# ECONOMIC PROGRESS IN ANDHRA PRADESH POST-BIFURCATION: A SECTOR-WISE ANALYTICAL STUDY

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*Abstract*
*The study investigates the economic trajectory of Andhra Pradesh in the decade following its bifurcation in 2014, emphasizing sector-wise performance across agriculture, industry, and services. Utilizing secondary data from 2014–15 to 2024–25, the research assesses the state's Gross State Domestic Product (GSDP) growth and the contributions of various sub-sectors. The study adopts a quantitative approach, analyzing secondary data sourced from official economic surveys and reports spanning 2014–15 to 2024–25. It focuses on three primary sectors: agriculture, industry, and services, further dissecting each into relevant sub-sectors such as horticulture, livestock, manufacturing, construction, and various service domains. Statistical tools, including Compound Annual Growth Rate (CAGR) calculations, correlation analyses using Karl Pearson's method, and linear regression models, are employed to evaluate growth patterns and inter-sectoral relationships. This methodological framework facilitates a comprehensive understanding of the state's economic development post-bifurcation, identifying key growth drivers and areas requiring policy intervention.*

*Key words: CAGR, Correlation, GSDP, GVA, Regression.*

## 1. Introduction

The bifurcation of Andhra Pradesh to create the new state of Telangana was carried out under Article 3 of the Indian Constitution, which empowers the Parliament to form new states. As per the constitutional procedure, the Andhra Pradesh Reorganization Bill was introduced following the President's recommendation and was referred to the state legislature for its views. Despite being rejected by the Andhra Pradesh Legislative Assembly and Council on January 30, 2014—primarily due to opposition from the Seemandhra region—the Bill was passed by both Houses of Parliament and received Presidential assent. Consequently, Telangana officially became the 29th state of India on June 2, 2014 (Pramana Research Journal, 2019).

Andhra Pradesh Reorganization Act, 2014 laid down provisions such as a common capital in Hyderabad for ten years, shared governance under a single Governor, declaration of the Polavaram Project as a national project, and continuation of the Tungabhadra Board's role in water regulation. Additionally, the then Prime Minister Dr. Manmohan Singh proposed a six-point development package for Andhra Pradesh in Parliament, including a promise of Special Category Status (SCS). However, SCS was not explicitly included in the Act.

Post-bifurcation, Andhra Pradesh faced multiple challenges. Many key assurances under the Reorganization Act remained unfulfilled, such as establishing a major port at Dugarajapatnam, a steel plant in Rayalaseema, the Visakhapatnam-Chennai industrial corridor, a new railway zone in Visakhapatnam, and metro rail in Vizag. Delays in financial support for the Polavaram Project and in resolving the revenue deficit added to the state's woes. Resource allocation—especially river waters and institutional assets—led to disputes between Andhra Pradesh and Telangana. Several institutions, including universities and public corporations, remain partially divided or are under legal adjudication

due to ambiguities in the Act. Furthermore, Andhra Pradesh's struggle to build a new capital at Amaravati, after losing Hyderabad—a well-developed city—highlights the state's financial and infrastructural constraints.

Despite the promise of SCS made in Parliament, successive central governments have been reluctant to implement it, citing technicalities such as its omission from the Act and lack of consensus from other states like Tamil Nadu and Telangana (Pramana Research Journal, 2019). The study by Kasina Naga Surya Narayana critically examined the state's financial trends using secondary data from the Socio Economic Surveys (2004–05 to 2022–23). It highlights significant growth in GSDP from ₹1.34 lakh crore to ₹13.17 lakh crore post-bifurcation. The agricultural sector emerged as a key growth driver, although its increasing share in GSDP raises concerns about structural imbalances. The industrial sector showed marginal improvement, but its growth remained weak. The service sector's declining contribution signals a potential economic concern, given its usual dominance in developing economies. The study also acknowledges the disruptive impacts of demonetization and the COVID-19 pandemic on financial performance.

## 2. Review of Literature

An attempt is made to review the existing literature with special reference to the economy of the Andhra Pradesh state both before and after bifurcation to analyze the economic scenario in the state.Reddy, V., & Reddy, P. P. et al. (2004) examined shrimp farming growth in Andhra Pradesh, supported by state incentives. Despite profitability, the sector faced viral outbreaks and ecological damage. The study called for sustainable and planned development to benefit small farmers. Dabla et al. (2004) noted Andhra Pradesh's push for IT, education, and e-governance to spur development. These efforts enhanced services and job opportunities but offered limited benefits to marginalized groups. The study recommended inclusive IT policies. Gopinath Reddy M. & Anil Kumar K. et al. (2010) highlighted the persistent marginalization of Scheduled Tribes in Andhra Pradesh. Despite welfare schemes, weak implementation, corruption, and insecure land rights kept tribals excluded. The Forest Rights Act failed to deliver meaningful inclusion.

Amarender Reddy A. et al. (2011) observed slow agricultural growth and regional disparities in Andhra Pradesh. Telangana showed progress, while Rayalaseema stagnated. Livestock farming near urban centers saw gains. The study urged policy reforms to reduce costs and improve rural development. Lal et al. (2011) investigated diseases in tribal regions of Andhra Pradesh, finding high incidence of fever, malaria, and diarrhea. Healthcare access was limited, leading to high expenses. The study proposed improved health infrastructure and free immunizations. Taylor (2011) analyzed the 2010 microfinance crisis in Andhra Pradesh, linking it to agrarian distress. Loans were often used for consumption, worsening debt. The study criticized microfinance as a poverty solution and stressed the need to address structural agrarian issues.

