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CAUGHT IN THE MIDDLE?

Survey report on challenges faced by

URBAN NANO ENTERPRISES IN PUNE

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About deAsra Centre of Excellence in Nano Entrepreneurship

deAsra Centre of Excellence in Nano Entrepreneurship is established within Centre for Excellence in Entrepreneurship and Development (CEED) at Gokhale Institute of Politics and Economics, Pune.

The work at the deAsra Centre is specifically focused on strengthening the nano entrepreneurship ecosystem. It aims to conduct research, curate information, and partner with the nano entrepreneurship enablers.

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This publication uses U.K. spelling.

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Executive Summary

Context: In the vast literature on entrepreneurship, the heterogeneity within the micro enterprise sector remains largely under-explored. Despite their struggle for sustainability and growth, the enterprises in the middle segment of the micro enterprise category in the MSME sector are often overlooked and their needs are unmet. In light of this gap, the deAsra Centre of Excellence in Nano Entrepreneurship at the Gokhale Institute conducted a survey among these businesses in Pune in Maharashtra to draw attention to their struggles and challenges and to give a voice to their requirements. In this survey, we aim to document the challenges encountered by service sector nano businesses with an annual turnover ranging between Rs 10 Lakh and 1 Crore.

The term “nano entrepreneur” has been defined and understood differently in various contexts. According to some reports on the Indian micro business sector, nano enterprises can be classified as a distinct segment within the Micro, Small, and Medium Enterprises (MSMEs) as firms with an annual turnover of less than INR 1 crore, characterized by their hyperlocal roots and focus (Dell Foundation, IFMR-LEAD Report, January 2023).

This study draws upon existing definitions of nano enterprises and applies them to the current MSME classification criteria based on annual turnover. This survey covers both registered and unregistered nano enterprises that have an annual turnover ranging from Rs 10 lakhs to 1 crore. The survey includes various types of businesses such as grocery shops, small boutiques, independent tutors, catering and food stalls, bakeries, salons, pharmacies, auto repair shops, retail and trading outlets, and small restaurants. The data is based on in-depth interviews with more than 500 randomly selected nano entrepreneurs.

Rationale: Businesses with an annual turnover of over Rs 10 lakhs demonstrate resilience and can be considered poised to move to the next stage of growth. Mid-tier micro-entrepreneurs is a large segment. According to NSSO 73rd round, nano enterprises form more than 60% of micro enterprises. Therefore, it is crucial to gain a better understanding of them to address the challenges that they continue to face.

The lower-income, self-employed, and rural or semi-rural segment is often supported by self-help groups (SHG) and microfinance networks (MFI), whereas the upper segment of the micro enterprise sector is catered

to by banks and the financial system under the MSME label. However, the mid-tier micro entrepreneurs are less likely to attract policy focus. This is primarily due to the perception that they are too urban, centrally located, and non-poor, making them appear less vulnerable.

Thus, it is imperative to shed light on their struggles and provide them with the necessary resources to reach their full potential. Only then can we ensure that they contribute positively to the growth, employment, and development of the economy.

The report highlights the conditions and challenges faced by nano enterprises in the following areas: digitalization and technological know-how, access to finance, marketing, compliance and government support, entrepreneurial aspiration, and the entrepreneurial ecosystem.

Findings and Actionable Recommendations

Themes	Gaps	Action points
Digitalization and technological know-how	<ul style="list-style-type: none"> UPI transactions are popular but 94% of transactions with customers and 69% with vendors still occur in cash Need to leverage digitalization for marketing and operational efficiency; digitalization does not go beyond use of UPI-based payments 38% of the degree and diploma holders admitted that they lack knowledge about new technology Out of those who lacked technological know-how, 71% were women Lack of a well-planned digital transformation strategy 	<ul style="list-style-type: none"> Industry-specific technology training & hand-holding by Government: While the current CSR regulations prioritize technology provision and training for youth and start-ups, they have proven to be insufficient for established and mature nano businesses. Government can introduce effective initiatives that cater to the unique requirements of existing businesses within the nano business segment. Government agencies like National Institute of MSME (NIMSME) can design and conduct targeted training / capacity-building programs specifically focusing on vendors /women customers of such nano enterprises. Tantra Mitra Fellowship for Youth: Introducing the “Tantra Mitra Fellowship Program”, which will provide one-year fellowships to skilled youth to train and mentor nano business owners in specific technological skills and strategies. For example, a fellowship holder with an MBA or MSc in Agriculture can provide training and guidance to nano businesses in the food processing industry on forming technology adoption strategies and integrating them into their business processes.
Sources of funding	<ul style="list-style-type: none"> 92.5% respondents depend on self-funding and informal financing Hesitation to apply for bank loans due to the perceived complexity and delays in the loan application procedures 	<ul style="list-style-type: none"> Introducing Bank Sakhi and Bank Mitra for urban micro businesses to facilitate use of special lending schemes by nano businesses. Digital Ledger Applications: The utilization of digital ledger applications in the micro-lending interface of fintech banks is an underexplored area in Indian micro-lending policy. Encouraging the adoption of digital ledger applications can be the initial step towards moving in this direction. Introducing Priority Sector Requirement for Fintech Lenders.
Marketing efforts and business expansion	<ul style="list-style-type: none"> 78% rely on self for marketing No backing of association or marketing expert 	<ul style="list-style-type: none"> Establishing disruptive platforms through public-private partnership: private sector digital platforms play a role to aggregate the services of self-employed professionals like beauticians, electricians, plumbers, etc. Some of these private platforms are unregulated and exploitative. These platforms can provide assessment and ranking services for member nano enterprises to improve quality of services provided and provide a value to customers. Regulatory policy for the existing private sector digital disruptive platforms. This initiative will leverage the power of digitalization beyond use of UPI e.g. providing market linkage, bringing informal sector service providers into the formal ecosystem, providing support for upgrading, and professionalism. Online platforms for matching and connecting Indian SMEs to companies across the world.

Findings and Actionable Recommendations

Themes	Gaps	Action points
Formalization, taxes and compliance	<ul style="list-style-type: none"> • Indifference for voluntary formalization e.g. Udyam Registration • No role of Government schemes • Disconnect between the targeted beneficiaries and the implementing agencies 	<ul style="list-style-type: none"> • Introduce solid fringe benefits for Udyam Registration: <ul style="list-style-type: none"> a) Free capacity building and digital training b) Partnering or impaneling government with associations like Business Network International (BNI), Rotary Club, etc. to subsidize their membership for Udyam registered entrepreneurs • Government-recognized grading and accreditation for service industries. • Monitoring and evaluation of Government schemes (e.g. PMMY) by third-party agencies.
Entrepreneurial aspiration	<ul style="list-style-type: none"> • Positive association between women owned enterprises and entrepreneurial aspiration but inadequate capacity-building efforts for existing businesses • No linkage between formal education and entrepreneurial aspiration shows need for sector-specific professional training 	<ul style="list-style-type: none"> • Forming Business Affinity Groups (BAGs): To reduce the disconnect between the nano entrepreneurs and the system. Each Business Affinity Group can be attached to a larger association at district and state levels to work on various issues faced by nano entrepreneurs. • Establishing business turnaround support centers and initiating the process of scaling for SMEs. • Enabling Public-private partnerships for capacity building for women, and young entrepreneurs.
	<ul style="list-style-type: none"> • Disconnect between ecosystem and nano businesses • Most rely on friends and family or self-support for finance, consultation, compliance, and marketing • Delayed payments, working capital management and disrupted supply chains 	<ul style="list-style-type: none"> • Mandatory service contribution for IT postgraduates and CAs and ICWAs for hand-holding for one year in IT skills and tax, compliance and accounting respectively. • Encourage collective federations of nano entrepreneurs to enhance collective power of nano entrepreneurs to tackle the problem of delayed receivables.

This report highlights the urgent requirement for a comprehensive ecosystem approach to facilitate the growth of nano enterprises. Although the report's findings are based on a sample data collected from a specific location, they demonstrate significant gaps in the current policy framework. This report emphasizes the need for a coherent ecosystem approach to foster nano enterprise growth. NGOs and entrepreneurship associations can play a crucial role in organizing the ecosystem of enablers necessary to achieve this goal. Instead of constantly introducing new Government programs, it is crucial to eliminate implementation barriers and ensure the effective utilization of existing programs.

The ecosystem enablers should explore how nano enterprises could potentially transform the economy, serving as a viable alternative to mass-produced branded products where the distribution of gross value added is often highly inequitable. This viewpoint takes into account the contribution of local workers to the nano enterprises' gross value added, their carbon footprint and sustainability, and their efficient use of resources, among other factors.

In conclusion, there needs to be a fundamental shift in the way that researchers, government officials, and ecosystem enablers approach the nano enterprise sector. By altering the prevailing narrative, the market positioning of the nano enterprise sector can be reshaped, positioning them as key partners within the ecosystem.

1

Nano Enterprises: The Missing Middle of Micro Business Segment

1.1 The context

In the vast literature on entrepreneurship, the middle segment of micro enterprises has been largely overlooked. Despite struggling for sustainability and growth, businesses in this middle segment of the micro business sector are often neglected and their needs unmet. Recognizing this gap, the deAsra Centre of Excellence in Nano Entrepreneurship at the Gokhale Institute of Politics and Economics conducted a survey among these businesses in Pune to shed light on their struggles, challenges, and requirements. The survey aims to document the challenges faced by service sector nano businesses with an annual turnover ranging between Rs 10 Lakh and 1 Crore and identify their pain points and requirements.

The term ‘nano entrepreneur’ has been differently defined and understood by different experts. Nano enterprises can be classified as a distinct segment within the Micro, Small, and Medium Enterprises (MSMEs) as firms with an annual turnover of less than INR 1 crore, characterized by their hyperlocal roots and focus¹.

To arrive at a focused definition, this study draws upon existing definitions of nano enterprises and applies them to the current MSME classification criteria of annual turnover². It thus narrowly defines nano enterprises as all enterprises, registered or unregistered, with an annual turnover anywhere between Rs 10 lakhs to 1 crore. Although no precise definition of nano enterprises can be found in the literature, the rationale for selecting this cohort for our study is as follows. The lower limit of the middle nano sector can be the level of turnover that offers a stability of business operations with minimal change in the type of business for a period of 5-10 years. The upper limit of the middle nano sector could be the turnover level beyond which there is the employment provided to one or more employees. The examples of these businesses covered in the survey are grocery shops, small boutiques, independent tutors, catering and food stalls, bakeries, salons, pharmacies, auto repair, retail and trading outlets, small restaurants, etc. located in urban and semi-urban areas. We made a conscious decision to focus on this cohort, positioned between the lower and upper segments of micro enterprises, for the following reasons.

Need to voice the problems of the missing middle:

The lower-income, self-employed, and often rural or semi-rural segment is served by self-help groups (SHG) and micro-finance networks (MFI), while the upper segment of the micro enterprise sector is served by banks and the financial system under the MSME label. However, despite their struggle to survive and grow, the voices of mid-tier micro entrepreneurs are seldom heard. This lack of attention is due to the perception that they are too urban, centrally located, and non-poor, which makes them less vulnerable and thus less likely to attract a policy focus.

In the political economy of development, businesses in the middle segment of the micro business sector, are too small and fragmented to influence policy decisions.

¹<https://ifmrlead.org/wp-content/uploads/2023/01/Impact-of-Access-to-Finance-on-Nano-Enterprises.pdf>

²<https://msme.gov.in/know-about-msme#:~:text=Not%20more%20than%20Rs.1,50%20crore>

Nano in size but massive in numbers:

The information regarding the MSME sector is based on either estimates from the National Sample Survey 73rd round or voluntary registration by MSMEs on the Udyam portal of the Government of India. Therefore, both sets of data have limitations in providing an exact representation of the MSME sector, but can be used as an approximate indication. If we choose to rely on Udyam registration data over estimated figures, it reveals that the micro business segment forms approximately 97% of the micro, small, and medium sector (Ref. Figure 1).

Maharashtra has the highest number of Udyam registered micro businesses, accounting for 18.8% of such businesses in India. Figure 2 highlights that 89% of the MSMEs in Maharashtra have net annual turnover of less than Rs. 1 Crore. This justifies conducting the survey in Maharashtra.

Figure 1
Distribution of MSMEs in India as per Udyam Registration

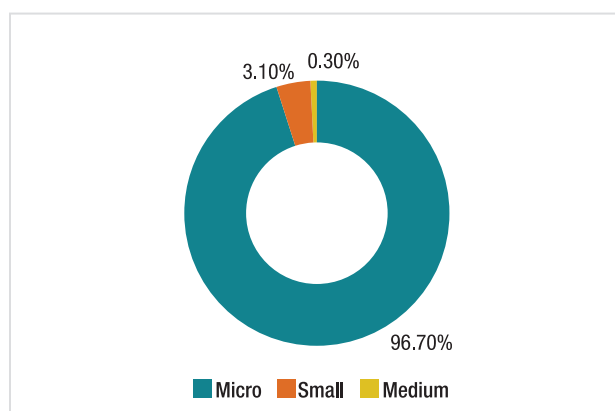
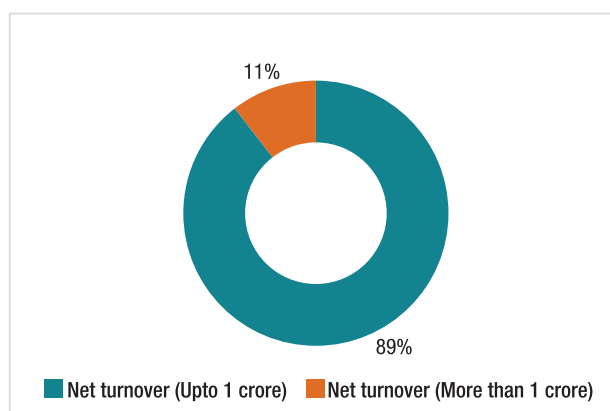


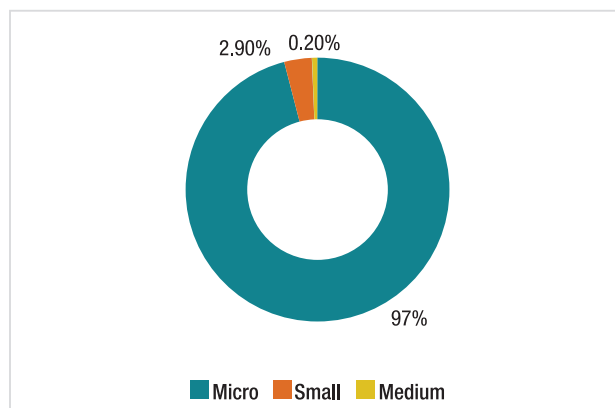
Figure 2
Distribution of MSMEs in Maharashtra as per Net Annual Turnover



Source: Analysis of Udyam Registration Data Maharashtra State (MSMEs registered upto 31st July, 2021)

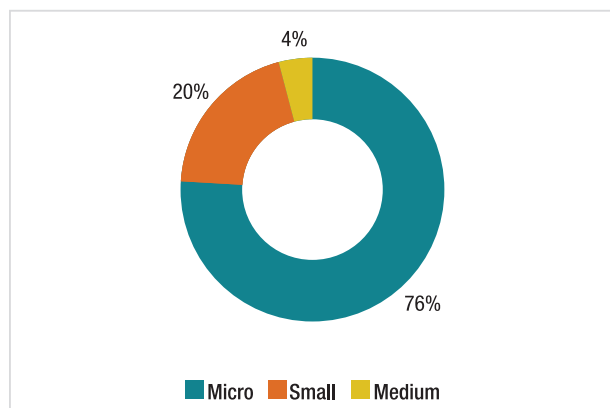
The huge share of micro segment in MSME contributes to high share of MSME employment in Maharashtra and India (Ref. Figure 3a and Figure 3b).

Figure 3a
Share of Micro Segment in MSME Employment in India (%)



Source: MSME Annual report 2022-23

Figure 3b
Employment Share of Micro Segment in MSME Sector in Maharashtra (%)



Source: Analysis of Udyam Registration Data Maharashtra State as on 10th August 2021

According to the literature³, businesses with more than 10 employees account for only 1% in India. Thus it is important to scale these enterprises to increase their employment potential.

Why Pune?

