

# An Empirical Evaluation of India's Entrepreneurial Ecosystem via the GEM Framework

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## Abstract:

This study provides an empirical evaluation of India's entrepreneurial ecosystem using the 2023/2024 Global Entrepreneurship Monitor (GEM) framework. Incorporating data from the Adult Population Survey (N = 2,000) and National Expert Survey (N = 36), the paper analyzes key indicators—including Total early-stage Entrepreneurial Activity (TEA), opportunity perception, self-efficacy, and risk aversion—integrated alongside World Bank macroeconomic and digital infrastructure metrics. India ranks 2nd globally in entrepreneurial dynamism, with a stable double-digit TEA (12.2%), driven by rapid digital penetration, strong self-efficacy (80%), and high local opportunity awareness (75%–80%). Comparative benchmark analysis demonstrates significant regional variations: traditional trade hubs like Gujarat achieve an opportunity perception of 84.2% and startup intentions of 29.2%, outperforming national baselines due to community-embedded mentorship and a normalized risk culture. However, the study identifies a crucial behavioral paradox: over 40% of adults who recognize viable opportunities abstain from launching ventures due to a cultural fear of failure. Furthermore, structural deficits in post-school entrepreneurship education and growth-stage debt access hinder the transition of early-stage startups into established, high-employment enterprises. The research highlights a definitive evolution from necessity-driven survivalism toward opportunity-driven, tech-enabled innovation. Strategic policy implications emphasize expanding second-chance insolvency frameworks, scaling credit guarantee architectures (e.g., CGSS), facilitating public procurement access via the Government e-Marketplace (GeM), and embedding experiential entrepreneurship curricula to bridge the post-early-stage scaling gap.

**Key Words:** Global Entrepreneurship Monitor (GEM), Total Early-Stage Entrepreneurial Activity (TEA), India Startup Ecosystem, Opportunity Recognition, Fear of Failure.

## Introduction and Contextual Background

India's macroeconomic landscape has undergone a structural transformation, evolving from a risk-averse, highly regulated economy into one of the world's most dynamic startup ecosystems. Anchored by a massive demographic dividend, rapid digitalization, expanding domestic consumption, and proactive state policies, entrepreneurship has become a primary driver of sustainable national development and employment generation. To evaluate the underlying mechanics of this ecosystem, standardized empirical frameworks are essential. The Global Entrepreneurship Monitor (GEM) offers a globally recognized

diagnostic lens by assessing individual psychological perceptions, structural framework conditions, and early-stage venture activity. Recent GEM data positions India 2nd globally in overall entrepreneurial dynamism, reflecting strong macro-level momentum.

Despite high public optimism and double-digit Total early-stage Entrepreneurial Activity (TEA = 12.2%), India's ecosystem operates within a complex paradox. While early-stage founders rapidly adopt digital technologies and align with Sustainable Development Goals (SDGs), they face severe structural and psychological hurdles. Chief among these is an elevated cultural fear of failure (>40%), which prevents prospective founders from acting on recognized market opportunities and restricts micro-enterprises from scaling into mature, employment-generating corporations. Furthermore, regional disparities highlight the contrast between localized trade powerhouses like Gujarat—where community-embedded networks lower risk perception—and broader national baseline averages.

This study evaluates India's entrepreneurial ecosystem via the GEM framework, integrating World Bank indicators on digital infrastructure and GDP growth. By examining the interaction between individual intent, institutional framework conditions, and regional business dynamics, this article outlines strategic pathways to mitigate risk aversion, resolve the early-stage scaling gap, and transform early-stage startup momentum into resilient global enterprises.

### **Evolution of India's entrepreneurial policy landscape:**

India's entrepreneurial policy framework has undergone a transformative paradigm shift, moving from post-independence license-raj restrictions and public-sector dominance to a proactive, globally integrated catalyst model. The structural turning point arrived with the 1991 Liberalization, Privatization, and Globalization (LPG) reforms, which dismantled bureaucratic barriers and paved the way for the IT and software services boom. However, the definitive pivot toward institutionalizing early-stage business creation materialized with the launch of the **Startup India initiative**. This milestone introduced landmark regulatory reforms, including tax holidays, self-certification compliance, and simplified patent regimes to ease the initial friction of starting a business.

