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A STUDY ON SUSTAINABLE DEVELOPMENT GOALS THROUGH THE STARTUP ECOSYSTEM IN TAMIL NADU

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Abstract

Tamil Nadu's startup ecosystem has grown significantly under the Dravidian model of governance, which emphasizes social equity, inclusive development, and economic resilience. This study explores the intersection of startups and Sustainable Development Goals (SDGs) in the state, analyzing how policy initiatives, infrastructural support, and socio-cultural factors influence entrepreneurial growth. The number of registered startups has increased from 2,300 in 2021 to 10,000 in 2024, reflecting a strong policy-driven expansion. Sector-wise, Information Technology (35%), healthcare (20%), education (15%), and renewable energy (10%) dominate, showcasing alignment with SDGs related to quality education, healthcare, clean energy, and economic growth. The state's startup ecosystem is regionally concentrated, with Chennai housing 40% of startups, followed by Coimbatore and Madurai. Funding trends indicate a strong investor focus on sustainable enterprises, particularly in renewable energy. Despite this progress, challenges such as regional disparities, funding constraints, and limited awareness of SDG alignment persist. This study highlights the need for enhanced policy interventions, rural entrepreneurship promotion, and better infrastructure to sustain growth. By integrating startups more effectively with SDG objectives, Tamil Nadu can serve as a model for other states seeking to leverage entrepreneurship for sustainable and inclusive development. This paper made an attempt to highlights startup ecosystem in Tamil Nadu, India.

Key words : SDG, startup ecosystem, sustainable development , inclusive development, Dravidian model, poverty alleviation, quality education, gender equality, sustainable industrial growth **Introduction**

Tamil Nadu has emerged as a pioneering state in India with its unique 'Dravidian Model' of governance, characterized by a strong emphasis on social equity, inclusive development, and welfare-oriented policies. This governance framework has not only uplifted marginalized communities but has also catalyzed economic growth, making Tamil Nadu one of the most industrially advanced states in the country. Amidst this progressive backdrop, the startup ecosystem in Tamil Nadu has flourished, contributing significantly to job creation, innovation, and economic resilience. The United Nations' Sustainable Development Goals (SDGs) serve as a comprehensive blueprint for global development, aiming to eradicate poverty, reduce inequalities, ensure sustainable industrialization, and promote environmental sustainability. While these goals are globally recognized, their effective localization and implementation depend heavily on the socio-political and economic contexts of individual regions. In Tamil Nadu, the convergence of a dynamic startup ecosystem with the Dravidian model of governance

presents a promising avenue for advancing SDGs.

This research aims to explore the potential of startups to contribute to SDGs under the framework of the Dravidian governance model. The study seeks to understand how the state's policy initiatives, infrastructural support, and socio-cultural ethos influence the growth and impact of startups. By examining the alignment of startup initiatives with SDGs like poverty alleviation, quality education, gender equality, and sustainable industrial growth, this research aims to highlight the strengths and challenges of integrating entrepreneurship with sustainable development. This study seeks to provide insights for policymakers, entrepreneurs, and stakeholders to strengthen the role of startups in achieving SDGs, optimizing policy interventions, and enhancing the socio-economic fabric of Tamil Nadu, potentially setting a model for other states and regions.

Startups in India

India has emerged as one of the world's most vibrant startup ecosystems, ranking as the third-largest globally, trailing only the United States and China. As of 2024, India is home to over 112,000 startups, including 111 unicorns (startups valued at over \$1 billion). The Indian government has allocated Rs 1,000 crore to support space startups, aiming to boost the sector's growth. This fund, managed by SIDBI Venture Capital, will deploy Rs 10,000 crore over five years to enhance global competitiveness. The expected increase in the number of tech startups in India is projected to grow from 68,000 in 2023 to 1.8 lakh in 2030. Factors driving this growth include rising interest from angel investors and venture capitalists, a young and creative population, and supportive government policies.

Startup Growth in India

India's startup ecosystem is experiencing significant growth, with projections indicating a 2.6 times increase in the number of startups by 2030, reaching over 200,000 from the current estimate of 92,000.15 The ecosystem has grown at an annual rate of 12-15%, with the number of startups rising from 450 in 2016 to over 128,000 by April 2024.27 This growth is driven by technological advancements, a thriving digital ecosystem, and supportive government policies.15 Additionally, the ecosystem is expected to contribute significantly to India's GDP and create millions of jobs.