The survey covers various areas in Pune and Pune Municipal Corporation region, for two reasons:

- 1 As Maharashtra ranks first in Udyam registered micro businesses in India, Pune ranks first at the district level in Maharashtra. At district level, Pune has the highest registered micro enterprises (13%) in India, contributing to 25.9% of the total employment in the state.
- 2 Pune is a Tier 1 city in India, where access to banks, Government schemes, digital facilities, and institutional architecture is well established. As our study focused on the demand-side barriers to scaling nano enterprises, Pune provides an ideal setting where supply-side barriers are expected to be minimal. Therefore, given the availability of supply-side factors, we are attempting to determine whether the demand-side gaps still exist.

Table 1

Importance of Nano Businesses in Pune District	Number	% of MSME Sector
Total Number of MSMEs in Pune	1,36,531	100%
Total Number of Micro Businesses	1,29,197	95%
Total Number of Nano Businesses in Pune (Less than 1 Crore Annual Turnover)	1,26,613	93%

Source: Analysis of Udyam Registration Data Maharashtra State as on 10th August 2021

Why we focus on the service sector:

Within the nano segment, the study focuses on the nano enterprises of the service sector, as the service sector is fragmented, encompasses a variety of segments, and has huge employment potential for the educated urban unemployed population. At the all-India level, the service sector constitutes 68% of the micro-business segment, while in Maharashtra, it forms 71% of the micro-business segment. Figures 4a and 4b reflect on the share of service sector in India and Maharashtra. Figure 4c shows the share of service sector employment in MSMEs in India.

Figure 4a

Distribution of Estimated MSME by Nature of Activity in India

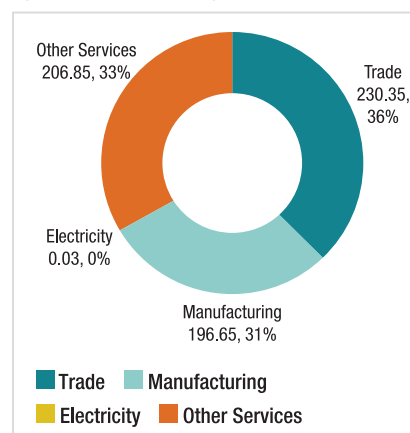


Figure 4b

Share of Service Sector in Micro Businesses Segment (Maharashtra)

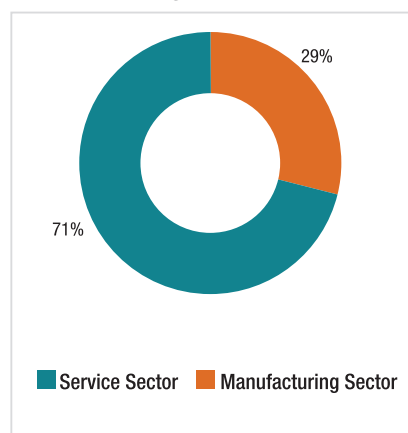
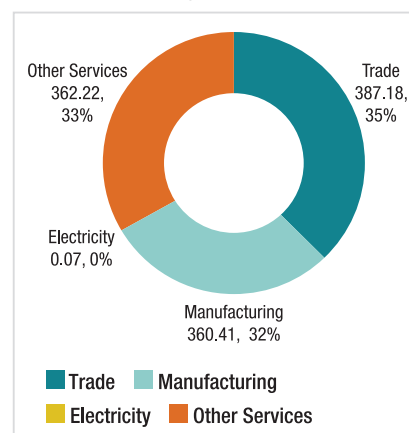


Figure 4c

Employment in MSME Sector in India (Nature of activity)

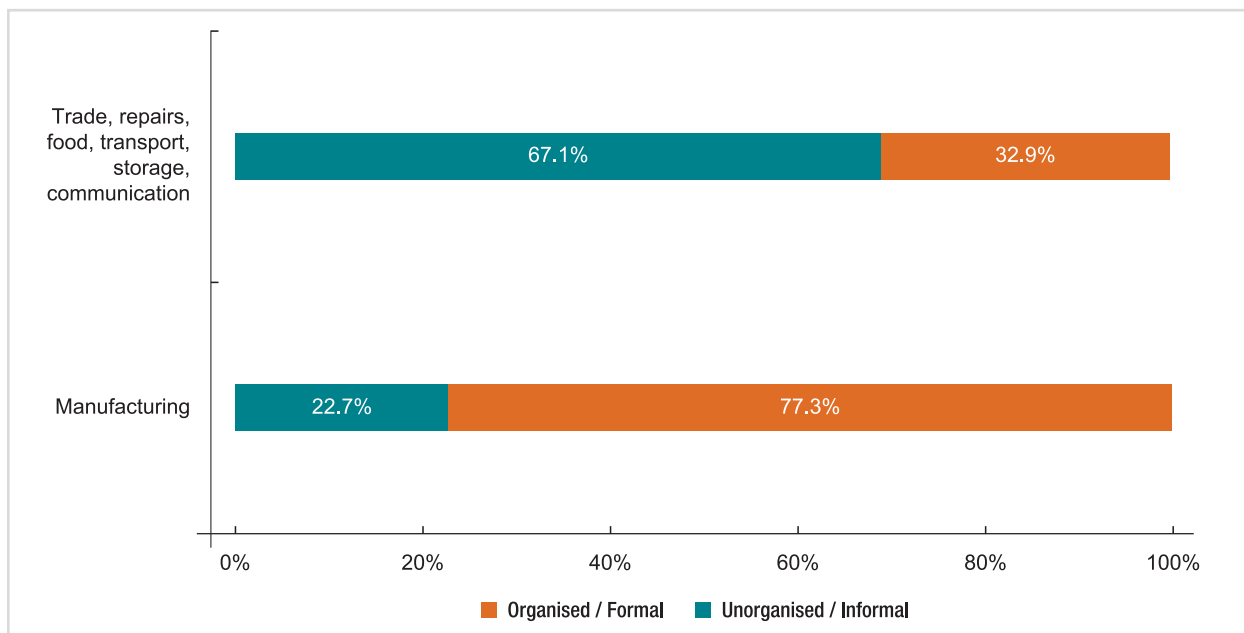


Source: MSME Annual Report 2022-23

³Source: OECD (2023), Enterprises by business size (indicator). doi: 10.1787/31d5eeaf-en

Figure 5

Percentage of Formal Sector Vs. Informal Sector Micro Businesses Across Manufacturing and Selected Service Sector Businesses



While the state-level data on service sector firms in the informal sector is not available in the public domain, at the national level, 77% of firms in manufacturing are formal, as shown in the figure 5, while retail and trade in services have a higher proportion of informal and unorganised firms. Service sector nano enterprises need support as a large proportion of these businesses are in the informal sector.

1.2 Data and methodology

To fill the gap in the existing literature, this survey covered both formal and informal nano enterprises to express the fundamental demand-side problems faced by nano enterprises in the service sector and recommend reforms of the existing system to give them the necessary support to offer to scale their business.

After the literature⁴ review, it is found that the reports and studies as well as the data that have been available on the micro, small, and medium sector, do not adequately provide separate information on nano businesses. The secondary sources of data or information on nano businesses are not found in the public domain. Therefore, we conducted a primary survey and collected data from 504 micro enterprises with an annual turnover of Rs 10 lakhs to 1 crore and providing services like food, restaurants, beauty, auto repairs, trade, etc.

The questions that guided our discussions primarily revolved around their business model, relationship with buyers, experience with technology, coping mechanisms and mitigation strategies, marketing efforts, the need for new technologies, funding, digitization, compliance, and other additional comments on the issues they felt to be the most pressing.

We conducted in-depth interviews with nano enterprise owners with the following objectives.

⁴ Refer to Annexure II — Literature Review Note on Relevant Themes

1.3 Objectives of the Survey

The objectives of this study are:

1. To identify the real issues, challenges, and pain points faced by nano entrepreneurs in the urban service sector
2. To document and support this unrecognized yet crucial section of entrepreneurship by generating discussions on relevant platforms
3. To suggest interventions and policy recommendations for effective operational solutions to these problems

1.4 Profile of the respondents:

The survey was conducted over two months in 2022 from mid-July to the end of September. The regions covered in this survey under PCMC are Kalewadi, Chinchwad, Pimpri, Bhosari, Nigadi, Baner, Balewadi, and Pimple Nilakh. The areas covered in PMC are Bund Garden Road, Bhandarkar Road, Fergusson College Road, Nana Peth, Sadashiv Peth, Hadapsar, Aundh, Katraj, and Susgaon.

1.4.1 Demographic Profile:

Age: The age of the respondents ranged from 20 years to 80+ years, with the mean age being 37 years. The highest percentage of respondents (23%) were in the 30-34 age group (Ref. Figure 6a).

Figure 6a

Age Composition (in years)

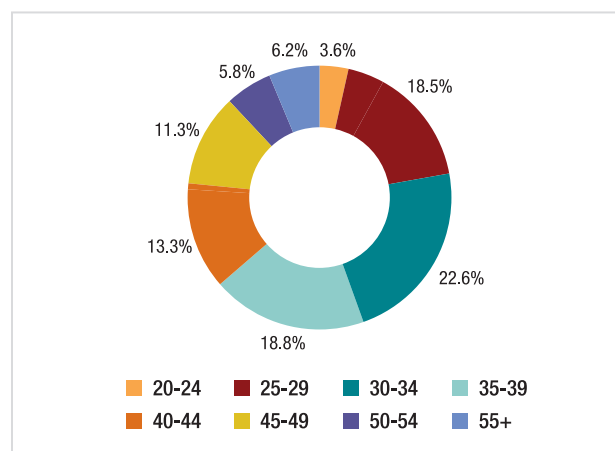
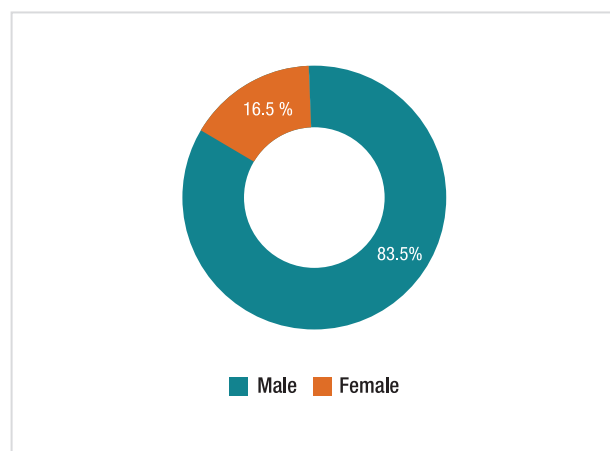


Figure 6b

Gender Composition



- **Gender Composition:** In terms of gender, the total sample data showed that 16.5% of enterprises were owned by women, consistent with the estimates for India where women-led enterprises are estimated to be approximately 18-20% of the total micro enterprises (Ref. Figure 6b).

Figure 7a

Education Wise Distribution of Women Led Enterprises Across Sectors

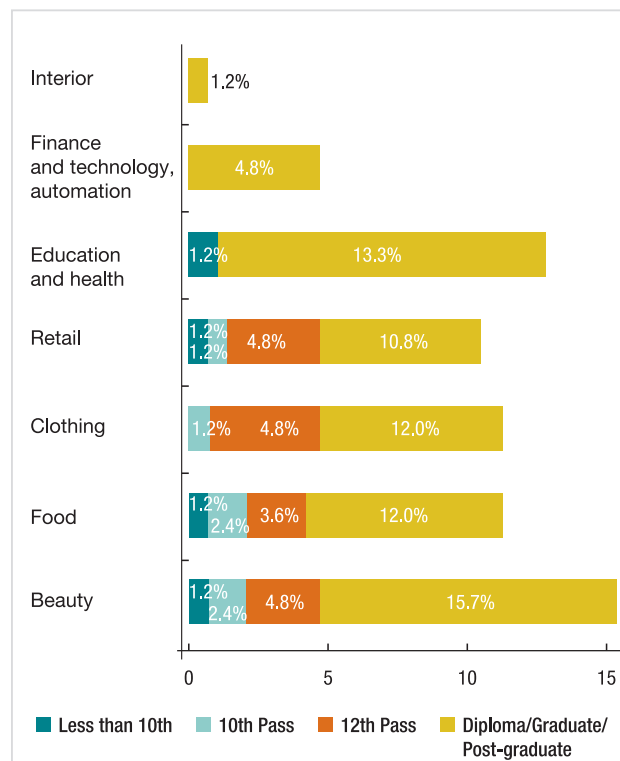
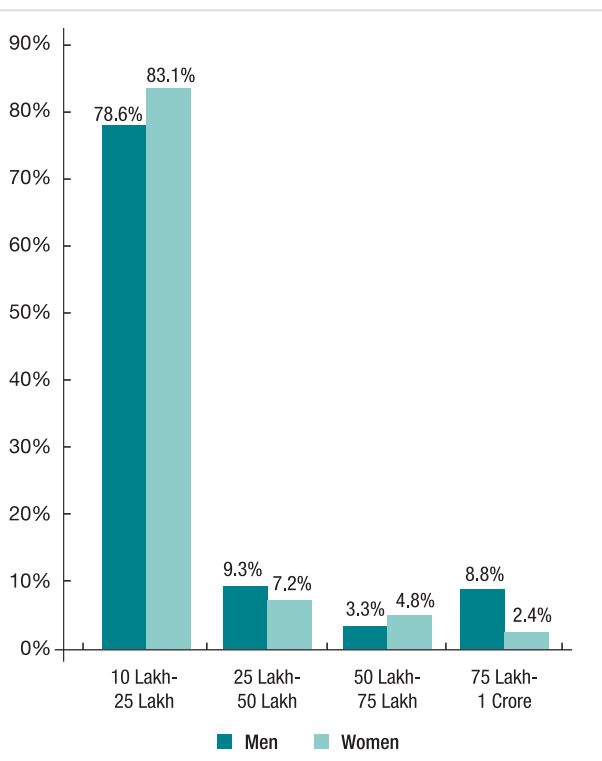


Figure 7b

Gender Wise, Annual Turnover of Enterprises (%)



- The highest proportion of female entrepreneurs was involved in beauty-related businesses, followed by food and clothing. Only 4% of women entrepreneurs in the survey were engaged in businesses involving finance and technology (Ref. Figure 7a).
- We observed gender disparity in the business ownership annual turnover-wise. Our findings align with several studies, including Deshpande & Sharma (2013), which indicate that women are engaged in bottom-of-the-ladder, low productivity, and survival activities. Therefore, entrepreneurship as a vehicle for women's social mobility and breaking gender stereotypes is yet to become a reality in India (Ref. Figure 7b).
- **Education:** The educational profile of nano entrepreneurs includes less than 10th, 10th-pass, 12th-pass, Diploma, Graduate, Postgraduate, and above. 92% of respondents are 10th pass or above, while 58.5% are graduates, post-graduates, and diploma holders (Ref. Figure 8a).

Most of the participants involved in finance and technology enterprises are found to be at least graduates. This is followed by entrepreneurs who had only studied up to the 10th standard, with a large share of these owning businesses that involved non-technical skills (Ref. Figure 8b).