Rao (2013) explores the socio-economic and emotional significance of Hyderabad for the people of the undivided Andhra Pradesh. The article highlights how Hyderabad served not just as an administrative capital but also as a major hub for employment, education, entrepreneurship, and public revenue. Rao argues that given Hyderabad's central role in the state's development, its allocation and future governance should be handled with fairness and sensitivity during the bifurcation process. He cautions that any imbalance in the treatment of different regions—particularly Seemandhra—could result in deep-rooted regional dissatisfaction and hinder inclusive growth.

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Samarpitha, Vasudev, & Suhasini (2016) studied rice farmers in Andhra Pradesh. Most were smallholders with irrigation and credit access but low organizational involvement. The study recommended diversification, financial awareness, and use of digital tools for outreach. Kavita et al. (2016) examined tribal communities in Srikakulam, highlighting negative effects of structural reforms and the New Economic Policy. Displacement, environmental harm, and marginalization worsened. The study emphasized culturally sensitive, people-centered development.

Stephen Meka et al. (2019) applied the UN SDGs to North Coastal Andhra Pradesh, identifying regional gaps and opportunities. The study stressed localizing global goals through customized policies to achieve rural sustainability. Giribabu M. et al. (2019) assessed agriculture in Andhra Pradesh, noting low productivity, rising costs, and regional imbalances. Despite challenges, gains in paddy and sugarcane were seen. The study called for tech investment and stronger policy delivery.

Podile et al. (2019) evaluated the Amaravati Land Pooling Scheme, which promoted voluntary land sharing with minimal displacement. Landowners experienced income growth, increased savings, and investment. The model demonstrated inclusive urban development. Narayana Rao et al. (2019) assessed tribal conditions in Kurnool, showing improvement in economic and social status through welfare programs. The study affirmed the programs' positive impact using statistical evidence.

Nazeeruddin M. et al. (2020) examined industrial employment trends in Andhra Pradesh. Job losses followed large industry closures, though small-scale industries and new investments like Kia Motors supported rural employment. The study stressed balanced industrial planning. Kumar & Reddy et al. (2021) analyzed continued exclusion of tribal groups in Andhra Pradesh. Corruption, land alienation, and weak access to services persisted despite legal protections. The study urged decentralized planning and awareness for tribal upliftment. Petrikova et al. (2022) investigated the impact of inequality on social capital in Andhra Pradesh. As village-level inequality rose, communal participation declined while group-based bonding increased. The study linked inequality to social fragmentation.

Adari A., Surisetti R. B. et al. (2025) studied dairy farming in Anakapalli. Land ownership and herd size drove profits, but gender disparities in credit access and land persisted. Family labor boosted productivity but hindered child education. The study recommended gender-inclusive policies and cooperatives. Surekha N., Kumari R. S. et al. (2025) explored entrepreneurship in Chittoor. Entrepreneurship drove job creation and urbanization, especially in electronics. However, rural areas faced capital and infrastructure deficits. The study called for targeted support to strengthen regional development.

The reviewed literature highlights Andhra Pradesh's evolving economic landscape pre- and post-bifurcation, revealing sectoral growth alongside persistent regional and social disparities. Key findings span shrimp farming's ecological impact, IT-led development with limited inclusivity, and continued tribal marginalization despite welfare efforts. Agricultural stagnation, especially in Rayalaseema, and the 2010 microfinance crisis underscore rural distress. Studies emphasize the socio-economic importance of Hyderabad during bifurcation, healthcare challenges in tribal regions, and uneven industrial employment. Post-bifurcation analyses show efforts toward sustainable development, inclusive urban planning, dairy and entrepreneurial growth, yet underline the need for gender equity, decentralized governance, and targeted rural support to bridge disparities.

### 3. Objectives of the Study

The study focuses on the following objectives.
1. To examine the growth in GSDP in the State of Andhra Pradesh.
2. To study the comparative performance of the economic growth in the three select sectors in the state.
3. To analyse the impact of sub sectors on the overall economic growth of the each of three sectors.

### 4. Methodology

The study is based on the economic indicators and the GSDP of the state. The study is secondary data based. The study is based on the period between 2014-2024. The study period is based on post bifurcation of the Andhra Pradesh State. To examine the economic growth of the state, three select economic indicators are taken into consideration. These are Agriculture, Industrial and Services sector. Further, under each sector, its allied sectors were considered for the analysis.
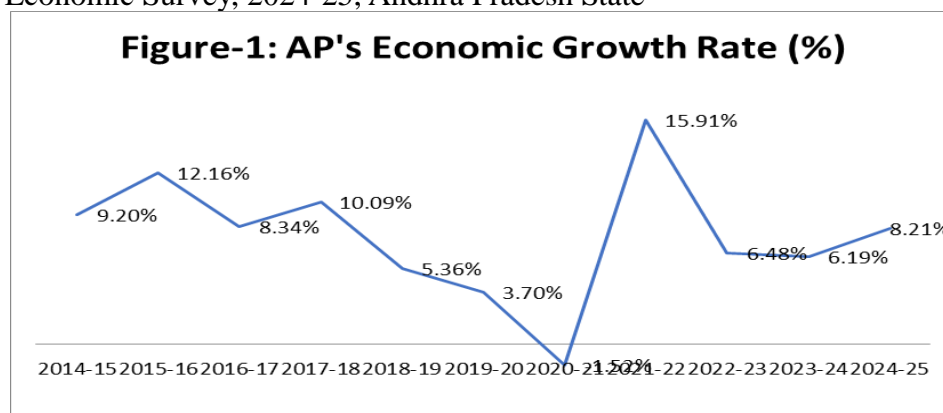
### 5. Growth in GSDP in the State of Andhra Pradesh

A period between 2014-15 to 2024-25 is considered for analysing the Gross State Domestic Product(GSDP). Year wise economic growth rate is computed to examine the trends.

