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Financial Literacy and Its Impact on Entrepreneurship Development in Eastern Uttar Pradesh: An Empirical Study

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ABSTRACT- Financial Literacy is an important facilitator of economic development and entrepreneurial success. Entrepreneurship development is the process of creation of enterprises with the help of risk-taking, innovation and mobilisation of the resources and is very important for regional economic growth. This study examines the impact of financial literacy on entrepreneurship development among the beneficiaries of Mudra Yojana in Eastern Uttar Pradesh. Primary data were collected from 463 beneficiaries of Mudra Yojana with the help of a structured questionnaire, measuring financial literacy components (financial knowledge, skill, attitude, behaviour) and entrepreneurship development components (creativity and innovation, new enterprise establishment, risk-taking, dynamic surplus, productivity, employment, income generation). Exploratory factor analysis was used to validate the constructs, while regression analysis revealed that financial literacy has a significant influence on entrepreneurship development. Financial knowledge and behaviour emerged as the strongest predictors, while financial attitude was the weakest component.

KEYWORDS- Entrepreneurship Development, Financial Attitude, Financial Behaviour, Financial Knowledge, Financial Literacy, Financial Skill

I. INTRODUCTION

Entrepreneurship is the creation of economic value for the customers via a new product, service or improvement in existing products and services. Entrepreneurship development (ED) is about building capacity, skills, and an ecosystem, which are necessary for entrepreneurship to grow. According to Shane [1], ED is the process of creation of enterprises with the help of risk-taking, innovation and mobilisation of the resources and is very important for regional economic growth. Financial Literacy(FL), which includes financial knowledge, skill, behaviour and attitude, is an important facilitator of economic development and entrepreneurial success[2] [3]. For a country like India, where the micro, small and medium sector is a significant contributor to the economy in terms of GDP and employment [4], financial literacy helps entrepreneurs to manage the limited resources, mitigate risk and act on opportunities[5] [6]. Eastern Uttar Pradesh, despite its great potential in terms of demographic dividend, large size, fertile land, etc, lags behind in economic progress due to low financial inclusion, inadequate infrastructure and limited access to formal financial credit, underlining the need for improved financial literacy to promote entrepreneurship development[7] [8].

Entrepreneurs who are financially literate are better equipped to manage their debt and budget effectively, strategically invest, thereby improving the sustainability and productivity of their business[9][10]. Financial literacy and its components have a bearing on entrepreneurship development and its components[11]. Pradhan Mantri Mudra Yojana (PMMY), launched in 2015, has improved micro entrepreneurship in the country by providing collateral-free low-interest loans of ₹12.30 lakh crore disbursed to 24.48 crore accounts by 2019–20, 68% of which supported women entrepreneurs[12]. But the effectiveness of these schemes in eastern Uttar Pradesh remained constrained due to awareness gaps and low financial literacy[13].

Eastern Uttar Pradesh, which lags in economic indicators and is heavily reliant on agriculture and traditional industries like handloom[8] [14], provides us an opportunity to study financial literacy and entrepreneurship development. While different studies have indicated the role of financial literacy in entrepreneurship development globally and nationally [15] [16], we find a limited studies in the context of eastern Uttar Pradesh. This study addresses this gap by examining the relationship between financial literacy and entrepreneurship development in eastern Uttar Pradesh.

The structure of this paper is as follows. The literature review section integrates theoretical frameworks, concepts, and empirical studies on FL and ED. Research methodology provides the details of the research design, sampling technique, data collection, and statistical tools used, followed by data analysis and findings, discussion, and conclusion. This study contributes to the existing study on financial literacy and entrepreneurship by providing a regional context.