Figure 8a
Education

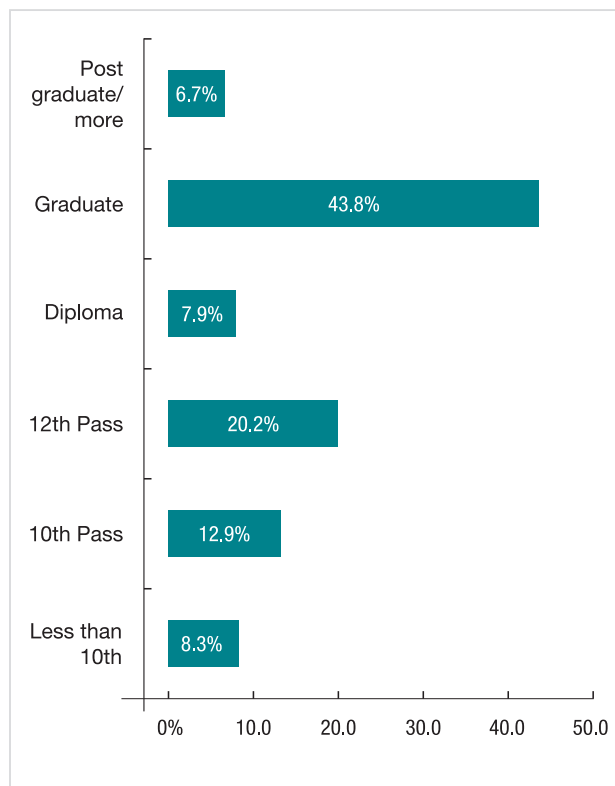
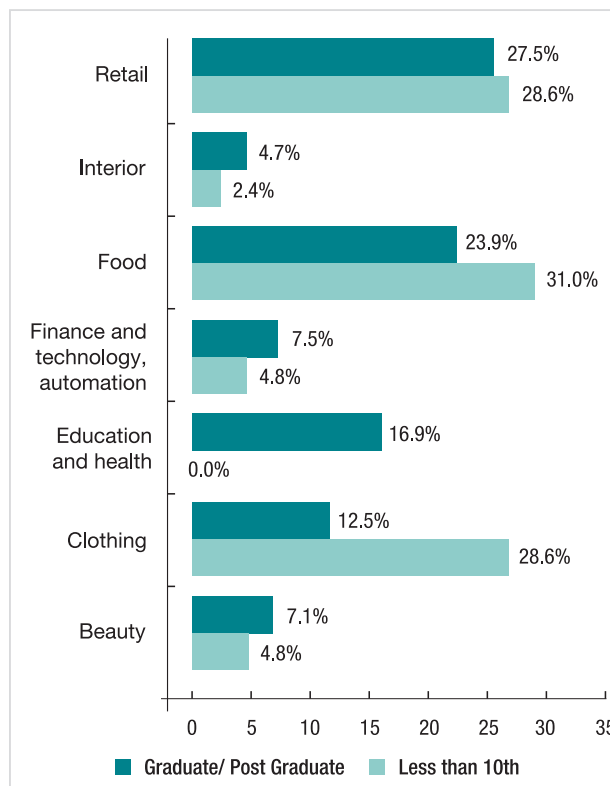


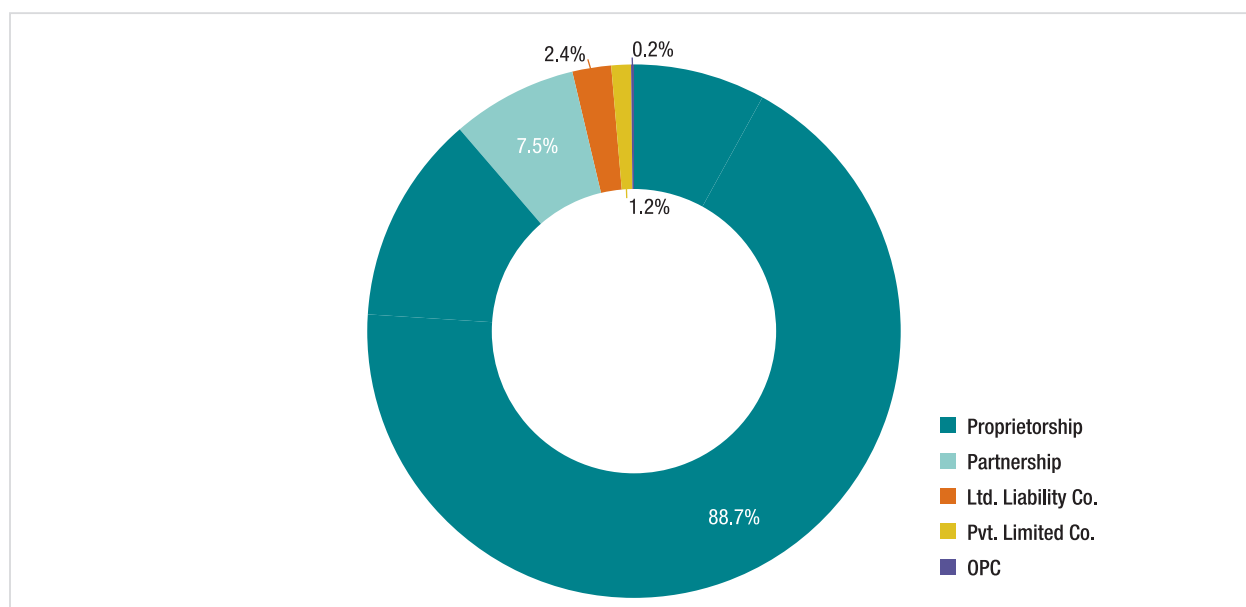
Figure 8b
Education Wise, Sector Wise Distribution



1.4.2 Business Profile

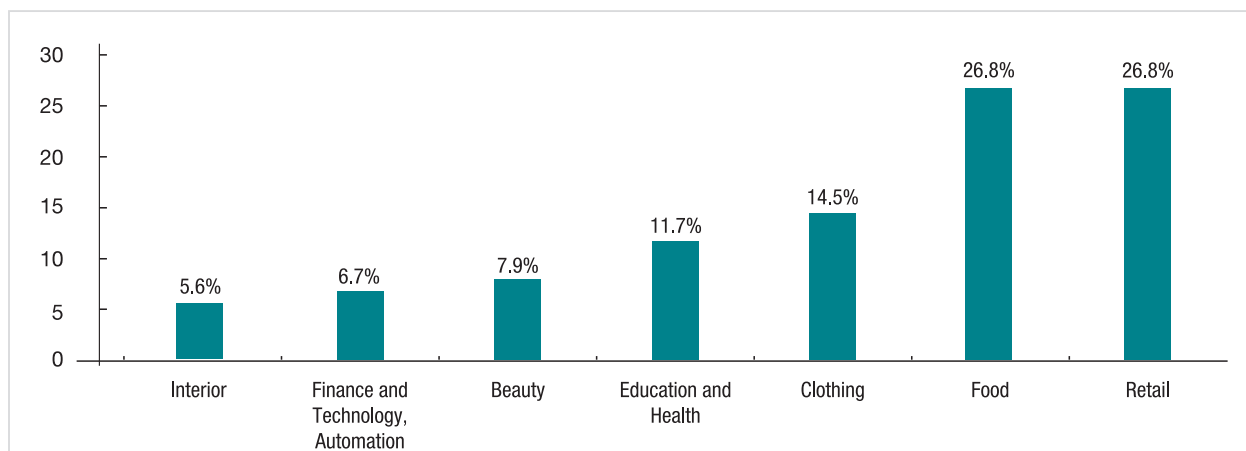
- **Type of business firm:** The survey covers a diverse range of business types, including proprietary, partnership, Limited Liability Company (LLC), One Person Company, and private limited company. 88.7% of businesses surveyed are proprietorship firms (Ref. Figure 9).

Figure 9
Type of Business Firm (% of Total Respondents)



- **Business Segment:** The survey covers various business sectors, including food (26.8%), clothing (14.5%), education and health (11.7%), beauty (7.9%), finance and technology (6.7%), and interior design and housing (5.6%). Other retail enterprises like photocopy sellers, florists, and tour and travel services accounted for 26.8% of the sample (Ref. Figure 10).

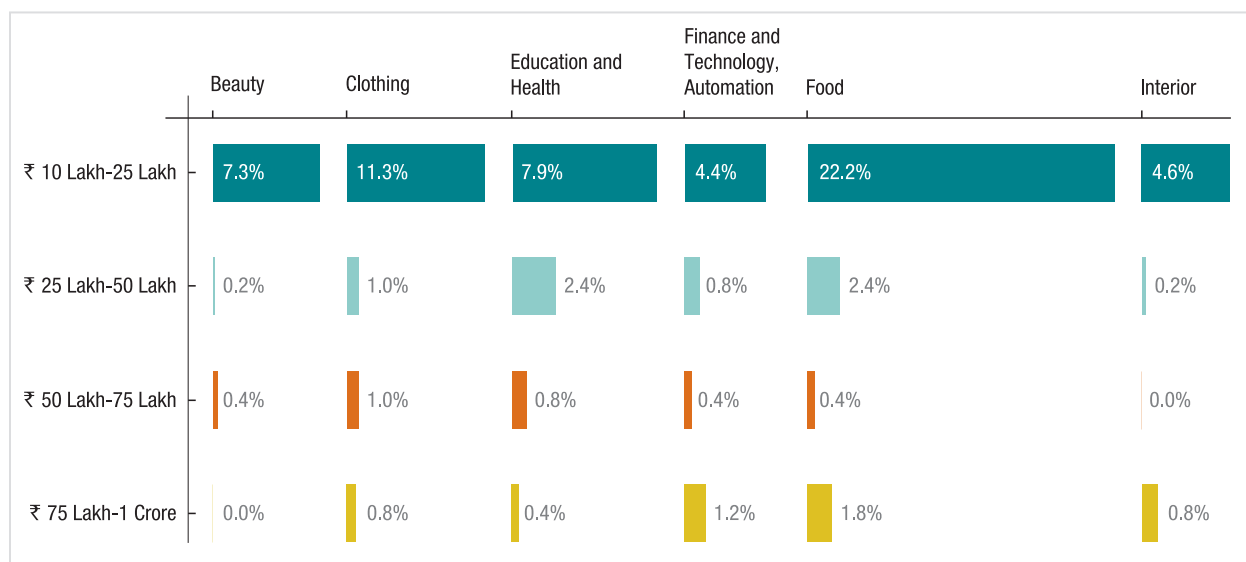
Figure 10
Business Segments (% of Total Respondents)



- **Annual Turnover:** The turnover is divided into four sub-groups of 10 lakhs to 25 lakhs, 25 lakhs to 50 lakhs, 50 lakhs to 75 lakhs, and 75 lakhs to 1 crore.

Figure 11 provides a classification of businesses in our data according to their annual turnover, by business category.

Figure 11
Annual Turnover (in %)



- 80% of enterprises had an annual turnover of Rs. 10 lakhs to 25 lakhs
- Out of the total respondents in food products business category, 22.2% had an annual turnover of Rs. 10 lakhs to 25 lakhs
- The education and health sector had 2.4% of enterprises with a turnover of Rs 25 lakhs to 50 lakhs, despite their overall representation being just 11.7% in that sub-group
- Only 3.8% of enterprises had a turnover of Rs 50 lakhs to 75 lakhs, with the interior and food sectors having the lowest proportion
- Out of all the sectors, mainly finance and technology, as well as the food sector, had an annual turnover of Rs 75 lakhs to 1 crore

Summary of Sample Profile

- 1/4th of the entrepreneurs are in the 30- to 34-year age group, with the average age being 37 years
- 16.5% of the businesses were women-owned. The highest proportion of female entrepreneurs was involved in beauty-related businesses, followed by food and clothing. Only 4% of women entrepreneurs in the survey were engaged in businesses involving finance and technology
- 89% of businesses register themselves as proprietary firms
- Diverse business sectors were covered—beauty, clothing, food, finance and technology, education and health, and interiors
- 58.5% are graduates, post-graduates and diploma holders

2

Findings

The interviews of the nano business owners aimed at the first two objectives of the survey that are:

- 1) To identify the real issues, challenges, and pain points faced by nano entrepreneurs in the urban service sector.
- 2) To document and support this unrecognized yet crucial section of entrepreneurship. This section provides detailed survey results, broken down into six broad themes relevant to identifying barriers from respondents' perspectives.

The themes are: 1) Digitalization and their perceptions on the need for new technologies, 2) Sources of funding, 3) Marketing efforts, 4) Formalization, taxes and compliance, 5) Entrepreneurial aspiration, and 6) Ecosystem and the topmost barriers to growth.

The following sections present the findings of the survey.

2.1 Digitalization: New Benefits but Newer Barriers?

The survey tries to understand the preferred mode of payment used for vendor as well as the customer (Ref. Figure 12)

Figure 12

Mode of Payment (% of Total Respondents)

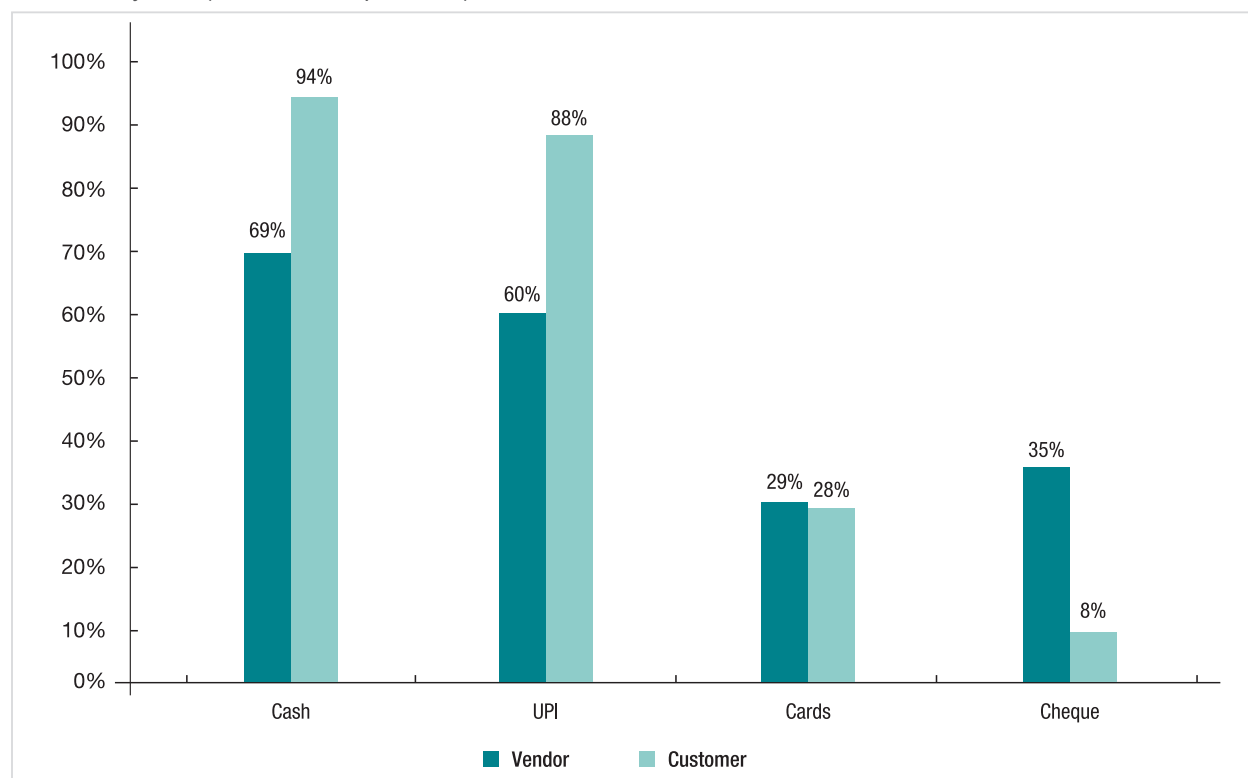


Figure 12 shows:

1. **UPI Payments widely used for financial transactions:** From the survey responses it is found that respondents commonly used UPI and emails for digital transactions.
2. UPI is a popular payment method for both vendors and customers, with 88% of respondents using it to transact with customers. **But digitalization has not yet been fully leveraged for B2B transactions**, with 60% of respondents using it for transactions with vendors.

Cash is still the King: Interestingly, respondents did not perceive digital transactions as a replacement for cash.

- While the use of UPI has increased due to its ease and convenience, **94% of transactions with customers and 69% with vendors are still in cash.** Although the use of UPI for financial transactions is prevalent, it has not yet replaced cash as the primary mode of payment.
- In case of B2B transactions, bank cheques and transfer are also popular payment methods. Cheques are considered a reliable and feasible payment method for payments made to vendors.

We further probed to understand whether educational qualification played a role in the better use of new technology and what entrepreneurs require to facilitate using innovative technology.

