deAsra यशस्वी उद्योजक Voice of deAsra

ARTHA GLOBAL

The State of Nano-enterprises in Maharashtra

OCTOBER 2026



Foreword



India needs to create 100 million jobs over the next ten years. A challenge of this scale cannot be met by a few large employers alone. To achieve this goal, we need millions of job creators.

Nano-entrepreneurs can be those job creators. They run food counters, beauty salons, retail stores, repair shops and small manufacturing units. They work as photographers, designers and service providers. Our ambition must go beyond helping them create livelihoods for themselves or employ one or two others. We must enable them to scale into sustainable businesses employing tens of people. If millions of nano-enterprises make this transition, they can become a powerful engine of employment and broad-based economic growth.

This conviction is at the heart of deAsra Foundation's mission. We have supported more than one million nano-entrepreneurs so far in starting, managing and growing their businesses. Our experience has taught us that they do not lack ambition, energy or resilience. What they often lack are the rails that enable them to scale: access to markets, appropriate finance, practical business capabilities, technology, skilled workers and policies designed for enterprises of their size.

We cannot build the right rails without first developing a clear, evidence-based understanding of nano-enterprises and their diverse growth journeys. Today, they remain largely invisible in economic data and public policy. They are grouped with businesses many times their size or viewed primarily as livelihood activities rather than as potential employers. Their ambitions, constraints and growth journeys deserve recognition in their own right.

That is why deAsra supported Artha Global in undertaking this study. The report brings rigorous, ground-level evidence to an important but insufficiently understood part of our economy. It moves beyond treating nano-enterprises as one homogeneous group and examines why some grow, why others remain constrained, and what different enterprises need to progress. I commend the Artha Global team for undertaking this pioneering work and for placing the experiences of nano-entrepreneurs at its centre.

This report should mark the start of a continuing endeavour. Regular surveys can show how the sector is evolving, whether policies and programmes are producing results, and where new opportunities or constraints are emerging. Over time, such evidence can help government, financial institutions and enterprise-support organisations build better rails for nano-entrepreneurs.

To solve India's jobs challenge, we must look beyond creating livelihoods alone. We must help nano-entrepreneurs cross the threshold from self-employment to job creation—and from small operations to sustainable businesses employing tens of people. This requires recognition, evidence, enabling policy, and sustained action. I hope this report strengthens that resolve and helps place nano-entrepreneurs where they belong: at the centre of India's employment strategy.

Anand Deshpande, Ph.D.
Founder, deAsra Foundation

About Artha

Artha Global is a globally networked policy consulting organisation that partners with governments, multilateral agencies, philanthropies, and the private sector to address systemic challenges that hinder people's aspirations for shared prosperity and opportunity.

Artha Global Research Team:

Neelanjan Sircar
Priya Vedavalli
Vidisha Mehta
Ishana Deshpande
Aadya Jain
Ananya Sarda
Karan Shah
Niranjan Rajadhyaksha

Designed By: Meher Rajpal

Edited By: Veena Venkateshwaran at Sirius Interactive

Disclaimer and Terms of Use

This study was commissioned by deAsra Foundation and conducted by Artha India Research Advisors Pvt. Ltd. The copyright in this report vests exclusively with deAsra Foundation.

About deAsra Foundation

Founded in 2013 and funded by the Deshpande Family, deAsra Foundation is a not-for-profit organisation working to enable growth-oriented entrepreneurship and job creation at scale.

Founder: Dr. Anand Deshpande
Founder, Chairman & Managing Director, Persistent Systems

deAsra combines practical business support, technology and ecosystem partnerships to help entrepreneurs access the knowledge, resources, opportunities and connections they need to grow.



Who We Serve — Nano-Entrepreneurs

EMPOWERING INDIA'S NANO-ENTREPRENEURS

We define **nano-enterprises** as small businesses with the **potential and ambition to grow beyond ₹10 lakh in annual revenue.**

These businesses may be small individually, but collectively they represent a significant opportunity for **enterprise growth and job creation.**



10 Lakh Users — Milestone

10 LAKH USERS. ONE MILESTONE. A DECADE OF IMPACT.

deAsra has reached 10 lakh users on its platform.

A milestone that reflects a decade of reaching entrepreneurs with the knowledge, resources, opportunities and connections that can help them start, stabilize and scale.

10,00,000+ users reached through the deAsra platform



Our Three Pillars Of The dreamBIG Framework

INSPIRE
For future-ready youth

We inspire young people to see entrepreneurship as a pathway to creating opportunities and jobs — by building entrepreneurial mindsets, business skills and confidence.



IGNITE
For growth-oriented nano-entrepreneurs

We help nano-entrepreneurs move from potential to growth by enabling access to **Markets, Funds, Talent, Technology and Compliance** with knowledge, resources and connections.

INFORM
For the entrepreneurial ecosystem

We inform **entrepreneurs, policymakers, institutions and ecosystem stakeholders** through knowledge, stories (through Yashaswi Udyojak) research and insights (through INSIGHTs) that strengthen the environment in which businesses operate.

Table of Contents

Glossary 6

Key Insights At A Glance 7

01 Introduction 10
1.1 The Struggle To Make It Big 10
1.2 The Need For Policy 13
1.3 This Report 17

02 Defining Nano-enterprises 18

03 Scope & Objectives 20
3.1 Key Themes 20
3.2 Study Design 21
3.3 Why Maharashtra 22
3.4 Rationale For Archetypes 22

04 Methodology 23

05 Existing Surveys & Studies On Nano-enterprises 25
5.1 Current Landscape 25
5.2 Key Challenges & Responses 26

06 Section I • Nano-enterprises: Key Themes & Findings 29
6.1 Overarching Trends 29
6.2 Growth Archetypes 32
6.3 Access To Credit 40
6.4 Access To Markets 46
6.5 Digital Integration 50
6.6 Hiring And Workforce 54
6.7 Registration, Compliance and Formalisation 60
6.8 Firm Structure 67

07 Section II • Thematic Deep Dive: DPI, ONDC & Other Unfinished Bridges To Complete Digital Adoption 72
7.1 Payments: A Universal But Foundational Rail 72
7. 2 Platforms: The Missing Bridge To Digital Integration 74
7. 3 Entrepreneurial Orientation Is Associated With How Far Firms Progress Digitally 76
7. 4 Why Firms Stop At Payments 78
7.5 The Digital Dividend: Where Business Value Emerges 79
7. 6 From Digital Transactions To Digital Businesses 80

08 Policy Recommendations 81
8.1 Why Nano-Enterprises Should Be Treated As A Separate Segment 81
8.2 Moving Nano-Enterprises Towards Growth: Five Policy Priorities 83
8.3 From Five Interventions To Tailored Pathways For Growth 90

Appendix 91
Appendix 1: Sampling & Fieldwork Methodology 91
Appendix 2: Variable Construction 92
Appendix 3: Survey Questionnaire 96

Endnotes 97

Glossary

ASI	Annual Survey of Industries
ASUSE	Annual Survey of Unincorporated Sector Enterprises
CA	Chartered Accountant
CMEGP	Chief Minister Employment Generation Programme
DPI	Digital public infrastructure
EMI	Equated monthly installment
ESDP	Entrepreneurship and Skill Development Programme
GDP	Gross domestic product
GST	Goods and services tax
GVA	Gross value added
ICRIER	Indian Council for Research on International Economic Relations
IFC	International Finance Corporation
LEAD	Leveraging Evidence for Access and Development Centre
MCED	Maharashtra Centre for Entrepreneurship Development
MSE-CDP	Micro & Small Enterprises Cluster Development Programme
MSICDP	Maharashtra State Industrial Cluster Development Programme
MSME	Micro, small and medium enterprise
NCEUS	National Commission for Enterprises in the Unorganised Sector
NCS	National Career Service
ODOP	One District One Product
OECD	Organisation for Economic Co-operation and Development
ONDC	Open Network for Digital Commerce
PCA	Principal component analysis
PMMY	Pradhan Mantri Mudra Yojana
QR	Quick response
RAMP	Raising and Accelerating MSME Performance
SME	Small and medium enterprise
TEAM	Trade Enablement and Marketing
UPI	Unified Payments Interface

Key Insights at a Glance

Nano-enterprises are not short of ambition; they are short of a runway for growth. Across the state of Maharashtra, these tiny firms, with an annual turnover between Rs. 20 lakh and Rs. 2 crore, sit at distinct points along a common trajectory. Some are already scaling; others are growing but lack the resources to reach the next stage; many have ambitions but remain stagnant; and a small group is content with the status quo. The opportunity as well as the challenge lies in understanding what separates these four types of nano-enterprises, and what it would take to help them level up. This has profound implications for the wider Indian economy, specifically for employment growth and income generation.

Nano-enterprises occupy a blind spot in the enterprise system – located between very small livelihood businesses and established small enterprises – but are often treated as part of a single microenterprise category. Having crossed the basic registration milestone, most of these firms aspire to grow but face constraints that are different across firms. Support, therefore, has to be tailored to their specific challenges and not offered as a broad set of solutions for the universe of nano-enterprises. Often a bottleneck for these firms is not whether support exists but whether it reaches the specific point where the business is getting stuck.

By studying 2,001 nano-enterprises across six districts of Maharashtra (covering all administrative regions), this study presents eight key takeaways for how policy can better target and respond to the needs of this unique subset of enterprises.

1. Turnover alone is not an indicator of nano-enterprises that need support

Nano-enterprises are not a homogeneous group. Based on revenue trends, growth ambition and hiring behaviour, the businesses in our sample fall into four distinct archetypes: 38% are Scalers who have rising revenues, growth ambition and have converted that ambition into organisational expansion through hiring. 25% are Aspirants: their revenues are rising, they want to expand, but they have not yet translated this intent into workforce growth. 33% are Stagnant Incumbents, with stable or declining revenues, and 4% are Passive Beneficiaries, whose revenues have grown without a corresponding growth in ambition.

A growing firm that wants to expand faces a different problem from a stagnant firm, even when both have the same turnover. So turnover alone is not enough to identify firms with growth potential or the support they need.

2. Many firms want to grow but have not yet made the transition

85% of firms report some form of forward growth ambition, but only 38% have actioned that ambition and realised organisational growth.

This gap is particularly important for Aspirants and Stagnant Incumbents with growth aspirations, for they do not lack entrepreneurial intent but grapple

with barriers to market access, finance, skills or organisational capability. Targeted policy support is vital if these firms are to translate their ambition into growth.

3. Access to markets is the most widely reported constraint

Market access is the most common constraint, particularly among retail and trading firms, where 50.5% identify it as a primary challenge. For many firms, this is fundamentally a physical market access problem: reaching customers beyond an immediate catchment, competing for footfall, entering new geographies and maintaining a sufficient customer base.

Digital marketplaces offer a potential route to expand this reach, but adoption remains limited. Less than 1% of firms use ONDC or related seller applications, and qualitative interviews point to concerns around fraud, returns, logistics and price competition. For many nano-enterprises, therefore, the constraint is not simply getting onto a marketplace, be it physical or digital, but turning productive capacity into sustained and scalable demand.

4. Credit needs and borrowing patterns vary across nano-enterprises

Credit demand is not uniform across nano-enterprises. 43% of firms report no need for credit, and among non-borrowers, 75% say they did not need credit, compared with only 2% who cite fear of rejection. Low borrowing, therefore, does not by itself indicate that firms are unable to access credit.

Where firms do borrow, banks remain the dominant formal source. Borrowing is generally small-ticket and short-term: 73% of reported loans are below Rs. 5 lakh, while 60% of borrowing firms require collateral. At the same time, interest rates, documentation requirements and repayment conditions can discourage firms that do want to borrow.

The financing challenge therefore differs across firms. Growth-oriented enterprises report greater financing needs and may require finance to support expansion, while some more established firms deliberately avoid debt. For firms seeking finance, the issue is not simply increasing the overall supply of credit, but ensuring that available financing is suited to the scale, cash flows and risks of nano-enterprises.

5. Digital adoption is widespread but still shallow due to a capability gap

Almost nine in ten firms use digital payment applications (89.5%), but adoption drops sharply for tools that support business growth: 44.3% use social media, 13.9% digital accounting or invoicing, 13.6% business listings and just 7.7% B2C e-commerce. The issue is no longer simply access to digital infrastructure. The missing layer is business capability: knowing how to use digital tools to acquire customers, maintain records, manage transactions and build a business that can grow.

6. Hiring is constrained by skills and affordability

Nano-enterprises struggle to find workers with the skills they need at wages they can afford. This problem is most acute in the manufacturing sector: around 35% of manufacturing firms report skill shortages as against roughly 22% of retail and trading firms. Additionally, firms in the lower turnover range rely heavily on personal networks to recruit, which limits their access to workers outside existing connections. This is simultaneously a skills-mismatch and an information problem that calls for a two-sided solution: training that aligns with the technical skills demanded by local enterprises and better matching between small firms and workers.

7. Formalisation is widespread, but its benefits are not

Most of the sampled nano-enterprises have crossed the basic formalisation threshold: 78% are Udyam-registered and 69% have GST registration. Udyam-registered firms are also nearly three times as likely to have borrowed from a bank as unregistered firms (36.9% versus 12.7%).

But registration is not the end of the process. Among Stagnant Incumbents, nearly one-quarter report that Udyam made no difference to their business, while 46% report never interacting with government agencies.

This points to a shift in policy challenge: from simply getting firms registered to making the formal status easier to navigate and use. Formalisation can open the door to finance, procurement and government schemes, but firms still need to understand and successfully access these benefits.

8. The priority is not more programmes, but targeted support to overcome specific constraints

Instead of another layer of programmes, the priority is to make existing infrastructure work better for this segment of enterprises: connect firms to demand, help clusters build market visibility, provide practical digital capabilities, improve local skills matching and make formal status easier to navigate.

The common thread is closing the gaps between infrastructure and actual enterprise capability – between being listed and being discovered, between being registered and accessing opportunities, having a vacancy and finding the right worker, and using digital payments and building a more productive business.

The central message is simple: nano-enterprises are not a homogenous group and therefore cannot be addressed by one policy. They need the right intervention at the point where they are getting stuck.

01

Introduction

India's nano-enterprises (a subset of microenterprises), which consist of the smallest of firms, constitute one of the largest segments of the country's enterprise base but remain the least understood. Employing millions of people across sectors, micro and nano-enterprises form the backbone of local economic activity, jointly accounting for ~97% of micro, small and medium enterprise (MSME) employment[1] and roughly 30% of India's gross domestic product (GDP)[2]. However, they are underserved both by policy and finance. Although characterised as small, informal, owner managed and operating with minimal capital, nano-enterprises are far from homogeneous. Some operate as stable livelihood businesses, others show clear growth ambition alongside rising revenues and a subset are distressed entrepreneurs facing stagnation or decline. A lack of understanding of these distinctions and the constraints that shape them is a key challenge in designing effective enterprise support systems.

1.1 THE STRUGGLE TO MAKE IT BIG

Unlike micro, small and medium enterprises, nano-enterprises are not formally recognised under India's MSME Act. Instead, they are subsumed within the broader micro-enterprise category, making it difficult to distinguish the smallest firms in official statistics, policy design or financial products. With no universal definition, different organisations define the nano-enterprise segment using thresholds that align with their objectives (Table 1). For example, the Leveraging Evidence for Access and Development Centre (LEAD) at Krea University defines nano-enterprises as firms with an annual turnover between Rs. 10 lakh and Rs. 1 crore, while industry practitioners often use the term more broadly to refer to very small businesses operating with an annual turnover below roughly Rs. 1 crore[3]. Over 96% of India's microenterprises[4] report a turnover under Rs. 1 crore, effectively rendering much of the micro category "nano" in scale.

Table 1: *Nano-enterprise definitions from different sources*

Framework	Basis of classification	Micro / nano threshold
Ministry of MSME (2025)	Turnover and investment	Micro: turnover up to Rs. 10 crore; investment up to Rs. 2.5 crore
International Finance Corporation (IFC)	Employees, annual sales, total assets (any two of three)	Micro: fewer than 10 employees; sales and assets each below about USD 100,000
Annual Survey of Unincorporated Sector Enterprises (National Statistical Office)	Incorporation status	Unincorporated enterprises not registered under the Companies Act 1956 or 2013
National Commission for Enterprises in the Unorganised Sector (NCEUS)	Ownership and size	Unincorporated businesses owned by individuals or households, often with fewer than 10 employees
World Bank	Formal registration	Informal enterprises lacking GST or PAN registration
LEAD at Krea	Turnover, hyperlocal focus	Rs. 10 lakh to Rs. 1 crore turnover



The absence of a formal definition has become more pronounced following the 2025 revision to India's MSME classification[5], which increased the turnover ceiling for microenterprises from Rs. 5 crore to Rs. 10 crore and the investment threshold from Rs. 1 crore to Rs. 2.5 crore. While intended to help firms grow without losing policy benefits, the revision substantially broadens the already heterogeneous microenterprise category. Now, a firm with an annual turnover of Rs. 50 lakh falls within the same policy category as one whose turnover is closer to Rs. 10 crore despite operating under very different constraints and growth opportunities. The revised classification strengthens the case for distinguishing nano-enterprises as a separate category, especially for analytical purposes.

Defining Nanoenterprises: The Rs. 20 Lakh – Rs.2 Crore "Missing Middle"

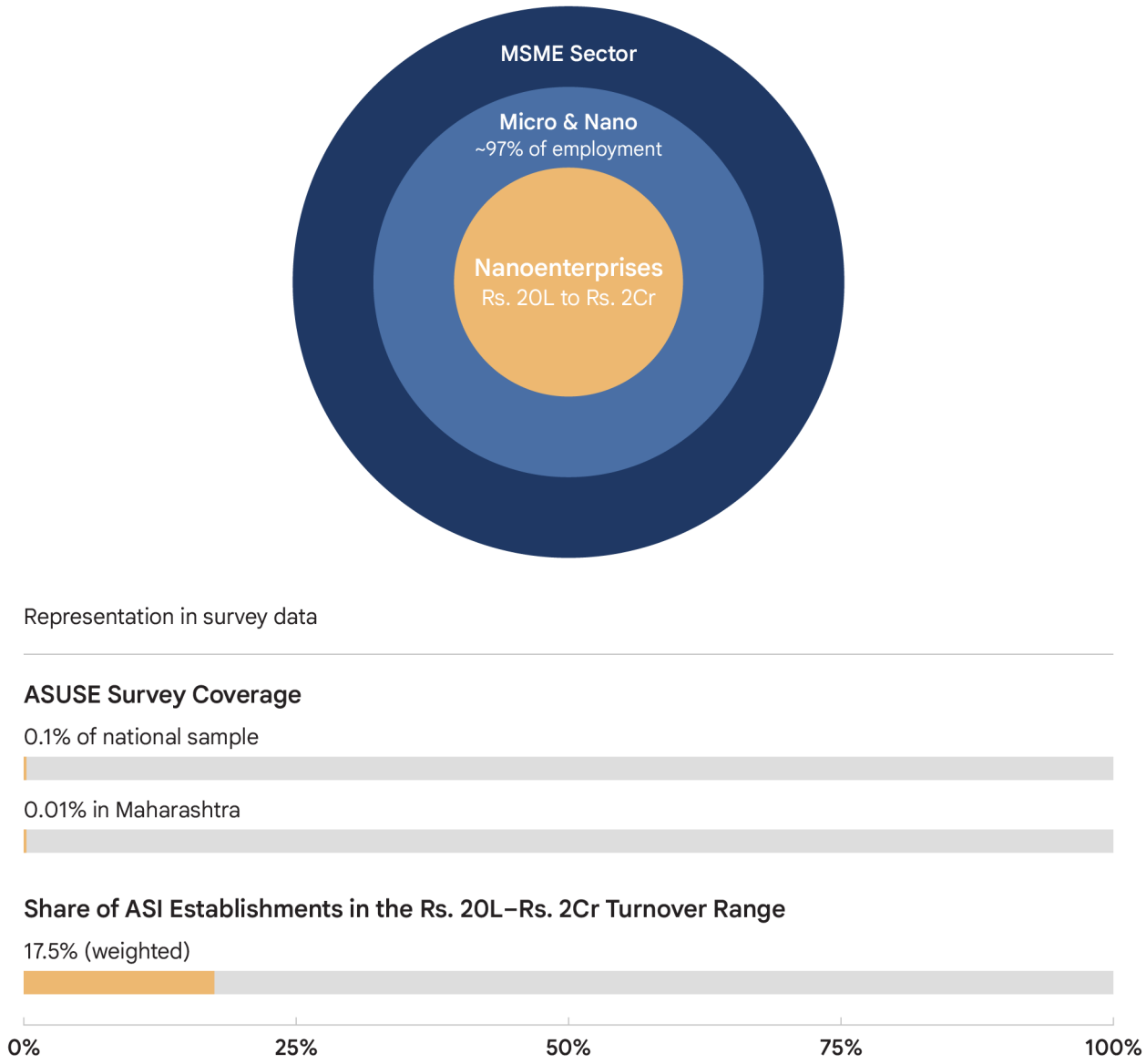


Figure 1: *Defining Nano-enterprises*

Anand Deshpande, founder of the deAsra Foundation and Persistent Systems, observes that nano-enterprises occupy a blind spot in the enterprise chain, which makes them too large for microfinance and too small and informal for bank credit, government support or procurement opportunities. Findings from independent research on nano-credit support this view: nano-enterprises are largely locked out of formal credit systems and are confined to subsistence-level operations[6]. Linked to poor credit access is the lack of formal financial records, which are also needed to meet the requirements of formal enterprise status. Digital transactional records rarely capture information rich enough to be meaningful in a credit or compliance context. Hence, for most nano-enterprises, maintaining financial records and meeting compliance requirements necessitate the services of multiple third parties, which add to their cost burden.

1.2 THE NEED FOR POLICY

A deAsra Foundation white paper[7] argues that for nano-enterprises to sustain and grow, "the foremost need is to recognise, define and create a policy structure". There is now a broad and growing consensus that nano-enterprises should be recognised as a distinct MSME category, so that policy can be tailored to their needs.

Enterprise growth reflects both the choices firms make and the conditions in which they operate. Whether a firm invests, hires or expands depends on its ability and willingness to grow, but also on the demand it faces, access to finance, availability of workers and the broader business environment. This makes it important to look beyond aggregate measures of enterprise growth and understand how firms at different stages of development experience these constraints.

Recent national enterprise surveys provide an important starting point. The Annual Survey of Industries (ASI) 2023–24 shows continued expansion of the registered manufacturing sector, while the Annual Survey of Unincorporated Sector Enterprises (ASUSE) 2025 captures the scale and diversity of enterprises operating across manufacturing, trade and services. These surveys describe the characteristics and performance of enterprises at different points in the formal and informal economy, but they do not directly examine why some small firms grow while others remain at the same scale.

Our own analysis of ASI microdata shows that registered nano-enterprises (Rs. 20 lakh–Rs. 2 crore turnover) form a distinct segment: nearly one-fifth of weighted ASI establishments nationally are concentrated in sectors such as construction materials, food processing and fabricated metals and positioned between informal enterprises and larger registered firms.

However, ASUSE data on the same turnover band tells a different story. Nationally, only 1,485 of the ASUSE sample fall within the Rs. 20L–Rs. 2Cr range (~0.1% of the dataset), with just 142 in Maharashtra (~0.01%). This underscores the sparse attention paid to the segment outside our survey. ASUSE enterprises in this band are predominantly service-oriented: education-related services (31.2%), trading (27.4%) and manufacturing with power (26%) account for the bulk of establishments. They are also lean, with a typical establishment employing just 12 workers and manufacturing, trading and health/social firms in particular operating with moderate team sizes (median 10–13 workers). Digital adoption is high but shallow: 93.5% of establishments use computers and 96.7% use the internet, but this usage is confined to routine functions, email (82.5%) and internet banking (85.8%) rather than growth-oriented applications. Only 10.6% use the internet for online sales, 17% for recruitment and 32.8% for staff training. In other words, firms with similar turnover operate in markedly different institutional and sectoral environments, highlighting the need for a more nuanced view of growth pathways than conventional MSME classifications allow.



This limitation is also evident in the international literature, which has increasingly begun to distinguish subsistence enterprises from a much smaller subset of growth-oriented firms. Nichter and Goldmark (2009) found that only a minority of small firms sustain growth[8]; Grimm, Knorringa and Lay (2012) described the high-potential subset as "constrained gazelles" – firms capable of expanding but held back by market access, managerial capability, skilled labour, finance and the macroeconomic environment[9]. Broad-based MSME support is therefore likely to have limited impact unless targeted at firms with demonstrable growth potential.

Growth also depends as much on managerial capability. Campos et al. (2017) reported that behavioural training generates larger performance gains than conventional business training[10]. McKenzie and Woodruff (2017) found that training is most effective when paired with mentoring and market-oriented support[11]. Banerjee et al. (2015) showed that microfinance increased borrowing but had only modest average effects on growth, which was concentrated among already-stronger firms[12].

In interviews conducted for this study, experts consistently argued that growth depends on the broader enterprise ecosystem, not just access to finance. Entrepreneurial mindset, growth orientation and managerial capability are stronger predictors of scale, while market access, trusted intermediaries, digital capabilities and integration into supply chains are critical for enterprise expansion.

Access to credit by itself rarely drives growth. Firms require additional support such as market linkages, technology adoption, mentoring and flexible financial products to transition from subsistence to sustained growth. These perspectives reinforce international evidence that growth-oriented enterprises require a different policy approach from the wider universe of livelihood-oriented microenterprises.

Against this backdrop, this report focuses specifically on nano-enterprises in the Rs. 20 lakh–Rs. 2 crore turnover range. Rather than examining a single constraint such as finance, it analyses enterprise capability across markets, capital, technology, teams and customers to understand why some firms scale while others remain stagnant.



GLOBAL LESSONS ON SUPPORTING GROWTH-ORIENTED NANO-ENTERPRISES

How comparable enterprise segments are studied and supported internationally

INDONESIA

Tambunan (2019) finds that Indonesian MSMEs continue to face persistent constraints in finance, market access and access to inputs despite decades of targeted policy support. The experience suggests that regulatory reforms alone are insufficient to overcome scale-related bottlenecks and that enterprise growth requires complementary investments in business capabilities and market integration.

GHANA

Research from Ghana frames subsistence and transformational entrepreneurs as fundamentally different populations. Schoar (2010) argues that people engaging in these two types of entrepreneurship are very distinct in nature; moreover, only a negligible fraction of them transition from subsistence to transformational entrepreneurship. These individuals vary in their economic objectives, skills and their role within the economy. They also respond very differently to policy changes and economic cycles. Similar studies find that capital constraints primarily affect firms with growth potential (Udry & Anagol, 2006). Without understanding the differences between the different types of entrepreneurs and their specific capital constraints, it is difficult to design policy interventions. Research from Ghana provides a useful lens for interpreting the heterogeneous borrowing and growth trajectories observed in our report.

ETHIOPIA

The World Bank (2015) identifies a financing gap for enterprises in the "missing middle," suggesting that firms growing beyond the microenterprise stage often face greater credit constraints than either very small informal firms or larger businesses. These challenges are unique to firms that have growth potential but remain underserved by conventional financial institutions.

PERU

A joint ILO–World Bank study of Peruvian microenterprises shows that formalisation is gradual rather than binary. Firms often adopt different dimensions of business and labour formality incrementally and may even move in and out of formality over time. Thus, enterprise formalisation is better understood as a progression accompanying business growth than as a single transition (Díaz et al., 2018).

SUB-SAHARAN AFRICA

Abreha et al. (2022) show that the "missing middle" becomes substantially more visible once informal firms are incorporated into enterprise datasets. Their findings highlight that survey coverage and sampling design are central to understanding enterprise structure in developing economies.

GLOBAL INFORMALITY LITERATURE

The broader literature on informality provides important context for interpreting nano-enterprise behaviour. La Porta and Shleifer (2014) argue that informal firms often constitute a distinct business regime rather than simply smaller versions of formal enterprises. Maloney (2004) offers a complementary perspective from Latin America, suggesting that informality may also reflect voluntary choices where the costs of formalisation outweigh perceived benefits. De Mel, McKenzie and Woodruff (2013) find that in Sri Lanka, low-cost registration information and reimbursement of direct registration costs do not increase formalisation; however, larger monetary incentives do. Their results suggest that formalisation is attractive only when private benefits are substantial enough to offset the costs of registering and operating formally. Overall, these studies suggest that enterprise growth depends not only on reducing constraints but also on strengthening the incentives and capabilities that make formalisation commercially valuable.

CROSS-COUNTRY EVIDENCE ON FIRMS

Hsieh and Olken (2014) caution that the "missing middle" is rarely observed as a literal gap in firm-size distributions. Instead, firm sizes generally decline smoothly, suggesting that the policy challenge lies not so much in filling a missing size category but in enabling firms to progress from survival to sustained growth.

The World Bank complements its enterprise surveys of registered firms with informal sector enterprise surveys, which use adaptive, area-based sampling to capture unregistered enterprises that are typically omitted from conventional business registers. This approach has been applied across multiple countries to improve the visibility of informal businesses and provides a useful methodological analogue for the cluster-based fieldwork adopted in this study.

References

- Abreha, K. G., et al. (2022). Deconstructing the missing middle: Informality and growth of firms in sub-Saharan Africa (Policy Research Working Paper Series 10233). The World Bank.
- de Mel, S., McKenzie, D., & Woodruff C. (2013). The demand for, and consequences of, formalization among informal firms in Sri Lanka. American Economic Journal: Applied Economics, 5(2), 122–150.
- Díaz, J. J., Chacaltana, J., Rigolini, J., & Ruiz, C. (2018). Pathways to formalization: Going beyond the formality dichotomy—The case of Peru (Policy Research Working Paper No. 8551). World Bank. https://doi.org/10.1596/1813-9450-8551
- Hsieh, C.-T., & Olken, B. A. (2014). The missing "missing middle". Journal of Economic Perspectives, 28(3), 89–108.
- La Porta, R., & Shleifer, A (2014). Informality and development. Journal of Economic Perspectives, 28(3), 109–126.digitalcommons.dartmouth
- Maloney, W. F. (2004). Informality revisited. World Development, 32(7), 1159–1178.
- https://www.sciencedirect.com/science/article/abs/pii/S0305750X04000555
- Schoar, A. (2010). The divide between subsistence and transformational entrepreneurship. Innovation Policy and the Economy, 10(1), 57–81.
- Tambunan, T. (2019). Recent evidence of the development of micro, small and medium enterprises in Indonesia. Journal of Global Entrepreneurship Research, 9(18). https://doi.org/10.1186/s40497-018-0140-4
- Udry, C., & Anagol, S. (2006). The return to capital in Ghana. American Economic Review, 96(2), 388–393.
- World Bank. (2015). SME finance in Ethiopia and addressing the missing middle challenge. https://openknowledge.worldbank.org/entities/publication/5045442f-b65d-5630-b5c6-91b0e9e85374
- World Bank. (2022). Surveying informal businesses: Methodology and applications. openknowledge.worldbank+1
- World Bank. Understanding Informality. documents1.worldbank
- World Bank Enterprise Analysis Unit. Informal Sector Business Survey / ACS pilot work, launched since 2016.documents1.worldbank

1.3 **THIS REPORT**

To better understand nano-enterprises with the potential to scale and the barriers and opportunities facing them, we develop a framework based on five recurring dimensions: capital, markets, technology, ownership and teams, and registration and compliance.

