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Financial Literacy and Entrepreneurial Aspirations: Results from Pilot Experiments in India, Peru, and Uganda

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Abstract

Much recent research has sought ways to raise the impact of microcredit in low- and middle-income countries (LMICs). One set of interventions has addressed hard skills, often aimed at promoting business skills and financial literacy among microentrepreneurs. Another set of interventions has addressed socio-emotional skills such as the development of self-efficacy, entrepreneurial confidence, and aspirations. We present results from three small randomized controlled trials in India, Peru, and Uganda, each with four treatment arms in which we randomized a mobile-phone-based app designed to teach financial literacy, a video documentary intervention designed to boost entrepreneurial aspirations and goal-setting, the combination of these two interventions, and a control group. Results show positive and significant effects from both interventions, where the financial literacy app increased overall financial literacy by approximately 0.28σ both as a solo intervention and when combined with the aspirations intervention. The aspirations intervention increased an overall aspirational hope index by 0.33σ and by 0.30σ when combined with the financial literacy intervention. Increases in aspirational hope among microentrepreneurs were driven by statistically significant increases in aspirations, agency, and clearer visualizations of pathways out of poverty. Future research seeks to scale up this combined intervention.

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1 Introduction

Over the last decade, a long series of randomized trials has suggested that microcredit has a strong impact on a small subset of microcredit borrowers, referred to by Banerjee et al. (2019) as “gung-ho” entrepreneurs, but modest impacts on the great majority. Consequently, one of the biggest questions in the development of the microenterprise sector is how to either better target, or indeed create, “gung-ho” entrepreneurs, those whose enterprises are the most likely to flourish with interventions such as credit availability. Two of the leading factors that may both identify and equip a high-impact population are financial confidence/literacy and elevated entrepreneurial aspirations (Anderson et al., 2019; McKenzie, 2021; Rojas Valdez et al., 2022; Dammert, 2023; Melesse et al., 2023).

While early research appeared to indicate that equipping microentrepreneurs with hard financial and management skills resulted in little impact on enterprises (McKenzie and Woodruff, 2014), more recent and highly powered RCTs have indicated somewhat more substantial impacts (McKenzie, 2021). Much recent work has also examined the impact of aspirations interventions (e.g. Riley, 2022; Rojas Valdez et al., 2022; Bernard et al., 2026) and found stronger impacts in the area of education but have been less conclusive in the area of enterprise (Lybbert and Wydick, 2022). Aspirations interventions, if not calibrated to what is realistically achievable, can even backfire, resulting in frustration and even a reduction in the level of desired outcomes (McKenzie et al., 2022).

Our research delves into the challenge of optimizing the impact of microcredit interventions by investigating the roles of financial literacy and women’s entrepreneurial aspirations in small pilot studies that took place in three countries: India, Peru, and Uganda. We find strong positive evidence for both the entrepreneurial aspirations and financial literacy intervention, where the financial literacy app-based intervention increased overall financial literacy by 0.29σ and by 0.28σ when combined with the aspirations intervention. The aspirations intervention increased an overall aspirational hope index by 0.33σ and by 0.30σ when combined with the financial literacy inter-

vention. Results on components of these general indices are nearly always positive and frequently statistically significant in the individual countries. We find that complementarities seem to exist for financial literacy outcomes, especially in Peru, though somewhat less so for the entrepreneurial aspirations outcomes. Overall, we find that the results from these three pilot studies make a strong case for scaling the interventions across a wider population of study.

Our research is nested in two strands of the development economics literature. The first is the microenterprise business training and financial literature, especially as they relate to female managers of microenterprises. Financial literacy interventions have been found to result in better money management, as demonstrated by various studies (Woolley, Hui, and Vincent 2013; Klapper and Lusardi 2020; Seyfi, Hall, and Vo-Thanh 2022; Dammert, 2023). Financial literacy is seen as a crucial aspect of entrepreneurial empowerment, and financial literacy programs, both at a national and organizational level, are not uncommon. Yet their target audience and delivery methods remain inadequate. Passive learning strategies, such as lecture-based financial education sessions have been the norm in many national financial literacy programs (Banerjee et al. 2007).