Table-1: Analysis on Growth rate in GSDP of Andhra Pradesh

| Year | AP's GSDP (in ₹ Cr) | AP's Economic Growth Rate (%) |
|---|---|---|
| 2014-15 | ₹ 4,44,564 | 9.20% |
| 2015-16 | ₹ 4,98,606 | 12.16% |
| 2016-17 | ₹ 5,40,212 | 8.34% |
| 2017-18 | ₹ 5,94,737 | 10.09% |
| 2018-19 | ₹ 6,26,614 | 5.36% |
| 2019-20 | ₹ 6,49,810 | 3.70% |
| 2020-21 | ₹ 6,09,678 | -1.52% |
| 2021-22 | ₹ 7,06,791 | 15.91% |
| 2022-23 | ₹ 7,52,597 | 6.48% |
| 2023-24 | ₹ 7,99,400 | 6.19% |
| 2024-25 | ₹ 8,65,013 | 8.21% |
| CAGR | 6.24% | |

Source: Socio Economic Survey, 2024-25, Andhra Pradesh State



Figure-1: AP's Economic Growth Rate (%)

The Gross State Domestic Product (GSDP) of Andhra Pradesh has demonstrated an overall upward trend from ₹4.45 lakh crore in 2014–15 to an estimated ₹8.65 lakh crore in 2024–25, reflecting a Compound Annual Growth Rate (CAGR) of 6.24%. The state experienced strong economic growth in the initial years, peaking at 12.16% in 2015–16. However, growth decelerated in the following years, hitting a low of -1.52% in 2020–21 due to the COVID-19 pandemic. A sharp recovery occurred in 2021–22 with a 15.91% growth rate, followed by moderate but stable growth in subsequent years. This pattern highlights the state's economic resilience and capacity to rebound from external shocks.

## 6. Sector wise Growth in the state of Andhra Pradesh

The three sector comparison is made with special reference to the post bifurcation period starting from 2014-15 to 2024-25. Sector wise growth rate is computed for further analysis.

**Table-2 Sector wise Growth in Andhra Pradesh State**

| Year | Agriculture GVA (₹ Lakh Cr) | Agriculture Growth Rate (%) | Industry GVA (₹ Lakh Cr) | Industry Growth Rate (%) | Services GVA (₹ Lakh Cr) | Services Growth Rate (%) | GSDP (₹ Lakh Cr) | GSDP Growth Rate (%) |
|---|---|---|---|---|---|---|---|---|
| 2014–15 | 1.12 | 3.55 | 1.12 | 12.58 | 1.83 | 8.98 | 4.45 | 9.2 |
| 2015–16 | 1.22 | 8.3 | 1.24 | 10.74 | 2.05 | 12.08 | 4.99 | 12.16 |
| 2016–17 | 1.4 | 14.98 | 1.39 | 12.48 | 2.09 | 1.76 | 5.4 | 8.34 |
| 2017–18 | 1.65 | 18.23 | 1.47 | 5.75 | 2.25 | 7.98 | 5.95 | 10.09 |
| 2018–19 | 1.71 | 3.54 | 1.52 | 3.17 | 2.36 | 4.84 | 6.27 | 5.36 |
| 2019–20 | 1.86 | 8.51 | 1.51 | -0.41 | 2.52 | 6.52 | 6.5 | 3.7 |
| 2020–21 | 1.89 | 1.89 | 1.8 | 18.86 | 2.28 | -9.21 | 6.6 | 1.52 |
| 2021–22 (TRE) | 2.07 | 9.6 | 1.86 | 3.19 | 2.55 | 11.46 | 7.07 | 7.14 |
| 2022–23 (SRE) | 2.13 | 2.87 | 1.94 | 4.68 | 2.81 | 10.43 | 7.53 | 6.51 |
| 2023–24 (FRE) | 2.1 | -1.58 | 2.09 | 7.52 | 3.03 | 7.71 | 7.99 | 6.18 |
| 2024–25 (FAE) | 2.32 | 10.7 | 2.23 | 6.58 | 3.29 | 8.53 | 8.73 | 9.24 |
| CAGR(%) | 6.13% |  | 6.40% |  | 2.46% |  |  |  |

Source: Socio Economic Survey, 2024-25, Andhra Pradesh State

The data reveals dynamic shifts across the agriculture, industry, and services sectors in Andhra Pradesh over the decade:

  i.   Agriculture displayed fluctuating growth, with notable highs in 2017–18 (18.23%) and 2024–25 (10.7%), but also a contraction in 2023–24 (-1.58%). Overall, the sector saw a gradual increase in GVA from ₹1.12 lakh crore to ₹2.32 lakh crore.

  ii.  Industry showed robust expansion initially, especially in 2020–21 (18.86%) post-pandemic, but also experienced a minor contraction in 2019–20 (-0.41%). The sector's GVA nearly doubled over the period.

  iii. Services consistently contributed the most to GSDP, with steady growth and resilience, particularly strong in 2021–22 (11.46%) and 2024–25 (8.53%).

