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## Increasing the non-farm employment in Uttar Pradesh, India: A Policy Analysis

Saurabh Pratap Singh  
K. V. Raju



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Chanakya University Research Monograph  
(CU-ROS/2023-24/RM-001)

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**Chanakya University Research Monograph No. CU-ROS/2023-24/RM-001**

**ISBN No. : 978-93-94911-03-1**

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Research Monograph Series Editor: Prof. K. V. Raju

Research Monograph Series Coordinator: Dr. Manasa R

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Published by: Chanakya University, NH - 648, Haralur - Polanahalli  
Near Kempegowda International Airport, Devanahalli, Bengaluru - 562165





# Increasing the non-farm employment in Uttar Pradesh, India: A Policy Analysis

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## **Abstract**

*Uttar Pradesh has a huge upside potential for economic growth if its people are engaged more productively. This study cursorily reviews the prospects of employment creation and argues that UP should focus on the secondary and tertiary sectors for generating self-employment opportunities. In this regard, growth diagnostics framework, developed at Harvard University, is used to analyse the possible constraints that may be impeding the entrepreneurship in the state. Based on secondary data analysis and wider consultation with many stakeholders, study provides observational conclusion that 'access to finance' can be a major constraint in growth of enterprises. This constraint is channelled through high-risk perception and aversion for microentrepreneurs from supply side of finance. Additionally, other constraints such as coordination, infrastructure, lower desire for entrepreneurship among youth are also weakly identified. The study concludes with offering focused recommendations to deal with the identified obstacles in a systemic way, hitting their root causes.*

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## **Acknowledgement**

The idea of such a study was first discussed informally with the Hon'ble Chief Minister (CM) of Uttar Pradesh on 19 December 2020, when I got a privileged opportunity to meet him at his residence. When I offered my services voluntarily for the benefit of about 250 million people of my state Uttar Pradesh, the Chief Minister appreciated the selfless motive and suggested that I send him a formal proposal. In the midst of too many things vying for his attention, I wasn't sure if the CM would remember having asked me to send him the proposal, much less accept it. But I had nothing to lose. So, I sent the proposal to the CM in March 2021. I was pleasantly surprised that my proposal was not only accepted but was actively pursued by the top government officials on the CM's advice.

This policy project simply would not have been possible without the support and guidance from the state's highest echelon. I am thankful to the CM and his team for encouraging me to take this study to its logical conclusion. I am indebted to Shri Siddhartha Nath Singh, Hon'ble Minister of MSMEs, for giving momentum to this study. I am especially thankful to Dr. Sahastrabuddhe whose encouragement and mentorship pushed me to take this opportunity to do whatever little I can for millions of people of my state.

Dr. K.V. Raju, Economic Advisor to Chief Minister generously provided timely guidance and support to this project. He played an instrumental role in helping me narrow down the focus of the study and facilitated coordination with the concerned top bureaucrats: Shri S.P. Goyal (Additional Chief Secretary, CM Office), and Dr. Navneet Sehgal (Additional Chief Secretary, Department of MSMEs). Shri Goyal kindly supported the study by providing an active coordination with the concerned government departments. Dr. Sehgal played a key role in this study by providing regular inputs and guidance. He was also generous in assigning a dynamic consultant Shri Gaurav Srivastava to this study. Over the course of 8-9 months, I was associated with Gaurav, we shared our ideas, and experiences, which made the study that much more focused and cohesive. He was one person I could approach for any support from the government. Gaurav also connected me with many industry experts to help me understand their perspective on the study and organised few sessions with key stakeholders to seek their guidance. I am thankful to Dr. Raju, Shri Goyal, Dr. Sehgal, Shri Gaurav, and the members of their team for their immense cooperation. They provided the much-needed sounding board to ensure that I was on the right track!

A very important part of this study was wider consultation with stakeholders. At my request, more than 70 members and entrepreneurs of Indian Industries Association (IIA), UP, joined me to share their understanding of the study as well as their suggestions and experiences. In addition, more than 30 district government officials of Industries Centres spared their precious time to share their views on the study.

Most importantly, State Level Bankers' Committee (SLBC), UP, helped me connect with lead district managers and business correspondents (BCs) of all the 75 districts of Uttar Pradesh. With the active support of SLBC, bank controllers, regional heads, nodal coordinators, district bank officials and BCs, I managed to reach out to hundreds of bankers and (potential) entrepreneurs in the state to seek their opinion. The main contribution of this study is its uniqueness in reaching out to as many stakeholders as possible, and it became a possibility only through the network of such committed officials. I would like to thank the industry associations, government officials, SLBC, bank controllers, nodal officers, district bankers, BCs and hundreds of entrepreneurs who participated in surveys, shared their views, and enriched the study substantially.

It is nearly impossible to pull off such a complex study in a limited time frame with a lot of inherent procedural and administrative constraints. But I feel privileged to have received constant support, guidance, and encouragement from Harvard community. Prof. Ricardo Hausmann shared with me his deep insights of the mechanics of growth diagnostic framework which I tried to adopt for this study. Prof. Jie Bai helped me understand the incentive alignment issues of various stakeholders and guided me to prepare a questionnaire to capture that element. Prof. Will Dobbie fine-tuned my understanding of econometrics and provided guidance on how to approach such studies technically. Prof. Gautam Nair generously shared his time to discuss the issue of MSME in general and reviewed the draft of this report to finalise the content. Prof. Matt Andrews offered incisive insights in approaching this study from implementation perspective and design solution space accordingly. Ms. Van B. Tran, senior research, and data librarian, HKS, provided me a useful list of resources, literature, and database to explore for this study. The study also benefitted hugely from exchanges of insights with my batchmates and research fellows at Harvard Growth Lab. I feel humbled and privileged to be a part of this vibrant and committed Harvard community, and I thank each one of them for their contribution in making this policy paper.

The main architects of this policy report are Prof. Dani Rodrik and Prof. Michael Walton. Prof. Rodrik is an authority in the area of economic development, and he needs no introduction. Anyone who is pursuing the work of development must have been influenced by the rich body of work offered by Prof. Rodrik in the field. I started discussing this study with Prof. Rodrik right after I received formal approval of the state government to pursue it further. In about last 8-9 months of this engagement, there have been many moments when I felt directionless or overwhelmed. Prof. Rodrik always came to my rescue with his incisive insights. I felt awed by his knowledge, reputation, and stature but he put me to ease with his humility. Despite his extremely busy schedule, he always remained accessible to me even on very short notice. It was an absolute honour to have him as my advisor in this study.

Prof. Walton, a very dynamic, knowledgeable, and insightful expert in the area of international development worked on constant refinement of the project throughout. Technically, I was working alone on this project, but at the back of my mind I had this feeling that any time I want to I could always fall back upon his advice as mentor. Each stage of this study had the benefit of his immensely rich experience in international development. His easy availability helped me discuss and deal with several knotty issues in the study.

Despite the great insights I received from the stalwarts mentioned above, this study may be far from being perfect, and I alone am responsible for its intellectual inadequacy and other shortcomings.

## Executive Summary

Uttar Pradesh (UP) is India's largest state with population of about 250 million, net state domestic product of about Rs.10 trillion, and per capita income of about Rs. 45,000 (at 2019-20 market price). The focus of **this study is to help create conditions conducive to generation of non-farm employment in Uttar Pradesh** to absorb its vibrant demography productively, release surplus labour from agriculture for more productive manufacturing and services sectors and create meaningful employment opportunities for all its residents. There has been a significant reverse migration into the state especially after the dreadful spread of COVID-19 and series of lockdowns. In fact, **the pain and suffering of the returning migrant workers were the main driving force for this study** in the first place (Section I). This policy project is an attempt to explore ways to create enough jobs within the state so that no one is compelled to migrate to other states for survival or growth.

In Sections II & III of this study, the analyses focus upon finding the right cross-section of employment alternatives which fit the specific environment of the state. **It is argued that the easy way to create millions of productive employment opportunities is through promoting entrepreneurship and bringing-in crucial reforms in micro enterprises.** Accordingly, the growth question for this policy study is: How to promote the growth of micro enterprises in Uttar Pradesh?

Section IV introduces the growth diagnostic framework to analyse the issue of lower entrepreneurship in UP. This framework intends to identify the root cause of a problem rather than the focusing merely on the symptoms. Section V tests the hypothesis of the lack of access to funds being a major constraint in growth of entrepreneurship in the state. **Various sources of data and views of stakeholders across time point out some friction in the financial intermediation.** This is especially driven by that fact that lending to **micro borrowers may be perceived risky** and **banks are usually risk averse.** Section VI tests if low economic return is a major binding constraint. My observation is that **there is no evidence to suggest that the firms in UP are less profitable.** Still, I continued the analysis in top-down manner to get an inkling of other possible constraints or concerns. This section highlights factors like physical infrastructure, motivation, coordination, misappropriation, etc. which may inhibit the growth of micro units. Section VII **highlights the importance of both financial and non-financial constraints and summarises the key findings of the constraint analysis.** But it is important to bear in mind that studies are based on observational data. There has been a conscious effort to triangulate the findings through multiple data sources, though.

After conducting the basic diagnostic tests on both the constraints, the recommendations focus on dealing with all the identified concerns. **To deal with lack of finance, most of the recommendations are designed to make delivery and design of MUDRA scheme more effective. For non-financial constraints the focus of recommendation has been primarily on improving the coordination among all the key stakeholders** of this sector. Implementation strategies and nature of commitment for most of the important recommendations are shared in this section followed by tentative cost-benefit analysis of the recommendations and their political and administrative implementability.

## 1. Motivation: Increasing the non-farm employment in Uttar Pradesh

Dr. Bhimrao Ambedkar, the architect of Indian Constitution and a great visionary of India, opined in his classic work 'The Annihilation of Caste'<sup>1</sup>, that there should be a social endosmosis in an ideal society. It should be mobile, full of channels for conveying change taking place in one part to other parts. His ideas encourage migration of people from one place to another largely to build a great society full of diverse views and knowledge base.

Migration is not only helpful from the perspective of sociology; it has also proven economic benefits. It is an active area of interest of Growth Lab at Centre of International Development (CID), Harvard University<sup>1</sup>. The theory of economic complexity (originally proposed in Hidalgo, C.A. & Hausmann, R., 2009<sup>2</sup>) argues that products in the economy are collection of know-how – the technical expertise -- which is easy to transfer through migration of people, compared to building it indigenously. This transaction also helps both the sender and receiver by matching excess labour supply to excess labour demand and tries to find an equilibrium in the labour market by optimising labour productivity.

India, a country of 36 States and Union Territories, with population of over 1.3 billion people has witnessed international, interstate, and intercity migration throughout its existence. According to the Economic Census (2016-17)<sup>2</sup>, the outmigration of three states, namely, Uttar Pradesh, Bihar, and Madhya Pradesh increased significantly during the high economic growth decade of 2001-2011 as compared to the previous decade 1991-2001. These states also happened to have one of the lowest income per capita -- indicating that migration is actually taking place from low-income states to high income states, as the conventional wisdom would suggest.

But this outward migration was reversed in 2020 when the world got crippled by COVID-19, which compelled several countries to clamp total lockdown except essential services. India, the world's second most populous country, declared a 3-week nationwide lockdown on 24 March 2020<sup>3</sup> to slow down the transmission of the virus. Weeks of complete lockdown stretched to months when the cases upsurged, bringing the economic wheel to a complete halt.

During the lockdown, millions of workers (waged and self-employed), comprising the most vulnerable class, were suddenly at the real risk of falling into poverty, malnutrition, and poor health. Governments took many measures

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<sup>1</sup>Migration and Mobility, Harvard Growth Lab, available at <https://growthlab.cid.harvard.edu/publications/policy-area/migration-mobility> (Accessed: February 10, 2022)

<sup>2</sup>India on the move and churning, Ch.12, Economic Survey 2016-17, available at <https://www.indiabudget.gov.in/budget2017-2018/es2016-17/echap12.pdf> (Accessed: February 10, 2022)

to mitigate the devastating impact. In the cities thousands of enterprises downed their shutters, resulting in millions losing their livelihoods. Informal economy workers are particularly vulnerable because the majority lack access to quality health care.

The looming uncertainty and economic distress associated with the pandemic led to the largest migrant exodus in the history of independent India. Uttar Pradesh, India's largest state, with a population of about 240 million (map of Uttar Pradesh is given in Appendix 1), alone received more than 2+ million reverse-migrants from across the country during the first three months of the lockdown<sup>4</sup>. The state government welcomed the returning migrants and tried its best to provide them daily wage work in rural employment generation programme called MGNREGA<sup>5</sup>. As per an estimate provided by CMIE, the state government offered 150 million extra man-days of work under MGNREGA during 2020-21 to additional 5 million workers -- probably those who lost their jobs in COVID-19.

The returning migrants of Uttar Pradesh who had been working in the industrialised states have come back with richer experience. The diversity of skillset, exposure, work-culture has increased in the state by this reverse migration. But to ensure that the state utilises these returnees more productively, there is a need to create meaningful employment opportunities for them as well as those who are looking for them.

Additionally, Uttar Pradesh also needs to transform its predominantly agrarian economy to one based on industry and services to unlock its true growth potential. The state currently employs 41% of the working population in farming, which is about 1/3rd more than the national average (Fig. 1). The employment in the primary sector is roughly 2/3<sup>rd</sup> of working population of the state with huge potential for productive labour displacement away from that sector. Additionally, the employment rate of Uttar Pradesh is 33% against the national average of 36% which indicates the existence of some friction in the labour market. (Fig. 2).

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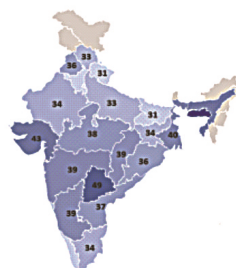
<sup>3</sup>Hebbar, Nistula, Dec 03, 2021, The Hindu available at (<https://www.thehindu.com/news/national/pm-announces-21-day-lockdown-as-covid-19-toll-touches-10/article31156691.ece>) (Accessed: February 11, 2022)

<sup>4</sup>Chisti, Seema, June 08 2020, The Indian Express, Available at <https://indianexpress.com/article/explained/coronavirus-how-many-migrant-workers-displaced-a-range-of-estimates-6447840/> ; (Accessed: February 11, 2022)

<sup>5</sup>MNREGA, MoRD, GoI, available at [https://nrega.nic.in/Nregahome/MGNREGA\\_new/Nrega\\_home.aspx](https://nrega.nic.in/Nregahome/MGNREGA_new/Nrega_home.aspx)



**Fig. 1.** Employment by occupation groups  
(CMIE, 2021-22)

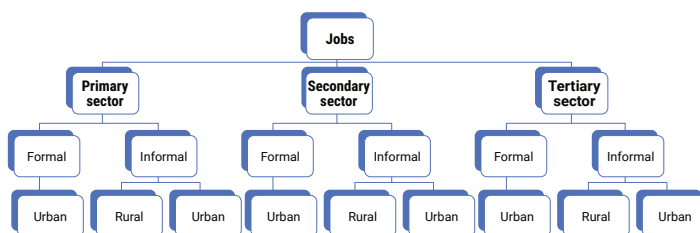


**Fig. 2.** Employment rate in India  
(CMIE, 2021-22)

The reverse migration and current employment structure have given the state government an aspirational target to create more 'productive' employment opportunities. Such opportunities will help the government foster accelerated and inclusive growth of the economy by unlocking the underutilised potential of human resources. The structural transformation will also increase the per capita income (thereby the living standard of underprivileged people) and provide access to better education and health-care facilities.

## 2. Pre-diagnostics: Where are the employment opportunities?

In this section we identify the areas in which productive employment opportunities may be created 'easily' in Uttar Pradesh. On a very broad theoretical level, jobs in any economy may be found in one of the following blocks (Fig. 3).



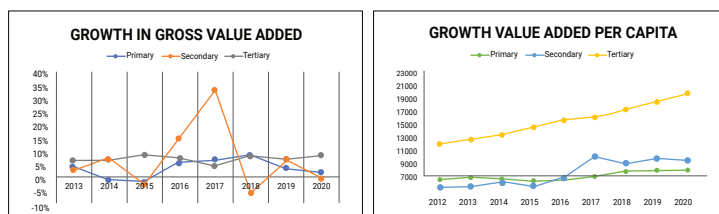
**Fig. 3.** The job tree of an economy

The job tree indicates the three major sectors (primary: agriculture; secondary: industries; and tertiary: services) in which employment may be generated; the category of jobs (formal or informal) and finally the location of jobs (urban or rural). To examine the possibility of employment generation in these sectors, categories, or locations we need to understand the economy of Uttar Pradesh.

To narrow down the scope of our analysis on finding high potential areas for employment creation and growth opportunities, we need to analyse these sectors critically.

## Sector: Primary vs. Secondary & Tertiary

The data of the net state domestic product reveal that the growth of gross value added (GVA) per capita in the primary sector was listless (having increased from Rs. 8700 to Rs. 10000 in eight years from 2012 to 2020). During the same period, GVA increased marginally from Rs 7700 to Rs. 11300 in the secondary sector. It expanded the fastest in the tertiary sector from Rs. 13500 to Rs. 20400.