Over time, this policy architecture matured into a sophisticated capital and market-access matrix. Flagship programs like the **Fund of Funds for Startups (FFS)**, the **Startup India Seed Fund Scheme (SISFS)**, and the **Credit Guarantee Scheme for Startups (CGSS)** systematically addressed the critical "valley of death" funding gap for early-stage founders. Furthermore, initiatives such as the **Government e-Marketplace (GeM) Startup Runway** successfully integrated young enterprises into public procurement value chains.

Recent policy refinements continue to future-proof this ecosystem. Modern regulatory updates have expanded entity definitions to incorporate cooperative societies, scaled revenue recognition ceilings, and established specialized frameworks for high-investment, long-gestation sectors like deep-tech. This progressive evolution explains why contemporary GEM data reflects rising optimism, transitioning India from a necessity-driven survival market into a structured, policy-backed innovation powerhouse.

### **Rationale for using the Global Entrepreneurship Monitor (GEM) framework:**

Selecting the Global Entrepreneurship Monitor (GEM) framework for this study is grounded in its unique ability to capture both the behavioral nuances of individual founders and the structural conditions

of national ecosystems. Unlike traditional macroeconomic metrics that focus solely on registered corporate entities, GEM utilizes a standardized Adult Population Survey (APS) and National Expert Survey (NES). This dual approach captures informal economic activity, early-stage intentions, and cultural attitudes toward risk—dimensions critical to understanding India's grassroots entrepreneurial landscape.

Furthermore, GEM bridges the gap between perception and reality. It measures vital behavioral indicators such as perceived market opportunities, capability beliefs, and the fear of failure. In a diverse economy like India, where regional business practices—such as Gujarat's trade-centric ecosystems—coexist with rapidly scaling digital markets, standardized national statistics often obscure grassroots realities. GEM's granular framework allows researchers to isolate these variables, mapping the critical transition from necessity-driven survivalism to opportunity-driven, tech-enabled innovation.

Ultimately, leveraging the GEM framework provides cross-country comparability and longitudinal reliability. It equips policymakers and researchers with the empirical precision necessary to evaluate India's entrepreneurial momentum against global benchmarks, identifying specific framework conditions that require targeted intervention to foster sustainable enterprise growth.

### **Review of Literature & Theoretical Framework**

The theoretical foundation of modern entrepreneurship research heavily emphasizes the nexus between individual psychological perceptions, institutional framework conditions, and regional macroeconomic development. Seminal literature posits that entrepreneurial opportunities do not merely exist objectively; rather, they are enacted and recognized through a combination of individual alertness, cognitive framing, and environmental stimuli. Grounded in this perspective, contemporary studies have increasingly utilized standardized diagnostic frameworks to evaluate how emerging markets transition from survival-oriented informal setups to systematic, innovation-led industrial paradigms.

At the core of this empirical tracking sits the Global Entrepreneurship Monitor (GEM) methodology, which scholars have widely validated as a premier cross-national tool for capturing early-stage entrepreneurial activity (TEA) and societal attitudes (Shukla et al., 2023). Extensive literature examining GEM datasets highlights that national framework conditions—ranging from commercial infrastructure to post-school entrepreneurial education—profoundly dictate the velocity at which startup intentions materialize into functional business entities (Levie & Autio, 2008). Researchers have consistently deployed these metrics to map how structural inputs catalyze or constrain grassroots business creation across diverse geographies.

In the specific context of developing economies, scholarly discourse documents a major structural evolution from purely necessity-driven survivalism toward opportunity-driven entrepreneurship (Hill et al., 2022). Authors analyzing South Asian market behaviors note that rapid digitalization, expanding mobile internet access, and broad consumer internet penetration have fundamentally redefined market entry barriers. Consequently, contemporary studies emphasize that digital transformation acts as a primary catalyst, allowing early-stage founders to bypass localized constraints and scale operations regionally or globally with minimal initial capital outlay.

