"ECONOMIC ELEVATION: AN IN-DEPTH EXPLORATIONOF GROWTH DYNAMICS IN JHARKHAND, CHHATTISGARH, AND UTTARAKHAND THROUGH MACROECONOMIC LENSES."

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Abstract

This paper examines the distinct growth trajectories of Jharkhand, Chhattisgarh, and Uttarakhand since their formation in 2000 through a comparative analysis of macroeconomic indicators using secondary data on variables like state domestic product, population, foodgrain output, power use and fiscal deficits. Applying analytical techniques including trend analysis, it unravels inter-state divergences underpinned by heterogeneity in initial conditions and policy approaches. Key findings reveal that while post-bifurcation output growth has accelerated, lags persist in per capita income convergence, poverty reduction and human development. Moreover, overdependence on primary sectors and low urbanization underscore concerns regarding sustainable and inclusive growth. The study synthesizes the promises and pitfalls in the economic pathways of the newer states, suggesting policy perspectives for more broad-based expansion.

Key words: comparative analysis, growth trajectories, macroeconomic indicators, secondary data, trend analysis, inter-state divergences, per capita income, human development

1. Introduction

The creation of the states of Jharkhand, Chhattisgarh, and Uttarakhand in 2000 marked an important milestone in India's federal evolution. Carved out of the larger states of Bihar, Madhya Pradesh, and Uttar Pradesh respectively, the formation of these states came after decades of movements demanding separate statehood driven by aspirations for greater political autonomy, economic development, and social justice for the distinct tribal, historical and cultural identities of these regions (Bhagat, 2013; Tillin, 2013). As India's newer states, Jharkhand, Chhattisgarh and Uttarakhand face particular opportunities and challenges in their developmental trajectories.

While these states are endowed with substantial natural resources, tourism potential and scopes for hydroelectric power, they also contain large rural populations reliant on agriculture, mining and forestry with high poverty rates and deprived human development indicators (Mohan, 2012; Srivastava, 2013). Furthermore, despite their nation-leading economic growth for the first few years after their formation, their economies have slowed down over the past decade, growing below the national average (CAG, 2011; Gupta & Sankar, 2009).

This analysis aims to conduct an in-depth exploration into the economic growth dynamics and

trajectories of these three states since their formation. Using macroeconomic data and analytical frameworks, it will assess core aspects including economic growth patterns, structural changes in production and employment, investment trends, fiscal standing, and progress in human development and poverty reduction. The analysis seeks to unravel both

common development pathways as well as variation between the states, situating performance within the changing national and global economic contexts.

The purpose is to critically examine the sources and patterns of economic growth in Jharkhand, Chhattisgarh and Uttarakhand since their inception and reasons behind their economic trajectories while identifying policy spaces that can enable more broad-based, sustainable, and equitable growth going forward. Key macroeconomic variables like GSDP growth trends, sectoral composition changes, urbanization rates, per capita incomes, FDI inflows, poverty and employment metrics will be analysed to shed light on ground realities and binding constraints facing these emerging states (Heller & Rao, 2015; Kapur et al., 2014; Srivastava, 2013).

Overall, such an analytical exploration can provide crucial insights into efficacy of past policy approaches while broadening understanding of core potentials and challenges confronting India's newer states in fostering robust, diversified, and sustainable economic expansion.

2. Literature Review:

A literature review is a comprehensive analysis of existing scholarly literature, summarizing key findings and theories to establish the current state of knowledge and identify research gaps. For "Economic Elevation: An In-Depth Exploration of Growth Dynamics in Jharkhand, Chhattisgarh, and Uttarakhand through Macroeconomic Lenses," it involves scrutinizing scholarship on regional economic growth, fiscal policies, and sectoral analysis to inform the empirical study and enhance understanding of development challenges and opportunities in these states. By critically evaluating previous research, the literature review contributes to shaping the study design, methodology, and theoretical framework, ultimately advancing knowledge in the field.

2.1 Mukherji R India Review (2009)

This paper employs a political economy framework drawing on historical evidence to analyse the factors shaping India's economic growth trajectory since independence, characterized by early state-business compromise giving way to greater state control in the 1960s and 1970s under import substitution which was later gradually reversed from the mid-1970s onwards leading to pro-market reforms in 1991 catalysed by both economic crisis and a technocratic policy consensus, resulting ultimately in higher growth led by private sector dynamism and global integration post-2003, however some gaps remain in making this growth more inclusive as seen in the agricultural crisis, lagging manufacturing and infrastructure, and poor human

development outcomes compared to peers (Mukherji, 2009).