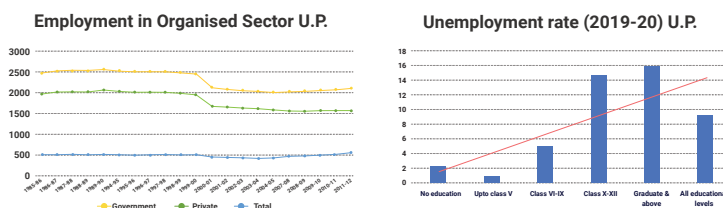
**Fig. 4.** Growth and productivity of economic sectors in Uttar Pradesh  
(State Govt, 2020)

In terms of growth rate, it is observed that in the last one decade, the primary sector grew at an average of 3% per annum while the secondary and the tertiary sectors recorded a growth rate of 5% and 6% per annum, respectively (Fig. 4). So, while the productivity of the primary sector was stagnant at lower level, the productivity of the secondary sector (which incidentally had lagged behind agriculture till 2015-16), increased to an extent, and that of the services sector at a quick pace. Besides the lowest productivity, the primary sector employs about two-third of working population in the state (NSSO data, 68th round), with 41% of workers directly engaged in farming. Uttar Pradesh has, over the years, experienced a significant shift from agriculture to non-farm employment. Construction has emerged a major employer after agriculture.

## Set-up: Formal vs. Informal

Now, let's focus on the formal sector employment. Fig. 5 reports the trend of formal (government and private sector) employment in Uttar Pradesh from late 1980s till 2011-12. It also shows education-wise unemployment rate in the state.

There are three important observations we can make from this graph: 1) the formal sector employment has been largely stagnant in absolute terms in both the government and private sector; 2) private sector jobs in formal or organised sector are only 20% of total jobs in the sector; 3) the unemployment rate increases as per educational qualification. Usually, educated people prefer to get hired by formal sector employers, but we can see that the employment is very low in that category. This could be a good opportunity to tap but I would argue that there is a limit to which government jobs can be created.



**Fig. 5.** Employment in organised sector (L), and unemployment rate as per education (R) (CMIE, 2021-22)

During the last 5 years, the state government claims to have created about 4.5-5 lakh new government jobs but there is a limit to which this option can be used. We cannot create new government departments and employment opportunities overnight, and government jobs have the lowest turnover rate. Similarly, more private sector jobs will only be created if big structural and transformational reforms take place in the state, which can happen only gradually.

### Location of jobs: Rural vs Urban

Finally, let us discuss the job prospects in urban centres in Uttar Pradesh. Economic growth usually involves economic transformation towards industries and services away from agriculture. The surplus labour freed up from agriculture gets more productively absorbed in other sectors, often involving urbanisation. This explains why urbanisation is quite closely related to the share of industry and services in GDP (Satterthwaite, 2007<sup>3</sup>).

There are empirical findings which suggest that highly urbanised countries tend to be more prosperous (UN Habitat 2010<sup>4</sup>). Henderson (2010<sup>5</sup>) also found a strong correlation between the proportion of urbanised population and Gross National Income per capita in 2004 for countries around the world. However, it may not be true that increasing urbanisation necessarily would lead to growth; there should be other policy reforms also.

Surprisingly, urbanisation in India has lagged behind significantly as compared to its economic growth (Fig. 6). The graph shows that the urbanisation rate in India in 1985 was above average given its income level, but it fell significantly below the average in 2015. On an average, more than two-third of Indian population still lives in rural areas despite magnificent growth of the country.

Even within India, there is a lot of regional differences. Uttar Pradesh has lower urbanisation rate (20% of the population) as compared to that of Tamil Nadu (48%), Kerala (47%) and Maharashtra (45%). It clearly shows that Uttar Pradesh has very few urbanised centres to accommodate urban workers.



**Fig. 6.** Urbanisation rate vs per capita income  
(World Development Indicators, 2020)

## Summary of pre-diagnostics

The above analysis reveals that massive job creation in Uttar Pradesh is possible in the informal rural economy. I started with exploring the possibility in all the three sectors -- primary, secondary, and tertiary and argued that the conventional primary sector is almost saturated with low productivity and surplus labour so it can be excluded from the potential target. Secondly, I assessed the scope in the formal sector and observed that there is stagnation in this sector. The formal sector is largely dominated by government sector employment (80%) which, as stated earlier, has its own limitations in offering productive jobs. Because of this restriction, I concluded that the formal sector may not be able to absorb/generate the mass-scale employment opportunities. Lastly, I argued that India in general, and Uttar Pradesh in particular, lacks adequate urban centres to support urban jobs. Each of these observations or conclusions can be formally investigated separately to unearth root causes of these structural distortions. But the main focus of our study is to assess where and how we can create employment opportunities in the state of Uttar Pradesh. Based on this assessment, I want to focus on informal rural jobs in secondary and tertiary sectors only.

### 3. Diagnostics phase I: Which MSMEs to target for jobs?

The non-farm rural jobs are predominantly created by MSME (micro, small, and medium enterprises) sector in India. But this MSME sector is extremely heterogeneous. This section attempts to narrow down the focus of policy reform even further, given the objectives.

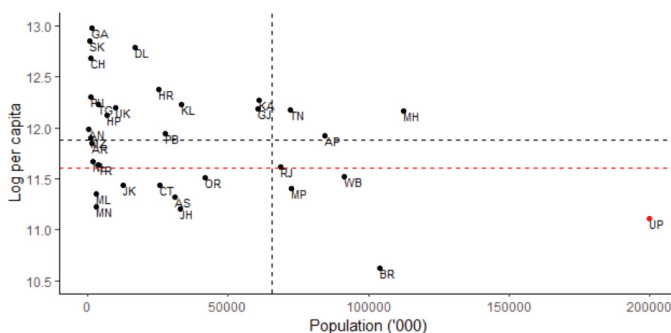
#### Uttar Pradesh: Economy and the MSME sector

The net state value added of Uttar Pradesh is estimated to be about Rs. 9.45 trillion (or, \$140 billion USD) during FY 2019-20. Nearly half of the value added comes from the tertiary sector, 27% from secondary and the remaining 24% from the primary sector. Within the primary sector, agriculture, forestry, and fishing account for 21% of net value added (or, 90% of entire primary sector contribution), with manufacturing in the secondary sector contributing

14% (or, 53% of total secondary sector), and real estate accounting for 13% to the value added. Analysing the data further it is evident that during the last decade (2012-2020), transportation (in the tertiary sector) and mining (in the primary sector) were the two largest economic activities which expanded in double digits with the state registering a average CAGR of about 6% against the national average of about 5%.

On sectoral basis, the primary sector's growth rate was 3.4% per year as against 6.4% and 6.9% for the secondary and tertiary sectors, respectively. Growth in per capita income was a modest 4.2% against the national average of about 3.7% (price adjusted)<sup>7</sup>.

In absolute terms, however, the per capita income of Uttar Pradesh is significantly lower than the national average or the average of large comparable states (Fig. 7). In the Fig., the black dotted lines show national average of income per capita and population of all the states while the red dotted horizontal line show the average per capita of larger states with population above the national average. Maharashtra (MH), West Bengal (WB), Tamil Nadu (TN), Andhra Pradesh (AP), and Karnataka (KA) are growing faster (4.5%, 5.6%, 5.7%, 6.3%, and 7.4%, respectively) than UP in terms of per capita income, despite having a relatively larger population base as compared to the national average.



**Fig. 7.** Log per capita income and population of Indian states  
(Economic Survey, 2021, Census Data 2011)

## MSMEs in India and Uttar Pradesh

MSMEs play a very significant role in the economy of India. Share of MSMEs in gross value added of the Indian economy stood at around 32-33% on an average during 2015 to 2019, and its contribution to GDP was close to 30%

<sup>6</sup>Planning Department, State Government of Uttar Pradesh

<sup>7</sup>Economic Survey 2020-21, Government of India

in the same period. The contribution of MSMEs to the country's total manufacturing gross output at current prices has also remained constant at around 33% during 2014-15 to 2018-19.

As per National Sample Survey (NSS) 73<sup>rd</sup> Round, the total estimated number of unincorporated non-agricultural MSMEs in India was about 63.4 million out of which 32.5 million were in rural sector while the remaining 30.9 million were in the urban sector (Table 1). Uttar Pradesh has about 14% of the total MSMEs in India, with 17% in trading, 14% in other services, and about 11% in manufacturing. The rural-urban divide of MSMEs is balanced in India (51% rural, 49% urban) versus UP (53% and 47%)

**Table 1.** Activity wise estimated number of MSMEs (million) in India and UP  
(NSS 73rd Round, 2015-16)

|                | India |       |       | Uttar Pradesh |       |       |
|----------------|-------|-------|-------|---------------|-------|-------|
|                | Rural | Urban | Total | Rural         | Urban | Total |
| Manufacturing  | 11.4  | 08.3  | 19.7  | 1.3           | 0.9   | 2.2   |
| Trade          | 10.9  | 12.1  | 23.0  | 1.97          | 2.03  | 4.0   |
| Other services | 10.2  | 10.5  | 20.7  | 1.5           | 1.3   | 2.8   |
| Total          | 32.5  | 30.9  | 63.4  | 4.8           | 4.2   | 9.0   |

About a quarter of Indian work force is employed in the MSME sector which makes it second largest employer after agriculture (Table 2). MSMEs in India employed 111 million people during 2015-16 out of which about 45% were in rural areas while the remaining 55% jobs were in urban locations. The jobs in MSMEs of Uttar Pradesh are fairly distributed in rural and urban areas. Activity-wise, UP accounts for a total of 15% job share of India in MSMEs with following break-up: 13% in manufacturing, 14% in other services, and 17% in trading. Interestingly, the number of employees per firm in UP is higher than the country's average across both rural and urban. It is also observed that the manufacturing firms in UP employ more than 2 persons on average against 2 for all-in India. In trading, the ratio is constant for both at 1.69 while for other services it is 1.82 in UP against 1.75 for all-India.

**Table 2:** Activity-wise estimated number of MSME workers (million) in India and UP  
(NSS 73rd Round, 2015-16)

|                | India |       |       | Uttar Pradesh |       |       |
|----------------|-------|-------|-------|---------------|-------|-------|
|                | Rural | Urban | Total | Rural         | Urban | Total |
| Manufacturing  | 18.6  | 17.4  | 36.0  | 2.6           | 2.1   | 4.7   |
| Trade          | 16.1  | 22.7  | 38.8  | 3.0           | 3.7   | 6.7   |
| Other services | 15.1  | 21.1  | 36.2  | 2.7           | 2.4   | 5.1   |
| Total          | 49.8  | 61.9  | 111.0 | 8.3           | 4.2   | 9.0   |

<sup>a</sup>Annual Report of MSME 2020-21, GoI

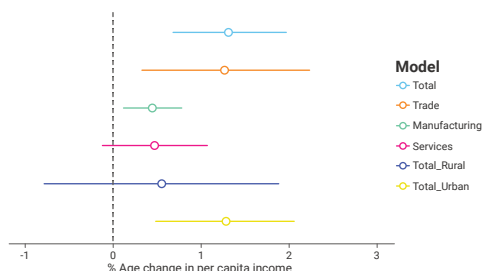
## MSMEs, their employment profile, and impact on per capita income

Further analysis of NSS data reveals that (1) UP has fewer number of firms than the national average in all categories (except trading), and (2) the employment per firm in Uttar Pradesh is hovering around the national average in all categories (Fig. 8). The dotted lines show the national average value of respective axes and UP is shown in red dot.



**Fig. 8.** Number of firms and employment per firm in Indian States  
(NSS 73rd Round, 2015-16)

It was also observed that increase in non-farm employment (per firm) is significantly associated with increase in per capita income, on national level (Fig. 9). Employment per firm of different categories (e.g., trade, manufacturing, and services, rural and urban) are associated independently with per capita income of the states. The coefficients of each separate regression are plotted in Fig. 9 which highlights that amongst all categories of firms, employment per firm in trade, manufacturing and urban enterprises are significantly related with per capita income with statistical significance at 95% level. We can interpret the Fig. in following way: increase in average employment per manufacturing firm by one person is associated with an increase of 0.44% in per capita income of a state on average.



**Fig. 9.** Employment per firm (categorical values) and log per capita income of states  
(NSS, 73rd Round 2015-16)

## **Identifying the growth question**

Based on the above analysis, there could be two ways to increase the non-farm employment: (1) improve the employment per firm in existing enterprises, and/or (2) set up more firms by promoting entrepreneurship in rural areas.

It is observed that UP has a better or equally good employment ratio per firm in almost all categories (manufacturing, trade, and other services) as compared to the national average. There are states like Delhi, Maharashtra, Haryana, Tamil Nadu, Gujarat which have slightly higher employment ratios in one category or another but the position of UP is not far behind from these states. This finding probably signifies that employment per firm does not have any structural issues specific to the state of Uttar Pradesh. Although, there is still some potential to improve the firm size of micro enterprises, at least in terms of employment per firm.

As regards the number of firms, however, UP falls behind the national average in both manufacturing and other services categories. In the trading sector, the number of firms in UP is higher than the national average. Overall, UP falls below the national average in terms of total MSMEs available per thousand people. Therefore, in this study, I have decided to focus on increasing the number of enterprises in UP by promoting entrepreneurship.

Based on the discussion in the preceding paragraphs, the focus of this study is to suggest ways and means to set up more micro enterprises in Uttar Pradesh.

## **4. The growth diagnostic framework**

In previous sections I have argued that to increase employment in Uttar Pradesh, we need to focus on increasing the number of micro enterprises (entrepreneurship). In this section, I will conduct a growth diagnostic to analyse the reasons for lower number of micro enterprises in the state.

### **Review of literature for important constraints**

The main reasons of low growth and entrepreneurship, particularly of micro businesses, can be classified into two: (1) business & institutional environment, and (2) growth ambitions (Gherhes et al., 20166).

Under institutional environment, the most pressing challenge could be access to resources -- finance and adequate business support (Fielden et al., 20007; Greenbank, 2000a8; Lee, 20149; Perren, 199910), and enabling such resource-access can actually increase the survival chances and growth (Coad et al., 201311) of enterprises.

Several literatures point out that financial institutions are not able to provide adequate capital (Fielden et al., 20007) to micro enterprises, resulting in these units not being able to do as well as they could have.

In addition to the institutional environment factors, business environment factors such as the state of the economy, dynamism, hostility, competition, profitability, and demand, which are outside the control of micro enterprises, can further constrain the growth of such enterprises (Lee, 20149; Perren, 199910, 2000; Wiklund et al., 200914).

But, Gherhes et al. (20166) argue that sometimes despite an enabling institutional and business environment, micro enterprises may still not be able to grow because of lack of growth ambitions. Thus, growth of micro enterprises is also contingent on entrepreneurial behaviour and skills, namely, their ability and intention to use the available resources for growth (Wiklund et al., 200914).

Studies specific to Indian context also highlight similar obstacles. S. Jayadatta (201415) argues in her study that financial problem, lack of technical knowledge, education, skills, along with physical infrastructure, and financial amenities impede the growth of entrepreneurship in India. Similarly, S. Moghana et al. (201416) have identified several obstacles (such as literacy, risk aversion, lack of skilled labour, technical know-how, limited access to essential services, lack of communication facilities, etc.) as being inimical to the growth of rural entrepreneurship in India. S. Vijay Kumar (201317) identifies broad categories of problems -- financial, marketing, management and human resources -- faced by Indian rural entrepreneurs.

The above factors are directly responsible for low growth of micro enterprises, (in)directly affecting the culture of entrepreneurship as well (general equilibrium effect). The poor growth of existing businesses due to the constraints enumerated previously, discourage others to explore entrepreneurship opportunities. Therefore, it is fair to assume that all these factors combine to stifle the growth of entrepreneurship.

These factors are presented in the table for easy reference:

**Table 3.** Summary table of key constraints

| Broad category            | Key constraints                                                                                                                                               |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Institutional environment | Access to resource: lack of capital, fears of increased financial risk, fear of being unable to obtain finance, and perceptions of finance being inaccessible |
| Business environment      | State of the economy, dynamism, hostility, competition, profitability and demand                                                                              |
| Growth ambition/skills    | Low motivation of entrepreneurs, poor entrepreneurship skills                                                                                                 |

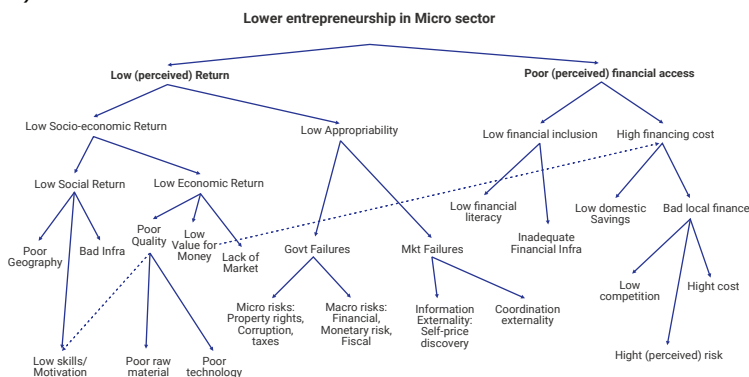
## The growth-diagnostic tree

While the issue of employment or entrepreneurship is not new in the state of UP or even the country, I have tried to look at it in a different way. This paper takes a relatively more holistic and analytical approach to understand root causes of low entrepreneurship in the state and accordingly suggest policy recommendations to deal with those causes specifically. The growth diagnostics approach adopted in this paper takes up the main issue and builds hypotheses of possible causes, based on available literature. Then, I try to screen-out the relatively unimportant causes which do not show any explicit symptoms in the given context of Uttar Pradesh and focus on those which need to be further looked into. The process works just like a medical diagnosis. When we have fever, we consult a doctor/specialist instead of taking generic medication; doctor asks several questions, conducts few tests to understand the main cause of the medical condition before prescribing proper medication to treat not just the symptom (temperature) but the root cause of the said disease.

The growth diagnostics approach helps the policy makers import vast knowledge on the issue (through literatures) and customise it by looking for causes which are more pronounced in their particular region. There was a time when we used to suggest standardised recommendations for similar policy problems. For example Washington Consensus which recommended the same package of reforms for crisis-wracked developing poor countries, irrespective of their economic situation. Theories or frameworks like growth diagnostics adopted in this paper, work in a different (and more rational) way because it relies upon collecting evidence to understand the contextual root causes and then suggest policy actions which specifically deal with those causes.