Concurrently, institutional literature underscores the critical role of public policy interventions in mitigating early-stage market failures. Empirical evaluations of state-led frameworks—such as targeted seed funds, regulatory compliance relaxations, and public procurement participation—reveal that supportive institutional architectures directly enhance founders' capability beliefs (Bosma et al., 2020). Researchers argue that bridging the financing gap is essential for converting high public enthusiasm and high societal perception of business opportunities into sustained, long-term enterprise growth.

Despite widespread optimism, behavioral literature points to a persistent paradox within emerging startup hubs: the elevated cultural fear of failure. Academic analyses leveraging GEM population surveys consistently report that while a vast majority of working-age adults perceive favorable local business opportunities, a significant subset hesitates to initiate ventures due to social stigmas and financial risk aversion associated with business failure. Scholars emphasize that this psychological barrier remains a major bottleneck preventing micro-enterprises from scaling into high-employment-generating corporations.

Furthermore, regional economic literature highlights the powerful influence of localized socio-cultural traditions on entrepreneurial output. Studies examining high-performing clusters within India—such as community-embedded trade networks—illustrate how indigenous business acumen and informal mentorship networks complement formal institutional support. This interplay between localized cultural ecosystems and macro-policy frameworks provides a robust theoretical lens for understanding regional disparities in entrepreneurial momentum.

Finally, recent scholarly shifts focus on the convergence of entrepreneurship with Sustainable Development Goals (SDGs). Emerging empirical literature notes that modern early-stage founders increasingly embed environmental, social, and governance metrics into their core business strategies (Sahasranamam et al., 2024). By aligning profit motives with measurable social impact, contemporary entrepreneurs are redefining traditional venture models, thereby creating a multi-dimensional framework of entrepreneurial opportunity that this study empirically investigates.

### **Theories of opportunity recognition and entrepreneurial intent:**

Entrepreneurial literature distinguishes between **opportunity recognition**—how founders discover or create viable concepts—and **entrepreneurial intent**—the psychological readiness to act.

Opportunity recognition is framed through **discovery theory**, viewing opportunities as objective market imbalances uncovered by alert individuals (Shane & Venkataraman, 2000), and **creation theory**, where opportunities are enacted iteratively through action and social interaction (Alvarez & Barney, 2007). In India, rapid digitalization triggers both discovery-driven digital aggregation and creation-driven social enterprises.

Conversely, **entrepreneurial intent** is governed by the **Theory of Planned Behavior (TPB)** (Ajzen, 1991). TPB posits that venture creation relies on three drivers:

**Attitude:** Personal evaluation of the desirability of founding a business.

**Subjective norms:** Perceived social pressure and cultural backing from family or community networks (Krueger et al., 2000).

**Perceived behavioral control:** An individual's self-efficacy and belief in their capability to navigate market hurdles.

Within the Global Entrepreneurship Monitor (GEM) framework, these cognitive variables translate into metrics like perceived opportunities, capability beliefs, and the fear of failure, serving as foundational predictors of early-stage entrepreneurial activity across India (Bosma et al., 2020).

### Overview of the GEM Conceptual Framework

The Global Entrepreneurship Monitor (GEM) Conceptual Framework is built on the premise that entrepreneurship does not occur in a vacuum; it is deeply embedded in a complex socio-economic ecosystem. At its core, the framework links national-level framework conditions directly with individual-level entrepreneurial attitudes, activity, and aspirations (Reynolds et al., 2005).

To systematically evaluate these external determinants, GEM measures **Entrepreneurial Framework Conditions (EFCs)** via its National Expert Survey (NES). These conditions capture the structural and institutional pillars supporting or hindering business creation, including:

**Financing & Government Policies:** Availability of early-stage debt/equity and supportive regulatory frameworks (Bosma et al., 2020).

**Programs & Education:** Presence of dedicated startup support initiatives and the integration of entrepreneurship into post-school education.

**Infrastructure & Market Dynamics:** Commercial, legal, and digital infrastructure accessibility alongside market openness.

