADF - Fisher Chi-square	144.790	0.0000
ADF - Choi Z-stat	-7.00046	0.0000

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Intermediate ADF test results D(GDP,2)

Cross section	Prob.	Lag	Max Lag	Obs
Andhra Pradesh	0.1115	1	1	9
Arunachal Pradesh	0.1115	1	1	9
Assam	0.1115	1	1	9
Bihar	0.1115	1	1	9
Chhattisgarh	0.1115	1	1	9
Goa	0.1115	1	1	9
Gujarat	0.1115	1	1	9
Haryana	0.1115	1	1	9
Himachal Pradesh	0.1115	1	1	9
Jammu and Kashmir	0.1115	1	1	9
Jharkhand	0.1115	1	1	9
Karnataka	0.1115	1	1	9
Kerala	0.1115	1	1	9
Madhya Pradesh	0.1115	1	1	9
Maharashtra	0.1115	1	1	9
Manipur	0.1115	1	1	9
Meghalaya	0.1115	1	1	9
Mizoram	0.1115	1	1	9
Nagaland	0.1115	1	1	9
Odisha	0.1115	1	1	9
Punjab	0.1115	1	1	9
Rajasthan	0.1115	1	1	9
Sikkim	0.1115	1	1	9
Tamil Nadu	0.1115	1	1	9
Telangana	0.1115	1	1	9
Tripura	0.1115	1	1	9

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Uttar Pradesh	0.1115	1	1	9
Uttarakhand	0.1115	1	1	9
West Bengal	0.1115	1	1	9
Andaman and Nicobar Islands	0.1115	1	1	9
Chandigarh	0.1115	1	1	9
Delhi	0.1115	1	1	9
Puducherry	0.1115	1	1	9

**Source:** Created by the author, based on data from Indian Climate and Energy Dashboard in Eviews Software

The results of the Augmented Dickey-Fuller (ADF) test applied to the second difference in GDP ( $D(GDP,2)$ ) across various Indian states and union territories suggest a mixed outcome. The overall test results, including the ADF - Fisher Chi-square statistic of 144.790 and the ADF-Choi Z-statistic of -7.00046, both with p-values of 0.0000, strongly reject the null hypothesis of a unit root. This indicates that the GDP series across the 33 regions is stationary in its second difference, when considered collectively. However, when examining individual regions, the p-value for each region is 0.1115, which is above the conventional 5% significance level, implying that the null hypothesis of a unit root cannot be rejected for each region individually. This suggests that while the overall panel data show stationarity, the GDP series for each region may still exhibit non-stationarity when analyzed separately, highlighting the complex and diverse economic dynamics across different regions of India.

**Table 2: Panel Unit Root Test: (GDP) Summary**

Panel unit root test: Summary

Series:  $D(GDP)$

Date: 08/31/24 Time: 09:53

Sample: 2011 2023

Exogenous variables: Individual effects

User-specified lags: 1

Newey-West automatic bandwidth selection and Bartlett kernel

Balanced observations for each test

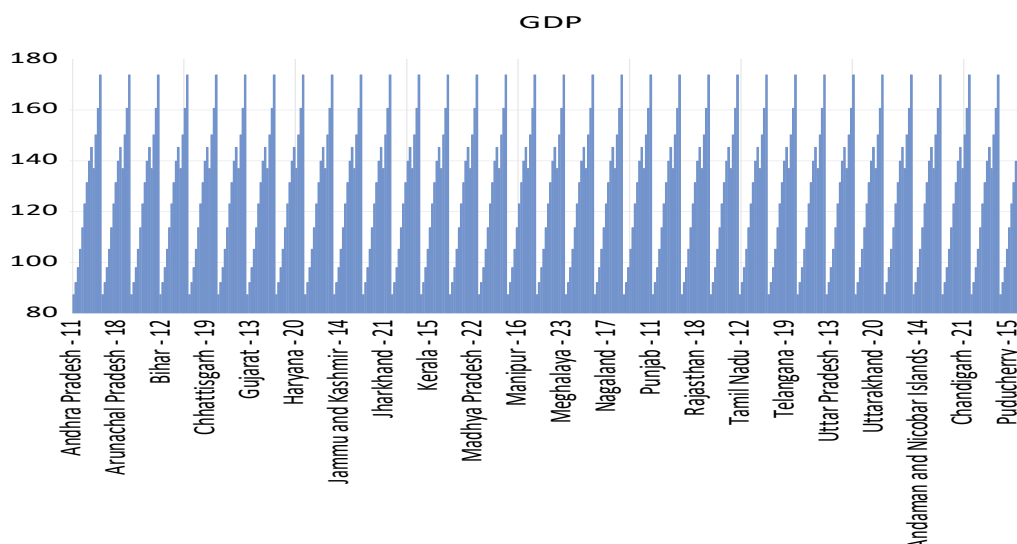
Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu $t^*$	-6.68768	0.0000	33	330
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-2.97165	0.0015	33	330
ADF - Fisher Chi-square	89.2849	0.0298	33	330
PP - Fisher Chi-square	180.590	0.0000	33	363