Central to this report is the distinction between growth-oriented nano-enterprises and the much larger mass of subsistence self-employment. Because the two are often conflated, policy suffers: programmes designed for survival-focused businesses rarely meet the needs of firms positioned to grow, while growth-oriented interventions seldom fit subsistence enterprises. Yet crossing the subsistence threshold does not guarantee growth. Within this segment, some firms are expanding while others have stalled, and the archetypes developed in this report are designed to distinguish between them.

This report is intended as the first edition of an annual flagship publication. The next section (Section 2) explains how nano-enterprises are defined in this study. Section 3 introduces the scope and themes of investigation, which is then followed by our survey methodology (Section 4). Section 5 maps the current landscape of Indian enterprises and highlights the challenges faced by nano-enterprises. Section 6 presents survey findings, organised around the five dimensions, while Section 7 presents policy recommendations based on those findings.



02

Defining Nano-enterprises

In this report, nano-enterprises refer to firms with a turnover ranging from Rs. 20 lakh to Rs. 2 crore. The Rs. 20 lakh floor is designed to capture the blind spot: firms that have moved beyond bare subsistence and possess genuine potential to grow and hire. Findings based on ASUSE and ASI unit-level data support this range: the mass of unincorporated micro activity sits below Rs. 20 lakh, and the Rs. 20-lakh-to-2-crore band isolates firms that are structurally distinct from the subsistence base and the larger registered units above it.

This distinction is important because India's employment challenge is increasingly one of creating productive, non-farm jobs rather than expanding self-employment alone. Enterprises with the ambition and capability to grow are more likely to hire workers, invest in technology, formalise their operations and integrate into wider markets. Understanding the constraints of this segment is therefore critical for policies aimed at accelerating job creation, productivity growth and structural transformation as well as for building a more competitive MSME sector.



The lower threshold excludes the large number of subsistence and own account enterprises (OAEs) with limited capacity or intention to expand, while remaining broad enough to capture firms that have demonstrated commercial viability and employ workers beyond the owner. The upper threshold extends beyond conventional definitions of nano-enterprises to include firms approaching formalisation and ready to transition to the wider microenterprise segment.



The choice of this range is also motivated by a significant data gap. Although nano-enterprises account for a substantial share of India's enterprise base, they remain largely invisible in official datasets. In the ASUSE national sample, only around 1,485 enterprises, roughly 0.1% of firms, fall within the Rs.20 lakh–Rs.2 crore turnover range, including just 142 enterprises in Maharashtra. Thus, existing surveys provide limited evidence on businesses that sit between subsistence self-employment and established small enterprises. Throughout this report, the term nano-enterprise refers specifically to firms within this turnover range, recognising them as a distinct analytical group with the potential to generate productive employment, adopt new technologies and scale over time.

03

Scope & Objectives

3.1 KEY THEMES

Placing nano-enterprises within India's broader economic landscape, this study attempts to address the following question: what helps certain nano-enterprises on their growth journey and in turn improve employment generation? The study is organised around five dimensions, each highlighting a gap or challenge stalling the growth of nano-enterprises:

Capital

This theme focuses on the gap between the risk capital that early-stage nano-enterprises need and the fixed-repayment commercial credit they are typically offered. This misfit is compounded by factors such as rigid EMI schedules; lenders' insistence on bank statements, goods and services tax (GST) records, and bureau scores over alternative data; and volatile/ seasonal incomes of enterprises.

Markets

Nano-enterprises face multiple barriers in reaching new markets from entry-level blocks, such as documentation, branding and logistics, to sustaining orders and quality once onboarded, finding appropriate sales channels, responding to competition and deciding pricing strategies.

Technology

This theme examines why digital adoption on its own rarely translates into credit access, market reach or formal visibility. Although nano-enterprises report high access to devices and the internet, their usage remains confined to basic, transactional functions, held back by demand-side awareness and trust gaps.

Ownership & Teams

This theme explores the influence of workforce and ownership structures on the growth capacity of enterprises, including patterns of hiring, access to formal or informal skills training, persistent skill gaps and hiring challenges.

Compliance

Many small firms struggle to bridge the gap between functional compliance capacity and the demands of formal enterprise status. Despite holding GST/ Udyam registrations on paper, some continue to face time and cost constraints in meeting filing and documentation requirements, often relying on informal support or intermediaries.

In addition to these dimensions, this study also looked at firm structure, including wage spends, inputs and monthly revenue, to understand the operational capacities of firms.

3.2 STUDY DESIGN

We examined the themes above across nano-enterprises in Maharashtra through a primary survey spanning six districts. In addition to survey responses, we obtained data via a review of existing literature and a series of key informant interviews (KIIs) with policy researchers, financial-inclusion practitioners, senior leadership at Open Network for Digital Commerce (ONDC), and industry strategists, who provided distinct perspectives on nano-enterprise constraints. Focused on nano-enterprises as a distinct segment, this data complements the information obtained through national surveys such as ASUSE and ASI but does not replace them.

To avoid presenting a single, undifferentiated narrative of nano-enterprise growth, we classified the surveyed enterprises into four archetypes (Scalers, Aspirants, Stagnant Incumbents and Passive Beneficiaries – explained in the later sections) along three dimensions: revenue trend, growth ambition (whether growth is being actively pursued or merely experienced passively) and realised hiring or workforce expansion (whether growth has converted into employment). These factors helped segregate nano-enterprises based on their unique constraints.



3.3 WHY MAHARASHTRA

Maharashtra was chosen for two reasons. First, it is India's most significant state for MSME activity, accounting for the largest number of registered MSMEs (over 1 crore Udyam registrations; close to 13% of the national total)[13] and roughly 14.5% of national manufacturing gross value added (GVA) (ASI 2023–24 unit-level data). Second, the state encompasses diverse economic regions, from the metros of Mumbai and Pune and the industrial centres of Nashik and Chhatrapati Sambhajinagar to the agricultural belt of the Vidarbha region around Nagpur and Amravati. This variation is borne out by the data: the state's registered factory base is concentrated in the Pune–Nashik–Mumbai corridor while its unincorporated nano segment skews towards retail trade and personal services (ASUSE 2023–24 unit-level data). This study's coverage of six districts is designed to capture these variations that the term "MSME" tends to obscure.

3.4 RATIONALE FOR ARCHETYPES

In keeping with our definition of distinguishing between subsistence enterprises and those with a genuine potential for growth, we conceptualised a growth-oriented nano-enterprise as one that combined growth ambition with organisational expansion. Enterprises were classified as growth-oriented if they reported either planned expansion (e.g. entering new markets, introducing new products, or expanding production or geography) or were already pursuing at least one active growth strategy. Beyond financial performance, growth-oriented firms were identified as those that (i) demonstrated improving business performance, (ii) expressed a clear intention to expand through new markets, products or investments, and (iii) were beginning to translate that ambition into larger organisational capacity through hiring.

These criteria emerged from our broader policy objective of finding enterprises capable of generating productive employment and contributing to structural transformation. While many nano-enterprises provide important livelihoods, only a subset is likely to expand its workforce, invest in productivity-enhancing technologies and transition into larger, more formal businesses. Distinguishing these firms from those that remain stable or function as livelihood-oriented businesses enables policy to target interventions to enterprise-specific growth potential instead of viewing the nano-enterprise sector as homogeneous.

Lastly, it is important to highlight that this study does not attempt to replicate the scope or sample size of ASUSE or ASI, nor is it nationally representative. Its findings describe a deliberately scoped, regionally and sectorally bounded sample of nano-enterprises in Maharashtra. It builds directly on the 2025 pilot of 141 enterprises (detailed in the Methodology and Pilot sections), scaling and restructuring that groundwork rather than repeating it. While designed with a longitudinal panel in mind, this baseline edition is a first iteration. The data are intended to track segment trends over time rather than serve as a definitive census.

04

Methodology

We sampled 2,001 nano-enterprises – with an annual turnover between Rs. 20 lakh and Rs. 2 crore – across six districts in Maharashtra (i.e. Mumbai, Pune, Nashik, Nagpur, Amravati and Chhatrapati Sambhajinagar) through a cluster-based sampling approach, designed to reach enterprises across all sectors, with fixed quotas at the district level.

The process began with a mapping exercise to identify prominent market and enterprise clusters across all six districts, geo-tagged and classified by type (mandis, general markets, kiranas, commercial clusters, wholesale markets). Commercial clusters were the primary focus of this study.

Within each cluster, we first estimated the range of enterprise units present. Using the midpoint of the range, a target number was assigned to each cluster. From each cluster, shop numbers were drawn through random selection. Non-response (closed shops, refusals, ineligibility) was handled via a fixed replacement process, ensuring a systematic and auditable approach.

In addition to collecting 2,001 survey responses, we also conducted 30 qualitative interviews with survey respondents who agreed to participate in an interview process. The surveys were administered to business owners or their close family members and were conducted in Hindi or Marathi. Of the 30 interviews, 20 were conducted alongside the quantitative fieldwork to gain contextual insights. The remaining 10 were conducted after the survey was completed to further contextualize the findings and better understand the underlying mechanisms. The first 20 interviewees received the same qualitative questionnaire whereas the last 10 answered archetype-specific questions, which helped us gain a deeper understanding of the operations, entrepreneur mindset, and the background and functioning of firms across archetypes.

This design was informed by our pilot conducted in August–September 2025 with 141 GST-registered nano-enterprises, surveyed online through institutional partners. The pilot approach faced persistent constraints with response rates and timelines and risked a sampling bias towards firms associated with a single partner, which pushed us to adopt a cluster-based approach for the flagship round. Apart from the sampling methodology, this round differed from the pilot in two ways: credit-access questions moved away from usage and outcomes to behaviour and attitudes, and a qualitative interview component was included alongside the quantitative survey.

We also considered the Udyam registration database as a sampling frame but ruled it out because Udyam registration is a voluntary process, and evidence shows that registered addresses often do not match actual business locations.

A limitation of our method is that the sample is skewed towards retail and market-facing enterprises because they were recruited from physical market clusters. As a result, the sample underrepresents home-based enterprises (ASUSE records 1.8% of Maharashtra nano-enterprises as home-based units) and standalone service providers with no visible market presence.

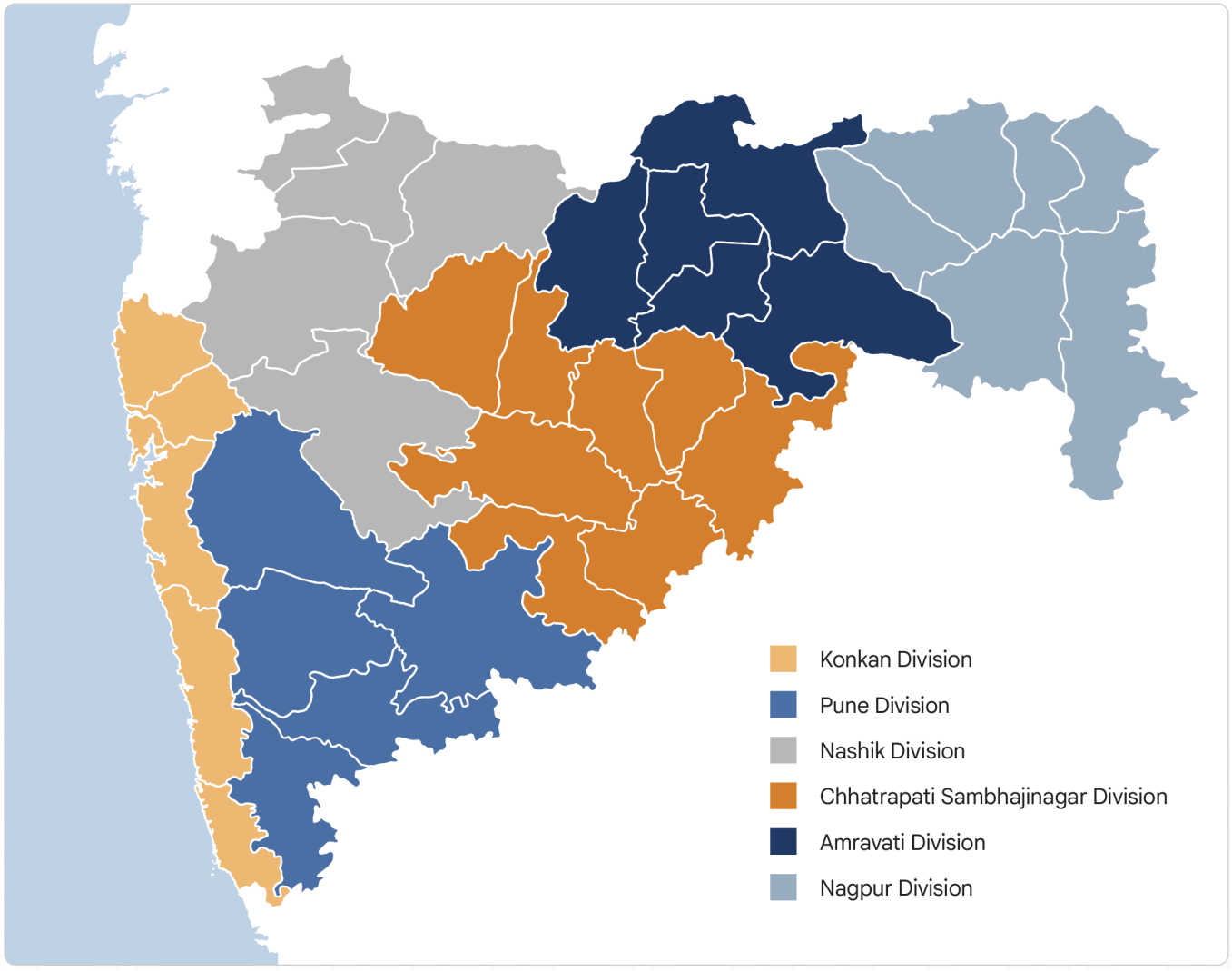


Figure 2: *2001 enterprises within key metropolitan and urban areas across all administrative regions of Maharashtra*

05

Existing Surveys & Studies on Nano-enterprises

5.1 CURRENT LANDSCAPE

This section situates our study within existing national surveys of India's MSME sectors, chiefly the ASI, which tracks registered manufacturing establishments, and the ASUSE, which covers informal, non-agricultural enterprises. Together they offer the closest available proxies for our segment, even though neither isolates nano-enterprises specifically.

Within this landscape, both formal and informal MSMEs have reported productivity gains. ASI 2023-2024[14] recorded a 5.65% increase in the formal sector's GVA per person engaged, led by basic metals, food products and chemical industries. Similarly, ASUSE 2023–24[15] recorded a 5.6% rise in the informal sector's GVA per worker.

- Employment in MSMEs is also on the rise but remains concentrated in single-worker and family-run units. ASUSE[16] reports that over 1 crore jobs have been added in the unincorporated non-farm sector, with "Other Services" emerging as the fastest-growing segment (~20%). Yet the World Bank's Informal Enterprises Survey[17] finds that over 47% of informal enterprises across most surveyed Indian cities are single-person units, a pattern ASUSE[18] corroborates at a greater scale. The Economic Census (2013–14)[19] similarly found that 55% of non-agricultural enterprises were run solely by the owner and a further 32% by only two to three workers.

- Wages are rising alongside employment: ASI 2022–23[20] reports a 6.3% increase in average manufacturing emoluments, consistent with the MSME Outlook Survey's[21] finding that firms anticipating higher production and sales also expect improved margins though skilled-labour shortages remain a persistent constraint.

- Growth is regionally concentrated. ASI 2022–23[22] shows that Maharashtra, Gujarat, Tamil Nadu and Uttar Pradesh jointly account for over half of India's manufacturing GVA and employment, and MSME Outlook Survey[23] names the same regions as ranking high in business confidence.
- Digital integration is emerging as a performance enabler but unevenly. ICRIER (2025)[24] finds that over 70% of digitally integrated MSMEs (particularly those using e-commerce platforms) secured collateral-free loans and faster loan approval. However, this remains concentrated among larger MSMEs that are formally registered on platforms like Udyam, pointing to a growing digital divide.

The enterprise landscape can be seen as a spectrum: necessity-driven, single-worker OAEs on one end and large formal enterprises on the other. In between sit hired worker enterprises (HWEs, typically 5–20 employees[25]), the segment with the greatest potential to generate broad-based employment and the one most in need of nurturing.

Services dominate the informal micro segment: ASUSE[26] finds that 41.5% of informal microenterprises operate in the "Other Services" category (land transport, food and beverage, water supply, real estate, financial services), ~31% in trade and ~28% in manufacturing though the ASUSE[27] revised its definition of "Other Services" to include informal service providers like tutors, which has somewhat contributed to inflating the share.

5.2 KEY CHALLENGES AND RESPONSES

Compliance

GST registration is mandatory for Indian firms with a turnover above Rs. 40 lakhs (goods) or Rs. 20 lakhs (services). Staying unregistered limits access to corporate buyers and formal platforms that require GST invoicing, but registration brings its own burdens: 4 to 12 filings a year, meticulous invoice records and for most nano-enterprises, the added cost of an external accountant. Beyond regulatory compliance, GST also creates commercial incentives for formalisation. Because registered buyers can claim input tax credits only when suppliers issue GST invoices, larger firms increasingly prefer to source from registered businesses, creating a "formalisation cascade" that propagates through supply chains and gradually pulls smaller enterprises into the formal economy[28]. The reverse charge mechanism shifts the compliance burden onto small buyers in certain transactions, while GST's accrual basis creates cash-flow strain for firms facing delayed payments. Gulzar Natarajan questions this system, arguing that "informality cannot be taxed away"[29]. The structural conditions driving informality (low education, tiny scale, survival focus) cannot be dissolved through tax enforcement alone; support should come through public goods and skill-building rather than coerced formalisation[30]. Simplified returns, digital compliance tools and nano-specific exemptions (audit relaxations, RCM exemption, cash-based GST payment) are other factors that could help nano-enterprises, allowing the compliance burden to scale gradually with firm size. The GST Council moved partly in this direction in its 56th meeting (September 2025): three-hour

registration for low-risk applicants[31], faster refunds[32] (up to 90% provisional for exporters facing inverted duty structures), prefilled returns[33], capped late fees and a streamlined appellate tribunal. An easy entry point into formalisation for nano-enterprises is Udyam registration: free, relatively simple and useful for claiming benefits without immediate tax implications.



Credit access

India's MSME credit gap is estimated at ~US$360 billion[34], with the largest financing gap concentrated at the "missing middle" – enterprises that are too large for most microfinance products but too small or risky for conventional bank lending. Microfinance institutions (MFIs) and self-help groups (SHGs) partly address this gap via group lending, especially for women, but often exclude urban nano-enterprises outside group structures and are likely to charge high interest rates[35]. Banks meet priority-sector targets by lending to safer, larger SMEs, thus leaving the smallest borrowers underserved[36]. Mudra loans (PMMY, since April 2015[37]) target collateral-free lending to non-corporate microenterprises – Rs. 19,392 crore disbursed to 20.14 lakh[38] Maharashtra beneficiaries as of September 2024 – while PM SVANidhi[39] offers similar support to street vendors, though both suffer uneven regulatory oversight, outreach gaps and processing delays[40]. TReDS[41], RBI's 2018 invoice-discounting platform, offers a route to working-capital relief but remains underused owing to its buyer-dependent model, complex onboarding, low awareness and buyer-side inertia[42].

More fundamentally, however, access to credit is only one side of the equation. For many nano-enterprises with volatile demand and uncertain growth prospects, borrowing itself is a risky prospect because repayments must be met regardless of business performance. Besides, high effective interest costs, even without collateral requirements, discourage loan uptake. Thus, the policy challenge extends beyond expanding the supply of credit to improving the conditions under which enterprises can confidently invest and repay.



Digital adoption

A core barrier to credit is the absence of formal financial records; most nano-enterprises operate largely in cash. Although digital payments and registration (UPI, Udyam, GST) are slowly building a data trail that fintechs and NBFCs can use as an alternative credit signal, this remains nascent. ONDC, the government's open e-commerce protocol launched in 2022[43], is the most ambitious response, which decouples sellers from a single dominant platform and helps them bypass intermediary layers that erode margins. By January 2025, ONDC spanned over 616 cities and 7.64 lakh registered sellers[44], accounting for 154.4 million cumulative orders by December 2024. However, persistent challenges[45] include onboarding sellers beyond Tier 1 cities, low digital literacy for cataloguing and fulfilment, weak operational infrastructure for delivery and returns, and competitive pressure from bundled offerings on larger platforms.

Procurement thresholds

The 2020 MSME classification restructuring, and its 2025 revision (micro: investment up to Rs.2.5 crore, turnover up to Rs.10 crore) aim to support scaling of firms but risk sidelining the smallest enterprises. Most microenterprises are single-person or very small proprietary firms operating well below even pre-2020 thresholds. As the classification band widens, procurement and scheme benefits may increasingly skew toward better-resourced firms within the micro category, while rising GST and compliance requirements for accessing formal schemes further disadvantage the least-equipped.

Intermediaries

As thresholds rise, the role of trusted intermediaries (NGOs, industry associations, extension officers) grows more important in bridging nano-enterprises' information and market gaps[46]. This is also captured by deAsra Foundation's model (mentors, business clinics, market linkage support). The Indian Council for Research on International Economic Relations (ICRIER) (2025) similarly finds that e-commerce-integrated firms (often connected through intermediaries) report faster growth, better margins and greater access to finance and export markets.

State support

Several national (Micro & Small Enterprises Cluster Development Programme (MSE-CDP))[47] and state-level (Maharashtra State Industrial Cluster Development Programme (MSICDP)) cluster programmes have been designed to support small enterprises, but a one-size-fits-all approach, weak monitoring, limited capacity among cluster associations, poor connectivity and inconsistent inclusion of marginalised groups blunt their effectiveness[48]. For instance, Maharashtra's support programs span skill development, entrepreneurship training, cluster development and credit facilitation. These include initiatives such as PM Vishwakarma (traditional artisans), the Entrepreneurship and Skill Development Programme (ESDP), MSE-CDP, SFURTI (traditional industry clusters), the Maha Udyami Sashaktikaran Program under RAMP (targeting 60,000 MSMEs), and the Chief Minister Employment Generation Programme (CMEGP). Yet limited digital literacy, weak follow-up support, low scheme awareness and complex onboarding limit their reach. Evidence from Banaras[49] and Surat[50] clusters shows that local roads, power and water supply are central to enterprise productivity[51]; however, policy still tilts towards skilling over infrastructure.

06

SECTION I

Nano-enterprises:

Themes & Key Findings

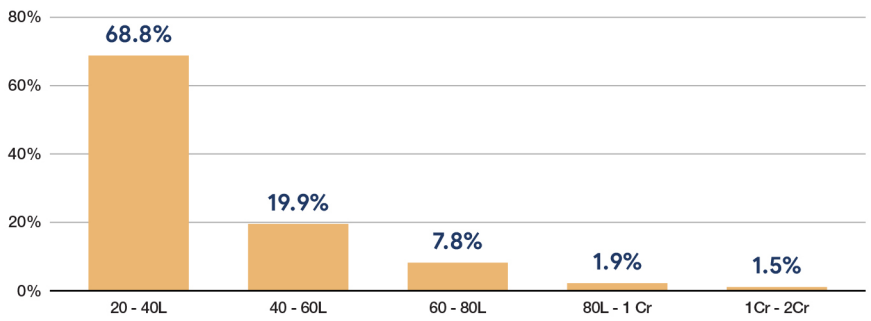
Surveying nano-enterprises above the micro-subsistence threshold, this dataset captures a segment that is barely visible in national data. The Rs. 20L–Rs. 2Cr band forms just 0.1% of the ASUSE sample nationally and 0.01% of Maharashtra's enterprise segment, underscoring how little existing surveys capture this tier.

6.1 OVERARCHING TRENDS

The district profile reflects both survey design and the economic diversity of Maharashtra. Mumbai enterprises account for the largest share of the sample (551), followed by Pune (400), while Nagpur, Nashik, Amravati and Chhatrapati Sambhajinagar each contribute around 250–275 enterprises. Overall, the sample is concentrated in the lower end of the study's turnover range. Over two-thirds of the total sampled enterprises (~70%) – and over 80% of enterprises in Amravati, Nagpur and Nashik – report an annual turnover between Rs. 20 and 40 lakh. Mumbai stands out as the most commercially diverse district, with only 44% of firms in the lowest band and a substantially higher representation of enterprises with a turnover above Rs. 40 lakh. Across all six districts, retail is the dominant activity. Services have a stronger presence in Pune (24.5%) and Nagpur (29.5%), while trading activities are relatively more common in Chhatrapati Sambhajinagar (15.6%) and Nashik (16.4%). Manufacturing represents a relatively small share of the sample across all districts, ranging from 1.5% in Pune to around 9% in Amravati, Chhatrapati Sambhajinagar, Nagpur and Nashik. Enterprises generating between Rs. 1 Crore and Rs. 2 Crore constitute just 1.5% of the sample (Table 2).

Figure 3: *Sample Characteristics*

Turnover Range (Rs.)



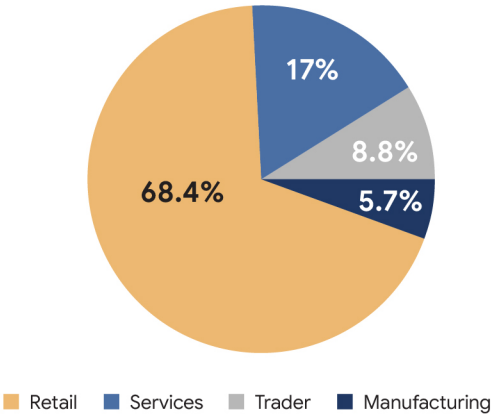
Turnover Trend

67.1%
Increased

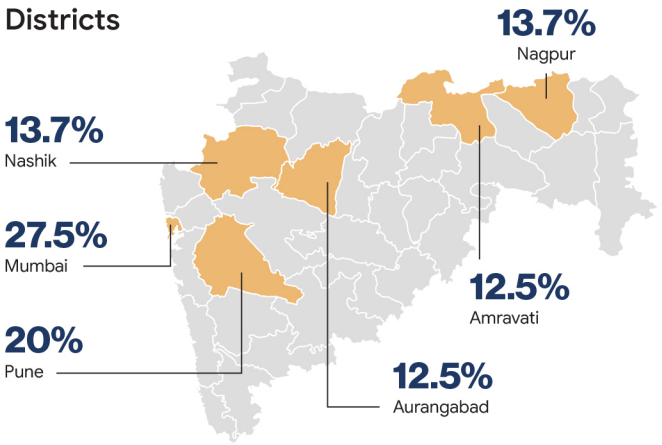
22.3%
Remained the same

10.6%
Decreased

Sectors



Districts



Top 3 Future Growth Plans

30.3%
Increase production

23%
Diversity of products

16.9%
Hire more workers

Top 3 Current Growth Strategies

33.2%
No such expansion / diversification

28.1%
Expanded customer base /
increase in number of customers or orders

18.3%
Introduced new products / services

Gender



4.7%
Female

95.3%
Male

Udyam Registration



85.3%
Registered

14.1%
Not registered

0.6%
Not aware

Operation Nature



98.2%
Perennial

1.8%
Seasonal

Growth performance mirrors this sample concentration. Among enterprises reporting increased turnover in the past three years, 66% sit in the Rs. 20–40L bracket, and growth flattens sharply as firms approach a turnover of Rs. 80L to 1Cr, pointing to an operational ceiling where compliance, tax thresholds and working capital begin to constrain firms.

Table 2: *Split of nano-enterprises by sectors and turnover ranges (n = 2001)*

	Sector-wise distribution (%)				
Turnover Band (INR)	**Retail**	**Manufacturing**	**Services**	**Trading**	**Band total**
20–40L	47.2	3.6	13.6	4.3	68.8
40–60L	14	1.4	1.9	2.5	19.9
60–80L	5.1	0.3	1.2	1.1	7.8
80L–1Cr	1.3	0.1	0	0.5	1.9
1–2Cr	0.7	0.1	0.2	0.3	1.5
Sector total	68.4	5.7	17	8.8	100

Sector composition reflects the hyperlocal, trade-heavy nature of nano-enterprises rather than the registered-manufacturing bias typically seen in surveys like ASI. Retail and trade account for 77% of the sample, followed by services at 17% and manufacturing at just ~6%, and this pattern holds across turnover levels. In all four sectors, a large majority of firms cluster in the Rs. 20L– Rs. 40L band, with manufacturing spilling slightly more into higher turnover ranges than retail or services, though none show meaningful concentration above Rs. 1Cr.

Workforce size and hiring intent tell a similarly modest story. Just over half the enterprises (50.1%) employ two to three workers, and only 7.5% employ more than five, while 65% of firms have no plans to hire in the coming year. Where firms do plan to grow, they favour immediate, organic expansion over structural investment. Increasing production (30%) and diversifying products (23%) are the most common agendas, while fewer than 4% intend to invest in efficiency improvements, technology or machinery (Fig. 4).