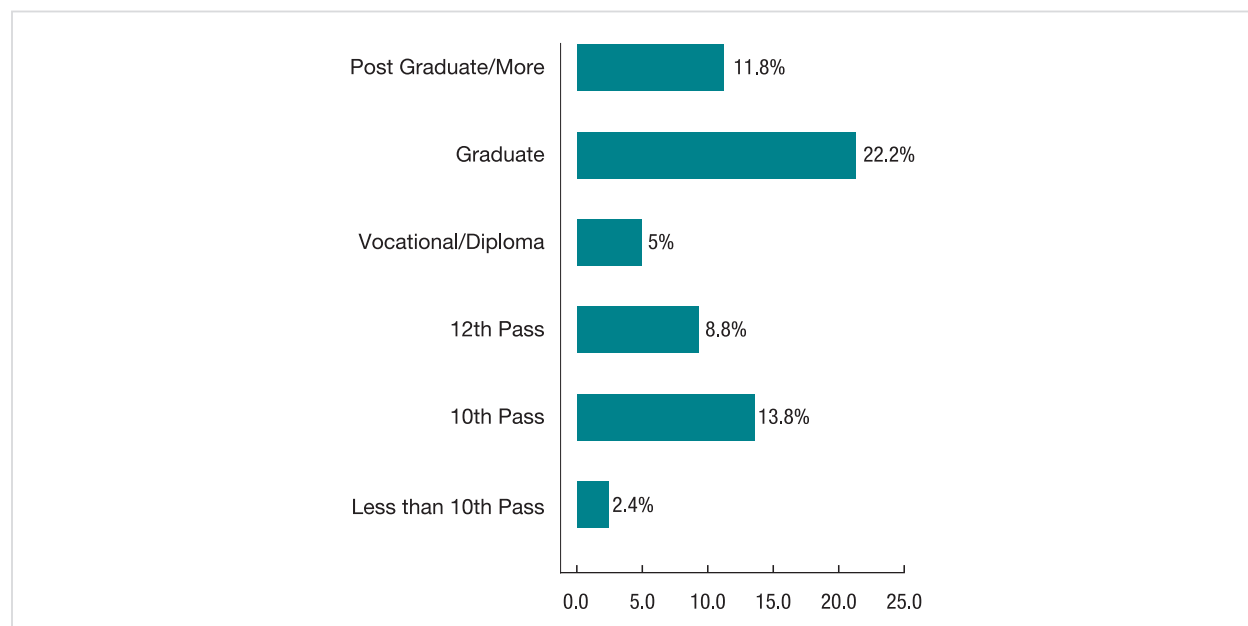
No link between level of formal education and adoption of technology: As Figure 13 shows, 38% admitted that they did not know about new technology in their field. Out of those who did not have technological know-how 71% are women.

According to the data, there was no correlation between age and technological know-how, as 10% of respondents who lacked technological know-how were over 45 years old, while 20% were below that age.

Education wise, graduates had technological know-how (Ref. Figure 13).

Figure 13

Do not have technological know-how, education wise (% of Total Respondents)



- Figure 13 illustrates that around 58.5% of the respondents had completed graduate, post-graduate, or vocational diploma programs. However, 11.8% of post-graduate and 22.2% of graduate respondents reported a lack of expertise in using new technology. Based on the chi-square test⁵, it was found that education was not a significant factor in determining technological know-how, as the p-value was not significant at a 95% confidence level. Therefore, having formal educational qualifications does not necessarily ensure better adoption of technology.
- Our survey found that nano entrepreneurs across all sectors felt that they lacked the expertise or the latest technology for expanding their businesses (Ref. Figure 14).

Figure 14

Do NOT have technological know-how, business sector wise (% of Total Respondents)

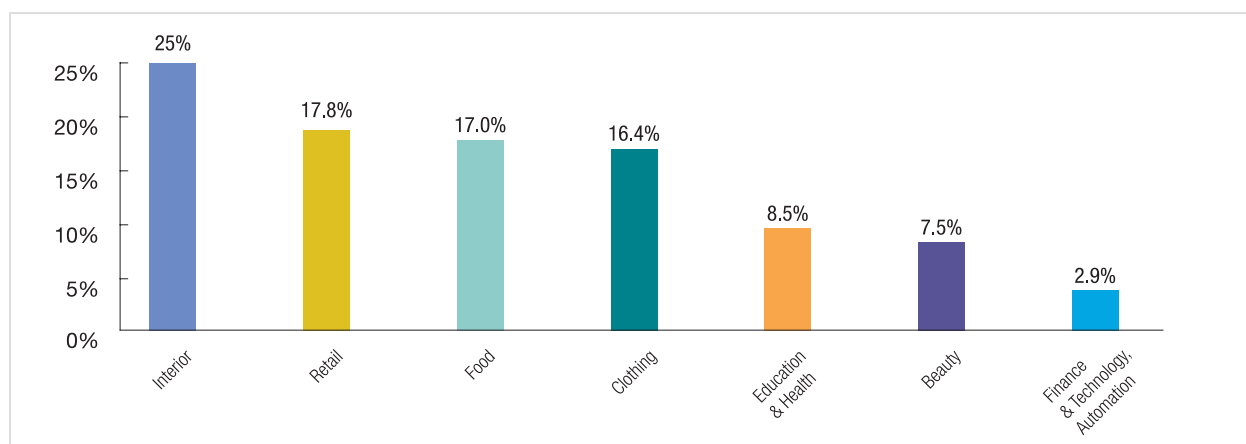


Figure 14 above shows that the finance and technology sector exhibited the highest percentage of businesses (97.1% of total respondents in the finance and technology sector) with awareness of the latest technology, followed by the beauty sector (92.5% of total respondents in the beauty sector) and the education and health sector (91.5% of total respondents in the education and health sector).

This highlights the need for more education and support for entrepreneurs to embrace new technology and be competitive in their fields.

Themes emerging from qualitative responses:

Qualitative analysis brought forth five prominent themes:

- Many entrepreneurs believe that cash will be entirely replaced by UPI in the future and were keen on mentioning the benefits of digitalization for expanding customer base, marketing, etc.
- For the nano entrepreneur, digitalization begins and ends with UPI-based payments:**
 - When asked about their usage or awareness of other forms of digitalization for operations or processes, it became clear that the term “digitalization” was understood and used in a very limited sense by the nano entrepreneurs who participated in the survey. Their understanding of digitalization was limited to the use of a computer and UPI for buying and selling.
 - When asked why cash is used for B2B transactions, some openly admitted that cash transactions are considered convenient to avoid taxes.

⁵Annexure III provides summary of statistical findings

- While digital financial transactions are becoming more popular, the **penetration of fin-tech and digital lending among nano entrepreneur remains close to zero.**
- According to the respondents, digitalization has led to an increase in the number of orders in the food business. However, it had a negligible impact on profit margins due to the high fees charged by online portals. Nonetheless, some businesses still view new technology as a one-time investment that could potentially reduce manpower charges.

In our survey, we aimed to explore the adoption of new technology among nano entrepreneurs beyond just digital payments and digitalization for business operations.

Figure 15

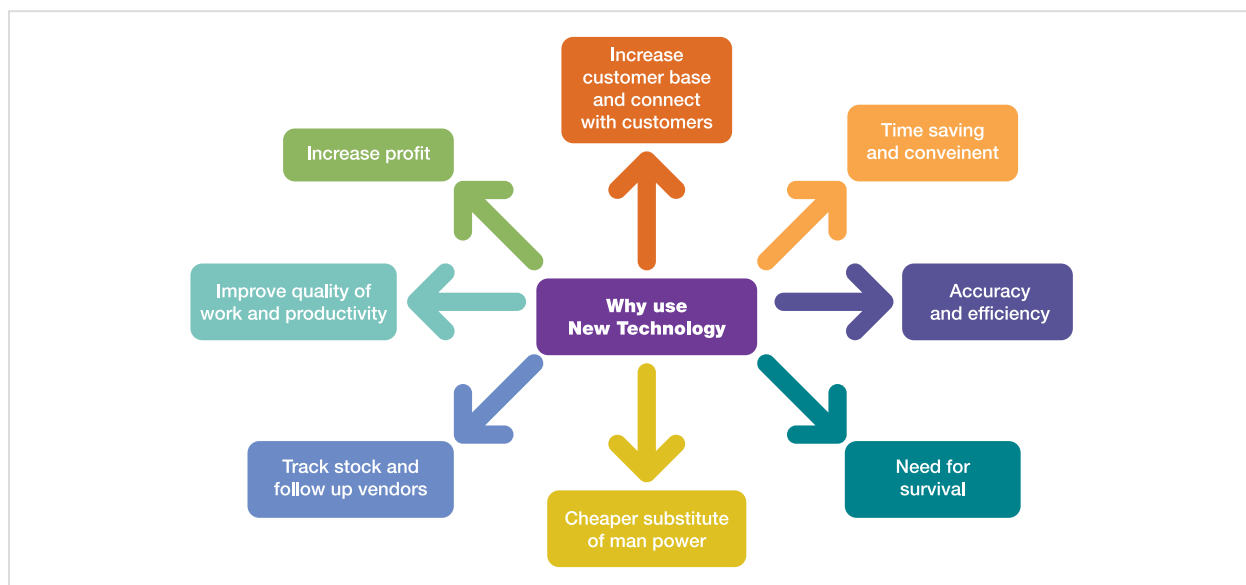
Positive Perception of Nano Entrepreneurs on Digital Payments



iii. Willing to adopt but lack techno-savviness:

- A positive attitude towards technology adoption among nano entrepreneurs as they perceive the benefits of new technologies for connecting with customers, saving time, improving the quality of work, increasing profit levels and tracking stock.

Figure 16
Positive Perception on Adopting State of the Art Technology



iv. **Cost is not perceived as Barrier for Technology Adoption**

- Interestingly, the comments by the respondents on adopting new technology, revealed that the cost of adopting new technology is not considered as a significant barrier by nano entrepreneurs. Instead, the lack of suitable training and perceived difficulty in use are the greatest obstacles hindering their adoption of new technology.

v. **Barriers to the widespread adoption of digitalization and new technology among entrepreneurs are:**

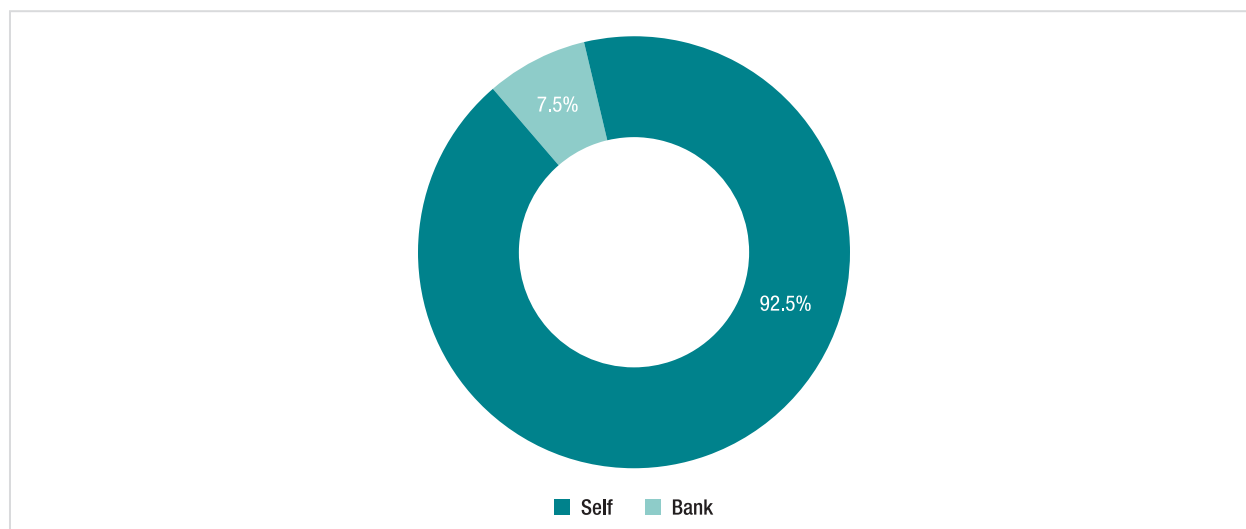
- **Lack of information on how to adopt** these technologies effectively
- **Lack of a well-planned digital transformation strategy** is a major hurdle for businesses looking to meet the continuously evolving needs of their customers
- **Lack of basic IT skills**, which can hinder their ability to adopt even the simplest of digital technologies

Our findings indicate that the respondents were aware of the existence of newer technologies, and most of them felt the need to adopt such technologies regardless of their sector. However, they lacked knowledge about how and where to start adopting and using new technologies. They expressed the need for adequate training to overcome perceived difficulties in using such technologies.

2.2 Access to Finance: A Disturbing Reality

Figure 17

Source of Funding (% of Total Respondents)



- 92.5% of respondents reported self-funding, including borrowing from friends and family, as the primary source of financing for their businesses
- Self-funding and informal finance are prevalent in all business segments regardless of gender, education, or age

Figures 18a, 18b, 18c and 18d show the access to finance across sectors, gender, education and also highlights the source of funding as per the annual turnover.

Figure 18a

Access to Finance Sector-Wise
(% of Total Respondents)

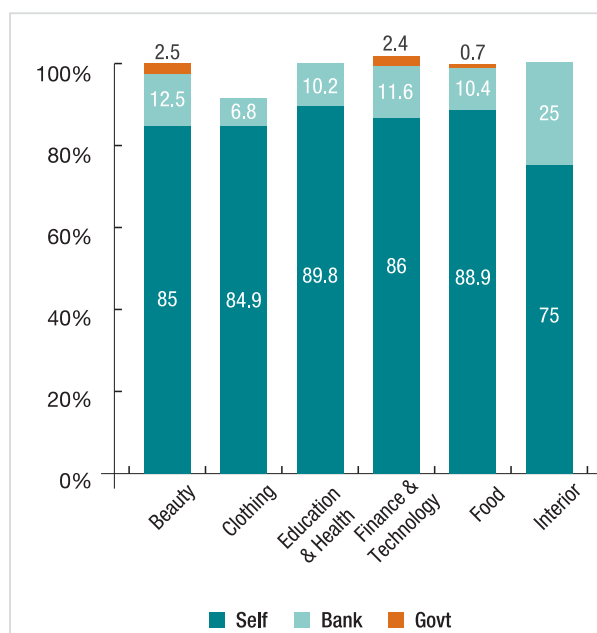
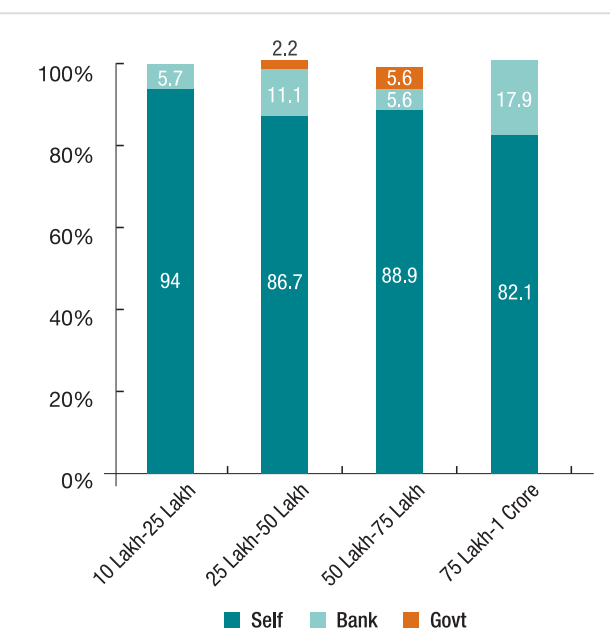


Figure 18b

Source of Funding, Annual Turnover-Wise
(% of Total Respondents)



From Figures 18a to 18d, we observe that nano entrepreneurs rely mainly on self funding and informal sources of finance, including friends and family. Regardless of gender, annual turnover, business sector or level of formal education, the reliance on informal sources of finance persists.