2.2 Sachs J, Bajpai N, Ramiah A (2002)

(Sachs et al., 2002)Analyse the differential economic performance of 14 major Indian states between 1980-1998 in "Understanding Regional Economic Growth in India." Using national income accounts data, they find a lack of sigma and beta convergence, indicating persistent divergence rather than catch-up between richer and poorer states. Growth is highly correlated with initial urbanization levels, with coastal and urbanized states benefiting most from 1991 economic reforms. The authors conclude that geographical factors impede convergence, and that poorer, inland states continue to lag behind. Their analysis underscores the importance of urbanization and coastal access in India's uneven regional growth patterns in the 1980s and

1990s.

2.3 Tripathi & Joshi (2013), Sharma (2009), Nagdeve et al. (2006), Bhagat & Mohanty (2009), Singh et al. (2014), and Bajpai (2004)

The literature on population, human capital formation and economic development in Madhya Pradesh over 1951-2011, including analyses by Dr. Surya Prakash Tripathi et al., highlights rapid population growth compared to national averages, low levels of educational attainment and public health outcomes, and links between these human capital deficiencies and constraints on inclusive economic growth. Specifically, Tripathi & Joshi analyse long-term population data showing higher growth rates in MP; Sharma projects continued rapid population increases. Studies by Nagdeve et al., Bhagat & Mohanty, and Singh et al. demonstrate gaps in health and education outcomes, as well as inequality between groups and districts within MP. Meanwhile Bajpai and Tripathi & Joshi argue lack of commensurate human capital development has inhibited productive demographic dividends and equitable growth. Additional investigation of specific pathways between aspects of human capital formation and economic sectors can further inform policy interventions.

2.4 Karumari M (1999)

(Karumari, 1999) uses secondary data on the NSDP, PCI, and sectoral incomes of Tamil Nadu to analyse the state economy's growth trends and structural changes over 1999-2000 to 2013-2014. Applying quantitative models to the state-level data, Karumari finds that while overall and per- capita income growth accelerated in the 2000s post-economic liberalization, growth has been largely driven by the tertiary sector with the primary sector lagging. The study concludes that more balanced development across sectors is needed for Tamil Nadu's long-run growth.

2.5 Irshad M Pakistan Social Sciences Review (2022)

(Irshad, 2022) employ secondary data on GDP, FDI, trade volume, and exchange rates from 1972–2021 to econometrically analyse the impacts of these macro variables on Pakistan's economic growth over the long term. Applying time series analytical techniques including regression modelling and Granger causality tests on the 50-year national dataset, the study

concludes that FDI and exchange rate changes have significant causal effects on the country's GDP growth rate, while trade volume does not. The research highlights the need for stable investment and currency conditions to accelerate Pakistan's economic development.

2.6 Ali M, Saifullah K, Kari F (2015)

A VAR Co-integration Analysis", (Ali et al., 2015) used secondary annual time series data from1988-2012 and econometric analyses like VAR models to empirically study the long run impacts of market capitalization, foreign direct investment inflows, and real interest rates on Bangladesh's economic growth, measured by real GDP. They found that while these key macroeconomic factors have predictable positive effects on long run growth, they do not have short run impacts. Based on these findings, the authors suggested policies targeting higher market capitalization, increased foreign direct investment, and maintenance of stable real interest rates in order to promote Bangladesh's long term economic growth.

2.7 Khan G, Mitra P

An Econometric Analysis by (Khan & Mitra, n.d.)conducts an econometric analysis of the causal relationship between foreign direct investment (FDI) inflows and macroeconomic variables like GDP growth, inflation, and exchange rates in India over the period 1975-1976

to 2011- 2012. Using time series secondary data for 37 years, the authors employ econometric tests like Dicky-Fuller, Cointegration, Vector Error Correction Modelling, and Granger Causality test. GDP growth rates are used to measure economic expansion, Consumer Price Index measures inflation, and annual Rupee-Dollar rates capture currency movements. The sample size is 37 covering the period from 1975 to 2012.