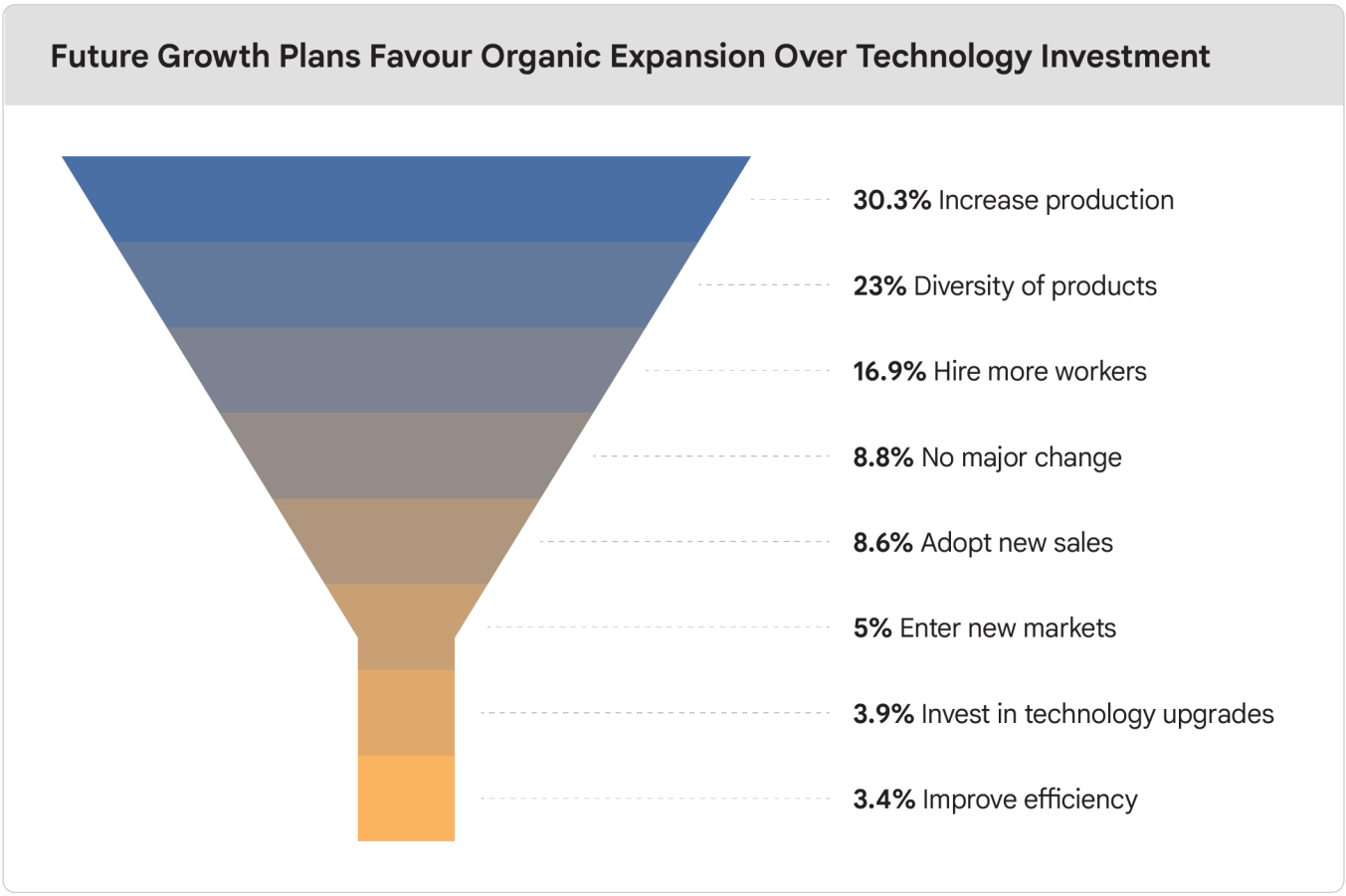


Figure 4: *Future growth plans of the surveyed nano-enterprises (n = 2001)*

6.2 GROWTH ARCHETYPES

The diversity of future growth paths indicates that nano-enterprises in this segment are not a uniform population. A one-size-fits-all approach to support is unlikely to work for firms with such different trajectories, ambitions and resources. Given the resource constraints inherent to any programme design and consistent with the broader growth trends observed across the sample, we chose to group firms into four archetypes by separating those who are converting growth into scale from those who are not. Such a division can eventually allow support to be sequenced or tailored by archetype rather than randomly. The purpose of building these archetypes was to move from a general description of the sample towards a targeting lens: a way of identifying the exact profile of a firm that a given intervention could target rather than designing support for an average firm that did not really exist in large numbers.

6.2.1 Construction of the archetypes

The archetypes were constructed using three core variables: revenue trend, current and future growth plans, and current workforce size and hiring intent (Table 3). Rather than treating these as independent dimensions and fully crossing them, they were layered sequentially to reflect how firms typically evolved in practice. This sequential approach allowed the archetypes to capture progression more realistically: from performance to aspiration to action. Thus, each archetype reflects not just a static combination of attributes but a stage in the firm's growth journey.

Table 3: *Split of nano-enterprises by sectors and turnover ranges (n = 2001)*

Q1. In the past 3 years, would you say your annual turnover has increased, decreased or remained about the same?

- ☐ Increased
- ☐ Decreased
- ☐ Remained the same
- ☐ Not aware

Q2. In the next 2–3 years, do you have any of the following plans for your enterprise? *(Multi Select)*

- ☐ Increase production
- ☐ Hire more workers
- ☐ Diversify products
- ☐ Enter new markets (geographies, customer segments)
- ☐ Adopt new sales channels or digital tools (e.g. online sales, digital payments)
- ☐ Invest in machinery, equipment or technology upgrades
- ☐ Improve efficiency / reduce costs through internal process changes (e.g. training)
- ☐ No major change; continue current operations

Q3. In the past 2–3 years, has the enterprise undertaken any of the following?

- ☐ Opened a new business location
- ☐ Expanded customer base / increase in number of customers or orders
- ☐ Introduced new products / services
- ☐ Entered new markets (geographic areas)
- ☐ No such expansion or diversification
- ☐ Other

Q4. Over the next year, how many paid (full-time) employees would you plan to add to your enterprise?

- ☐ Have not planned to hire anyone
- ☐ 1 - 2
- ☐ 3 - 5
- ☐ Over 5

Q5. How many paid (full-time) employees work in your enterprise, excluding the owner and family members?

- ☐ No hired employees
- ☐ 1 - 2
- ☐ 3 - 5
- ☐ Over 5

- Turnover trend provided the first split, distinguishing firms that reported a revenue increase over the past 3 years from those that did not.
- 'Ambition' was a constructed variable: a firm was coded as ambitious except if it had no major future plans (expansion, product diversification, hiring) or current hiring strategy. Ambition was present when either forward-looking or backward-looking growth signals were present.
- Realised growth was also a constructed variable, and it was based on hiring behaviour rather than revenue. A firm demonstrated realised growth if it had a larger workforce (more than two full-time hired employees) or had plans to hire. In other words, the firm was either already staffed beyond a skeleton crew or was actively planning to add staff.



The process of classifying firms was as follows: among firms with increasing turnover, ambition was applied as the first cut and realised growth as the second. This helped separate firms that were growing and backing their growth with intent and hiring from those that were growing but had not yet converted that momentum into staffing. Firms with flat or declining turnover formed a separate group regardless of ambition or hiring status.

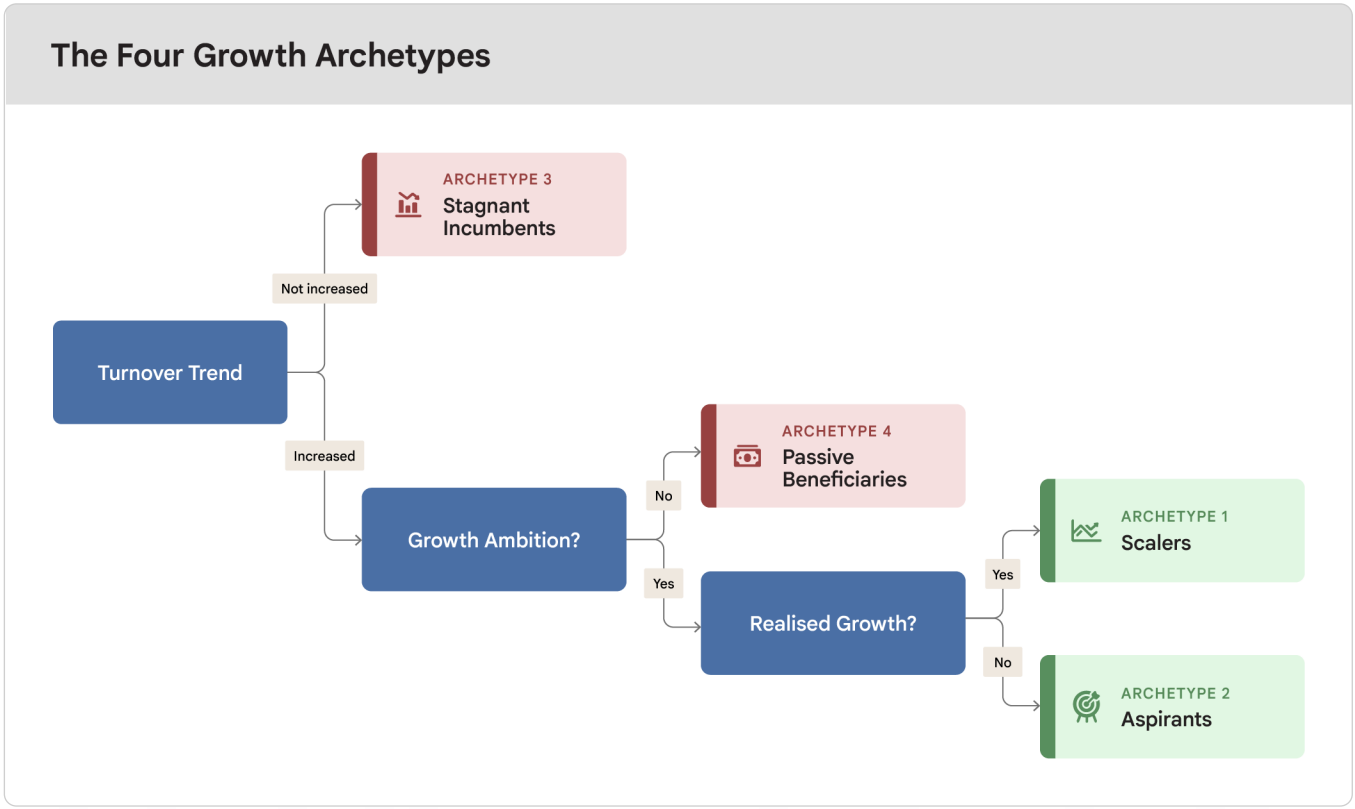


Figure 5: *Process for grouping the nano-enterprises into four archetypes*



6.2.2 The four archetypes

Archetype 1: Scalers

(760 firms, 38% of the sample)

- Revenue increased
- Forward growth ambition or current growth practices
- Large workforce (> 2 full-time employees) or plans to hire

Archetype 2: Aspirants

(495 firms, 25% of the sample)

- Revenue increased
- Forward growth ambition or current growth practices
- Small workforce (<= 2 full-time employees) and no hiring plan

Archetype 3: Stagnant Incumbents

(659 firms, 33%)

- Stable or declining revenue
- Includes both ambitious and non-ambitious firms

Archetype 4: Passive Beneficiaries

(87 firms, 4%)

- Revenue increased
- No growth ambition

Scalers combine revenue growth with clear ambitions to expand, and evidence suggests that growth is already translating into organisational capacity. They are the most evenly distributed across turnover bands and the most diversified by sector. While market access remains their primary challenge, they are also most likely to convert digital adoption, formalisation and finance into business growth, making them the closest to follow a sustained scaling trajectory.

Aspirants share the same revenue growth and stated ambition as Scalers but have not yet translated them into workforce expansion. Nearly three-quarters (74%) operate in the Rs. 20–40 lakh turnover band and 65% are in retail. While market access is their leading constraint (48%), financial constraints are more prominent (19%) here than among Scalers, suggesting that access to appropriate growth finance may be the key barrier preventing these firms from converting ambition into hiring and business expansion.

Stagnant Incumbents consist of firms whose turnover has remained stable or declined, irrespective of their stated ambitions or workforce characteristics. This group is predominantly in retail (75%) and concentrated in the Rs. 20–40 lakh turnover band (74%). Market access remains the most frequently cited constraint (47%); at the same time, their financial constraints are the highest of all (24%). Notably, 452 of the 659 firms (69%) still express growth ambitions, indicating that aspirations alone are insufficient without improvements in market access, finance and the broader business environment.

Passive Beneficiaries are the smallest and most distinct archetype. They have experienced revenue growth but report neither ambitions to expand nor active growth strategies. The group is overwhelmingly retail (85%) and concentrated in the Rs. 20–40 lakh turnover band (77%). Their constraint profile also differs from that of the other archetypes: although market access remains the most cited challenge

(28%), shortage of skilled workers (20%) is also a relatively important concern, suggesting that these firms benefit from favourable market conditions but are not actively pursuing further expansion.

Scalers (Archetype 1) are dominant in Amravati (44.4%), Nagpur (42.5%), Pune (42%) and Mumbai (40.8%). However, in Nashik, most enterprises (55.3%) are Stagnant Incumbents (Archetype 3). Pune (36.5%) and Mumbai (32.3%) also have relatively large numbers of this archetype. Aspirants (Archetype 2) account for roughly one-fifth to one-third of enterprises across all districts, whereas Passive Beneficiaries (Archetype 4) remain uncommon everywhere except Chhatrapati Sambhajinagar, where they comprise 20% of the surveyed firms (Tables 4&5). Together, these patterns suggest that growth-oriented enterprise profiles are not evenly distributed across Maharashtra but are shaped by differences in local industry structure, market orientation and the maturity of firms within each district.

Table 4: *Archetype distribution by district (% of firms within each district) (n = 2001)*

District	Scalers (%)	Aspirants (%)	Stagnant Incumbents (%)	Passive Beneficiaries (%)	No. of Firms
Mumbai	40.8	25	32.3	1.8	551
Pune	42	18.8	36.5	2.8	400
Nagpur	42.5	30.5	25.1	1.8	275
Nashik	21.8	19.3	55.3	3.6	275
Chhatrapati Sambhajinagar	31.6	27.2	21.2	20	250
Amravati	44.4	30.8	24.4	0.4	250



Table 5: Archetype distribution by turnover band (% of firms within each band) (n = 2001)

Turnover Band (Rs.)	Scalers (%)	Aspirants (%)	Stagnant Incumbents (%)	Passive Beneficiaries (%)	No. of Firms
20 - 40L	33.3	26.4	35.4	4.9	1,377
40 - 60L	44.7	22.4	29.6	3.3	398
60 - 80L	53.5	21.7	21.7	3.2	157
80L - 1 Cr	53.8	12.8	30.8	2.6	39
1 Cr - 2 Cr	63.3	10	23.3	3.3	30

WOMEN ENTREPRENEURS: GROWTH BEYOND BUSINESS

Women-owned enterprises accounted for 4.7% of the surveyed businesses (95 of 2,001 firms). District-wise, the survey covered seven female-owned enterprises in Mumbai, 25 in Nashik, 27 in Nagpur and 12 each in Chhatrapati Sambhajinagar, Pune and Amravati.

Most of these enterprises are in retail (57%) followed by services (32%), with relatively few operating in manufacturing (7%). Within these sectors, the largest shares are in retail and trade (33%), personal and lifestyle services (23%), and textiles, apparel and handicrafts (17%), indicating a concentration in consumer-facing activities with relatively low barriers to entry. Despite exhibiting levels of business ambition comparable to men (83% vs. 85%), women-owned firms remain less formalised: lower average formalisation scores (0.51 vs. 0.68, as detailed in the appendix), Udyam registration (65% vs. 81%) and GST registration (40% vs. 71%).

Most women-owned businesses (84%) report an annual turnover between Rs. 20 and Rs. 40 lakh and can be classified as Scalers and Aspirants, together accounting for two-thirds (66%) of all women-owned enterprises. This suggests a mix of growing businesses and ambitious firms facing resource constraints.

The pattern of business challenges is broadly similar for women and men, with limited market access emerging as the most frequently cited constraint by both groups (24%). However, women entrepreneurs are more likely to identify access to finance as a key challenge (22% vs. 18% for men), whereas men are almost as likely as women entrepreneurs to report shortage of skilled workers (20% vs. 19% among women). These findings suggest that while market expansion remains the primary concern across enterprises, improving access to finance may be particularly important for supporting women-owned businesses.

Women-owned enterprises are significantly more likely to employ women than male-owned businesses. While women-owned enterprises remain underrepresented and less formalised, the interviews reveal a strikingly consistent pattern:

> ***Women entrepreneurs describe their businesses not just as a source of income but as a pathway to independence, confidence and community impact.***

They often describe entrepreneurship as a consequence of their life circumstances (widowhood, limited employment opportunities, family responsibilities) rather than a decision driven by a market opportunity. For instance, one respondent began selling sarees from home after her husband's death. She eventually expanded to a retail shop, initially relying on women she knew through her previous work as a cook to build a customer base. Having established her business, her ambition is now to move beyond retail into manufacturing, although limited working capital constrains her ability to stock newer designs. Another respondent transformed a hobby into a full-time business after struggling to find suitable employment. Across interviews, entrepreneurship was frequently described as a means of gaining financial independence rather than simply supplementing household income.

Unlike many male respondents, women frequently spoke about empowering other women as one of their long-term aspirations. Several women entrepreneurs expressed a desire to expand their businesses while creating employment and training opportunities for other women. One salon owner hoped to train women in her community to start their own businesses, while another planned to establish a beauty academy alongside expanding her enterprise.

Family support emerged as an important enabler, but experiences varied considerably. Several respondents spoke about strong encouragement from spouses or parents, while others recounted initial resistance or outright social opposition. A respondent who runs a beauty parlour recalled facing opposition when she first chose beauty work because it was viewed as a "barber's job". After gaining experience through training, employment and teaching, she established her own business, now uses Instagram to attract customers and hopes to expand while employing other women.

Women consistently framed their future ambitions in terms of expansion rather than stability: opening larger shops, establishing training centres, creating additional branches and employing more women. At the same time, they repeatedly identified access to working capital, stronger digital marketing capabilities and better awareness of government schemes as the key enablers needed to realise those ambitions.

Together, these narratives suggest that women entrepreneurs harbour strong growth aspirations while facing significant financial and social constraints. Their ambitions extend beyond business survival – from expanding into manufacturing to creating employment for other women – but achieving these goals often depends on access to capital, digital market access and supportive social environments.

6.3 ACCESS TO CREDIT

43% of firms report no need for credit, and among non-borrowers, 75% say they did not need credit, compared with only 2% who cite fear of rejection.

Early-stage capital is overwhelmingly self-generated by nano-enterprises: owners, their savings and their immediate network do the financing, while banks and other formal institutions are at the margins. Aspirants (Archetype 2) depend most on savings, Stagnant Incumbents (Archetype 3) lean the hardest on banks and Passive Beneficiaries (Archetype 4) fall back the most on family and friends (Fig. 6). This money is typically informal and on several accounts is extended interest free and on trust. Interestingly, self-funding falls from 63.3% at the Rs. 20–40L turnover range to 23.3% at the Rs. 1–2Cr range. Bank loans peak at 28.2% in the Rs. 80L–1Cr band. Across sectors, the pattern is uniform, with services being the most savings-reliant (62.5%) and retail/trading being the least (55.3%). Manufacturing relies the most on informal lenders and chit funds.

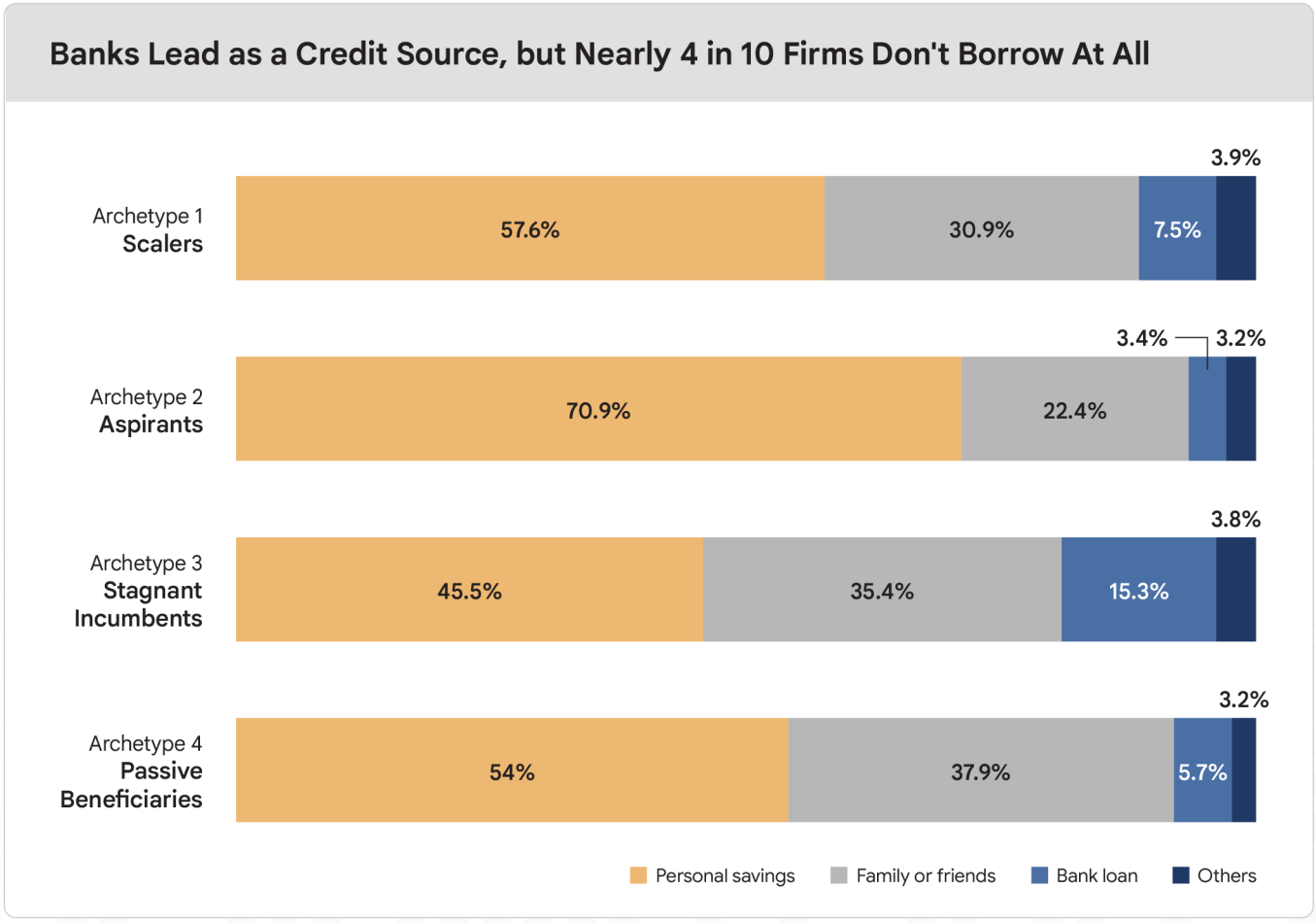


Figure 6: *Sources of early-stage capital by archetype*



For their most recent financing needs, 38.2% of firms did not borrow, while 33.3% sourced funds from banks. Across sectors, manufacturing firms are the most reliant on formal credit, with 57% borrowing from banks compared with just 19.1% of service firms. Services engage the least with formal finance, constituting the highest share of non-borrowers (47.2%) and the greatest users of NBFCs and microfinance (10.6%). Retail/trader enterprises occupy the middle ground and make the greatest use of supplier and trade credit (6.8%). Bank borrowing increases steadily with enterprise scale, rising from 27.3% among the Rs. 20–40 lakh band to 56.4% among the Rs. 80 lakh–1 crore firms, suggesting that larger enterprises are both more willing and able to access formal finance.

At the same time, the need for credit increases with growth ambition. Passive Beneficiaries are the least likely to require finance (67.8% report no need for credit), whereas growth-oriented firms, particularly Scalers and Aspirants report the greatest financing needs. Manufacturing stands out as the most credit-intensive sector: only 26.3% in this sector reported no need for credit, while half (50%) required credit multiple times, reflecting the working capital demands of raw materials and machinery. In contrast, repeat borrowing is far less common among retail/trader (20.2%) and service (18.5%) firms, whose business models typically require lower fixed-capital investments (Fig. 7).

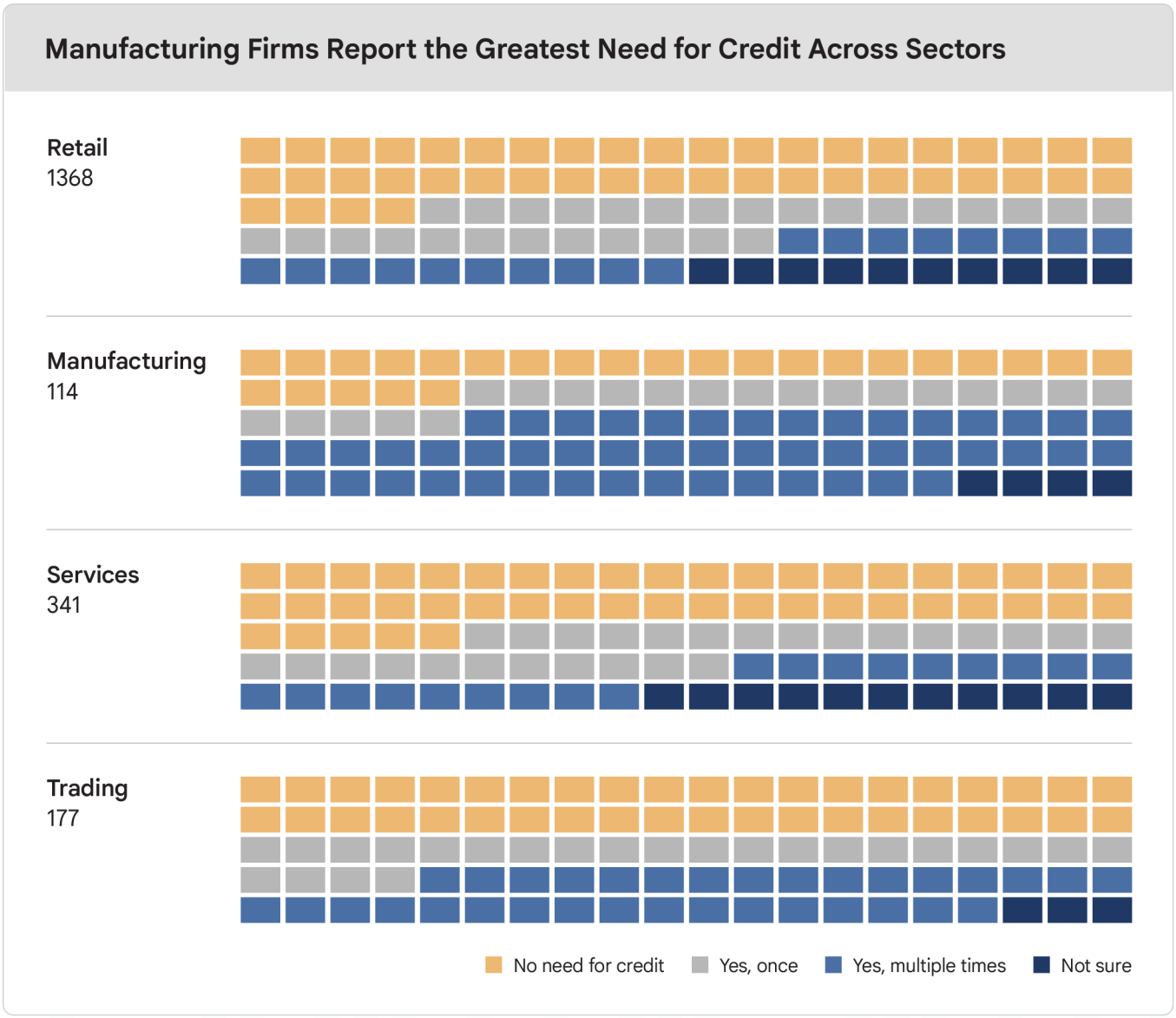


Figure 7: *Need for credit across sectors*

PASSIVE BENEFICIARY: "A LOAN IS A DOUBLE-EDGED SWORD"

For over three decades, an entrepreneur based in Nashik has run a family-owned grain processing business, serving local farmers and traders. Built almost entirely through word-of-mouth and longstanding customer relationships, the business has little need to advertise or actively pursue new markets. Instead of borrowing to expand, he has used retained earnings to gradually invest in machinery, preferring to grow at a pace that the business can comfortably sustain.
Unlike many other surveyed entrepreneurs, he has deliberately avoided relying on bank finance, not from an inability to borrow but from a deep caution about debt. He describes a loan as "a double-edged sword—both sides are sharp".

Borrowing can help a business invest and grow, but repayments continue regardless of market conditions. A poor harvest, delayed customer payments or an unexpected downturn can quickly turn a productive loan into a financial burden. Instead, he waits until he has accumulated sufficient savings before making major investments, even if this means expanding more slowly.

His approach illustrates an important finding of this study: limited borrowing does not necessarily indicate poor access to finance. For many established nano-enterprises, it is a deliberate strategy of risk management. Entrepreneurs weigh potential gains from faster growth against the financial insecurity associated with debt, particularly in businesses where revenues fluctuate seasonally or depend on uncertain customer payments. Low borrowing by many nano-enterprises reflects risk aversion and uncertainty, not simply exclusion from formal credit.

> ***"A loan is a double-edged sword. If business goes well, it helps you grow. If it doesn't, the repayments become another problem."***

However, finance is not the main constraint affecting his business today. It is finding reliable workers during peak agricultural seasons, while the absence of a successor, interested in continuing the family enterprise, diminishes his appetite for further expansion. Having built a respected and financially stable business, his objective is no longer rapid growth but continuity and quality. His experience indicates that not all successful nano-enterprises seek to scale: for some, maintaining a specialised, resilient business is itself the desired outcome.

Binding constraint: Labour availability and business succession, underpinned by a deliberate preference for self-financed growth over debt

Among non-borrowers of loans, most (74.9%) simply cite no need for credit, but the barriers are the highest for Stagnant Incumbents. Firms belonging to this archetype cite interest rates, complicated processes (two to three times the rate of Scalers) and many documentation challenges as factors blocking their access to credit. Passive Beneficiaries offer a starkly different perspective, with 90.8% saying they do not need loans. This is a crucial distinction between the two non-growth-realising groups: Stagnant Incumbents are held back from credit, while Passive Beneficiaries opt out of it.

Price sensitivity also sharpens as firms grow: interest rates are cited as a barrier by 9.2% of non-borrowers in the Rs. 20–40L band but 27.8% in the Rs. 80L–1Cr band. Sectorally, manufacturing is the most rate-sensitive (14%) while services report the most difficulty with documentation and collateral (5.8%) (Fig. 8).