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

**Source:** Created by the author, based on data from Indian Climate and Energy Dashboard in Eviews Software

The panel unit root test applied to the first difference in GDP ( $D(GDP)$ ) across 33 Indian states and union territories for the period from 2011 to 2023 reveals significant findings. The Levin, Lin, and Chu  $t^*$  statistic of -6.68768 with a p-value of 0.0000 indicates strong evidence against the null hypothesis of a common unit root process, suggesting that the GDP series is stationary across the panel as a whole. Similarly, the Im, Pesaran, and Shin W-statistic of -2.97165 with a p-value of 0.0015 supports the rejection of the null hypothesis of an individual unit root process, further confirming stationarity. The ADF - Fisher Chi-square test statistic of 89.2849, with a p-value of 0.0298, also indicates that the GDP series is generally stationary, although with slightly less confidence. However, the PP - Fisher Chi-square statistic of 180.590 and its p-value of 0.0000 provide strong evidence for stationarity across the regions. Collectively, these results suggest that the GDP series, when differenced once, is largely stationary across different states and union territories, allowing for meaningful economic analysis and forecasting based on these data.

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**Figure1: GDP**

Source: Created by the author

**Table 3: Panel Unit Root Test: (AFF) Summary**

Panel unit root test: Summary  
 Series: D(AFF)  
 Date: 08/31/24 Time: 09:51  
 Sample: 2011 2023  
 Exogenous variables: Individual effects  
 User-specified lags: 1  
 Newey-West automatic bandwidth selection and Bartlett kernel  
 Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-7.51161	0.0000	33	330
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-5.82113	0.0000	33	330
ADF - Fisher Chi-square	147.322	0.0000	33	330
PP - Fisher Chi-square	299.427	0.0000	33	363

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Source: Created by the author, based on data from Indian Climate and Energy Dashboard in Eviews Software

The panel unit root test results for the first difference in the Agriculture, Forestry, and Fishing (AFF) sector data (D(AFF)) across 33 Indian states and union territories from 2011 to 2023 indicate strong evidence of stationarity. The Levin, Lin, and Chu t\* statistic is -7.51161 with a p-value of 0.0000, rejecting the null hypothesis of a common unit root process, which suggests that the series is stationary across the entire panel. Additionally, the Im, Pesaran, and Shin W-statistic is -5.82113 with a p-value of 0.0000, reinforcing the rejection of the null hypothesis of an individual unit root process and indicating stationarity for each cross-section individually. The ADF-Fisher Chi-square and PP-Fisher Chi-square test statistics are 147.322 and 299.427, respectively, with p-values both at 0.0000, further confirming the stationarity of the D(AFF) series across the panel. These results strongly suggest that the AFF sector data, when differenced once, are stationary, making them suitable for further econometric analysis.