Figure 18c

Access to Finance Gender-Wise
(% of Total Respondents)

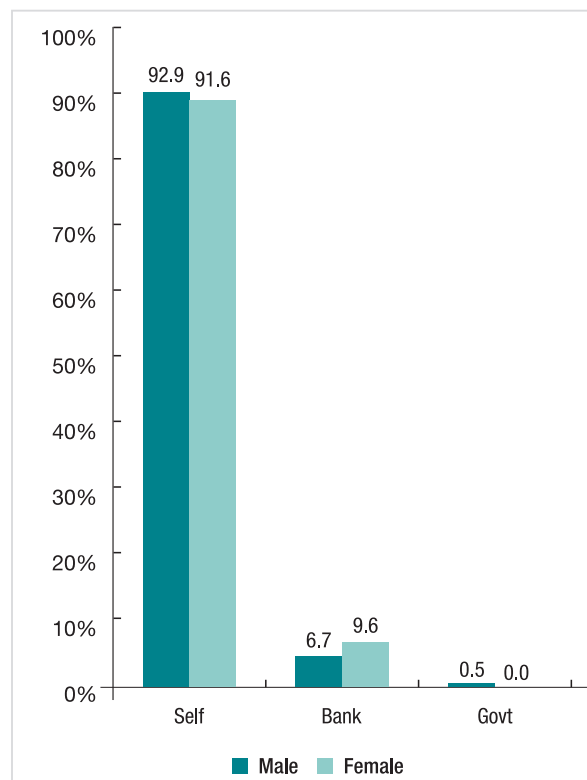
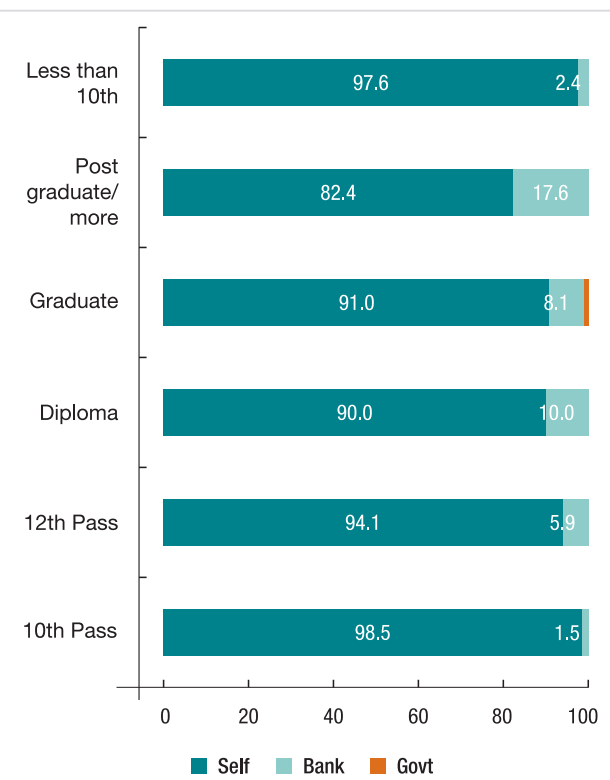


Figure 18d

Access to Finance, Formal Education-Wise
(% of Total Respondents)



Gender Disparity in Access to Funding:

Of the 83 women entrepreneurs in our data, 46% said they face challenges when looking for investments. Our study shows that despite the abundance of banks in Pune, nano entrepreneurs are reluctant to apply for bank loans. This highlights a serious loophole in the existing system and government-led efforts at financial inclusion and lending to priority sectors. A fundamental change in policy is therefore imperative.

Why aren't bank loans popular?

This is the prototypical story of Neeta (pseudonym), a nano entrepreneur who owns a food store in the bustling business area of Deccan Gymkhana in Pune. Neeta's Chakalis and Chiwada are in high demand among college students, working women, and office workers. To expand her business, Neeta applied for a loan. However, due to her rented premises, lack of credit history, inadequate accounting, and lack of collateral, she faced challenges in securing a loan. Consequently, she is now planning to borrow from informal sources, even though banks and micro-lending NBFCs, along with special schemes for women-owned enterprises, are readily available in the city. When asked about her reasons for choosing informal sources, she mentioned the ease of obtaining funds and the flexibility of repayment terms. "Agar jaldi paisa mil raha hai to itane zanzat me kyu padana?" she said, meaning "If I am getting immediate money, then why bother with so much trouble?" Many nano entrepreneurs in our survey shared similar views.

Insights from Qualitative Analysis:

The diagram below presents a “Word Cloud Visualization of Sentiment Analysis” of the qualitative responses and comments explaining why the respondents were hesitant to approach banks for loans.

Figure 19

Word Cloud Visualization of Sentiment Analysis



When asked about the high reliance on informal finance in Pune, despite the availability of bank branches, respondents expressed their opinions openly regarding bank loans.

Based on their responses, the reasons for not using bank funding are as follows:

- Respondents stated that they did not have sufficient collateral to obtain the required loan amount.
- Respondents found the loan application process frustratingly lengthy, and even after the delay, they were unsure if they would get the amount they wanted. Respondents felt it was a waste of time to go to banks to get a loan.
- Respondents preferred to turn to informal community sources of credit to fund themselves, including friends and family, because they either lacked the necessary documentation or wanted to avoid submitting it when applying for bank loans.
- Surprisingly, many respondents believed that formal sources meant high interest rates, a perception apparently due to the strict interest and repayment terms.

2.3. Marketing: Moving on with the Digital Era

As shown in Figures 20a and 20b:

- 77% believe that ‘word-of-mouth’ publicity is the most effective commonly employed marketing method.
- Social media marketing is the second most popular mode of marketing. **52% respondents reported using social media platforms** such as Instagram, as a marketing strategy. They also appoint freelancers to work as food and fashion bloggers. These bloggers are invited to try the products and share them on their social media, which reaches a wide audience.

Figure 20a

Preferred Modes of Marketing
(% of Total Respondents)

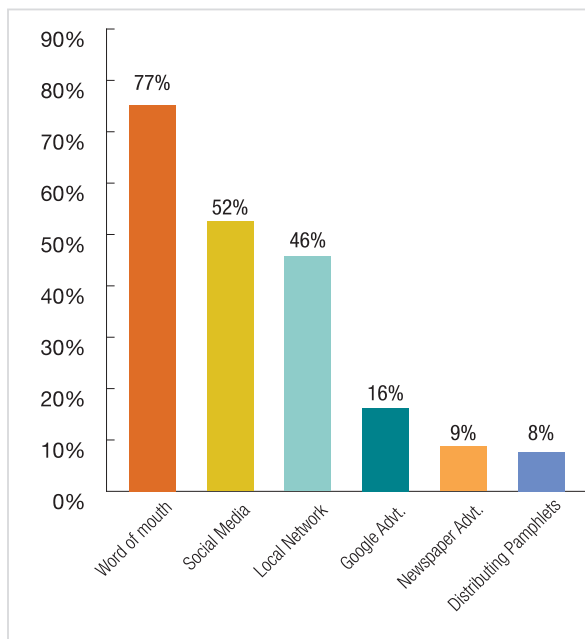
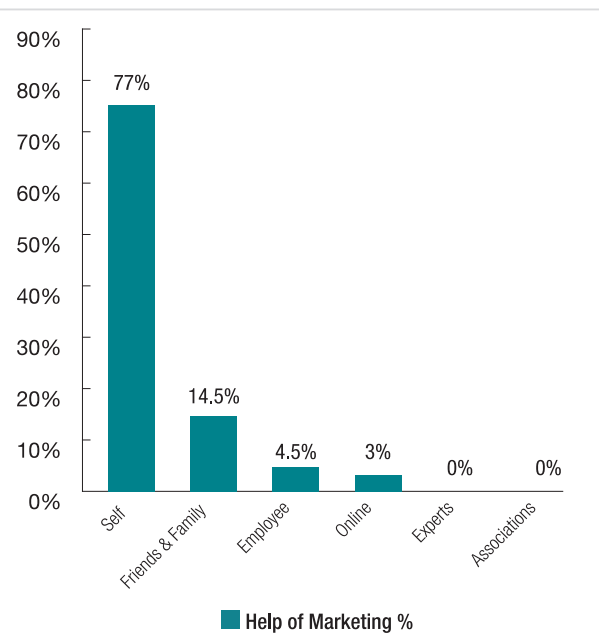


Figure 20b

Top Source of Marketing Assistance
(% of Total Respondents)



- Many in the food and fashion industries mentioned that in the wake of the Covid-19 crisis, they realized the importance of maintaining a social media presence to connect with new age consumers.

Marketing — Whom do they take help from?

Figure 20b sheds light on the marketing assistance sought by entrepreneurs.

- 77% of the respondents are self-reliant when it comes to marketing.** They believed that they possess an inherent understanding of their customers and depend on their loyal patrons to maintain their business.
- Approximately 14.5% seek help from their immediate social circle, including family, friends.
- 4.5% of respondents reported that they sought dedicated marketing support from skilled employees.
- 3% mentioned using online resources such as Google and Pinterest to aid in their marketing efforts.
- None of the respondents in this cohort reported using any association or marketing expert as a source of marketing assistance.

This implies that nano entrepreneurs prefer to manage their marketing efforts themselves or with the help of their trusted circle.

Themes emerging from qualitative information:

1. Belief in core business values:

- Entrepreneurs believe that creating goodwill and providing quality products are key factors in increasing their customer base.

- They recognize that product quality and building a loyal customer base are fundamental to achieving repeat business.
- Many respondents expressed confidence in the superiority of their products and believed that quality alone was a potent marketing tool.

2. Popular marketing practises:

- Building customer relationships and offering discounts are popular marketing practices among nano enterprises.
- Entrepreneurs prioritize respecting and honouring customer needs, maintaining customer relationships by offering discounts to loyal customers.
- Launching promotional campaigns during peak seasons to expand their business, Branding and Packaging is often used as a marketing tool, with some entrepreneurs believing that it delivers their brand's essence, makes it relatable to the customer, and helps it remain in their mind. Attractive packaging, printed with the brand's associated colours, location, and contact details, is especially effective in the food industry.
- Flexes and pamphlets are identified as great marketing tools to reach local audiences as potential customers.
- While belief in core business values like product quality, customer loyalty are the positive takeaways no use of associations, experts indicate gaps in the ecosystem.

2.4. The Nano Entrepreneur and the Government: Give and Take

The survey aimed to explore the intriguing relationship between the government and nano entrepreneurs across three different dimensions: formalization, taxation, and government schemes. The subsequent sections present the viewpoints of nano entrepreneurs who participated in the survey on these specific aspects.

A. Basic Formalization: GST, Shop Act and Udyam Aadhar:

1. **Shop Act:** Across all sectors, over 90% of respondent businesses complied with the Shop Act. The compliance with the Shop Act is between the range of 85% in the beauty sector to 96% in the interior designer segment.
2. **GST:** While GST registration is mandatory and PAN-based, compliance among respondents across all sectors averages 63.7%. Among the respondents the GST compliance was highest in the interior design segment at 75% while lowest at 58% in the beauty business segment.
3. **Udyog Aadhaar:** Approximately 53.2% of respondents have registered under Udyog Aadhaar. Udyog Aadhaar registration percentage among the respondents ranged between 62% in finance and technology to 38% in clothing, fashion segment.
4. **FSSAI and Export-Import:** Among food businesses, 74.1% of respondents comply with FSSAI. 4.8% of nano businesses in our sample had an import/export license.

Figure 21a
Percentage of Compliances and Documentation (%)

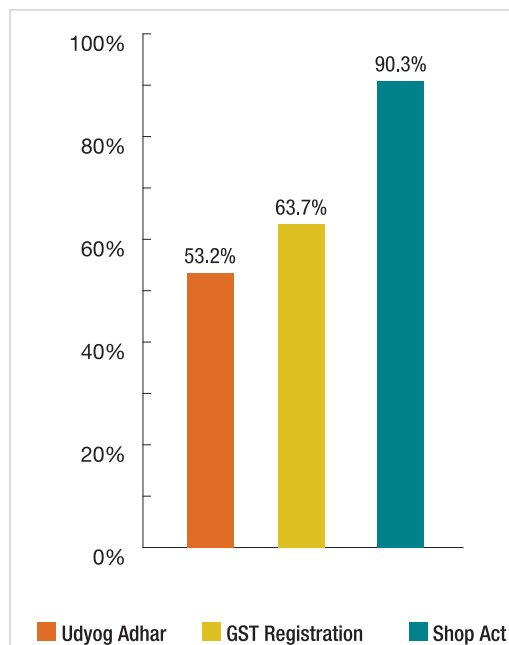
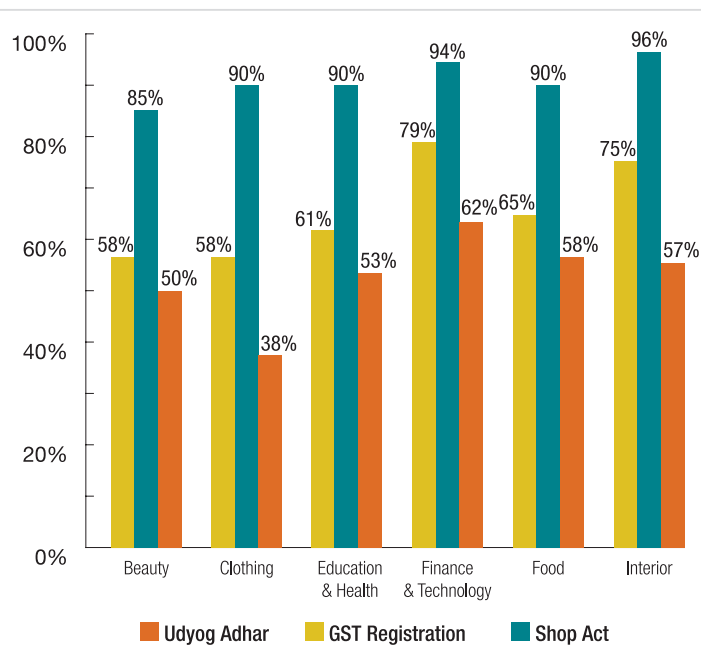


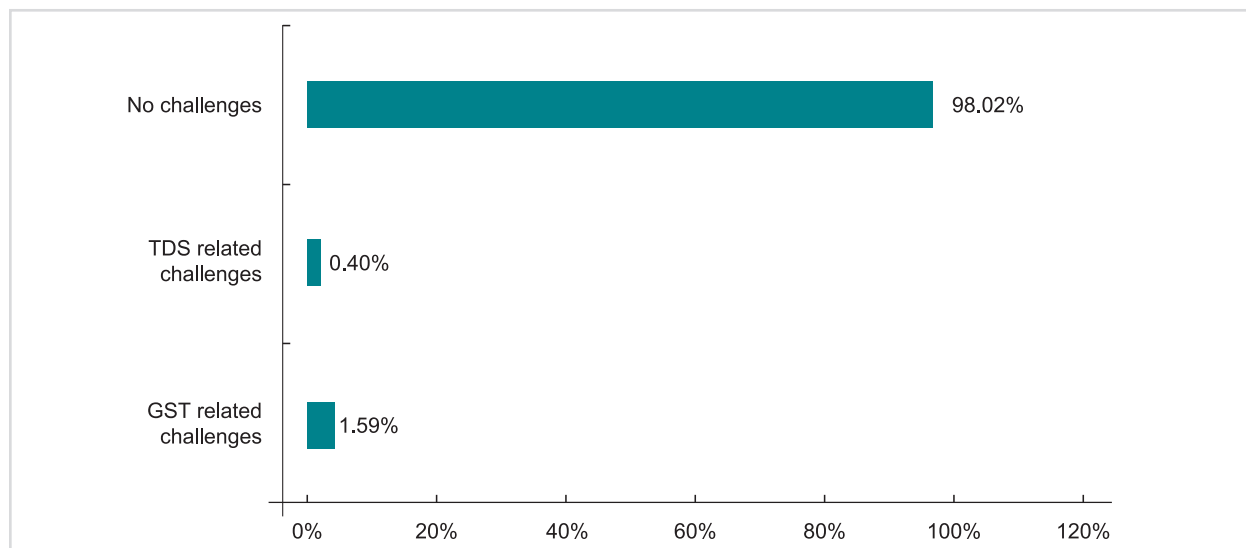
Figure 21b
Percentage of Compliances and Documentation, Business Sector Wise (%)



B. Tax Compliance Process is Cumbersome:

- As shown in Figure 22, 98% of respondents claimed to have faced no challenges while paying GST.
- 1.6% claimed to have had problems with GST filing.
- The ones who filed taxes themselves claimed that the process is slow and time-consuming.
- A significant share of entrepreneurs claimed that not knowing the process is the reason they've never attempted initiating it, and as a result, they have faced no challenges.