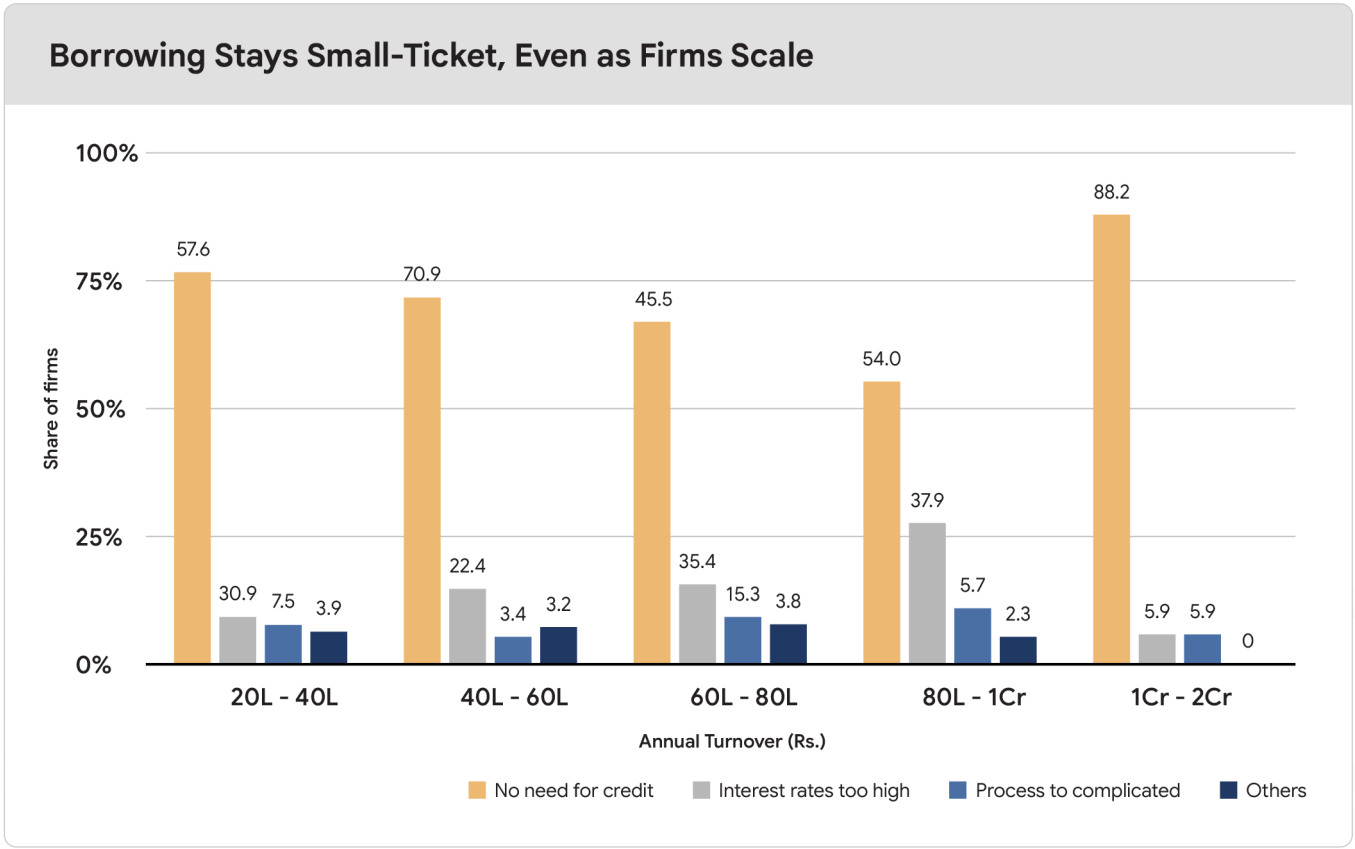


Figure 8: *Barriers to borrowing by turnover*

Borrowings by nano-enterprises are mainly restricted to small-ticket loans, with nearly three-quarters of all reported loans (73%) being under Rs. 5 lakh. Borrowings are mostly in the range between Rs. 50,000 and Rs. 2 lakh, taken by four in ten borrowers. Among the smallest firms (Rs. 20–40L), about two-thirds of loans (65.7%) are under Rs. 2 lakh whereas in the Rs. 60–80L band, two-thirds of loans (66.7%) sit between Rs. 5 lakh and 10 lakh. Among the largest firms (Rs. 1–2Cr), loans above Rs. 10 lakh become the norm (69.2%). Sectoral differences are attributable to the nature of each business: manufacturers, who must buy raw materials and machines, tend to borrow above Rs. 10 lakh (10.9%), while retailers and traders borrow the smallest amounts, with 42.3% of their loans falling in the Rs. 50,000–2 lakh band.

Interviews with the respondents suggest that formal credit access is blocked less by outright rejection than by documentation and process friction, which discourage nano-enterprises from finishing what they start. One respondent, who runs a chain of beauty parlours and has a clear expansion plan, was rejected for a Mudra loan despite being eligible. Naturally, simplified access to Mudra loans is her single biggest policy ask. Another respondent, also a parlour owner, tried to access a government loan scheme meant for her sector but could not complete the documentation process and gave up. Others described relying on agents to navigate loan applications or defaulting to personal savings and family support specifically to avoid the paperwork and uncertainty that come with formal credit.

During expert interviews, an official from Dvara Research revealed that rigid EMI repayment schedules are poorly suited to nano-enterprises' seasonal, uneven income and that commercial credit alone cannot substitute for the kind of flexible or concessional capital these firms need at the nano-enterprise stage.



Aspirant: "If I Had the Capital, I Know Exactly How I Would Grow"

A female entrepreneur from Chhatrapati Sambhajinagar started selling sarees from home after her husband's death. Two years later, she opened a shop and since then, she has expanded from sarees to a broad range of women's ethnic wear. She relies on WhatsApp to showcase new stock and has built a loyal customer base almost entirely through word-of-mouth. Her dream is to start her own manufacturing unit and supply to other retailers.

Her constraint is neither demand nor entrepreneurial ambition. It is a working capital. Fashion trends change rapidly, but she cannot afford to stock new designs when customers ask for them. Existing loans carry high repayment burdens; banks remain difficult to access; and during financial emergencies, she has sold personal jewellery instead of shutting down the shop. For her, finance is not simply about starting a business; it determines whether she can respond to market opportunities as they arise.

Binding constraint: Affordable working capital for inventory expansion

6.4 ACCESS TO MARKETS

For the vast majority of nano-enterprises, market access remains the most urgent operational bottleneck, though its primacy shifts as firms scale up. At the entry turnover band (Rs. 20–40L), almost half (46%) of enterprise owners identify limited market access as their primary challenge (Fig. 9). This constraint becomes more pronounced as firms move into the Rs. 60–80L range, where 60% cite market access as a challenge. It then eases somewhat among firms above Rs. 80L, with around half continuing to report market access as a key constraint. The pattern suggests that market access remains a persistent bottleneck even as firms grow, although its relative importance varies across turnover bands. However, as firms cross into higher turnover tiers, this constraint steadily eases, making way for financial bottlenecks and acute shortages of skilled labour (Fig. 10).

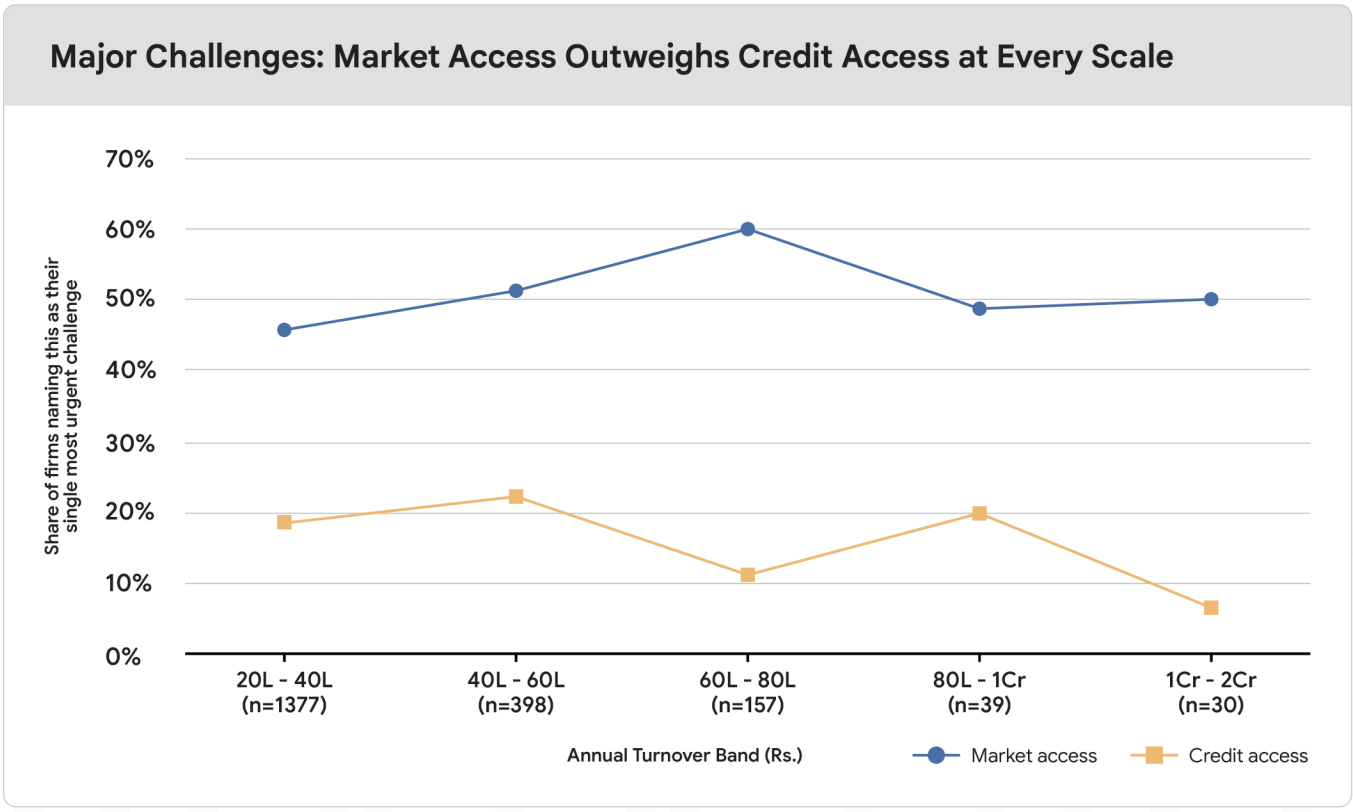


Figure 9: *Main operational barriers identified by nano-enterprises across turnover bands*

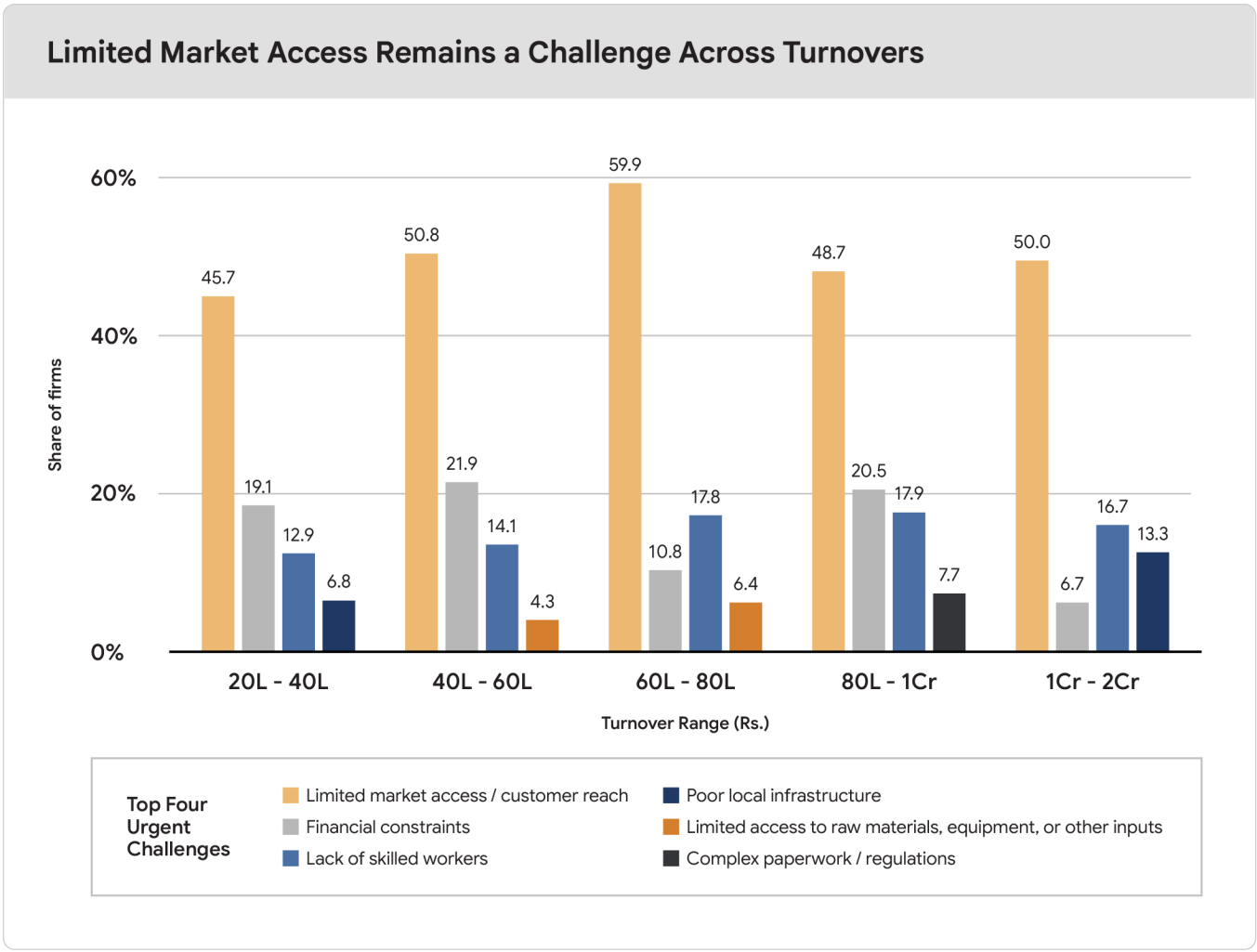


Figure 10: *Top four urgent challenges by turnover*

Sectoral dynamics further influence these challenges. Retail and trading enterprises are overwhelmingly bottlenecked by market access (50.5%), whereas manufacturing enterprises split their primary concerns between financial capital (29.8%) and skilled labour availability (27.2%). Among archetypes, Scalers identify market access (51.6%) and talent (17%) as their binding constraints, while among Stagnant Incumbents and Passive Beneficiaries, access to finance is more prominent (Fig. 11). Among Stagnant Incumbents, 74% of those with growth ambition list market access as a constraint.



Limited Market Access Leads Across All Growth Orientations

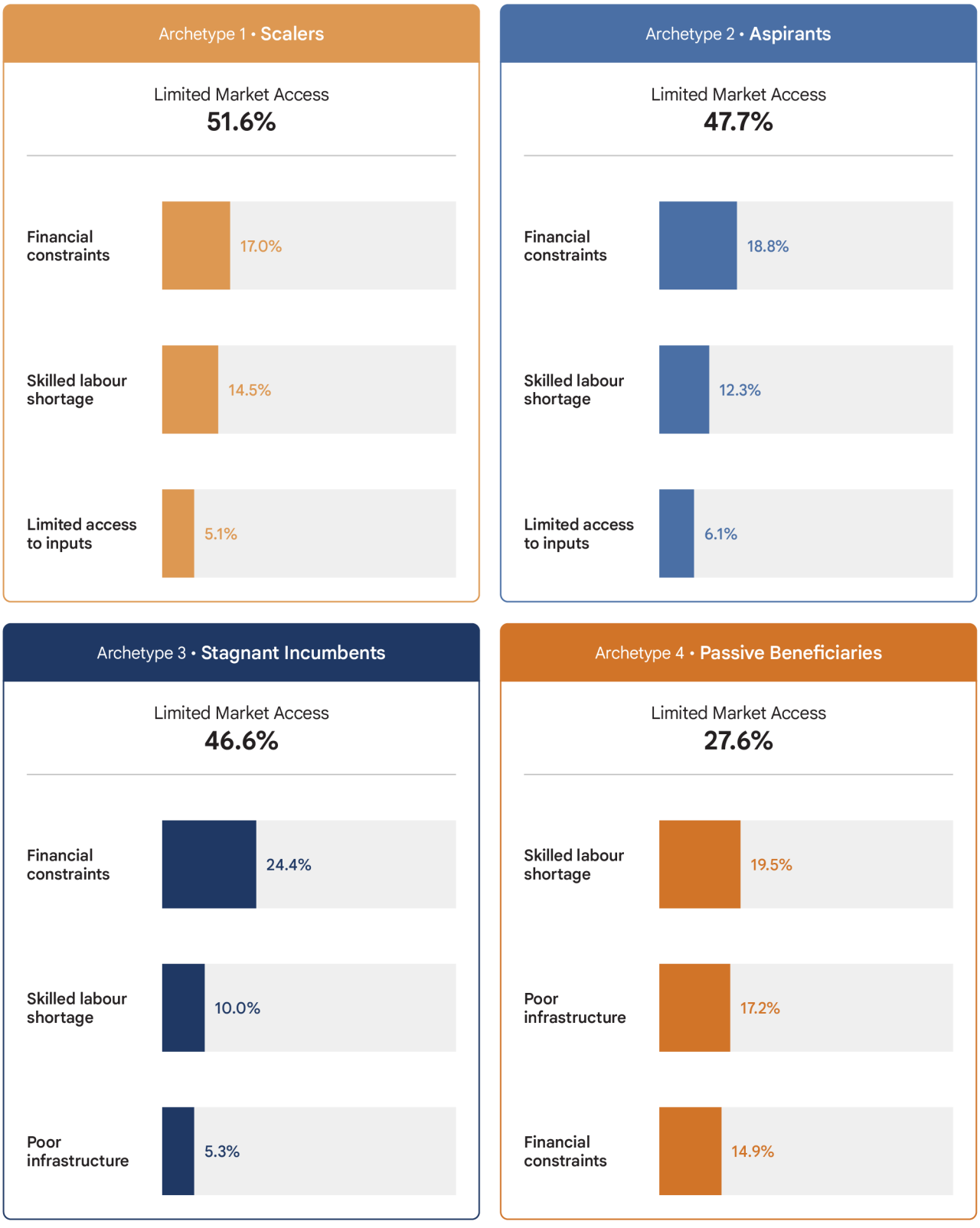


Figure 11: *Top four urgent challenges for each archetype*

"GETTING ORDERS IS EASY; GETTING PAID IS THE PROBLEM"

> *In our business, orders are easy to come by, but the entire trade runs on buyer credit. Identifying honest clients who actually pay on time is our single biggest challenge. Unreliable buyers take goods and delay payments endlessly, draining our working capital.*
>
> – Wholesale Bag Manufacturer, Scalers, Mumbai

> *It's easy to find customers, but difficult to find a customer with good payment practices. Our informal business network meets regularly just to discuss 'bad customers' who default on payments, so we know who to avoid.*
>
> – Textile & Garment Trader, Scalers, Pune

Qualitative interviews suggest that market access is not only about finding customers, but also about converting demand into sustained revenue. For some enterprises, orders are relatively easy to secure, but delayed or difficult payment collection creates a significant strain on cash flows. For others, intensifying competition erodes their share of local demand. A saree and clothing retailer in Amravati, for instance, described her business as being in "survival mode" amid rising competition from nearby malls. She had consequently reduced her inventory and stopped pursuing expansion, identifying limited space and declining footfall – not capital – as the binding constraint on her business. Another respondent noted that expanding into new cities helped attract customers, but the cost of establishing a physical presence in each location made expansion slow and expensive. Others described a similar dynamic: competition had intensified over time without a commensurate increase in their customer base, leaving firms with unsold inventory and established reputations but a shrinking share of local demand. Together, these accounts suggest that market access constraints extend beyond customer acquisition to retaining demand, collecting payments, and expanding into new markets at viable cost.

This lines up with the opinion of an expert from ONDC, who described market entry for nano-enterprises as a layered set of barriers, involving documentation, branding and logistics upfront followed by sustaining of orders and quality once onboarded.

Reliance on immediate demand is closely tied to how these firms generate sales. Direct walk-in customers dominate sales channels across the entire spectrum, accounting for 65.7% of primary sales in the Rs. 20–40L band. However, as enterprises scale toward the Rs. 1–2Cr tier, reliance on pure walk-in traffic drops to 42.2%, with larger firms expanding to intermediaries, wholesalers (18.8%) and door-to-door sales (9.4%).

By sector, retail remains almost entirely dependent on walk-in footfall (63.7%), whereas manufacturing exhibits greater channel diversification, relying more on social media marketing (15.3%) and trade intermediaries (9.5%). Customer loyalty also tracks revenue scale: firms reporting over 75% repeat customers increase from 8.8% in the baseline turnover tier to 15.4% among Rs. 1–2Cr enterprises.

Market friction is exacerbated by intense hyper-local competition, which peaks in the middle-growth bands (reaching 62.8% at the Rs. 40–60L tier) before moderating at higher revenue levels. Stagnant Incumbents report markedly lower competitive pressure (37.5%) than ambitious, growth-seeking firms (Scalers at 48.6%), indicating that active expansion pushes firms into more contested market spaces.

Concurrently, institutional support mechanisms remain largely out of reach. In the Rs. 20–40L tier, 88.9% of owners report receiving no benefit from government support schemes. However, uptake improves significantly among larger units. Non-beneficiaries in the Rs. 1–2Cr tier drop to 45.9%, with MUDRA serving as the predominant institutional bridge. Crucially, scheme awareness and uptake follow growth intent rather than firm size alone: Scalers register significantly higher scheme utilisation (26.9%) than Passive Beneficiaries (6.8%).

6.5 DIGITAL INTEGRATION

Payment apps (UPI, PhonePe, GPay) are the most-used digital tool across sectors and turnover bands, while genuine e-commerce or marketplace presence stays negligible. Firms adopt UPI "because everyone uses it now" or "because customers primarily use it now," and most still keep a paper register beside the QR code.

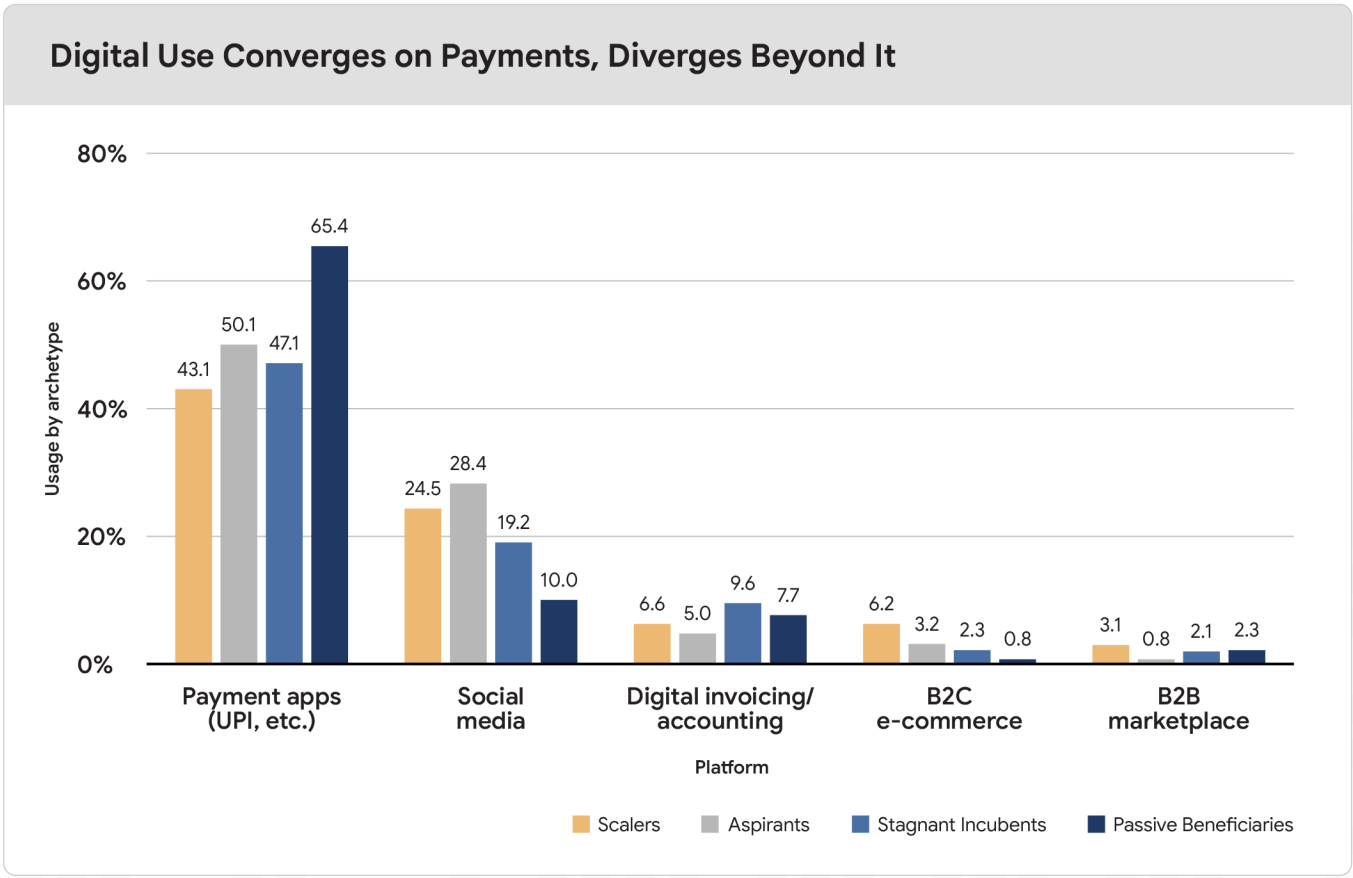


Figure 12: *Digital platform usage by archetype (n = 2001)*

Digital use penetration is the deepest among Stagnant Incumbents, the least cash dependent of the four groups. What is crucial for firms is not how much they digitalise but whether that activity converts into something useful, such as credit, new customers, or revenue. Scalers optimise digital usage: they most often use digital tools to reach new customers, increase revenue and access credit. Passive Beneficiaries, on the other hand, lean on UPI more heavily than any other group (65.4%) but use social media the least (10%) and barely engage with e-commerce (Fig. 12). For them, digital adoption is purely convenience-driven: going digital simply makes the existing business run more smoothly instead of creating new growth.

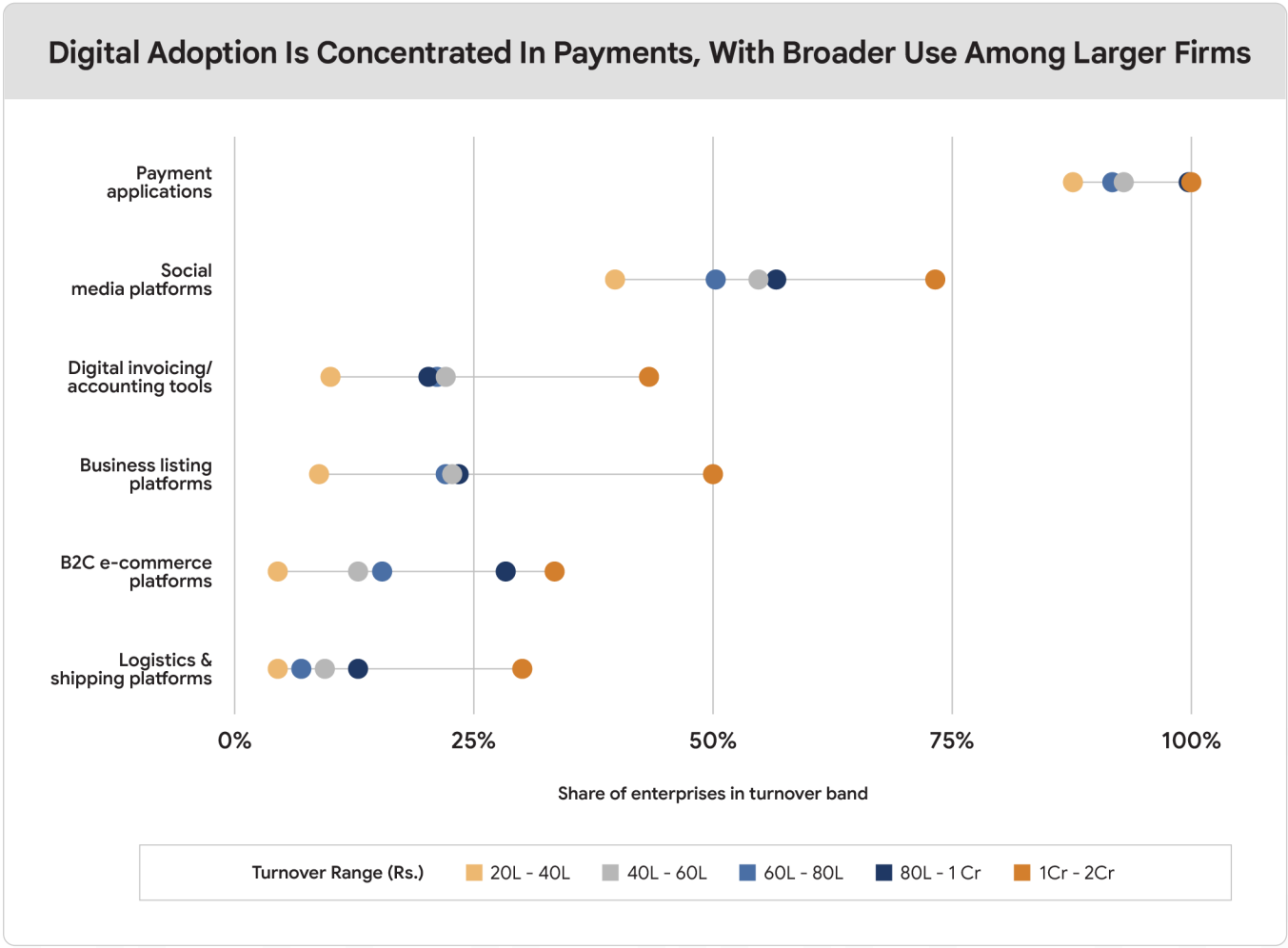


Figure 13: *Digital platform usage by turnover (n = 2001)*

The use of payment applications is universal across the sample, rising from 87.7% for firms in the Rs. 20–40L band to 100% at Rs. 80L and above. Most other digital tools show a consistent pattern: a five to seven-fold increase in usage from the lowest to the highest turnover band. The use of business-listing platforms rises from 8.7% to 50%, B2C e-commerce from 4.4% to 33.3%, logistics and shipping from 4.5% to 30%, and digital invoicing or accounting tools from 9.9% to 43.3%. Social media falls in between, growing from 39.7% to 73.3% (Fig. 13). These trends suggest that firms do not deepen their digital adoption simply by transacting more on UPI; rather, digital maturity comes from layering additional tools on top of it. Payments are the entry point nearly every enterprise has crossed, while the adoption of other tools builds up gradually as turnover rises.