2.8 Sahoo B, Acharya D

Developed a comprehensive index for measuring Indian state-level macroeconomic performance over time using data envelopment analysis (DEA) models. The authors apply both radial and non-radial DEA variants to an 8-year panel dataset covering 22 major Indian states. The macroeconomic performance (MEP) index integrates three key indicators: GSDP per capita growth, price stability, and fiscal deficit. The DEA models generate MEP scores for each state-year as well as comparative rankings. The results highlight considerable heterogeneity across states and over time. Additional correlation and regression analysis provides further validation and sheds light on the relationship of the MEP index with poverty, inequality and FDI inflows.

Overall, the paper makes a valuable methodological contribution in constructing a robust, multi-dimensional index of state-level macroeconomic performance for an important emerging economy. The empirical findings offer insights into India's uneven growth and development across states.

2.9 Ernest Simeon Odior (2013)

In his paper, (Odior, 2013) empirically investigates the impact of selected macroeconomic

factors - exchange rate, consumer price index, interest rate, credit to manufacturing sector, broad money supply, and foreign direct investment - on the productivity of the manufacturing sector in Nigeria from 1975-2011 using annual time series data and techniques like static regression modeling, unit root tests, and cointegration analysis. The key findings are that credit to manufacturers and foreign direct investment have a significant positive effect on manufacturing productivity and thus the capacity to greatly increase manufacturing output, while consumer price inflation and high interest rates undermine productivity growth. (Odior, 2013) recommends policy measures to boost credit availability to manufacturers, sustain foreign investment flows, and moderate inflation and interest rates.

2.10 Sidrat Jilani, Farooq-E-Azam Cheema, and Muhammad Asim

In their paper, (Jilani et al., 2010) empirically investigate the effects of selected macroeconomic factors - inflation, interest rate, and exchange rate - on the economic growth of Pakistan measured by gross domestic product (GDP) over the period 1980-2011 using multivariate regression analysis. They find that inflation and interest rates have a significant negative association whereas exchange rate has a significant positive relationship with GDP growth in Pakistan. Based on these results, they recommend tight monetary policy to control inflation along with maintaining higher exchange rates to promote exports and boost economic growth.

3. Research Gap
- Limited exploration of economic growth dynamics specifically focusing on the states of Jharkhand, Chhattisgarh, and Uttarakhand formed in 2000.
- Scarcity of comparative studies analysing macroeconomic indicators across these states

- to understand their distinct trajectories and common challenges.

4. Objective of the study:

To conduct a comprehensive comparative analysis of the economic growth dynamics and macroeconomic indicators of the states of Jharkhand, Chhattisgarh, and Uttarakhand, which were formed in 2000, with a focus on understanding their distinct trajectories and common challenges.

5. Description of Data and Research Methodology:

Data: This research paper conducts a comprehensive comparative analysis of the economic growth dynamics and macroeconomic indicators of Jharkhand, Chhattisgarh, and Uttarakhand since their formation in 2000, utilizing data sourced from the Economic and Political Weekly Research Foundation (EPWRF) database available at epwrfits.in. The study focuses on key variables including population dynamics, Gross State Domestic Product (GSDP), production of food grains, gross fiscal deficit, power consumption utilities usage. Employing secondary

data analysis methodology, the research aims to understand the distinct trajectories and common challenges of these states, utilizing statistical techniques such as comparative analysis and trend analysis. While ensuring data reliability through validation procedures and ethical considerations in data usage, the study seeks to provide valuable insights into the economic development patterns of Jharkhand, Chhattisgarh, and Uttarakhand, contributing to the understanding of their economic landscapes since their inception in 2000.

6. Key Variables:

It is the comparison of different variables of Population, State Domestic Product, Power Consumption, Fiscal Deficit and Foodgrain, from Chhattisgarh, Jharkhand and Uttarakhand in descriptive statistics.

6.1 Population (in '000s)

Table I: *This table indicates the descriptive statistics on the population of Chhattisgarh, Jharkhand, Uttarakhand.*

Heads	Chhattisgarh	Jharkhand	Uttarakhand
Mean	16289684.22	15674841.91	11459235.91
Median	15807382	15708393	11532759
Standard Deviation	6868913.36	5893792.04	5956721.51
Minimum	6521713	7557045	3328624
Maximum	28908241	25979986	20710398

Interpretation:

- o Chhattisgarh shows a moderate mean headcount and relatively lower variability compared to otherstates.
- o Uttarakhand exhibits a higher mean headcount with wider variability in population data.
- o Jharkhand falls between Chhattisgarh and Uttarakhand, with a lower mean but less variability.
- o Disparity in median and maximum headcounts within Uttarakhand suggests potential regionalinequalities.
- o Chhattisgarh presents a stable population trend, while Uttarakhand's higher variability
- o may indicatediverse population sizes or uneven distribution across regions.
- o Further investigation into socioeconomic factors is warranted to understand demographic patternscomprehensively.

