

ORIGINAL PAPER

Analyzing the Role of MUDRA Yojana in Fostering Micro, Small & Medium Enterprises (MSME) Development in the North-Eastern States of India

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Abstract:

MSMEs in India play a substantial role in the growth of country's economy, contributing 30% to its GDP. The Micro, Small & Medium Enterprises or MSMEs in India employees over 11.10 crore people and facilitates in employment generation. These enterprises are involved in the production of over 6000 different items, showcasing their diverse range of economic activities. However, despite their significant contributions, Indian MSMEs face a major obstacle in the form of lack of finance. Along with the financial problem, due to many other challenges, micro-enterprises are struggling for their growth and development. To overcome the problem of financial support, the Government of India launched the MUDRA (Micro Units Development and Refinance Agency) Scheme to provide financial assistance and support to MSMEs on April 8, 2015. The seven sister states are the neighboring states of Arunachal Pradesh, Assam, Meghalaya, Manipur, Mizoram, Nagaland and Tripurain north eastern India. However, the region has a blessed strategic location and abundant resources with specialties of production from each state. Indeed, the people of the region can take advantage to a greater extent by utilizing the available resources and promoting the MSME. Thus, This research paper aims to critically evaluate the performance of the MUDRA scheme in India since its inception. Additionally, the paper aims to evaluate the state-wise number of accounts and disbursement amount under Shishu, Kishore and Tarun under Mudra Scheme across all 7 Northern East states of India. The study covers the period from 2015-16 to 2021-22. The analysis is based on secondary data, collected from the annual

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report of 2022-2023 generated by the Ministry of MSME, GOI. The application of ANOVA demonstrated a significant difference in the average number of accounts under Shishu, Kishore and Tarun under the Mudra Scheme across all 7 Northern East states of India from 2015-2016 to 2021-2022. Conversely, the analysis did not indicate a significant difference in the Average disbursement amount under Shishu, Kishore and Tarun under MUDRA Scheme across all 7 Northern East states of India during 2015-2016 to 2021-2022.

Keywords: *Micro, Small & Medium Enterprises (MSMEs), Mudra Scheme, Ministry of MSME, Northern East states of India.*

Introduction

MSMEs play a decisive role in the development and growth of the country. In rural and remote areas, MSMEs serve as supporting organizations for many industries by providing more opportunities for vertical integration. National fiscal progress depends heavily on this sector (Gade, 2018). India's MSMEs rank second after China's. From conventional to hi-tech products, more than 6000 different services and products are provided by this sector (Meher et al., 2021), (Meher & Gupta, 2020), (Meher & Gupta, 2020). Our economy relies heavily on MSMEs, which provide the second-largest job market after agriculture. Around 30% of India's GDP comes from MSMEs. (S. & Mayya, 2022). In manufacturing, MSMEs contribute to nearly 6.11% of GDP, while in service, they contribute to nearly 24.63% (Singh, 2016). The Indian MSME sector has a highly heterogeneous array of product and service offerings, as well as technological levels (Dey, 2014). In terms of output and exports, it contributes about 33% and 45% respectively (Mittal & Raman, 2021). According to the annual report of MSMEs, generated by the Ministry of MSMEs GOI. most MSMEs are unregistered, and 1.6 million MSMEs are registered in India (Gade, 2018). As per the National Sample Survey (NSS) 73rd round, conducted by the National Sample Survey Office, Ministry of Statistics & Programme Implementation during the period 2015-16, which found 633.88 lakh unincorporated non-agriculture MSMEs engaged in a variety of economic activities in the country. The report states that very small businesses account for 94.9% of MSME, remaining 4.9% are small scale firms (Gade, 2018). Due to its vast network of more than 30 million units, it contributes much to the economic growth of India. roughly 70 million people are employed by it, and it directly or indirectly accounts for roughly 45% of industrial production and 40% of exports. A major contribution to India's employment growth is made by MSMEs (Gade, 2018). According to the 73rd round of the National Sample Survey (NSS), which was done between 2015 and 2016, 11.10 crore employment has been provided by the MSME sector. According to the IFC report on MSME published by Finance of India 2012, In India, MSME finance requirements totaled 32.5 trillion rupees, which includes 26 trillion in debt and 6.5 trillion in equity. The total financing requirement is Rs.32.5 trillion out of which only 22 % amount is obtained through the financial sector rest of the 78 % amount is self-financed or obtained from unofficial sources (Kannan & Sudalaimuthu, 2014). Bai Gokarna et al. (2021) also revealed the importance of education in the case of an emerging country such as India.

Problems and prospects of MSMEs are the following: poor infrastructure; banks do not credit them; shortages of raw materials and other inputs; advanced technology is not available; multinational companies compete with them; lack of programmes for skill development and training, lack of distribution of marketing channels as well as