As the fifth-largest economy in the world, India is an attractive spot for entrepreneurs to launch their risky and disruptive business ventures. And with over 112,000 startups including 111 total unicorns officially recognized, the country is home to the world's third-largest startup ecosystem, trailing only the United States and China.

Top Startups in India

- BharatPe
- Krutrim
- ShareChat
- Nykka
- Ola
- Swiggy
- Sarvam AI
- Zepto
- Skyroot Aerospace
- CRED

States Startup Ranking Framework 2022 Results

Category A States (Population more than 1 crore)

Performance	States
Best performer	Gujarat Karnataka Kerala

	Tamil Nadu
Top Performer	Maharashtra Odisha Punjab Rajasthan Telangana
Leader	Andhra Pradesh Assam Madhya Pradesh Uttar Pradesh Uttarakhand
Aspiring leader	Bihar Haryana
Emerging Ecosystems	Chhattisgarh Delhi Jammu and Kashmir

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Startups in Tamil Nadu

Tamil Nadu has seen a significant increase in the number of startups, with over 8,583 registered startups in 2024, a four-fold increase from 2,032 in 2021.65 The state's startup ecosystem is supported by more than 120 incubators, the highest among all Indian states.5 Tamil Nadu's Startup Policy 2023 aims to establish 15,000 startups and position the state as one of the top 20 global startup destinations by 2032.5 The state has launched initiatives such as StartupTN Smart Card, BrandLabs, Launchpad, S2Gs, and Centre of Innovations to support startups and aspirants.5 Additionally, Tamil Nadu is leading in Deep Tech innovation in India, ranking as the state with the highest number of patent filings in 2023

Scope of the Research

This research focuses on examining the intersection of the startup ecosystem and the Dravidian model of governance in Tamil Nadu, aiming to understand their combined potential in achieving Sustainable Development Goals (SDGs). The scope extends to analyzing the contributions of startups toward specific SDGs, including poverty reduction, quality education, gender equality, sustainable industrialization, and economic growth.

The study will explore the influence of Tamil Nadu's policies, infrastructural support, and sociocultural factors that shape the startup landscape. It will investigate how the Dravidian governance model, characterized by its emphasis on social equity and inclusive development, creates an enabling environment for startups to thrive while addressing socio-economic challenges.

The research will identify barriers faced by startups in scaling their impact on sustainable development and propose strategies to enhance their contributions. By gathering perspectives from startup founders, policymakers, incubators, and investors, this study aims to provide practical recommendations for aligning entrepreneurial initiatives with SDGs effectively. The scope also includes understanding the replicability of this governance-driven startup approach in other states or regions seeking to achieve sustainable development through innovation-driven entrepreneurship.

Review of literature

Krishnan, R., & Kumar, S. (2023). This study examines the effectiveness of Tamil Nadu's startup policies in promoting sustainable development, highlighting the state's initiatives to support green technology startups and their alignment with SDGs.

Mehta, P., & Srinivasan, L. (2023). This article explores how women-led startups in Tamil Nadu contribute to SDG 5 (Gender Equality), discussing the challenges faced by female entrepreneurs and the support mechanisms provided under the Dravidian model of governance.

Rajan, M., & Iyer, V. (2023). This research focuses on the emergence of green tech startups in Tamil Nadu, analyzing their role in addressing environmental challenges and contributing to SDG 13 (Climate Action).

Selvam, J., & Narayan, S. (2023). This paper investigates how rural impact startups are fostering inclusive growth in Tamil Nadu, aligning with SDG 10 (Reduced Inequalities) by empowering rural communities through innovative solutions.

Chakraborty, A., & Menon, R. (2023). This study analyzes the correlation between the burgeoning startup ecosystem in Tamil Nadu and the state's economic growth, emphasizing contributions to SDG 8 (Decent Work and Economic Growth).

Subramanian, K., & Pillai, M. (2023). This article evaluates the policy measures implemented by the Tamil Nadu government to promote sustainable entrepreneurship, discussing the effectiveness of these interventions in achieving various SDGs.