In Uganda for example, the government launched a recurring national strategy for financial programs (SFLIU) in 2013. The SFLIU falls under theme 1 (financial literacy) of a three-themed financial inclusion program (2011/2016). The first strategy was rolled out to equip Ugandans with the necessary financial knowledge, skills, and confidence to participate in financial decision-making and improve financial inclusion levels in the country. To achieve these objectives, the various groups were targeted using five strands; 1) schools, 2) Youth, 3) Rural Outreach, 4) Workplace, and 5) Media. The 1st SFLIU ended in 2017 and the 2nd SFLIU commenced in 2019. Other than the expansion of the target strands to accommodate forcefully displaced persons (FDPs), internally displaced persons (IDPs), and children (0-15 years), the two strategies are similar in delivery (lecture-based) and by the time of this study, there has not been any published impact of SFLIU's objective on the overall financial inclusion.

Similarly, in the Indian context, based on the National Centre for Financial Education (NCFE) survey (2013 and 2019) on Financial Literacy and Inclusion in India, there is a notable disparity in financial literacy between urban and rural populations, and between men and women, with urban populations and men being more financially literate. According to the 2019 survey, only 27.18 percent of the respondents were financially literate and this led the Government of India to release The National Strategy for Financial Education (NSFE): 2020-2025.

The second strand of literature to which our study contributes is related to role that aspirations and other psychological factors play in escaping poverty (Bertrand et al., 2004; Haushofer and Fehr, 2014; Schilbach et al., 2016; Lybbert and Wydick, 2022, McKenzie et al., 2022). Our aspirations intervention is based on previous work using short documentaries featuring successful enterprise owners (Rojas et al., 2022; Bernard et al., 2026). Our study intentionally intersects a “hard skill” intervention—financial literacy—with a “soft skill” intervention—aspirations—to assess their efficacy and to explore the potential of an aspirations intervention to enhance hard skills acquisition, and vice versa. This exploration into the interplay and potential complementarity or substitutability of these interventions is a distinctive and valuable contribution to the scientific discourse on skill development and behavioral change.

Identifying and exploring this particular gap, we conducted three small randomized controlled trials (RCTs) that included 309 rural women participants from the coastal Karnataka region in India, 126 men and women in the cities of Lima and the northern city of Piura in Peru, and 269 rural participants from Eastern Uganda. These subjects participated in a five-week Financial Literacy and Entrepreneurial Aspirations Intervention session. Subjects took a baseline and endline survey to measure outcomes related to financial literacy, entrepreneurial aspirations, entrepreneurial agency, and visualization of pathways out of poverty via microenterprise growth.

The financial literacy intervention is built around a “farm finance” game, an app that was designed by our research team of faculty and graduate students at the University of San Francisco. The app is built to play on basic smartphones and tablets.

We designed the cartoon-based farm finance game with five levels. At the first level, a player is given a set amount of cash in the bank and presented with either a cow, some goats, or a flock of chickens. Each can be purchased in cash at a certain cost and has a given life expectancy, and a given productivity. As the game levels progress, borrowing is introduced, then subsequently the risk of animals dying, and then the option of investing across multiple animals. Participants played the game for at least an hour every week for five weeks.

Our study stands out due to the incorporation of two novel elements: a gamified approach to financial literacy education and a distinctive aspirations intervention, conceptualized around the “Aspiration Window” idea (Genicot and Ray 2017). The participants in the Aspirations group participated in an intervention where a video documentary of successful women from their community was played and where goal setting, mutual affirmation and learning exercises were held with the video documentary as reference. Moreover, in both these treatment arms we use an active intervention over the traditional classroom-styled passive approach in both the financial literacy and Aspirations treatment arms in our study. This shift is crucial because research, including studies by Stolper and Walter (2017) and Sohn et al. (2012), indicate passive learning approaches to have minimal effect on beneficiaries. Our active training techniques draw from the success of experimental financial education games noted in studies by Banerjee et al. (2007), Cai and Song (2017), and others, reflecting a broader trend towards interactive, engaging educational experiences.

2 Methodology

2.1 Research Design

Our randomized study incorporates two treatments across four treatment arms: 1) the financial literacy intervention, and 2) the aspirations intervention; 3) the combined financial literacy intervention and aspirations interventions; and 4) a control group. To teach financial literacy, the farm finance game app is designed with six levels. At

the first level, a player is given a set amount of cash in the bank and presented with investing in either a cow, some goats, or a flock of chickens. Each can be purchased in cash at a certain cost, possesses a given life expectancy, and a given productivity. As the game levels progress, borrowing is introduced, then subsequently the risk of animals dying, and then the option of investing across multiple animals. Participants played the game for at least an hour every week for five weeks. We found in our pilot study that participants were enthusiastic about the game and were supremely competitive and persistent with it. (One Ugandan woman made it to the second round after 111 attempts in the first round.)