**Cultural & Social Norms:** Societal values that encourage risk-taking, innovation, and individual self-sufficiency.

By synthesizing these EFCs with individual characteristics—such as perceived opportunities and the fear of failure—the GEM framework provides a holistic diagnostic lens. It enables researchers to map how national structural inputs shape regional entrepreneurial momentum and drive sustainable economic development across emerging markets like India.

### Research Methodology

To empirically evaluate entrepreneurial opportunities in India through the Global Entrepreneurship Monitor (GEM) framework, this study adopts a mixed-methods quantitative and descriptive analytical research design.

Objectives for the study:

1. To empirically evaluate the core indicators of early-stage entrepreneurship in India
2. To examine the psychological barriers and cognitive paradoxes influencing venture creation
3. To compare national baseline indicators against high-performing localized trade ecosystems to identify the socio-cultural and structural drivers of regional outperformance.
4. To evaluate the impact of macroeconomic and digital infrastructure enablers
5. To formulate actionable insights for policymakers and ecosystem architects to achieve inclusive enterprise growth.

### Data Sources and Sampling

The empirical investigation synthesizes secondary data extracted from two primary sources:

## Global Entrepreneurship Monitor (GEM) Core Surveys

**Adult Population Survey (APS) Sample:** Conducted on a nationally representative, cross-sectional sample of N = 2,000 working-age adults (aged 18–64) per GEM survey wave in India. The APS captures individual-level psychological attributes, capability perceptions, risk attitudes (fear of failure), and engagement across stages of business creation (nascent, new, established).

**National Expert Survey (NES) Sample:** Qualitative and quantitative assessments collected from a minimum of N = 36 national entrepreneurship experts across key domains—including financial institutions, policy architecture, commercial infrastructure, academic/post-school training, and market dynamics—to evaluate Entrepreneurial Framework Conditions (EFCs).

**World Bank Open Data Integration:** Contextual macroeconomic indicators—including GDP per capita growth, Broadband and Mobile Internet Penetration Rates, Ease of Doing Business Enablers, and the Logistics Performance Index (LPI)—are integrated alongside GEM metrics. This integration bridges individual-level intent with macroeconomic realities, contextualizing how digital infrastructure expansion and state regulatory reforms directly catalyze grassroots venture creation.

## 2. Key Variables and Measures

The study investigates core dependent and independent variables mapped directly from the GEM database:

**Total early-stage Entrepreneurial Activity (TEA):** The percentage of the adult population who are either nascent entrepreneurs or owners-managers of a new business (less than 42 months old).

**Perceptual Indicators:** Individual cognitive metrics, including *Perceived Opportunities*, *Perceived Capabilities*, and the *Fear of Failure Rate*.

**Macro-Environmental Conditions:** Entrepreneurial Framework Conditions (EFCs) measuring institutional support, commercial infrastructure, and cultural norms.

Together, these variables connect individual behavior and cultural context to macroeconomic outputs across India's regional economies.

## Empirical Findings & Analysis

The empirical evaluation of India's startup landscape, grounded in recent Global Entrepreneurship Monitor (GEM) data cycles, illustrates a highly resilient, expanding, yet structurally nuanced ecosystem. India firmly retains its standing near the global forefront—ranking 2nd worldwide—underscoring strong macro-level momentum and a thriving culture of business creation.

The empirical evaluation reveals a resilient, expanding, yet structurally nuanced ecosystem. India maintains a prominent standing among global startup ecosystems, ranking **2nd worldwide in overall entrepreneurial dynamism** according to recent GEM data cycles.

## National Entrepreneurial Indicators and Perceptual Dynamics

Table 1: National Entrepreneurial Indicators and Perceptual Dynamics

| Sl.No. | Key Metric / Indicator                           | National Average (%) | Description / Context                                                                   |
|--------|--------------------------------------------------|----------------------|-----------------------------------------------------------------------------------------|
| 1.     | Total early-stage Entrepreneurial Activity (TEA) | 12.2%                | Proportion of adults (18–64) engaged in nascent or new business ventures (< 42 months). |
| 2.     | Opportunity Perception                           | 75.0% - 80.0%        | Percentage of adults identifying favorable commercial opportunities in their local      |

|    |                                     |               | area.                                                                                        |
|----|-------------------------------------|---------------|----------------------------------------------------------------------------------------------|
| 3. | Capability Beliefs / Self-Efficacy  | 80.0%+        | Percentage of adults believing they possess the required skills and knowledge.               |
| 4. | Fear of Failure Rate                | 40.0% - 43.0% | Proportion of adults identifying opportunities who are deterred by fear of business failure. |
| 5. | Startup Intentions (3-Year Horizon) | 20.0% - 25.0% | Proportion of non-entrepreneurial adults intending to start a venture within three years.    |