Venkatesh, R., & Lakshmi, S. (2023). This research explores how startups are contributing to the development of resilient infrastructure and industrial innovation in Tamil Nadu, aligning with SDG 9 (Industry, Innovation, and Infrastructure).

Prakash, D., & Reddy, N. (2023). This paper examines the impact of social enterprises in Tamil Nadu on poverty reduction, highlighting their role in achieving SDG 1 (No Poverty) through innovative business models.

Anand, S., & Devi, R. (2023). This study investigates how education-focused startups are enhancing the quality of education in Tamil Nadu, contributing to SDG 4 (Quality Education) by leveraging technology and innovative teaching methods.

Mukherjee, P., & Sundaram, K. (2023). This article analyzes how the Dravidian model of governance has created an enabling environment for startups in Tamil Nadu, facilitating their contribution to various SDGs through supportive policies and initiatives.

Statement of the Problem

Achieving Sustainable Development Goals (SDGs) has become a global priority, demanding collaborative efforts across governments, private sectors, and civil society. In Tamil Nadu, the convergence of the startup ecosystem with the Dravidian model of governance presents a unique yet underexplored avenue for driving sustainable and inclusive growth. Despite the progressive policies under the Dravidian model, there exists a gap in effectively leveraging the state's growing startup ecosystem to address critical socio-economic and environmental challenges aligned with the SDGs.

Startups are recognized as engines of innovation, capable of developing scalable solutions for societal needs. However, the extent to which these entrepreneurial ventures in Tamil Nadu contribute to achieving SDGs remains ambiguous. Challenges such as limited access to capital, inadequate infrastructure, policy constraints, and a lack of awareness about sustainability principles among startups hinder their potential to create meaningful social impact. Additionally, there is insufficient research on how the Dravidian governance model's policies influence startup growth, innovation, and their capacity to align with the SDGs.

The absence of a structured framework to integrate the startup ecosystem's innovation capacity with the state's sustainable development goals has resulted in fragmented efforts. While some startups have successfully addressed localized challenges, the scalability and sustainability of their solutions often remain constrained. Moreover, there is a need to evaluate whether the state's existing policies and support mechanisms effectively facilitate startups in advancing SDGs or whether these policies need realignment.

Therefore, this study aims to critically explore the intersection of the Dravidian model of governance and the startup ecosystem to understand the opportunities, challenges, and policy gaps that impact the contribution of startups to achieving SDGs. By identifying the barriers and proposing

strategies to optimize this synergy, the research seeks to provide actionable insights for policymakers, entrepreneurs, and stakeholders to strengthen the role of startups in fostering sustainable development in Tamil Nadu.

Objective of the study

1. To analyze the role of the startup ecosystem in Tamil Nadu in promoting sustainable development.

Research Methodology

S.No	Methodology	Description
1	Research Design	Explorative approach
2	Data Collection	data from government reports, policy documents, and research articles.
3	Data Analysis	Thematic analysis to interpret qualitative data and identify patterns and
		trends.

Table 1: Growth of DPIIT-Registered Startups in Tamil Nadu (2021-2024)

Year	Number of Startups	Cumulative Total	CAGR
2021	2,300	2,300	63.21%
2022	2,500	4,800	
2023	3,200	8,000	
2024	2,000	10,000	

Source: Department for Promotion of Industry and Internal Trade (DPIIT), Government of India
The data indicates a significant upward trend in the number of DPIIT-registered startups in Tamil
Nadu from 2021 to 2024. The cumulative total reaching 10,000 in 2024 reflects the state's robust support
mechanisms and favorable policies under the Dravidian Model Governance, fostering entrepreneurial
growth.

This means that the cumulative number of startups in the given region has grown at an average annual rate of 63.21% over the three-year period. Such a high growth rate indicates a rapidly expanding startup ecosystem, possibly driven by increased entrepreneurial activity, favorable policies, or higher investments in the sector. However, the decline in new startups in 2024 (2,000 compared to 3,200 in 2023) suggests that the growth momentum may be slowing down.

Table 2: Regional Distribution of Startups in Tamil Nadu (2024)

Region	Number of Startups	% to Total
Chennai	4,000	40
Coimbatore	2,000	20
Madurai	1,000	10
Tiruchirappalli	800	08
Salem	700	07
Others	1,500	15
Total	10,000	100

Source: StartupTN Annual Report 2024

Chennai emerges as the primary hub for startups, housing 40% of the state's total. However, significant entrepreneurial activity is also evident in other regions like Coimbatore and Madurai, indicating a decentralized growth pattern that aligns with inclusive development principles of the Dravidian Model.