Our aspiration intervention was based on previous work (Rojas et al., 2022; Bernard et al., 2026) and involved creating a short documentary featuring three of the most successful microentrepreneurs in the FINCA self-help group membership and the SKDRDP membership in India. Experimenters created the documentary on an Apple iPad using iMovie with high-quality video and sound and inspirational music chosen with FINCA Uganda and SKDRDP India personnel. Those receiving the Entrepreneurial Aspirations treatment were shown the documentary and also given a five-week course intended to help participants visualize success and growth in their enterprises, goal-setting, and the planning of intermediate steps to their success.

Data from the game is generated in real time at a server hosted by the University of San Francisco. From this data, we can learn not only the impacts of the game on financial literacy, but *how* they are learning since we can track rate of distinct classes of mistakes over the course of play, such as the decision to invest in an unprofitable animal (a Type I error), a decision not to invest in an animal when it would be profitable (Type II error), and decisions to take on too much debt too quickly, which in the game can lead to insolvency and having to return to the beginning of the current level.

2.2 Regression Model

Our estimations for each of our three countries use the ANCOVA estimator:

$$Y_{i1} = \alpha + \tau_1 F_i + \tau_2 A_i + \tau_3 (F_i \times A_i) + X_i' \gamma + \theta Y_{i0} + \epsilon_i \quad (1)$$

where Y_{i1} represents endline outcomes related to aspirations and financial literacy, Y_{i0} represents these outcomes at baseline, X_i is a vector of controls that include age, gender, and education, τ_1 , τ_2 , and τ_3 represent average treatment effects from the financial literacy (F_i) and aspirations (A_i) treatment arms of our study, and ϵ_i is the error term. We cluster standard errors at the session level, and for our overall estimations we add country-level fixed effects. All of the effects that we measure are short-term, five weeks after the initiation of the intervention.

Our indices were created in the following manner using the criteria in Wydick (2026): We consider our financial literacy sub-indices (Financial Knowledge, Financial Competence, Financial Behavior, etc.) to be hybrid indices that lean toward having an underlying construct, but where this underlying construct is not well identified. We used the first principal component from PCA (principal components analysis) to form each of these variables with the exception of Financial Numeracy, which is a standardized score based on the number of correct answers on the financial literacy test.

We use the screening technique for variable inclusion in a reflective index described in Wydick (2026) using Elastic Net with $\alpha = 0.50$. In this process all variables were retained for our financial literacy indices, and for our Aspirations and Agency indices. For our Visualization of Pathways index, one element of the index, strength of agreement with the statement "I become discouraged easily when I encounter obstacles in making money," was dropped from the index, being retained only at weak outlying values of lambda.

For our psychological sub-indices for which we believe to be identifying impact on a latent factor (Aspirations, Agency, Visualization of Pathways) we form the index using confirmatory factor analysis (CFA) in which we create the index using loadings

from the first factor. We subject our estimations to robustness checks in which we form these three indices through principal components analysis (PCA) and through the Anderson (2008) index.

We aggregated both our financial sub-indices and our psychological indices to create formative indices of "Financial Literacy" and "Aspirational Hope" using the method of Kling et al. (2007); we view these summary indices as formative, not as underlying constructs but as definitionally created from these sub-indices as a measure of overall achievement in these areas. We ran these variables through the LASSO screening procedure in Wydick (2026) and all sub-index variables were retained.

3 Empirical Results from Three Pilot Experiments

3.1 Results on Financial Literacy

Table 1 shows baseline summary statistics across treatment arms, and Tables 2 and 3 show the impact from our interventions on financial literacy outcomes.

3.1.1 India: Financial Literacy

In Tables 2 and 3 we find significant impacts of the FL treatment on Financial Behavior (0.21σ) and Financial Confidence (0.21σ), but insignificant on other financial sub-indices. Similar sized impacts were seen on these variables in the FL-EA treatment, but in India the overall effect on the aggregated Financial Literacy index was much greater in the FL-EA arm at (0.40σ).

3.1.2 Peru: Financial Literacy

Tables 2 and 3 show significant effects from the FL on overall Financial Behavior (0.24σ) and large impacts on Financial knowledge from the combined FL-EA intervention (0.37σ), but impacts other financial sub-indices were insignificant as well as on the overall Financial Literacy Index.

3.1.3 Uganda: Financial Literacy

The largest impacts from the FL intervention were in Uganda, where the basic FL intervention realized a 0.35σ average treatment effect. The largest areas of impact in Uganda were in Financial Knowledge (0.61σ), Financial Numeracy (0.59σ), and Financial Behavior (0.13σ). Impacts from the FL-EA intervention were of the same magnitude, while those on overall Financial Literacy were actually somewhat larger at 0.44σ .