Figure 22
Percentage of Businesses that Face Issues While Paying Tax



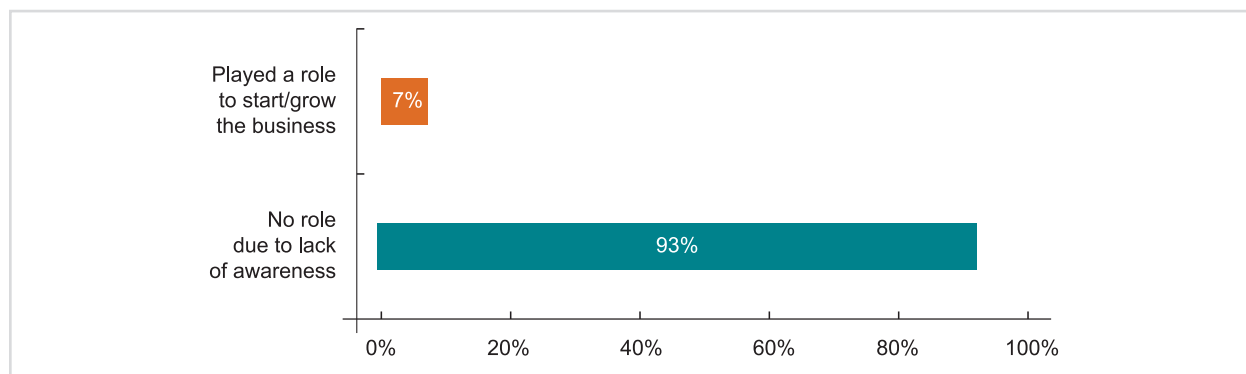
C. Apathy Regarding Government Schemes:

- Only 7% of entrepreneurs claimed that government schemes played a role in starting or growing their businesses, mainly through the help they received from a government scheme or training program.
- 93% of businesses said that government schemes had no role to play in growing their businesses.

Figure 23 shows the role of government schemes in starting and growing a business.

Figure 23

Role of Government Schemes in Starting and Growing a Business (% of Total Respondents)

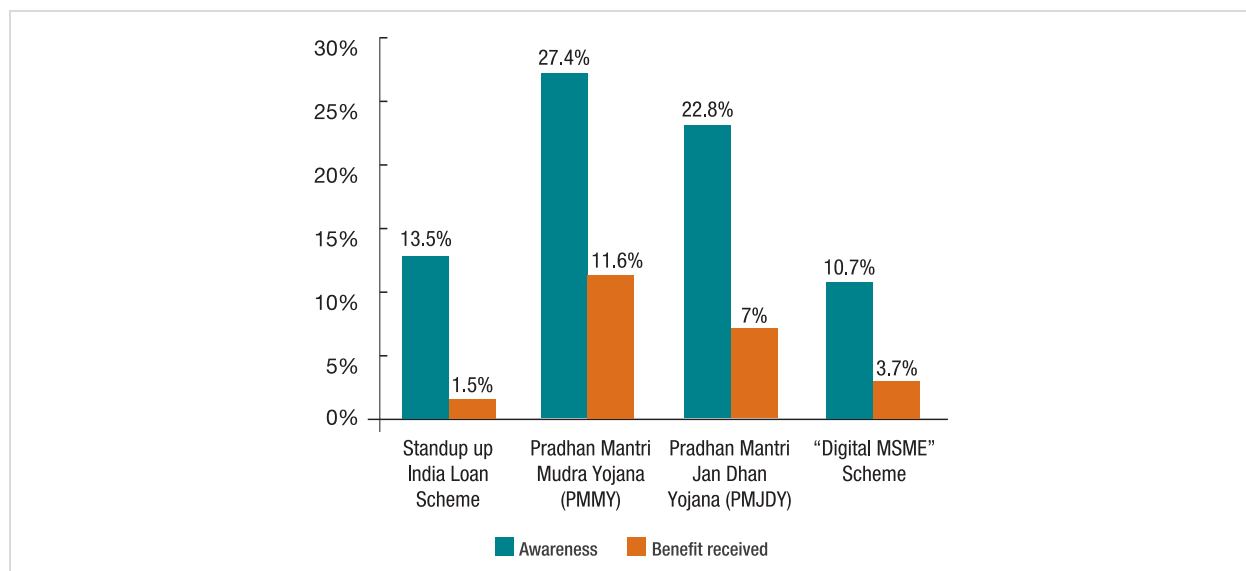


Alarming Ignorance & Disinterest in Government Initiatives:

The survey included in-depth questions to dive deep into the nano entrepreneurs' awareness of the flagship government schemes. Three of these schemes viz. Stand-up India, PMMY, and Digital MSME scheme, specifically target the micro business segment. The fourth programme, PMJDY, addresses the broader goal of financial inclusion. The questions attempted to capture awareness of these government programs in terms of the benefits offered, the application process, and the agency to contact to apply. Respondents were also asked if they received benefits from each of these schemes (Ref. Figure 24).

Figure 24

Awareness and Benefits Received From Government Schemes (% of Total Respondents)



- **Stand-Up India:** Only 13.5% of the respondents in our survey reported awareness of this scheme, and only 1.5% received its benefits.
- **Pradhan Mantri MUDRA Yojana (PMMY):** Although 27.4% of respondents reported awareness of the scheme, only 11.6% received its benefits.
- **Pradhan Mantri Jan-Dhan Yojana (PMJDY):** Despite being highly publicized during demonetization, only 22.8% of the total respondents reported awareness of this scheme, and only 7% benefitted from it.
- **Digital MSME scheme:** 10.7% of entrepreneurs reported awareness of the scheme, and only 3.7% received its benefits.

Reasons for ignorance and apathy toward Government initiatives — Qualitative insights:

- Lack of awareness of most of the schemes shows a disconnect between the targeted beneficiaries and the implementing agencies.
- The apathy toward the Government schemes is rooted in the distrust and lack of confidence in the mechanism.
- Respondents indicated that they avoid applying to the programs as they are unsure of receiving the benefits without being embroiled in endless bureaucracy. Respondents reported submitting their 'papers' and cumbersome documentation as the deterrent to receive benefits.
- Community support more comfortable than the hassles of getting support from Government systems.

2.5 Entrepreneurial Aspiration: Key to Success

Identity Crisis of the Nano Entrepreneur in the Literature

In Western literature, nano entrepreneurs are frequently defined as self-employed individuals who entered the workforce due to dissatisfaction with their previous jobs. The literature focused on the Global South also highlights negative factors, such as a lack of job opportunities and unappealing working conditions, that compel many technically skilled young men to pursue entrepreneurship as a necessity rather than a choice. It is crucial to address the aspirations, entrepreneurial behavior of nano entrepreneurs. In this survey, we aimed to comprehend how entrepreneurial pursuits fuel success among this distinct group of entrepreneurs.

Reasons for getting into business:

- 46% of the respondents had prior knowledge and skills for starting their businesses, particularly in finance and technology, and interior design, often due to their educational background (Ref. Figure 25).
- Some respondents gained their prior knowledge and skills through employment in the same sector.
- 24% of the respondents reported running a family-owned business, which is most common in clothing-related businesses.

- Due to the Covid-19 pandemic and lock-down crisis, sustenance earnings emerged as the most important reason for entering a business in the last three years. 22% of the respondents reported starting their business due to the loss of jobs, lack of skills, low educational attainment, and family pressure.

Perspective on the growth of business:

- **Expansion of Business:** The survey found that 96% of the 504 respondents were planning to expand their businesses by increasing their customer base.

Figure 25
Reasons for Getting into Business
(% of Total Respondents)

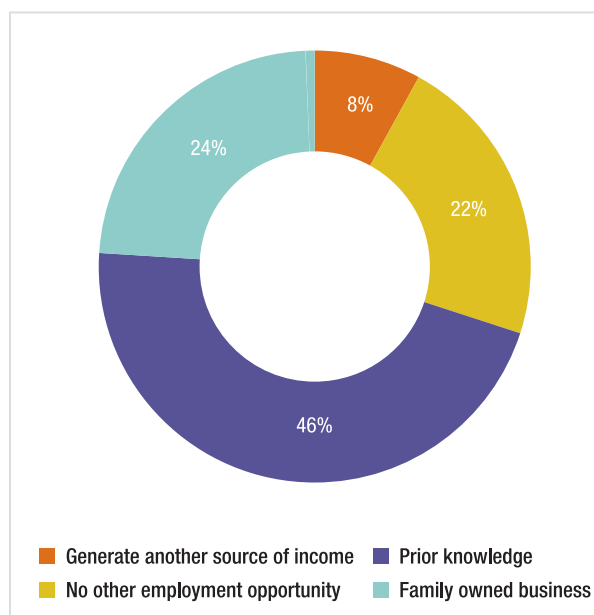


Figure 26
Gender Wise, Reasons for Getting into Business
(% of Total Respondents)

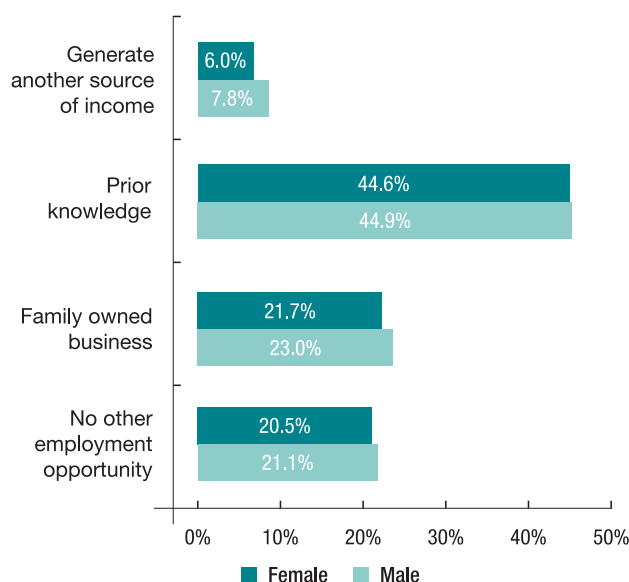
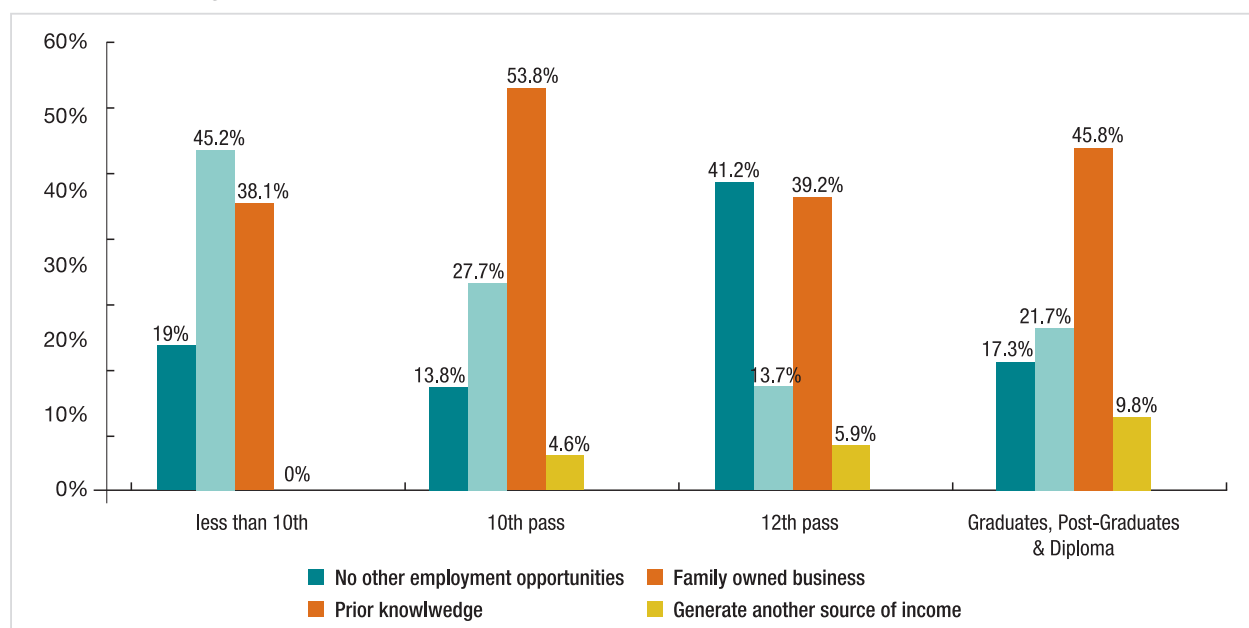


Figure 27
Reasons for Getting into Business, Education-wise (%)



- **Brand and Online Presence Improvement:** Approximately 53% of the respondents were focused on improving their brand and online presence to double profits.
- **Outlet and New Vertical Planning:** 46% of respondents were planning to open new branches or explore new verticals.

It is important to note that these plans and aspirations may be impacted by a variety of factors such as market conditions, competition, and economic uncertainties.

Figure 28

Entrepreneurial Aspirations



What drives entrepreneurial aspiration to grow and expand business?

Figure 29 below shows the vision of the nano entrepreneurs for scaling their businesses in the next five years.

Figure 29

Vision of Nano Entrepreneurs for Scaling their Businesses



We examined the association between some measurable variables and individual characteristics of the entrepreneur and the entrepreneurial aspiration. Expansion and growth are taken as the proxy for entrepreneurial aspiration.

Entrepreneurial Aspiration (i) = Age(i) + Gender(i) + Educational Qualification(i) + Age of the business(i) + Strategic Planning(i) + Business in Profit(i)

Where (i) is the individual entrepreneur and Entrepreneurial Aspiration being a binary dependent variable taken as Expansion/Growth aspiration to grow and expand as (1) and no growth aspiration as (0). We applied a logit model to examine the association of various factors with entrepreneurial aspiration (Ref. Table 2 in Annexure III).

The results of this exercise are presented below:

- All the variables including constant are statistically significant at a 5 per cent level of significance except business in profit variable which is significant at a 10 per cent level of significance and educational qualification which remains statically insignificant even at a 10 per cent level of significance.
- **Age of the entrepreneur:** There is a **negative correlation** between the age of the respondent/entrepreneur and the dependent variable of expansion/growth aspiration. Entrepreneurs under the age of 30 exhibit greater aspirations for expansion/growth compared to those surveyed above the age of 30. The variable 'Age of the entrepreneur' holds statistical significance at the 1% level.
- **Women entrepreneurs showed higher aspiration to grow:** The gender of the respondent/entrepreneur also exhibits a negative correlation with the dependent variable. The study's results indicate that female entrepreneurs exhibit greater aspirations for expansion/growth than their male counterparts. The gender variable holds statistical significance at the 5% level.
- **No statistically significant association between education and entrepreneurial aspiration:** The lack of significance in the educational qualification variable as an explanatory factor for the dependent variable indicates that an entrepreneur's educational qualification or background does not influence their aspirations for expansion/growth.
- **Newer business has higher aspiration to grow:** Business age exhibits a negative correlation with the dependent variable and holds statistical significance at the 1% level. The analysis indicates that entrepreneurs/respondents who established their businesses after 2015 exhibit greater aspirations for expansion/growth compared to those who established their businesses before 2015.
- **Strategic planning and aspiration to grow business show a positive relationship:** The strategic planning variable exhibits statistical significance at the 5% level and demonstrates a positive correlation with the dependent variable. Entrepreneurs/businesses that have implemented strategies to increase their customer base, integrate technology into their operations, comply with regulations, or adopt growth-oriented price and product strategies in recent years exhibit greater aspirations for expansion/growth compared to those who resist change or are content with their current revenue and customer base.
- **Profits and aspiration to grow show a positive association:** There is a positive correlation between profits and aspirations for growth. Respondents/entrepreneurs whose businesses were profitable exhibited greater aspirations for expansion/growth compared to those whose businesses were not profitable or were incurring losses.

- **Having prior expertise in the field shows positive association with entrepreneurial aspiration:** Prior expertise in the field is positively associated with entrepreneurial aspiration. Respondents/entrepreneurs with prior knowledge and expertise in starting or running businesses exhibited greater aspirations for expansion/growth compared to those without such expertise. This variable is statistically significant at the 5% level of significance.

In conclusion, the research findings indicate that businesses owned by females under the age of 30, established after 2015, and exhibiting strategic planning practices and prior expertise in the field are more aspirational for expansion/growth.

Implications: These findings have implications for capacity-building efforts designed specifically for women, young entrepreneurs, and those demonstrating serious business practices such as strategic planning, which can be more effective for scaling nano-enterprises. Professional training specific to the subject matter may be more effective for supporting the scaling of companies than emphasizing traditional degrees.

2.6 Entrepreneurial Ecosystem: Need for better connect

The Covid-19 pandemic proved to be a litmus test for the entrepreneurial ecosystem. The survey aimed to examine how the nano entrepreneurs were supported by various elements in the ecosystem during the crisis.