Building upon the existing literature and inspired by the seminal work of Rodrik et al. (2006<sup>18</sup>), I have formed a growth diagnostic tree to help me recommend policy actions which, when acted upon, would create the right milieu for people to set up micro enterprises in UP (Fig. 10). There could be two hurdles in promoting entrepreneurship: either the return on investment (the business environment and skills) in the sector is low or there is a financial constraint (institutional environment) which deters entrepreneurs from starting up or scaling up their micro unit. This framework also incorporates the perception of stakeholders, the third factor discussed elsewhere in this paper: growth ambition and skills. As we go down the branch of financial constraint, we believe that such a constraint may arise either because entrepreneurs/people find (or believe) it difficult to access finance from financial institutions or they do not (or believe not to) have access to institutions because of financial exclusion/low financial awareness. Similarly, the ROI could be low because of poor social or economic environment, or low appropriation (realisation) of the

return, or the entrepreneurs are not motivated enough to invest further (point IV.6).



**Fig. 10.** Diagnostics tree for lower level of entrepreneurship in UP

To test these constraints, I am relying upon secondary and primary data sources, such as Shrug database, Economic Census 2013, and enterprise survey data of World Bank (2014). I have also conducted surveys of entrepreneurs, bankers, industry experts and department officials in the state to have a better grip on this issue. Collectively, analysis of all these information can help us to Fig. out if 'access to finance' or 'profitability' is a key concern in UP. Finally, based on an in-depth analysis of these two branches (low return and low financial access), we can focus on the key constraint to design policy solution to engender entrepreneurship and to facilitate the setting up of micro enterprises.

## 5. Analysing lack of access to finance as key constraint for low entrepreneurship

To analyse the binding constraints, we need very rich, representative, and diverse datasets. Based on literatures cited above I have tried to determine factors in our diagnostic tree (Fig. 10), which may inhibit the growth of micro enterprises. Unfortunately, micro enterprises, the focus of this study, are not covered extensively (and timely) in available dataset. I will, therefore, have to rely upon the limited data I have, and supplement it with qualitative inputs such as views expressed by the concerned stakeholders in surveys or focused interactions. This section will be devoted to analysing lack of access to finance as a key constraint coming in the way of the growth of entrepreneurship and establishment of new micro enterprises in rural areas.

### Access to finance: Review of literature

The relationship between access to finance and growth of businesses dates as far back as 1911 when Schumpeter identified that financial sector

development affects growth by efficiently allocating capital across producers in the economy. Goldsmith (1969<sup>19</sup>) also observed parallelism between economic and financial development in his cross-country analysis. Establishing a relationship between enterprises and financial access, Robinson (1952<sup>20</sup>) noted that the financial sector closely follows the growth of enterprises. Rajan and Zingales (1998<sup>21</sup>) compared industries with different requirement of external financing across countries with different financial sector development and provided crucial evidence that credit constraints are likely to matter a lot in developing countries.

Access to finance also significantly affects profitability of firms. Del Mel, McKenzie, and Woodruff (2008<sup>22</sup>) in their paper "Returns to Capital in Microenterprises: Evidence from a Field Experiment" in Sri Lanka reported marginal return as high as 60% per annum for firms with less than 1000 USD in capital. A possible explanation of this high profit could be that usually small retailers do not purchase enough to get bulk discounts (Kremer et al 2011<sup>23</sup>) but when they gain access to easy and affordable credit, they buy in bulk to reduce cost and also the cost of credit is cheaper than other possible alternatives. This is further supported by the research of Banerjee and Duflo (2012<sup>24</sup>) who argued in their paper that credit-constrained firms use easy credit to expand sales. The relationship between access to finance and growth of businesses dates as far back as 1911 when Schumpeter identified that financial sector development affects growth by efficiently allocating capital across producers in the economy. Goldsmith (1969<sup>19</sup>) also observed parallelism between economic and financial development in his cross-country analysis. Establishing a relationship between enterprises and financial access, Robinson (1952<sup>20</sup>) noted that the financial sector closely follows the growth of enterprises. Rajan and Zingales (1998<sup>21</sup>) compared industries with different requirement of external financing across countries with different financial sector development and provided crucial evidence that credit constraints are likely to matter a lot in developing countries.

Another important aspect in credit constraint is incentive misalignment of banker. Banerjee and Duflo (2012<sup>24</sup>) argue that as distance between the borrower and loan officer grows, banks curtail the discretionary power of the loan officer, impose several systemic rules for sanction of loans and penalize the loan officer for bad loans. This makes the banker more risk-averse, and it may further induce the ever-greening of bad loans (giving more loans to insolvent borrowers so that they could service a part of previous loan) than giving fresh loans to good borrowers and entrepreneurs) which creates hindrance in access to finance for small firms.

In an efficient market the marginal return to capital should be equalised to the cost of capital. In a credit-constrained economy, the marginal return to capital should be greater than market interest rate. The idea of this equalisation

is that in an efficient market, firms would be willing to borrow as much as possible till the interest rate on additional borrowing is equal to the marginal return on incremental capital. If the marginal return is higher than the loan rate, then it could be a potential sign of credit-constrained inefficient environment.

### **Access to bank branches and its relationship with non-farm employment**

A bank branch in a village is a very crucial element in providing finance to the rural economy. I have tried to analyse association of bank branch availability and non-farm employment in a particular village in India and Uttar Pradesh separately. But it was important to realise that there are several confounding variables such as road, electricity, literacy level, distance to market, and per capita consumption levels which may affect both the availability of bank branches and non-farm employment. So, it is important to understand the covariate balance of these factors in villages with or without bank branches. For this analysis, I have used Economic Census 2013 and Shrug data base, an open-platform database, stitching together many available data sources for India to form a village level repository of key information for socio-economic analysis (Ashur et.al, 2020<sup>25</sup>).

The covariate analysis points out that the mean differences of above factors between villages with and without branch is statistically significant (Table 4). Therefore, any crucial statistical association between branch availability and non-farm employment in a particular village can be established using the above covariates as controls.

**Table 4.** Summary of covariate balance

|                  | Villages without branch |       |       | Villages with branch |       |       | Test       |
|------------------|-------------------------|-------|-------|----------------------|-------|-------|------------|
|                  | N                       | Mean  | SD    | N                    | Mean  | SD    |            |
| Ln_Consumption   | 309136                  | 9.71  | 0.29  | 54814                | 9.89  | 0.26  | F=18708*** |
| Avg_Power        | 289849                  | 8.33  | 7.83  | 53753                | 11.87 | 7.71  | F=9298***  |
| Pc11_vd_tar_road | 308968                  | 0.68  | 0.46  | 54987                | 0.92  | 0.27  | F=13187*** |
| Tdist_50         | 313945                  | 28.59 | 19.21 | 118259               | 14.67 | 18.74 | F=45727*** |
| Lit              | 313945                  | 58.85 | 13.23 | 118259               | 70.39 | 10.64 | F=72326*** |

In above table, Ln\_consumption is the log value of average consumption of all households in that village and it can indicate both income level of households as well as the size of local market (high consumption in a village may also indicate higher potential for markets, especially retail sector). Average\_power is the average of total electricity provided in the village in both summer and winter months, and it is measured in hours. Pc11\_vd\_tar\_road is a binary variable which assesses if a particular village has access to tar road or not. Tdist\_50 is a variable that indicates access to bigger market (distance of the respective village from a geographical unit with minimum population of

50,000). Finally, Lit describes the percentage of literate population in that village.

In addition to the above confounding variables, there may exist several other factors specific to a particular state or district which may affect the level of non-farm employment. To deal with this issue, I have used district and state level fixed effects in the regression estimation of association between non-farm employment and branch availability. The regression equations are given below:

Equations for all India (with state and district fixed effects)

*Equations for all India (with state and district fixed effects)*

$$\log(ec13\_emp\_all)_{i,s,d} = \beta_1 * \ln\_consum_{i,s,d} + \beta_2 * avg\_power_{i,s,d} + \beta_3 * pc11\_vd\_tar\_road_{i,s,d} + \beta_4 * tdist\_50_{i,s,d} + \beta_5 * branch_{i,s,d} + \beta_6 * lit_{i,s,d} + state_s + district_d + \varepsilon_{i,s,d} \dots (1)$$

$$\log(ec13\_emp\_manuf)_{i,s,d} = \alpha_1 * \ln\_consum_{i,s,d} + \alpha_2 * avg\_power_{i,s,d} + \alpha_3 * pc11\_vd\_tar\_road_{i,s,d} + \alpha_4 * tdist\_50_{i,s,d} + \alpha_5 * branch_{i,s,d} + \alpha_6 * lit_{i,s,d} + state_s + district_d + \varepsilon_{i,s,d} \dots (2)$$

$$\log(ec13\_emp\_ser)_{i,s,d} = \gamma_1 * \ln\_consum_{i,s,d} + \gamma_2 * avg\_power_{i,s,d} + \gamma_3 * pc11\_vd\_tar\_road_{i,s,d} + \gamma_4 * tdist\_50_{i,s,d} + \gamma_5 * branch_{i,s,d} + \gamma_6 * lit_{i,s,d} + state_s + district_d + \varepsilon_{i,s,d} \dots (3)$$

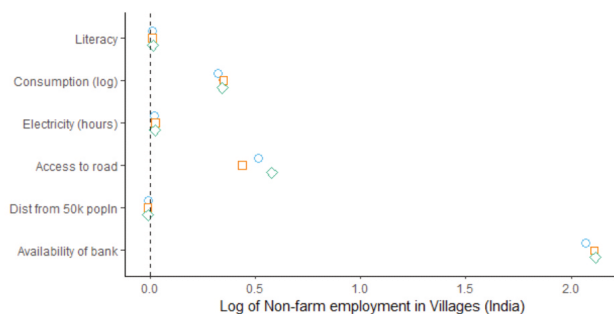
*Equations for Uttar Pradesh (with district fixed effect)*

$$\log(ec13\_emp\_all)_{i,d} = \theta_1 * \ln\_consum_{i,d} + \theta_2 * avg\_power_{i,d} + \theta_3 * pc11\_vd\_tar\_road_{i,d} + \theta_4 * tdist\_50_{i,d} + \theta_5 * branch_{i,d} + \theta_6 * lit_{i,d} + district_d + \delta_{i,d} \dots \dots (4)$$

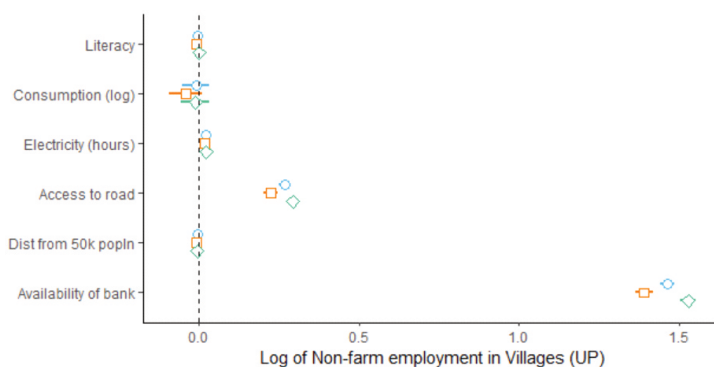
$$\log(ec13\_emp\_manuf)_{i,d} = \vartheta_1 * \ln\_consum_{i,d} + \vartheta_2 * avg\_power_{i,d} + \vartheta_3 * pc11\_vd\_tar\_road_{i,d} + \vartheta_4 * tdist\_50_{i,d} + \vartheta_5 * branch_{i,d} + \vartheta_6 * lit_{i,d} + district_d + \delta_{i,d} \dots \dots (5)$$

$$\log(ec13\_emp\_ser)_{i,d} = \mu_1 * \ln\_consum_{i,d} + \mu_2 * avg\_power_{i,d} + \mu_3 * pc11\_vd\_tar\_road_{i,d} + \mu_4 * tdist\_50_{i,d} + \mu_5 * branch_{i,d} + \mu_6 * lit_{i,d} + district_d + \delta_{i,d} \dots \dots (6)$$

In above equations, ec13\_emp\_all, ec13\_emp\_manuf, and ec13\_emp\_ser describe employment in non-farm, manufacturing, and services as per Economic Census 2013. The non-farm employment could serve as a proxy for level of non-farm entrepreneurship or non-farm economic activity in a village 'i', of district 'd', and state 's'. Branch is again a binary variable indicating if there is availability of bank branch in that village or not. This indicator can be treated as proxy for easy access to finance and credit support from banks. I use state and district fixed effects for analysing the relation on country level. I have only used district fixed effects for Uttar Pradesh. The regression coefficients for India and UP are plotted below in Fig. 11 and Fig. 12 respectively and the detailed result is shared in Appendix 2.



**Fig. 11.** Regression result for India; Author's calculation  
(SHRUG, 2022)



**Fig. 12.** Regression result for UP; Author's calculation  
(SHRUG, 2022)

The above analysis highlights that *ceteris paribus* availability of bank branches in a village is associated with about two times higher non-farm employment in India and about 1.5 times higher in UP, on an average. Both the results are statistically significant at 99% level. Easy access to finance provides necessary support to entrepreneurs to start and scale up their businesses. In addition to providing financial support, banks also help many commercial activities in the vicinity because customers who visit the branches for banking transactions become potential customers for other services and goods.

This analysis also emphasises the importance of physical infrastructure (road, electricity, etc.), literacy, and access to market for growth of non-farm employment. It may not be visibly clear from the graphs in Fig. 11 and Fig. 12 because of scale-effect, but detailed statistical results given in Appendix 2 highlight that, other things remaining the same--

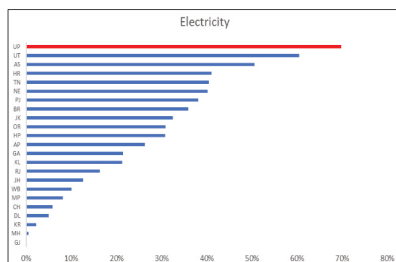
- Village with availability of tar road (better connectivity and transportation facilities) has 51% higher non-farm employment nationally and 27% higher in UP, on an average, (with 99% significance)
- Similarly, on an average, a village with 1 km additional distance from a geographical establishment with more than 50,000 people will likely have 1.2% lesser non-farm employment in India and 0.5% lesser in UP,
- Availability of one additional hour of electricity in India and UP is associated with 2% increase in non-farm employment, on an average
- Nationally, 1% increase in the consumption level of a village is associated with about 32% increase in non-farm employment. But villages in UP do not show statistically significant relationship between consumption and non-farm employment.
- Finally, 1 percentage point increase in literacy of a particular village, on an average, is associated with 1.1% increase in national non-farm employment with 99% significance level. In UP, the effect of literacy is mixed and negligible.
- **Limitations:** The above analysis may potentially suffer from reverse causality and outdated data. It is important to note that the above results could be an outcome of reverse causality (for example, villages with high non-farm employment attract banks to open branches there) hence we need more evidence to draw a conclusion. The dataset is very rich and comprehensive, but it is a little outdated for the current purpose. This analysis could be repeated with updated dataset to validate the findings.

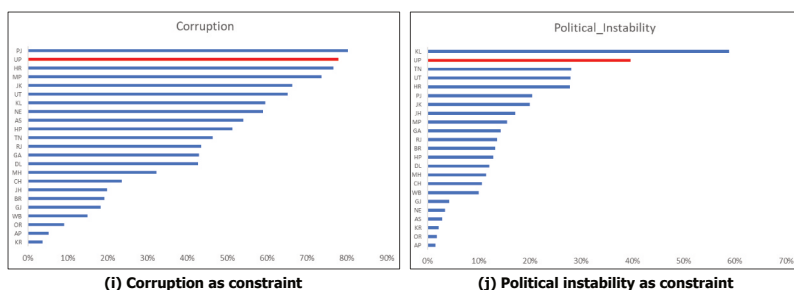
## **Access to finance as a constraint: Intertemporal views of stakeholders**

### **(i) Enterprise Survey, World Bank 2014**

The World Bank surveyed a total of 9281 firms (2303 large, 4133 medium, and 2845 small) in India during 2012-13 across all states and activities through stratified random sampling. Big enterprises had 100+ employees, medium enterprises 20-99 employees and small firms 5-19 employees. Although there are no specific surveys to define micro enterprises, small firms with 5-19 employees closely resemble micro enterprises. Therefore, I analysed the microdata of 2845 small firms across India to get to know their constraints. UP and Gujarat had the largest sample size of 212 and 213 firms, respectively. The category-wise findings are given in Fig. 13 (UP is represented by red stack while other states are blue).

The highest number of sampled firms (42%) in Uttar Pradesh reported lack of access to finance as a major constraint in their growth against the national average of 16% (Fig. 13-h). Bihar with 31% was second. The proportion of UP firms was also among the highest for other key constraints like physical infrastructure (electricity, telecom, transport, skill, etc.) and business environment (corruption, political stability, regulations, etc.). About 3/4th of the total sampled firms identified electricity, corruption, tax rates, and access to finance as their major-to-severe obstacles.

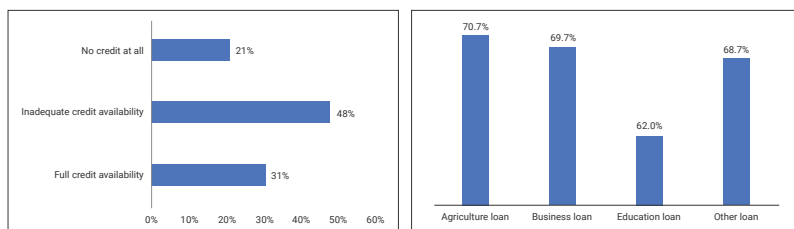




**Fig. 13.** Summary of findings: Enterprise Survey 2014

## (ii) Author's survey of rural population (2018)

The survey of over 4,000 rural population in four selected districts in Uttar Pradesh (2018) revealed that about 70% of the sampled population claimed to have either no access or inadequate access to finance for their needs. The lack of access is more pronounced in agriculture and business loans (71% and 70%, respectively) than for other categories of loans including education, vehicle, property, medical, personal loans (Fig. 14).