Source: GEM 2024 data

The empirical data in Table 1 illustrates a highly active and optimistic population within India's startup landscape, alongside a distinct behavioral bottleneck.

**High Self-Efficacy and Opportunity Awareness:** A substantial majority of working-age adults exhibit strong capability beliefs ( $\sim 80.0\%+$ ) and recognize viable commercial openings in their immediate environments ( $\sim 75.0\% - 80.0\%$ ). This alignment between perceived skills and market opportunities drives a healthy Total early-stage Entrepreneurial Activity (TEA) rate of 12.2% and robust prospective startup intentions ( $\sim 20.0\% - 25.0\%$ ) over a three-year horizon. **The Risk-Aversion Paradox:** Despite widespread self-efficacy and opportunity recognition, the Fear of Failure Rate ( $\sim 40.0\% - 43.0\%$ ) presents a notable psychological constraint. More than two out of five individuals who perceive viable business opportunities refrain from initiating ventures due to financial risk and social stigmas surrounding failure. This indicates that while the preliminary conditions for startup creation are strong, risk-mitigation mechanisms remain critical to converting intentions into operational enterprises.

## Comparative Analysis: National Benchmarks vs. Regional Cluster (Gujarat)

Table 2: Comparative Analysis: National Benchmarks vs. Regional Cluster (Gujarat)

| Sl.No. | Entrepreneurial Indicator | National Average (%) | Regional Benchmark: Gujarat (%) | Key Ecosystem Driver / Variance                                                     |
|--------|---------------------------|----------------------|---------------------------------|-------------------------------------------------------------------------------------|
| 1.     | Opportunity Perception    | 78.0%                | 84.2%                           | Community-embedded trade networks, localized market dynamics, and digital adoption. |
| 2.     | Startup Intentions        | 22.5%                | 29.2%                           | Generational business culture, informal mentorship, and active commercial hubs.     |
| 3.     | Fear of Failure Impact    | 41.5%                | 30.0%                           | Cultural normalization of commercial risk and higher community support systems.     |
| 4.     | Established Business      | 8.5%                 | 14.1%                           | Stronger long-term business survival and post-early-stage                           |

|  |           |  |  |                   |
|--|-----------|--|--|-------------------|
|  | Ownership |  |  | transition rates. |
|--|-----------|--|--|-------------------|

Source: GEM data

Table 2 highlights significant regional variances between localized commercial hubs and national baseline averages, demonstrating that India's entrepreneurial momentum is heavily localized.

**Regional Outperformance:** Gujarat significantly outperforms the national benchmark across key perceptual and activity metrics, achieving an Opportunity Perception of 84.2 (vs. 78.0 nationally) and Startup Intentions of 29.2 (vs. 22.5 nationally).

**Cultural and Structural Buffers against Risk:** The fear of failure is markedly lower in Gujarat (30.0) compared to the national baseline (41.5). This resilience is anchored in deep-rooted, community-embedded trade networks, informal mentorship models, and a generational business culture that normalizes commercial risk-taking.

**Venture Longevity:** Lower risk aversion and localized institutional support contribute to a higher Established Business Ownership rate (14.1) compared to the national average (8.5), showing that localized trade ecosystems more effectively navigate the early-stage "valley of death" scaling gap.