A detailed exploration of how digital and technology integration shapes firm growth, along with the policy implications that follow, is presented in Section 2: Digital Integration of Firms.

WHEN DIGITAL ADOPTION DOESN'T MEAN GROWTH

Several entrepreneurs had embraced UPI and digital payments because of their customers.

> *It was mainly due to customer demand. Some customers do not have cash and prefer online payments or card transactions, so I had to keep those options available.*
>
> – Medical Store, Aspirants, Pune

They emphasised that digitalisation had not fundamentally changed their business.

> *No, there is no increase due to the use of digital tools. You only use UPI.*
>
> – Rice Mill, Passive Beneficiaries, Nashik

> *The difference in sales is the same; nothing has increased or decreased significantly. It has just saved time.*
>
> – Manufacturing, Scalers, Nagpur

For some, digital tools reduced bookkeeping and cash handling.

> *There has been a change. It has saved a bit of time. The tension of going somewhere just to pay or receive money is completely gone.*
>
> – Manufacturing, Scalers, Nagpur

For others, WhatsApp became a useful way of notifying existing customers about new stock.

> *I have a WhatsApp group... I have made a group for all the ladies in the neighbourhood. I give them the details, and whoever wants something comes to take it. When I bring something, I post it. They see it, and whoever wants it comes by themselves.*
>
> – Saree Centre, Aspirants, Chhatrapati Sambhajinagar

I keep posting statuses, etc., on WhatsApp.

– Beauty Parlor, Stagnant Incumbents, Nagpur

Few reported that digital adoption alone generated new demand.

No, there is no increase due to the use of digital tools.

– Rice Mill, Passive Beneficiaries, Nashik

Sales have increased due to digital... digital platforms viewed as beneficial — useful for advertising and publicity. No disadvantages experienced with online platforms.

– Beauty Parlour, Scalers, Chhatrapati Sambhajinagar





Qualitative interviews suggest that most respondents barely know ONDC or other B2B/B2C marketplaces, indicating that awareness and follow-through break down well before any real market benefit. One respondent, a spice manufacturer in Chhatrapati Sambhaji Nagar with an active presence across Facebook, WhatsApp and Google, said he had never subscribed to a paid platform like Amazon or ONDC simply because he lacked know-how, despite receiving unsolicited loan offers on the back of his UPI transaction history.

Another respondent, a file manufacturer in Nagpur, shared that he had tried IndiaMART for a year and received good orders through it, but chose not to renew, relying instead on word of mouth and an already established name in the market. Others described B2B listings as better for generating enquiries than customers, with one trader noting that his website presence brought in leads but not many "good," reliably paying customers. This also aligns with the views of an ONDC executive, who described the adoption of open networks as an inherently slow and non-linear process, cautioning that this pace should not be read as a failure signal. He added that smaller, challenger firms rather than established incumbents are a more realistic entry point for building adoption from the ground up.



6.6 HIRING AND WORKFORCE

Workforce size and hiring behaviour offer a more operational view of where firms sit along the growth spectrum, complementing the turnover and ambition-based angles developed in the archetypes above. Examining which firms employ, whether they intend to hire, what skills they look for, where hiring falls short and how they source workers helps identify where labour market support – wage benchmarking, skilling or formal hiring channels – would be most useful and for whom.

Workforce Size Rises Steadily With Turnover

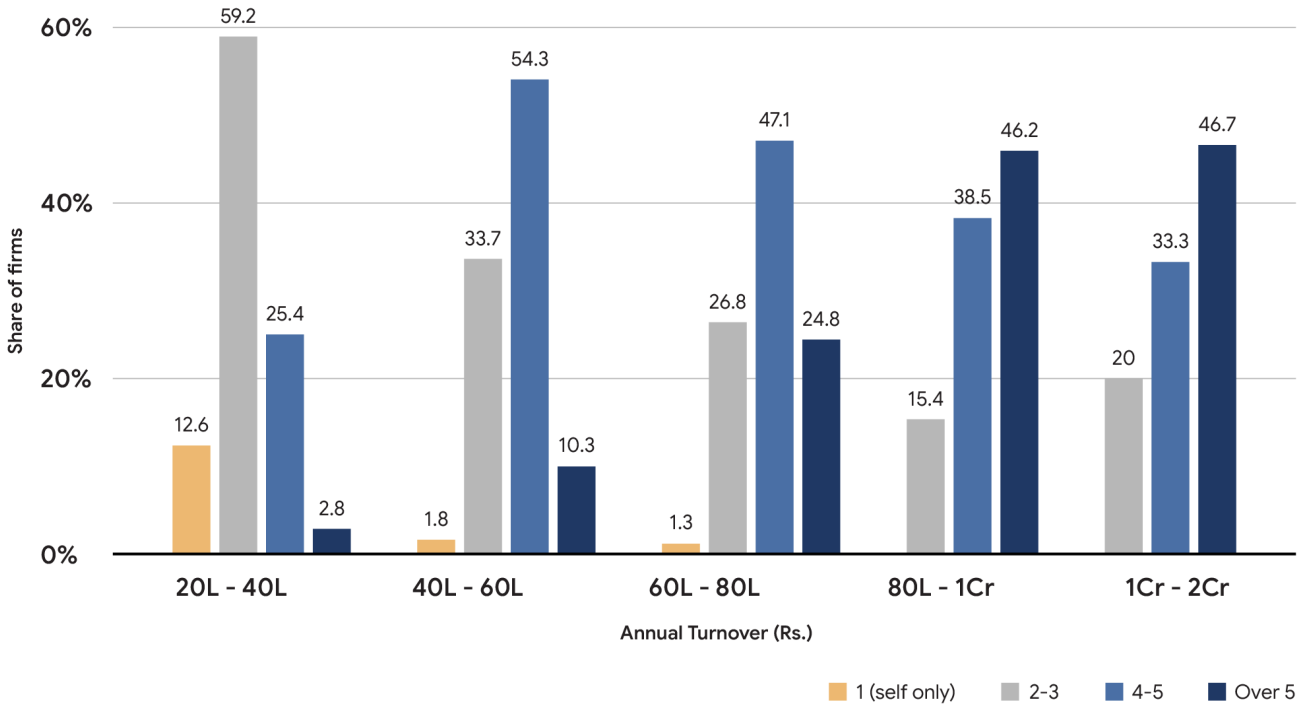


Figure 14: *Workforce strength by annual turnover*

Workforce size and hiring intent both rise consistently with turnover and growth trajectory. Firms with 3 to 5 full-time employees grow from 17% in the Rs. 20–40L band to ~45% in Rs. 80L–1Cr band, while the share reporting no hired employees at all falls by over 10% between the same two bands (Fig. 14). Correspondingly, the share of firms with no plans to hire also falls by around 40% from Rs. 20–40L to Rs. 1–2Cr.

The archetypes support this picture: Scalers have both the most built out workforce (~50% at 3 to 5 employees), while firms with no hired employees are the highest among Stagnant Incumbents (~20%). Aspirants are entirely composed of firms with no hiring plans while Stagnant Incumbents noted lack of skilled workers as a challenge (Fig. 15). Within the same archetype, 57% of those without growth ambition also listed a lack of skilled workers as a major challenge. Sector differences here are comparatively muted, though manufacturing shows the strongest hiring intent of any sector, whereas retail and trading sectors have the highest shares of no-hired-employee firms (Fig. 13).

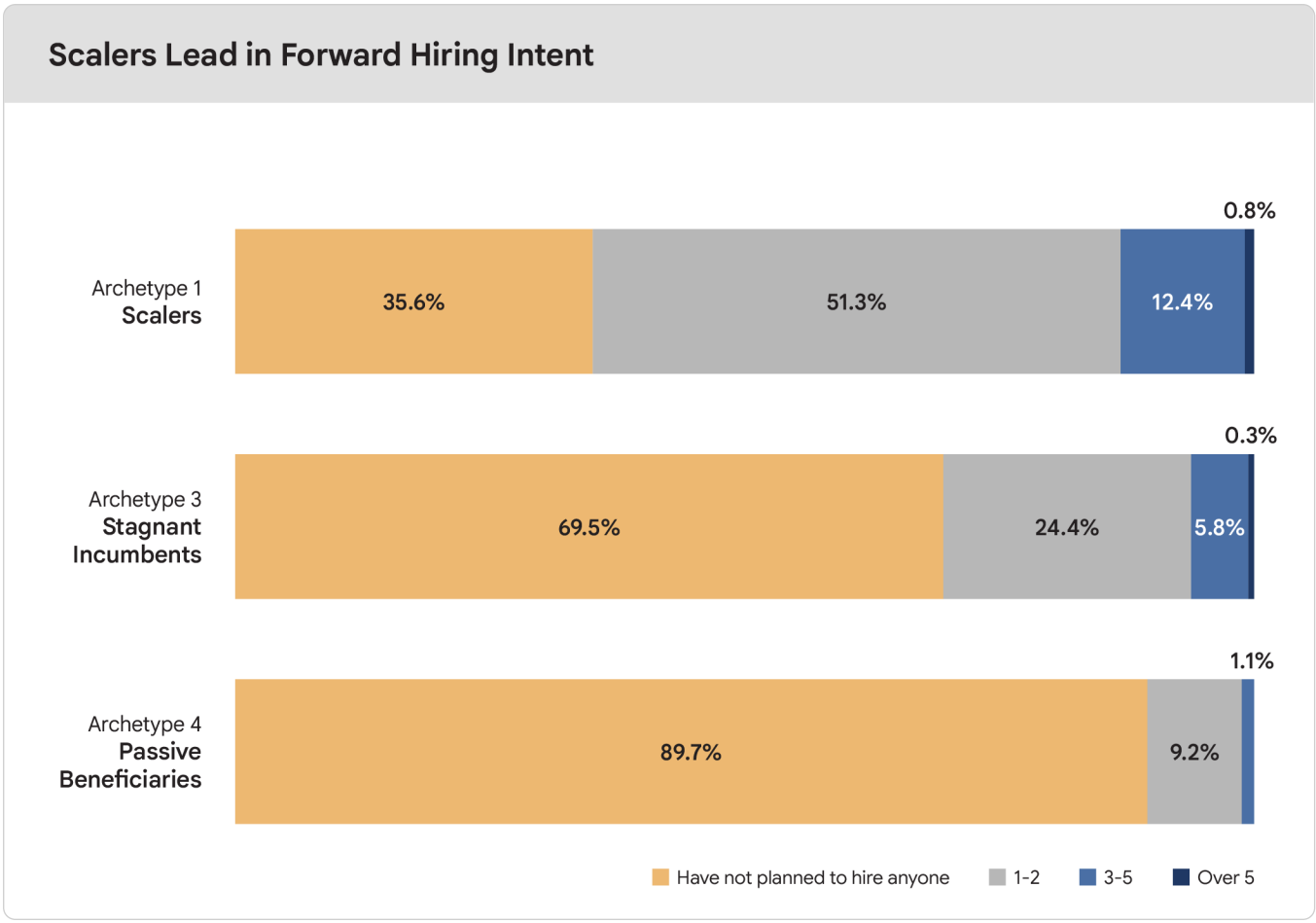


Figure 15: *Plans to hire by archetype (n = 1506)*

**Note: Archetype 2 is not included because this variable was filtered out during the analysis.*



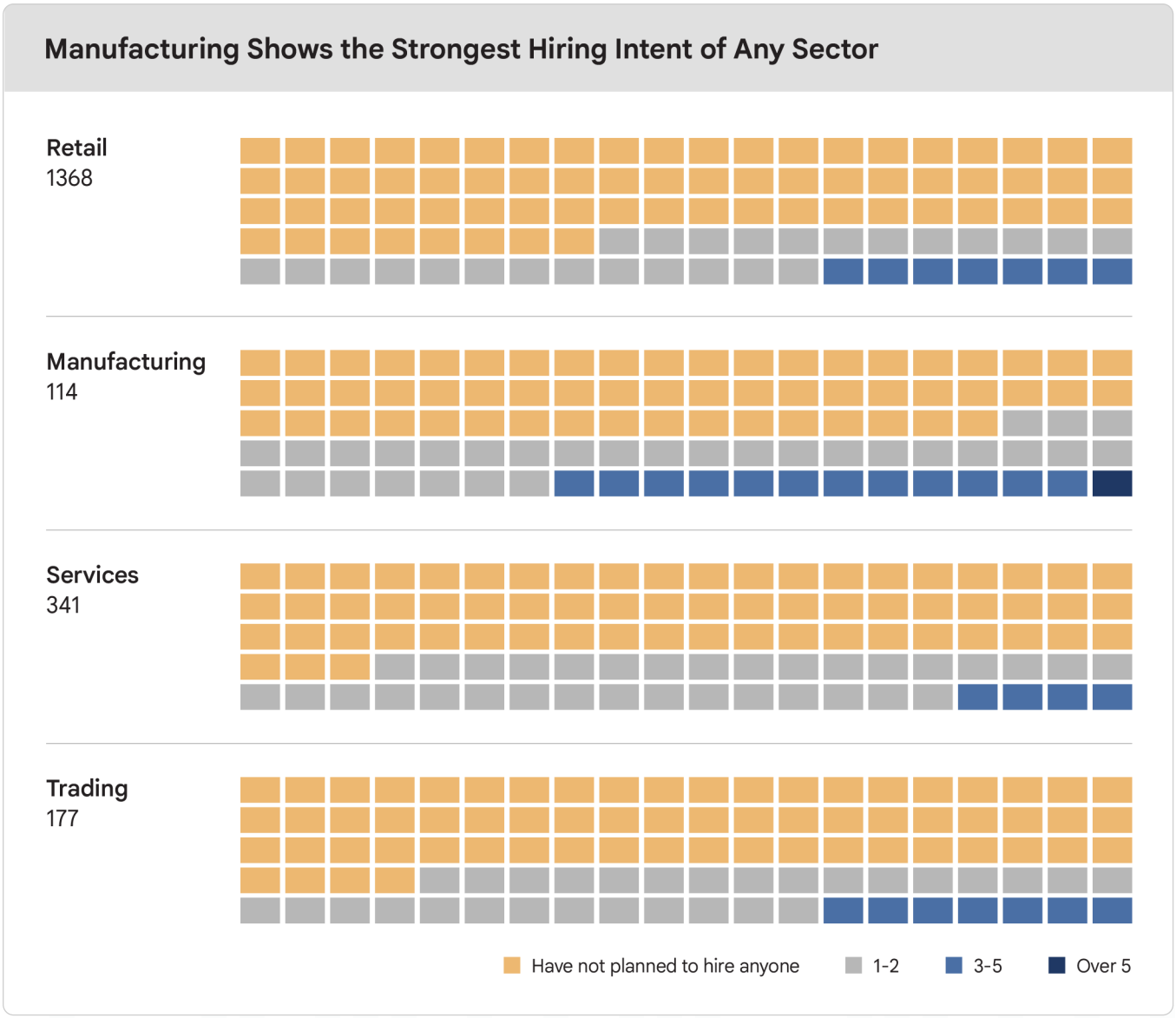


Figure 16: *Plans to hire by sector (n = 2001)*

What firms look for when hiring remains fairly stable across turnover bands, with prior work experience and basic skills consistently emerging as the top two picks, cited by roughly 35% of firms. Hiring preferences shift with a firm's growth trajectory. Firms that are actively growing tend to hire for training, favouring workers with basic skills, whereas firms whose turnover has stagnated or non-growth firms emphasise proven ability, favouring prior work experience instead.

This split points to an underlying difference in hiring philosophy:

> *growing firms appear more willing to invest in developing a worker, while stagnant firms lean on hiring people who can contribute from day one.*

HIRING SKILLED LABOUR

Some entrepreneurs felt that government income-support schemes reduced willingness to take up formal wage work.

> *There are so many government schemes now – workers get paid through them regardless, so many don't feel the need to work as hard. I raised their wages by Rs. 100, but they still only show up 4, 5, or 6 days a week.*
>
> – Rice Mill, Passive Beneficiaries, Nashik

Skilled labour isn't just harder to find – it changes what a business can actually produce.

> *The challenge is a skilled artisan – more artisans will be needed, and they should also be skilled. You won't be able to explain to them every time; if you give a drawing, they should be able to do it. We can manage material and customers, but the craftsmen who do the actual work are the challenge.*
>
> – Engineering Enterprise, Scalers, Nashik

Skilled labour commands a wage premium and it's often paid out of necessity, not choice.

> *We don't get skilled labourers – this work is very hard, so we do manual labour, but skilled ones are hard to find. Even if we get them, we have to pay them extra.*
>
> – Spice Manufacturer, Scalers, Chhatrapati Sambhajinagar

> *Any person who is looking for a job expects a good salary for less work, but we decide the salary based on their skills.*
>
> – Ayurvedic Product Seller, Scalers, Pune

Skill isn't just about hired workers; it's a capability the owner has to build personally to run the business.

> *Skill must be compulsorily in our own hands too. Because trusting a worker [alone isn't enough].*
>
> – Beauty Parlour Owner, Scalers, Mumbai

Binding Constraint: Skilled-labour scarcity behaves less like a hiring-volume problem and more like a capacity ceiling.

By sector, manufacturing is the clear outlier, requiring more technical or vocational skills than any other sector (~28% vs. 21% for retail and trading and 24% for services). This demand is not being met easily: manufacturing firms report skill shortage as a hiring challenge far more often than other sectors (~35% vs. 22% for both retail and trading), suggesting a mismatch between the specialised skills the sector needs and what is available in the local labour pool. This strain is acute for the smallest firms, with skill shortage complaints peaking at the lowest turnover band (24% at Rs. 20 to 40L) and gradually easing as firms grow larger, likely reflecting both greater bargaining power and better access to networks as businesses scale.

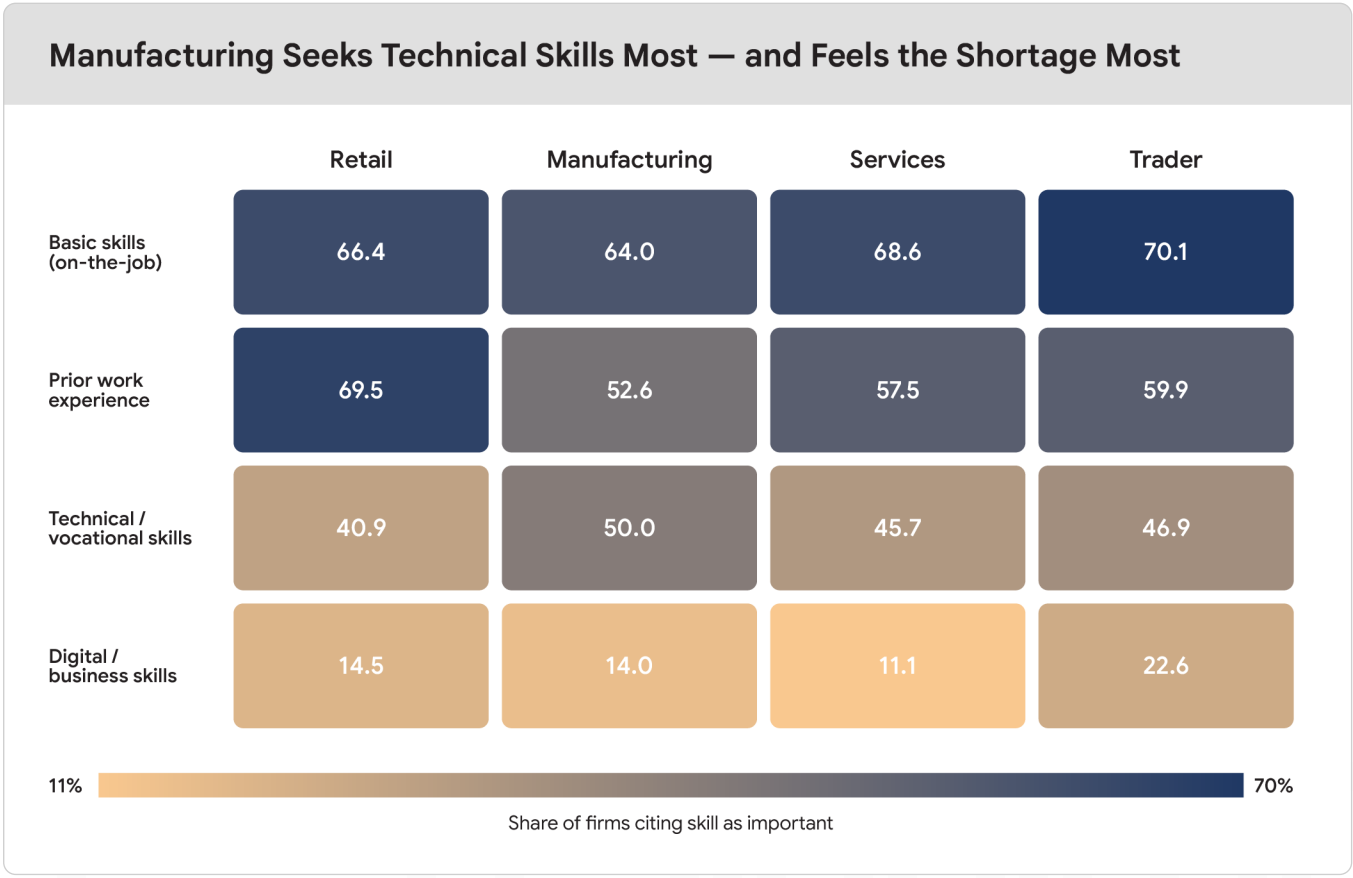


Figure 17: *Skills required by sector*

Wage expectations being too high and an inability to find workers with the required skills remain the two dominant hiring challenges throughout.

Finally, sourcing channels for workers change with both the scale and growth status of the firm. Personal networks dominate at lower turnover bands (used by 42% of firms at Rs. 20 to 40L), but referrals from existing employees become the primary channel at higher turnover (67% at Rs. 80L to 1Cr) (Fig. 17). The archetypes echo this trend: Scalers rely most heavily on employee referrals (over 51%), whereas Stagnant Incumbents and Passive Beneficiaries rely most on personal networks (~50% and ~65%), reinforcing that formalisation in hiring tracks growth trajectory rather than turnover alone.

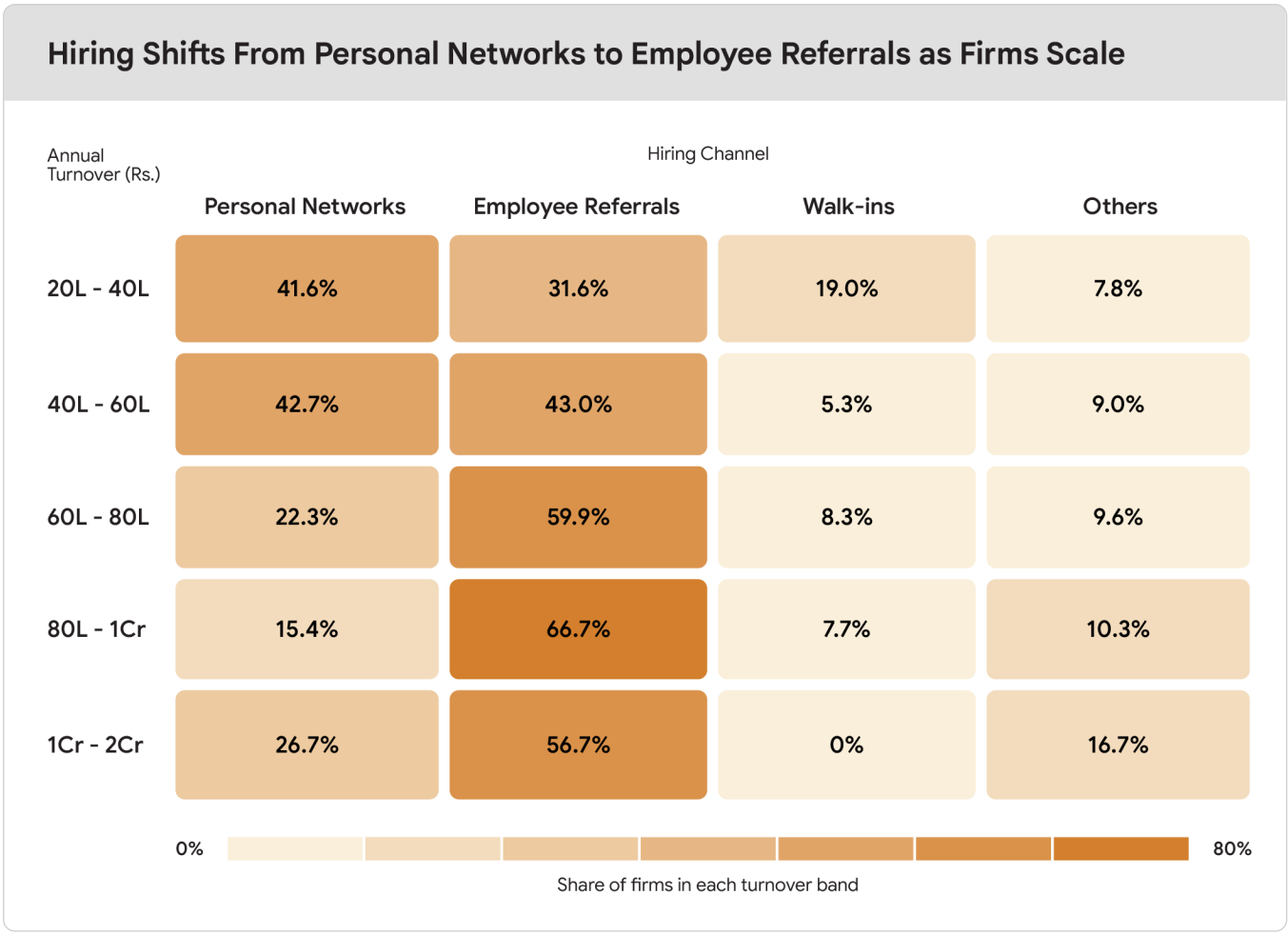


Figure 18: *Hiring channel by turnover bands (n = 2001)*

6.7 REGISTRATION, COMPLIANCE AND FORMALISATION

Formalisation, measured through business registrations and compliance practices, reflects the extent to which enterprises participate in the formal regulatory system. The number of registrations held by firms increases steadily with annual turnover. Among enterprises with an annual turnover of Rs. 20–40 lakh, only 5.5% hold four or five registrations. This rises to 35.9% among firms with a turnover between Rs. 80 lakh and 1 crore, suggesting that firms acquire additional registrations as they expand and engage with a wider set of regulatory requirements (Fig. 19).



Number of Registrations Held Rises Steadily With Annual Turnover

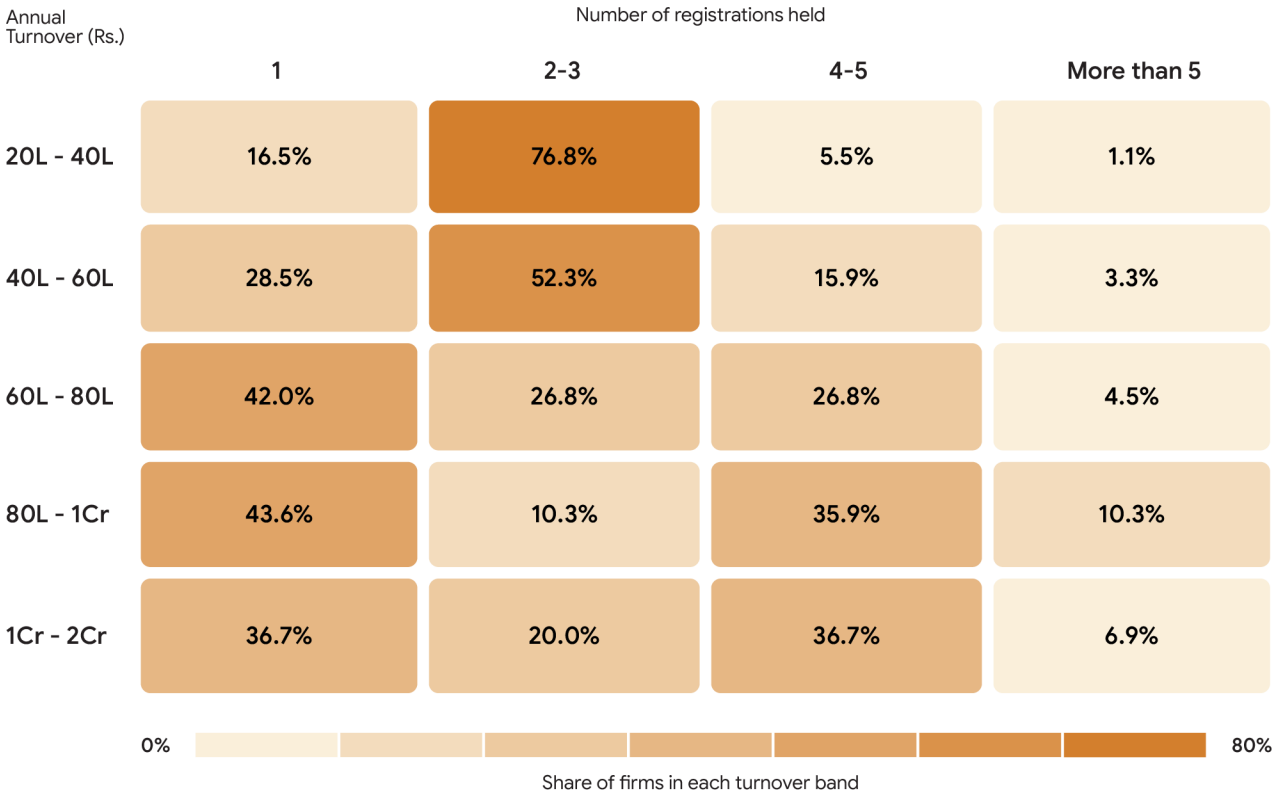


Figure 19: *Number of registrations by annual turnover (n = 2001)*



Across archetypes, however, the pattern is less closely aligned with business performance. Scalers and Stagnant Incumbents are the most likely to hold four or more registrations (14.9%, including firms with more than five registrations) compared with Aspirants (7.5%) and Passive Beneficiaries (3.4%). Aspirants are the most likely to hold only a single registration (22%), while nearly three-quarters (73.6%) of Passive Beneficiaries hold two or three registrations (Fig. 20).