complicated labour regulations and bureaucracy (Ali & Husain, 2014). It indicates that this sector's primary barrier is its inadequate institutional financial backing (L & Rathod, 2021). Finance is the main obstacle to entrepreneurship in India (Antony, 2021). Moreover, Ullal et al. (2022) discussed the importance of Artificial Intelligence in the case of service industry in India. Due to their many challenges, micro enterprises are lagging in their development (Agarwal & Dwivedi, 2017). Former Finance Minister Shri ArunJaitley stated in his 2015-2016 budget address that, the number of small business units and micro units is about 5.77 crore. Of these, 62% belong to ST, SC and OBC. The weaker sections and low-income groups find it difficult to access financial services and credit (Agarwal & Dwivedi, 2017).on April 8, 2015, Mudra Scheme was introduced by the Government of India to alleviate the financial issues experienced by micro enterprises. (Lall, 2018; Vijai, 2018; Poornima, 2019; Antony, 2021). This scheme's principal concept is "Fund the Unfunded." This initiative aims to give funding to the MSME sector as "Last Mile Financiers." (Gautam, Kumar, & Gopal, 2017). Under PMMY, these loans are categorized as MUDRA loans. In the form of the MUDRA plan, a financial initiative will help micro units develop small businesses by providing credit and funding. (Lall, 2018, Salgotra et al., 2021). PMMY is a wholly-owned subsidiary of the SIDBI. In the Union Budget for 2015-16, Mudra Bank's establishment was announced. In March 2015, it was registered as a company under the Companies Act of 2013, and in April 2015, it was registered with the RBI as a non-banking finance corporation (Poornima, 2019). MUDRA was given the primary role of monitoring the entire programme by routinely acquiring the necessary data. As a result, MUDRA has set up an exclusive monitoring platform that meticulously records loan information under PMMY (Mirwani & Gawde, 2019). It offers three major product options for borrowers, including Shishu Kishore and Tarun. Entrepreneurs that want to launch their own business or are in the nascent stage of the business are offered Shishu loans, with loans up to Rs.50,000.Such Business owners who need capital for machinery, raw materials, etc., for their existing businesses, are offered Kishore loans, in which the amount ranges from Rs. 50001 - 5,00,000. Such entrepreneurs who already have a successful enterprise and need money to expand or diversify itare offered Tarun loan amounts ranging from Rs. 5,00,001 - 10,00,000 (Bindal & Singh, 2022).

In northeastern India, the seven sister states are Arunachal Pradesh. Assam. Meghalaya, Manipur, Mizoram, Nagaland and Tripura. Approximately It occupies 7% of India's total land area. (Sivaramakrishnanet al., 2016). In the northeastern part of India, 80 percent of the area is covered by rural areas with inadequate infrastructure. Although, only 2 or 3 % of it is connected to India's mainland and more than 90 % is covered by international borders (Gachuiwo & Yarso, 2019). Northeast itself is problematic as the region represents varied cultural mosaic and has never considered itself to be one compact unit (Misra & Hutton, 2012). The remote and mountainous nature of India's northeastern states has discouraged investment. Due to the long distance from markets, lack of infrastructure, high levels of poverty as well as limited private sector interest (Sivaramakrishnan, Khatun, & Majumdar, 2016). However, the region had a blessed strategic location and abundant resources with specialties of production from each state. Indeed, the people of the region can take advantage to a greater extent by utilizing the available resources by promoting MSME Hence it is important to study the performance of the MUDRA scheme among states of Arunachal Pradesh, Assam, Meghalaya, Manipur, Mizoram, Nagaland and Tripurain north eastern India.

Literature Review

This section is divided into three parts. In the first part, we highlight some of the key research conducted on the MUDRA scheme, shedding light on their noteworthy findings. Additionally, the second part of the literature review aims to discuss some studies related to the MSME sector and the role of MSMEs in the Indian economy. Lastly, the third part highlights some important research conducted specifically on the northeastern states of India. A Study threw light on the performance of the MUDRA Scheme in India and also brought out the comparative performance of the Mudra Yojana in West Bengal with other states like Tamil Nadu, Karnataka, Odisha and Uttarakhand for a period of four years from 2015-16 to 2018-19 (Biswas, 2019). Another study showed some limitations of MUDRA Bank and suggested that PMMY needs to have more control over the fixation of Interest rates. In the same study, it was found that the needy people were still not accessing the MUDRA Yojana. Also, MUDRA Yojana was only providing the fund but there were no provisions for skill oriented training sessions for new entrepreneurs (S. & Mayya, 2022). Another critical study was done on the performance analysis of PMMY based on state, caste and category. A SWOT analysis of the scheme was done the same study (Agarwal & Dwivedi, 2017). A research was done to assess the knowledge and awareness of the PMMY scheme among its beneficiaries. It was found that there was a low level of awareness of the PMMY scheme among its beneficiaries, with most respondents getting their information from relatives or friends, according to the study (L & Rathod, 2021). An attempt was made to bring out the performance of the Pradhan Mantri Mudra Yojana -MUDRA Scheme in the last four financial years from 2015-16 to 2018-19 in the states of Tamilnadu, Karnataka, Maharastra, Uttar Pradesh, West Bengal (Poornima, 2019). Again, a paper provided a snapshot of PMMY's performance over the last three financial years and it was concluded that if people are given strong financial support, they are more likely to start their businesses (Mirwani & Gawde, 2019). A researcher observed how MUDRA Yojana has affected the overall entrepreneurial landscape. The total of disbursements of MUDRA loan during five years was analyzed under PMMY Scheme (Vashishtha, 2021).

Another interesting observation was made in a research paper where it was found that more than 91% of the mudra loans disbursed under the Shishu scheme were below Rs.50000. This study attempted to understand the status of Mudra loans. MUDRA bank's financial performance, the rate of unemployment and the loan disbursement by the PMMY Scheme (Ghanti & Hiremath, 2021). A study aimed to analyze the progress and performance of various schemes under PMMY in southern parts of India, including the state of Tamil Nādu, Kerala, Karnataka, Andhra Pradesh, and Telangana along with Union Territory Pondicherry. The results of the study showed that the PMMY was performing well in the southern region of India and it was expected that the disbursement amounts would increase in other parts also (Kaleeshwari, Navitha, & Jegadeeshwaran, 2022). Another article sheded light on the performance of Mudra Yojana in Uttarakhand.