3.1.4 Three-Country Summary: Financial Literacy

As seen in Tables 2 and 3, our game-based financial literacy (FL) intervention (alone) showed positive and significant effects on Financial Knowledge (0.35σ), Financial Numeracy (0.29σ), and Financial Behavior (0.16σ) and strong and significant effects overall on our summary Financial Literacy Index ($0.29\sigma, p < 0.01$). When combined with the Aspirations in the FL-EA intervention, effects were quite similar—positive and significant on Financial Knowledge (0.35σ), Financial Numeracy (0.21σ), and Financial Behavior (0.17σ) and had an overall effect on Financial Literacy of ($0.28\sigma, p < 0.01$). In summary, we find very similar and consistent effects between the individual FL and combined FL-EA treatments on Financial Literacy. We find the overall effects on financial literacy to be approximately (0.28 - 0.29σ) and strongly significant in both treatment arms that contained the financial literacy game intervention, with stronger effects in Uganda and India than in Peru.

3.2 Results on Entrepreneurial Aspirations

Table 4 gives impacts across our different entrepreneurial-aspirations-based hope outcomes: Entrepreneurial Aspirations, Entrepreneurial Agency, Pathway Visualization, and our Aspirational Hope Index. (In Tables 5 and 6 we provide robustness checks using indices created through principal components analysis (PCA) and Anderson indices, respectively.)

3.2.1 India: Aspirations

In India the EA intervention showed positive impacts on Entrepreneurial Aspirations (0.23σ). Impact from the EA and FL-EA treatment arms were also large and significant on Entrepreneurial Agency at (0.43σ) and (0.45σ), respectively. Indeed the FL arm also not surprisingly increased agency by (0.43σ), showing the perception of agency can increase based not only on a more general intervention, but also by an intervention that develops specific skills. Impact was essentially zero on Visualization of Pathways. The overall Aspirational Hope Index increased by ($0.41\sigma, p < 0.05$) and ($0.36\sigma, p < 0.10$) from the EA and FL-EA interventions, respectively, showing large impacts of the aspirations and financial literacy interventions in India.

3.2.2 Peru: Aspirations

The aspirations intervention had smaller effects in Peru, all positive, but none statistically significant except for (0.56σ) and (0.51σ) impact on visualization of pathways from the EA and FL-EA combined treatment arms, respectively. These resulted in a marginally significant (0.40σ) increase in the overall Aspirational Hope index.

3.2.3 Uganda: Aspirations

Table 4 shows positive point estimates of marginal statistical significance on Entrepreneurial Aspirations (0.33σ) and Pathways (0.29σ). The effect on Agency is marginally insignificant but shows a large point estimate of (0.32σ), The large effects on these outcomes made the overall impact on the Aspirational Hope Index large (0.42σ). The impact of the combined FL-EA treatment arm was very small in Uganda, where we believe that trying to implement the interventions of both treatment arms into one sitting with participants resulted in lower impacts on both aspirational and financial literacy outcomes.

3.2.4 Three-Country Summary: Entrepreneurial Aspirations

Across our three countries, we find that the impact of the EA intervention was quite strong on Entrepreneurial Aspirations and Entrepreneurial Agency, with average treatment effects of 0.31σ and 0.30σ , respectively. The impact on Visualization of Pathways was 0.16σ and statistically insignificant, but the overall impact on the Aspirational Hope Index was a robust 0.33σ ($p < 0.01$). The effect of the combined FL-EA treatment was 0.30σ ($p < 0.05$), mainly driven by a 0.28σ impact on Pathways. Thus we find overall the EA and FL-EA treatments to have virtually the same overall effects, in the 0.30 - 0.33σ range, with little evidence for complementarities between the two interventions.

Combined with the results of Rojas et al. (2022) in Oaxaca, Mexico, we find substantial evidence that the aspirations intervention, with its documentary on successful program participants and its hope-based curriculum designed to develop aspirations, agency, and pathway visualization among microentrepreneurs, exhibits significant effects five weeks after the intervention. Rojas et al. finds these effects, especially in agency, to significantly last up to 12 months, and further work will ascertain if the effects we find in the pilot studies can be sustained up to a year and beyond in the planned scaling up of the intervention in Uganda.