II. LITERATURE REVIEW

Many factors are necessary for the success of an entrepreneurial venture, and financial literacy is one among them, as it is evident in many theories. As per Human Capital Theory, [17],[18] education and skills, along with financial literacy, enhance the ability of an individual to make informed decisions. This helps in improving the outcomes of entrepreneurship. Financial literacy equips entrepreneurs to better manage their resources, assess risks in business ventures, and make their businesses more sustainable[2]. Resource-Based View (RBV) of Barney[19] focuses on the components of financial literacy, suggesting that financial knowledge and skills give a competitive edge to the enterprises [10]. FL also has a role in enabling the entrepreneurs to make better use of available financial resources, thereby boosting innovation and growth in the enterprise [20]. Schumpeter [21] has linked entrepreneurship to innovation, in which financial literacy provides the risk-taking, thereby enabling the entrepreneurs to allocate resources for new ventures. In summary, these theories point out how FL enhances entrepreneurial capacity and boosts business performance.

Entrepreneurship development (ED) is understood as a dynamic process which involves the identification of opportunities, the mobilisation of resources and the creation of value. opportunity identification, resource mobilization, and value creation[1],[22].According to Tripathi[23], the Constellation of Forces Framework, macro-level factors (e.g., economic infrastructure, government policies) and micro-level actions (e.g., opportunity perception, resource assembly) drive ED. As per Isenberg's [24] Entrepreneurial Ecosystem Model, there is an interplay of finance, policy, culture, and human capital, with access to microloans (e.g., PMMY). According to OECD/Eurostat Framework [25], entrepreneurial determinants (e.g., access to finance) are connected to performance (e.g., new enterprises) and impacts (e.g., employment generation). These models identify ED as a multifaceted process where FL acts as a tool for the exploitation of opportunity and economic progress.

Studies have suggested that financial literacy is not a single measurable variable but is composed of many dimensions. Atkinson and Messy[26], in their study, have stated that financial literacy is a combination of financial awareness, knowledge, skill, attitude, and behaviour required to make appropriate financial decisions, which helps in achieving individual financial well-being. Core components of financial literacy include budgeting which is planning and monitoring income and expenses to facilitate financial stability[27], Savings which can be understood as accumulating funds for future needs or investments[2], Investment which involves allocating resources to financial products for wealth creation[28] and Debt Management which includes effectively handling loans and credit to avoid over-indebtedness[29]. These components enable entrepreneurs to manage cash flows, evaluate financial products, and mitigate risks[11].

FL is important for business decision-making as it enhances the ability of an entrepreneur to navigate financial challenges. According to [30], individuals who are financially literate stand a better chance of making correct choices regarding allocation of capital, cost management, and investment choices, thereby leading to better results in the performance of their business. Many Studies have found that financial literacy supports allocation of funds for meeting operational expenses, setting aside savings for business expansion, and helps in managing debt for sustainable cash flow in business [31]. Eko [9] in his study concluded that financial literacy has a considerable significant impact on financial behaviour (FB), which has a mediation effect on investment decisions. Investment decisions have a critical bearing on the growth of entrepreneurship. Also, having sound financial literacy among entrepreneurs improves their risk-taking ability, thereby enabling them to follow innovative ventures with a high degree of confidence[10]. In our area of study, eastern Uttar Pradesh, which faces a lot of constraints, having better financial literacy is necessary for efficient allocation of financial resources[15].

Entrepreneurship development is not a single phenomenon, but it can be understood as a collection of many dimensions. According to Audretsch [32] and Shane [1], it is actually a process in which entrepreneurs identify opportunities which have business viability, then mobilise resources to create value for the businesses in particular and the economy in general. Entrepreneurship development is a multi-stage process starting with conceptualising and initiating a business by looking for opportunities and collecting resources[33]. It is then followed by an upward trajectory in which businesses grow by bringing innovation, thereby penetrating the market and optimising the resources[34]. The final stage of entrepreneurship development is sustainability, which ensures that the business remains long-term viable by being efficient, better risk-managed and reinvesting the proceeds of the business in its growth [35]. Entrepreneurship development leads to the transformation of individuals from job seekers to job creators, thereby accelerating economic progress[36].