6.2 Sate Domestic Product (SDP)

Table II: *This table indicates the descriptive statistics on the State Domestic Product (SDP) of Chhattisgarh,Jharkhand, Uttarakhand.*

Heads	State Domestic Product (SDP) (Rs Lakh)		
	Chhattisgarh	*Jharkhand*	*Uttarakhand*
Mean	16289684.22	15674841.91	11459235.91
Median	15807382	15708393	11532759
Standard Deviation	6868913.365	5893792.046	5956721.519
Minimum	6521713	7557045	3328624
Maximum	28908241	25979986	20710398

Interpretation:

o Chhattisgarh demonstrates the highest mean State Domestic Product (SDP) at Rs 16,289,684.22,indicating robust economic performance.

o Jharkhand follows closely behind Chhattisgarh in mean SDP, suggesting a significant economicpresence.

o Uttarakhand shows a slightly lower mean SDP compared to the other states.

o Uttarakhand exhibits the lowest variability in SDP with the smallest standard deviation, implying amore stable economic performance.

o Chhattisgarh displays the highest maximum SDP, indicating its economic strength, while Jharkhandhas the highest minimum SDP, showcasing potential economic diversity.

o Overall, Chhattisgarh emerges as the economic powerhouse among the three states, with Jharkhandand Uttarakhand displaying their unique economic landscapes.

6.3 Production Foodgrain Kharif (in thousand tonnes)

Table III: *This table indicates the descriptive statistics on the Production Foodgrain of Chhattisgarh, Jharkhand, Uttarakhand.*

Heads	Chhattisgarh	Jharkhand	Uttarakhand
Mean	5796.81	3204.00	882.26
Median	5863.2	3630.48	887.13
Standard Deviation	1457.55	1068.84	44.19
Minimum	2627	1576.38	761
Maximum	8492.84	5078.39	967.9

Interpretation:

- Chhattisgarh exhibits the highest mean production of foodgrain among the three states, significantly surpassing Jharkhand and Uttarakhand.
- Both Chhattisgarh and Jharkhand display considerable variability in foodgrain production, as indicated by their larger standard deviations.
- Uttarakhand shows a smaller standard deviation, implying more consistent yields in foodgrain production compared to the other states.
- While Chhattisgarh demonstrates the highest maximum production of foodgrain, Jharkhand records the highest minimum, suggesting potential variations in agricultural productivity.
- Overall, Chhattisgarh emerges as the leading producer of foodgrains among Chhattisgarh, Jharkhand, and Uttarakhand, underscoring its significant agricultural strength.

6.4 Gross Fiscal Deficit (in cr.)

Table IV: *This table indicates the descriptive statistics on the Gross Fiscal Deficit of Chhattisgarh,Jharkhand, Uttarakhand.*

Heads	Chhattisgarh	Jharkhand	Uttarakhand
Mean	4919.65	5938.86	3530.39
Median	2204	4918	2171
Standard Deviation	5780.43	4046.47	2681.63
Minimum	410	1567	136
Maximum	17970	14911	8504

Interpretation:

o Jharkhand displays the highest mean and median Gross Fiscal Deficit among the three states, indicating potential fiscal challenges or higher government spending relative to revenue.

o Chhattisgarh, while showing a lower mean deficit, exhibits the widest variability with the highest standard deviation and maximum deficit, suggesting potential fluctuations or disparities in fiscal management.

o Uttarakhand demonstrates the lowest mean and variability in Gross Fiscal Deficit, implying a relatively stable fiscal situation compared to the other states.

o Overall, Jharkhand may face significant fiscal pressures, Chhattisgarh demonstrates greater volatility, and Uttarakhand displays more fiscal prudence in managing fiscal deficits.

o Understanding these variations can provide insights into the fiscal policies and economic conditionsof each state.