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iv.    GSDP itself rose from ₹4.45 lakh crore in 2014–15 to ₹8.73 lakh crore in 2024–25, with growth peaking in 2015–16 (12.16%) and dipping sharply during the pandemic in 2020–21 (1.52%).

This trajectory indicates a balanced economic structure with the services sector maintaining a dominant role, agriculture showing recovery in recent years, and industry gaining momentum post-2020.

Over the 11-year period from 2014–15 to 2024–25, the agriculture sector recorded an average annual growth rate of 6.13%, indicating consistent and moderate expansion, likely driven by improvements in productivity and rural development initiatives. The industrial sector experienced a slightly higher growth rate of 6.40% per year, reflecting robust performance possibly fueled by increased manufacturing activities and infrastructure investments. In contrast, the services sector showed a comparatively lower CAGR of 2.46%, suggesting slower growth, which may be due to market saturation, post-pandemic recovery issues, or a higher base value at the start of the period.

**Table-3: Inter-correlation among the sectors using Karl Pearson Correlation**

|  | *Agriculture GVA (₹ Lakh Cr)* | *Industry GVA (₹ Lakh Cr)* | *Services GVA (₹ Lakh Cr)* |
|---|---|---|---|
| Agriculture GVA (₹ Lakh Cr) | 1 |  |  |
| Industry GVA (₹ Lakh Cr) | 0.956373 | 1 |  |
| Services GVA (₹ Lakh Cr) | 0.919532 | 0.936377 | 1 |

*Source: Compiled from Annual Reports*

The inter sectoral correlation analysis using Karl Pearson's method reveals a strong positive relationship among the agriculture, industry, and services sectors in Andhra Pradesh. Agriculture shows a very high correlation with industry (0.956), indicating that growth in agricultural output is closely linked with industrial development, likely due to agro-based processing and related activities. Similarly, the correlation between agriculture and services (0.920) suggests that agricultural performance significantly influences service-related sectors such as logistics, finance, and retail. The industry and services sectors also exhibit a strong interdependence with a correlation coefficient of 0.936, reflecting mutual reinforcement through industrial demand for services and service-driven support for industrial operations. These high correlation values highlight the integrated nature of the state's economy, where growth in one sector tends to positively influence the others.

**7. Development of State in Agriculture sector**
Year wise growth in the allied sectors of Agriculture sector I the state of Andhra Pradesh for the period between 2014-15 to 2024-25 is presented in table-4.

**Table-4: Development in Agriculture Allied Sector**

| Year | Agri. & Horti. GVA (Rs. Crores) | Livestock GVA (Rs. Crores) | Forestry & Logging GVA (Rs. Crores) | Fishing & Aquaculture GVA (Rs. Crores) |
|---|---|---|---|---|
| 2014-15 | 60983 | 31185 | 2412 | 17620 |
| 2015-16 | 58460 | 36219 | 2361 | 24479 |
| 2016-17 | 64304 | 41917 | 2498 | 30999 |
| 2017-18 | 74118 | 46918 | 2702 | 41452 |
| 2018-19 | 69303 | 50760 | 2747 | 48226 |
| 2019-20 | 78063 | 53484 | 2887 | 51151 |

| 2020-21 | 75197 | 55846 | 2760 | 55297 |
|---|---|---|---|---|
| 2021-22 (TRE) | 80097 | 59368 | 2623 | 65171 |
| 2022-23 (SRE) | 81303 | 60986 | 2570 | 68345 |
| 2023-24 (FRE) | 77257 | 60673 | 2643 | 69264 |
| 2024-25 (FAE) | 86111 | 66456 | 2644 | 77085 |
| CAGR(%) | 3.19% | 7.12% | 0.84% | 14.36% |

Source: Socio Economic Survey, Andhra Pradesh, 2024-2025



Figure-2: CAGR(%) of subsectors of Agriculture
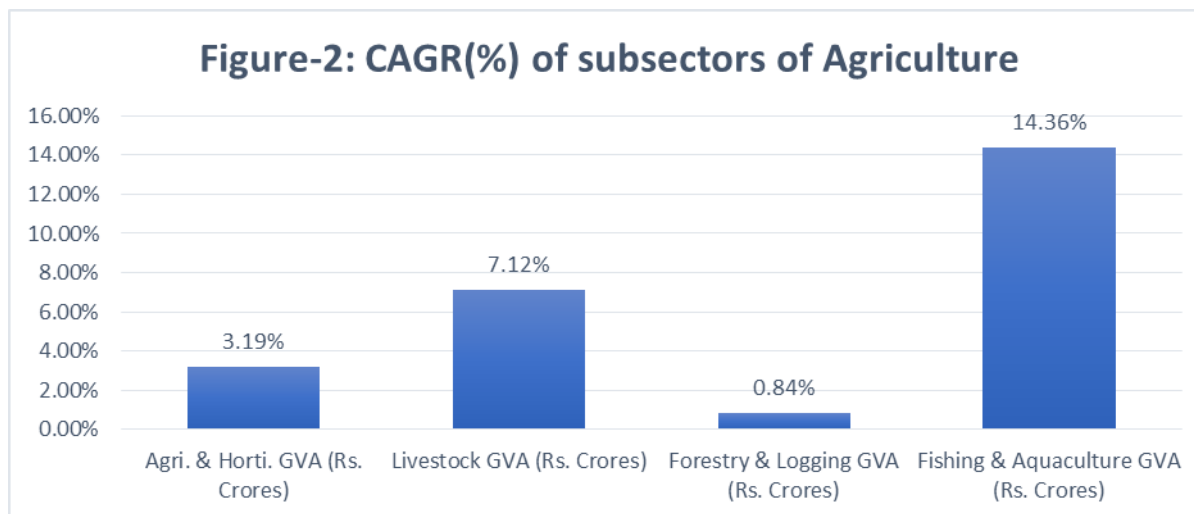
The agriculture allied sector in Andhra Pradesh, encompassing agriculture & horticulture, livestock, forestry & logging, and fishing & aquaculture, has experienced mixed growth trends over the years. Agriculture and horticulture, the largest component, showed notable fluctuations—contracting in 2015–16 and 2023–24 but rebounding with a strong growth of 11.46% in 2024–25. Livestock consistently contributed to sectoral stability, growing steadily from ₹31,185 crore in 2014–15 to ₹66,456 crore in 2024–25, despite a marginal decline in 2023–24. Forestry and logging remained the smallest and most volatile sub-sector, with frequent negative growth years, indicating limited expansion and possible sustainability concerns. Fishing and aquaculture, a key sector in coastal Andhra Pradesh, recorded robust growth in several years—especially 2015–16 and 2017–18—but saw a slowdown after 2021–22, with only 1.34% growth in 2023–24 before recovering to 11.29% in 2024–25. Overall, the sector reflects structural diversity and regional significance, with livestock and fisheries emerging as strong drivers of allied rural income.