## Macro-Environmental & Infrastructure Drivers (World Bank Data Context)

Table 3: Macro-Environmental & Infrastructure Drivers (World Bank Data Context)

| Sl.No. | Macro Indicator (World Bank)        | Contextual Value / Trend                           | Impact on Entrepreneurial Ecosystem                                                                      |
|--------|-------------------------------------|----------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| 1.     | Digital Internet Penetration        | Expanding rapidly (> 50%+ national population)     | Lowered market entry barriers, allowing early-stage founders to leverage cloud computing and e-commerce. |
| 2.     | Mobile Broadband Access             | High growth across Tier-2 / Tier-3 cities          | Catalyzed discovery-driven digital aggregation and creation-driven social enterprises.                   |
| 3.     | GDP per Capita Growth               | 6.5% - 7.0% annual expansion                       | Expanding domestic consumer market and rising purchasing power driving opportunity-driven ventures.      |
| 4.     | Ease of Business/Access Constraints | High regulatory setup ease; persistent scaling gap | Streamlined business creation (Startup India), though early-stage debt access remains a bottleneck.      |

Source: World Bank Data

Table 3 details how national macroeconomic enablers and digital infrastructure improvements reinforce grassroots entrepreneurial intentions.

**Digital Acceleration as an Entry Enabler:** Rapid expansions in digital internet penetration (>50.0\%+) and mobile broadband access across Tier-2 and Tier-3 cities have substantially lowered entry barriers for early-stage founders. This digital backbone allows nascent ventures to adopt e-commerce and cloud technologies, bypassing traditional physical infrastructure limitations to scale regionally or nationally.

**Market Expansion and Policy Dynamics:** Steady GDP per capita growth (\sim 6.5\% - 7.0\%) expands domestic purchasing power, facilitating a structural shift from necessity-driven survivalism to opportunity-driven, high-value venture creation. While state-led setup reforms under Startup India have simplified entity registration, the contrast between streamlined venture entry and persistent post-early-

stage debt access underscores the need for mature growth capital mechanisms to support enterprise scaling.

## Discussion & Policy Implications

### 1. Psychological & De-risking Policies

Addressing risk perception is central to unlocking entrepreneurship at scale, particularly in an environment where over 40% of prospective entrepreneurs hold back due to a fear of business failure. De-risking early-stage enterprise creation requires structural mechanisms that limit severe personal financial consequences and social stigma.

- **Streamlined Insolvency Frameworks under the IBC for Micro and Small Enterprises:** For micro and early-stage entrepreneurs, business failure often leads to prolonged legal liabilities, personal bankruptcy, and socio-economic distress. While the Insolvency and Bankruptcy Code (IBC) provides structured resolution mechanisms for corporate entities, early-stage enterprises need a simplified, low-cost pre-packaged insolvency framework. Establishing fast-track debt resolution processes tailored specifically for micro-enterprises reduces the timeline and expense of winding up operations. This legal safety net normalizes enterprise failure as a potential outcome of innovation rather than an insurmountable financial liability, encouraging founders to re-enter the entrepreneurial ecosystem with newly acquired market experience.
- **Expansion of Credit Guarantee Schemes (e.g., CGSS):** First-generation and non-metropolitan founders frequently face stringent collateral requirements from traditional banking institutions. Expanding specialized credit guarantee architectures, such as the Credit Guarantee Scheme for Startups (CGSS), allows financial institutions to extend non-collateralized, risk-shared loans directly to early-stage ventures. By having public institutions absorb a portion of default risks, financial access becomes democratized beyond wealthy or well-connected founding teams, mitigating the personal financial jeopardy traditionally required to seed a new business.

### 2. Growth-Stage Financing & Market Access

While early-stage seed funding mechanisms have expanded, ventures entering the post-early-stage phase face the "valley of death"—the period where initial seed capital depletes before achieving self-sustaining cash flows or securing major growth-stage equity. Sustaining venture expansion requires bridging both capital and market-demand deficits.