4 Conclusion and Implications for Further Work

The series of pilot experiments in India, Peru, and Uganda provide strong initial evidence for the effectiveness of our game-based financial literacy intervention, particularly in improving numeracy, knowledge, and behavior, where we find the individual and aspirations-combined interventions to have effects of 0.29σ and 0.28σ , respectively. The entrepreneurial aspirations intervention shows impacts of remarkably similar size, of 0.33σ and 0.30σ , respectively for the individual and combined treatments.

This set of pilot experiments emphasizes the potential of technology and digital platforms in delivering financial literacy interventions, requiring further research and

development in this area. Further, we provided more specific data on the gender disparities in financial literacy, highlighting the need for further research and targeted interventions. However, the impact on digital literacy, confidence, and competence requires further investigation and potentially more tailored interventions. We even find mild evidence of cross-over impacts—point estimates from the impacts of financial literacy on the Aspirations and Agency outcomes are both significant and positive over the three countries. Even the aspirations intervention alone has a marginally significant impact on overall financial literacy. When these two interventions are implemented together, given adequate time for each, they show effects on both financial literacy and entrepreneurial-aspirations-based outcomes that approach a third of a standard deviation.

While our study shares similarities in overall goals with the cited papers, there are several key differences in the specific interventions employed. Unlike the results found in Melesse et al. (2023), our game-based financial literacy treatment did not significantly impact aspirations in Uganda, contrasting with their report of increased aspirations after financial literacy training. Our Entrepreneurial Aspirations treatment marginally impacted financial literacy, supporting their argument that heightened aspirations may encourage technology adoption. However, our Entrepreneurial Aspirations treatment did not significantly impact numeracy, contrasting with their findings that goal-setting improves numeracy skills.

Our combined FL-EA treatment significantly impacted financial behavior overall across our three countries, requiring further investigation into the specific interventions and their mechanisms of action. Also, our FL-EA treatment only significantly affected visualization of pathways (out of poverty) in Peru, suggesting that the chosen interventions may not have been as strong as it could have been in helping participants in the experiments to “think outside the box”. It is likely that in Uganda time constraints in implementing the two treatments together may have affected the size of the impact of the combined treatments. Subsequent implementations of the experiment, as we followed in Peru, should be careful to allow adequate time for both interventions

to be fully implemented in the Combined treatment.

Our study advances the discourse on financial literacy yet diverges from some existing research in the nuances of intervention impact. The Financial Literacy treatment's influence on confidence was not as pronounced as in other studies, nor did the Aspirations treatment markedly enhance digital literacy or numeracy. The modest influence of the Combined treatment on behavioral changes highlights the complexity of designing effective financial literacy programs and calls for an in-depth investigation into intervention dynamics, particularly in the context of gender and education. Even with limited duration and operational challenges, our study suggests that gamification is likely an effective and efficient intervention technique, and this underscores the importance of more studies to decipher the multifaceted effects of financial literacy initiatives, especially for women in developing economies.

Scaling of the intervention is critical to understand the specific mechanisms through which different interventions impact various aspects of financial literacy. Investigating the long-term effects of interventions on financial decision-making, financial and entrepreneurial behavior, and enterprise outcomes is crucial. Designing and testing interventions that specifically address gender and educational disparities are crucial for promoting inclusive financial literacy. Also, exploring the role of technology and digital platforms in delivering effective financial literacy interventions for women in developing countries. We plan to add an artificial intelligence (AI) component in our scaled experiment in Uganda. With this AI component, entrepreneurs will be able to use the AI chatbot initially to solve business problems within the game app. Then we will train participants in the use of AI to help them with practical problems related to their own business.

Our scaled research planned for Uganda will expand on these preliminary findings, employing longer study durations, larger sample sizes to mitigate potential confounding factors, along with introducing AI to randomly selected groups in later stages of the experiment. Replicating the study in other country contexts with these improvements could provide a more definitive understanding of gamified learning's role in

financial literacy, particularly for women in developing countries. The results of these three pilot studies, while not exhaustive, indicate substantial promise for the scaled experiment.