As stated earlier, Entrepreneurial Development consist of many important constituents that contribute to its success. Creativity and Innovation (CI) consist of developing new products, processes, or markets[21], [37]. The Establishment of New Enterprises (NE) necessitates starting enterprises which can take advantage of market opportunities[38]. Risk-Taking Ability (RT) can be understood as taking a calculated amount of business risks to hunt for those opportunities[10], [39]. According to Wadeson [34], when excess value is generated because of efficient allocation of resources, there is a dynamic surplus (DS) in the business. Focusing on productivity and efficiency in business operations maximises the output, thereby creating value for the firm[40]. Employment Generation (EG) is a critical part of entrepreneurship development as it helps in the reduction of unemployment [5], [41]. Finally, Income Generation (IG) activities improve the personal and household income of the entrepreneur because of a boost in business activities[42]. In summary, these components are crucial for a comprehensive framework that provides support for the success of entrepreneurship.

Thus, we see that entrepreneurship is an important pillar for economic development, especially in a regional setting, as it promotes employment, ensures equality in income, and helps in the reduction of poverty[43], [44]. In India,

micro, small and medium enterprises have created approximately 111 million jobs and helped in reducing regional disparity since a lot of work done by them is labour-intensive [6], [45]. According to Kirkire[46], micro-entrepreneurship provides employment opportunities at low capital costs, which is vital for rural economies. In Eastern Uttar Pradesh, rural industries like handlooms foster local development and curb urban migration[8]. Entrepreneurship also enhances innovation and economic coordination by aligning resources with market needs[34], [47].

FL is an important enabler of ED by influencing its components through informed decision-making and resource management. According to Gustafsson & Omark [48] and Molina-García et al. [10], financial knowledge enhances risk-taking ability (RT) by improving risk assessment. Financial behaviour supports productivity and efficiency (PE) through budgeting and debt management [9]. Financial skills facilitate the establishment of new enterprises (NE) by enabling entrepreneurs to secure and manage capital (OECD INF, 2011). According to Potrich et al. [49], financial attitude fosters dynamic surplus (DS) by encouraging long-term planning. Studies like OECD [11] show that FB and FA drive financial well-being, which supports employment generation (EG) and income generation (IG). In the context of microfinance, FL improves the effectiveness of schemes like PMMY by promoting creativity and innovation (CI) through strategic investments [5]. Globally, FL has a linkage to entrepreneurial success. Cole et al.[50] and Bernheim et al.[51] found that financially literate individuals save more and plan better for retirement, supporting business sustainability. According to Van Rooij et al.[28] FL increases stock market participation, aiding capital accumulation for ventures. According to Eko [9], in India, FL influences FB, which mediates investment decisions, which are crucial for MSMEs. OECD [11] suggest that FB has a stronger effect on financial well-being than FK, highlighting its role in entrepreneurial decision-making. Beck et al.[52] adds that financial inclusion, driven by FL, accelerates SME growth, particularly in developing economies.

In Eastern Uttar Pradesh, empirical research is limited but gives important insights. According to Vaish[8], financial constraints and infrastructure deficits among handloom entrepreneurs in Maunath Bhanjan district support the importance of financial literacy and access to credit. Jha & Dwivedi[13] in their study on the effectiveness of Small Industrial Development Bank of India (SIDBI) found that its support is more effective for micro-enterprises than medium enterprises. Further, the awareness among entrepreneurs regarding the support provided by SIDBI varied by district. According to Gupta[15], microfinance in northeastern Uttar Pradesh provides support to self-employment and plays a role in reducing migration of individuals, particularly women. As per a study done by Bhatnagar & Gaur[53], there exists a low level of awareness of government schemes among individuals, resulting in limited growth of MSMEs. In their study, Yadav et al. [14] gave emphasis to the role of the scheme One District, One Product (ODOP) in the empowerment of women entrepreneurs after the COVID-19 pandemic, with the support of microbusinesses like handicrafts. These studies provide an indication of the critical role of financial literacy and microfinance in entrepreneurship development in eastern Uttar Pradesh, but also highlight the gap in awareness levels and regional differences.