Analysis of various categories of under MUDRA loans was done using trend forecasting. It was revealed that while MUDRA Yojana performed well in the Kishor and Tarun categories, the Shishu category declined and the total payouts also decreased (Lall, 2018). Many research studies including Prasad, (2006); Kavitha Vani & Nagaraju, (2013) explained the reluctance on the part of formal financial institutions – mainly due to borrowers' incompetency in addressing lenders' demands – in funding the

financial needs of micro, small and medium enterprises, especially due to their inability to show their worthiness as a reliable and performing borrower. In an another study, current status of the performance of MSMEs in India and their future possibilities was discussed. The author concluded that MSME sector had a substantial impact on the nation's economy, employment, and exports (Dey, 2014). The current situation of MSMEs in India was examined in another article to shed light om the contributions of the MSME sector sector in Indian economy including jobs creation, exports, GDP addition, and improving the standard of living for millions of families. The paper suggests that the Indian banking industry should increase its share of finance to the sector, either directly or indirectly (Kannan & Sudalaimuthu, 2014). A Study focused on the north-eastern states of India's. It was reported that north-eastern states have suffered from a dearth of investment because of its remote, mountainous location, a long distance from markets, high levels of poverty and local demand, and limited private sector interest (Gachuiwo & Yarso, 2019).

In addition to evaluating state-by-state responses to the bank's schemes and their performances based on the parameters like number of accounts registered, sanctioned amount, and payout amount, the current research aims to increase beneficiary awareness by emphasizing different MUDRA Bank policies. In all the NER states of India, it has been shown that there are much more entrepreneurs and loan disbursements. This research paper aims to critically evaluate the performance of the MUDRA scheme in India since its inception and also to evaluate the state-wise Number of Accounts and Disbursement Amounts under Shishu, Kishore and Tarun under Mudra Scheme across all 7 Northern East states of India during 2015-16 to 2021-22.

Hypotheses of the Study

 H_{01} : Average Number of Accounts under Shishu, Kishore and Tarun under the Mudra Scheme across all 7 Northern East states of India during 2015-16 to 2021-22 are not significantly different.

 H_{02} : Average Disbursement Amount under Shishu, Kishore and Tarun under Mudra Scheme across all 7 Northern East states of India during 2015-16 to 2021-22 are not significantly different.

Research Methodology

This study aims to analyze the progress and performance of MUDRA schemes in the 7 Sister states of India i.e., Arunachal Pradesh, Assam, Meghalaya, Manipur, Mizoram, Nagaland and Tripura. The study is analytical. The study is entirely based on Secondary data. Secondary data related to the number of accounts and amount disbursement under 3 schemes of Mudra Yojana of 7 north-east states of India are collected from the annual report of 2022-23 of MSMEs generated by the Ministry of MSME, Government of India. Along with this, some websites have also been used for such as: http://www.mudra.org.in/PMMYReport, data collection and www.mudra.gov.in. The reason for considering 7 sister north-east states is because the Mudra Scheme places special emphasis on providing credit to women, Scheduled Castes (SCs), Scheduled Tribes (STs), and Other Backward Classes (OBCs). The North-East states have a significant population belonging to these vulnerable groups. Therefore, studying the scheme's effectiveness helps determine whether it has effectively reached these target groups, empowering them economically and promoting social inclusion. The study covers seven financial years from 2015-16 to 2021-

22.ANOVA has been implemented for testing the hypotheses of data. For calculation of results of ANOVA Microsoft Excel 2016 has been used.

Objectives of the Study

- To critically evaluate the performance of the MUDRA scheme in Arunachal Pradesh, Assam, Meghalaya, Manipur, Mizoram, Nagaland and Tripura. since its inception
- To evaluate the state-wise Number of Accounts under Shishu, Kishore and Tarun under Mudra Scheme across all 7 Northern East states of India during 2015-16 to 2021-22.
- To analyze the progress and performance of MUDRA schemes in the of Arunachal Pradesh, Assam, Meghalaya, Manipur, Mizoram, Nagaland and Tripura.
- To study the effectiveness of various scheme of MUDRA schemes in the of Arunachal Pradesh, Assam, Meghalaya, Manipur, Mizoram, Nagaland and Tripura.

Need of the Study

The North-East states of India, often referred to as the seven sisters, have unique geographical, cultural, and socio-economic characteristics. These states face developmental challenges such as limited infrastructure, inadequate access to credit, and low levels of industrialization. Therefore, studying the effectiveness of the Mudra Scheme in this region provides insights into its impact in a specific context. Furthermore, The Mudra Scheme was launched as a flagship program of the Government of India, aimed at boosting entrepreneurship and supporting the growth of small businesses. Evaluating its effectiveness in the North-East states allows policymakers to assess its implementation, identify any challenges or gaps, and make informed decisions regarding its future design and implementation strategies. The North-East states' unique characteristics and challenges make them potential learning grounds for designing effective policies and interventions. By studying the effectiveness of the Mudra Scheme in this region, valuable lessons can be learned and applied to similar regions facing similar socio-economic constraints across India or even other countries.

Analysis and Discussion

Under the MUDRA plan, banks can give loans with a maximum sum of Rs. 10 lakh and a maximum payback period of 5 years. To apply for a Mudra loan, applicants are not obliged to provide security or collateral. Even the foreclosure fees and processing expenses are nil or minimal. The Mudra scheme is offering three schemes namely, Shishu, Kishore and Tarun.