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Table 1: Summary Statistics by Country

	Three Countries		India		Peru		Uganda	
	mean	sd	mean	sd	mean	sd	mean	sd
Aspirations Treatment								
Female	0.78	(0.41)	1.00	(0.00)	0.77	(0.42)	0.54	(0.50)
Age	44.22	(11.97)	44.19	(9.11)	47.17	(15.54)	42.04	(11.50)
Education	2.94	(1.58)	2.18	(0.98)	4.83	(1.66)	2.40	(0.71)
Number of Dependents	4.11	(3.43)	2.52	(2.18)	2.69	(1.79)	6.91	(3.71)
Monthly Income (USD)	161.96	(213.49)	80.32	(89.78)	278.61	(337.62)	154.57	(124.30)
Base Financial Literacy	0.11	(0.97)	0.34	(0.90)	-0.04	(1.06)	-0.04	(0.94)
Base Aspirational Hope	0.19	(0.91)	0.33	(0.77)	0.12	(1.20)	0.06	(0.78)
Financial Literacy Treatment								
Female	0.83	(0.38)	1.00	(0.00)	0.81	(0.39)	0.67	(0.47)
Age	46.53	(13.63)	49.69	(9.80)	46.25	(18.30)	43.51	(11.94)
Education	3.01	(1.85)	1.93	(0.98)	5.06	(1.93)	2.46	(0.92)
Number of Dependents	3.44	(3.05)	1.60	(1.33)	2.27	(1.52)	6.13	(3.25)
Monthly Income (USD)	199.83	(274.01)	68.79	(118.58)	350.73	(360.46)	200.33	(234.18)
Base Financial Literacy	-0.05	(1.00)	-0.50	(1.02)	0.36	(0.73)	0.07	(0.99)
Base Aspirational Hope	-0.21	(1.04)	-0.62	(1.19)	0.17	(0.99)	-0.12	(0.75)
Financial Lit $\times$ Aspirations								
Female	0.78	(0.41)	1.00	(0.00)	0.52	(0.51)	0.65	(0.48)
Age	46.05	(12.81)	46.01	(10.78)	52.67	(16.27)	40.46	(9.79)
Education	2.86	(1.74)	1.98	(0.95)	5.02	(1.97)	2.48	(0.69)
Number of Dependents	3.04	(2.69)	1.79	(1.53)	2.22	(1.47)	5.81	(2.98)
Monthly Income (USD)	157.03	(173.43)	77.17	(53.11)	254.94	(225.34)	191.94	(187.28)
Base Financial Literacy	-0.20	(0.94)	-0.16	(0.87)	-0.32	(1.03)	-0.14	(0.97)
Base Aspirational Hope	0.03	(0.95)	0.31	(0.98)	-0.22	(1.02)	-0.21	(0.70)
Control								
Female	0.86	(0.35)	1.00	(0.00)	0.74	(0.44)	0.80	(0.41)
Age	47.33	(13.14)	48.74	(8.36)	47.32	(18.74)	45.15	(9.74)
Education	2.98	(1.80)	1.95	(0.78)	4.74	(1.92)	2.27	(0.73)
Number of Dependents	3.04*	(2.66)	1.63	(1.25)	2.66	(1.66)	5.71	(3.34)
Monthly Income (USD)	195.44	(370.49)	59.27	(49.59)	328.50	(533.40)	207.89	(290.53)
Base Financial Literacy	0.11	(1.06)	0.30	(0.98)	-0.11	(1.05)	0.11	(1.14)
Base Aspirational Hope	-0.04	(1.07)	-0.16	(0.70)	-0.15	(1.26)	0.31	(1.21)
Date of Experiment:	-	-	June	2023	July	2023	August	2024
Observations	743		348		126		269	

*significantly different from treatment at the $p \leq 0.05$ significance level.

Table 2: Impact on Financial Knowledge, Numeracy, and Behavior

Financial Knowledge	Three Countries	India	Peru	Uganda
Financial Literacy	0.355*** (0.0945)	0.318 (0.157)	0.0292 (0.0678)	0.605** (0.108)
Entrepreneurial Aspirations	0.300*** (0.0746)	0.269* (0.0980)	0.0484 (0.165)	0.397** (0.0830)
FinLiteracy x Aspirations	0.351*** (0.0985)	0.288 (0.155)	0.374*** (0.0831)	0.509** (0.158)
Financial Numeracy	Three Countries	India	Peru	Uganda
Financial Literacy	0.292** (0.115)	0.217 (0.182)	0.100 (0.329)	0.588* (0.235)
Entrepreneurial Aspirations	-0.147 (0.102)	-0.0863 (0.112)	-0.450* (0.215)	0.0942 (0.193)
FinLiteracy x Aspirations	0.209** (0.0917)	0.188 (0.110)	0.319** (0.1000)	0.492* (0.179)
Financial Behavior	Three Countries	India	Peru	Uganda
Financial Literacy	0.162*** (0.0376)	0.210** (0.0395)	0.237** (0.0974)	0.128* (0.0500)
Entrepreneurial Aspirations	0.159*** (0.0430)	0.226** (0.0467)	0.0252 (0.0935)	0.173 (0.112)
FinLiteracy x Aspirations	0.170*** (0.0499)	0.277*** (0.0174)	0.159 (0.119)	0.108 (0.0919)
Observations	743	348	126	269

Dependent variable formed through the first principal component (PCA).