**Fig. 14.** Inadequacy of credit access-aggregate and loan wise

A simple descriptive summary statistic (Appendix 3) details that access to credit depends on key factors such as gender, age, source of income, credit requirement, and transactional history of the borrower with bank. Interestingly, borrowers with small credit requirement of, say, Rs. 50,000 to Rs. 200,000 are about 4% less likely to receive adequate credit than others. Education level of borrowers does not play any significant role in enabling access to credit. But if a borrower already has some form of investment with the bank, then his probability of getting adequate credit increases by 4.6%.

## (iii) MUDRA loan analysis

The Government of India runs a very ambitious scheme for micro enterprises and entrepreneurs called Pradhan Mantri Mudra Yojana (PMMY)<sup>9</sup>. The details of the MUDRA scheme are given below:

1. The loans under MUDRA scheme are offered in three categories: Shishu (upto Rs. 50,000), Kishore (Rs. 50,000-500,000), and Tarun (Rs. 5,00,000-10,00,000) as per development stage and funding needs of the beneficiary unit<sup>10</sup>.
2. With the objective to promote entrepreneurship among the new generation aspiring youth, it is ensured that more focus is given to Shishu than Kishore or Tarun loans.
3. MUDRA loans can be availed of from any eligible (as per Reserve Bank's stipulated norms) Scheduled Commercial Bank, Regional Rural Bank, Non-banking finance companies, Small Finance Bank, Micro finance institutions. Borrowers can directly apply on a web portal also where almost all the branches and financial institutions are already registered.
4. In order to encourage women entrepreneurs, the financing banks / MFIs may consider extending additional facilities, including interest reduction on their loan.
5. Borrowers are also given a MUDRA card which is a debit card issued against the MUDRA loan account, for working capital portion of the loan. The borrower can make use of MUDRA Card in multiple withdrawals and credits, so as to manage the working capital limit in cost-efficient manner and keep the interest burden minimum. MUDRA Card also helps in digitalisation of transactions and creating credit history.
6. In the case of banks, RBI has also put a cap on the interest rate at base rate/ MCLR for lending micro units by commercial banks under MUDRA. Similarly, other financial institutions are also directed to reduce their cost reasonably.
7. Traditional institutional financing in Indian context adopts an Asset Based Lending Approach with emphasis on collateral. Micro units, most of the times, are unable to provide the comfort. Hence, loans up to Rs. 10 lakhs under MUDRA, have been made collateral free, as per the RBI norms.
8. Other banks like Commercial Banks, Regional Rural Banks, Small Finance Banks and NBFCs are eligible to avail of refinance support from MUDRA for financing micro enterprises. Refinance as term loan and working capital loan up to Rs. 10 lakhs per unit have been made available.
9. During COVID-19, the Central government announced a 2% interest subvention on all Shishu MUDRA loans to help new micro enterprises.

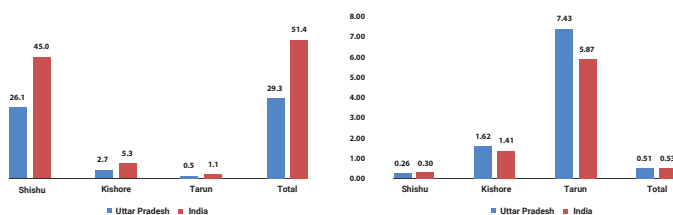
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<sup>9</sup>MUDRA, MoF, GoI, available at <https://www.mudra.org.in/offering>s (Accessed: Feb 13, 2022)

<sup>10</sup>Shishu, Kishore, and Tarun are Hindi language words implying Child, Adolescent, and Adult respectively. These words symbolise the growth stage of an enterprise.

10. This scheme also intends to exploit synergies with various other schemes such as National Rural Livelihood Mission, Start-Up India, Make-in-India, etc, to promote non-farm employment and entrepreneurship in rural areas.

Analysis of MUDRA loans data reveals that Uttar Pradesh lags in both number of MUDRA loan accounts per thousand people in all categories, as well as in the amount disbursed as loan under Shishu category (Fig. 15). As indicated in the Fig.s below, the number of MUDRA loans per thousand people in UP is about 29 (26-Shishu, 2.7-Kishore, and 0.5-Tarun) against the national average of 51 which is roughly 75% higher than UP's average. The biggest difference is in the number of loan accounts under Shishu category (for micro entrepreneurs) where nationally there are 45 loan accounts per thousand people against the state's average of 26. So far as disbursement is concerned, UP disburses Rs.4,000 less per Shishu loan as compared to national average.

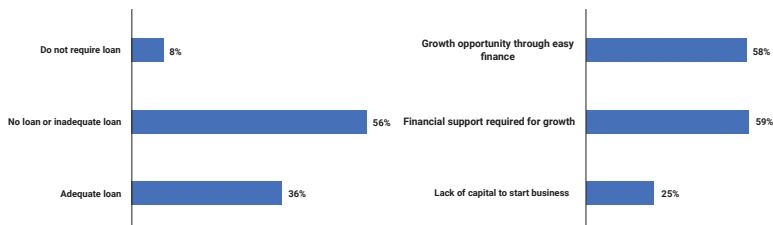


**Fig. 15.** Mudra loan- No. of accounts and amount per loan ('000)  
(Mudra, 2019-20)

This data highlights the systemic bias against micro enterprises in Shishu category for unspecified reasons. There is a possibility that bankers in UP may prefer to give relatively few large loans under MUDRA than many small loans under Shishu category. One reason for this practice is that big borrowers usually enjoy a good relationship with their bankers because of the high transaction value and credit history. This approach can be detrimental to the growth of entrepreneurship.

#### **(iv) Author's survey of rural population (2022)**

I surveyed more than 860 persons across the state to unearth their understanding of how lack of access to finance affects entrepreneurship. 56% of the respondents claimed inadequate or no credit access; 58% ranked availability of easy finance as a necessary factor for growth of enterprise and 59% sought financial support in any form to establish/scale up their business (Fig. 16).



**Fig. 16.** Access to finance as a constraint (Survey 2022)

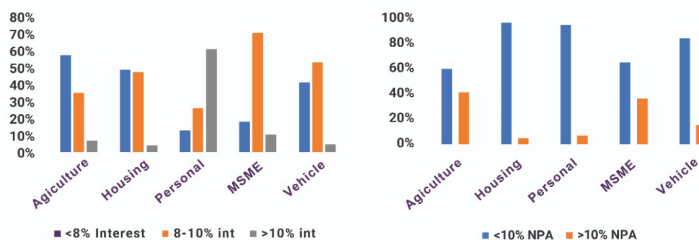
#### **(v) Author's survey of government officials and industry associations (2022)**

During my focused interactions with industry associations, two factors, namely access to finance, and high set-up cost of enterprises were dominantly identified as the main inhibitors of the growth of enterprises in the state. I had a detailed discussion with few industry associations and experts of MSME on this issue. Later, a webinar was also organised on this topic with about 80 members of various trade associations. The discussion with the industry members was very candid and many pertinent concerns were raised during the conversation. More than 30 members also filled a structured questionnaire on MSME growth.

Majority of government officials covered in the survey and focused interaction also felt that access to finance, and high set-up cost of enterprises, were primarily the two most important constraints in growth of micro enterprises in the state. Each district in Uttar Pradesh has an industrial centre called DIC which is headed by a government officer of the rank of general manager. Under the guidance of senior district bureaucrats, this officer facilitates the growth of MSMEs through effective coordination with all concerned and through implementation of crucial government schemes. In their responses, officials reiterated the access to finance and non-cooperation from banks as major constraints.

#### **(vi) High shadow price as evidence**

Bankers and other respondents informed that the average rate of borrowing for businesses (MSME) was among the highest across all categories (Fig. 17). The rate was higher even after writing off bad loans (NPA) in this category. The higher risk-adjusted rate of lending increases the cost of finance and can make it inaccessible for entrepreneurs. Also, the high cost can also serve as a shadow price indicating frictions in the credit market.



**Fig. 17.** NPA and borrowing costs  
(Author-Survey, 2022)

The survey respondents expected >15% return from rural entrepreneurship which was significantly higher than the expected borrowing cost of about 8-10%. Point 5 specifies that in an efficient financial intermediation, the marginal cost of borrowing and marginal return should equalise. Usually in the growth stage, marginal profit  $\geq$  average profit, so we can argue that with an average profit of >15%, the marginal return would be even higher for new micro enterprises. Lower number of enterprises in UP despite the significant difference between expected return and cost possibly indicates the existence of credit constraint.

### Limitation of the study

My secondary and primary analyses present a convincing case that lack of access to finance is the single most important constraint in the growth of micro enterprises in UP. However, it is important to keep in mind that the study suffers from some limitations as well:

- I. The data analysed to reach the above conclusion is about 8-9 years old
- II. The survey data was collected from only 210+ which cannot be a representative sample size.
- III. Moreover, the four districts of UP I covered in my 2018 survey had lower economic base and development parameters. There could be some selection bias in such sample, and the findings may not be valid.
- IV. Analysis of MUDRA loans indicate a lower off-take of MUDRA in UP in terms of number of account and amount and we discussed that it provided evidence of constraint on supply side. There is an equally valid alternative argument of demand side bottlenecks. For sake of this study, we are limiting our attention to supply side issues.
- V. My surveys of 2022 were targeted directly to all the stakeholders (industry, associations, entrepreneurs, bankers, and government officials) but the sample may not be representative enough for generalisation of results. Overall, the analyses rely primarily on observational data (views and

opinions of stakeholders). However, it is important to highlight here that I have tried to triangulate the analysis with many supporting evidence and databases. So, if some issues are coming up persistently in every analysis, across time, then the issue must be relevant.

### **Top-down analysis of access to finance as a binding constraint**

Access to finance is measured by two dimensions: (1) whether people are financially included in the system, and (2) if financially included, is the access not affordable because of cost. I will go down the diagnostics tree (Fig. 10) to understand the causes of low access to finance in more detail, based on our survey data.

#### **Financial Inclusion**

Survey data (2022) reveal that only about 12% (7% in 2018 survey though in different contextual setting) respondents reported not having any relationship with bank or using any financial product. . But both (which both?? Pl name them) the surveys identified high financial inclusion of the respondents. Similarly, only 3% respondents in 2022survey informed having no bank in their vicinity. These facts indicate that inclusiveness in the financial system and availability of bank are not a concern for most respondents.

#### **High cost of financing**

The Bankers (Fig. 17) reported that the average interest on an MSME loan ranged between 8-10% or sometimes even higher. This rate is higher than rates of other loan categories such as housing, or agriculture. About 60% of our rural survey respondents also reported paying 8-12% or even more (20% respondents) interest on business loans. So, I will go down this branch to analyse possible reasons for high financing cost.

#### **Supply of funds**

Banks in UP maintain relatively higher deposit than the amount of credit disbursed. Therefore, supply of funds is not a cause for high financing cost. The CD ratio of UP is among the lowest ones in the country with an average of about 41% as compared to national average of 71%<sup>11</sup>. The lower CD ratio could be because of either lack of demand or lack of supply or both. Having ground experience in the area, I can vouch for co-existence of both demand and supply side constraints. I am focusing here on supply side issue, and low CD ratio possibly indicates either bad local finance or ineffective intermediation. The three possible reasons for bad local finance are: (1) low competition in banks, (2) high (perceived) risk of micro enterprises, and (3) high cost of acquiring funds for banks.

## High cost of acquiring new funds

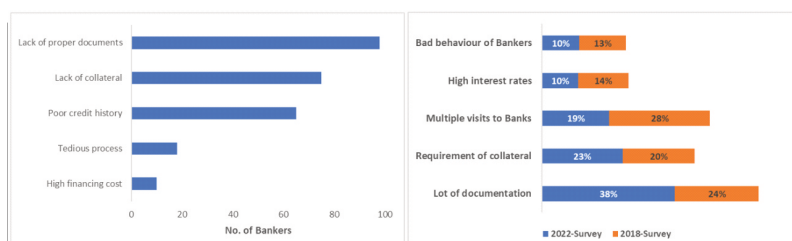
The average savings rate in Indian banks is around 2-4% and current account earns no interest. These two categories of accounts -- savings and current -- account for nearly half of all deposits in Indian banks<sup>12</sup>, reducing their cost of acquiring funds significantly. Therefore option (3) in above para (V.27), can be ruled out.

## Low competition

As regards low competition among bankers, nearly 40% respondents of rural survey (2022) reported that they have access to only one bank (37%) or no bank at all (3%). Access to only one bank can be detrimental to the prospects of borrower because it gives monopoly and discretion to the concerned branch. Even if official rate of interest of a particular loan may be fixed by the bank in general, shadow cost (in form of multiple visits, or payment to different agents) could still be higher for small borrowers.

## High (perceived) risk of micro enterprises

Majority of bankers admitted that the NPA in business and MSME loans were quite high, increasing their riskiness (Fig. 17). Also, when asked about reasons for low access to finance for micro entrepreneurs, bankers identified lack of documentation, collateral, and poor credit history as main reasons (Fig. 18). These or similar reasons were also highlighted by all the other stakeholders such as association members and government officials. Entrepreneurs also indicated that multiple visits to banks, excessive documentation, and requirement of collateral were restricting their access to finance (Fig. 18).



**Fig. 18.** Reasons why MSMEs are denied loans: Response of Bankers (L), Borrowers (R)  
(Author-Survey, 2022)

<sup>11</sup>State-wise CD ratio, Nov 24, 2021, RBI, available at <https://m.rbi.org.in/scripts/PublicationsView.aspx?id=20795>, (Accessed: Feb 13, 2022)

<sup>12</sup>PTI, Sep 23, 2021, The Economic Times, available at <https://economictimes.indiatimes.com/industry/banking/finance/banking/bank-deposits-rise-12-per-cent-in-fy21-on-higher-casa-growth-rbi-data/articleshow/86457041.cms>, (Accessed: Feb 14, 2022)

It is true that as part of their risk mitigation strategies banks ask borrowers for all kinds of documentation, collateral, or credit history. The banks are much more demanding of MSMEs and micro enterprises borrowers who they find a little riskier. It might be a reason for low credit offtake in UP (low CD ratio, or low MUDRA offtake).

The Probit model of conditional probability reveals that location of branch (rural) and risk-averseness of bankers are negatively associated with credit disbursal (Box-1 & Table 5). The Table shows the change in probabilities of a branch having high CD ratio depending upon change in one of regressors keeping others constant. Now it is quantified that a rural branch is 14% less likely to have high CD ratio (market effect) than a non-rural branch, a branch where manager spends at least an hour per day reviewing existing loan applications is 36.4% more likely to have high CD ratio, and a branch where manager feels that high NPA will hurt his career is 16% less likely to have high credit disbursal.

**Table 5.** Conditional probabilities based on Probit model (High CD ratio)

| <b>Regressor (<math>X_i</math>)</b> | <b>Change in Probability when <math>X_i=1</math></b> | <b>Statistically significant result and level of significance</b> |
|-------------------------------------|------------------------------------------------------|-------------------------------------------------------------------|
| Rural branch                        | <b>-14.00%</b>                                       | Yes (90% significance)                                            |
| Time reviewing loan applications    | <b>+36.40%</b>                                       | Yes (99.9% significance)                                          |
| NPA is bad for career progression   | <b>-16.37%</b>                                       | Yes (95% significance)                                            |
| NPA more than 10%                   | -7.6%                                                | No                                                                |
| Time acquiring new borrowers        | +9.86%                                               | No                                                                |
| More loan is good for career growth | +11.78%                                              | No                                                                |

It is also interesting to notice that penalty of high NPA has statistically significant negative impact on credit disbursal, but incentives of more loan disbursal does not have statistical significance. This finding probably indicates an incentive misalignment (point V.4 of this study) and risk-averse attitude of branch managers towards new loans. If true, it provides an important insight for analysing access to finance as a constraint for entrepreneurs.

Therefore, it can be argued that bankers perceive MSME borrowers as risky candidates. Hence, because of their risk-averse nature, bankers shy away from lending loans to this segment of borrowers. This can possibly explain why all the previous analyses have highlighted access to finance as a constraint. In continuation, the pruned diagnostic tree with probable causes of low entrepreneurship is given below (Fig. 19):

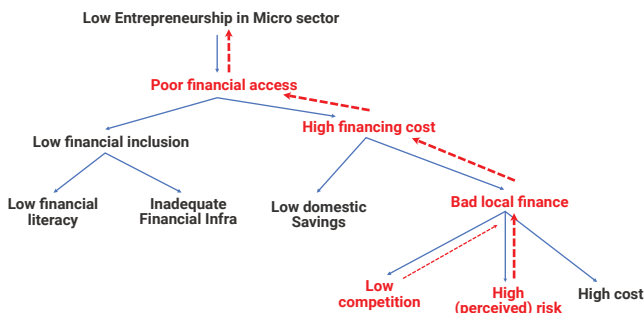


Fig. 19. Diagnostics tree with upward channel of constraints

### Box 1: Probit model for conditional probability of a branch having high or low CD ratio

I have used a non-linear probability function (Probit) to model the conditional probability of a branch having high or low CD ratio. Let's assume that the binary outcome for a branch is whether the branch has higher or lower CD ratio than the state average (values 1 and 0 respectively). In our sample of branches, 60% of sample will be classified as high CD ratio branches. I postulate that high CD ratio (or high credit disbursal) may depend upon the following factors: (1) location of the branch -- rural or otherwise (proxy for market or business opportunities); (2) existing level of NPAs in the branch (high NPA= poor credit history); (3) efforts of branch manager to review existing loan applications and acquire new borrowers; (4) Incentive: Is high loan good for the manager's career? and finally (5) Penalty: Is high NPA bad for the manager. The model is specified as below:

$$high\_cd = \beta_1 * rural + \beta_2 * high\_npa + \beta_3 * time\_review + \beta_4 * time\_new + \beta_5 * loan\_good + \beta_6 * npa\_bad + \varepsilon \dots \dots \dots (7)$$

where: high\_cd= 1 if the branch has high CD ratio (>40%); rural= 1 if the branch is rural; high\_npa=1 if the NPA percentage in the branch is higher than 10%; time\_review = 1 if branch manager spends at least more than 1 hour per day to review loan applications; time\_new = 1 if branch manager spends at least more than 1 hour per day to acquire new borrowers; loan\_good=1 if branch manager feels that disbursing more loan is good for his career; and npa\_bad= 1 if the branch manager feels that high NPA is bad for his career.