Shishu:

Entrepreneurs that want to launch their own business or are in the nascent stage of the business are offered Shishu loans, with loans up to Rs.50,000 at an interest rate of 12% per annum without any processing fee. (Bindal & Dr. Singh, 2022).

	Arunachal								
	Pradesh	Assam	Meghalaya	Manipur	Mizoram	Nagaland	Tripura		
2015-16	8.18	759.22	40.24	35.41	19.44	10.32	136.83		
2016-17	13.16	3593.18	60.04	58.22	15.46	25.08	719.12		
2017-18	23.14	4311.15	70.48	80.88	25.64	38.57	1046.92		
2018-19	42.28	6331.27	87.68	170.3	26.19	37.2	1210.69		
2019-20	57.03	4797.85	93.76	200.56	62.83	41.19	1151.37		
2020-21	3.65	2215.83	68.17	132.67	11.54	22.85	667.03		
2021-22	9.87	1329.19	30.7	136.77	11.87	19.37	643.51		

Source: Mudra.org

Kishore:

Such Business owners who need capital for machinery, raw materials, etc., for their existing businesses, are offered Kishore loans, in which the amount ranges from Rs. 50001 - 5,00,000 at an Interest rate of 14 to 16% per annum without any processing fee (Bindal & Dr. Singh, 2022).

	Arunachal						
	Pradesh	Assam	Meghalaya	Manipur	Mizoram	Nagaland	Tripura
2015-16	27.44	614.57	74.2	58.66	35.24	36.75	141.05
2016-17	28.12	725.46	68.52	47.18	53.16	39.26	166.65
2017-18	32.91	1583.47	80.55	71.47	97.23	44.25	330.41
2018-19	28.77	2550.2	91.82	106.46	144.46	65.84	508.63
2019-20	35.02	1766.81	77.6	104.74	109.67	59.4	292.44
2020-21	52.77	3822.95	180.1	168.16	136.68	132.98	1184.72
2021-22	25.03	2087.01	90.14	153.35	116.82	118.86	1639.38

 Table 2.: State Wise Disbursement Amount under Kishor Yojana

Source: Mudra.org

Tarun:

Such Entrepreneurs who already have a successful enterprise and need money to expand or diversify itare offered Tarun loan amounts ranging from Rs. 5,00,001 - 10,00,000 at an Interest rate of 17% per annum with 0.05% processing fee (Bindal & Dr. Singh, 2022).

 Table 3: State Wise Disbursement Amount under TarunYojana (In Crore)

	Arunachal						
	Pradesh	Assam	Meghalaya	Manipur	Mizoram	Nagaland	Tripura
2015-16	36	354.67	47.97	25.96	23.1	29.47	59.38
2016-17	37.4	505.91	57.17	37.07	21.7	39.49	82.78
2017-18	47.22	675.7	61.01	48.33	30.02	41.79	83.27
2018-19	43.11	916.86	88.85	67.45	45.21	48.54	107.16
2019-20	58.51	1006.94	95.09	88.13	63.59	69.25	111.5
2020-21	115.7	1360.89	154.16	105.85	62.94	88.65	188.6
2021-22	51.61	1161.09	83.16	89.08	63.61	71.25	162.84

Source: Mudra.org

Trend Analysis of Performance of MUDRA scheme in 7 states:

In this study trend forecastingis used to critically evaluate the performance of the MUDRA scheme in7 northeast states of India.

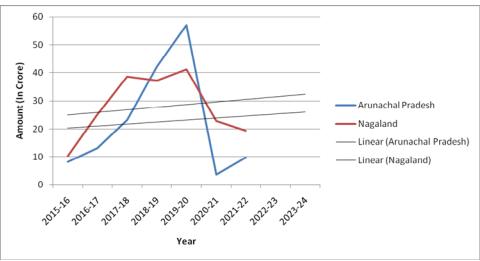


Figure 1: Graphical Representation of Trend Analysis Of State Wise Disbursement Amount Under Shishu Yojana

Source: Mudra.org

The above graph represents trend forecasting of Disbursement Amount under the Shishu category in Arunachal Pradesh and Nagaland and since 2015-16. It reveals the increase in the disbursement amount in both the state. There is a trend forecast that it will go up in 2022-23 and 2023-24 as well.

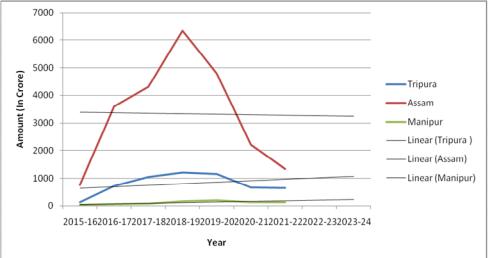


Figure 2: Graphical Representation of Trend Analysis ofState Wise Disbursement Amount Under Shishu Yojana Source: Mudra.org

The above given graph represents trend forecasting of Disbursement Amount under the Shishu category in Tripura, Assam and Manipur since 2015-16.It reveals the increase in the disbursement amount in Tripura and Manipur. Hence, there is a trend forecast that it will go up in 2022-23 and 2023-24 as well. But on the other hand Assam shows a decrease in the disbursement amount. There is a trend forecast that it will go a little bit down in 2022-23 and 2023-24 as well.