The literature on financial literacy and entrepreneurship is constantly evolving and growing, but the existence of several gaps in the existing literature mandates the importance of this study. The most evident gap is the lack of region-specific studies, which primarily focus on Eastern Uttar Pradesh, a region which is characterised by economic stagnation and lower financial inclusion [7], [45]. The majority of the studies are confined to national or urban areas, thereby overlooking rural and semi-urban regions like Eastern Uttar Pradesh. Then there is a requirement of empirical evidence on causal relationships between FL components (FK, FA, FB, FS) and ED components (CI, NE, RT, DS, PE, EG, IG). Some of the studies, such as Eko [9] and Molina-García et al.[10] have explored the influence of financial literacy on financial behaviour and risk-taking ability, but its application to entrepreneurship in underdeveloped regions is minimal. The role of Pradhan Mantri Mudra Yojana (PMMY) in improving financial literacy among entrepreneurs in Eastern Uttar Pradesh is underexplored. This study addresses these gaps by empirically assessing the impact of financial literacy on entrepreneurship development in Eastern Uttar Pradesh, with a focus on micro-entrepreneurs and PMMY's role. Therefore, the objectives of the study are as follows.

- To analyse the factors which determine the development of entrepreneurship.
- To assess the financial literacy level of entrepreneurs in Eastern Uttar Pradesh.
- To study the effect of financial literacy on the development of entrepreneurship in Eastern Uttar Pradesh

Hypothesis

- H01: There is no significant impact of FL on ED in Eastern Uttar Pradesh
  - H01A: There is no significant impact of FL on creativity and innovation
  - H01B: There is no significant impact of FL on the establishment of new enterprises
  - H01C: There is no significant impact of FL on risk-taking ability
  - H01D: There is no significant impact of FL on dynamic surplus
  - H01E: There is no significant impact of FL on productivity and efficiency
  - H01F: There is no significant impact of FL on employment generation
  - H01G: There is no significant impact of FL on income generation

III. RESEARCH METHODOLOGY

To study the impact of financial literacy on entrepreneurship development, we have employed a mixed-method research design where both qualitative and quantitative techniques have been used. The target population for the study are the entrepreneurs from eastern Uttar Pradesh. The convenience sampling method has been used for the study. For the study, we have considered a sample size of 500 respondents, since, as per Cochran

[54], if the population is finite, having a sample size greater than 400 results in a 95% confidence level with 5% margin of error. A structured questionnaire was administered to the Mudra Yojana beneficiaries in eastern Uttar Pradesh to collect the primary data for the study. For the secondary data, we have relied on past literature reviews and government reports.

For the Questionnaire development for this study, we took guidance from the existing scales of financial literacy, which is the independent variable, which was used in the study OECD INFE[3]. Financial literacy construct consisted of four subconstructs, which are financial knowledge (FK), financial behaviour (FB), financial attitude (FA) and financial skill (FS). The dependent variable of the study is entrepreneurship development. Entrepreneurship development construct consists of seven subconstructs, which are creativity and innovation (CI), establishment of new enterprises (NE), risk-taking ability (RT), dynamic surplus (DS), productivity and efficiency (PE), employment generation (EG), and income generation (IG), adapted from Ahmad and Seymour[38] and Molina-García et al.[10]. To ensure reliability and validity, we pretested the questionnaire by taking responses from 30 respondents, and for the data analysis, we used SPSS version 26. Correlation, multiple regression analysis, and descriptive statistics were the statistical tools used.

IV. DATA ANALYSIS AND FINDINGS

A. Exploratory Factor Analysis

To validate the constructs of financial literacy and entrepreneurship development, exploratory factor analysis (EFA) was conducted. EFA is a used to identify the underlying structure of a set of observed variables by uncovering latent constructs, or factors, that explain the correlations among the variables[55] and is useful in the early stages of scale development or when the theoretical structure of constructs is not fully established, as it allows researchers to explore how items group together into factors[56]. Principal Component Analysis (PCA) is used as the extraction method, with Varimax rotation to achieve a simpler and more interpretable factor structure. PCA was chosen because it is a widely used method in EFA for reducing data dimensionality while maximising variance explained by the factors[57]. Varimax rotation, an orthogonal rotation method, was applied to minimise the number of variables with high loadings on each factor, thereby enhancing interpretability [58].