Based on above specification, the population probit model is specified as follows:

$$P(high\_cd = 1 | rural, high\_npa, time\_review, time\_new, loan\_good, npa\_bad) = \Phi (\beta_1 * rural + \beta_2 * high\_npa + \beta_3 * time\_review + \beta_4 * time\_new + \beta_5 * loan\_good + \beta_6 * npa\_bad) \dots \dots \dots (8)$$

Where P(.) is a conditional probability of branch having high CD ratio (or disbursing more loans) and (.) is the cumulative standard normal distribution

function with  $z = \text{RHS of (7)}$ . In the above regression specifications, is the effect on  $z$  of a one-unit change in regressor  $X_i$ , holding constant all other regressors. The regression result is shared in appendix 3. As expected, it is observed from the results that a rural, or a high-NPA branch has negative relation with credit disbursal. Similarly, if the manager feels that high NPA will adversely affect his career progression, his branch is less likely to have high credit disbursal. If manager spends more time reviewing loan applications and acquiring new borrowers, or if manager feels that giving more loans will boost his career, then his branch is more likely to have high credit disbursals. The statistical significance, however, is of three regressors only: rural location of the branch (at 90% significance level), time spent on reviewing existing loan applications (at 99.9% significance level), and bad effect of high NPA on career (at 95% significance level). To make more meaningful statistical inference, we need to calculate probabilities ( $z_0$ ) and ( $z_1$ ) by changing value of one regressor while keeping all other elements constant. It will help us understand the difference in the overall probability of a branch having high CD ratio when we say change the location of branch from urban to rural, or when the branch manager starts giving more time to review loan applications than performing routine administrative work.

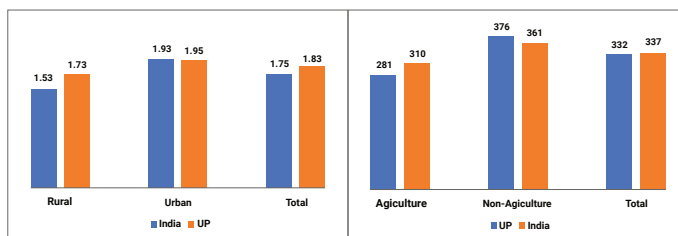
## **6. Analysing low return as a key constraint for low entrepreneurship**

In the previous section, I analysed access to finance as a major constraint in the growth of entrepreneurship in UP. This section tries to understand if there is evidence of low return or perception of low return in this sector which prevents the potential entrepreneurs from establishing their own businesses. In this pursuit, I will rely upon primary data sources and analyses of NSS data to understand the ROI concern.

### **Is economic return low in micro enterprises?**

#### **(i) Employment level (quantity effect)**

It is noticed that the average employment per firm in UP is higher than the national average, possibly indicating a higher productivity of the firms (Table 2 and Fig. 8). In rural areas, UP firms on an average employ 1.73 people per firm against the national average of 1.53 while the employment per firm in urban areas are roughly comparable (Fig. 20). The higher number of employment (quantity effect) indicates the possibility of higher profit in the sector. But the number can also be higher because of disguised employment in the state. To rule out the latter, we should also look at the wages offered (price effect) ascertaining the comparative level of wages earned in non-farm sector.



**Fig. 20.** Employment per firm (L) and average daily wage (R)  
(NSS & CMIE, 2021-22)

## (ii) Wage level (price effect)

The average daily rural wage rate in non-farm areas in UP is marginally higher than the national average while the wage rate in agriculture is significantly lower in UP (Fig. 20). The total wage in the given Fig. is simple average of agriculture and non-agriculture. The Fig. highlights that non-farm workers in rural UP earn more than the national average. UP was ranked 8th among 19 states whose data was available for the given period. The higher wage, coupled with higher employment per firm (point VI.1) validates that 'realised' profitability should not be a major constraint.

## (iii) Evidence from Enterprise Survey (2014)

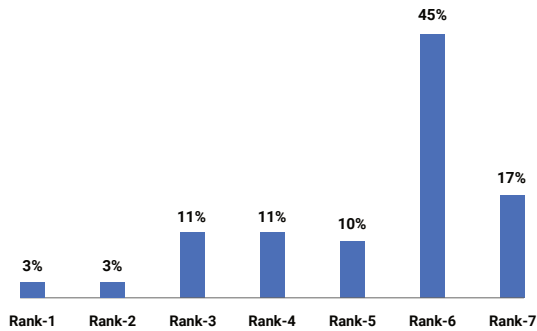
In terms of average annual revenue and cost, the firms of UP stood at 7th rank out of the 23 states surveyed. The profitability was very high for UP firms (ranked 2nd) as compared to other states. The median profit of firms in UP, however, is very low as compared to the average profit which highlights the potential inequity in growth of firms in the state. The sample size was not big enough to segregate it district-wise or activity-wise, but the indicative summary of the analysis is that firms in UP have a fair level of profitability with some inequity. The inequity could be for various reasons such as activities of high-profit firms, their regional location in the state, number of employees, etc.

In UP, large, medium, and small firms earn relatively larger proportion of their revenue from exports (28.8%, 11.6%, and 4%) as compared to the national average 15%, 7% revenue, 2.4%. This finding indicates that small firms are less export-oriented in general across country but firms in UP are more export driven on an average. Higher export orientation also highlights relative higher efficiency of sampled UP firms.

## (iv) Surveys of various stakeholders (2022)

Majority of bankers (62%) responded that profitability of micro enterprises is not a concern at all. For only 5-6% bankers this was one of the top two concerns (Fig. 21). Since bankers are supplier of funds, it is important to acknowledge that they may have a better understanding of the viability of a

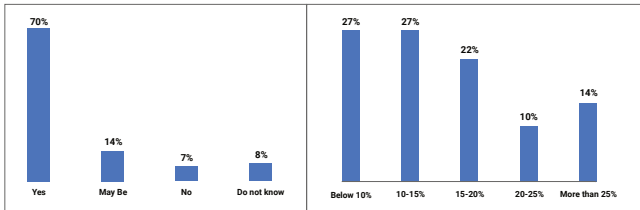
business unit. Additionally, bankers also have their finger on the pulse of the local economy through their due diligence.



**Fig. 21.** Do you find profitability as a concern  
(Author-survey, 2022)

The formal and informal interactions with industry association and district government officials also emphasised that running own businesses in rural areas are profitable. Only about 8% of the association members had reservations on the profitability of micro units in the state. Similarly, less than one in four district officials reported it to be a constraint. I inquired about the reason for proportionately more district officials, unlike other stakeholders, observed low profitability as a constraint. It was clarified that the higher cost of borrowing for such entrepreneurs affected the profitability. Therefore, it was more of an issue of costly credit. This relationship between access to finance and profitability has already been argued in this study at point V.3.

The most important source of information for this analysis is the views of the existing and potential entrepreneurs. A whopping 70% of sampled population informed that they found running their own business in rural area to be actually profitable (Fig. 22). To get a sense of profitability, they were also asked to report the expected or realised profit. About 73% of respondents mentioned that the usual profit rate was above 10%; 46% of them saying that it was above 15%. These profit rates were significantly higher than the average borrowing cost for entrepreneurs.



**Fig. 22.** Is owning a micro enterprise profitable (L)and what is the profit rate (R)  
(Author-survey, 2022)

In addition to profitability and expected profit rate, the rural people were also asked about their preference for staying in a village and owing a business or migrating to a city and earning comparable income in form of salary (cost adjusted). 43% of sampled population preferred to stay in village and running their own business while 16% mentioned farming as their preferred choice. The remaining respondents preferred to get a job in a different state (12%) or in a bigger city of UP (29%).

It became important to profile the respondents for the above two questions, based on available demographic information such as gender, age, education, marital status, expectation of profit in business, location of residence, and level of employment. The Probit model specifications of equation (7) and (8) (box 1) were suitably adjusted as follows:

$$P(buss\_benef = 1 | grad, married, youth, male, rur\_res, unemp, high\_exp, self\_emp) \\ = \Phi(\alpha_1 * grad + \alpha_2 * married + \alpha_3 * youth + \alpha_4 * male + \alpha_5 * rur\_res \\ + \alpha_6 * unemp + \alpha_7 * high\_exp + \alpha_8 * self\_emp) \dots \dots \dots (9)$$

And,

$$P(vill\_good = 1 | grad, married, youth, male, rur\_res, unemp, high\_exp, self\_emp) \\ = \Phi(\gamma_1 * grad + \gamma_2 * married + \gamma_3 * youth + \gamma_4 * male + \gamma_5 * rur\_res \\ + \gamma_6 * unemp + \gamma_7 * high\_exp + \gamma_8 * self\_emp) \dots \dots \dots (10)$$

Where P(.) are conditional probabilities and (.) are respective cumulative standard normal probability distributions. Buss\_benef=1 if respondents mention running own business as beneficial, grad=1 if respondents has at least bachelor's degree, youth=1 if respondent is 18-25 years of age, rur\_res=1 if the residence is in rural area, unemp=1 if respondent is unemployed, high\_exp=1 if respondent expects at least 20% profit in his business, and finally self\_emp=1 if the respondent is running his or her own business. The regression results are shared in appendix and the probability tables are appended below for information.

Table 6 provides conditional probability of diverse set of demography which finds that doing own business in village is profitable. Table 7 explores conditional probability around the second question, namely, who would prefer to stay in village across same demographic diversity.

**Table 6.** Conditional probabilities based on Probit model (Is doing own business profitable?)

| Regressor (X <sub>i</sub> )             | Change in Probability when X <sub>i</sub> =1 | Statistically significant result    |
|-----------------------------------------|----------------------------------------------|-------------------------------------|
| Graduate or Post-graduate               | +0.4%                                        | No                                  |
| Married                                 | <b>+2.0%</b>                                 | Yes (at 95% significance level)     |
| Youth (18-25 years)                     | +0.8%                                        | No                                  |
| Male                                    | <b>+1.8%</b>                                 | Yes (but at 90% significance level) |
| Living in village                       | <b>+6.3%</b>                                 | Yes (at 99.9% significance level)   |
| Unemployed                              | +0.1%                                        | No                                  |
| Have high profit expectations (>20% pa) | <b>+4.0%</b>                                 | Yes (at 95% significance level)     |
| Running own business                    | +1.0%                                        | No                                  |

**Table 7.** Conditional probabilities based on Probit model (Who prefers to stay in village?)

| Statistically significant result        | Change in Probability when $X_i=1$ | Statistically significant result    |
|-----------------------------------------|------------------------------------|-------------------------------------|
| Graduate or Post-graduate               | +0.8%                              | No                                  |
| Married                                 | +1.6%                              | No                                  |
| Youth (18-25 years)                     | <b>-16.3%</b>                      | Yes (at 99.9% significance level)   |
| Male                                    | +2.6%                              | No                                  |
| Living in village                       | <b>+9.5%</b>                       | Yes (at 95% significance level)     |
| Unemployed                              | +0.4%                              | No                                  |
| Have high profit expectations (>20% pa) | <b>+8.6%</b>                       | Yes (but at 90% significance level) |
| Running own business                    | +5.2%                              | No                                  |

The above results offer three most important insights: (1) almost all categories of people find 'running own business' profitable, especially those who are male, married, living in village and those who have high expectation of profit; (2) the youth does not find entrepreneurship profitable and does not want to stay in the village. In fact, they are 16% more likely to leave the village for urban jobs than other categories; and (3) people with high expectation of profits (>20%) not only are more likely to find own business profitable, they also are more likely to stay back in village and run their own business. Findings (1) and (2) indicate the possibility of high profitability in rural enterprises in UP (this corroborates with WB enterprise survey analysis) but still the youth do not want to stay in the village and want to move out to cities for job probably because of low perception of entrepreneurship. This behavioural trait of the youth was also highlighted by the association members in their focused group-interviews when they pointed out that even their own children did not want to continue their businesses or did not want to start something new.

The analyses so far highlight that we do have quantity and price signals, along with qualitative inputs that firms in UP are relatively more productive and profitable; still the youth may not find it attractive enough. Enterprise Survey of World Bank validates the findings of NSS 73rd round (2015-16) about profitability. My own survey also reaffirms that none of the stakeholders find profitability or low return as an important constraint in the growth of micro enterprises in the state. However, we have noticed that the youth in rural areas prefer a job to running their own business. This observation compelled me to dig a little deeper down the diagnostic tree (Fig. 8) to know if the aversion of youth is perception based or whether it is founded on some frictions which may be preventing the realisation of profits.

## **Economic return: Survey of other constraints down the diagnostic tree**

The primary and secondary analyses in this study have highlighted several other important factors which have a bearing on the economic return and cannot be ignored. This section discusses all those points sequentially to prepare a holistic list of issues that may affect the growth of entrepreneurship in UP.

The analysis of economic census (2013) and shrug database identified that the availability of physical infrastructure (road, electricity) and access to market are associated significantly with level of non-farm employment in a particular village (Fig. 11 & Fig. 12). The effect of these factors may not be as pronounced as availability of bank branch, but it is not insignificant to be ignored. Therefore, even though a particular venture might be beneficial, realising that profit requires access to physical infrastructure and a market.

Enterprise Survey (2014) specified that despite having high average profits, smaller firms in UP complained the most about almost all aspects of infrastructure --physical or regulatory (Fig. 13). Nationally, 26% firms reported lack of electricity as a major or severe obstacle in their growth, but this proportion was strikingly high (70%) in UP. Similarly, while only a very small proportion of firms (3%) reported problems of telecom network nationally, 35% of small firms in UP found this issue severe. On similar lines, about 40% firms in UP reported issues of transport as a severe obstacle against only 9% average nationally. On the issue of soft infrastructure, 39% firms of UP observed that their workforce was not adequately skilled or educated while this proportion was much less (10-11%) country wide.

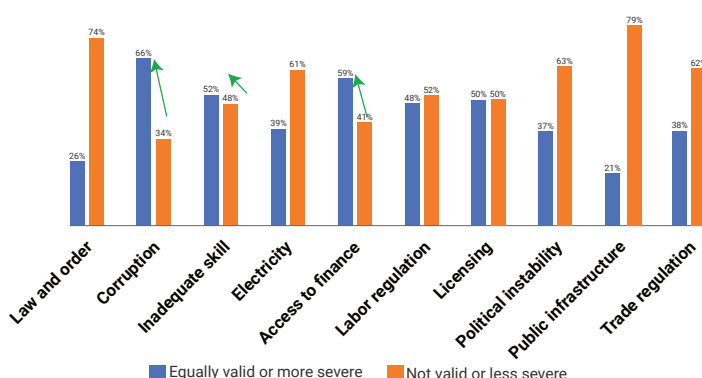
The proportion of firms finding a particular regulatory aspect constraining was very high (almost 2-3 times higher) as compared to the national average. Tax rate (64% small firms in UP), tax administration (51%), difficulty in obtaining licence or business permits (33%), stringent labour regulations (46%), and customs and trade regulations (32%) are some of the regulations which the firms in UP found severely constraining in their growth. The national averages of these regulatory categories were respectively 30%, 16%, 13%, 12%, and 9%. In addition to core business prospects, infrastructural constraints, and regulatory environment, the World Bank survey also captured the political dimensions (political instability, corruption, crime, etc.). Highest number of firms in UP (78%) reported corruption as a major or severe obstacle in their growth against the national average of 43%. Instability in politics was another concern for UP (40%) which was significantly higher than the national average (16%).

In addition to access to finance and high set-up cost (probably because of tedious compliance), district government officials further emphasised,

economic uncertainty in entrepreneurship, and lack of adequate skill/training as other possible constraints in the growth of micro enterprises in the state.

Association members and industry experts raised many concerns regarding misappropriation of the returns due to restrictive regulations (land and labour laws), and hidden corruption in the system. Interestingly, a common concern both in survey response and in the webinar was Lack of coordination and support from the system. Reportedly, associations lacked access to key decision-makers, and they were not involved or consulted during the process of policy formulation. There were other issues such as poor governance, neglect of micro and small enterprises, poor perception of a micro entrepreneur in the society, among others which were vocally highlighted by the members. I was curious to understand why both government officials and association members mentioned that set-up cost was a concern. I was told by many members that it was the combination of two factors: (1) requirement of several NOCs for few categories of enterprises which increase the compliance cost of a start-up; and (2) hidden corruption -- having to pay bribe to on-ground officials for getting necessary approvals. Because of these two reasons, members felt that high compliance cost would discourage the entrepreneurship. It is important to highlight here that the universe of micro enterprises may not require a lot of NOCs, and government has already digitalised many such services.