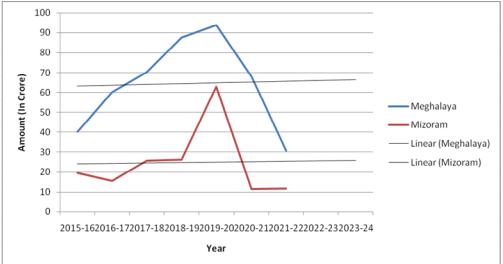


Figure 3: Graphical Representation of Trend Analysis of State Wise Disbursement Amount Under Shishu Yojana

Source: Mudra.org

The above given graph represents trend forecasting of Disbursement Amount under the Shishu category in Meghalaya and Mizoram since 2015-16. It reveals that there is an increase in the disbursement amount in both states i.e., in Meghalaya and Mizoram. Hence, there is a trend forecast that it will go up in 2022-23 and 2023-24 as well.

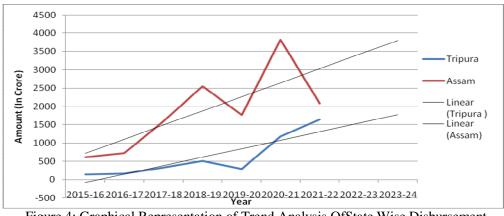


Figure 4: Graphical Representation of Trend Analysis OfState Wise Disbursement Amount Under Shishu Yojana

Source: Mudra.org

The above given graph represents trend forecasting of Disbursement Amount under the Kishore category in Tripura and Assam since 2015-16. The slope is positive at an increasing rate It reveals an increase in the disbursement amount in both the state. There is a trend forecast that it will go up in 2022-23 and 2023-24 as well.

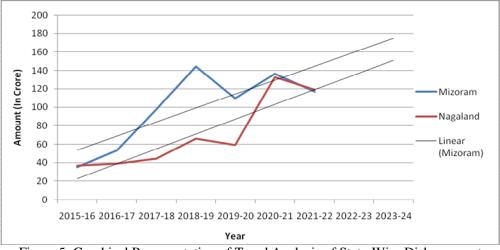


Figure 5: Graphical Representation of Trend Analysis of State-Wise Disbursement Amount Under Kishore Yojana

Source: Mudra.org

The above given graph represents trend forecasting of Disbursement Amount under the Kishore category in Mizoram and Nagaland since 2015-16. The slope is increasing, It reveals an increase in the disbursement amount in both the state. There is a trend forecast that it will go up in 2022-23 and 2023-24 as well.

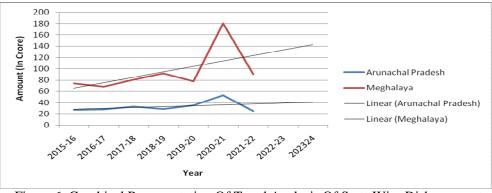
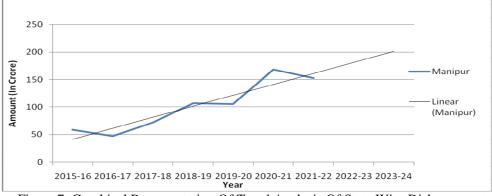
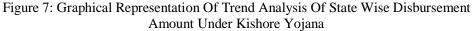


Figure 6: Graphical Representation Of Trend Analysis Of State Wise Disbursement Amount Under Kishore Yojana Source: Mudra.org

The above given graph represents trend forecasting of Disbursement Amount under the Kishore category in Arunachal Pradesh and Meghalaya since 2015-16.The

slope of Arunachal Pradesh is positive at an increasing rate and the slope of Meghalaya is increasing. It reveals an increase in the disbursement amount in both the state. There is a trend forecast that it will go up in 2022-23 and 2023-24 as well.





Source: Mudra.org

The above given graph represents trend forecasting of Disbursement Amount under the Kishore category in Manipur since 2015-16. The slope is positive at an increasing rate. It reveals an increase in the disbursement of amount in Manipur. There is a trend forecast that it will go up in 2022-23 and 2023-24 as well.

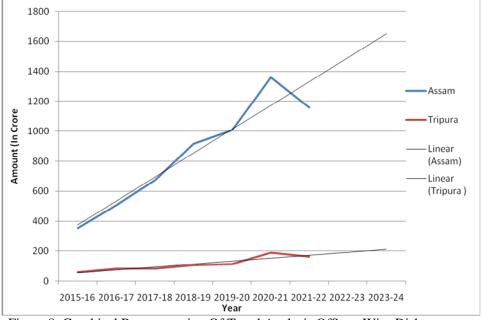


Figure 8: Graphical Representation Of Trend Analysis OfState Wise Disbursement Amount Under Tarun Yojana

Source: Mudra.org

The above given graph represents trend forecasting of Disbursement Amount under the Tarun category in Assam and Tripura since 2015-16. The slope of Assam is increasing at an increasing rate and The slope of Tripura is also increasing. It reveals an increase in the disbursement amount in both the state. There is a trend forecast that it will go up in 2022-23 and 2023-24 as well.

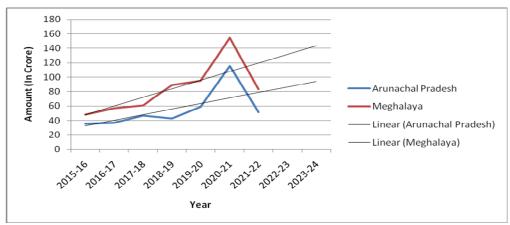


Figure 9: Graphical Representation Of Trend Analysis Of State Wise Disbursement Amount Under Tarun Yojana

Source: Mudra.org

The above given graph represents trend forecasting of Disbursement Amount under the Tarun category in Arunachal Pradesh and Meghalaya since 2015-16. The slope of both the state is increasing, It reveals an increase in the disbursement of the amount in both the state. There is a trend forecast that it will go up in 2022-23 and 2023-24 as well.