Findings: The Financial literacy construct had 27 items (each measuring various aspects of financial literacy) and was adopted from existing literature[3], [26], [49], [59]. Initial EFA conducted on 27 items resulted in a Kaiser-Meyer-Olkin (KMO) value of 0.866, which is considered excellent (values > 0.8 are deemed very good; [60]). Bartlett's Test of Sphericity was significant ($\chi^2 = 9331.167$, $df = 351$, $p < 0.001$), indicating that the correlation matrix was not an identity matrix and that the data were appropriate for factor analysis. Some items were removed due to significant cross-loadings and low loadings. This resulted in a reduced item pool of 21 items for the final EFA. Four factors were extracted, explaining 64.75% of the total variance (improvement from the initial EFA with all the items), which exceeds the recommended threshold of 60% for social science research [55]. The communalities for all items were above 0.3, ranging from 0.392 to 0.785, indicating that each item shared sufficient variance with the extracted factors. The final factor structure confirmed the theoretical composition of the financial literacy construct with four subconstructs: financial knowledge, financial behaviour, financial skill, and financial attitude.

The entrepreneurship development construct was measured using 41 items, which captured its different dimensions. The items to measure ED were evolved based on empirical literature on entrepreneurship development[25], [61]. The data were found fit for EFA since the value of Kaiser-Meyer-Olkin (KMO) statistics, which measures sample adequacy, was 0.92, which is above the threshold level of 0.08, and Bartlett's Test of Sphericity was significant at $p < 0.001$($\chi^2 = 15267.301$, $df = 820$). These indicated that the correlation matrix was not an identity matrix and that the data were appropriate for factor analysis. The Exploratory factor analysis extracted seven factors, which explained 67.46% of the total variance. The items shared sufficient variance with the extracted factors as indicated by communalities, which were above 0.4 for all the items. Some of the items had significant cross-loadings and low loadings, which led to the removal of 13 items from the final factor structure. The final factor structure consisted of seven subconstructs, which are Creativity and Innovation, Establishment of New Enterprises, Risk-Taking Ability, Dynamic Surplus, Productivity and Efficiency of Business, Employment Generation, and Income Generation. This confirmed the theoretical composition of Entrepreneurship development.

B. Financial Literacy of Respondents

As seen earlier, the EFA of financial literacy constructs resulted in a reduced pool of 21 items, which measured different aspects of financial literacy. A five-point Likert scale with 1 as strongly disagree, and 5 as strongly agree was used to measure the individual items. Score for individual items was calculated by assigning one point for the responses 4 and 5 and zero points for responses of 1, 2, and 3. This resulted in a total financial literacy score of 21 and component scores as presented in Table 1.

Table 1: Financial Literacy

Constructs	No of items	Total Score	Score	Percentage	Std. Deviation
Financial Literacy	21	0-21	13.19	62.83	6.12
Financial Knowledge	8	0-8	5.40	67.44	2.83
Financial Skill	6	0-6	3.80	63.39	2.27
Financial Attitude	4	0-4	2.05	51.19	1.58
Financial Behaviour	3	0-3	1.95	64.94	1.10

The FL score of 62.83% suggests that the entrepreneurs in eastern Uttar Pradesh exhibit a moderate financial literacy, with FK being the strongest component and FA the weakest. The standard deviation of 6.12 implies that the financial literacy level of the respondents is diverse. Financial Knowledge score of 67.44% and standard deviation of 2.83 suggests that the entrepreneurs in eastern Uttar Pradesh have a relatively high level of understanding of financial concepts such as budgeting, saving, compound interest and regulatory aspects, with considerable variation in understanding of financial concepts. Financial Skill score of 63.39% and standard deviation of 2.27 shows that entrepreneurs demonstrate moderate proficiency in practical financial management skills (e.g., managing cash flow, taxes, and debt), but with a difference in proficiency level. Financial behaviour score of 64.94 and standard deviation of 1.1 indicate that Entrepreneurs show moderate adoption of disciplined financial practices (e.g., saving for taxes, securing insurance) with little variation among the respondents. Financial Attitude score of 51.19% and standard deviation of 1.54 indicate that entrepreneurs have a less positive mindset toward financial planning and risk-taking, along with moderate differences in financial mindset.