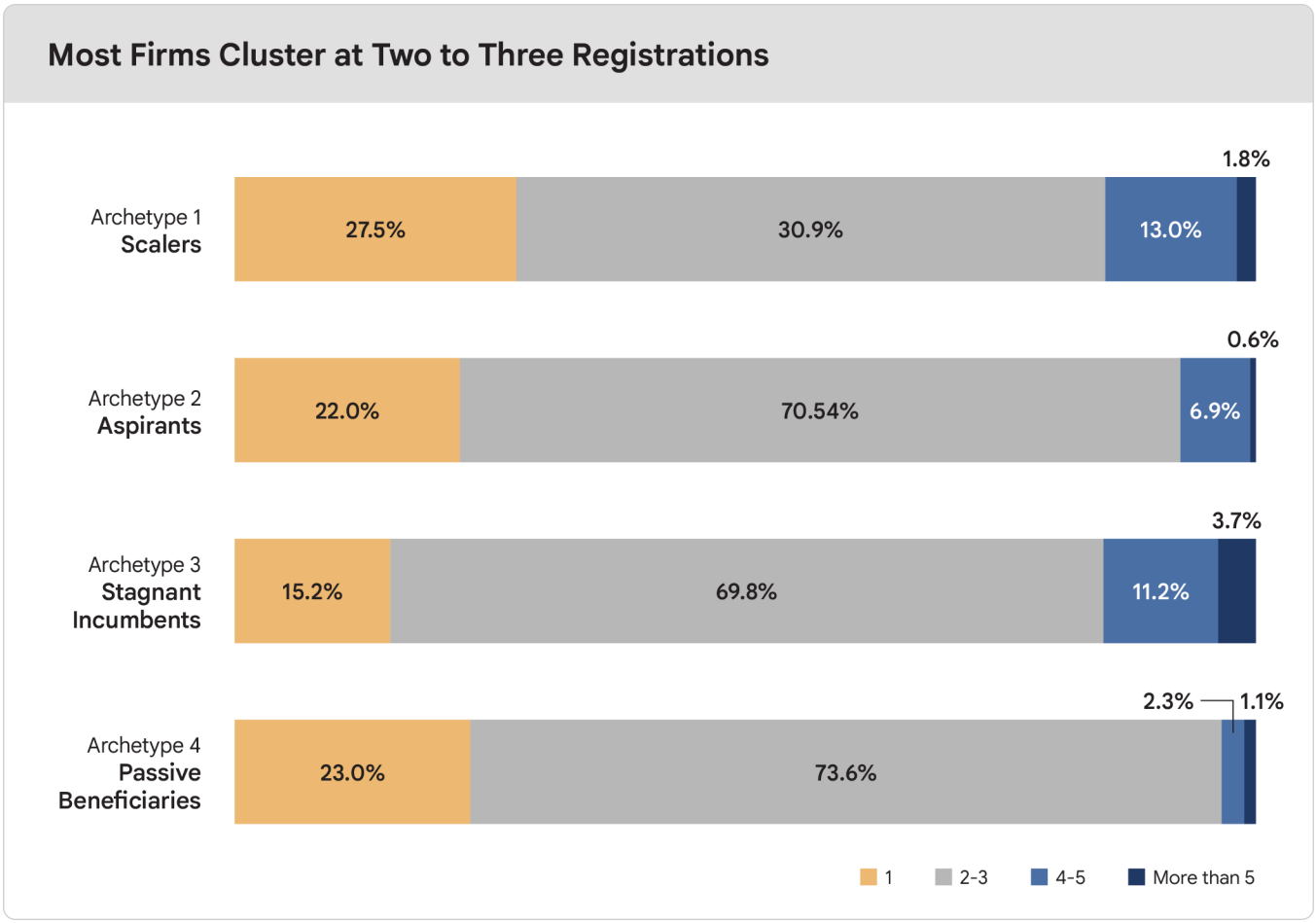


Figure 20: *Number of registrations by archetype (n = 2001)*

Manufacturing firms are the most likely to hold only one registration (30.7%), whereas service-sector enterprises tend to hold a broader mix of registrations. The composition of registrations is broadly similar across firms. The two most commonly held registrations across all turnover bands are Udyam registration and Shop and Establishment licence, each accounting for roughly one-quarter to one-third of registrations. GST registration is also consistently prevalent across turnover groups, indicating that the core registrations required by enterprises remain similar as firms scale.

The pattern differs more strongly across archetypes. Shop and Establishment licences are nearly universally held by all enterprise types, ranging from 75% of Scalers to 92% of Passive Beneficiaries. GST registration is also common across turnover groups (63–73% of all archetypes), although its prevalence increases modestly as firms grow. By contrast, Udyam registration rates vary substantially by enterprise type: over 85% of Scalers and Aspirants hold Udyam registrations as against 76.5% of Stagnant Incumbents and just 36.8% of Passive Beneficiaries (Table 6).

Table 6: Registrations held by archetype

Registration Type	Scalers	Aspirants	Stagnant Incumbents	Passive Beneficiaries
Udyam	86.1%	85.1%	76.5%	36.8%
GST	72.6%	72.1%	63.4%	63.2%
Shop & Establishment	74.7%	81.6%	80.4%	92.0%
Trade licence	49.9%	37.6%	38.5%	19.5%

Table 7: Registrations held by turnover

Registration Type	Rs. 20–40L	Rs. 40–60L	Rs. 60–80L	Rs. 80L–1Cr	Rs. 1–2Cr
Udyam (MSME)	76.3%	87.4%	94.9%	92.3%	93.3%
Shop & Establishment	74.7%	85.2%	94.9%	100.0%	90.0%
GST	59.1%	88.2%	94.9%	97.4%	100.0%
Trade Licence / Local Municipal	32.0%	54.3%	78.3%	87.2%	73.3%
Other	5.2%	9.3%	7.0%	5.1%	16.7%

Registration patterns become progressively more comprehensive as enterprises grow. Udyam and Shop & Establishment registrations are commonly held by firms with an annual turnover of Rs. 20–40 lakh (76.3% and 74.7%, respectively), while GST registration is held by a smaller share (59.1%). Beyond Rs. 40 lakh turnover, however, GST registration rate rises sharply to 88.2%, reaching almost universal coverage among firms above the Rs. 60 lakh level (94.9–100%). Udyam and Shop & Establishment registrations follow a similar trajectory. Trade licence registration also increases steadily, from 32% among Rs. 20–40 lakh firms to 87.2% among firms with a turnover between Rs. 80 lakh and 1 crore (Table 7). Together, these patterns suggest that enterprises accumulate registrations as they scale and engage with a broader range of markets and regulatory requirements.

Most firms register at the time of establishment, typically in the Rs. 20–40 lakh bracket (44.1%) though Rs. 60–80 lakh firms are more likely to register over a year of operations (33.8%). By archetype, Aspirant firms tend to register at inception (51.4%), while Stagnant Incumbents (41.5%) and Passive Beneficiaries

(48.3%) tend to formalise within their first year, suggesting registration often follows rather than precedes business activity.

The majority of the enterprises find Udyam registration beneficial, with Rs. 20–40 lakh firms most likely to call the benefit significant (~50%). Gains appear to taper as firms mature. Registered firms are also nearly three times as likely to have borrowed from a bank. By archetype, Scalers report the strongest gains from registration (~55% significant), followed by Aspirants (~49%) and Passive Beneficiaries (43.8%). Nearly a quarter of Stagnant Incumbents – the highest share across groups – report no benefit at all.

Qualitative interviews suggest that GST serves a different function from other registrations. While Shop and Establishment licences and Udyam are often obtained early in a firm's lifecycle, entrepreneurs describe GST as a commercial registration that is needed when businesses begin supplying to larger buyers, participating in government procurement or seeking formal finance. Recent evidence[52] also points to a "formalisation cascade", whereby firms adopt GST because customers, suppliers and larger buyers increasingly require GST-compliant transactions. Formalisation therefore spreads through commercial relationships as much as through regulatory enforcement, reinforcing the importance of creating market incentives while reducing compliance costs.

COMMERCIAL INCENTIVES DRIVE GST REGISTRATION

For enterprises above the threshold, GST becomes a functional necessity.

> *When applying for a loan, they ask about the GST paid. I have to provide those details when filing my GST returns.*
>
> – Engineering Firm, Scalers, Nashik

> *I do not have a GST number, which makes it impossible to get government tenders.*
>
> – Manufacturing Firm, Scalers, Nagpur

For enterprises below the threshold, GST isn't a barrier. It's simply irrelevant to their scale of operation.

> *Where would we pay GST – is the sales even that high? We don't have to pay GST at all; big traders pay GST.*
>
> – Saree Seller, Stagnant Incumbents, Nagpur

> *Still, we don't have GST. It's not on such a large scale that it is required, so we don't have a GST certificate.*
>
> – Clothing Boutique, Stagnant Incumbents, Mumbai

The survey data are consistent with these qualitative accounts. While Udyam and Shop & Establishment registrations are widespread even among smaller firms, GST registration varies dramatically with business scale, rising from 59% among Rs. 20–40 lakh firms to almost 100% among enterprises above the Rs. 60 lakh turnover band.

Similarly, interactions with government agencies become more frequent as firms grow. Nearly half (49.4%) of firms with an annual turnover of Rs. 20–40 lakh report never interacting with government agencies compared with only 10.8% of firms in the Rs. 60–80 lakh turnover category. Larger firms typically interact with government agencies a few times each year. Within archetypes, Scalers report the greatest engagement with the government (66% – at least once a year) compared with 57% of Aspirants and 53% of Stagnant Incumbents. At the same time, almost half of Stagnant Incumbents report never interacting with government agencies, the highest of all archetypes.

These differences are mirrored in compliance practices. Smaller firms predominantly manage compliance themselves, while firms above Rs. 1 crore turnover increasingly rely on accountants or consultants. Across archetypes, Scalers and Passive Beneficiaries (60-80%) are the most likely to self-manage compliance, while Aspirants and Stagnant Incumbents make greater use of accountants (43%).

SCALER: "COMPLIANCE ISN'T PAPERWORK – IT'S WHAT ALLOWS US TO DO BUSINESS."

After learning fabrication informally at a friend's workshop and then completing a course in it, this entrepreneur established his engineering business in 2000. Growth was gradual until 2011, when he secured a cash credit (CC) facility from a bank that allowed the business to scale. Today, the enterprise employs five workers, takes on custom fabrication work sourced primarily through government tendering and already operates a second small unit in Sinnar, with plans for a further supporting unit in the district.

His registrations – GST, Shop Act, Udyam, and GeM (the government e-marketplace) – were all obtained for a specific, practical reason: participation in government tendering. Rather than treating this as a burden, he describes compliance in largely positive terms, as a factor that helps grow the business. His registrations also feed directly into his ability to raise working capital: banks routinely ask for his GST filing history when assessing loan applications, and he keeps all transactions digital and "white" (transparent) so that his accountant can file accurate returns and his financial record stays clean for future credit assessments.

Formalisation, however, has not insulated the business from core operational pressures. The entrepreneur continues to deal with fluctuating raw material prices, which can change "every morning," rising and unpredictable electricity costs, and most persistently a shortage of skilled labour. Apart from the need for skilled workers who could interpret technical drawings independently, he expressed some personal uncertainty about keeping pace with increasingly automated machinery entering his sector. When asked about government support that would make the biggest difference to his business, instead of credit or registration support, he spoke about price stability: "The costing of the material changes every morning... it should remain fixed for at least one or two months."

His experience counters the idea that formalisation is purely a defensive or reluctant compliance exercise. For this entrepreneur, registration was originally a requirement tied to a specific commercial opportunity (government tendering), but once obtained, it enhanced his credibility among lenders and formal finance channels. At the same time, his story shows that formalisation doesn't address the constraints limiting his growth: skilled labour availability and input cost volatility remain unresolved regardless of how formalised the business is.

Insight: Formalisation is often adopted for a specific, immediate commercial need rather than a general philosophy of transparency. But, once in place, it can genuinely strengthen credit access and financial credibility. It does not, however, substitute for addressing operational constraints, such as skills and cost stability, that ultimately determine whether growth is achievable.

6.7.1 Formalisation index

Formalisation is often treated as a binary distinction between formal and informal enterprises. In practice, however, firms register with different institutions over time. To understand where nano-enterprises lie along the registration continuum and examine how registration is associated with firm characteristics and growth, we constructed a formalisation index based on key business registrations.

Specifically, we used principal component analysis (PCA) on four binary indicators of registration and formalisation status: possession of GST registration, Udyam (MSME) registration, Shop & Establishment licence and trade/municipal licence. The distribution shows that enterprises cluster into distinct formalisation levels rather than being evenly distributed, reflecting common combinations of registrations. Roughly half the firms sit at the high end of the scale (0.75 and above), indicating that a substantial share of enterprises have obtained most or all the standard registrations.

Formalisation increases steadily with enterprise turnover. Average formalisation score rises from 0.60 among firms with an annual turnover of Rs. 20–40 lakh to over 0.90 among firms with a turnover above Rs. 60 lakh, where at least half possess nearly all the registrations included in the index.

> *"This suggests that larger firms are substantially more likely to participate in the formal regulatory system."*

Differences across sectors are more modest. Manufacturing firms have the lowest average formalisation score (0.58), followed by services (0.65) and retail (0.68), while trading exhibits the highest average score (0.77), although based on a small sample. Overall, turnover has a much stronger correlation with formalisation than sector.

Formalisation also varies across enterprise archetypes. Scalers exhibit the highest average formalisation, followed by Aspirants. Stagnant Incumbents occupy the middle of the distribution, indicating that formalisation alone is insufficient to drive growth, while Passive Beneficiaries have the lowest average formalisation score despite experiencing revenue growth (Table 8).

Table 8: *Formalisation score by archetype*

Archetype	Formalisation level	Mean Degree of Formalisation	Number of Firms	Pattern
Scalers	Highest	0.722	760	Concentrated at the high end, with the largest share holding most or all registrations.
Aspirants	Middle	0.692	495	Formalisation increases with firm size but remains less consistent than among Scalers.
Stagnant Incumbents	Lower-middle	0.634	659	Heavily represented in the lowest-middle formalisation bands, with some presence across all bands.
Passive Beneficiaries	Lowest	0.448	87	Concentrated in the lowest formalisation bands

6.8 FIRM STRUCTURE

Apart from the key themes of the study, we also examined firm structure and related patterns (wage spend, revenue and profits on a monthly basis) since growth depends not only on generating higher revenues but also on how those revenues are allocated across labour, business inputs and household income. Trading firms exhibit the strongest overall financial position, with 62% reporting revenues of at least Rs. 3 lakh, 74% spending at least Rs. 1 lakh on business inputs, and 70% reporting household surpluses of Rs. 50,000 or more monthly. In contrast, services are concentrated in lower revenue brackets, with only ~32% reporting monthly revenues above Rs. 3 lakh and 41.6% (the lowest of all sectors) spending at least Rs. 1 lakh on inputs, although nearly two-thirds (64.5%) still report household surpluses above Rs. 50,000.

Financial indicators increase consistently with annual turnover, reflecting increasing business scale. Only ~24% of firms with an annual turnover of Rs. 20–40 lakh report monthly revenues above Rs. 3 lakh compared with 100% of firms with a turnover above Rs. 80 lakh. Similarly, the share of firms spending at least Rs. 25,000 on monthly wages rises from ~32% among the smallest turnover group to over 90% among firms with a turnover between Rs. 80 lakh and 1 crore, while household surpluses of at least Rs. 50,000 increase from 55% in lowest band to over 93% among the highest band (Table 9).

Table 9: *Monthly revenue, spending and surplus by sector and turnover*

Group	Revenue ≥Rs. 3 lakh per month (%)	Wage spend ≥Rs. 25,000 per month (%)	Input spend ≥Rs. 1 lakh per month (%)	Household surplus ≥Rs. 50,000 per month (%)
Sector				
Manufacturing	50.0	47.4	63.2	56.2
Retail	47.3	48.0	55.4	65.3
Services	31.7	38.4	41.6	64.5
Trader	62.1	49.2	74.0	70.0
Annual turnover				
Rs. 20–40 lakh	23.7	31.7	39.7	55.2
Rs. 40–60 lakh	89.6	73.4	87.8	84.4
Rs. 60–80 lakh	99.3	86.7	91.7	89.9
Rs. 80 lakh–1 crore	100.0	92.3	94.8	94.9
Rs. 1–2 crore	100.0	86.6	100.0	93.4

The survey collected data on firm structure across input costs, profits, wage spends and monthly sales as ordered value brackets rather than exact rupee amounts. To preserve the ordering of responses, for the purpose of the analysis, each bracket was converted into an ordinal rank. Median values were then calculated on these ranks and mapped back to their original bracket labels, so the figures below represent the typical value bracket for each archetype rather than average monetary values.

Table 10: Median revenue, wage spend, input spend and household surplus

Archetype	Median revenue bracket (Rs.)	Median wage spend bracket (Rs.)	Median input (raw material/ inventory) spend bracket (Rs.)	Median household surplus bracket (Rs.)	n
Scalers	3–5 lakh	25,000–50,000	1–3 lakh	50,000–1 lakh	760
Aspirants	1–3 lakh	10,000–25,000	1–3 lakh	50,000–1 lakh	495
Stagnant Incumbents	1–3 lakh	10,000–25,000	1–3 lakh	50,000–1 lakh	659
Passive Beneficiaries	3–5 lakh	10,000–25,000	50,000–1 lakh	25,000–50,000	87

Note: Figures represent median response brackets rather than average monetary values. Because revenue, input expenditure and wages were collected as ordered brackets, differences between brackets should not be interpreted as measures of profitability or operating efficiency.

Two broad patterns distinguish the archetypes. Scalers and Passive Beneficiaries occupy the highest revenue bracket, but their financial profiles differ substantially. Scalers report higher wage spending while their input expenditure and household surplus match the other archetypes, consistent with enterprises translating growth into employment and expansion. In contrast, Passive Beneficiaries combine high revenue with lower wage spending, lower input expenditure, and the lowest household surplus, suggesting that revenue growth is not accompanied by comparable investment in the business or improvements in household income (Table 10).

The relationship between reported revenue and input expenditure varies across archetypes, although these figures should be interpreted as descriptive comparisons of reported value brackets. Scalers and Aspirants have similar reported input expenditure, with both typically falling in the ₹1–3 lakh monthly bracket. Stagnant Incumbents are also concentrated in this input-spend bracket, while Passive Beneficiaries are more likely to report lower input expenditure of ₹50,000–1 lakh despite occupying the highest revenue bracket.

These patterns are consistent with differences in how firms allocate resources as they grow, but the ordinal nature of the data does not allow us to infer differences in profitability, margins or cost efficiency.



Table 11: *Differences between revenue and input expenditure by archetype*

Archetype	Mean input revenue rank gap (input rank - revenue rank)	Input spend = Revenue bracket (%)	Input spend > Revenue bracket (%)	Interpretation
Scalers	-1.03	19.1	2.6	Input expenditure is typically one bracket below revenue
Aspirants	-1.02	19.0	1.6	Input expenditure shows a similar pattern to Scalers, typically falling one bracket below reported revenue.
Stagnant Incumbents	-0.71	37.5	4.4	The gap between reported input expenditure and revenue is smaller than for the other archetypes, with a larger share reporting both in the same bracket.
Passive Beneficiaries	-1.59	17.2	1.2	Reported input expenditure is typically further below revenue in the ordinal brackets, with relatively few firms reporting input expenditure in the same or a higher bracket (n = 87)

Note: The mean input–revenue gap measures the average difference between an enterprise's rank on input expenditure and its rank on annual turnover by archetype. Lower (more negative) values indicate that firms generate relatively higher revenue for their level of inputs, while higher (positive) values suggest comparatively greater input intensity.



The share of firms spending at least Rs. 50,000 per month on wages increases sharply with the number of full-time employees across all archetypes, indicating that reported wage expenditure broadly reflects firm size. Among firms employing one to two workers, relatively few report wage bills above Rs. 50,000, although Stagnant Incumbents (15.4%) are nearly twice as likely as Scalers (8.1%) to do so. In contrast, among firms employing three to five workers, almost half of Stagnant Incumbents (45.8%) report wage expenditure above Rs. 50,000 compared with 31.3% of Scalers and 15.8% of Passive Beneficiaries (Fig. 21).

Combined with the earlier finding that Stagnant Incumbents have the smallest gap between revenue and input expenditure. On the other hand, Scalers appear to expand employment without a proportionate increase in wage expenditure, indicating a cost structure that is better aligned with business growth.

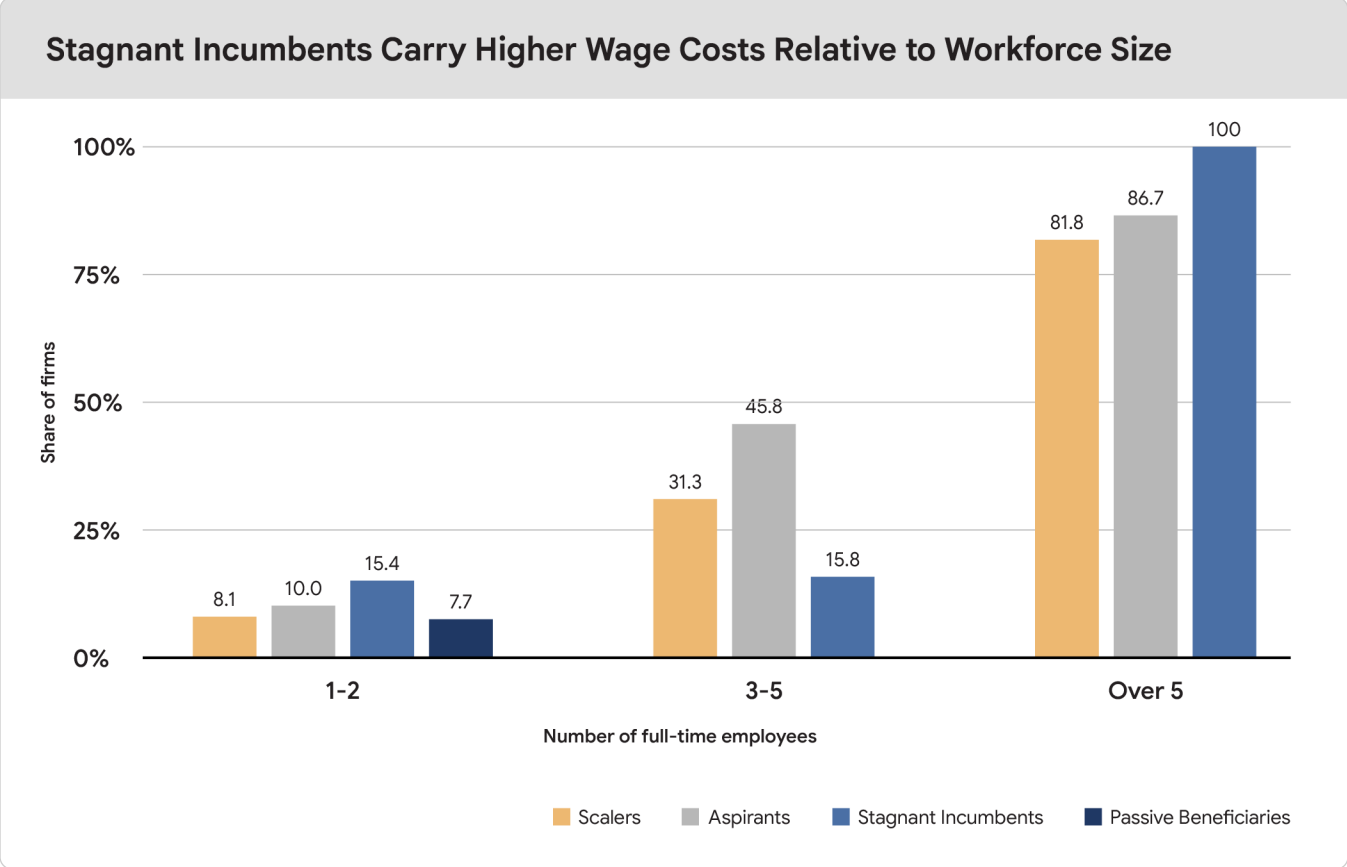


Figure 21: *Share of firms with wage spend >= Rs. 50,000 by archetype and number of employees (n = 647)*

07

SECTION II

Thematic Deep Dive:

DPI, ONDC & Other Unfinished Bridges To Complete Digital Adoption

India's nano-enterprises have already crossed the foundational stages of digital adoption. Adoption of payment applications is nearly universal, while business registration has become an early milestone, with most firms registering (80% of our sample) within their first year of operation. If digital adoption alone were sufficient to unlock productivity, credit and market-access gains, these enterprises would be well positioned to realise them. However, that is not the pattern we observed.

In this section, we explore not only whether India's digital public infrastructure (DPI) is being adopted but also if this adoption has translated into meaningful business outcomes. Of the digital rails available to nano-enterprises – payments, market platforms and credit – which have delivered value, where are the blocks and what prevents the progression from digital transactions to digital businesses?

7.1 PAYMENTS: A UNIVERSAL BUT FOUNDATIONAL RAIL

Payment applications are the only digital tool that has achieved near-universal adoption among nano-enterprises. Unlike most other digital technologies, UPI has become embedded in routine business operations across firms regardless of sector, turnover or business ambition. In effect, digital payments are no longer a differentiator but a basic feature of doing business. Payment applications are used by 89.5% of surveyed firms, making them the most widely adopted digital tool in the sample. This rail is working at scale, uniformly, across archetype, sector, and turnover. Digital payment adoption varies remarkably little across enterprise types: 76.3% of manufacturers, 90.1% of retailers, 92.7% of service firms and 87% of traders report using payment applications. Across archetypes, adoption ranges from 87.9% among Scalers to 97.7% among Passive Beneficiaries, reinforcing that digital payments have become common business infrastructure rather than a

differentiator. The next most used digital tool is social media, and it is used by less than half of the surveyed firms (44.3%). Other digital tools are adopted by fewer than 15% of enterprises.

Qualitative interviews conducted as part of this survey reinforce these adoption trends. Entrepreneurs confirmed adopting UPI not as a strategic business decision but as a response to changing customer expectations: "because customers now primarily use it" or because cash transactions had become inconvenient. In other words, digital payments have become the new baseline for doing business rather than a deliberate growth strategy.

Some respondents also indicated that these digital footprints are quietly building a credit signal that they are yet to use. A spice manufacturer from Chhatrapati Sambhajinagar said his UPI transaction history had generated loan offers from platforms like IndiaMART and Google, but he had not used them, relying instead on manual registers cross-referenced against his UPI statements. Another respondent, a bag manufacturer, shared that his digital transaction history had led to pre-approved loan offers reaching him directly, which he again had not acted on despite a chronic need for working capital. Others described digital records as a useful backup for a CA or for loan applications rather than as something they actively leveraged to seek better credit terms.

An expert on financial inclusion, who likened digital footprints (e.g., UPI) to a kind of credit passport for nano-enterprises, cautioned that this pathway works only if lenders are actively underwriting against transaction-level data instead of defaulting to bank statements and bureau scores. Relatedly, another expert argued that despite their hype, alternative or non-traditional data sources have not proven useful for underwriting decisions in practice. Thus, while digital payments have become trusted infrastructure, the next question is how firms can build additional digital capabilities on top of this foundation.



7.2 PLATFORMS: THE MISSING BRIDGE TO DIGITAL INTEGRATION

While the use of UPI has become ubiquitous, digital commerce, marketing and record-keeping are thinly adopted (Table 12). This mirrors the OECD's[53] central finding that SMEs "tend to digitalise some business functions first" and that "digital uptake is to a large extent still confined to basic services". The ICRIER–PROSUS[54] index notes India records the highest real-time digital payment volume of any country and that DPI (Aadhaar + UPI) scaled digital access "at population scale" even as the country "lags behind in the adoption of older basic technologies".

Firms with increasing turnover show an expanded digital toolkit. Although payment-app usage falls from 51.9% at Rs. 20–40L to 26.3% at Rs. 1–2Cr, this is not because larger firms use UPI less. Their digital usage expands around it: business listings (13.2%), digital invoicing (11.4%), B2C e-commerce (8.8%) and social media (19.3%) all pick up share at the upper bands.

Table 12: *Digital tools and platforms used by the surveyed nano-enterprises*

Digital Tool Adoption	Firms (n)	% of firms
Payment applications (e.g., UPI, RazorPay, BharatPe)	1,791	89.5%
Social media platforms (e.g., Facebook, Instagram, WhatsApp)	887	44.3%
Digital invoicing or accounting tools (e.g., Tally, Zoho, QuickBooks, Khaatabook, Vyapaar)	278	13.9%
Business listing platforms (e.g., JustDial, Sulekha, Google My Business)	272	13.6%
B2C E-commerce platforms (e.g., Amazon, Flipkart, Snapdeal, Meesho)	155	7.7%
Logistics and shipping platforms (e.g., Shiprocket, Delhivery, Porter)	124	6.2%
Local delivery or logistics platforms (e.g., Dunzo, Swiggy, Zomato)	116	5.8%
B2B marketplace platforms (e.g., IndiaMart, Udaan, TradeIndia)	84	4.2%
ONDC or related seller apps (Open Network for Digital Commerce)	19	0.9%
GeM (Government e-Marketplace)	7	0.3%

Note: Percentages represent the share of surveyed firms (N = 2,001) reporting use of each digital tool. As respondents could select multiple tools, percentages do not sum to 100%.

Across most turnover categories, the majority of firms report that 50–75% of their sales are received digitally. Among firms with ₹1–2 crore turnover, however, one-third (33.3%) report that 75–100% of their sales are received through digital transactions. By sector, manufacturing enterprises are the least digitally integrated in terms of sales, with only 30% reporting that more than half of their sales are through digital channels. Retail/trader and service enterprises perform considerably better, with approximately 46–50% of firms generating the majority of their sales digitally. Platform adoption remains limited among larger firms. B2C e-commerce is adopted by only 15.8% of manufacturers and 8.4% of retailers, while ONDC adoption never exceeds 2.3% in any sector.

Age also shapes patterns of digital platform use. Younger entrepreneurs (18–30 years) make the greatest use of payment applications (52.9% of responses) but are the least likely to use social media for business (18.2%). At the other end of the spectrum, entrepreneurs aged over 60 display the lowest overall engagement with digital platforms, with 12.5% reporting no engagement at all.