**Table-5: Regression Analysis Results**

| *Regression Statistics* | | | | | |
|---|---|---|---|---|---|
| Multiple R | | | | 0.999985 | |
| R Square | | | | 0.99997 | |
| Adjusted R Square | | | | 0.99995 | |
| Standard Error | | | | 278.1956 | |
| Observations | | | | 11 | |
| ANOVA | | | | | |
| | *df* | *SS* | *MS* | *F* | *Significance F* |
| Regression | 4 | 1.53E+10 | 3.83E+09 | 49531.54508 | 1.11E-13 |

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| | | | | | |
|---|---|---|---|---|---|
| Residual | 6 | 464356.7 | 77392.78 | | |
| Total | 10 | 1.53E+10 | | | |
| | | *Coefficients* | *Standard Error* | *t Stat* | *P-value* |
| Intercept | | 138.9129 | 2042.125 | 0.068024 | 0.947 |
| Agri. & Horti. GVA | | 0.95448 | 0.033484 | 28.50556 | 0.000 |
| Livestock GVA | | 1.075914 | 0.105196 | 10.22774 | 0.000 |
| Forestry & Logging GVA | | 1.318194 | 0.991859 | 1.329014 | 0.000 |
| Fishing & Aquaculture GVA | | 0.969405 | 0.058439 | 16.58834 | 0.000 |

Source: Compiled from Agriculture allied sectors data 2014-15 to 2024-25

The regression analysis shows a very strong relationship between the Overall Agriculture Sector GVAs (Agri. & Horti. GVA, Livestock GVA, Forestry & Logging GVA, and Fishing & Aquaculture GVA) and the Overall Agriculture Sector GVA, with a high multiple R of 0.999985 and an R-squared value of 0.99997, indicating that 99.997% of the variance in the Overall Agriculture Sector GVA can be explained by the model. The ANOVA results show that the regression model is statistically significant with a very low p-value (1.11E-13), indicating a strong model fit. All the inOverall Agriculture Sector GVAs have significant coefficients (p-values < 0.05), with Agri. & Horti. GVA (0.95448), Livestock GVA (1.075914), Forestry & Logging GVA (1.318194), and Fishing & Aquaculture GVA (0.969405) all positively influence the Overall Agriculture Sector GVA. The t-statistics for each variable are well above the critical value, further supporting their significance. The intercept term is not statistically significant, with a high p-value (0.947), suggesting it has little impact on the model. The standard error of the regression (278.1956) reflects the average distance between observed and predicted values, which is relatively large compared to the scale of the Overall Agriculture Sector GVA.
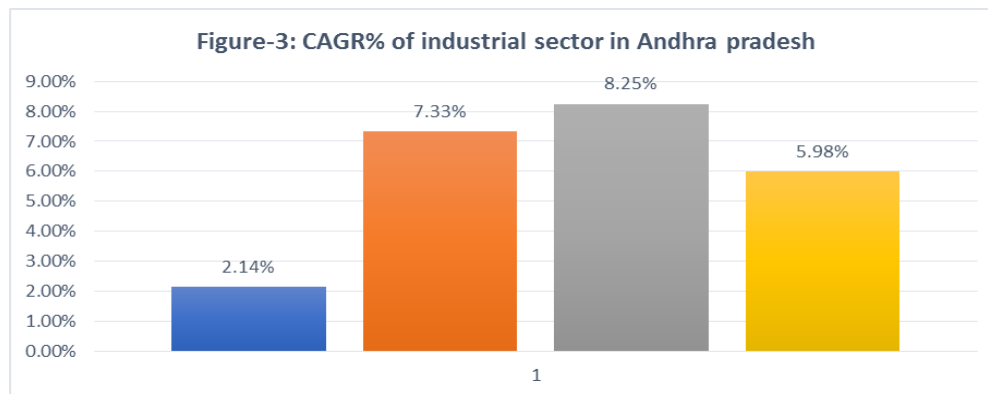
**8. Analysis on Industrial Sector contribution to Economic Growth of the State**
The statistical data from 2014-15 to 2024-25 is considered to evaluate the subsectors growth of overall industrial sector. A total of 5 sub sectors are considered and year wise performance is presented in table-6.