C. Correlation Analysis

Financial literacy's influence on entrepreneurship development and its components can be understood by examining the correlation coefficients, which are shown in Table 2. Correlation coefficients between all the pairs are significant at the .01 significance level for a two-tailed test.

The results of correlation analysis show that financial knowledge has a significantly stronger influence on different dimensions of entrepreneurship development, especially with creativity and innovation, new enterprises, and income generation. Financial behaviour also shows a moderate correlation consistently across different components of entrepreneurship development. The findings indicate that constructs of financial literacy have a positive association with different constructs of entrepreneurship development.

Table 2: Karl Pearson Correlations Between Financial Literacy and Entrepreneurship Development

	Financial Knowledge	**Financial Skill**	**Financial Attitude**	**Financial Behaviour**
Creativity and Innovation	0.615*	0.444*	0.196*	0.505*
New Enterprises	0.586*	0.426*	0.407*	0.486*
Risk-Taking Ability	0.545*	0.440*	0.303*	0.385*
Dynamic surplus	0.558*	0.387*	0.558*	0.475*
Productivity and efficiency	0.483*	0.396*	0.226*	0.395*
Employment Generation	0.464*	0.415*	0.172*	0.378*
Income Generation	0.579*	0.401*	0.478*	0.433*
**. Correlation is significant at the 0.01 level (2-tailed).				

D. Regression Analysis

Multiple linear regression was used to assess the impact of FL components (FK, FS, FA, FB) on the seven components of ED (CI, DS, NE, PE, RT, EG AND IG). The results of the analysis are presented in Table 3a and Table 3b.

Findings: The result of the regression analysis shows that different components of financial literacy, which are independent or predictor variables, have R square in the range of 0.28 and 0.468. This indicates that the predictor variable explains 28.0% to 46.8% of the variation in the dependent variable.

Regression models 1 and 4 have the highest R square (0.468 and 0.437, respectively), which indicates that financial literacy has a significant impact on creativity and innovation and dynamic surplus among the Mudra Yojana beneficiaries in Eastern Uttar Pradesh.

The result of the regression analysis suggested a specific pattern across different dimensions of entrepreneurship. Creativity and innovation are significantly affected by FK and FB, both being strong and positive predictors, as evident by their beta values, which are significant as well. Other predictors like FS are significant but have a small effect (low beta value). Financial attitude has a beta value of -0.226, which is significant. This indicates that having a positive financial mindset might not always result in an increase in innovation and creativity, probably because of the aversive attitude of the beneficiaries.

Table 3a: Regression Results for Financial Literacy Predicting Entrepreneurship Development Components (Model Summary)

Dependent Variable	**R^2**	**F (4, 458)**	**Durbin-Watson**
Model 1-CI	0.468	100.851**	2.089
Model-2NE	0.401	76.716**	1.605
Model -3 RT	0.331	56.579**	1.597
Model -4 DS	0.437	89.027**	1.974
Model-5 PE	0.28	44.470**	1.668
Model 6-EG	0.28	44.496**	2.057
Model 7-IG	0.398	75.577**	1.626
Predictor-FK, FS, FA, FB			

Table 3b: Regression Results for Financial Literacy Predicting Entrepreneurship Development Components (Coefficient estimates)