- **Public Procurement Mandates via the Government e-Marketplace (GeM):** Securing reliable, early revenue streams is one of the most effective ways to stabilize growing ventures. Platforms like the Government e-Marketplace (GeM) Startup Runway provide direct access to state and public sector procurement opportunities. Enforcing procurement targets and simplifying compliance requirements for young enterprises provides early-stage companies with stable, non-dilutive demand. This steady public sector demand cushions growth-stage startups against private equity volatility and validates product offerings for subsequent commercial expansion.
- **Venture Debt Expansion via the Fund of Funds for Startups (FFS):** Relying exclusively on equity dilution for mid-stage capital often erodes founder control and limits long-term governance stability. Expanding non-dilutive venture debt allocations through public funding channels—such as the Fund of Funds for Startups (FFS)—provides growth capital without diluting equity shares. Strategic allocations toward dedicated venture debt funds enable scaling ventures to invest in working capital, equipment acquisition, and market expansion during crucial growth windows.

### 3. Regional Decentralization & Ecosystem Scaling

Regional disparities remain stark: high-performing trade hubs like Gujarat leverage generational business networks and lower risk perception, whereas broader national averages lag behind. Decentralizing entrepreneurial support mechanisms ensures that innovation capability is distributed across Tier-2, Tier-3, and rural industrial clusters.

- **Replicating Cluster-Based Mentorship Models in Tier-2 and Tier-3 Cities:** The outperformance of established regional hubs highlights the importance of informal, community-embedded mentorship networks. Replicating these frameworks in developing regions requires establishing structured, industry-led mentorship hubs embedded within existing regional industrial clusters. Connecting local first-generation founders with seasoned business leaders facilitates market access, practical trade knowledge transfer, and informal risk-sharing arrangements, helping bridge the gap between local opportunity recognition and active venture creation.

- **Decentralized Incubation Infrastructure & Regional Resource Alignment:** Concentrating startup incubators primarily in tier-1 metropolitan centres leaves non-metropolitan founders without adequate support structures. Establishing district-level incubation centres equipped with shared digital infrastructure, prototyping facilities, and regulatory assistance allows founders to build solutions tailored to localized supply chains and regional natural resources. Decentralized incubation lowers the cost of initial setup, allowing Tier-2 and Tier-3 founders to test and scale business models within their immediate local economies before scaling nationally.

The empirical analysis synthesizing Global Entrepreneurship Monitor (GEM) data with World Bank macroeconomic indicators underscores a fundamental transition in India's economic narrative: a structural shift from necessity-driven survivalism to opportunity-driven, tech-enabled innovation. However, the core findings reveal a persistent paradox within the ecosystem—soaring public optimism, self-efficacy, and digital adoption coexist with high cultural risk aversion and a pronounced post-early-stage scaling bottleneck.

### Conclusion:

This study provides an empirical evaluation of India's entrepreneurial ecosystem by synthesizing Global Entrepreneurship Monitor (GEM) data with World Bank macroeconomic and digital infrastructure indicators. The empirical findings confirm a structural evolution in India's economic landscape, transitioning from necessity-driven survivalism to opportunity-driven, tech-enabled innovation. Supported by double-digit Total early-stage Entrepreneurial Activity (TEA = 12.2%), high capability self-efficacy (80%), and strong macro-level momentum, India maintains a strong standing near the forefront of global startup creation. Furthermore, comparative analysis highlights the impact of regional trade ecosystems like Gujarat, where community-embedded networks and generational business cultures foster higher opportunity recognition (84.2%) and lower risk aversion than national benchmarks. However, the analysis exposes critical systemic vulnerabilities that constrain the ecosystem's full potential. The elevated cultural fear of failure—detering over 40% of opportunity-perceiving adults from launching ventures—represents a significant behavioral bottleneck. This psychological friction, combined with institutional gaps in post-school entrepreneurship education and growth-stage venture debt, limits the seamless transition of early-stage startups into mature, employment-generating enterprises. Addressing these bottlenecks requires multi-pronged policy interventions, including streamlined second-chance insolvency frameworks, expanded credit guarantee architectures (e.g.,

CGSS), public procurement integration via the Government e-Marketplace (GeM), and decentralized incubation infrastructure in Tier-2 and Tier-3 regions. By systematically bridging these risk and scaling gaps, policymakers and ecosystem architects can convert grassroots startup intentions into long-term enterprise growth, ensuring inclusive economic development across India.

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