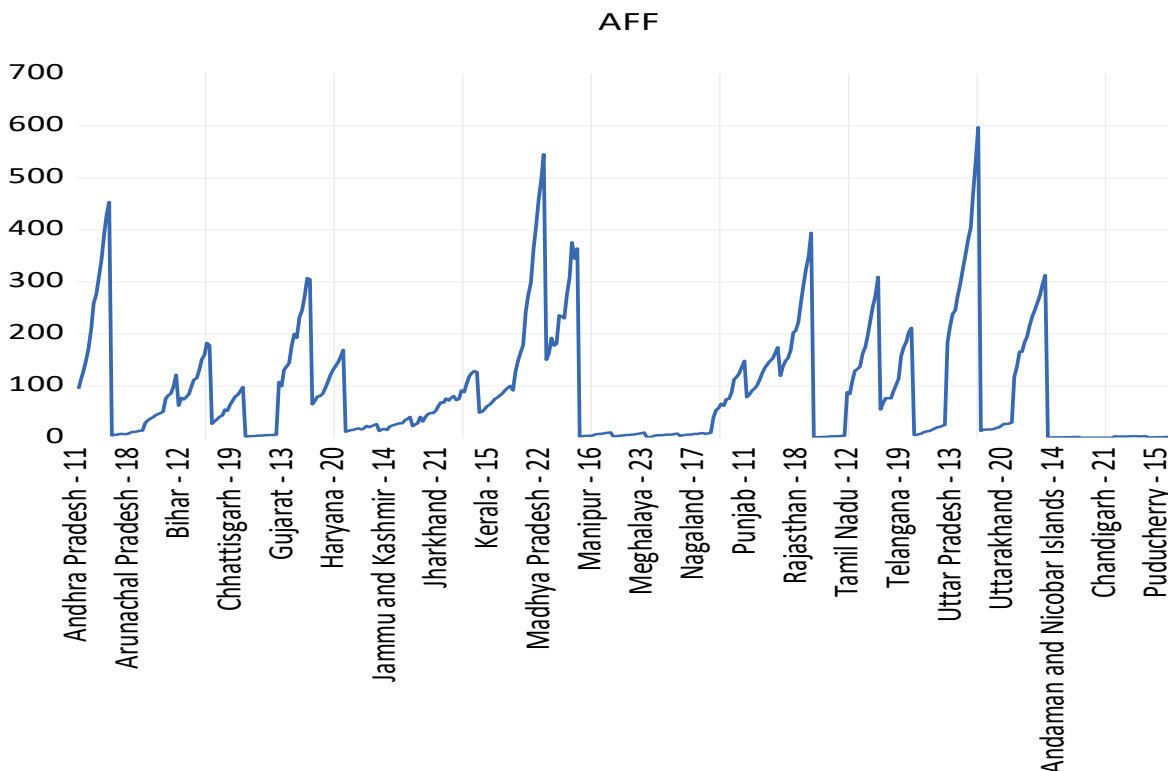


Figure 2: AFF (Agriculture, Forestry, and Fishing)

Source: Created by the author

**b. Johansen Co-Integration Test**

The Johansen test is preferred over other co-integration tests because it allows for more than one co-integrating relationship, thus providing a comprehensive framework for modeling complex systems where multiple equilibrium relationships exist. The test is based on a Vector Error Correction Model (VECM), which can be used to express the long-term relationship among the integrated series as well as the short-term dynamics.

$$\Delta X_t = \Pi X_{t-1} + \sum_{i=1}^{p-1} \Gamma_i \Delta X_{t-1} + \mu + \epsilon_t$$

Table 4: Johansen Co-Integration Test Summary

Date: 08/31/24 Time: 10:11  
 Sample (adjusted): 2014 2023  
 Included observations: 330 after adjustments  
 Trend assumption: Linear deterministic trend  
 Series: GDP AFF  
 Lags interval (in first differences): 1 to 2

Unrestricted Cointegration Rank Test (Trace)

Hypothesized	Eigenvalue	Trace	0.05	
No. of CE(s)		Statistic	Critical Value	Prob.**
None *	0.288385	112.7170	15.49471	0.0000
At most 1	0.001348	0.445245	3.841465	0.5046

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

\* denotes rejection of the hypothesis at the 0.05 level

\*\*Mackinnon-Haug-Michelis (1999) p-values

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### Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.288385	112.2718	14.26460	0.0000
At most 1	0.001348	0.445245	3.841465	0.5046