Dependent Variable	Predictor	Beta	t	Sig.
Model 1	FK	0.523	11.304	0
CI	FS	0.097	2.283	0.023
	FA	-0.226	-5.573	0
	FB	0.293	7.007	0
Model 2	FK	0.385	7.832	0
NE	FS	0.081	1.807	0.071
	FA	0.095	2.205	0.028
	FB	0.211	4.761	0
Model 3	FK	0.394	7.585	0
RT	FS	0.171	3.59	0
	FA	0	0.003	0.997
	FB	0.106	2.27	0.024
Model 4	FK	0.288	6.041	0
DS	FS	0.035	0.8	0.424
	FA	0.328	7.863	0
	FB	0.17	3.944	0
Model 5	FK	0.344	6.377	0
PE	FS	0.145	2.943	0.003
	FA	-0.077	-1.634	0.103
	FB	0.187	3.85	0
Model 6	FK	0.332	6.154	0
EG	FS	0.195	3.963	0
	FA	-0.141	-2.991	0.003
	FB	0.182	3.752	0
Model 7	FK	0.376	7.622	0
IG	FS	0.06	1.327	0.185
	FA	0.218	5.054	0
	FB	0.119	2.682	0.008
Significance: **p < 0.01 (2-tailed).				

The establishment of new enterprises is significantly affected by financial knowledge and financial behaviour. Financial attitude has a small effect, and financial skill has no significant effect on this variable. Risk-taking ability is significantly affected by financial knowledge and financial skill, while FB has a small effect, and FA has no significant effect on the risk-taking ability of the Mudra Yojana beneficiaries. For dynamic surplus, financial attitude and financial knowledge are the significant predictors, while financial skill has no significant effect on dynamic surplus. Productivity and efficiency of business are significantly affected by FK and FB, while attitude toward finance has no significant effect on them. Employment generation is an important indicator of entrepreneurship development. It is significantly affected by FK and FS, while FA has a negative effect. This suggests that having a positive financial attitude has no significant influence on employment generation. Income generation is influenced by financial knowledge and financial attitude. Financial behaviour and financial skill have a small or no significant effect on income generation.

V. DISCUSSION

The findings from the financial literacy score indicate that while entrepreneurs in eastern Uttar Pradesh have a good understanding of financial concepts, their attitude toward financial planning and risk-taking may pose a restriction on their ability to make full use of this knowledge. The variability in FA, FS and FK indicate heterogeneity in financial literacy levels, which may be influenced by factors such as education, access to training, or business experience. This aligns with the socioeconomically challenged context of Eastern Uttar Pradesh, where access to financial education may vary. Low variability in financial behaviour suggests more uniform practices, possibly due to standardised financial requirements for entrepreneurs. The findings of this study indicate that targeted interventions are necessary for strengthening the financial attitude and financial skill of the beneficiaries since these constructs have a low mean score and high variability. These gaps can be plugged by integrating financial literacy workshops and training into micro credit schemes like Mudra Yojana. This can help in addressing the shortcomings and developing a positive financial mindset.

Financial knowledge has a strong positive relationship with creativity and innovation, which indicates that entrepreneurs with a good understanding of financial concepts such as budgeting, saving, compound interest are more likely to adopt new technologies, invest in research and development, and explore market opportunities. The strong correlation with new enterprises indicates that financial knowledge helps reduce financial barriers and supports business growth and reinvestment. The relationship with income generation and dynamic surplus suggests that financially knowledgeable entrepreneurs are better at generating profits and reinvesting in their businesses. Weaker correlations with employment generation suggest that financial knowledge may have a less direct impact on hiring or retaining employees compared to other outcomes. Financial skill (e.g., managing cash flow, budgets, taxes, and debt) moderately influences all entrepreneurship development components, with the strongest impact on creativity and innovation and risk-taking ability. The Entrepreneurs who have strong financial skills are better equipped to make informed decisions, manage business finances effectively, and take calculated risks, which supports innovation and business expansion. The relatively lower correlation with Dynamic surplus suggests that financial skill may not directly translate to profit generation as strongly as financial knowledge.