I also wanted to understand the current relevance of constraints highlighted by Enterprise Survey (2014). For this purpose, I presented the World Bank findings to the association members and asked them to respond to each of the constraints in four possible ways: (1) the concern of 2014 is valid even now, (2) Still valid but with lesser severity, (3) Still valid with higher severity, and finally (4) No more valid today. The findings of this analysis are shown below (Fig. 23):



**Fig. 23.** Current relevance of enterprise survey findings  
(Author-Survey, 2022)

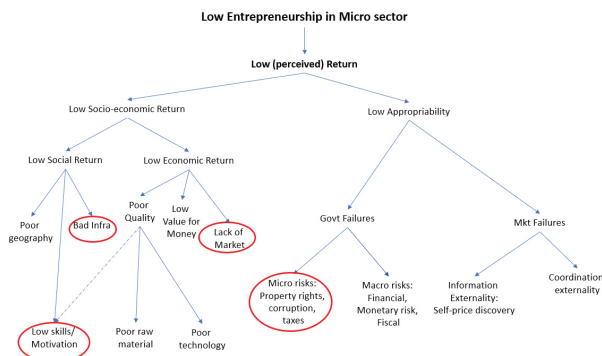
The association representatives were of the view that majority of constraints in the World Bank Enterprise Survey (2014) are either not valid in 2022, or they are less severe now than they were in 2014. Most visible improvements have happened in the availability of public infrastructure (including electricity), law and order, and political stability. However, members suggested that 'inadequately educated or skilled labour force', 'access to finance', and 'corruption' are either equally valid or even more pronounced as a constraint in 2022 as compared to 2014. If we recall from the previous section, nearly 78% of sampled small firms in UP had identified corruption as a major concern. Rise in this number even further (as suggested by views of association members in this survey), if truly indicative of reality, is an alarming concern for the government.

Bankers identified high set-up cost, lack of entrepreneurial skills, and lack of market potential or access to market as three most important constraints in the growth of micro enterprises. Entrepreneurship being a risky business was ranked lowest as a constraint. Interestingly, other stakeholders (government officials and association members) have also highlighted set-up cost and market as key constraints in their respective exchange of views. This has been explored in detail in the earlier discussion (VI.17).

The rural respondents were indirectly asked about crucial factors to increase or realise the profit in entrepreneurship. Besides access to affordable finance, respondents identified reduction in cost-structure (19%), access to market (19%), and reduction in misappropriation (12%) as enabling factors to increase their profit.

The survey asked the respondents to identify key constraints in the growth of entrepreneurship and micro enterprises in UP. The unemployed youth, and entrepreneurs predominantly highlighted lack of good quality public infrastructure, and market potential and access as two most important obstacles in growth of entrepreneurship other than access to finance. This finding was in sync with what other stakeholders and previous analyses have claimed in this study.

Succinctly, we observe that although the realised or perceived economic returns may not be a major constraint in the growth of entrepreneurship there are few identified groups of concerns, down the diagnostic tree, such as infrastructure, skill and motivation, market access, and misappropriation which may be inhibiting the proper growth of enterprises (Fig. 24). Relaxing these constraints will definitely unlock the potential of micro sector further and encourage more entrepreneurial ventures in rural India.



**Fig. 24.** Other important constraints in the diagnostic tree

## 7. Summary of the analysis of binding constraints

I have conducted this analysis incorporating multiple datasets and perspectives. I started the analysis with Shrug database which also has compiled data from Economic Census 2013. Then I analysed the Enterprise Survey, 2014 conducted by the World Bank. Both these datasets are 7-8 years old which may not represent the true picture as it exists today in the state. So, I consulted the stakeholders through focused-group interviews, webinars, telephonic calls, and large-scale surveys. I also used the data of my 2018 survey to validate some of the points noticed in current analyses. All these analyses have been carried out to triangulate the findings and cross-validate them with each other to rule out or limit the impact of possible biases in any study. This cross-validation is done in anticipation that if every study (intertemporal, and across stakeholders) points to a specific narrow set of binding issues, those issues must be important.

Section V details the analysis of finance as a potential binding constraint. I specified that with adequate controls and fixed effects, the availability of bank branch (access to finance) was associated with 1.5x non-farm employment in a UP village, *ceteris paribus*. Then I analysed the World Bank data and validated it with other surveys on access to finance as a constraint (or, at least people believed so) holding up the growth of entrepreneurship. The channel of transmission in this part of analysis was that bankers perceive it risky to lend to micro entrepreneurs. There is a lot of ancillary requirements (documentation, collateral, credit history, etc.) which make the accessibility costly and difficult. In addition, I also highlighted that the bankers are usually risk averse which affects the credit growth in the area. It is important to emphasise that the conclusion of this section was largely relying upon observational data which may not be very accurate. Hence, declaring access to finance as the main binding

constraint under given set of analysis may seem a little farfetched. Therefore, it was even more important to include other identified constraints in the analysis.

Section VI analysis of low economic returns as a potential source of constraint. Based on the evidence presented in the section, it was concluded that the low economic return was not a primary concern of any stakeholder, although few concerns were identified to improve the existing institutional and business environment. Respondents specified that market access and potential improvement in public infrastructure, inadequate skills and motivation, misappropriation, and lack of coordination with government agencies may require some improvement to make the policy reforms more holistic. Additionally, it was also pointed out that countering the low perception of entrepreneurship might attract a lot of talented youth in this segment.

Finally, on the relative merit of the presented analyses it is fair to assume that access to finance is a much more serious constraint than the economic return, but the latter should not be ignored. I would claim that we do not have a very strong case for any one aspect (finance or return) being absolutely binding but as per available data and assumptions, finance definitely seems to outweigh the return on a relative scale. The next section of policy recommendations adopts this approach by focusing more on relaxing financial constraint first and then adequately dealing with other crucial non-financial constraints to offer a holistic reform solution.

## **8. Policy recommendations**

### **Overcoming the constraint of access to finance**

The major obstacles in improving access to finance has both demand and supply side frictions. Bankers, on the supply side, are wary of riskiness of the project. They demand a lot of documentation and/or guarantees. Borrowers, on the demand side, particularly new entrepreneurs lack collateral or documentation or credit history. And this imbalance creates friction in financial intermediation.

The government has already implemented MUDRA scheme which tries to address many of the identified constraints. For example, high interest rates have been regulated, web-portal facility is offered to avoid multiple visits to bank, loans are offered collateral-free for all categories, and credit history is being built in the system. With all of these features, there should have been adequate credit saturation in the state for micro enterprises but that has not happened. There could be two reasons for this situation: incentive misalignment (supply side constraint) and lack of awareness (demand side issue).

In my survey, surprisingly, 78% of the respondents had wrong information or no information at all about MUDRA. Only 28% of sample

population had correct information about MUDRA scheme. The lack of awareness was more or less similar for other schemes (ASPIRE, SFURTI, PMEGP -- all targeted at promoting rural entrepreneurship, self-employment, and innovation) as well which highlighted a big demand side issue.

In view of the above, I propose the following recommendations to deal with two key issues in access to finance: (1) perceived risk and (2) lack of awareness (Table 8).

**Table 8.** Recommendations for relaxing financial constraints

| Major issue                                                     | Sub-issues                                          | Recommendation                                                                                                                                                       | Nature of commitment |
|-----------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| <b>High (perceived) risk in giving loans to micro borrowers</b> | a) High NPA or poor repayment                       | Loan guarantees by government; payment flexibility offered to micro borrowers (weekly or fortnightly than monthly)                                                   | Financial            |
|                                                                 | b) Low collateral                                   | Loan guarantees and refinancing of micro loans by state/central government                                                                                           | Financial            |
|                                                                 | c) Lot of documentation (with scrutiny taking time) | -Prepare a 'standard documentation list' and get it uploaded through an App using business correspondents.<br>-One integrated financing scheme                       | Non-financial        |
|                                                                 | d) Multiple meetings/visits of borrower             | Business correspondents to take care of documentation at doorstep. Borrowers need to visit only at final approval stage.                                             | Non-financial        |
|                                                                 | e) High cost of borrowing                           | Interest rate subsidy on prompt repayment of micro loans                                                                                                             | Financial            |
|                                                                 | f) Inadequate skills in entrepreneurs               | Provide adequate training to entrepreneurs by existing training facilities and by app-based online modules. A pass grade may be required for sanction of MUDRA loan. | Non-financial        |
|                                                                 | g) Inadequate credit                                | Increase the cut-off of Shishu loan under MUDRA scheme.                                                                                                              | Financial            |
| <b>Awareness/ sensitisation</b>                                 | h) Low level sensitisation among bankers            | Capacity building and sensitisation workshops/ online modules for Incentive alignment with welfare mandate                                                           | Non-financial        |
|                                                                 | i) Low level awareness among people                 | Awareness camps and credit camps organised by banks and local leaders; One integrated financing scheme                                                               | Non-financial        |

Details on the implementation of few important recommendations are shared below:

### **1. Redesigning and effective implementation of MUDRA scheme**

- a. Increasing the cut-off of Shishu loan:** It is observed that average disbursement under Shishu scheme is only Rs.25,000-30,000 per unit. This amount may not be sufficient for a new entrepreneur, especially if he wishes to start a small capital-intensive unit or to start a unit with a little sustainable scale. I propose that the cut-off for Shishu loan may be raised to Rs. 100,000 from its current limit. This will benefit the micro entrepreneurs immensely as they reportedly suffer from inadequate access to credit. The state government may request the central government to make this amendment.
- b. Increasing the corpus of refinancing of MUDRA loan:** There may be requirement of additional fund under MUDRA for refinancing new loans. This may happen only in the case of over-subscription of new Shishu loans. The state government may coordinate with the central government and RBI, if required, or make suitable provisions (if legislatively possible) for this additional fund in their own budget.
- c. Interest subvention for prompt repayment:** To encourage micro entrepreneurship in the state by providing affordable finance, State government may like to offer 1-2% interest subvention to the eligible Shishu borrowers or entrepreneurs for establishing new units. This subvention will be given conditionally on maintaining good credit history. This reform will also possibly reduce the non-performing loans because of an incentive in repaying the loan.
- d. Ensuring end-use of funds:** To ensure that money given under MUDRA is used for appropriate purposes, a post-disbursement documentation can be institutionalised. The documents can be verified at local level by respective business correspondents and can be cross validated randomly by the concerned branch only on sample basis..
- e. Credit-plus approach:** The financial support under any scheme such as MUDRA should be formulated as credit plus programme which not only provides financial support but also imparts other required skills. Bankers and industry associations in their respective surveys identified lack of adequate (entrepreneurial) skills in prospective applicants or new enterprises. Every district in India has a government funded establishment named RSETIs (Rural Self-Employment Training Institutes). These establishments should be used extensively to provide basic and advanced modules of entrepreneurship to government beneficiaries or budding entrepreneurs. Trade related modules and business acumen (financial management, financial literacy, etc.) should also be delivered through these set-ups. Data

of trained entrepreneurs should be available with all concerned stakeholders, and it should be ensured that these committed individuals are saturated with credit under MUDRA.

**f. Support of BCs in loan process:** The vast talented network of banking agents can be used extensively in (1) spreading word-of-mouth awareness about MUDRA schemes, (2) surveying the village for interested applicants, and (3) assisting the applicants in their documentation. It will free-up crucial banking resources. Bankers will have more time reviewing loan applications, and borrowers will not have to worry about documentation or multiple visits to banks. Proper training for BCs could be arranged for this task. 82% of our sampled bankers have endorsed the idea of having additional manpower to increase credit disbursal to MSMEs.

**g. Support of BCs in NPA recovery and flexible repayment schedule:** Business correspondents who source loan applications can also be entrusted with the recovery of loans from borrowers. Since they are from the same village, they may have better follow-up with the borrower; repayment should be more frequent than monthly; it is often observed that micro entrepreneurs earn less and consume most of the earnings daily, especially in early stage of their business. It is always difficult for them to pay the equated monthly instalments in one go. It may not be feasible for banks to collect weekly loan repayment, but banking agents (such as BCs) may be deployed for the purpose and deposit the collection with the bank on designated days. Such agents usually have some collateral with banks so it is not likely that they will commit any fraud. Having weekly repayment schedule will ease the burden on the borrowers of giving one large sum every month; it will also be easier to monitor and counsel the delinquent borrowers frequently.

**2. Integrating all financing schemes:** Currently, there are various government schemes run by the central and state governments to provide financial support to micro enterprises. I propose that all such schemes may be merged to exploit the synergy of each other, reduce frictions in their monitoring and implementation, and increase general awareness.

### **Overcoming other crucial constraints**

In addition to access to finance, several other constraints such as lack of coordination, inadequate skills, public infrastructure, misappropriation, issue of perception, access to market were identified by various stakeholders. It is important to address them here in order to offer a holistic support to growth of entrepreneurship in the state. The additional recommendations for those concerns are offered below (Table 9):

**Table 9.** Recommendations for relaxing other constraints

| Major issue                                      | Sub-issues                                                                                                                                  | Recommendation                                                                                                                                                                                   | Nature of commitment |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| <b>Lack of coordination between stakeholders</b> | (a) The issues of micro enterprises are a lot different from those of small and medium. Micro entrepreneurs are not adequately represented. | Form a separate ministry (Ministry of Micro Enterprises, for example) or at least carve-out a new department under existing MSME ministry to take cognisance of this.                            | Non-financial        |
|                                                  | (b) The existing coordination machinery is not working efficiently                                                                          | Revitalising the district and regional level grievance redressal mechanism. Top bureaucrats, ministers, CM to take frequent meetings.                                                            | Non-financial        |
|                                                  | (c) No effective way to raise a grievance or seek redressal                                                                                 | Enable grievance raising features in the App designed for micro entrepreneurs. The grievance redressal to be monitored digitally.                                                                | Non-financial        |
|                                                  | (d) No consultation with stakeholders in formulating policies                                                                               | Form a state level empowered committee with wide representation of all stakeholders. Policy issue needs to be discussed here.                                                                    | Non-financial        |
| <b>Low perception of entrepreneurs</b>           | (a) Despite identifying own business as more profitable, youth may not find it "attractive"                                                 | -Constitute Best Entrepreneur award block/district/state wise: government offers recognition and funding<br>-Include 'Entrepreneurship' as a qualifying module in senior school (classes IX-XII) | Non-financial        |
| <b>Lack of access to bigger markets</b>          | (a) Limited market size in local market                                                                                                     | Export promotions and outward outlook                                                                                                                                                            | Financial            |
|                                                  | (b) Price and cost efficiency                                                                                                               | Micro clusters based on comparative advantage (economic complexity model)                                                                                                                        | Financial            |
|                                                  | (c) Lack of unique offerings, value-for-money products                                                                                      | Rural incubation centres for promoting innovation and bringing                                                                                                                                   | Financial            |
| <b>Availability of data</b>                      | (a) Data on Micro entrepreneurs are very scarce and usually outdated.                                                                       | Conduct frequent rural surveys to collect valuable information on trends and progress of micro entrepreneurship in the state.                                                                    | Non-financial        |

Details on the implementation of few important recommendations are shared below:

### 1. Facilitating better coordination:

**a. Separate Ministry (or department) for micro sector:** The challenges of micro enterprises, which are largely proprietary firms with 1-3 employees and 90% of all MSMEs, are very unique and easily tractable. I propose to separate the micro sector from MSME and create a different Ministry for Micro Enterprises. This ministry will be responsible for coordination of all

existing schemes in the sector. Ministry of Micro Enterprises will also promote formation of groups and associations of micro enterprises in every district for effective coordination. If it is not feasible to create a separate ministry for some reason, then at least a different department headed by a senior bureaucrat should be formed under MSME ministry for the said purpose.

- b. Rejuvenating the existing coordination system:** It is reported by various stakeholders that the coordination with government at the district level and the state level has been very ineffective primarily because of lack of interest from top administrative and executive leadership. It is recommended that district and state level grievance redressal forums like Udyog Bandhu should be reactivated with full vigour to provide platform to the business community for raising any concerns and offering suggestions. Member of Parliaments (MPs), Minister of MSME, and the Chief Minister should also chair the respective district and state level meetings occasionally to get direct feedback from industries. There should be a centralised portal to track the progress of grievance redressal of various concerns raised at different forums.
  - c. State level empowered committee comprising stakeholders:** During informal interactions with few association members, it was pointed out that many government policies, with all its best intents, are designed and formulated without consulting the MSME bodies or entrepreneurs. I propose that an empowered committee should be formed at the Ministry level with representation of many regional associations, industry experts, academicians, and government officials. The proposal for any reform should be sourced from wider consultation, discussed in this group, and pilot tested, if required, before launching it at the state level.
- 2. Local incubation centres:** The state government should plan local incubation centres, as per demand, in villages or towns in various districts to provide holistic ecosystem for the growth of entrepreneurship. This can be done in public-private partnership mode as envisaged by the National Small Industries Corporation -- Training-cum-Incubation Centre (NSIC-TIC). The purpose of these incubation centres would specifically be to assist low-skill mass manufacturing units to attain the requisite skillsets in launching and sustaining manufacturing enterprises at the micro level.
- 3. Export promotion and outward outlook:** Access to market was flagged by many stakeholders in their feedback. We need to broaden the market potential of our products by making them export oriented. There should be a conducive ecosystem for our micro industries to experiment in this space. Export promotion policies of the state should be framed with wider

consultation and should provide special package (including but not limited to subsidised finance, better backward linkages, etc.).

**4. Micro clusters based on comparative advantage:** It is very important to ascertain what our enterprises are producing and exporting because that 'has direct implication for our growth prospect' (Rodrik, Hausmann, and Hwang, 2006). The government has identified One-District-One-Product (ODOP) policy to protect and promote the uniqueness of each district. This scheme has been very instrumental in creating demand for these specific products in India and abroad. I feel that this scheme can further be revised, by accounting for market forces of demand and supply. We can estimate the relative comparative advantage (RCA) of each district and develop micro clusters to leverage that advantage. One way to estimate RCA is by calculating relative turnover (employment share) in any business activity and compare it with national average or benchmark it against international standards.

$$RCA_{d,p} = \frac{\text{District-}d\text{'s fraction of income or employment or export in product-}p}{\text{Benchmark } k\text{'s fraction of income or employment or export in product-}p}$$

The common understanding is that if a particular industry is employing many people in one particular activity or earning a lot from that activity, then there are chances that the particular activity in that concerned district is economically more active.