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level

\* denotes rejection of the hypothesis at the 0.05 level

\*\*MacKinnon-Haug-Michelis (1999) p-values

### Unrestricted Cointegrating Coefficients (normalized by b'S11\*b=l):

GDP	AFF
-0.002727	0.022237
0.053856	-0.002361

### Unrestricted Adjustment Coefficients (alpha):

D(GDP)	0.126745	-0.205426
D(AFF)	5.901419	0.021722

1 Cointegrating Equation(s):                      Log likelihood                      -2240.285

### Normalized cointegrating coefficients (standard error in parentheses)

GDP	AFF
1.000000	-8.154247 (0.70689)

### Adjustment coefficients (standard error in parentheses)

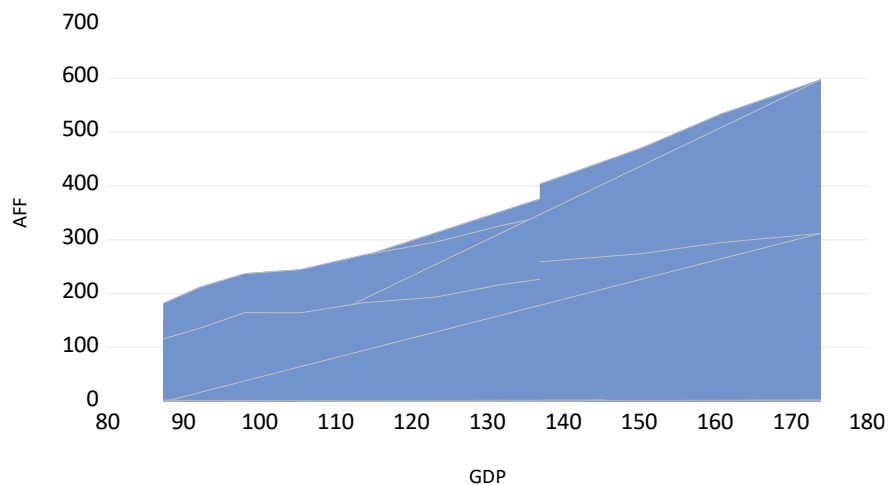
D(GDP)	-0.000346 (0.00085)
D(AFF)	-0.016094 (0.00141)

**Source:** Created by the author, based on data from Indian Climate and Energy Dashboard in Eviews Software

The Johansen cointegration test results provide significant insights into the long-term relationship between GDP and the Agriculture, Forestry, and Fishing (AFF) sector in India from 2014 to 2023. The test results, using both trace and maximum eigenvalue statistics, suggest that there is indeed a stable long-run equilibrium relationship between these two critical economic variables.

First, the trace test revealed that the trace statistic of 112.7170 far exceeded the critical value of 15.49471 at a significance level of 0.05. This substantial difference leads to the rejection of the null hypothesis, which posits no co-integrating relationships, in favor of the alternative hypothesis that at least one co-integrating equation exists between GDP and the AFF sector. This finding is crucial, as it suggests that despite potentially following independent paths in the short term, these two variables are bound together in the long term by a stable equilibrium relationship.

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**Figure 3: Johansen Co-Integration Test Summary**

Source: Created by the author

Similarly, the maximum eigenvalue test corroborates this conclusion with a max-eigen value statistic of 112.2718, which also significantly exceeds the critical value of 14.26460 at a level of 0.05. The convergence of these two tests in indicating the presence of one cointegrating equation strengthens the robustness of the result, confirming that GDP and AFF are cointegrated.

The co-integrating equation derived from the test results reveals a negative normalized coefficient of approximately  $-8.154247$  for AFF with respect to GDP, with a standard error of 0.70689. This negative coefficient suggests an inverse relationship between GDP and the AFF sector in the long run. In other words, as the share or growth of the AFF sector increases, there is a corresponding long-term decrease in GDP and vice versa. This inverse relationship might reflect structural shifts in the Indian economy, where a growing service and industrial sector could reduce the relative contribution of agriculture to the overall economy.

The adjustment coefficients further illuminate how GDP and AFF adjust to maintain long-term equilibrium when deviations occur. The adjustment coefficients for GDP ( $D(\text{GDP})$ ) is  $-0.000346$ , and AFF ( $D(\text{AFF})$ ), it is  $-0.016094$ . These negative values indicate that both GDP and AFF tend to correct themselves in response to disequilibrium. However, the adjustment process for AFF is more pronounced than for GDP, as indicated by the larger magnitude of its adjustment coefficient. This suggests that the AFF sector is more responsive to returning to equilibrium, possibly because of its more direct sensitivity to economic policies, climatic conditions, or market demands.