FA (e.g., positive views toward financial planning and risk-taking) has a strong impact on DS, indicating that a positive financial mindset contributes to profit generation and reinvestment. The moderate correlation with IG and

NE suggests that a proactive FA supports long-term financial goals and business growth. The weak correlations with CI and EG indicate that FA may play a less direct role in fostering innovation or hiring compared to knowledge and skills (e.g., saving for taxes, having insurance, considering affordability). has a strong relationship with CI, suggesting that disciplined financial practices enable entrepreneurs to invest in new products or processes. The moderate correlations with NE and DS indicate that good FB supports business expansion and profit generation.FK and FB have the strongest overall correlations with ED components, particularly CI (0.615 and 0.505) and NE (0.586 and 0.486). This suggests that understanding financial concepts and practising disciplined financial behaviours are critical for fostering innovation and business growth in Eastern Uttar Pradesh. FA shows the weakest correlations with most ED components (e.g., 0.172 with EG, 0.196 with CI), indicating that a positive financial mindset alone may not suffice without knowledge and skills.

FK is consistently the strongest predictor across all ED components, highlighting its critical role in fostering innovation, business expansion, risk-taking, profit generation, efficiency, employment, and income. FB is Significant in most models (except Risk-Taking Ability, where it is weaker), emphasising the importance of disciplined financial practices (e.g., saving for taxes, securing insurance) in supporting entrepreneurial outcomes. FS is Significant for CI, RT, PE, and EG, but not for NE, DS, or IG, suggesting that practical skills are less critical for profit-oriented outcomes. FA has Mixed results, with positive effects on DS, NE, and IG, but negative or non-significant effects on CI, PE, and EG. The negative coefficients (e.g., Beta = -0.226 for CI) suggest that a positive financial mindset may lead to risk aversion, limiting innovation or hiring. The strong predictive power of FK and FB supports the role of Mudra Yojana in reducing financial barriers and enhancing entrepreneurial outcomes in Eastern Uttar Pradesh, a socioeconomically challenged region.

VI. CONCLUSION

In this study, we have examined the impact of financial literacy on entrepreneurship development among micro-entrepreneurs in Eastern Uttar Pradesh. The study addressed the objectives of assessing FL levels and analysing its influence on ED components. The findings reveal that the entrepreneurs have a moderately high level of financial literacy with a score of 62.83%. Financial Knowledge was the strongest component with a score of 67.44% and financial attitude was the weakest with a score of 51.19%. This suggests that while entrepreneurs possess a good understanding of financial concepts, their mindset toward financial planning and risk-taking requires improvement. There was a significant variability in components of FL, particularly attitude and skill, underlining that there exists a heterogeneity in financial capabilities, which is likely influenced by limited access to financial education in this socioeconomically challenged region[7], [8].

The regression analysis confirmed that financial literacy has a significant impact on entrepreneurship development, thereby rejecting the null hypothesis ($H_0$1) and its sub-hypotheses ($H_0$1A–$H_0$1G). Financial knowledge and behaviour emerged as the strongest predictors across different components of entrepreneurship development, explaining 28.0% to 46.8% of the variance. FS has a significant influence on CI, RT, PE, and EG, while FA shows mixed effects, positively affecting DS, NE, and IG but negatively impacting CI and EG, which suggests a potential risk aversion[10]. These results highlight the critical role played by financial literacy in fostering innovation, business expansion, and economic outcomes, particularly in the context of PMMY, which reduces financial barriers for micro-entrepreneurs[5], [12].

These findings have a significant bearing on policy in Eastern Uttar Pradesh. Targeted financial literacy programs, integrated with PMMY, should prioritise enhancing FA and FS through workshops on financial planning and practical skills like cash flow management**.** MSMEs, which approximately contribute 111 million jobs in India [6], can be supported by strengthening financial knowledge and financial behaviour, which drive entrepreneurial outcomes. The Schemes, such as One District, One Product (ODOP), can help in promoting entrepreneurship in traditional industries like handlooms [14].

Since the study is limited by its convenience sampling and focus on PMMY beneficiaries, it puts a limitation on the generalizability of its findings. Investigating the role of digital financial literacy and its impact on ED in rural contexts can further enrich the literature. This study provides a foundation for understanding FL's role in ED, offering actionable insights for fostering economic development in Eastern Uttar Pradesh.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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