#### **Prioritisation of recommendations**

This paper has provided an exhaustive list of recommendations to overcome both financial and non-financial constraints. It may be difficult for the government to implement all of the recommendations simultaneously. Hence, this segment offers some insights into prioritising the same. In phase-1 of the implementation, I would suggest that the focus should be primarily on recommendations which require no major financial or administrative commitment. Phase-2 of implementation will take-up the recommendations with some moderate financial commitments with moderate organisational restructuring. The final phase will activate recommendations which require serious financial and administrative commitments. List of recommendations with their tentatively suggested phase schedule is appended in Table 10 (the government may use its own mechanism to prioritise them):

**Table 10.** Prioritisation of recommendations

| Policy recommendations                                                                                                                                                                                         | Phase  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Loan guarantees by government; payment flexibility offered to micro borrowers (weekly or fortnightly instead of monthly)                                                                                       | 3      |
| Loan guarantees and refinancing of micro loans by state/central government                                                                                                                                     | 3      |
| -Prepare a 'standard documentation list' and get it uploaded through an App using business correspondents.<br><b>-One integrated financing scheme</b>                                                          | 2<br>2 |
| Business correspondents to take care of documentation at doorstep. Borrowers to visit only at the final approval stage.                                                                                        | 1      |
| Interest rate subsidy on prompt repayment of micro loans                                                                                                                                                       | 3      |
| Provide adequate training to entrepreneurs at the existing training facilities and by app-based online modules. A pass grade in basic assessment of their learning may be required for sanction of MUDRA loan. | 2      |
| Increase the cut-off limit of Shishu loan under MUDRA scheme.                                                                                                                                                  | 3      |
| Capacity building and sensitisation workshops/ online modules for incentive alignment with welfare mandate                                                                                                     | 2      |
| -Awareness camps and credit camps to be organised by banks and local leaders<br><b>-One integrated financing scheme</b>                                                                                        | 1<br>2 |
| Form a separate ministry (Ministry of Micro Enterprises) or at least a new department under existing MSME ministry                                                                                             | 3      |
| Revitalising the district and regional level grievance redressal mechanism. Top bureaucrats, minister, CM to take frequent meetings.                                                                           | 1      |
| Enable grievance raising features in the App designed for micro entrepreneurs. The grievance redressal to be monitored digitally                                                                               | 2      |
| Form a state level empowered committee with wide representation of all stakeholders. Policy issue needs to be discussed here.                                                                                  | 1      |
| -Constitute Best Entrepreneur award block/district/state wise: recognition and funding<br>-Include 'Entrepreneurship' as a qualifying module in senior school (classes IX-XII)                                 | 1<br>2 |
| Export promotions and <b>outward looking policy for international trade</b>                                                                                                                                    | 2      |
| Micro-clusters based on comparative advantage (economic complexity model)                                                                                                                                      | 3      |
| Rural incubation centers for promoting innovation                                                                                                                                                              | 3      |
| Conduct frequent rural surveys to collect valuable information on trends and progress of micro entrepreneurship in the state.                                                                                  | 2      |

## Cost-benefit analysis of the recommendations

The cost-benefit analysis in this section just provides a very sketchy indication of how much benefit will potentially accrue from few focused interventions suggested in this report. Creating a culture of entrepreneurship, developing the micro enterprises, providing non-farm employment opportunities to the people, and developing public infrastructure are largely part of 'public good' which a government should anyway deliver.

The list of policy proposals and recommendations is heavily skewed towards incremental structural changes in the existing system with little or no financial implications. As mentioned in this study, the issues raised by various stakeholders are neither new nor require a new policy intervention. The existing schemes or policies of the government are already very ambitious and comprehensive. We only need improvement in their implementation with a redirected focus on identified set of constraints. With the implementation of suggested policy proposals, the state potentially may find a place among states with highest level of entrepreneurship. The details of assumptions made in estimating cost or benefits are shared in Appendix 8.

| Recommendations with financial implications                      | Estimate                                                                                                        | Benefits of reforms                                                                        | Estimate                                                                                 |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| <b>Interest subvention for micro borrowers</b>                   | Rs. 2 billion (Central government announced a similar scheme during COVID with an expenditure of Rs. 5 billion) | Increased employment through reforms and entrepreneurship                                  | 11 million new employments (5.3 million new enterprises * average 2x employees per firm) |
| <b>Refinancing or providing loan guarantees for micro loans*</b> | Rs. 10-15 billion* (Central government incurred about Rs. 100 billion nationally)                               | Vibrant state economy due to more firms                                                    | Rs. 6600 billion (5.3 million firms with average profit of Rs. 10000 per month)          |
| <b>Setting up rural incubation centers</b>                       | Rs. 1.5 billion (20 million per district*75 districts)                                                          | Let's assume that out of this only 20% were unemployed earlier => real addition in economy | Rs. 1320 billion (20% of above value)                                                    |
| <b>Annual expenses (awareness, training, etc.)</b>               | Rs. 150 million (2 million per district)                                                                        | Let's assume that government can tax 5% of this income (through GST, IT, etc.) => Revenue  | Rs. 65 billion (5% of above income)                                                      |
| <b>App</b>                                                       | Rs. 100 million                                                                                                 |                                                                                            |                                                                                          |
| <b>Total</b>                                                     | Rs. 13-17 billion                                                                                               | <b>Total</b>                                                                               | Rs. 65 billion                                                                           |

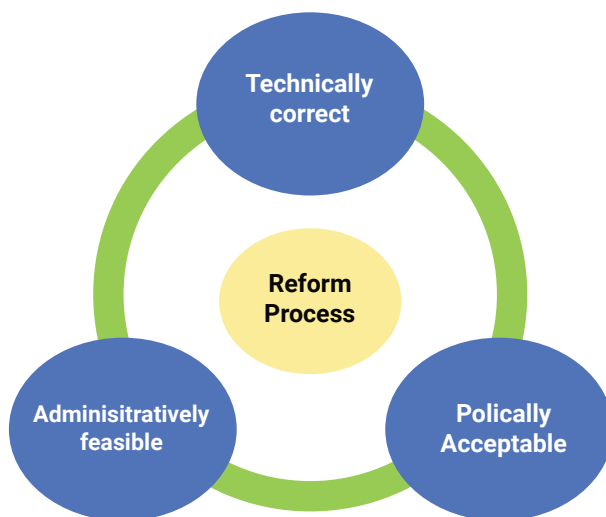
## The Trinity of policy reforms

The trinity of policy reforms suggests giving equal importance to all the three aspects.

Fortunately, this policy analysis has received guidance and support from the state's top leadership from time to time. The idea of such a study was discussed with Hon'ble Chief Minister. It was formulated by the Economic Advisor to Chief Minister, and finally commissioned under the leadership of Additional Chief Secretary. Minister of MSME also provided his valuable guidance and support in this study. Therefore, it can be argued that there is a very high level of political acceptability of such reforms which claim to increase the non-

farm employment in a state like Uttar Pradesh. This objective gels perfectly with the growth agenda of the state government.

Secondly, the reforms suggested in the analysis are already formulated to keep the feasibility in mind. They are largely incremental in nature without disrupting or changing the existing structure of governance in a major way. So, the administrative feasibility of reforms should also be considered acceptable. However, even these incremental reforms may seem a little intensive to implement in spirit. Therefore, the draft of the report was shared with the government to understand the feasibility constraints and refine the recommendations accordingly. I am confident that with the given support and vision of the administrative leadership in the state, these reforms are doable for larger benefit.



Lastly, the analysis done in the paper reflects the opinions of the concerned people. My primary task was to listen to their concerns, present them in a coherent and analytical manner, and suggest improvement to overcome the identified gaps. I think I have tried to do justice with the task by reaching out to as many people as possible in different interest groups. Therefore, the technical correctness of the findings, and suggestions based on those findings may not be challenged.

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## Appendices

### 1. Map of Uttar Pradesh



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(<https://www.mapsofindia.com/maps/uttarpradesh/proposed-new-states.html>)

### 2. Result of OLS regression factors affecting non-farm employment (India and UP)

**Table 11.** Regression result: Factors affecting non-farm employment

|                         | India<br>Nonfarm<br>Emp | India<br>Manuf<br>Emp | India<br>Serv<br>Emp  | UP<br>Nonfarm<br>Emp  | UP<br>Manuf<br>Emp    | UP Serv<br>Emp        |
|-------------------------|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| lit                     | 0.011***<br>(-0.000)    | 0.010***<br>(-0.000)  | 0.014***<br>(-0.000)  | -0.002***<br>(-0.001) | -0.007***<br>(-0.001) | 0.001**<br>(-0.001)   |
| ln_consum               | 0.321***<br>(-0.011)    | 0.347***<br>(-0.013)  | 0.342***<br>(-0.011)  | -0.009<br>(-0.025)    | -0.041<br>(-0.031)    | -0.01<br>(-0.027)     |
| avg_power               | 0.020***<br>(-0.000)    | 0.022***<br>(-0.001)  | 0.022***<br>(-0.000)  | 0.021***<br>(-0.001)  | 0.019***<br>(-0.001)  | 0.022***<br>(-0.001)  |
| pc11_vd_tar_road        | 0.513***<br>(-0.006)    | 0.438***<br>(-0.007)  | 0.578***<br>(-0.006)  | 0.268***<br>(-0.011)  | 0.225***<br>(-0.013)  | 0.294***<br>(-0.011)  |
| tdist_50                | -0.012***<br>(-0.000)   | -0.013***<br>(-0.000) | -0.011***<br>(-0.000) | -0.005***<br>(-0.000) | -0.006***<br>(-0.001) | -0.004***<br>(-0.000) |
| branch                  | 2.068***<br>(-0.007)    | 2.110***<br>(-0.008)  | 2.115***<br>(-0.007)  | 1.463***<br>(-0.013)  | 1.391***<br>(-0.016)  | 1.529***<br>(-0.014)  |
| State FE                | Yes                     | Yes                   | Yes                   | No                    | No                    | No                    |
| District FE             | Yes                     | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   |
| Observations            | 3,43,257                | 3,43,257              | 3,43,257              | 59,949                | 59,949                | 59,949                |
| R <sup>2</sup>          | 0.483                   | 0.407                 | 0.483                 | 0.237                 | 0.179                 | 0.236                 |
| Adjusted R <sup>2</sup> | 0.482                   | 0.406                 | 0.483                 | 0.236                 | 0.178                 | 0.235                 |

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01 |

**Source.** Author's calculation; Shrug Database (Economic Census 2013)

### 3. Adequacy of credit access across different demography (Survey 2018)

**Table 12.** Mean difference and significance: Credit access (Survey 2018)

| rt                                                               | Inadequate Access |       | Adequate access |       | Test               |
|------------------------------------------------------------------|-------------------|-------|-----------------|-------|--------------------|
|                                                                  | N                 | Mean  | N               | Mean  |                    |
| <b>Gender</b>                                                    | 2799              |       | 1238            |       | <b>X2=4.357**</b>  |
| ... F                                                            | 568               | 0.203 | 288             | 0.233 |                    |
| ... M                                                            | 2231              | 0.797 | 950             | 0.767 |                    |
| <b>age</b>                                                       | 2799              |       | 1238            |       | <b>X2=37.6***</b>  |
| ... <25                                                          | 576               | 0.206 | 356             | 0.288 |                    |
| ... >60                                                          | 84                | 0.03  | 49              | 0.04  |                    |
| ... 25-40                                                        | 1420              | 0.507 | 566             | 0.457 |                    |
| ... 40-60                                                        | 719               | 0.257 | 267             | 0.216 |                    |
| <b>edu_level</b>                                                 | 2799              |       | 1238            |       | <b>X2=1.177</b>    |
| ... <12                                                          | 1000              | 0.357 | 440             | 0.355 |                    |
| ... <8                                                           | 1148              | 0.41  | 523             | 0.422 |                    |
| ... grad                                                         | 549               | 0.196 | 227             | 0.183 |                    |
| ... postgrad                                                     | 102               | 0.036 | 48              | 0.039 |                    |
| <b>source_income</b>                                             | 2799              |       | 1238            |       | <b>X2=33.363**</b> |
| ... Agri                                                         | 1604              | 0.573 | 696             | 0.562 |                    |
| ... Business                                                     | 246               | 0.088 | 116             | 0.094 |                    |
| ... Others                                                       | 73                | 0.026 | 77              | 0.062 |                    |
| ... Service                                                      | 876               | 0.313 | 349             | 0.282 |                    |
| <b>has_account</b>                                               | 2799              |       | 1238            |       | <b>X2=97.883**</b> |
| ... N                                                            | 124               | 0.044 | 163             | 0.132 |                    |
| ... Y                                                            | 2675              | 0.956 | 1075            | 0.868 |                    |
| <b>has_invest</b>                                                | 2799              |       | 1238            |       | <b>X2=4.509**</b>  |
| ... N                                                            | 2213              | 0.791 | 941             | 0.76  |                    |
| ... Y                                                            | 586               | 0.209 | 297             | 0.24  |                    |
| <b>credit_req</b>                                                | 2799              |       | 1238            |       | <b>X2=20.513**</b> |
| ... <50k                                                         | 959               | 0.343 | 463             | 0.374 |                    |
| ... >500k                                                        | 222               | 0.079 | 134             | 0.108 |                    |
| ... 200k-500k                                                    | 449               | 0.16  | 207             | 0.167 |                    |
| ... 50k-200k                                                     | 1169              | 0.418 | 434             | 0.351 |                    |
| Statistical significance markers: * p<0.1; ** p<0.05; *** p<0.01 |                   |       |                 |       |                    |

#### 4. Result of Probit model regression (CD Ratio)

**Table 13.** Result of Probit model regression (CD Ratio)

```
Call:
glm(formula = high_cdr ~ rural + high_npa + time_review + time_new +
    loan_good_job + npa_bad_job - 1, family = binomial(link = "probit"),
    data = banker)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-1.9926 -1.0553  0.6947  0.8649  2.0274

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
rural        -0.4185    0.2472  -1.693  0.090375 .
high_npa      -0.2143    0.2697  -0.795  0.426695
time_review   0.9514    0.2789   3.412  0.000646 ***
time_new      0.2557    0.2390   1.070  0.284784
loan_good_job 0.3038    0.2528   1.202  0.229473
npa_bad_job   -0.5026    0.2500  -2.011  0.044344 *
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

    Null deviance: 158.04  on 114  degrees of freedom
Residual deviance: 131.00  on 108  degrees of freedom
(49 observations deleted due to missingness)
AIC: 143

Number of Fisher Scoring iterations: 4
```

**Source.** Author's calculation; (Survey of Bankers in UP, 2022)

#### 5. Result of Probit model regression (Is running own business beneficial?)

**Table 14.** Result of Probit model regression: Is running own business beneficial?

```
Call:
glm(formula = benefit ~ grad + married + youth + rur_res + male +
    unemp + self_emp - 1, family = binomial(link = "probit"),
    data = rural)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-2.4320  0.3689  0.4469  0.6017  1.1354

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
grad         0.19779    0.13197   1.499  0.1339
married      0.28885    0.11689   2.471  0.0135 *
youth        0.11803    0.13021   0.906  0.3647
rur_res      0.64401    0.12351   5.214 1.85e-07 ***
male         0.26531    0.13662   1.942  0.0521 .
unemp        -0.05561    0.14586  -0.381  0.7030
self_emp     0.11212    0.14657   0.765  0.4443
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

    Null deviance: 977.34  on 705  degrees of freedom
Residual deviance: 558.81  on 698  degrees of freedom
(161 observations deleted due to missingness)
AIC: 572.81
```

**Source.** Author's calculation; (Survey of rural people in UP, 2022)

## 6. Result of Probit model regression (Preference to remain in village)

**Table 15.** Result of Probit model regression: Preference to remain in village

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| Call:<br>glm(formula = vill_good ~ grad + married + youth + male + rur_res +<br>unemp + high_exp + self_emp - 1, family = binomial(link = "probit"),<br>data = rural)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  |  |
| Deviance Residuals:<br>Min      1Q   Median       3Q      Max<br>-1.7016  -1.2047   0.8566   0.9847   1.5069                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |
| Coefficients:<br>Estimate Std. Error z value Pr(> z )<br>grad      0.02142   0.11553   0.185   0.8529<br>married   0.04129   0.10290   0.401   0.6882<br>youth     -0.46409   0.10936  -4.244  2.2e-05 ***<br>male       0.06634   0.12029   0.552   0.5813<br>rur_res    0.24183   0.11060   2.187   0.0288 *<br>unemp      0.01005   0.12523   0.080   0.9361<br>high_exp   0.21805   0.11484   1.899   0.0576 .<br>self_emp   0.13325   0.12388   1.076   0.2821<br>---<br>Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1<br>(Dispersion parameter for binomial family taken to be 1)<br>Null deviance: 921.89 on 665 degrees of freedom<br>Residual deviance: 869.11 on 657 degrees of freedom<br>(201 observations deleted due to missingness)<br>AIC: 885.11 |  |  |  |  |