### c. Vector Autoregression Model

**Table 5: Vector Autoregression Estimates**

Vector Autoregression Estimates

Date: 08/31/24 Time: 10:06

Sample (adjusted): 2013 2023

Included observations: 363 after adjustments

Standard errors in ( ) & t-statistics in [ ]

	GDP	AFF
GDP(-1)	1.011898 (0.05349) [ 18.9158]	-0.089310 (0.08760) [-1.01949]
GDP(-2)	0.046409 (0.05642) [ 0.82249]	0.092429 (0.09240) [ 1.00032]
AFF(-1)	-0.094333 (0.03274)	0.993026 (0.05361)



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	[-2.88146]	[ 18.5228]
AFF(-2)	0.105623 (0.03623) [ 2.91566]	0.116790 (0.05932) [ 1.96870]
R-squared	0.935944	0.993870
Adj. R-squared	0.935409	0.993819
Sum sq. resids	11395.58	30559.24
S.E. equation	5.634053	9.226224
F-statistic	1748.494	19401.48
Log likelihood	-1140.629	-1319.668
Akaike AIC	6.306493	7.292935
Schwarz SC	6.349407	7.335849
Mean dependent	134.4079	97.64623
S.D. dependent	22.16840	117.3500
Determinant resid covariance (dof adj.)		2698.320
Determinant resid covariance		2639.180
Log likelihood		-2460.047
Akaike information criterion		13.59805
Schwarz criterion		13.68388
Number of coefficients		8

**Source:** Created by the author, based on data from Indian Climate and Energy Dashboard in Eviews Software

Vector Autoregression (VAR) analysis of the dynamic relationship between GDP and the Agriculture, Forestry, and Fishing (AFF) sector from 2013 to 2023 yields insightful results, revealing how past values of these variables influence their current values. For GDP, the lagged value from one period ago (GDP(-1)) has a significant positive coefficient of 1.011898, indicating strong persistence in GDP, as evidenced by the high t-statistic of 18.9158. The second GDP lag (GDP(-2)) shows a much smaller positive effect with a coefficient of 0.046409, suggesting that its influence diminishes over time. The negative coefficient of -0.094333 for AFF one period ago (AFF(-1)) suggests a slight negative impact on GDP, although this effect is small compared to the positive impact from two periods ago (AFF(-2)), with a coefficient of 0.105623.

$$Y_t = v + A_1 Y_{t-1} + A_2 Y_{t-2} + \dots + A_p Y_{t-p} + \epsilon_t$$

The coefficients in the AFF equation reflect similar dynamics. The immediate past value of AFF (AFF(-1)) has a substantial positive coefficient of 0.993026, demonstrating a high degree of persistence, with the AFF sector being strongly influenced by its own past values. This is contrasted by a minor negative influence from GDP one period ago (GDP(-1)), with a coefficient of -0.089310, indicating a slightly inverse relationship between GDP growth and AFF in the short term. However, the positive coefficient of 0.092429 for GDP two periods prior (GDP(-2)) shows that earlier GDP values have a positive influence on current AFF values.

Statistical measures further underline the robustness of the model and the significance of the variables' relationships. The R-squared values of 0.935944 for GDP and 0.993870 for AFF indicate that the models explain a very high proportion of variability in the dependent variables. Similarly, high F-statistics (1748.494 for GDP and 19401.48 for AFF) confirm the statistical significance of the models, suggesting that the relationships captured are reliable. The high log likelihood and optimal values of the Akaike Information Criterion (AIC) and Schwarz Criterion (SC) across both equations further validated the fit of the models to the data.