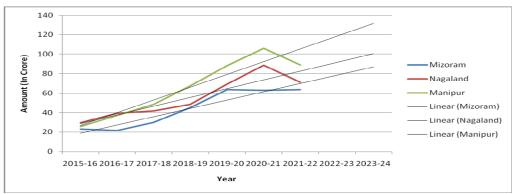


Figure 10: Graphical Representation Of Trend Analysis Of State Wise Disbursement Amount Under Tarun Yojana

Source: Mudra.org

The above given graph represents trend forecasting of Disbursement Amount under the Tarun category in Mizoram, Nagaland and Manipur since 2015-16. The slope of all three states are increasing. It reveals an increase in the disbursement of the amount

in both the state. There is a trend forecast that it will go up in 2022-23 and 2023-24 as well.

It is clear from the above trend analysis that entrepreneurs are encouraged to start their businesses. It demonstrates that MUDRA scheme's performance is effective in all three categories; however, the Shishu category has declined in Assam. Manufacturing, services, retail, and agriculture can all benefit from Mudra loans.

The data on State-wise Distribution of the Estimated Number of MSMEs has been compiled and Calculated from the Annual report 2022-23 generated by the Ministry of MSME, Government of India. The results and analysis are explained below with the help of tables and diagrams.

State-wise Distribution of Estimated Number of MSMEs (in lakh)									
7 sisters States	Micro	Small	Medium	MSME					
Arunachal Pradesh	0.22	0	0	0.22					
Assam	12.1	0.04	0	12.14					
Meghalaya	1.12	0	0	1.12					
Manipur	1.8	0	0	1.8					
Mizoram	0.35	0	0	0.35					
Nagaland	0.91	0	0	0.91					
Tripura	2.1	0.01	0	2.11					
	18.65								

Table 4: State-wise Distribution of Estimated Number of MSMEs

Source: Compiled and Calculated from the Annual report 2022-23 generated by the Ministry of MSME, GOI.

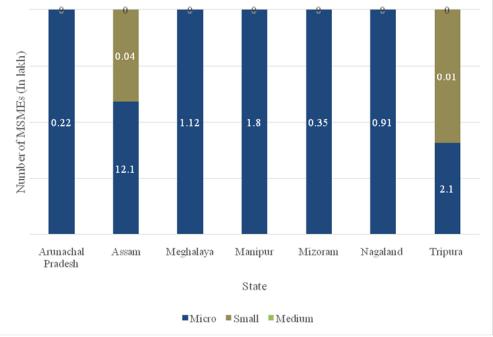


Figure 11: State-wise Distribution of Estimated Number of MSMEs Source: Mudra.org

The above table and chart depict the state-wise distribution of the Estimated Number of MSMEs registered under the MSMEs scheme in north eastern India. It is shown that the highest number of MSMEs are in Assam at 2.1 lakh, in which 12.10 lakh micro enterprises, 0.04 lakh small enterprises and zero medium sector enterprises have been included. Tripura is at second place with 0.22 lakh MSMEs. With 1.12 lakh, 1.8 lakh, 0.91 lakh and 0.35 lakh MSMEs, Manipur, Meghalaya, Nagaland and Mizoram follow at the third, fourth, fifth and sixth position. Arunachal Pradesh is at the bottom with only 0.22 lakh MSMEs. The number of small enterprises in seven states is nil. The number of medium enterprises in seven states is almost negligible.

Hypothesis Testing

To test the null hypothesis "H₀: Average Number of Accounts under Shishu, Kishore and Tarun under the Mudra Scheme across all 7 Northern East states of India during 2015-16 to 2021-22 are not significantly different", ANOVA (Analysis of Variance) is used in the study. ANOVA is applicable insituations where a comparison is made among the means of three or more groups or treatments. It is used to determine if there are statistically significant differences among the means of the groups based on the variation within and between the groups. Since we have three groups (the schemes Shishu, Kishore, and Tarun), Single Factor ANOVA is applicable in this study for comparing the means of the number of accounts under schemes across all seven northeastern states of India during the specified period. Here, we have one categorical independent variable (the number of accounts or disbursement amount) and we want to test if there are significant differences in the means of the number of accounts/ disbursement amount across the differences. The following table shows the ANOVA results:

Anova: Single Factor

Table 5: Anova for the number of Accounts and under Shishu, Kishor and Tarun schemes of Mudra Yojana in 7 Northern East states of India.

Groups	Count	Sum	Average	Variance
Number of A/Cs (Shishu)	49	10676802	217893.9184	2.10022E+11
Number of A/Cs (Kishore)	49	1648146	33635.63265	4721218922
Number of A/Cs (Tarun)	49	144165	2942.142857	32016085.92

SUMMARY

Source: Computed from MS Excel 2016

ANOVA						
Source of						
Variation	SS	Df	MS	F	P-value	F crit
Between						
Groups	1.32E+12	2	6.62296E+11	9.251019579	0.000166	3.058928
Within Groups	1.03E+13	144	71591678672			
Total	1.16E+13	146				
Source: Own com	putation usin	g MS I	Excel 2016			

Source: Own computation using MIS Excel 2016

Table 5 depicts the ANOVA for the number of Accounts under Shishu, Kishor and Tarun schemes of Mudra Yojana in 7 Northern East states of India. The p-value is 0.000166, which is less than the typical threshold of 0.05. This indicates that there are significant differences among the means of the groups. Thus the null hypothesis is rejected. So there is a significant difference in the Average Number of Accounts under Shishu, Kishore and Tarun under the Mudra Scheme across all 7 Northern East states of India during 2015-16 to 2021-22.