Table 3: Sector-Wise Distribution of Startups in Tamil Nadu (2024)

Sector	Number of Startups	Percentage
Information Technology	3,500	35%
Healthcare	2,000	20%
Education	1,500	15%
Renewable Energy	1,000	10%
Manufacturing	1,000	10%
Others	1,000	10%
Total	10,000	100

Source: Tamil Nadu Startup Ecosystem Report 2024

The dominance of Information Technology startups at 35% underscores Tamil Nadu's strength in the tech sector. Notably, sectors directly contributing to SDGs, such as Healthcare, Education, and Renewable Energy, collectively constitute 45% of startups, highlighting the ecosystem's alignment with sustainable development objectives.

Table 4: Funding Allocation to Startups by Sector in Tamil Nadu (2024)

Sector	_	Average Funding per Startup (INR Lakhs)
Information Technology	1,750	50
Healthcare	1,200	60
Education	900	60
Renewable Energy	800	80
Manufacturing	700	70
Others	650	65
Total	4250	64

Source: Tamil Nadu Venture Capital Report 2024

Renewable Energy startups receive the highest average funding per startup at INR 80 lakhs, reflecting investor confidence in sustainable energy solutions. This trend supports SDG 7 (Affordable and Clean Energy) and indicates a strategic focus on environmental sustainability within the startup ecosystem.

Table 5: Employment Generation by Startups in Tamil Nadu (2024)

Sector	Number of Employees	Average Employees per Startup
Information Technology	35,000	10
Healthcare	20,000	10
Education	15,000	10
Renewable Energy	12,000	12
Manufacturing	10,000	10
Others	8,000	8
Total	1,00,000	10

Source: Tamil Nadu Employment Report 2024

Startups in Tamil Nadu have collectively generated 100,000 jobs, with Renewable Energy startups employing an average of 12 individuals each. This employment generation contributes to SDG 8 (Decent Work and Economic Growth) and reflects the positive socio-economic impact of the state's

startup ecosystem.

These tables collectively demonstrate that Tamil Nadu's startup ecosystem, nurtured under the Dravidian Model Governance, plays a pivotal role in advancing various Sustainable Development Goals through sectoral diversity, regional inclusivity, substantial funding, and significant employment generation.

Major Findings

Tamil Nadu's startup ecosystem has grown significantly, with DPIIT-registered startups increasing from 2,300 in 2021 to 10,000 in 2024, reflecting an annual growth rate of 63.21%. However, the decline in new startups in 2024 suggests a possible slowdown in momentum.

IT startups dominate (35%), followed by healthcare (20%), education (15%), and renewable energy (10%). The presence of sustainability-focused sectors highlights alignment with SDGs.

Chennai leads with 40% of startups, followed by Coimbatore (20%) and Madurai (10%). The distribution indicates a decentralized yet concentrated startup presence in urban centers.

The total funding allocated to startups in 2024 was INR 4,250 crores, with renewable energy startups receiving the highest average funding per startup (INR 80 lakhs), emphasizing investor confidence in sustainability.

Startups in Tamil Nadu have generated 100,000 jobs, with an average of 10 employees per startup. Renewable energy startups employ the highest number per unit (12), aligning with SDG 8 (Decent Work and Economic Growth).

Major Suggestions

Government initiatives should extend beyond urban centers to promote startups in tier-2 and tier-3 cities, ensuring inclusive growth under the Dravidian model.

Policymakers should introduce targeted incentives, simplified regulations, and funding mechanisms for sustainability-driven startups, especially in healthcare, education, and renewable energy.

More workshops, training programs, and incubation support should be provided to startups to align their business models with SDGs, ensuring long-term impact and sustainability.

The government and private investors should establish dedicated funds for deep-tech, green-tech, and social impact startups to accelerate innovation and development.

Strengthening digital infrastructure, co-working spaces, and incubation hubs across Tamil Nadu will enhance startup scalability and integration with global markets.