**Table-6: Analysis on Industrial Sector**

| Year | Mining & Quarry GVA (Rs. Cr.) | Manufacturing GVA (Rs. Cr.) | Electricity, Gas, Water supply GVA (Rs. Cr.) | Construction GVA (Rs. Cr.) |
|---|---|---|---|---|
| 2014-15 | 12798 | 48828 | 10251 | 39963 |
| 2015-16 | 17393 | 54969 | 11546 | 39947 |
| 2016-17 | 20632 | 60545 | 14481 | 43657 |
| 2017-18 | 20116 | 65701 | 17653 | 43858 |
| 2018-19 | 19739 | 71515 | 14954 | 45496 |
| 2019-20 | 17756 | 71590 | 20528 | 41053 |
| 2020-21 | 13061 | 98595 | 23147 | 45137 |
| 2021-22 (TRE) | 17081 | 90936 | 19329 | 58330 |
| 2022-23 (SRE) | 20943 | 88651 | 21876 | 62882 |
| 2023-24 (FRE) | 15722 | 100913 | 23154 | 69193 |
| 2024-25 (FAE) | 16147 | 106281 | 24513 | 75801 |
| CAGR(%) | 2.14% | 7.33% | 8.25% | 5.98% |

*Source: Socio Economic Survey, Andhra Pradesh, 2024-2025*

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Figure-3: CAGR% of industrial sector in Andhra pradesh

The industrial sector in Andhra Pradesh, comprising mining & quarrying, manufacturing, electricity-gas-water supply, and construction, has shown uneven growth over the years. Mining and quarrying witnessed significant volatility, with strong positive growth in select years like 2015–16 (35.9%) and 2021–22 (30.88%), but steep declines in 2020–21 and 2023–24, reflecting susceptibility to global commodity cycles and regulatory dynamics. Manufacturing, the sector's backbone, expanded steadily from ₹48,828 crore in 2014–15 to ₹1,06,281 crore in 2024–25, with a major surge in 2020–21 (37.72%), possibly due to post-pandemic recovery, although it experienced a temporary contraction in the following two years.

The electricity, gas, and water supply sector also demonstrated inconsistency, peaking in 2019–20 with a 37.27% growth but showing a sharp decline in 2021–22 (-16.5%), before stabilizing with moderate gains. Construction, crucial for infrastructure development, followed a similar erratic path, with both negative and double-digit growth rates—declining notably in 2019–20 (-9.37%) and bouncing back strongly in 2021–22 (29.23%). Overall, while the industrial sector has grown in absolute terms, the wide swings in growth rates suggest underlying challenges such as demand fluctuations, policy shifts, and external shocks, emphasizing the need for sustained investment, innovation, and policy support.

**Regression Results**
To analyze the impact of the subsectors such as Mining and Quarry sector, manufacturing, Electricity, Gas, Water supply and construction on overall Industrial Sector, linear regression analysis is applied. The results are shown here.

**Table-7: Regression Results**

| Regression Statistic | | | | | |
|---|---|---|---|---|---|
| Multiple R | 0.970219 | | | | |
| R Square | 0.941325 | | | | |
| Adjusted R Square | 0.902209 | | | | |
| Standard Error | 13760.9 | | | | |
| Observations | 11 | | | | |
| ANOVA Results | | | | | |
| | *df* | *SS* | *MS* | *F* | *Significance F* |
| Regression | 4 | 1.82E+10 | 4.56E+09 | 24.06473 | 0.000772 |
| Residual | 6 | 1.14E+09 | 1.89E+08 | | |
| Total | 10 | 1.94E+10 | | | |

|  | Coefficients | Standard Error | t Stat | P-value | Lower 95% |
|---|---|---|---|---|---|
| Intercept | 51532.96 | 36465.9 | 1.413182 | 0.20732 | -37695.9 |
| Mining & Quarry GVA (Rs. Cr.) | 1.021302 | 1.743223 | 0.58587 | 0.579318 | -3.24421 |
| Manufacturing GVA (Rs. Cr.) | -0.66449 | 0.870176 | -0.76363 | 0.474034 | -2.79374 |
| Electricity, Gas, Water supply GVA (Rs. Cr.) | 5.219844 | 2.746224 | 1.900735 | 0.106062 | -1.49992 |
| Construction GVA (Rs. Cr.) | 2.58742 | 0.658538 | 3.929035 | 0.007721 | 0.976035 |

*Source: Compiled from the Agriculture sector results*

The regression analysis reveals a strong relationship between the sub-sectors and the overall Industrial GVA, with a high $R^2$ value of 0.94, indicating that 94% of the variation in Industrial GVA is explained by the four sub-sectors combined. Among them, construction GVA has a statistically significant and positive impact ($p = 0.0077$) on the overall industrial performance, suggesting it is a key driver. Other variables—mining, manufacturing, and electricity—show positive or negative coefficients but are not statistically significant ($p > 0.05$), implying limited individual impact within this model. The model itself is highly significant ($F = 24.06$, $p < 0.001$), validating the overall regression. However, caution is needed in interpreting individual predictors, especially given the small sample size ($n = 11$).