By sector, manufacturing leans the hardest on social media (30.4% vs. 22–23% for retail/trader and services) and on B2C e-commerce (7.9%), consistent with the idea that product businesses need visibility and derive greater value from online discovery. Service and retail firms, by contrast, remain centred on payment applications (47–50%), which is suggestive of business models that continue to rely primarily on local demand and repeat customers.

Use of commerce platforms stays marginal throughout: B2C e-commerce never accounts for more than 11% in any turnover band, and B2B marketplaces stay under 8%. Explained by the concept of "complementarity", proposed in a report by OECD[55], the adoption of one technology rises with the adoption of another as firms grow in scale. This widens digital divides[56] as smaller businesses are trapped in a vicious circle, and larger and more digital-savvy firms easily step up to new technology environments and digital practices.

Rather than replacing one another, digital tools accumulate. Payments become the entry point, followed by business listings, invoicing, social media, logistics and eventually online marketplaces. Larger enterprises appear more digitally mature not because they transact differently but because they layer additional digital capabilities onto an existing payment infrastructure.

> *Sector influences how firms digitalise, while enterprise growth determines how far they digitalise.*



Overall, digital adoption among nano-enterprises can be characterized as shallow but widespread. Digitalisation of payments is now nearly universal, while business functions such as customer acquisition, inventory management, bookkeeping and online commerce remain only partially digitalised. This distinction between transaction digitalisation and business digitalisation is central to understanding the findings. Transaction digitalisation lowers the cost of exchanging money, while business digitalisation changes how firms acquire customers, manage inventories, maintain records and access finance. While India's DPI has largely succeeded in the former, evidence from nano-enterprises suggests the latter remains an unfinished transition.

7.3 ENTREPRENEURIAL ORIENTATION IS ASSOCIATED WITH HOW FAR FIRMS PROGRESS DIGITALLY

Digital use is the deepest among Stagnant Incumbents, the least cash dependent of the four. What is crucial for firms is not how much they digitalise, but whether that activity converts into something useful, such as credit, new customers or revenue.

The archetype gradient shows that social media use is the highest among Aspirants (28.4%), followed by Scalers (24.5%), Stagnant Incumbents (19.2%) and Passive Beneficiaries (10%). The divergence is particularly visible in customer-facing technologies. Around half of Scalers (49.9%) and Aspirants (51.3%) use social media as against just 36.6% of Stagnant Incumbents and 14.9% of Passive Beneficiaries. B2C e-commerce follows the same pattern, declining from 12.6% among Scalers to just 1.1% among Passive Beneficiaries.

Payment apps account for 65.4% of digital platform usage by Passive Beneficiaries, and this group has the largest number of enterprises that do not use any other digital tools. They have digitalised exactly one function and stopped.

This supports the finding that in micro-firms

> *"digital uptake relies heavily on the owner's entrepreneurial orientation, innovative capacity and perception of potential risks and benefits[57]."*

Where ambition is absent, like in the case of Passive Beneficiaries, digital adoption halts at the transactional layer.

The archetypes demonstrate that digital adoption is not driven by technology availability alone. Firms with stronger growth ambitions progressively adopt digital tools that support marketing, customer acquisition and business management, whereas firms with limited growth aspirations largely stop once digital payments have been adopted. Entrepreneurial orientation therefore appears to determine whether firms progress beyond transactional digitalisation into strategic digital integration.

DIGITAL TRUST: WHY PAYMENTS SCALE BUT DIGITAL COMMERCE STALLS

While digital payments have been routinised, many nano-enterprises remain cautious about participating in digital commerce. Across interviews, entrepreneurs made a distinction between the convenience of UPI and the commercial risks associated with operating in online marketplaces.

Common concerns included:

- Fake buyers and payment scams, including attempts to misuse QR codes or claim false payments
- Fraudulent product returns, where substituted or damaged goods are returned to sellers
- High logistics and reverse-shipping costs, particularly for small-value orders
- Online price competition, making it difficult for small firms to maintain margins

---

Several entrepreneurs mentioned abandoning or avoiding online commerce because the risks outweighed the perceived benefits. One retailer who experimented with online selling explained that she "once tried online selling but stopped due to high return rates", preferring WhatsApp because she could "judge customer needs" in person. Another trader using IndiaMART and a company website reported that while digital platforms generated "multiple enquiries... not many good customers come through"; therefore, he preferred to rely on references and advance payments for new clients.

The experiences differ across enterprise archetypes:

- Scalers treat digital risk as something to be managed. They continue using websites, IndiaMART and digital marketing despite poor-quality enquiries, reducing commercial risk by relying on trusted networks, advance payments and repeat customers. Growth-oriented firms accept digital risks as part of expanding markets and develop mechanisms (references, advance payments, screening) to manage them.
- Aspirants are the most willing to experiment but also the most likely to retreat after encountering costly returns, unreliable online buyers or operational challenges. For these firms, commercial risk is often where digital progression stalls.
- Passive Beneficiaries rarely cite fraud or platform risk. Instead, they see little value beyond digital payments. As one entrepreneur explained, "The business does not use formal marketing... customers come through word of mouth", while another noted that digital payments "did not increase business or affect sales in any way".

Key Insight: Digital payments have become trusted infrastructure but not digital commerce. While almost every firm reports that UPI makes transactions faster and easier, only enterprises that develop the capabilities to manage commercial risk progress to using digital tools for customer acquisition, marketplace participation and accessing formal finance. Building the next phase of India's digital economy will therefore require not only expanding digital infrastructure but also strengthening trust through better fraud protection, transparent dispute resolution, logistics support, digital capability-building and awareness of safe digital business practices.

7.4 WHY FIRMS STOP AT PAYMENTS

Many entrepreneurs continue to view digital tools primarily as instruments of convenience rather than growth. Digital payments are valuable because they reduce cash handling, eliminate trips to the bank and speed up transactions. However, the use of digital tools for marketplace participation remains extremely limited. Only 7.7% of firms in our sample report using B2C e-commerce platforms, 4.2% use B2B marketplaces and fewer than 1% report using ONDC seller applications. In ICRIER's survey of 1002 firms[58] that had not integrated with e-commerce, 43% named lack of knowledge as the primary barrier. Apart from awareness, our qualitative interviews highlight the following: persistent commercial barriers including high product returns, fraudulent returns with substituted goods, two-way courier costs, online price competition and delivery-speed expectations that many nano-enterprises cannot meet.

Distinguishing between efficiency gains and growth gains, most entrepreneurs describe digital payments as making existing transactions easier rather than generating new demand. Only a small minority explicitly attribute higher sales or new customers to digital tools, typically those already using social media or digital platforms for business development. This is the honest texture behind the aggregate: digital payments have lowered transaction costs almost everywhere without, on their own, driving expansion. This shows how basic service adoption is necessary but insufficient for the productivity and scaling gains that deeper digital integration unlocks[59].

ONDC: INFRASTRUCTURE ALONE DOES NOT CREATE DIGITAL COMMERCE

The Open Network for Digital Commerce (ONDC) seeks to open India's digital marketplace by allowing buyers and sellers to transact across interoperable platforms rather than closed marketplaces. In principle, this lowers barriers to digital commerce and expands market access for small businesses.

Yet its adoption among surveyed nano-enterprises remains extremely limited (less than 1%), mirroring the broader finding that digital adoption rarely progresses beyond payments.

Expert interviews suggest that the primary constraints are commercial rather than technological. While ONDC reduces platform dependence, sellers continue to face the same operational challenges encountered on other e-commerce platforms: customer acquisition, catalogue creation, pricing, logistics, returns management and working-capital requirements.

One expert described ONDC as "a network, not a marketplace", arguing that participation requires businesses to actively manage digital catalogues, order fulfilment and customer service rather than simply listing products. Another noted that many small firms still struggle with product discoverability, observing that sellers often expect customers to arrive automatically after onboarding, when, in reality, digital marketing and demand generation are essential. Several experts also highlighted that returns, reverse logistics and fulfilment costs can quickly erode already thin margins, particularly for small sellers with limited scale.

Taken together, our interview findings suggest that the binding constraint has shifted from digital access to digital capability. ONDC expands the infrastructure available to nano-enterprises, but participation and commercial success depend on complementary investments in seller capability, logistics, marketing and demand generation. In this sense, ONDC should be viewed as an enabling layer of India's DPI rather than a standalone solution for market access.

7.5 THE DIGITAL DIVIDEND: WHERE BUSINESS VALUE EMERGES

The clearest pathway to digital integration is improved access to formal finance. E-commerce and digital footprints let firms "establish their creditworthiness and access formal finance more easily"[60]. Interviews with industry experts suggest that digital transaction histories, GST returns and online business records reduce information asymmetries by making small businesses more legible to lenders. The demand-side logic explains the other side: banks do not really understand SME businesses very well[61]. SMEs fall between retail and corporate banking silos, and lenders must seek them out by risk profile, which is precisely the information gap that a digital transaction trail closes. Multiple firm owners describe GST returns and UPI/CIBIL histories aiding successful bank loans.

Overall, 36% of firms reported that digital tools had improved their access to credit, while 56% reported no benefit and 8% were unaware of any such impact. However, these averages conceal substantial differences across enterprise types. The share of firms reporting improved access to credit declines steadily from 43.1% among Scalers to 39.8% for Aspirants, 26.9% for Stagnant Incumbents and just 17.6% for Passive Beneficiaries. Conversely, the proportion reporting no benefit rises from 46.6% among Scalers to 80% among Passive Beneficiaries. Similar gradients emerge within turnover categories: reported credit benefits increase from 33.3% among firms with an annual turnover of Rs. 20–40 lakh to 44.7% among firms with a turnover between Rs. 80 lakh and 1 crore to finally 50% among firms above Rs. 1 crore. Sectoral differences are equally pronounced with 55.3% of manufacturing firms reporting improved access to credit compared with 39.5% of traders, 36.6% of service firms and 33.5% of retailers.

These findings suggest that the credit dividend accrues to firms whose digital footprint is sufficiently deep and formal enough to be informative. This explains the dominance of Scalers and Aspirants as against Stagnant Incumbents and Passive Beneficiaries. Digital transaction histories can create economic value by making firms visible to lenders provided the enterprises accumulate enough formal business activity for those records to signal creditworthiness.

Broadly, the same divergence is reflected in firms' perceptions of digital impact. In terms of percentage, "increased sales/revenue" as a reported impact falls from 22.3% to 20.6%, 18.3% and 5.7% for Scalers, Aspirants, Stagnant Incumbents and Passive Archetypes respectively, and "helped reach new customers/markets" follows a similar decline. Passive Beneficiaries, focused on reduced costs and reduced time, experience digital adoption primarily as a tool for operational efficiency. Meanwhile, "no noticeable impact" is negligible for Scalers (1.1%) but becomes material for Stagnant Incumbents and Passive Beneficiaries (around 5% for each).



7.6 FROM DIGITAL TRANSACTIONS TO DIGITAL BUSINESSES

Enterprises whose business transactions yield informative digital records use their digital footprint as a source of economic value, making themselves more legible to lenders and markets. They use digital tools to reach customers, build credit histories and expand. The rest, however, do not go beyond using them for convenience. This is the firm-level face of OECD's warning that digital gaps are "strongly associated with gaps in productivity, scaling up, innovation and growth"[62].

Thus, digital integration is best understood as a progression rather than a binary state. Nearly every nano-enterprise has entered India's digital economy through payments, but relatively few have progressed to using digital tools for customer acquisition, business management or formal finance. The economic returns of digitalisation depend less on adopting a single technology and more on accumulating complementary digital capabilities over time. India's next policy challenge, therefore, is not only expanding access to digital infrastructure but also enabling firms to move from digital transactions to digital business models.

08

Policy Recommendations

8.1 WHY NANO-ENTERPRISES SHOULD BE TREATED AS A SEPARATE SEGMENT

India's policy framework has historically treated the smallest businesses as part of a broad microenterprise category. That approach is becoming less suitable in the current context. The 2025 revision to the MSME classification raised the turnover ceiling for a microenterprise to Rs. 10 crore; as a result, a firm with Rs. 50 lakh in annual turnover can now sit in the same administrative category as a business approaching Rs. 10 crore in turnover. However, the constraints facing these firms are fundamentally different. The smallest enterprises operate with limited organisational capacity, depend heavily on local markets and personal networks, and often combine household and business finances. Firms approaching Rs. 10 crore, on the other hand, have very different access to finance, markets, technology and managerial capacity.

This report uses Rs. 20 lakh–2 crore in annual turnover as an analytical frame for examining nano-enterprises. ASUSE and ASI data supports the distinction: the mass of unincorporated microenterprise activity sits below Rs. 20 lakh, while the Rs. 20 lakh–2 crore band occupies a position between subsistence businesses and larger registered enterprises. Very few firms in this segment are captured in existing official data: only around 1,485 enterprises in the national ASUSE sample, or approximately 0.1% of firms, fall within this turnover band, including just 142 in Maharashtra. As a result, there is limited evidence on firms that occupy the space between subsistence self-employment and established small businesses as well as on the factors that determine whether they remain small or grow into larger employers. The firms in this segment are also demonstrably commercially active rather than predominantly subsistence businesses: 62% report an increase in turnover over the past three years.

The case for treating nano-enterprises separately is therefore not simply that they are small, but that they face a distinct set of market and organisational barriers at a critical juncture between self-employment and productive enterprise growth. More than 70% of the surveyed firms fall in the annual turnover bracket of Rs. 20–40 lakh, and as they approach the Rs. 80 lakh–1 crore band, their growth begins to flatten. This suggests that the firms captured by the study are not simply smaller versions of established MSMEs; they are firms navigating a distinct set of operational, financial and organisational constraints as they attempt to move beyond small-scale commercial activity.

The policy case for a separate segment rests on whether targeted support can address these barriers more effectively than a broad microenterprise framework, while limiting the risk of creating unnecessary fragmentation or shielding firms from competition. While this report cannot establish that welfare trade-off definitively, evidence shows that firms in this segment face constraints that are systematically different from those of both very small livelihood enterprises and larger MSMEs. The purpose of the definition is, therefore, not to create an even finer set of enterprise categories but to identify a segment where the nature of the constraints changes materially and where a differentiated policy response may be justified.

Crucially, however, nano-enterprises are not a homogeneous group. The survey identifies four distinct enterprise archetypes: 38% are Scalers with rising revenues, growth ambition and organisational expansion; 25% are Aspirants with similar revenue growth and ambition but without corresponding workforce expansion; 33% are Stagnant Incumbents whose revenues have remained stable or declined; and 4% are Passive Beneficiaries whose revenues have grown without a corresponding growth orientation. Overall, 85% of firms report some form of forward growth ambition, but only 38% have both the ambition and realised organisational growth to qualify as Scalers. This points to a substantial pool of firms with unrealised growth potential.

The constraints facing the firms in this pool also differ. Aspirants, for example, are already growing and seeking to expand but face greater financing constraints, while Stagnant Incumbents face a combination of financial, market and operational constraints despite many expressing an ambition to grow. Market access is the dominant constraint in the sample, cited by 48% of firms, well ahead of finance at 21%. This suggests that the principal challenge is not simply access to capital but the ability to convert productive capacity into sustained demand.



This heterogeneity matters because growth orientation and business size are not interchangeable. A firm that has demonstrated commercial viability, seeks new customers and intends to hire additional workers faces a different policy problem from a subsistence enterprise whose primary objective is maintaining household income. At the same time, a growing but under-resourced firm requires different support from an established nano-enterprise whose revenues have stagnated. International evidence similarly finds that only a minority of small firms sustain growth and there exists a distinct subset of high-potential firms constrained by market access, managerial capability, skilled labour and finance[63]. The results of this survey also indicate that this segment has largely crossed the threshold of basic formalisation: 78% of firms are Udyam-registered and 69% have GST registration. The policy challenge, therefore, is not simply bringing firms into the formal system but ensuring that formalisation and digital adoption translate into access to markets, finance and opportunities to grow.

This distinction is important for the broader policy objective of productive employment. Enterprises with the ambition and capability to grow are more likely to hire workers, invest in technology, formalise and integrate into wider markets. Supporting them calls for going beyond improving their welfare and enabling them to become larger employers and contributors to productivity growth.

To sum up, the case for treating nano-enterprises as a separate policy segment is that these firms are sufficiently distinct from both subsistence enterprises and larger MSMEs to warrant dedicated attention, and they are sufficiently heterogeneous for policy to address the specific constraint preventing each type of firm from moving to the next stage of growth. The five priorities that follow focus on precisely these transition points: expanding market access, improving growth-oriented finance, moving digital adoption beyond transactions, easing skilled-labour constraints and turning formalisation into functional engagement with the state.

8.2 MOVING NANO-ENTERPRISES TOWARDS GROWTH: FIVE POLICY PRIORITIES

8.2.1 Build marketplace visibility

Key constraint: Market access is the leading constraint for nano-enterprises. Factors contributing to it are a general reluctance to use digital platforms and presence on digital platforms not yet translating into sustained customer acquisition.

Market access is the most cited constraint in the survey, reported by 48% of firms, well ahead of finance at 21%. This is particularly true for retail and trading firms, with 50.5% identifying it as a primary constraint. Manufacturing firms (28.9%) also list it as a major hurdle, after financial constraints. Among archetypes, Scalers report market access as their leading constraint (51.6%), while Stagnant Incumbents and Passive Beneficiaries are more likely to cite financial constraints. However, among Stagnant Incumbents with expressed growth ambition, 74% identify market access as a constraint, suggesting that access to customers may be particularly important for firms with unrealised growth potential. This is noteworthy because nano-enterprises can be commercially viable while still struggling to reach sufficiently large or

stable pools of customers. The problem is particularly acute for firms with limited resources to invest in customer acquisition, digital marketing or the capabilities required to participate effectively in online markets.

Digital platforms have not yet solved this problem. Less than 1% of firms in the sample use ONDC or related seller applications, and the adoption of other e-commerce platforms is also limited. The qualitative interviews yielded an important explanation: firms that experiment with digital commerce often encounter practical difficulties around returns, logistics, fraud and price competition, which result in some retreating from these platforms.

This suggests that the

> *Constraint has moved beyond basic platform access. Being listed is not the same as being discoverable, trusted or capable of converting a listing into a sale.*

Recommendation: The policy response should focus on building marketplace visibility, not just access. A demand-side campaign promoting nano-enterprises and locally made products could raise awareness of participating businesses and product categories. This should be paired with greater discoverability of nano-enterprise sellers on digital marketplaces, including ONDC, so that demand generation and platform participation reinforce one another.

Indonesia offers a useful precedent. Its 2026 regulation on e-commerce requires platforms to prioritise domestic products, particularly those produced or sold by micro and small enterprises, in search, recommendation and ranking systems, including placement on the first row of the first page and dedicated promotional space[64]. Importantly, the regulation sets the visibility outcome without prescribing the underlying algorithm, allowing platforms to determine how to achieve it. India could consider a similar outcome-based approach for verified nano/MSME products, alongside curated "local" or "nano-enterprise" landing pages, rather than prescribing how platforms should rank products.

The emphasis should be on converting listings into sales, rather than maximising the number of firms onboarded. This step requires support beyond registration, including cataloguing, fulfilment, customer interaction and troubleshooting. The existing MSME Trade Enablement and Marketing (TEAM) initiative addresses this need, providing MSMEs with digital guidance, market-access support, onboarding and outreach through the ONDC ecosystem. To ensure that firms do not retreat from e-commerce because of problems with returns, logistics and fraud, local industry institutions and ecosystem partners could provide hands-on support, paying greater attention to firms that have growth ambition but limited digital capability.

This approach also recognises that digital market access will not benefit all nano-enterprises equally. Thus, the objective should not be universal platform adoption, but assistance with converting digital visibility into customers and repeat sales for firms with



growth potential. Support can be tiered: light-touch awareness and digital literacy for a broad group; more intensive cataloguing, fulfilment and onboarding support for firms with stronger growth potential; and non-digital market-linkage options for firms less suited to e-commerce.

Responsible actors: Ministry of Micro Medium and Small Enterprises/Ministry of Commerce, delivered through State Industry Departments.

8.2.2 Use clusters to create collective market visibility

Key constraint: Nano-enterprises operate in fragmented, highly competitive markets and lack the collective visibility and market positioning needed to reach larger or more stable sources of demand.

The challenge of market access extends beyond digital platforms. Nano-enterprises are often geographically and sectorally concentrated, but individual firms are too small to independently invest in branding, market development or buyer acquisition. This can be addressed as a collective-action problem: the economic value of a cluster's reputation or product identity can exceed what any individual enterprise has an incentive or ability to build.

Recommendation: Rather than attempting to provide market-development support to thousands of firms individually, governments can use existing clusters of firms to build shared visibility and connect groups of enterprises to larger sources of demand.

The One District One Product (ODOP) framework provides an existing institutional mechanism through which this could be pursued where there is a clear sectoral fit. The objective should not be to force every nano-enterprise into an ODOP category or to make GI eligibility a prerequisite. Instead, suitable nano-enterprise clusters could be linked to district-level branding, promotion and buyer-development activities under ODOP.

Qualitative evidence from Tamil Nadu and Gujarat has highlighted the value of cluster and association-based branding relative to firm-by-firm support. Collective branding can reduce the cost of market development for individual firms while giving buyers a clearer reason to engage with a group of geographically concentrated producers or service providers[65]. Since market access is a larger challenge for retail firms, retail clustering can help firms with similar products and consumer demographics cluster together and benefit mutually.

The intervention should focus on building collective market positioning, rather than simply providing another registration or certification. Where a cluster has a sufficiently strong product or service identity, district-level promotion, common branding and buyer linkages could help nano-enterprises access more stable demand than they can generate individually.

The two interventions address different sides of the same market-access problem: digital visibility helps firms reach customers through existing platforms, while cluster-based branding helps create the collective identity and demand needed to make that visibility valuable.

Responsible actors: Ministry of Commerce / ODOP Secretariat, State Industries Departments and District Administration.

8.2.3 Build practical digital business capabilities

Key constraint: Digital adoption is constrained by limited awareness and business capability rather than lack of access to digital tools. Firms have adopted digital payments widely but lack the knowledge and hand-on support needed to harness digital tools for customer acquisition, recordkeeping and business growth.

The survey shows a sharp gap between basic digital transactions and broader business digitalisation. While 89.5% of the surveyed firms use payment applications, only 44.3% use social media, 13.9% use digital invoicing or accounting tools, 13.6% use business-listing platforms and 7.7% use B2C e-commerce. ONDC adoption is below 1%. These trends remain unchanged across sectors.

The usage numbers suggest that the presence of digital infrastructure does not create business capability by itself. Firms may be able to accept a UPI payment while having little experience using digital tools to find customers, maintain business records, manage online orders or build digital reputation. Our qualitative interviews reinforce this understanding. Entrepreneurs cited practical problems with using e-commerce including returns, logistics and fraud, which caused some to withdraw from online platforms after their experiments.

Recommendation: The digital policy for nano-enterprises should move from generic literacy towards practical and digital business capability. Instead of another broad campaign encouraging firms to "go digital", the government should develop and locally deliver a digital business training and handholding programme focused on the specific activities that firms need to undertake to benefit from digital tools.

The programme could include short, sector-specific modules on digital marketing and customer acquisition, business listing, e-commerce onboarding, digital bookkeeping and using transaction records for accessing credit. Importantly, support should include follow-up and not stop at one-off workshops. It is important to recognize a firm that creates an online listing but does not know how to maintain its catalogue, respond to customers or manage fulfilment has not meaningfully acquired digital capability.

The government need not provide all this support directly. Private technology and business-service providers could be incentivised to build these capabilities, particularly where improvements can be verified through digital usage. For example, support could take the form of performance-linked vouchers or payments to accredited providers, with payments being tied to measurable outcomes, such as active use of digital bookkeeping, generation of digital invoices, maintenance of a business catalogue or sustained use of customer-management tools. Thus private solutions can be leveraged for demonstrated capability – that can be easily verified through digital records – rather than one-off training. However, verification should focus on sustained use and

business outcomes rather than simple registration or downloads so that providers are not incentivised to maximise enrolment without building meaningful capability.

International experience supports combining technology adoption with hands-on support for small and medium enterprises (SMEs). Germany's *go-digital* programme[66], for example, uses authorised consultants to support SMEs through the digitalisation process, while Costa Rica has implemented national and local government-led digital upskilling programmes[67]. The takeaway for Maharashtra is not to replicate these programmes but to adopt their emphasis on practical assistance alongside technology adoption.

Priority should be given to firms that demonstrate growth ambition but have limited digital capability, rather than treating all firms equally. This would allow scarce implementation capacity to be directed towards firms most likely to convert improved digital capability into business outcomes.

Responsible actors: Maharashtra already has potential delivery infrastructure for this approach. The programme could be delivered through District Industries Centres (DICs) and the Maharashtra Centre for Entrepreneurship Development (MCED), with other state and central institutions supporting the development of content and digital partnerships.

8.2.4 Strengthen access to job-ready skills

Key constraint: Small firms face a shortage of appropriately skilled workers.

For firms seeking to expand, the ability to hire is key to converting revenue growth into organisational growth. In the survey, manufacturing enterprises split their primary concerns between financial capital (29.8%) and skilled labour availability (27.2%). Across sectors, wage expectations and finding appropriately skilled workers are the two dominant hiring challenges, and the problem is particularly pronounced in manufacturing, where 35% of firms report skill shortages, the highest of any sector.

Qualitative interviews suggest that this cannot be attributed simply to a lack of recruitment channels. Nano-enterprises often rely on personal networks to identify workers, while larger and more growth-oriented firms increasingly use employee referrals. Yet even firms with established recruitment networks struggle to find workers with the specific technical skills they require. In manufacturing, especially, firms need workers who are able to operate machinery, interpret technical drawings or perform other specialised tasks. Importantly, the survey does not suggest that manufacturing firms currently pay systematically higher wages than firms in other sectors: median reported wages are Rs. 10,000–25,000 across manufacturing, retail and services. Rather, qualitative evidence suggests that manufacturing firms struggle with the wage expectations required to attract workers with the specific skills they need.

The constraint is therefore a mismatch between the skills nano-enterprises need and the workers available to them at affordable wage expectations. This suggests that policy should address both sides of the market: improving how small firms access appropriately skilled workers while ensuring that existing training responds to the skills demanded by local enterprises.

Recommendation: Rather than creating a new recruitment platform, the recommendation is to direct the Ministry of Labour's existing National Career Service (NCS) portal towards hyperlocal, informal-sector matching for nano-enterprises. This would make existing infrastructure more responsive to the needs of small firms, which often recruit locally and require workers with specific skills.

The matching function should be sufficiently local and sector-specific to be useful to nano-enterprises. A generic job listing is unlikely to solve the problem if a small manufacturing firm needs a worker with a particular technical skill within a specific industrial cluster. Linking vacancies to local training institutions and sector-specific skill profiles could help reduce the information asymmetry that currently pushes firms towards personal networks.

At the same time, better matching should complement, not substitute for, better training. Survey evidence indicates that the supply of appropriately skilled workers is itself limited. Recruitment infrastructure should therefore be linked, where possible, to existing technical and vocational training so that training provision responds to actual demand from local enterprises. Therefore, part of the challenge is also to develop skills relevant to the sector that the programs are trying to serve.

These measures would make better use of existing public employment and skilling infrastructure. The policy challenge is not necessarily to create another portal but to ensure that an existing national platform is sufficiently relevant to the firms and the workers it is intended to serve.

Responsible actors: Ministry of Labour and Employment, through NCS or other existing employment infrastructure.



8.2.5 Make formalisation more functional

Key constraint: Formalisation is increasingly a prerequisite for participation in the formal economy, but firms may not understand or successfully access the opportunities that formal status enables. The study finds that formalisation increases with enterprise size, and nano-enterprises have already crossed many of the basic thresholds of formalisation: 78% of firms are Udyam-registered, and 69% have GST registration. Formalisation should therefore be understood as an objective in its own right rather than only as a route to business benefits. The relevant policy question is whether formalisation subsequently enables firms to participate effectively in the formal economy.

This is a particularly relevant question for Stagnant Incumbents. While 14.9% of this archetype holds four or more registrations, many report limited interaction with government agencies after registration. A quarter also report that Udyam registration provided them with no benefit. This does not imply that formalisation itself has no value. It may instead indicate that some firms register for reasons such as accessing credit, which requires formal status, while still failing to obtain the specific opportunity they sought.

In other words, the policy challenge has moved beyond registration. A firm can complete Udyam registration and still have little awareness of the schemes, procurement opportunities, finance access or other benefits that registration is intended to facilitate. In such cases, another registration campaign is unlikely to address the underlying problem.

Recommendation: Udyam should remain a clear entry point into the formal economy, while the state should make the subsequent steps easier to navigate. The objective should be to reduce the friction involved in complying with and making use of formal status. Registration could trigger information on relevant scheme eligibility, procurement opportunities and finance pathways, while a low-cost follow-up mechanism could help firms navigate these opportunities. For example, a newly registered firm could receive a tailored set of scheme-eligibility alerts based on its sector, location and size, alongside information on relevant procurement or finance opportunities.

This approach is likely to be particularly relevant for Stagnant Incumbents, where the problem appears to be not so much access to registration but the absence of a clear reason to engage with the state after registering. The priority for such firms is helping them understand and navigate the obligations and opportunities that follow from formal status.

Formalisation is also not a single event. As firms grow, different regulatory and market requirements become relevant. The policy objective should therefore be to make these requirements predictable and easier to navigate, rather than treating each additional registration as a separate administrative hurdle.

Responsible actors: Ministry of MSME

8.3 FROM FIVE INTERVENTIONS TO TAILORED PATHWAYS FOR GROWTH

The five recommendations above address different constraints, but they should not be interpreted as a solution package that every nano-enterprise needs simultaneously. The archetypes identified in the study suggest that the sequencing of support matters as much as the intervention itself.

For Aspirants – firms with revenue growth and forward growth ambition but who have not yet translated this into organisational expansion – the priority is to remove the specific constraints preventing the next step of growth. Market access, digital capability and access to skilled workers can help them convert existing ambition into additional customers and employees.

For Stagnant Incumbents, the pathway is likely to be more gradual. Many have multiple registrations but limited government engagement, and nearly half report no interaction with government agencies. For these firms, making existing formalisation useful and strengthening access to practical capabilities and markets may need to come before more ambitious growth interventions.

Scalers are firms that have already demonstrated the ability to convert revenue growth and ambition into organisational expansion. The role of policy in this case is to prevent market access, skilled labour or digital capability constraints from becoming the next ceiling on growth.

Overall, the findings suggest that nano-enterprise policy should move away from a single "support the MSME" model towards a differentiated pathway to growth. The recommendations offered do not require five new programmes. They largely involve adapting existing public infrastructure and using private and cluster-level capacity where it is more efficient: connecting firms to demand, helping clusters build market identity, strengthening practical digital capabilities, making existing employment infrastructure work better for small firms, and making formal status easier to navigate and use.