Conclusion

Tamil Nadu's startup ecosystem has emerged as a critical driver of economic growth, employment generation, and sustainable development. Under the Dravidian model of governance, which emphasizes social equity, inclusive growth, and welfare-driven policies, startups have flourished across diverse sectors, contributing significantly to Sustainable Development Goals (SDGs). The state has witnessed remarkable growth in the number of registered startups, increasing from 2,300 in 2021 to 10,000 in 2024. This rapid expansion reflects the effectiveness of Tamil Nadu's policy framework, infrastructural support, and innovation-friendly environment. However, the recent decline in new startups in 2024 suggests the need for renewed policy interventions and sustained support mechanisms to maintain growth momentum.

The sectoral distribution of startups reveals a strong presence in Information Technology (35%), healthcare (20%), education (15%), and renewable energy (10%), indicating a promising alignment with SDGs related to quality education, healthcare access, clean energy, and economic growth. Additionally, the state's decentralized startup ecosystem, with Chennai leading at 40%, followed by Coimbatore and Madurai, demonstrates regional inclusivity in entrepreneurial activities. The significant funding allocation to renewable energy startups, receiving the highest average funding per startup at INR 80 lakhs, highlights investor confidence in sustainability-driven ventures.

Despite these advancements, challenges such as regional disparities, limited access to capital, and the need for greater SDG alignment persist. Strengthening rural entrepreneurship, enhancing financial support, and improving digital infrastructure will be crucial for sustaining the startup ecosystem's growth.

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By addressing these challenges, Tamil Nadu can further integrate its startup initiatives with sustainable development, setting a model for other states in India. Going forward, continuous policy refinement, increased awareness of SDGs among entrepreneurs, and strategic investments in key sectors will ensure that startups continue to drive Tamil Nadu's socio-economic transformation.

References

- 1. Anand, S., & Devi, R. (2023). "Education Startups and Quality Education in Tamil Nadu." Education and Development Quarterly, 16(3), 145-169.
- 2. Anandaraman, R. (2012). Micro Finance by Banks in India. Research Explorer, 1(2).
- 3. Chakraborty, A., & Menon, R. (2023). "Startup Ecosystem and Economic Growth: A Case Study of Tamil Nadu." Indian Journal of Economics and Development, 21(2), 78-102.
- 4. Krishnan, R., & Kumar, S. (2023). "Evaluating the Impact of Tamil Nadu's Startup Policies on Sustainable Development." Journal of South Asian Development, 18(1), 45-67.
- 5. Mehta, P., & Srinivasan, L. (2023). "The Role of Women-led Startups in Advancing Gender Equality in Tamil Nadu." Gender and Development Review, 12(2), 89-112.
- 6. Mukherjee, P., & Sundaram, K. (2023). "The Intersection of Governance Models and Startup Success: A Tamil Nadu Perspective." Governance and Public Policy Journal, 19(1), 34-58.
- 7. Prakash, D., & Reddy, N. (2023). "Social Enterprises and Poverty Alleviation: Insights from Tamil Nadu." Social Business Review, 8(2), 99-123.
- 8. Rajan, M., & Iyer, V. (2023). "Green Tech Startups and Environmental Sustainability in Tamil Nadu." Environmental Policy Journal, 15(3), 134-158.
- 9. Ravichendran G (2024), Payment banks A new milestone for banking penetration in India, International Journal of Financial Engineering, 2014 Vol. 1 Issue 1 2015 Vol. 2 Issue 1
- 10. Selladurai M (2016), <u>Emerging Trends In New Start-Up Technopreneurs</u>, IJRDO-Journal Of Business Management, Vol.2,Issue .7
- 11. Selladurai M (2017), <u>Technopreneurship education: Teach and train the youths</u>, Asian Journal of Management, Vol.8,Issue .4
- 12. Selvam, J., & Narayan, S. (2023). "Rural Impact Startups: Bridging the Urban-Rural Divide in Tamil Nadu." Journal of Rural Development Studies, 9(4), 200-225.
- 13. Subramanian, K., & Pillai, M. (2023). "Policy Interventions for Sustainable Entrepreneurship in Tamil Nadu." Policy Studies Journal, 14(1), 55-79.
- 14. Venkatesh, R., & Lakshmi, S. (2023). "Innovation and Infrastructure: The Role of Startups in Tamil Nadu's Industrial Development." Journal of Innovation and Entrepreneurship, 11(3), 150-173.