Table 6: ANOVA for the Disbursement Amount under Shishu, Kishore and Tarununder Mudra Scheme across all 7 Northern East states of India during 2015-16 to2021-22

SUMMARY						
Groups	Groups				Average	Variance
Disbursement Amount	(Shishu)		49	30703.9	626.6102	1834680
Disbursement Amount		49	20207.36	412.3951	594870.3	
Disbursement Amount		49	8915.03	181.9394	94450.12	
Source: Computed from MS Excel 201						
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
						1 0111
Between Groups	4846591	2	2423296	2.880304	0.059357	3.058928
Between Groups Within Groups	4846591 1.21E+08	2 144	2423296 841333.4		0.059357	

Source: Own computation using MS Excel 2016

Table 6 depicts the ANOVA for the Disbursement Amount under Shishu, Kishore and Tarun under Mudra Scheme across all 7 Northern East states of India during 2015-16 to 2021-22. The above table shows that the P value is 0.059357 which is more than 0.05. Thus the null hypothesis isaccepted. So, there is not a significant difference in the Average Disbursement Amount under Shishu, Kishore and Tarun under the MUDRA Scheme across all 7 Northern East states of India during 2015-16 to 2021-22

Major Findings of the study (Explain the findings in little detail)

• The findings of the study indicate that Assam, among the seven sister states, possesses the highest number of MSMEs. Assam's geographic location and abundance of natural resources provide a favorable environment for the establishment and growth of various industries. The state is blessed with abundant agricultural resources, tea plantations, oil & gas reserves, and mineral deposits, which serve as the foundation for numerous MSMEs in sectors like agribusiness, tea processing, oil refining, handicrafts, and textiles.

• The research findings reveal that Arunachal Pradesh exhibits the lowest number of MSMEs among the seven sister states. The state's geographical and topographical characteristics pose unique challenges to industrial development. Arunachal Pradesh is known for its mountainous terrain, dense forests and remote locations, which hinder accessibility, infrastructure development and establishment of industries. The state has a comparatively smaller population compared to other sister states, which limits the available consumer market and the demand for various goods and services, and therefore less number of MSMEs.

• The findings also indicate a significantly limited presence of small enterprises in all seven states. This can be primarily ascribed to the lack of progression and expansion among micro enterprises which prevents their transition from micro enterprise to small enterprise category. Additionally, the shortage of entrepreneurs equipped with substantial capital resources may further contribute to the establishment of small enterprises in these states.

• In the context of the schemes, Tripura, Manipur, and Assam have observed a relatively high distribution of funds under the Shishu scheme compared to other sister states. The higher distribution of funds under the Shishu scheme in these states shows a greater emphasis on supporting and promoting micro-enterprises in the region. It also indicates proactive engagement by financial institutions and targeted efforts to enhance entrepreneurial activities at the grassroots level.

• Under the Kishore scheme, among the sister states, Mizoram, Meghalaya, and Nagaland have observed the highest distribution of funds. This indicates that substantial efforts have been made in these states to provide financial assistance during their growth phase. This can be attributed to supportive policy frameworks, proactive involvement of financial institutions and focused initiatives aimed at nurturing higher-scale entrepreneurial activities in the region.

• The research findings reveal that Arunachal Pradesh has observed a significant allocation of funds under the Tarun scheme. This shows that despite being a small state and having a number of challenges, the state has made commendable efforts to nurture medium enterprises. By providing substantial financial assistance during the transition phase of the enterprise, the scheme contributes to the promotion of entrepreneurship, job creation, and overall economic advancement in the state.

Conclusions

MSMEs in India play a substantial role in the growth of country's economy, contributing 30% to its GDP. The MSMEs in India employees over 11.10 crore people and facilitates in employment generation. It is producing more than 6000 items. The main obstacle to MSMEs in India is lack of finance. Due to their many challenges, micro-enterprises are lagging in their development. To overcome the problem of financial support, the Government of India launched the Mudra (Micro Units

Development and Refinance Agency) Scheme to provide financial assistance and support to MSMEs. On April 8, 2015. It offers three major product options for borrowers, including the Shishu, Kishore and Tarun. Entrepreneurs that want to launch their own business or are in the nascent stage of the business are offered Shishu loans, with loans up to Rs.50,000 at an interest rate of 12% per annum without any processing fee.

Such Business owners who need capital for machinery, raw materials, etc., for their existing businesses are offered Kishore loan, in which the amount ranges from Rs. 50001 – 5,00,000 at anInterest rate of 14 to 16% per annum without any processing fee.Such Entrepreneurs who already have a successful enterprise need money to expand or diversify itare offered Tarun loan amount ranges from Rs. 5,00,001 – 10,00,000 at anInterest rate of 17% per annum with 0.05% processing fee.In northeastern India, the seven sister states are Arunachal Pradesh, Assam, Meghalaya, Manipur, Mizoram, Nagaland and Tripura.The remote and mountainous nature of India's northeastern states has discouraged investment. Due to Poor infrastructure, long distance from markets, high levels of poverty as well as limited private sector interest.Evaluating its effectiveness in the North-East states allows policymakers to assess its implementation, identify any challenges or gaps, and make informed decisions regarding its future design and implementation strategies.