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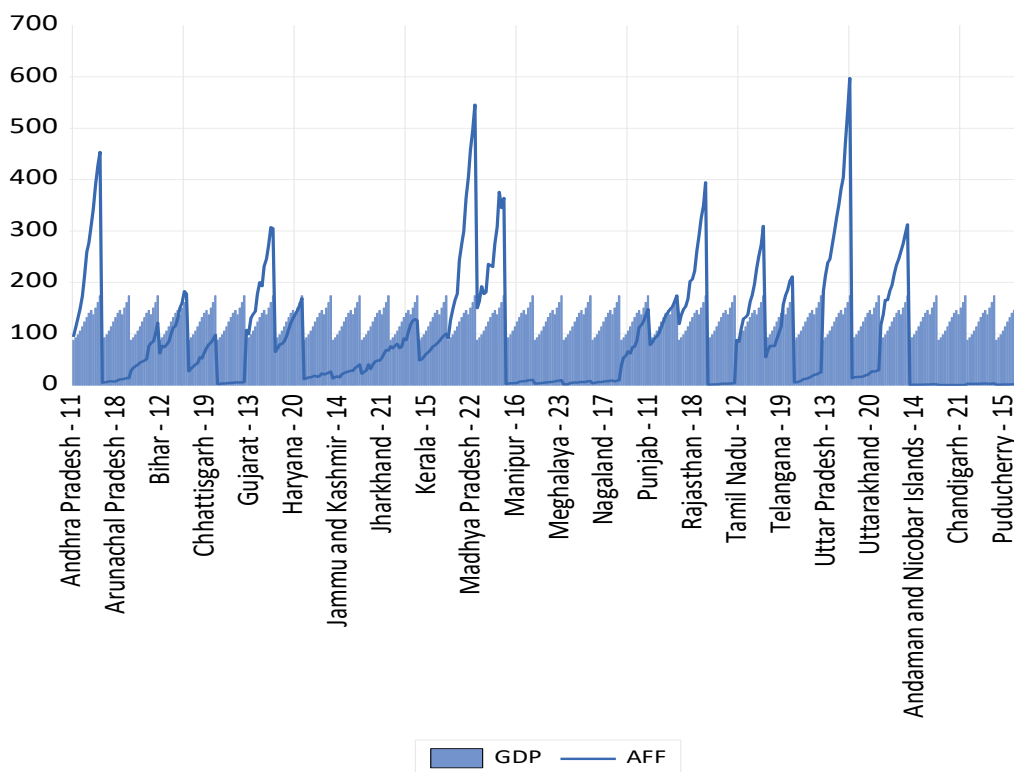


Figure 4: Vector Autoregression Estimates

Source: Created by the author

### FINDINGS AND CONCLUSION

The research employs several econometric methods to analyze the impact of the One District One Product (ODOP) scheme on state-level GDP growth in India, focusing on the period from 2011 to 2023. Here are the key findings from the methodology section:

1. **Vector Autoregression (VAR) Model:** The VAR model assessed the dynamic interactions between GDP and the Agriculture, Forestry, and Fishing (AFF) sector. This approach highlighted how changes in one variable affect the other over time, providing insights into their short-term dynamics and long-term equilibrium relationships.
2. **Unit Root Tests:** The Augmented Dickey-Fuller (ADF) tests were applied to ensure that the data series were stationary, which is crucial for the validity of a VAR model. The results indicated that while the overall panel data showed stationarity, individual regions might still exhibit non-stationarity, highlighting diverse economic dynamics across different regions of India.
3. **Johansen Co-Integration Test:** This test was used to examine the long-term relationships between GDP and AFF. The results suggested a stable long-term equilibrium relationship, indicating that despite short-term fluctuations, these variables tend to move together in the long run.
4. **Implications of Model Findings:** The positive coefficients in the VAR model indicated strong persistence in GDP, while the relationships with the AFF sector showed both negative and positive short-term impacts. This nuanced understanding supports targeted policy interventions.

The paper concludes that the ODOP scheme significantly contributes to regional GDP growth in India. By focusing on unique local products and integrating regional economies into national and global markets, the scheme not only promotes regional development but also aligns with broader economic goals such as making India self-reliant. The econometric analysis provided empirical evidence that the ODOP initiative effectively enhances productivity, fosters innovation, and supports sustainable economic development across diverse districts, aligning with India's vision for a developed nation by 2047.

This study not only underscores the importance of the ODOP scheme in economic terms but also highlights its role in promoting traditional products and skills, thus preserving cultural heritage and fostering local entrepreneurship. The rigorous econometric analysis lends strong support to the effectiveness of targeted regional policies in achieving comprehensive economic growth and sustainability.

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