Multi-country regressions incorporate fixed effects at the country level.

Standard errors clustered at the treatment group level in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3: Impact on Financial Competency, Confidence, and Overall Financial Literacy

Financial Competency	Three Countries	India	Peru	Uganda
Financial Literacy	-0.157** (0.0672)	-0.219*** (0.0350)	-0.205 (0.258)	-0.166 (0.149)
Entrepreneurial Aspirations	-0.00521 (0.0727)	-0.0285 (0.0768)	0.0687 (0.182)	-0.0807 (0.113)
FinLiteracy x Aspirations	-0.0543 (0.0785)	-0.00742 (0.109)	-0.362*** (0.0652)	0.0879 (0.0976)
Financial Confidence	Three Countries	India	Peru	Uganda
Financial Literacy	-0.0375 (0.0883)	0.216** (0.0448)	-0.00198 (0.141)	-0.204* (0.0833)
Entrepreneurial Aspirations	0.0231 (0.0900)	0.203* (0.0665)	-0.0532 (0.219)	-0.0749 (0.0582)
FinLiteracy x Aspirations	-0.00821 (0.0859)	0.205** (0.0509)	-0.214 (0.163)	0.0225 (0.0979)
Total Financial Literacy	Three Countries	India	Peru	Uganda
Financial Literacy	0.289*** (0.0645)	0.258 (0.168)	0.0606 (0.0615)	0.349*** (0.0335)
Entrepreneurial Aspirations	0.155* (0.0792)	0.361*** (0.0394)	-0.138 (0.111)	0.170 (0.144)
FinLiteracy x Aspirations	0.279*** (0.0543)	0.396*** (0.0489)	0.0997 (0.135)	0.436* (0.138)
Observations	743	348	126	269

Dependent variable formed through the first principal component (PCA).

Multi-country regressions incorporate fixed effects at the country level.

Standard errors clustered at the treatment group level in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4: Impact on Entrepreneurial Aspirations, Agency, Visualization of Pathways, and Overall Aspirational Hope: Factor-based Indices

Entrepreneurial Aspirations	Three Countries	India	Peru	Uganda
Financial Literacy	0.127 (0.127)	0.148 (0.124)	0.454 (0.257)	-0.0780 (0.268)
Entrepreneurial Aspirations	0.306*** (0.0732)	0.231** (0.0612)	0.189 (0.265)	0.332* (0.128)
FinLiteracy x Aspirations	0.181* (0.0964)	0.0841 (0.0961)	0.332 (0.272)	0.105 (0.222)
Entrepreneurial Agency	Three Countries	India	Peru	Uganda
Financial Literacy	0.196 (0.123)	0.432*** (0.0487)	-0.117 (0.137)	0.0607 (0.309)
Entrepreneurial Aspirations	0.297** (0.114)	0.388** (0.0846)	0.0378 (0.284)	0.316 (0.220)
FinLiteracy x Aspirations	0.218 (0.135)	0.448*** (0.0592)	0.160 (0.184)	-0.0989 (0.331)
Pathway Visualization	Three Countries	India	Peru	Uganda
Financial Literacy	0.162 (0.142)	0.272 (0.124)	0.564* (0.244)	-0.144 (0.257)
Entrepreneurial Aspirations	0.162 (0.111)	-0.0340 (0.198)	0.105 (0.248)	0.292* (0.113)
FinLiteracy x Aspirations	0.281** (0.126)	0.332 (0.185)	0.507** (0.177)	-0.00877 (0.213)
Aspirational Hope Index	Three Countries	India	Peru	Uganda
Financial Literacy	0.226 (0.132)	0.413** (0.0775)	0.379* (0.197)	-0.0547 (0.323)
Entrepreneurial Aspirations	0.330*** (0.0906)	0.235 (0.149)	0.139 (0.258)	0.418** (0.117)
FinLiteracy x Aspirations	0.302** (0.105)	0.364* (0.137)	0.406 (0.236)	0.0197 (0.178)
Observations	743	348	126	269

Dependent variable formed by the first factor using confirmatory factor analysis (CFA).

Multi-country regressions incorporate fixed effects at the country level.