**Table-8: Analysis on Services Sector**

| Year | Hotel & Restaurants | Railways | Transport by other means & storage | communications | Banking & Insurance | Realest, ownership of dwellings | Public Administration | Other services |
|---|---|---|---|---|---|---|---|---|
| 2014-15 | 36789 | 3781 | 29968 | 7692 | 18063 | 37025 | 16371 | 33281 |
| 2015-16 | 43218 | 3732 | 34410 | 8949 | 19081 | 38969 | 19004 | 37716 |
| 2016-17 | 43450 | 3753 | 34230 | 9003 | 19803 | 40939 | 18534 | 38982 |
| 2017-18 | 47281 | 4266 | 37761 | 8827 | 21518 | 43757 | 20044 | 41895 |
| 2018-19 | 52548 | 4418 | 39522 | 9440 | 26719 | 40399 | 21387 | 41821 |
| 2019-20 | 55777 | 3855 | 40115 | 10977 | 28037 | 44685 | 23213 | 44991 |
| 2020-21 | 42996 | 3411 | 28197 | 10127 | 30723 | 47148 | 26677 | 39196 |
| 2021-22 (TRE) | 49098 | 3857 | 38068 | 10753 | 31543 | 52396 | 27162 | 41778 |
| 2022-23 (SRE) | 57983 | 4342 | 39497 | 11643 | 36425 | 55465 | 28520 | 47333 |
| 2023-24 (FRE) | 64057 | 5070 | 42311 | 12787 | 41171 | 59048 | 28526 | 49914 |
| 2024-25 (FAE) | 69836 | 5380 | 47588 | 13351 | 47038 | 62845 | 28552 | 54122 |
| CAGR(%) | 6.00% | 3.26% | 4.29% | 5.14% | 9.09% | 4.93% | 5.19% | 4.52% |

Source: Compiled from the Industry results

The services sector in Andhra Pradesh has shown consistent and diversified growth from 2014–15 to 2024–25, with most sub-sectors expanding steadily. Hotels and restaurants nearly doubled in value, reflecting growth in tourism and hospitality. Transport (excluding railways) and storage services also

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saw significant gains, indicating improvements in logistics and mobility infrastructure. Communication services and banking & insurance experienced steady increases, driven by digital adoption and financial inclusion. The real estate and housing sector contributed substantially, growing robustly across the years. Public administration and other services expanded notably, especially after 2020, due to enhanced government expenditure and service delivery. Overall, the sector has proven to be a resilient and vital driver of the state's economic development.

**Table-9: Regression Analysis**

| Multiple R | 0.999998 | | | | |
|---|---|---|---|---|---|
| R Square | 0.999996 | | | | |
| Adjusted R Square | 0.999979 | | | | |
| Standard Error | 201.3661 | | | | |
| Observations | 11 | | | | |
| ANOVA Test Result | | | | | |
| | df | SS | MS | F | Significance F |
| Regression | 8 | 1.94E+10 | 2.42E+09 | 59693.99 | 1.68E-05 |
| Residual | 2 | 81096.6 | 40548.3 | | |
| Total | 10 | 1.94E+10 | | | |
| | Coefficients | Standard Error | t Stat | P-value | Lower 95% |
| Intercept | 1390.401 | 3036.512 | 0.457894 | 0.691964 | -11674.7 |
| Hotel & Restaurants | 1.021153 | 0.147494 | 6.923329 | 0.020232 | 0.386535 |
| Railways | 0.263637 | 0.667055 | 0.395225 | 0.730847 | -2.60647 |
| Transport by other means & storage | 1.084421 | 0.063533 | 17.06876 | 0.003415 | 0.811063 |
| communications | 1.350577 | 0.436884 | 3.091383 | 0.090638 | -0.52918 |
| Banking & Insurance | 1.018674 | 0.052619 | 19.35934 | 0.002658 | 0.792272 |
| Realest, ownership of dwellings | 1.064215 | 0.080331 | 13.2478 | 0.00565 | 0.718577 |
| Public Administration | 0.83701 | 0.074674 | 11.2089 | 0.007866 | 0.515715 |
| Other services | 0.861125 | 0.12431 | 6.927227 | 0.02021 | 0.326262 |

Source: Compiled from the Services Industry results

The regression results indicate a near-perfect fit, with an R Square of 0.999996, showing that almost all variation in the overall Services GVA is explained by the eight sub-sectors. The model is statistically significant, supported by a high F-value and a very low significance level. Notably, Banking & Insurance, Transport & Storage, Real Estate, Public Administration, Hotels & Restaurants, and Other Services have significant positive impacts, indicating they are major contributors to the Services GVA. Meanwhile, Railways and Communications, despite having positive coefficients, do not show statistical significance. The low standard error and high adjusted R Square suggest the model is accurate, though the limited degrees of freedom imply results should be interpreted with care.

## 9. Conclusions

The analysis of Andhra Pradesh's Gross State Domestic Product (GSDP) from 2014–15 to 2024–25 reveals a strong and resilient economic trajectory, with the state nearly doubling its GSDP over the decade. Despite temporary setbacks such as the COVID-19 pandemic, the state rebounded quickly, particularly in 2021–22. Sector-wise, services remained the dominant contributor, maintaining consistent growth, while agriculture and industry displayed notable fluctuations. Agriculture experienced both high and negative growth years, yet sustained an average annual growth of over 6%. Industry also showed significant expansion, especially in manufacturing and construction, though growth was uneven across years. The intersectoral correlation analysis underscored the interconnectedness among agriculture, industry, and services, indicating that growth in one sector tends to positively influence the others.