The Indian North-East states' unique characteristics and challenges make them potential learning grounds for designing effective policies and interventions. Hence it is important toanalyze the progress and performance of MUDRA schemes in the 7 Sister states of India i.e., Arunachal Pradesh, Assam, Meghalaya, Manipur, Mizoram, Nagaland and Tripura. Northeastern India witnessed rapid growth in sanctioned and disbursed loans under all three schemes. According to the state-wise comparison, the MUDRA scheme has demonstrated the best results in all three schemes in the northeastern region of India, especially Assam. Considering the importance of the MUDRA scheme in terms of promoting rural entrepreneurs in the region, it can be concluded that it was a significant initiative of the Indian government. Northeastern India will witness tremendous changes if the growth rate continues to rise.

Authors' Contributions:

The authors contributed equally to this work.

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Website

www.mudra.org.in/Default/DownloadFile/Annual_Report_Of_Mudra_2022-23.pdf http://www.mudra.org.in/PMMYReport www.mudra.gov.in

Appendix

 Table 7: The number of Accounts and Amount disbursement under Shishu, Kishore, Tarun schemes of Mudra Yojana in 7 Northern East states of India.

		Shishu		K	ishore	Tarun	
		Number	Disbursement	Number	Disbursement	Number	Disbursement
State Name	Year	of A/Cs	Amount	of A/Cs	Amount	of A/Cs	Amount
Arunachal Pradesh	2015-16	3194	8.18	977	27.44	454	36
Arunachal Pradesh	2016-17	4645	13.16	1003	28.12	461	37.4
Arunachal Pradesh	2017-18	9137	23.14	1236	32.91	631	47.22
Arunachal Pradesh	2018-19	12476	42.28	1415	28.77	564	43.11
Arunachal Pradesh	2019-20	20088	57.03	2435	35.02	765	58.51
Arunachal Pradesh	2020-21	2506	3.65	2094	52.77	1559	115.7
Arunachal Pradesh	2021-22	3968	9.87	1063	25.03	674	51.61
Assam	2015-16	390320	759.22	32121	614.57	4831	354.67
Assam	2016-17	1214502	3593.18	34363	725.46	6889	505.91
Assam	2017-18	1558335	4311.15	145421	1583.47	9248	675.7
Assam	2018-19	2112198	6331.27	281581	2550.2	29189	916.86

Assam	2019-20	1516050	4797.85	138233	1766.81	14064	1006.94
Assam	2020-21	862844	2215.83	306802	3822.95	20183	1360.89
Assam	2021-22	491693	1329.19	174191	2087.01	17005	1161.09
Meghalaya	2015-16	15451	40.24	3051	74.2	649	47.97
Meghalaya	2016-17	20357	60.04	2793	68.52	765	57.17
Meghalaya	2017-18	23858	70.48	4143	80.55	845	61.01
Meghalaya	2018-19	27558	87.68	5597	91.82	2419	88.85
Meghalaya	2019-20	38751	93.76	4330	77.6	1335	95.09
Meghalaya	2020-21	26513	68.17	11744	180.1	2221	154.16
Meghalaya	2021-22	10146	30.7	5630	90.14	1116	83.16
Manipur	2015-16	20943	35.41	2679	58.66	399	25.96
Manipur	2016-17	19099	58.22	2233	47.18	533	37.07
Manipur	2017-18	27973	80.88	4507	71.47	706	48.33
Manipur	2018-19	77581	170.3	7616	106.46	942	67.45
Manipur	2019-20	81858	200.56	7074	104.74	1243	88.13
Manipur	2020-21	56050	132.67	12312	168.16	1544	105.85
Manipur	2021-22	60528	136.77	12296	153.35	1314	89.08
Mizoram	2015-16	5473	19.44	1993	35.24	306	23.1
Mizoram	2016-17	3408	15.46	3278	53.16	287	21.7
Mizoram	2017-18	6474	25.64	5536	97.23	390	30.02
Mizoram	2018-19	6828	26.19	8434	144.46	596	45.21
Mizoram	2019-20	13784	62.83	5514	109.67	1137	63.59
Mizoram	2020-21	3849	11.54	8011	136.68	856	62.94
Mizoram	2021-22	3485	11.87	7031	116.82	880	63.61
Nagaland	2015-16	3247	10.32	1418	36.75	469	29.47
Nagaland	2016-17	8723	25.08	1726	39.26	602	39.49
Nagaland	2017-18	11069	38.57	2461	44.25	611	41.79
Nagaland	2018-19	11940	37.2	4822	65.84	686	48.54
Nagaland	2019-20	11360	41.19	2749	59.4	973	69.25
Nagaland	2020-21	9000	22.85	9529	132.98	1258	88.65
Nagaland	2021-22	5412	19.37	8740	118.86	1039	71.25
Tripura	2015-16	59298	136.83	7967	141.05	881	59.38
Tripura	2016-17	243249	719.12	9425	166.65	1133	82.78
Tripura	2017-18	366127	1046.92	32049	330.41	1123	83.27
Tripura	2018-19	381981	1210.69	57623	508.63	1510	107.16
Tripura	2019-20	371417	1151.37	24072	292.44	1605	111.5
Tripura	2020-21	233223	667.03	90827	1184.72	2805	188.6
Tripura	2021-22	208833	643.51	146001	1639.38	2470	162.84

Article Info

Received: July 02 2023 *Accepted:* August 30 2023

How to cite this article:

Kumari, P., Meher, B.K., Birau, R., Verma, T.L., Sagar, S., Ninulescu, P.V. (2023). Analyzing the Role of MUDRA Yojana in Fostering Micro, Small & Medium Enterprises (MSME) Development in the North-Eastern States of India. *Revista de Științe Politice*. *Revue des Sciences Politiques*, no. 79, pp. 81 – 100.