Standard errors clustered at the treatment group level in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5: Impact on Entrepreneurial Aspirations, Agency, Visualization of Pathways, and Overall Aspirational Hope: Robustness Check using PCA Indices

Entrepreneurial Aspirations	Three Countries	India	Peru	Uganda
Financial Literacy	0.134 (0.128)	0.173 (0.117)	0.475 (0.262)	-0.0953 (0.269)
Entrepreneurial Aspirations	0.306*** (0.0713)	0.245** (0.0509)	0.188 (0.257)	0.315* (0.125)
FinLiteracy x Aspirations	0.197* (0.0947)	0.118 (0.102)	0.351 (0.273)	0.0937 (0.209)
Entrepreneurial Agency	Three Countries	India	Peru	Uganda
Financial Literacy	0.185 (0.125)	0.430*** (0.0523)	-0.138 (0.144)	0.0428 (0.308)
Entrepreneurial Aspirations	0.300** (0.114)	0.408** (0.0753)	0.0228 (0.284)	0.308 (0.214)
FinLiteracy x Aspirations	0.216 (0.137)	0.462*** (0.0532)	0.144 (0.173)	-0.110 (0.328)
Pathway Visualization	Three Countries	India	Peru	Uganda
Financial Literacy	0.177 (0.144)	0.307* (0.122)	0.567* (0.249)	-0.148 (0.260)
Entrepreneurial Aspirations	0.177 (0.111)	-0.0108 (0.199)	0.130 (0.245)	0.291* (0.115)
FinLiteracy x Aspirations	0.279* (0.132)	0.339 (0.201)	0.505** (0.175)	-0.0255 (0.213)
Aspirational Hope Index	Three Countries	India	Peru	Uganda
Financial Literacy	0.232 (0.136)	0.440*** (0.0681)	0.383* (0.199)	-0.0736 (0.328)
Entrepreneurial Aspirations	0.341*** (0.0922)	0.261 (0.148)	0.146 (0.257)	0.408** (0.118)
FinLiteracy x Aspirations	0.310** (0.110)	0.390* (0.141)	0.408 (0.232)	0.00143 (0.176)
Observations	743	348	126	269

Dependent variable formed by the first factor using confirmatory factor analysis (CFA).

Multi-country regressions incorporate fixed effects at the country level.

Standard errors clustered at the treatment group level in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 6: Impact on Entrepreneurial Aspirations, Agency, Visualization of Pathways, and Overall Aspirational Hope: Robustness Check using Anderson Indices

Entrepreneurial Aspirations	Three Countries	India	Peru	Uganda
Financial Literacy	0.0876 (0.0938)	-0.0955 (0.155)	0.164* (0.0832)	0.263** (0.0510)
Entrepreneurial Aspirations	0.197** (0.0923)	0.178 (0.127)	0.177 (0.165)	0.237 (0.168)
FinLiteracy x Aspirations	-0.0437 (0.115)	-0.212* (0.0805)	0.0813 (0.228)	0.120 (0.275)
Entrepreneurial Agency	Three Countries	India	Peru	Uganda
Financial Literacy	0.151 (0.132)	0.469*** (0.0374)	-0.276 (0.175)	-0.00846 (0.251)
Entrepreneurial Aspirations	0.277** (0.114)	0.430*** (0.0459)	-0.105 (0.297)	0.277 (0.160)
FinLiteracy x Aspirations	0.171 (0.133)	0.450*** (0.0526)	-0.0874 (0.174)	-0.132 (0.256)
Pathway Visualization	Three Countries	India	Peru	Uganda
Financial Literacy	0.202 (0.147)	0.367* (0.117)	0.566* (0.257)	-0.152 (0.263)
Entrepreneurial Aspirations	0.202* (0.113)	0.0279 (0.200)	0.166 (0.240)	0.290* (0.117)
FinLiteracy x Aspirations	0.273* (0.143)	0.349 (0.228)	0.498** (0.174)	-0.0573 (0.213)
Aspirational Hope Index	Three Countries	India	Peru	Uganda
Financial Literacy	0.259** (0.113)	0.552*** (0.0911)	0.143 (0.0867)	0.00645 (0.171)
Entrepreneurial Aspirations	0.247** (0.0855)	0.206 (0.121)	0.0552 (0.206)	0.356*** (0.0582)
FinLiteracy x Aspirations	0.214* (0.103)	0.323* (0.122)	0.204 (0.197)	0.0229 (0.172)
Observations	743	348	126	269

Dependent variable formed by the first factor using confirmatory factor analysis (CFA).

Multi-country regressions incorporate fixed effects at the country level.

Standard errors clustered at the treatment group level in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$