**Source.** Author's calculation; (Survey of rural people in UP, 2022)

## 7. Summary of all the analyses

**Table 16.** Key findings of all the primary and secondary analyses

| Source                                        | Key findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Most important constraints                                                                  |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Shrug Database and the Economic Census (2013) | <ul style="list-style-type: none"> <li>• Significant importance of physical infrastructure (road, electricity); market and its access; and availability of banks for growth of non-farm employment.</li> <li>• Among all these factors, availability of bank (access a finance) provides most significant boost to growth in entrepreneurship and non-farm employment</li> </ul>                                                                                                              | 1. Access to finance<br>2. Public infrastructure<br>3. Access to market                     |
| Source                                        | Key findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Most important constraints                                                                  |
| Enterprise Survey, The World Bank (2014)      | <ul style="list-style-type: none"> <li>• The small firms in UP are relatively more profitable in India.</li> <li>• But they face a lot of constraints on both side of diagnostics tree.</li> <li>• Significant proportion of firms reportedly faces infrastructure, misappropriation, and finance as constraints in their growth.</li> <li>• About 3/4th of sampled firms identified electricity, corruption, tax rates, and access to finance as their major-to-severe obstacles.</li> </ul> | 1. Corruption or other misappropriation<br>2. Public infrastructure<br>3. Access to Finance |
| Source                                        | Key findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Most important constraints                                                                  |

| Survey in four districts in UP conducted by author (2018)                       | <ul style="list-style-type: none"> <li>• 21% respondents claimed not being able to have any access to finance.</li> <li>• 48% respondents had inadequate access to finance.</li> <li>• Major obstacles in accessing bank finance were: documentation, collateral, and multiple visits</li> </ul>                                                                             | Not Applicable (only analysed limited access to finance in detail)                                                                                                                        |
|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Source                                                                          | Key findings                                                                                                                                                                                                                                                                                                                                                                 | Most important constraints                                                                                                                                                                |
| Survey/focused interaction with government officials conducted by author (2022) | <ul style="list-style-type: none"> <li>• Majority of officials felt that access to finance, high set-up cost of enterprises, and riskiness and volatility in entrepreneurship were main constraints.</li> <li>• Officials cited non-cooperation from the banks in this regard.</li> <li>• Few district officials also pointed out lack of entrepreneurial skills.</li> </ul> | <ol style="list-style-type: none"> <li>1. Access to finance</li> <li>2. High set-up cost</li> <li>3. Perceived riskiness in entrepreneurship</li> </ol>                                   |
| Source                                                                          | Key findings                                                                                                                                                                                                                                                                                                                                                                 | Most important constraints                                                                                                                                                                |
| Survey/focused interaction with MSME associations conducted by author (2022)    | <ul style="list-style-type: none"> <li>• Access to finance, and high set-up cost of units were identified as the main constraints.</li> <li>• Association members did not feel that there was risk in doing business profitably.</li> </ul>                                                                                                                                  | <ol style="list-style-type: none"> <li>1. Access to finance</li> <li>2. High set-up cost (including compliance cost)</li> <li>3. Lack of coordination with government agencies</li> </ol> |

## 8. Details of cost and benefit analysis: Assumptions

### Benefits of reforms

To quantify the benefits, let us assume that we attain the national average of 45 accounts per thousand people from the current state level of 26 accounts under Shishu loans. This jump will benefit 3.8 million new borrowers in the state. With an average disbursement of about Rs.25,000-26,000 per loan account, the additional loans will be to the tune of Rs.100 billion in the economy of UP. Since we have plans to ensure end-usage of funds, we can assume that this Rs. 100 billion will be productively invested into the state economy over time, boosting investment and consumption.

An improved culture of entrepreneurship and its aspirational perception, along with a conducive environment would have cascading effect on sitting-on-the-fence youth -- pushing them to invest their own money, sourced from friends and family. If my survey is indicative of general preferences, the number of such people is about 40% of those who would go to bank. Their investment in the businesses will, potentially, add another Rs.40 billion (40% of 100 billion) to the state economy in form of productive asset than earning 2-3% in savings account.

It is estimated that average employment of SME enterprise in UP is about 1.84 per unit across all sectors (manufacturing, services, trades, etc.). For the sake of argument, even if the average productivity of firms in UP remains unchanged despite reforms, the increase in the number of firms itself will create employment for 3 million to 10 million people depending upon the number of units that come up. If we consider new MUDRA loans as proxy for entrepreneurship, then the number of firms in UP could go up by 5.3 million (3.9 million entrepreneurs from bank loans and 1.4 million from self-sourced financing). If, however, we go by the data of National Sample Survey, 73rd Round, which puts 45 firms per thousand people in UP vs. 52.2 nationally, then achieving the national average through host of reforms would add another 1.5 million firms in UP. The increased employment will generate Rs.30 billion to 100 billion in income for the employees and entrepreneurs which will boost the state economy through multiple channels further.

These additional benefits have been calculated without considering the indirect effects materialising from improved education and health of those who gain income support, backward and forward linkages, efficiency gain, improved law, and order.

### **Cost of reforms**

There is total of twenty-one recommendations (eleven related to access of finance, and ten to other constraints) offered in this paper. Out of these, about eight reforms may have some limited financial implications. Out of these eight, we should exclude the routine nominal expenses like media awareness (governments already spend significant amount on this), training and sensitisation workshops (I want specific additional modules to be delivered), few random surveys using government machinery, or development of an App. Out of remaining four, three relate to government financing programme: (1) Increasing the refinancing corpus of MUDRA scheme; (2) Increasing the cut-off of Shishu loans; and (3) Offering interest subventions. First, I personally think that (1) and (2) can easily be coordinated with the central government. The financial liability of these reforms will fall on the state government only if the central government falls short of designated fund to provide support, which is very unlikely. But should it happen, the amount of refinance for additional loans, over time, will not exceed Rs.10-20 billion (the central agency has refinanced to the tune of Rs.100 billion covering the entire country<sup>13</sup>. So, UP's share should be roughly 10% of it based on the number of accounts). Most importantly, this refinancing is an investment not an expense for the government.

I consider offering interest subventions as the most important direct intervention by the state government to reduce the cost of borrowing and increase the profitability of micro entrepreneurs. To get a hang of this intervention, I have taken a leaf out of the previous example. Here too the

central government announced a 2% interest subvention for all Shishu loan account holders in Aatm Nirbhar Bharat package (2020) due to COVID-19. MUDRA Annual report 2020-21<sup>14</sup> mentions that an expense of about Rs.5 billion was incurred on this subvention scheme. As the number of Shishu accounts in UP is around 10% of entire country the interest subvention cost should not exceed Rs.0.5-1.0 billion (considering more loan take-ups due to reforms). Even if calculate the subvention cost on roughly the entire Rs.100 billion additional loan (approximated in the benefits section), the 2% subvention should not cost more than Rs.2 billion in total.

The fourth proposal, which may have some financial implications, is about establishing rural incubation centres. The government has land and probably spare offices in every block of the state so the cost of establishing few incubation centres (let's say 2-3 per district in addition to RSETI) should not be more than Rs.1-2 billion. The need for brick-and-mortar incubation centres could be further reduced if government develops digital infrastructure (for example, an App. for micro entrepreneurs) and deliver general modules through the App. Only specific modules related to manufacturing or other technical skills may be imparted at these incubation centres. Initially, these training programmes may be organised at the existing RSETIs.

## **9. Further limitation and source of potential biases in the surveys**

### **Limitations of the World Bank survey**

There are possibly three limitations of this analysis:

1. The survey has identified 215 firms through stratified random sampling. The representativeness of firms may be questioned on the basis of sample size.
2. The survey was published in 2014, eight years ago. A lot of policy initiatives have taken place since then, especially in electricity, telecom, and roads. Additionally, corruption has decreased because of digitalisation and transparency. So, the validity of the identified obstacles may not exist.
3. Finally, the survey covered small firms with an employee base of 5-19, thereby virtually excluding most of the micro enterprises which have an average employee base of less than Therefore, the sampled firms may not be the best representatives of micro enterprises.

### **Limitation and biases in my surveys**

As discussed previously, due to a lack of good quality data I decided to build my own dataset by consulting with a wide variety of stakeholders on the

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<sup>13</sup><https://www.mudra.org.in/offering#:~:text=The%20refinance%20is%20available%20for,Shishu%2C%20Kishore%20and%20Tarun%20categories>

<sup>14</sup><https://www.mudra.org.in/offering#:~:text=The%20refinance%20is%20available%20for,Shishu%2C%20Kishore%20and%20Tarun%20categories>

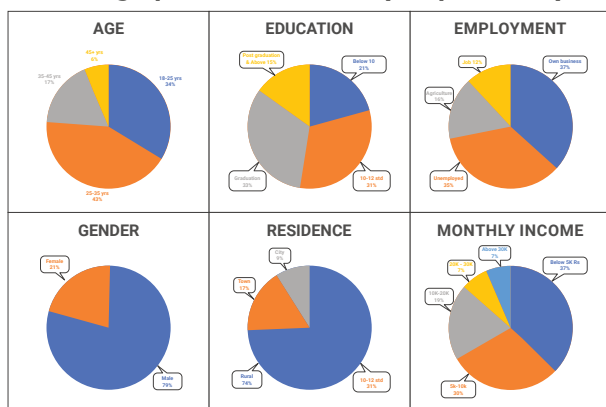
issue of growth of non-farm employment in villages. Given the paucity of time and resources, along with various other restrictions (including COVID-19 protocols), it was not possible to cover as many stakeholders as I would have liked to in normal course. Still, I managed to consult more than 70 association officials, 30+ district heads of government department, 160+ bankers and 860+ entrepreneurs in the state. The study was also supported by my previous anonymous survey (2018) with 4000+ respondents from four districts in UP.

These numbers may not truly represent the vast population, but the process of 2022 survey was completely random. The links for bankers and rural entrepreneurs' surveys were shared with the concerned stakeholders through a fixed channel and all regions were followed-up with equal rigour. LDMs of all the districts were also requested simultaneously to follow-up with their respective units. Expectedly, the branch managers and business correspondents responded to my survey requests randomly because no one was pre-identified or mandated by me or the authorities. Furthermore, business correspondents were also advised to select 5-6 people from their villages randomly for survey of entrepreneurs/unemployed youth.

**The few possible biases in my study which may have affected the findings are as under:**

- 1. MSME officials:** All district heads and ministry officials were approached by me but only a few of them responded. It is possible that the responding officials were more concerned, responsive, or obedient officials. So, it is likely that the issue of misappropriation, or lack of public infrastructure was not highlighted as a constraint.
- 2. Association:** I reached out to few associations with the help of ministry officials. The webinar conducted had more than 70 participants associated primarily with Indian Industries Association (IIA). Even though the participants questioned some of the government policies, the presence of only one association at the webinar may not represent the views of all the other associations which were not present at the virtual seminar.
- 3. Bankers:** Most of the bank branches in the state were approached to fill out the survey questionnaire but only 160+ responded to the request. Additionally, many districts did not have any representation in this survey. These limitations have made the survey biased towards a particular set of branch officials whose views may not be truly representative of the entire banking population.
- 4. Entrepreneurs:** Business correspondents were supposed to be identified randomly by branch officials with BCs in turn selecting the respondents randomly from their locality. Presence of bias cannot be ruled out in the process. It is likely that branch officials chose more amenable BCs and they in turn chose respondents with whom they shared good relationship. This bias may create under-reporting of access to finance or non-cooperative behaviour of bankers because of possible influence of BCs on respondents.

## 10. Demographic details of survey respondents (entrepreneurs)



**Total respondents: 795**

### 1. Questionnaire for entrepreneurs/unemployed youth

Q1 District

Q2 Age

- ☐ 18-25 years (1)   ☐ 25-35 years (2)   ☐ 35-45 years (3)   ☐ More than 45 years (4)

Q3 Gender

- ☐ Female (1)   ☐ Male (2)   ☐ Other (3)

Q4 Education

- ☐ Below 10th std (1)   ☐ 10th-12th std (2)   ☐ Graduate (3)   ☐ Post-graduate or above (4)

Q5 Marital Status

- ☐ Married (1)   ☐ Unmarried (2)   ☐ Other (3)

Q6 Residence

- ☐ Rural (1)   ☐ Town (2)   ☐ City (3)

Q7 Employment status

- ☐ Salaried (1)   ☐ Self-business (2)   ☐ Agriculture/Animal husbandry (3)   ☐ Unemployed (4)

Q8 If running a business, please provide number of employees at your firm

Q9 Do you think you can give employment to others?

- ☐ Yes (1)   ☐ No (2)  
☐ Yes but only when there is more growth in my business (3)

Q10 Monthly income (Rs.)

- ☐ Below 5000 (1)   ☐ 5000-10000 (2)   ☐ 10000-20000 (3)  
☐ 20000-30000 (4)   ☐ More than 30000 (5)

Q11 Which of the following financial products you use (select all that applies)

- ☐ Bank account (1)   ☐ Loan (2)   ☐ Insurance (3)  
☐ Investment products (Fixed Deposit, Recurring Deposit, etc.) (4)   ☐ None of the above (5)

Q12 Which, according to you, is the most appropriate source of finance for running a business?

- Government's fund (1)
- Bank loan (2)
- Financial help from friends and family (3)
- Self-savings (4)
- Loan from money-lenders (5)

Q13 Given a choice, what will you prefer?

- A job in different state for monthly salary of Rs. 20000 or above (1)
- A job in nearby city with monthly salary of Rs. 15000 or above (2)
- Business in my own village with monthly income of Rs. 10000 or above (3)
- Agriculture or animal husbandry in my own village (4)

Q14 Do you think running a business in your locality is beneficial?

- Yes (1)   ○ No (2)   ○ May be (3)   ○ Do not know (4)

Q15 What is your expected/realised profit from a business?

- Upto 10% (1)   ○ 10-15% (2)   ○ 15-20% (3)   ○ 20-25% (4)   ○ More than 25% (5)

Q16 What is important to increase profit in a business (Rank 1-5: 1=Most important, 5 =Least important)?

- \_\_\_\_\_ Affordable and adequate credit (1)
- \_\_\_\_\_ Reduction in cost (2)
- \_\_\_\_\_ Increase in prices (3)
- \_\_\_\_\_ More demand (4)
- \_\_\_\_\_ Reduction in systemic misappropriation, taxation, etc. (5)

Q17 If you were given financial support, where will you invest that money:

- Vegetable, grocery stores (1)
- Hardware shops (2)
- Computer, mobile repair shops (3)
- Leather, furniture, textile or related small manufacturing units (4)
- Transport business (5)
- Agriculture or animal husbandry (6)
- Other (please specify) (7)

Q18 As consumer, where do you prefer to do your shopping from?

- From my village (1)   ○ From nearest city/town (2)   ○ From bigger cities (3)   ○ Online (4)

Q19 What is the reason for your choice in above question?

- I get cheap goods there (1)
- Quality is good in that market (2)
- I get many options to choose from (3)
- It is very convenient to shop online (4)

Q20 Where would you go to meet financial needs of your business?

- Friends and family (1)   ○ Money lenders (2)   ○ Banks (3)   ○ Other financial institutions (4)

Q21 Which of the following statements is correct regarding bank loans?

- I can get adequate bank loan (1)
- I can get bank loan but not enough (2)
- I cannot get bank loan so have to rely on other sources (3)
- I do not require bank loan (4)

Q22 Based on your experience or information, how many times do you need to visit a bank for loan approval?

- I can get adequate bank loan (1)
- I can get bank loan but not enough (2)
- I cannot get bank loan so have to rely on other sources (3)
- I do not require bank loan (4)

Q23 What could be the annual interest on bank loan for financing your business?

- Less than 5% (1)    ○ 5-8% (2)    ○ 8-12% (3)    ○ More than 12% (4)

Q24 How many banks are there in your locality where you can apply for loan?

- None (1)    ○ only 1 (2)    ○ 2-3 (3)    ○ 4-5 (4)    ○ More than 5 (5)

Q25 What could be the obstacle in getting bank loan?

- A lot of documentation (1)
- Requirement for guarantee, collateral, mortgage, etc. (2)
- Multiple visits to banks (3)
- High interest rates (4)
- Bad behaviour of bankers (5)

Q26 What could be the biggest constraint in growth of business (Rank 1-7: 1- Most important, 7 -Least important)?

- \_\_\_\_\_ Road, electricity, law-and-order and other supporting public infrastructure (1)
- \_\_\_\_\_ Lack of market or access to market (2)
- \_\_\_\_\_ Poor quality-adjusted price of produce (3)
- \_\_\_\_\_ Lack of financial support (4)
- \_\_\_\_\_ Corruption and exploitation by public officials (5)
- \_\_\_\_\_ Lack of skill and motivation (6)
- \_\_\_\_\_ Business is risky so youth prefers job (7)

Q27 Which government support can facilitate growth in business (Rank 1-5: 1- Most important, 5- Least important)?

- \_\_\_\_\_ Financial support from banks and government (1)
- \_\_\_\_\_ Access to market (2)
- \_\_\_\_\_ Training for skill upgradation (3)
- \_\_\_\_\_ Easy access to technology and raw materials (4)
- \_\_\_\_\_ Availability of public infrastructure like road, electricity, etc. (5)

Q28 I give consent to use my information for academic/policy purpose

|                                                                                                                                            | Yes (1) | No (2) | Don't know (3) |
|--------------------------------------------------------------------------------------------------------------------------------------------|---------|--------|----------------|
| Entrepreneurs can get upto Rs. 10 lakh as loan under MUDRA by providing collateral (1)                                                     | ○       | ○      | ○              |
| Government provides 25% subsidy to unemployed youth to start his business under Prime Minister Employment Generation Programme (PMEGP) (2) | ○       | ○      | ○              |
| ASPIRE scheme promotes entrepreneurship only in urban areas (3)                                                                            | ○       | ○      | ○              |
| SFURTI is a cluster-based scheme which provides multi-dimensional support to small traditional units (4)                                   | ○       | ○      | ○              |

Q29 What do you know about following MSME schemes of government (Please do not guess; mark 'Yes' or 'No' only if you are aware about the scheme, otherwise mark 'Do not know')?

- Yes (1)    ○ No (2)

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ISBN 978-93-94911-03-1



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