6.5 Power Consumption Total Utilities (KWh)

Table V: *This table indicates the descriptive statistics on the Power Consumption total Utilities ofChhattisgarh, Jharkhand, Uttarakhand.*

Heads	Chhattisgarh	Jharkhand	Uttarakhand
Mean	549.34	448.40	700.82
Median	525	484.67	761.12
Standard Deviation	204.21	130.39	313.66
Minimum	248.32	248.92	254.68
Maximum	847.38	626.25	1091.63

Interpretation:

o Uttarakhand demonstrates the highest mean and median Power Consumption Total

o Utilities among the three states, indicating potentially higher energy demands or more efficient energy usage.

o Chhattisgarh and Jharkhand exhibit lower mean and median power consumption levels, with Chhattisgarh showing slightly higher consumption than Jharkhand.

o Jharkhand displays the lowest variability in power consumption, as evidenced by its smallest standard deviation, suggesting more consistent usage patterns.

o Overall, while Uttarakhand leads in power consumption, Chhattisgarh and Jharkhand show more moderate levels, with varying degrees of stability in usage patterns.

o Understanding these differences can provide insights into energy infrastructure development and consumption habits within each state.

7. Methodology:

This research employs a quantitative secondary data analysis approach to examine key economic indicators for the states of Chhattisgarh, Jharkhand and Uttarakhand since their formation in 2000. The data analyzed includes annual time series from 2000 2023 on population, state domestic product (SDP), foodgrain production, gross fiscal deficit, and power consumption, sourced from the EPWRF database. Descriptive statistical analysis is conducted, including measures of central tendency (means, medians) and dispersion (standard deviations) for the main variables across the three state cases. Graphical analysis is also utilized to visualize trends over time, using line graphs of the indicators. The comparative analytical framework benchmarks variables across the states to assess convergence or divergence in developmental trajectories. Correlation analysis examines relationships between metrics like SDP, deficit, and utilities usage. The quantitative, secondary datadriven methodology employing descriptive and graphical techniques provides a robust platform to achieve the study objectives of holistically understanding the distinct yet connected growth pathways of Chhattisgarh, Jharkhand and Uttarakhand since attaining statehood.

7.1 Trend Analysis:

Table VI:

Production Foodgrain Kharif (Thousand tonnes)		
State	**Trend**	**P Value**
Chhattisgarh	Present	0.00
Jharkhand	Present	0.00
Uttarakhand	Absent	0.71

Figure I:
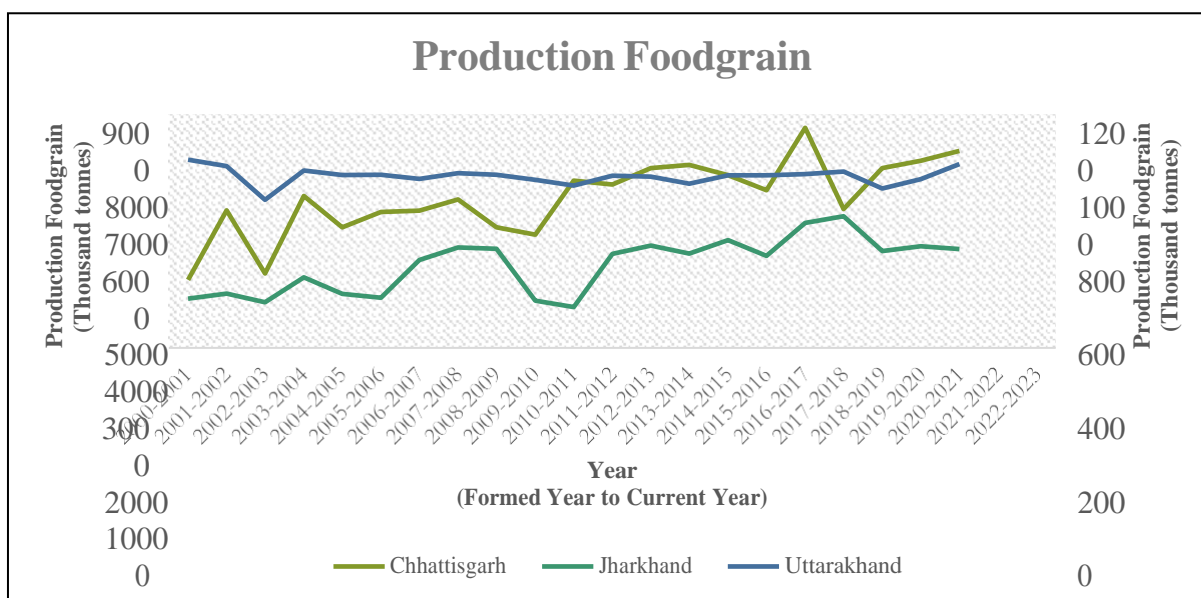
Table VII:
Power Consumption Total Utilities (KWh)