Together they address a common underlying problem: nano-enterprises are held back because the support available to them does not always address the specific point at which their growth is constrained.

> *"Thus, the policy objective for nano-enterprises should be progression, not merely inclusion."*

The firms in this study are not starting from zero. Many already participate in formal markets, use digital payments, hold registrations and generate revenues. The policy ask is how to help them take the next step, from transactions to customers, from customers to sustained revenues, from revenues to employees, and from registration to productive engagement with the wider economy.

Appendix

Appendix 1: Sampling & Fieldwork Methodology

1. **Cluster mapping**
    - Mapping built up in two stages: an initial mapping round, followed by a gap-filling round to cover areas or sectors under-represented in the first pass
    - Each district was first assigned a desired sample
    - Produced an exhaustive master list of clusters before fieldwork began
    - Districts were divided into regions and each region was then assigned a target sample size based on the number of clusters in that region.
    - We then estimated the number of shops per cluster through field work and assigned a target number of shops to each cluster based on the midpoint of the numbers of shops in a cluster and the target sample for a given region.
    - We then drew shop numbers to sample through a random selection algorithm.

2. **Fieldwork protocol**
    - Each cluster assigned a fixed starting point (a named market entrance, station exit, or junction)
    - Enumerators walked from that point to specific targeted shop numbers generated by the randomisation process, until the cluster's quota was filled
    - Ensured representation specific to each area within each district, not just a district-level total

3. **Replacement rule**
    - Odd-numbered shops replaced by moving left from the sample point; even-numbered shops replaced by moving right
    - Up to 3 sequential replacement attempts permitted per direction
    - If none of the 3 attempts yielded a valid, consenting respondent, enumerators moved to the next shop on the original sampling list (no further replacement attempts)
    - This also allowed tracking of refusal rates, closure rates, and average replacement rates, useful for refining sampling design in future rounds
    - We had a 28.8% replacement rate in the study with 577 originally sampled firms having to be replaced due a variety of reasons (closed, owner not present, not in revenue range, refused to participate). Of these, 503 firms (or 25% of the sample) were replaced once and 74 firms (or 4% of the sample) were replaced twice.

4. **Pilot study detail (Aug–Sep 2025, n=141)**
    - Initial institutional partnership yielded negligible responses
    - Subsequent collaboration with Jana Small Finance Bank improved outreach, but still required significant time and incentives to reach the final 141 respondents
    - Key limitation: partner-database model faces persistent constraints on response rates and timelines, and risks a sample biased toward one partner's network

Appendix 2: Variable construction

Construction of Archetypes

The four enterprise archetypes were developed using a rule-based classification framework combining three dimensions of enterprise performance and behaviour: revenue trends, growth ambition, and realised organisational growth. The objective was to distinguish enterprises not only by their recent business performance but also by their future orientation and organisational capacity to expand.

Revenue was used as the primary filter. Firms who had seen an increase in revenue in the past 3 years were classified as either Scalers, Aspirants or Passive beneficiaries based on the other variables described below. Firms with same or decreasing revenue trends in the past 3 years were classified as Stagnant incumbents.

Growth ambition was constructed from two sets of survey questions capturing both future aspirations and current business strategy. Enterprises were classified as having growth ambition if they reported either (i) at least one planned future expansion activity (such as entering new markets, introducing new products, increasing production capacity or expanding geographically), or (ii) at least one ongoing growth strategy. Firms that reported "No major change; continue current operations" as their future plan and "No such expansion or diversification" as their current strategy were classified as lacking growth ambition. This definition captures enterprises that are actively pursuing growth, irrespective of whether that growth has yet materialised.

Realised organisational growth was defined using current employment and hiring behaviour as a proxy for business expansion. Enterprises were classified as having realised growth if they either employed more than two full-time workers or reported plans to hire additional employees during the coming year. Firms employing no workers or only one to two workers and reporting no hiring plans were classified as not having realised organisational growth. This measure complements turnover growth by capturing whether expansion has translated into increased organisational capacity rather than remaining confined to higher sales alone.

The three dimensions were then combined to construct four mutually exclusive enterprise archetypes. Scalers (Archetype 1) comprise enterprises reporting increased turnover, positive growth ambition and realised organisational growth. Aspirants (Archetype 2) also report increased turnover and clear growth ambition but have not yet translated this into workforce expansion. Stagnant Incumbents (Archetype 3) include enterprises whose turnover remained stable or declined, regardless of ambition or hiring behaviour. Finally, Passive Beneficiaries (Archetype 4) are enterprises that experienced increased turnover but reported neither future growth ambitions nor active expansion strategies. Together, these archetypes distinguish firms that are scaling from those that are resource-constrained, experiencing stagnation, or benefiting from favourable market conditions without actively pursuing further growth.

Construction of the Formalization Index

To construct a composite formalization index, we used Principal Component Analysis (PCA) on four binary indicators of registration and formalization status: possession of GST registration, Udyam (MSME) registration, Shop & Establishment license, and trade/ municipal license. Rather than assigning equal weight to each indicator, PCA derives weights empirically from the correlation structure across indicators,

allowing registrations that co-occur in the data to contribute differently to the index. The first principal component (PC1), which explained 35.7% of the variance across the four indicators, was used as the formalization index. The resulting PC1 scores were then min–max normalized to a 0–1 scale, where 0 represents the lowest observed level of formalization and 1 the highest observed level in the sample. The index is therefore a relative measure of formalization rather than an absolute count of registrations.

The distribution indicates that enterprises cluster into distinct groups rather than spreading smoothly across the scale. This reflects the fact that formalization tends to happen in "steps" - an enterprise typically holds a specific combination of registrations (for example, GST only, or GST and Udyam together) rather than a gradual, continuous level of compliance. Each combination shows up as its own cluster in the data.

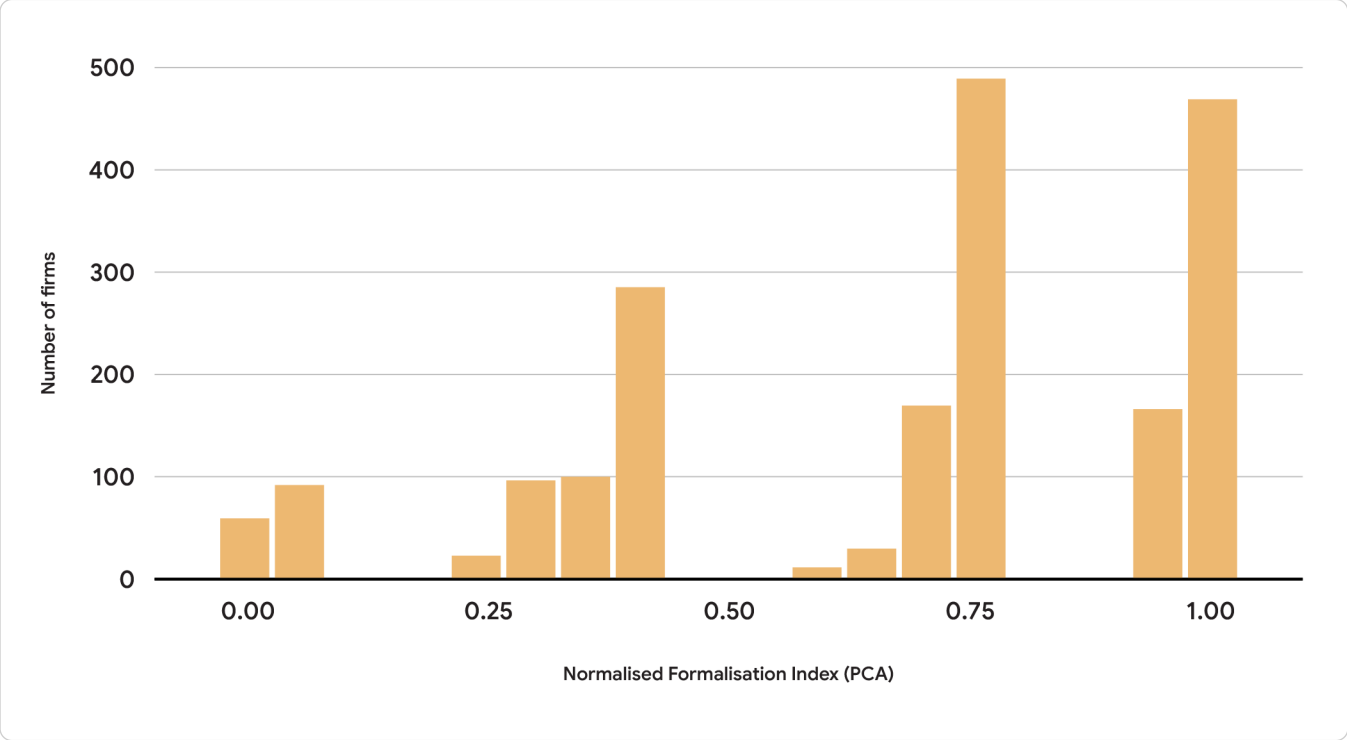


Exhibit: *Distribution of Formalization score (n = 2001)*

Comparison of alternative formalisation indices

To assess the sensitivity of the formalisation measure to the choice of weighting scheme, three alternative indices were constructed using the same four registration indicators: GST, Udyam, Shop & Establishment, and trade or local municipal registration. The first assigns equal weight to each registration, the second gives greater weight to less prevalent registrations, and the third uses principal component analysis (PCA) to derive weights from the observed correlation structure among the registration indicators.

The PCA results do not indicate a single overwhelmingly dominant component. The first principal component has an eigenvalue of 1.428 and explains 35.7% of the total variation, while the second component has an eigenvalue of 1.138 and explains a further 28.5%. The remaining two components account for 20.0% and

15.8%, respectively. PC1 nevertheless provides a readily interpretable formalisation gradient: all four registration indicators have positive loadings, with GST (0.619) and Udyam (0.604) contributing most strongly, followed by trade or municipal registration (0.490). The loading for Shop & Establishment registration is substantially smaller (0.108).

The choice of index construction has limited effect on the resulting measure. The simple additive, prevalence-weighted and PCA-based indices are highly correlated, with pairwise correlations ranging from 0.899 to 0.948. The simple and PCA indices are particularly closely aligned (0.948), while the prevalence-weighted and PCA indices have a correlation of 0.899. This indicates that firms' relative position on the formalisation measure is broadly similar across alternative weighting approaches.

Given these results, the main analysis uses the PCA-based index as the preferred specification. This choice should be interpreted as a methodological convenience rather than evidence that formalisation is a single latent dimension: the PCA results show that variation is distributed across multiple components. The robustness of the results across alternative constructions provides greater confidence that the patterns reported in the analysis are not driven by a particular weighting scheme.

Table 1a: *PCA results*

Component	Eigenvalue	Variance explained	Cumulative
PC1	1.428	35.7%	35.7%
PC2	1.138	28.5%	64.1%
PC3	0.801	20.0%	84.2%
PC4	0.633	15.8%	100.0%

Table 2a: *PCA Loadings*

Registration	PC1	PC2	PC3	PC4
GST	0.619	0.208	-0.490	0.577
Udyam	0.604	-0.374	-0.192	-0.677
Shop & Establishment	0.108	-0.820	0.327	0.457
Trade licence	0.490	0.379	0.785	0.004

Table 3a: *Correlation across alternative indices*

	Simple	Prevalence-weighted	PCA
Simple	1.000	0.926	0.948
Prevalence-weighted	0.926	1.000	0.899
PCA	0.948	0.899	1.000

Ranking ordinal Variables to Analyse Input Costs

Since the survey captured firm structure variables (revenue, wage spend, input spend, household surplus) as ordered categorical brackets rather than exact rupee amounts, these were converted into integer ranks rather than numeric midpoints, to avoid introducing false precision (e.g., treating "More than Rs. 10 lakh" as if it had a specific numeric value). Each bracket was assigned a rank based on its position in the ordered scale. For example, revenue brackets were ranked 1 (Less than Rs. 50,000) through 6 (More than Rs. 10 lakh), with wage spend, input spend, and surplus brackets ranked the same way using their own respective scales. These ranks preserve the ordering of categories (lower bracket = lower rank) without implying anything about the numeric distance between brackets. Relative-spending measures were similarly built by subtracting one rank from another, in cases where the two variables shared the identical underlying scale in the survey design.

To examine how efficiently enterprises convert business inputs into revenue, we construct a Mean Input–Revenue Gap using a rank-based approach. For monthly input expenditures excluding labor wages (e.g., raw materials, rent and other operating expenses), enterprises are ranked according to their expenditure, and separately ranked according to monthly revenue. For each enterprise, the difference between its input rank and revenue rank is calculated for every input category, and these rank differences are then averaged to produce a single summary measure by archetype. A positive gap indicates that an enterprise's input expenditures rank higher than its revenue, suggesting relatively greater input use for its scale of operations, while a negative gap indicates that revenue ranks higher than inputs, implying comparatively greater efficiency in translating inputs into sales. Because the measure relies on relative rankings rather than absolute expenditure levels, it is less sensitive to outliers and enables meaningful comparisons across enterprises of different sizes and sectors.

Appendix 3: Survey Questionnaire

1. **Enumerator Introduction Script:** Introduction, purpose, confidentiality
2. **Screening Questions:** Shop status, consent, turnover eligibility, respondent role
3. **Introductory Fields:** District, language, qualitative consent
4. **Identifiers:** Business name, address, contact details
5. **Growth Indicators:** Turnover, years of operation, employment trajectory, growth trend, future plans, past expansion
6. **Business Profile:** Industry, sector, nature of operations (perennial/seasonal)
7. **Organisational structure:** Ownership and operational setup, business premises type (fixed, home-based, mobile, online), family vs hired labour, scale of operations
8. **Entrepreneur Details:** Gender, age, education
9. **Credit:** Initial capital, credit need, borrowing behaviour, loan application, barriers, loan details, repayment, cost
10. **Market and Customers:** Constraints, support needs, schemes, sales channels, competition, repeat customers
11. **Access to Technology:** Platform usage, digital transactions, credit linkage, impact of digital tools
12. **Hiring and Workforce:** Workforce size, composition, hiring plans, skills, challenges, hiring channels, seasonality
13. **Registration and Compliance:** Number/type of registrations, timing, Udyam impact
14. **Firm Structure:** Monthly sales / revenue levels, Wage expenditure, Cost structure / business expenses

Scan to view the
Full Survey Questionnaire

Endnotes

1. Shekar, D.J. (2023, March 2). How Persistent Systems' Anand Deshpande is using his wealth to create nano entrepreneurs. Forbes India. https://www.forbesindia.com/article/leadership/how-persistent-systems-anand-deshpande-is-using-his-wealth-to-create-nano-entrepreneurs/83517/1
2. Ministry of Micro, Small & Medium Enterprises (2025, July 4). MSME sector accounts for 30.1% of India's GDP, 35.4% of manufacturing and 45.73% of exports in the country: Union Minister for MSME [Press release]. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2142170&reg=48&lang=2
3. MSME Desk (2024, September 12). How nano enterprises are defined in India? Check criteria. Financial Express. https://www.financialexpress.com/business/sme/how-nano-enterprises-are-defined-in-india-check-criteria/3609552/
4. MSME Desk (2024, September 12). How nano-enterprises are defined in India? Check criteria. Financial Express. https://www.financialexpress.com/business/sme/how-nano-enterprises-are-defined-in-india-check-criteria/3609552/
5. Press Trust of India (2025, March 31). Revised investment, turnover criteria from Apr 1 to help MSMEs scale up, boost job creation: Experts. Mint. https://www.livemint.com/economy/revised-investment-turnover-criteria-from-apr-1-to-help-msmes-scale-up-boost-job-creationexperts-11743423135430.html
6. Sharma, M. & Navaneeth, M.S. (2026, June 15). How big is the size of the nano-enterprise credit market in India. Dvara Research. https://dvararesearch.com/how-big-is-the-size-of-nano-enterprise-credit-market-in-india/
7. deAsra Foundation. (2022). Working paper: Need for developing a new taxonomy for MSME - Case for nano enterprises. https://www.deasra.in/wp-content/uploads/2022/07/WORKING-PAPER-The-Need-for-developing-a-new-Taxonomy-for-MSME-1.pdf
8. Nichter, S., & Goldmark L. (2009). Small firm growth in developing countries. World Development, 37(9), 1453–1464. DOI: 10.1016/j.worlddev.2009.01.013.
9. Grimm, M., Knorringa P., & Lay J. (2012). Constrained gazelles: High potentials in West Africa's informal economy. World Development, 40(7), 1352–1368. DOI:10.1016/j.worlddev.2012.02.007.
10. Campos, F., Frese, M., Goldstein, M., Iacovone, L., & McKenzie, D. (2017). Training personal initiative versus traditional business training: A randomized controlled trial in Togo. American Economic Review, 107(5), 501–505.
11. McKenzie, D., & Woodruff, C. (2017). Business practices in small firms in developing countries. Management Science, 63(9), 2967–2981.
12. Banerjee, A., Duflo, E., Glennester, R., & Kinnan, C. (2015). The miracle of microfinance? Evidence from a randomized evaluation. American Economic Journal: Applied Economics, 7(1), 22–53.
13. India Brand Equity Foundation. (2025). MSME industry in India. https://www.ibef.org/industry/msme
14. Ministry of Statistics & Programme Implementation (2025, August 27). Annual survey of industries (ASI) results for 2023-24 [Press release]. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2161192&reg=48&lang=2
15. Ministry of Statistics & Programme Implementation (2024). Operational and economic characteristics (Annual survey of unincorporated sector enterprises (ASUSE). Government of India. https://www.mospi.gov.in/sites/default/files/publication_reports/ASUSE_2023_24_Full_Report-L.pdf
16. Ministry of Statistics & Programme Implementation (2023). Annual survey of industries 2022-2023. Volume 1. Government of India. https://www.mospi.gov.in/sites/default/files/publication_reports/ASI%202022-23%20Volume%20I-compressed.pdf
17. https://www.enterprisesurveys.org/libs/granite/core/content/login.html?resource=%2Fcontent%2Fenterprisesurveys%2F%2Fen%2Finformal-businesses.html&$$login$$=%24%24login%24%24&j_reason=unknown&j_reason_code=unknown
18. Ministry of Statistics & Programme Implementation (2024). Operational and economic characteristics (Annual survey of unincorporated sector enterprises (ASUSE). Government of India. https://www.mospi.gov.in/sites/default/files/publication_reports/ASUSE_2023_24_Full_Report-L.pdf
19. Ministry of Statistics & Programme Implementation. (n.d). https://www.mospi.gov.in/all-india-report-sixth-economic-census
20. Ministry of Statistics & Programme Implementation (2023). Annual survey of industries 2022-2023. Volume 1. Government of India. https://www.mospi.gov.in/sites/default/files/publication_reports/ASI%202022-23%20Volume%20I-compressed.pdf
21. Small Industries Development Bank of India (2025). MSME outlook survey: Round 1: October-December 2024. https://www.sidbi.in/uploads/msme_outlook_survey.pdf
22. Ministry of Statistics & Programme Implementation (2023). Annual survey of industries 2022-2023. Volume 1. Government of India. https://www.mospi.gov.in/sites/default/files/publication_reports/ASI%202022-23%20Volume%20I-compressed.pdf
23. Small Industries Development Bank of India (2025). MSME outlook survey: Round 1: October-December 2024. https://www.sidbi.in/uploads/msme_outlook_survey.pdf
24. Goyal, T.M., Puri, H., & Khanna, R. (2025). Annual survey of micro, small and medium enterprises (MSMEs) in India: The role of digitalisation in enterprise development. Indian Council for Research on International Economic Relations (ICRIER). https://icrier.org/pdf/Annual-Survey-MSMEs_India_2025.pdf

25. Basole, A., & Chandy, V. (2019). Microenterprises in India: A multidimensional analysis. Azim Premji University and Global Alliance for Mass Entrepreneurship. https://publications.azimpremjiuniversity.edu.in/2115/1/Microenterprises_In_India_Report_Oct_2019_By_APU_GAME.pdf

26. Ministry of Statistics & Programme Implementation (2023). Annual survey of industries 2022-2023. Volume 1. Government of India. https://www.mospi.gov.in/sites/default/files/publication_reports/ASI%202022-23%20Volume%20I-compressed.pdf

27. Ministry of Statistics & Programme Implementation (2023). Annual survey of industries 2022-2023. Volume 1. Government of India. https://www.mospi.gov.in/sites/default/files/publication_reports/ASI%202022-23%20Volume%20I-compressed.pdf

28. Patnaik, M. (2026, April 6). How the GST created a formalisation cascade. Ideas for India. https://www.ideasforindia.in/topics/macroeconomics/how-the-gst-created-a-formalisation-cascade

29. Natarajan, G. (2023, October 23). The challenges with forced formalisation of the economy. Urbanomics. https://urbanomics.substack.com/p/the-challenges-with-forced-formalisation

30. Nageswaran, V.A. & Natarajan, G. (2019, October 9). India's quest for jobs: A policy agenda. Carnegie Endowment for International Peace. https://carnegieendowment.org/india/research/2019/10/indias-quest-for-jobs-a-policy-agenda

31. Times News Network (2025, September 5). GST council seeks to ease registration & refund process. The Times of India. https://timesofindia.indiatimes.com/business/india-business/gst-council-seeks-to-ease-registration-refund-process/articleshow/123709017

32. ET Government Desk (2025, September 4). Relief for exporters: GST council clears speedy refunds for claims below Rs.1000. ET Government. https://government.economictimes.indiatimes.com/news/economy/relief-for-exporters-gst-council-clears-speedy-refunds-for-claims-below-1000/123694765

33. ET Bureau (2025, September 5). GST council clears process reforms for taxpayers. The Economic Times. https://economictimes.indiatimes.com/news/economy/policy/gst-council-clears-process-reforms-for-taxpayers/articleshow/123705985.cms?from=mdr

34. Balachandar, G. (2025, May 13). MSME sector faces Rs.30-lakh crore credit gap; alternative finance gathers pace. The Hindu Businessline. https://www.thehindubusinessline.com/money-and-banking/msme-sector-faces-30-lakh-crore-credit-gap-alternative-finance-gathers-pace/article69571731.ece#:~:text=Regionally%2C%20rural%20MSMEs%20encounter%20a,improving%20access%20to%20working%20capital.

35. Finshots (2024, July 11). Why is RBI concerned over microfinance credit growth in UP and Bihar. https://finshots.in/archive/why-is-the-rbi-worried-about-the-microfinance-credit-growth-in-up-and-bihar/

36. Nagpal, A.K. (2023, February 1). Meeting priority sector lending shortfalls: One more option [Blogpost]. Vinod Kothari Consultants. https://vinodkothari.com/2023/02/meeting-priority-sector-lending-shortfalls-one-more-option/

37. Mudra. (n.d). About us. https://www.mudra.org.in/AboutUs/Genesis

38. Directorate of Economics & Statistics (2025). Economic survey of Maharashtra 2024-25. Government of Maharashtra. https://cdnbbsr.s3waas.gov.in/s349d4b2faeb4b7b9e745775793141e2b2/uploads/2025/01/2025030788773769.pdf

39. Patan District Administration (2020). Prime minister street vendor's AtmaNirbhar Nidhi (PM SVANidhi). https://patan.nic.in/scheme/prime-minister-street-vendors-atmanirbhar-nidhi-pm-svanidhi/

40. Mohan, M. (2024, April 18). Mudra loan advantages and disadvantages. The Business Scroll. https://www.thebusinessscroll.com/mudra-loan-advantages-and-disadvantages/

41. Niti Aayog (2018). Guidelines for the Trade Receivables Discounting System (TReDS). https://www.nitiforstates.gov.in/policy-viewer?id=SNCNAV000051

42. Pandey, A. (2025, May 18). Rs 25 lakh crore MSME credit gap: TReDS has sparked hope for small businesses but what's holding it back? The Economic Times. https://economictimes.indiatimes.com/small-biz/sme-sector/rs-25-lakh-crore-msme-credit-gap-treds-has-sparked-hope-for-small-businesses-but-whats-holding-it-back/articleshow/121177109.cms

43. ONDC (n.d.) https://www.ondc.org/

44. Ministry of Communications (2025, February 1). Digital infrastructure in India [Press release]. https://www.pib.gov.in/PressReleasePage.aspx?PRID=2098487&reg=48&lang=2#:~:text=Launched%20in%202022%2C%20The%20Open,reached%20approximately%204%2C90%2C000+.

45. Singhal, P. (2023, April 10). ONDC's challenge is onboarding stakeholders, expanding the market: T Koshy, CEO. Money Control. https://www.moneycontrol.com/news/economy/policy/ondcs-challenge-is-onboarding-stakeholders-expanding-the-market-t-koshy-ceo-10389921.html

46. State of Working India (2023) Social identities and labour market outcomes. Centre for Sustainable Employment. Azim Premji University. https://publications.azimpremjiuniversity.edu.in/5166/1/State_of_Working_India_2023_ebook_revised.pdf

47. Maharashtra Industry, Trade and Investment Facilitation (n.d.). Cluster development program. https://maitri.maharashtra.gov.in/about-us/department-initiative/cluster-development-program/

48. Sinha, I. (2022). Cluster development policy: Analysis, best practices, and recommendations. Wadhwani Foundation. https://wadhwanifoundation.org/wp-content/uploads/2023/12/policy-paper-on-cluster-development.pdf

49. Beddig, C. (2008). Cluster development policy rooted in the collective efficiency approach: An effective poverty alleviation tool in the Indian handloom sector? Graduate Institute of Geneva. https://www.unido.org/sites/default/files/2010-01/Cluster%20Development%20Policy%20in%20Indian%20Handloom%20Cl%20BeddigDec%2009_0.pdf

50. Pohit, S., Jamal, T., Suman, Y., Kumar Yadav, N., Kumar Saini, M. (2016). Innovation strategies in the Indian textile sector – Evidence from Surat textile cluster. MPRA Paper 70470, University Library of Munich, Germany. https://ideas.repec.org/p/pra/mprapa/70470.html

51. Basole, A., & Chandy, V. (2019). Microenterprises in India: A multidimensional analysis. Azim Premji University and Global Alliance for Mass Entrepreneurship. https://publications.azimpremjiuniversity.edu.in/2115/1/Microenterprises_In_India_Report_Oct_2019_By_APU_GAME.pdf

52. Patnaik, M. (2026, April 6). How the GST created a formalisation cascade. Ideas for India. https://www.ideasforindia.in/topics/macroeconomics/how-the-gst-created-a-formalisation-cascade

53. OECD (2021). The digital transformation of SMEs. OECD Studies on SMEs and Entrepreneurship, OECD Publishing, Paris. https://www.oecd.org/content/dam/oecd/en/publications/reports/2021/02/the-digital-transformation-of-smes_ec3163f5/bdb9256a-en.pdf

54. Mishra, D., Kedia, M., Reddy, A., Ramnath K., & Manish. M. (2024). State of India's digital economy (SIDE) report, 2024. ICRIER. https://icrier.org/pdf/State_of_India_Digital_Economy_Report_2024.pdf

55. OECD (2021). The digital transformation of SMEs. OECD Studies on SMEs and Entrepreneurship, OECD Publishing, Paris. https://www.oecd.org/content/dam/oecd/en/publications/reports/2021/02/the-digital-transformation-of-smes_ec3163f5/bdb9256a-en.pdf

56. OECD (2021). The digital transformation of SMEs. OECD Studies on SMEs and Entrepreneurship, OECD Publishing, Paris. https://www.oecd.org/content/dam/oecd/en/publications/reports/2021/02/the-digital-transformation-of-smes_ec3163f5/bdb9256a-en.pdf

57. OECD (2021). The digital transformation of SMEs. OECD Studies on SMEs and Entrepreneurship, OECD Publishing, Paris. https://www.oecd.org/content/dam/oecd/en/publications/reports/2021/02/the-digital-transformation-of-smes_ec3163f5/bdb9256a-en.pdf

58. Kapoor, R., & Goyal, T.M. (2023). Annual survey of micro, small, and medium enterprises (MSMEs) in India: Leveraging e-commerce for the growth of MSMEs. ICRIER. https://icrier.org/pdf/E-commerce_MSME_Annual-Survey.pdf

59. OECD (2021). SME digitalisation to "build back better." https://www.oecd.org/content/dam/oecd/en/publications/reports/2021/12/sme-digitalisation-to-build-back-better_c52afe21/50193089-en.pdf

60. Kapoor, R., & Goyal, T.M. (2023). Annual survey of micro, small, and medium enterprises (MSMEs) in India: Leveraging e-commerce for the growth of MSMEs. ICRIER. https://icrier.org/pdf/E-commerce_MSME_Annual-Survey.pdf

61. Brand Connect (2019, March 15). Digital empowerment by banks for SMEs in India. Forbes India. https://www.forbesindia.com/article/brand-connect/digital-empowerment-by-banks-for-smes-in-india/52795/1

62. OECD (2021). SME digitalisation to "build back better." https://www.oecd.org/content/dam/oecd/en/publications/reports/2021/12/sme-digitalisation-to-build-back-better_c52afe21/50193089-en.pdf

63. Grimm, M., Knorringa, P., & Lay, J. (2012). "Constrained Gazelles: High Potentials in West Africa's Informal Economy." World Development 40(7): 1352–1368.
Grover, Arti Goswami, Denis Medvedev, and Ellen Olafsen. "HighGrowth Firms: Facts, Fiction, and Policy Options for Emerging Economies." 2019. Washington, D.C.: The World Bank. https://doi. org/10.1596/978-14648-1368-9

64. Indonesia bolsters small business protection on digital marketplaces, Antara News ,2026
https://en.antaranews.com/amp/news/424500/indonesia-bolsters-small-business-protection-on-digital-marketplaces

65. Centre for Responsible Business. (n.d.). Sustainable cluster brand. https://c4rb.org/sustainable-cluster-brand/

66. Federal Ministry for Economic Affairs and Climate Action. (n.d.). Shaping the digital transformation. https://www.bundeswirtschaftsministerium.de/Redaktion/EN/Dossier/digitalisierung.htm

67. Organisation for Economic Co-operation and Development. (2024, June 10). Costa Rican SME underwent upskilling run by national and local governments to optimize use of digital tools. OECD. https://www.oecd.org/en/publications/digital-for-smes-case-studies_d65e57f4-en/costa-rican-sme-underwent-upskilling-run-by-national-and-local-governments-to-optimize-use-of-digital-tools_d326a1db-en.html

deAsra

यशस्वी उद्योजक
Voice of deAsra

ARTHA
GLOBAL