Regression analyses across all three sectors validated the strong statistical relationships between their respective sub-sectors and overall GVA, with high R² values indicating robust explanatory power. The agriculture sector's sub-sectors all had significant positive impacts, with livestock and fisheries emerging as vital contributors to rural income. In the industrial sector, construction was the most significant driver, while other components like mining and electricity showed limited influence. The services sector demonstrated the highest model fit, with key sub-sectors such as banking, real estate, and transport playing critical roles in economic development. These findings emphasize the need for integrated policy interventions and sustained investments across all sectors to ensure balanced and inclusive growth in the state.

## References

1. Dabla, A. (2004). The role of information technology policies in promoting social and economic development: The case of the state of Andhra Pradesh, India. *The Electronic Journal of Information Systems in Developing Countries, 19*(5), 1–21. https://doi.org/10.1002/j.1681-4835.2004.tb00125.x.
2. Reddy, V., Reddy, P. P., & Kumar, U. H. (2004). Ecological and economic aspects of shrimp farming in Andhra Pradesh. *Indian Journal of Agricultural Economics, 59*(3), July–September.
3. Reddy, A. A. (2011). Dynamics of the agricultural economy of Andhra Pradesh, India since the last five decades. *Journal of Development and Agricultural Economics, 3*(8), 394–410. http://www.academicjournals.org/JDAE.
4. Lal, B. S. (2011). Economic analysis of health care services: A study in tribal areas of Andhra Pradesh, India. *International Journal of Health Management and Information (IJHMI), 2*(2), 119–131.
5. Taylor, M. (2011). 'Freedom from poverty is not for free': Rural development and the microfinance crisis in Andhra Pradesh, India. *Journal of Agrarian Change, 11*(4), 484–504. https://doi.org/10.1111/j.1471-0366.2011.00330.x.
6. Reddy, M. G., & Kumar, K. A. (2010). Political economy of tribal development: A case study of Andhra Pradesh (Working Paper No. 85). *Centre for Economic and Social Studies*.
7. Rao, G. G. (2013). Hyderabad and the bifurcation of Andhra Pradesh. *Economic and Political Weekly, 48*(42), 39–43. https://www.jstor.org/stable/23528573.
8. Samarpitha, A., Vasudev, N., & Suhasini, K. (2016). Socio-economic characteristics of rice farmers in the combined state of Andhra Pradesh. *Asian Journal of Agricultural Extension, Economics & Sociology, 13*(1), 1–9. https://doi.org/10.9734/AJAEES/2016/28696.

9. Kavita, A. (2016). Disparities in the economic development patterns among the Scheduled Tribes in Andhra Pradesh. *International Journal of Multidisciplinary Educational Research, 5*(10), 3. https://doi.org/10.xxxx/xxxxx.

10. Pramana Research Journal. (2019). Consequences after post bifurcation of Andhra Pradesh. *Pramana Research Journal, 9*(3), 723–730. Retrieved from https://pramanaresearch.org/.

11. Meka, J. S. (2019). The 2030 sustainable development goals and their applicability to economic progress in rural North Coastal Andhra Pradesh. *Journal of Critical Reviews, 6*(4), 472. jamesstephenm@gmail.com.

12. Rao, V. N. (2019). A study of socio-cultural entity at a definite historical stage of tribal groups development in Andhra Pradesh: A case study of Andhra Pradesh. *International Journal of Advance and Innovative Research, 6*(1 XIV), 71. https://doi.org/10.XXXX/XXXX.

13. Podile, V. (2019). Impact of land pooling scheme on key economic variables in the capital city area (Amaravati) of Andhra Pradesh. *Research Review International Journal of Multidisciplinary, 6*, 836. https://www.rrjournals.com.

14. Mahasamudram, G. (2019, June). Agriculture growth in Andhra Pradesh: A study on performance and determinants [Article]. *Research Gate.* https://www.researchgate.net /publication/ 333656024.

15. Nazeeruddin, M. (2020). Growth and decline of employment in the industries of Andhra Pradesh. *Research Review International Journal of Multidisciplinary, 5*(5), 27. https://doi.org /10.31305 /rrijm.2020.v05.i05.007

16. Kumar, K. A., & Reddy, M. G. (2021). Political economy of tribal development: A case study of Andhra Pradesh. *IOSR Journal of Humanities and Social Science, 26*(4), 39–48. https://doi.org/10.9790/0837-2604063948

17. Petrikova, I. (2022). The effects of local-level economic inequality on social capital: Evidence from Andhra Pradesh, India. *Journal of Development Research, 34*(6), 2850–2877. https://doi.org/10.1057/s41287-021-00495-w

18. Narayana, K. N. S. (2024). Economic evolution of Andhra Pradesh: A post-bifurcation analysis of financial performance. *International Journal of Financial Management and Economics, 7*(2), 111–115. https://doi.org/10.33545/26179210.2024.v7.i2.349

19. Adari, A. A. R., Surisetti, R. B., Varalakshmi, N. S. D., Srilakshmi, G., & Gnanswari, S. (2025). Impact of dairy farming on socio-economic development and rural empowerment in Anakapalli district, Andhra Pradesh. *International Journal of Veterinary Sciences, 10*(3), [Article No. 2160]. https://doi.org/10.22271/veterinary.2025.v10.i3f.2160

20. Surekha, N., Kumari, R. S., Priya, V. S., & Devi, G. R. (2025). An effect of entrepreneurship on regional development & urbanization with respect to Chittoor district in Andhra Pradesh. *Journal of Philanthropy and Marketing, 5*(1), 73. E-ISSN: 2691-1361.

21. https://www.newindianexpress.com/states/andhra-pradesh/2025/Apr/06/andhra-pradesh-achieves - second -highest-growth-rate-in-india.