Examining the Impact of the Pandemic on Nano Entrepreneurs

The pandemic crisis brought about significant disruptions, and the respondent nano entrepreneurs faced several challenges, including paying rent, repayment of loans, and loss of supply channels.

To manage the shock, the following strategies were employed:

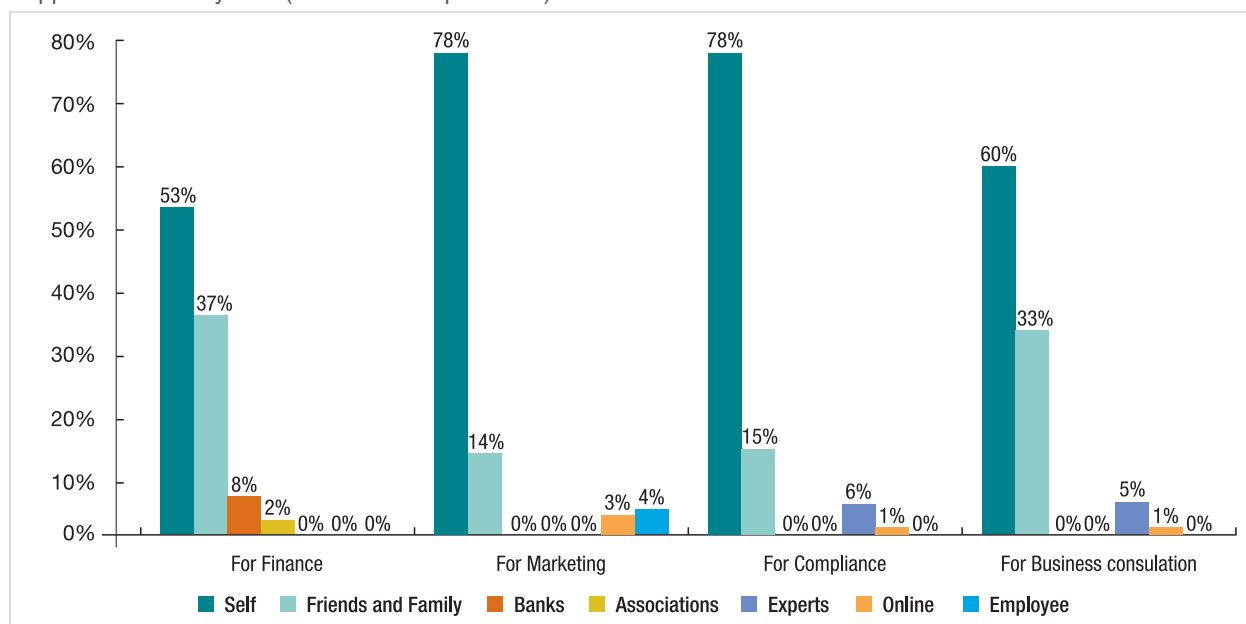
- 41% of the respondents focused on survival, with the struggle being most intense in the food and beauty sectors.
- 20% of the respondents focused on preventing losses by diversifying into different verticals.
- During the lock-down, nano entrepreneurs kept their shops half open and were available on call for deliveries.
- 19% of the nano entrepreneurs leveraged the potential of online businesses and owned businesses related to the health sector to increase their market share and sales.

A litmus test of the ecosystem in supporting the nano entrepreneur:

The pandemic shock was a litmus test for the support system and entrepreneurial infrastructure. As shown in Figure 30, the majority of respondents relied on either friends and family or self-support for finance, consultation, compliance, and marketing.

- 37% of the respondents relied on friends and family for finance, and 53% relied on savings.
- Out of the total respondents 90% depended on either savings or friends and family for their funding needs during the pandemic.
- 60% did not seek any help for business advice, and 78% managed compliance work on their own.
- For marketing, 78% of the respondents relied on their own efforts.

Figure 30
Support From Ecosystem (% of Total Respondents)

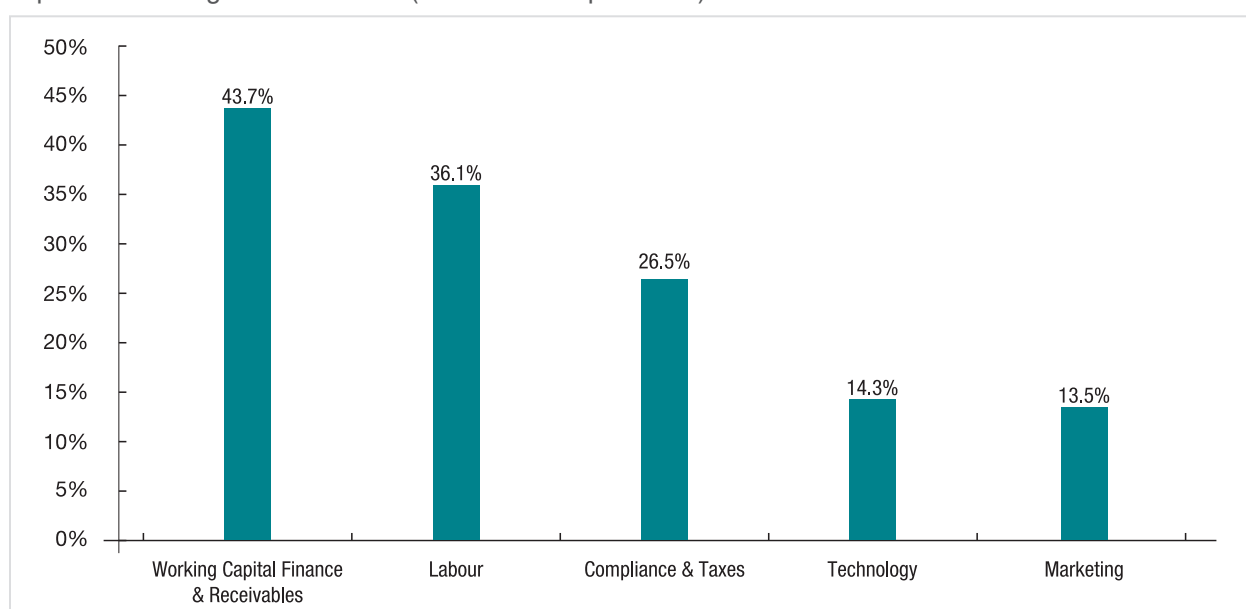


Post-pandemic recovery—several ecosystem challenges prevail:

According to the survey data, 93.6% of the enterprises surveyed, stated that they have recovered from the crisis and started to earn a profit. The food sector perceived a boom, while finance, technology, and automation proved to be the most profitable.

Notably, technology was recognized by 29.7% of entrepreneurs as a boon for earning profit. However, some firms that had been incurring losses during the pandemic and lockdown could not recover even after restrictions were lifted. They cited reasons such as changing lifestyle patterns, lower profit margins, delayed payments from vendors, and a threat from growing online businesses.

Figure 31
Top Five Challenges for Business (% of Total Respondents)



When asked about the top five challenges to their growth, the following challenges were cited by the majority of the respondents:

1. **Lack of formalisation and delayed payments** by clients affect their cash flow management leading to dependence on informal sources of finance due to limited access to formal financial services.
2. **Difficulty in hiring and retaining skilled labourers.**
3. **Compliance-related issues** like complex regulations and disconnect between the implementing agencies and target segment hinder their ability to navigate through the system.
4. **Marketing issues** due to lack of cohesion in the entrepreneurial ecosystem, and fragmented voluntary associations.
5. **Technology adoption** due to lack of training in access and use of new technology.

It is revealed that the above five top challenges emerged during the pandemic and remain major hurdles for these businesses.

The next section provides indicators for policy reform and action points based on these insights.

3

Actionable recommendations

The Government of India's Ministry of MSME has initiated several measures to establish a supportive ecosystem for entrepreneurship through its special initiatives. The recently announced Union Budget 2023 has also emphasized the significance of connecting various institutions to enable an entrepreneurial ecosystem for MSMEs.

To promote the growth of MSMEs, policies have been implemented to strengthen the entrepreneurial ecosystem from the supply-side. However, the effectiveness of these policies relies on the extent to which the target group can benefit from the facilities and opportunities provided. The primary objective of this survey was to identify the challenges faced by nano entrepreneurs, a group that is often overlooked in MSME discussions, and to understand their perspective on the factors that affect their growth. This survey aimed to provide demand-side evidence and highlight the aspirations and obstacles faced by nano entrepreneurs in India.

We have discovered that in Tier 1 cities such as Pune, there is no shortage of infrastructure, programs, and institutional networks. However, despite their abundant availability, nano enterprises encounter obstacles due to a convoluted and bureaucratic system, a lack of market connections, and a general disconnect within the ecosystem.

The issues revealed from the perspective of the nano entrepreneurs are explained in the previous section number 2.

The following sections summarize the findings of the survey and provide recommendations based on them. Specific action points are indicated for a) policy reform, b) ecosystem enablers and c) further academic research.

Summary of Survey Findings

The survey results are organized into six themes that are critical for the expansion of nano businesses in the service sector. These themes, which are the six main sections of this report, are digitalization, access to finance, marketing, taxes and compliance, entrepreneurial aspirations, and the entrepreneurial ecosystem.

Based on this survey, we have identified that even though nano-enterprises are located in Tier 1 metropolitan cities such as Pune, they still face significant obstacles that hinder their growth and progress. According to the perspective of nano entrepreneurs, the top five barriers to the growth of their business are:

1. **Lack of formalisation and delayed payments** by clients affect their cash flow management leading to dependence on informal sources of finance due to limited access to formal financial services.
2. **Difficulty in hiring and retaining skilled labourers.**
3. **Compliance-related issues** like complex regulations and disconnect between the implementing agencies and target segment hinder their ability to navigate through the system.

4. **Marketing issues** due to lack of cohesion in the entrepreneurial ecosystem, and fragmented voluntary associations.
5. **Technology adoption** due to lack of training in access and use of new technology.

Lack of cohesion in the entrepreneurial ecosystem, and fragmented voluntary associations, leading to a disconnect between the nano entrepreneurs and the enablers of growth.

Based on our analysis of the challenges faced by nano entrepreneurs, we propose the following specific recommendations to address these issues and promote their growth:

Action Points for Regulators and Policy Makers:

1. **Introduce solid fringe benefits for Udyam Registration:** To make Udyam registration beneficial by adding business incentives such as free capacity building and digital training, membership in market-linked associations, etc. With the perks, nano entrepreneurs are encouraged to register. The government can partner with or empanel associations like BNI, Rotary Club, etc. to subsidize membership for Udyam registered entrepreneurs.
2. **Forming Business Affinity Groups (BAGs):** To reduce the disconnect between the nano entrepreneurs and the system. The SHG movement has been successful in solving some issues at the rural level; on similar lines business affinity groups can be formed by nano entrepreneurs in various segments. Each Business Affinity Group can be attached to a larger association at district and state levels to work on various issues faced by the nano entrepreneurs.
3. **Bank Mitra and Bank Sakhi for Urban Nano Entrepreneurs:** To facilitate the use of bank lending and to reduce dependence on informal lending, schemes like Bank Sakhi and Bank Mitra can be extended to urban areas for micro businesses having less than 2 Crore turnover. These schemes are currently implemented in rural areas in self-help group networks with some success. There is no reason why this concept cannot be extended to nano businesses in urban areas.
4. **Use of digital ledger apps:** Fin-tech banks interface in the nano enterprise space. A conscious policy thrust to connect fin-tech with banks will help address the demand for credit through innovative lending. The use of digital ledgers will facilitate financial literacy and has proven to increase profits and support micro-lending.
5. **Establishing disruptive platforms through public-private partnership:** Today private sector digital platforms like Urban Clap, play a role in aggregating the services of self-employed professionals like beauticians, electricians, plumbers, etc. Some of these private platforms are unregulated and exploitative. Government can regulate the existing private platforms and consider establishing a new disruptive mechanism to regularize and provide a market to the service sector nano entrepreneurs. This can be introduced with public-private partnerships in various regions and states. This initiative will leverage the power of digitalization in various ways e.g. providing a market, bringing informal sector service providers into the formal ecosystem, support for upgrading, and professionalism.
6. **Tantra Mitra Fellowship for Youth:** Introducing the “Tantra Mitra Fellowship Program”, which will provide one-year fellowships to skilled youth to train and mentor nano business owners in specific technological skills and strategies. For example, a fellowship holder with an MBA or MSc in Agriculture can provide training and guidance to nano businesses in the food processing industry on forming technology adoption strategies and integrating them into their business processes.

7. **Online platforms for matching and connecting Indian SMEs** to companies across the world. Especially for Indian local food products, nutraceuticals, and food processing. These platforms can provide assessment and ranking services for member nano enterprises to improve quality of services provided and provide a value to customers.
8. **Gradation and accreditation of service sector businesses:** Specifically for services like beauty business and retail services, official gradation accreditation recognized by the government is necessary to identify different quality services and rationalize pricing, etc. These facilities are not available except for food businesses.
9. **Monitoring and evaluation of Government schemes by third-party agencies:** In 2018 it was proposed to monitor and evaluate the PMMY program. The report is not available in the public domain monitoring and evaluation of Government programmes by a third-party agency will help increase their effectiveness for the targeted population.
10. Establishing business turnaround support centers initiating the process of scaling for SMEs. These centres can provide 360-degree support. These centers can be established under the Udyam registration umbrella to encourage formalization.

Action points involving ecosystem enablers

1. Technology training workshops for specific sectors can be organized by Government. Government agencies like National Institute of MSME (NIMSME) can design and conduct targeted training / capacity-building programs specifically focusing on vendors /women customers of such nano enterprises.
2. Mandatory one-year contribution by professional qualified students: Maharashtra Government has announced that starting with the academic year 2022-2023, it is now mandatory for MBBS students in Maharashtra to complete a one-year residency in the countryside after completing their course. Similar to this rule a one-year mandatory service contribution for IT post graduates and CAs and ICWAs to train 5 nano businesses for one year in IT skills and tax, compliance and accounting respectively. Under this requirement, fresh graduates will hand hold the nano businesses in urban or rural areas for IT or financial accounting capacity building.
3. Encourage federations of nano entrepreneurs: Fragmentation should be reduced to create bargaining power. Companies and supply chains can come together to form federations.
4. Large companies deal with conglomerates of micro businesses to manage receivables problems.
5. Introducing Priority Sector Requirement for Fin-tech Lenders and encouraging public private partnership with fin-tech and AI for consolidating data and removing data gaps.

Action points for Researchers: Scope for Further Research

1. Providing definition of nano enterprise and reconsidering present official MSME classification. The middle nano sector can be defined more precisely by identifying the cutoffs. We have adopted the lower cut-off of the middle nano sector based on the turnover level beyond which there is the stability of business operations and the upper cut-off of the middle nano sector as the turnover level beyond which there is the employment provided to one or more employees. Other criteria could be examined through a survey. The cut-offs can help to define the middle nano sector more precisely and with objective criteria. Further research can be undertaken to identify the cut-offs to define the middle nano sector.

2. Study on banks' perspective on lending to nano businesses and implementing schemes like PM Mudra Yojana
3. A systematic literature review on this cohort is necessary
4. Receivables and working capital management problem
5. Evaluation and monitoring of PMMY
6. Research on need and scope of formalization in the Indian socio-economic environment
7. Benefits of digital platforms for removing gaps in funding marketing
8. Cluster-specific studies to explore possibilities of some of the above policy action points like Business Turnaround Support Center and online platform for export connect with the global market

This report highlights the urgent requirement for a comprehensive ecosystem approach to facilitate the growth of nano enterprises. Although the report's findings are based on a sample data collected from a specific location, they demonstrate significant gaps in the current policy framework. This report emphasizes the need for a coherent ecosystem approach to foster nano enterprise growth. NGOs and entrepreneurship associations can play a crucial role in organizing the ecosystem of enablers necessary to achieve this goal. Instead of constantly introducing new Government programs, it is crucial to eliminate implementation barriers and ensure the effective utilization of existing programs.

The ecosystem enablers should explore how nano enterprises could potentially transform the economy, serving as a viable alternative to mass-produced branded products where the distribution of gross value added is often highly inequitable. This viewpoint takes into account the contribution of local workers to the nano enterprises' gross value added, their carbon footprint and sustainability, and their efficient use of resources, among other factors.