State	**Trend**	**P Value**
Chhattisgarh	Present	0.00
Jharkhand	Present	0.00
Uttarakhand	Present	0.00
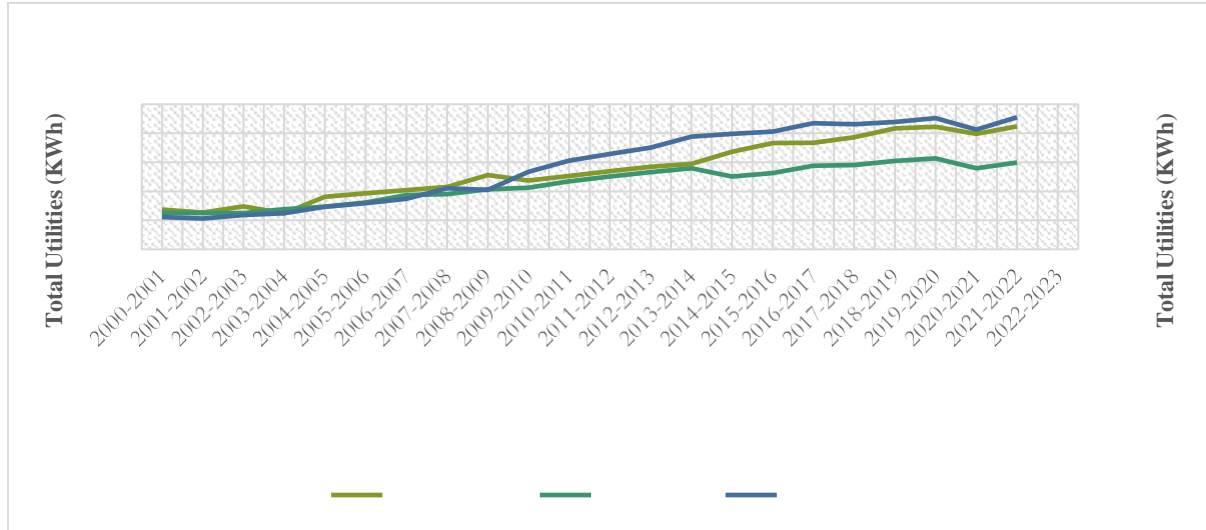
Figure II:

Table VIII:

State Domestic Product (SDP) (Rs Lakh)		
State	**Trend**	**P Value**
Chhattisgarh	Present	0.00
Jharkhand	Present	0.00
Uttarakhand	Present	0.00

Figure III:
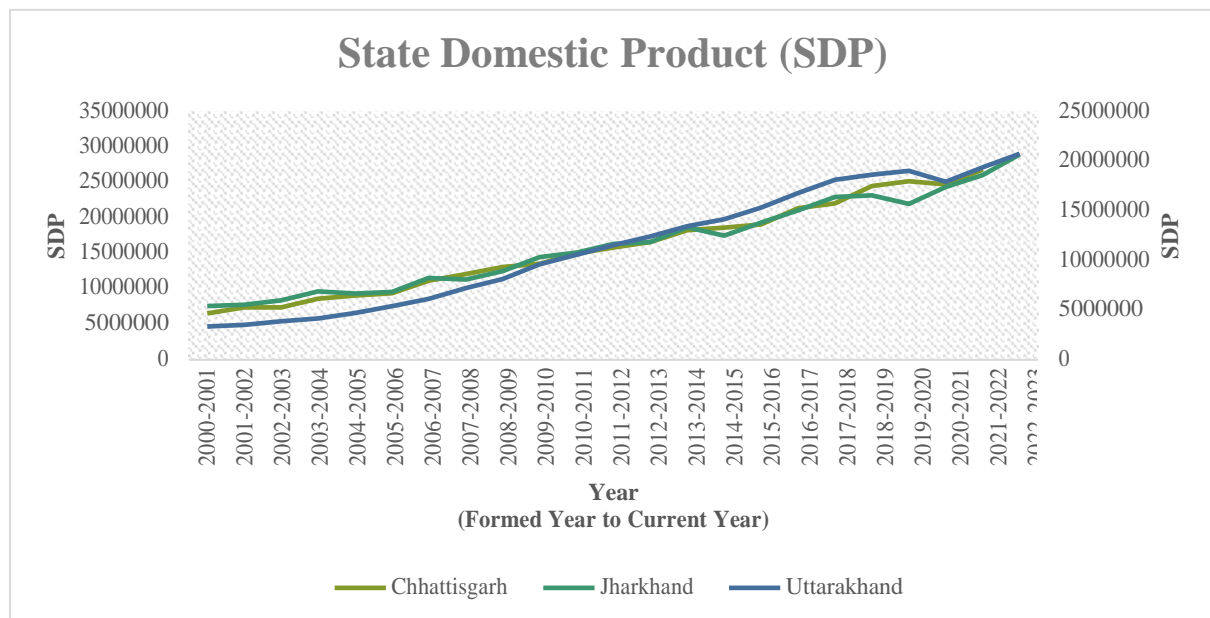
Table IX:

Gross Fiscal Deficit (Rs Crore)		
State	**Trend**	**P Value**
Chhattisgarh	Present	0.00
Jharkhand	Present	0.00
Uttarakhand	Present	0.00

Figure IV:
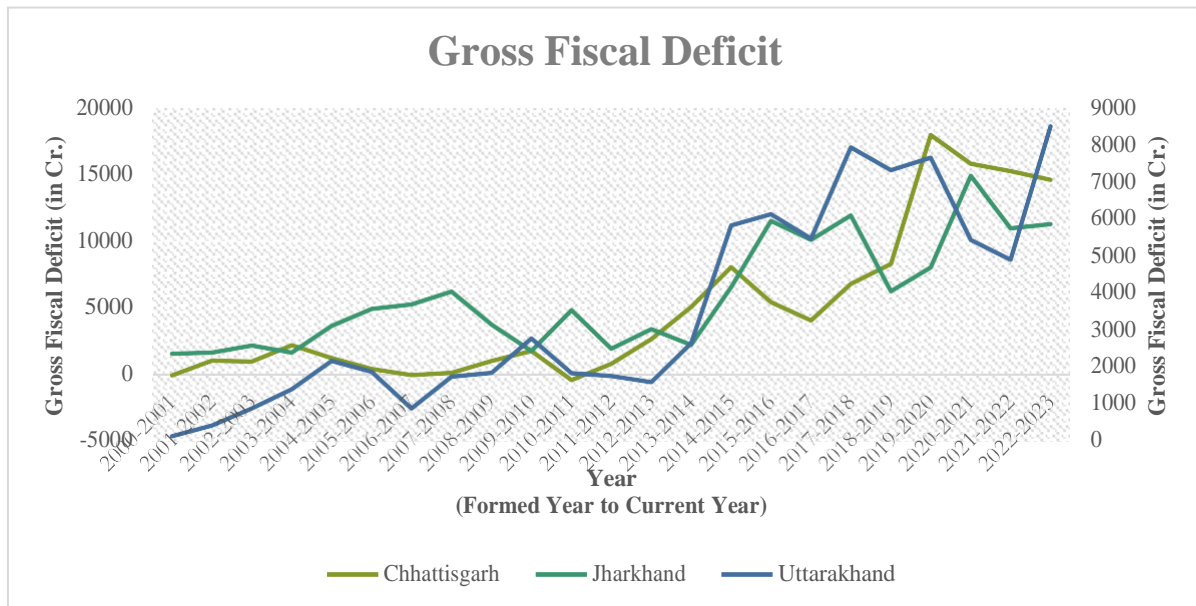
Table X:

Population (in '000s)		
State	**Trend**	**P Value**
Chhattisgarh	Present	0.00
Jharkhand	Present	0.00
Uttarakhand	Present	0.00

Figure V:

Population (in '000s)
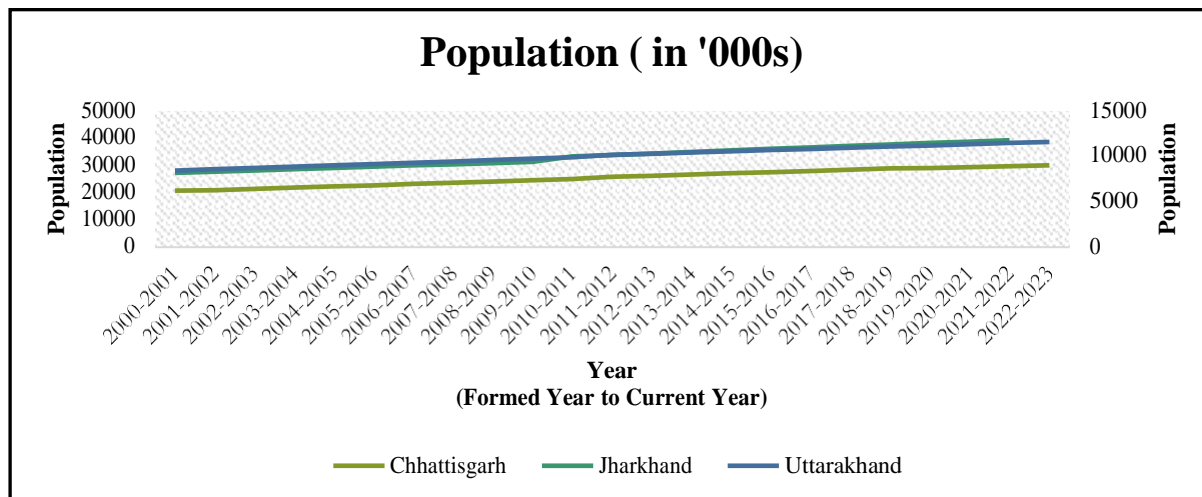
Conclusion:

This comparative analysis of key economic indicators for the Indian states of Chhattisgarh, Jharkhand, and Uttarakhand reveals several notable findings regarding their growth trajectories since being granted statehood in 2000.

On population dynamics, all three states have experienced rapid expansion over the past two decades, pointing to mounting pressures on livelihood provision and service delivery. Meanwhile, economic growth measured through State Domestic Product shows steady yet varied patterns with recently accelerating pace in Uttarakhand surpassing the other states.

Agricultural production as seen through foodgrain output displays volatility across the board. Fiscal balances remain challenging, with persistent deficit issues requiring redressal. Infrastructure access as proxied by power consumption metrics exhibits increase but from low bases.

Therefore, while the newly formed states set out on their development journeys together, their macroeconomic outcomes showcase both shared hurdles and distinct pathways. Lagging human capital and infrastructure constraints remain pressing in Chhattisgarh and Jharkhand. Overdependence on limited highrisk sectors impacts Uttarakhand.

As India approaches its 100th year of Independence, its younger states must play catch up to fulfil their economic promise. Tailored strategies aligning local realities with national and global dynamics are vital. Building robust fiscal capacities, diversified production ecosystems and human capabilities can put these states on an equitable growth trajectory.

Their interlinked pasts and futures call for collaborative policy innovations between Chhattisgarh, Jharkhand and Uttarakhand learning from each other's challenges and successes to usher in an era of shared prosperity.

REFERENCES

Ali, M. A., Saifullah, K., & Kari, F. B. (2015). The Impact of key Macroeconomic factors on Economic Growth of Bangladesh: A VAR Co-integration Analysis. In *International Journal of Management Excellence* (Vol. 6, Issue 1).

Irshad, M. (2022). Macroeconomic Variables the Indicators for the Economic Growth of Pakistan. *Pakistan Social Sciences Review*, *6*(II). https://doi.org/10.35484/pssr.2022(6-ii)06

Karumari, M. R. S. (1999). *Academia and Society Volume 2 Number 2 An Analysis on the Growth of Tamil Nadu*.

Khan, G. S., & Mitra, P. (n.d.). A Causal Linkage between FDI Inflows with Select Macroeconomic Variables in India-An Econometric Analysis. In *IOSR Journal of Economics and Finance* (Vol. 5). www.iosrjournals.orgwww.iosrjournals.org

Mukherji, R. (2009). The State, Economic Growth, and Development in India. *India Review*, *8*(1), 81–106. https://doi.org/10.1080/14736480802665238

Odior, E. S. (2013). Macroeconomic Variables and the Productivity of the Manufacturing Sector in Nigeria: A Static Analysis Approach. In *Finance and Banking (JEIEFB) An Online International Monthly Journal* (Issue 5). www.globalbizresearch.comwww.globalbizresearch.com

Sachs, J. D., Bajpai, N., & Ramiah, A. (2002). *Understanding Regional Economic Growth in India Working Papers*.

Tripathi, S. P., & Joshi, N. Population Profile, Human Capital Formation and Economic Development of Madhya Pradesh (1951-2011).

Sahoo, B. K., & Acharya, D. (2012). Constructing macroeconomic performance index of Indian states using DEA. *Journal of Economic Studies*, *39*(1), 63-83.

Jilani, S., & Asim, M. (2010). Exploring impact of macro-economic variables on GDP of Pakistan. *IBT Journal of Business Studies (JBS)*, *2*(2).