In conclusion, there needs to be a fundamental shift in the way that researchers, government officials, and ecosystem enablers approach the nano enterprise sector. By altering the prevailing narrative, the market positioning of the nano enterprise sector can be reshaped, positioning them as key partners within the ecosystem.

Annexure I

Data Collection

After reviewing the literature, it is found that the reports and studies as well as the available data on the micro, small and medium-sized sector do not provide any separate information on nano enterprises in the target cohort. The secondary sources of data or information on nano enterprises are not publicly available. We therefore decided to carry out the primary survey.

The primary survey involved the following steps and protocols:

1. Interviews with experts on MSMEs and primary survey methods are conducted to arrive at the survey design. The sample is collected from the Pimpri Chinchwad Municipal Corporation (PCMC) and Pune Municipal Corporation (PMC).
2. After a series of consultations with the experts and stakeholders from deAsra Foundation, we adopted the following approaches to identify the sampling frame:
 - We approached the District Industries Corporation, and contacted units from their data. However, upon multiple efforts to contact the businesses, it was found that most of the units are unapproachable or non-existing.
 - We collected some data from MCCIA and similar organizations, but observed that most of these organizations dealt with micro units in the manufacturing segment.
 - Finally the data from a microfinance NBFC providing lending to nano entrepreneurs formed our sampling frame. Based on a systematic random sampling to have a judicious representation for various sectors and areas of the city, a data of 1000 nano businesses was selected to target the sample size of 500 businesses across the PMC and PCMC regions. Ultimately as the survey started, investigators came across the problem of the units in the sample being untraceable or non-existent. In these cases the snowball method was used wherever necessary.
3. A structured survey schedule is prepared in consultation with the field survey experts and it is tested with a pilot of 25 respondents before it is finalized.
 - A workshop with experts and stakeholders is conducted to finalise the questionnaire for the survey. The quantitative questions are coded in numbers. The data is collected through in-depth interviews of the respondents. The questionnaire used for the interviews consisted of both close-ended and open-ended questions. The duration of each interview is 30 minutes to 1 hour.
4. The data is collected from 504 very small micro enterprises with an annual turnover of Rs 10 lakhs to 1 crore and providing services like food, restaurants, beauty, auto repairs, trade etc. Ten investigators were trained to conduct the survey. The interviewees were briefed about the objectives of the survey, they were informed that the identity will be masked, and their consent is taken.
 - The questions that guided our discussions primarily revolved around their business model, relationship with buyers, experience with technology, coping mechanisms and mitigation strategies, marketing efforts, the need for new technologies, funding, digitization, compliance, and other additional comments on the issues they felt to be the most pressing. The survey is conducted over two months in 2022 from mid-July to the end of September. The regions covered in this survey under PCMC are Kalewadi, Chinchwad, Pimpri, Bhosari, Nigadi, Baner, Balewadi, and Pimple Nilakh. The areas covered in PMC are Bund Garden Road, Bhandarkar Road, Fergusson College Road, Nana Peth, Sadashiv Peth, Hadapsar, Aundh, Katraj, and Susgaon.

Annexure II

Literature Review Note on Relevant Themes

It is useful to distinguish between firms based on their growth performance. To do so, the intuition is that high-productivity entrepreneurial firms will grow fast, while those who turn to self-employment simply because they have no other option are more interested in survival and remain at a small scale. For example, (Rogerson, 1996) distinguishes between ‘survivalist’ and other small firms, while (Autio, 2008) separates high-aspiration entrepreneurs from low-aspiration entrepreneurs. It should be noted that these classifications rest mainly on different growth performances of small firms. The success of any economy depends on the success of its small businesses. These businesses are closely entwined with local economies. As small businesses grow, they become the major generators of employment, local development, and general economic expansion.

Micro, Small, and Medium Enterprises (MSMEs) are the spine of the Indian economy. Nearly 6 crore MSMEs employ approximately 11 crore people, i.e., approximately 40% of India’s non-farm workforce. These organizations are also critical to the distribution and supply chains of larger companies, contributing nearly 25% of India’s services GDP and 33% of total manufacturing output (Ramakumar & Kanitkar, 2021). Even pre-COVID-19, the sector was cost-uncompetitive with many small firms perennially stuck in a vicious cycle of informality, low productivity, and stiltedness. For India’s economy to grow at a reasonable pace and create adequate employment and prosperity, there is a need for millions more enterprises that are both productive and able to grow. To do so, talking about Micro, Small, and Medium Enterprises (MSMEs) is not enough, there is a need to tap into the gap that is still unrecognized. The gap can be called ‘Nano Enterprises’. And the ones running a Nano Enterprise will be a Nano Entrepreneur.

As per Michael and Susan Dell Foundation¹ ‘Nano entrepreneurs are people who typically run small retail or kirana shops, are micro wholesalers or earn a livelihood as street vendors. They have not had the benefit of receiving a college education, which prevents them from attaining formal means of employment. They live in rented homes and earn less than INR 25,000 (\$330) a month. Many may have been shouldering debt even before the pandemic, making it even direr for those who have faced health or a debt crisis during the pandemic.’

These nano businesses² are the various “solopreneurs” and home-based businesses such as make-up artists, event planners, battery chargers, independent dispatch riders, vendors, call center agents, fashion designers, vulcanizers, drycleaners, corner shop owners, single retail marketers, repairers, painters, business center operators, market women and men in the various open markets, among others.

To run the enterprises, several factors take and make the enterprise. Energy and creativity along with business acumen are the need for entrepreneurship. Some factors that contribute to entrepreneurship may decline with age, but business skills increase with experience in high-level positions (Liang et al., 2018). Entrepreneurs may use the internet to acquire new skills or knowledge for more efficient production processes or business organizations (Comin & Mestieri, 2018). It may also enable and encourage them to do business with new partners, which can lead to substantial growth in networks and, thus, also in sales and exports. Nonetheless, the positive effect of digitalization is not always reflected in productivity data. According to Solow (1987), “You can see the computer age everywhere but in the productivity statistics.” This is known as the Solow paradox, a concept that scholars are still exploring (Acemoglu et al., 2014). A large body of literature has empirically shown the important role played by digital technology in promoting welfare in developing countries. For instance, Aker & Mbiti (2010) found that the extensive adoption of mobile phones in sub-Saharan Africa has greatly reduced search costs and improved markets. Jensen (2007) showed that the adoption of mobile phones by wholesalers in Kerala, India, reduced price

dispersion and cost, and increased both the profits of businesses and the welfare of consumers. The benefit for enterprises appears only when the adoption is associated with extensive strategic and organizational changes to business processes. Often the discussion on technology and digitalization starts and ends with digital payment transactions. But it can be said that the application of digital technologies in the context of small and small-and medium-sized enterprises has revolutionized organizations around the globe (Tabares et al., 2021). Digitalization processes lead to lower transaction costs (Okkonen et al., 2013), which provides equalization of market conditions for nano innovative enterprises. The transformation from manual to digital processes along the entire value chain enables firms to automatically collect and analyze data, which can help new ventures increase the quality and comprehensiveness of information that is transferred from one end to another. The more digital a new venture is, the greater appears the work flexibility, as the number of actions team members must physically perform in the office decreases (Parviainen et al., 2017).

Micro businesses are particularly constrained by gaps in the financial system, and these include administrative costs, high collateral requirements, and lack of experience within financial intermediaries. Therefore, financing obstacles are considered major growth-limiting factors for small-sized firms. Moreover, financing remains one of the most under-researched areas in developing countries (Dalberg, 2011). Additional sources of finance, mark the phase of difficulty for the growth of small firms because of the access to channels of financing such as banks and financial institutions, other investors demand transparency of information, managerial expertise, and a long-term relationship of trust and creditworthiness, which is not possible, especially for start-ups (Gupta & Sharma, 2022).

In the last two decades of digitalization, marketing has evolved both as a discipline as well practice. Marketers are trying to find new and innovative ways to influence today's well-informed and diverse consumer (Hung & Li, 2007) who has many new opportunities to seek information, get connected, and create user-generated content. It is well known that the ultimate goal of maintaining a loyal customer base transcends the obvious primary relationship between the enterprise and its customers. The customer's estimation of the value of the product/service is influenced by the inter-relationships as it is these relationships that ultimately denote the value (core competence) of the product/service (Kandampully & Duddy, 1999). The all-pervasive internet technology has become the most important component of the promotion mix (Gupta & Sharma, 2022), thus suggesting the establishment of new channels for marketing. Among the new promotion tools, social media is emerging as a change agent providing numerous opportunities for marketers, who are trying to adapt to this new paradigm of communication.

Micro and nano businesses are undeniably critical to the development of any nation's economy as they are an excellent source of employment generation, help in the development of local technology, and develop indigenous entrepreneurs (Erdem & Erdem, 2011). However, small businesses confront challenges in their operations. They also face challenges from increased competition, the ability to adapt to rapidly changing market demand, technological change, and capacity constraints relating to knowledge, innovation, and creativity (Yoshino & Taghizadeh Hesary, 2016).

The lack or inaccessibility of bank finances is a serious constraint during the formation of new ventures as well as at later stages as business requires additional inflows of capital to support expansion and growth (Tendai & Ellen, 2011). Inadequate bookkeeping and lack of financial management knowledge are also challenges that have a negative impact. According to (Schagen & Lines, 1996), financial illiteracy is the inability to make informed judgments and to take effective decisions regarding the use and management of funds.

The second challenge is of lack of market linkages, mainly faced by the food and agriculture industry. Market linkages connect the organizations involved in producing the products and delivering the services for any and every market (Zandniapour et al., 2004). As such when linkages are absent or weak, markets become inefficient. In light of this, poor reliability and the frequent delays experienced in giving services which pose a critical issue to

firms that rely on efficiency. The lack of information services makes it difficult for buyers to tap into local supplier networks. As such, accessing local networks, identifying partners, and undertaking basic due diligence on local enterprises make creating linkages a costly endeavor both regarding the time it takes to identify local partners and in monetary terms. The wider policy and business environment in developing countries itself obstructs rather than facilitates market linkages (Mugione & Farinelli, 2010). Steps like providing infrastructural facilities, developing various industrial parks and technology incubators under cluster development programs, creating networks of organizations that help provide training to a skilled workforce to improve productivity, encourage entrepreneurship and competency in management, funding R&D investments, technology advancement may work for the betterment of the sector (Kumar et al., 2009).

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^[1] <https://www.dell.org/insight/nano-entrepreneurs-india/>. Accessed on 21st October 22

^[2] <https://guardian.ng/opinion/nano-businesses-a-hidden-dimension-of-msmes/>. Accessed on 1st November 22

Annexure III

Note on the Business Sectors

The report classifies the business sectors based on the NIC classification. NIC classifies sectors on the basis of the nature of the economic activity carried out in an establishment, at single or multiple physical locations under single or multiple ownership control of a firm or enterprise. The survey includes the National Industrial Classification 2008 to develop broad sections. In case of similar patterns and profiles of the sections and fewer observations, two sections are clubbed together, eg Education and health, Finance and technology. The seven broad sections of business segments are beauty, clothing, education and health, finance and technology, food, interiors, and retail sector.

The businesses that were included in these sections are as follows:

1. Beauty included salons, tattoo studios, spas, make-up artists, nail art studios.
2. Clothing included Tailors, designer boutiques, cobblers, hand-printed fabric-related businesses, laundry, dry cleaning.
3. Education included tuition classes, spoken English training academies, playschools and nurseries, crèche, computer training institutes, library. Health included opticians, homeopathy practitioners, veterinary doctors, medical stores.
4. Technology included Digital art studios, cyber cafes, computer and mobile repairs, drone making, nanotechnology, and app developers. Finance included financial services, moneylenders, stock market traders/consultants, product servicing, tax consultants.
5. Food included Street-side snacks centers, Mess, caterers, bakeries, small-scale/home-based pickle-papad-farsan makers and sellers, cafes, flour mills, cold storage, sweet shops, juice and milkshakes sellers, dairy, tea stalls, fish sellers.
6. Interiors included Painters, furniture designers, interior designers, chandelier sellers, architects.
8. Retail included Supermarkets, photocopy shops, traders, cab services, courier services, pets shop, mobile sellers, stationary suppliers, hardware and electric shops, crockery, and plastic ware, cosmetic suppliers.

Annexure IV

Statistical Note

Results of Chi Square² Test

The following tables provide the results of chi-square tests for variables relevant to some of the themes.

1. Digitalization

Use of cash

$H_{0(1)}$ = Educational qualification does not affect the use of cash in a business

$H_{0(2)}$ = Gender does not influence the use of cash in a business

	p-value
Education	0.002
Gender	0.59

Note: $p < 0.05$

We reject the null hypothesis and can say that the level of education is highly significant in the use of cash. Here, we fail to reject the null hypothesis on the gendered influence on the use of cash in a business.

Use of New Technology

$H_{0(1)}$ = Educational qualification does not affect the expertise of using new technology

$H_{0(2)}$ = Gender does not influence the expertise of using new technology

	p-value
Education	0.009
Gender	0.42

It can be said that the influence of education will not affect the expertise of using new technology 9 in 1000 times ($p = 0.009$).

2. Funding

$H_{0(1)}$ = Educational qualification does not affect the source of funding

$H_{0(2)}$ = Gender does not influence the source of funding

	p-value
Education	0.2
Gender	0.52

Note: $p < 0.05$

It can be said that we reject the null hypothesis i.e. educational qualification influences the source of funding with a 20% chance of error. We fail to reject the null hypothesis as gender does not seem to play a role in the source of funding for getting into a business.

3. Entrepreneurial aspirations

$H_{0(1)}$ = Educational qualification does not affect the reason for getting into a business

$H_{0(2)}$ = Gender does not influence the reasons for getting into a business

$H_{0(3)}$ = Business sector does not affect the reason for getting into a business

	p-value
Education	0.0000002
Gender	0.24
Business sector	0.02*

Note: $p < 0.05$

We fail to reject our first null hypothesis that educational qualification does not affect the reason for getting into the business. There is a 24% chance that gender does not influence the reasons for getting into the business. The p-value is highly significant for business sectors; thus it is safe to say that the reason for getting into a business is highly affected by the business sectors.

What drives entrepreneurial aspiration to grow and expand business?

We tried to examine the association between some measurable variables and individual characteristics of the entrepreneur and the entrepreneurial aspiration. Expansion and growth are taken as the proxy for entrepreneurial aspiration.

Entrepreneurial Aspiration (i) = Age(i) + Gender(i) + Educational Qualification(i) + Age of the business(i) + Strategic Planning(i) + Business in Profit(i)

Where (i) is the individual entrepreneur and Entrepreneurial Aspiration being a binary dependent variable taken as Expansion/Growth aspiration to grow and expand as (1) and no growth aspiration as (0) We applied a logit model (Ref. Table 2).

Table 2

VARIABLE TYPE	VARIABLE NAME	VARIABLE DESCRIPTION
Dependent Variable	Expansion/ Growth Aspiration	<ul style="list-style-type: none"> • 0 – No Expansion/ Growth Aspiration • 1 – Expansion/ Growth Aspiration
Independent Variables	Age	<ul style="list-style-type: none"> • 0 – Age up to 30 Years • 1 – Age more than 30 Years
	Gender	0 – Female, 1 – Male
	Education Qualification	<ul style="list-style-type: none"> • 0 – Qualification below or at par with the 10th Pass (Below 10th and Up to 10th Pass) • 1 – Qualification of above 10th Pass (12th Pass, ITI/ Diploma, Graduation, and Post-Graduation)
	Business Age	<ul style="list-style-type: none"> • 0 – Businesses Established after 2015 • 1 – Businesses Established before 2015
	Strategic Planning	<ul style="list-style-type: none"> • 0 – Have Not Adopted Strategies to Expand Business in the Last 5 Years • 1 – Have Adopted Strategies to Expand Business in the Last 5 Years
	Business in Profits	<ul style="list-style-type: none"> • 0 – Businesses were facing Losses or were in No Loss and No Profit stage • 1 – Businesses were in Profits
	Prior Expertise/ Knowledge to Start Business	<ul style="list-style-type: none"> • 0 – No Prior Expertise/ Knowledge regarding how to start or drive business • 1 – Has Prior Expertise/ Knowledge regarding how to start or drive business

³Annexure III provides summary of statistical findings