



ADVANCING WOMEN'S ENTREPRENEURSHIP: THE ROLE OF DIGITAL MONEY MANAGEMENT TOOL

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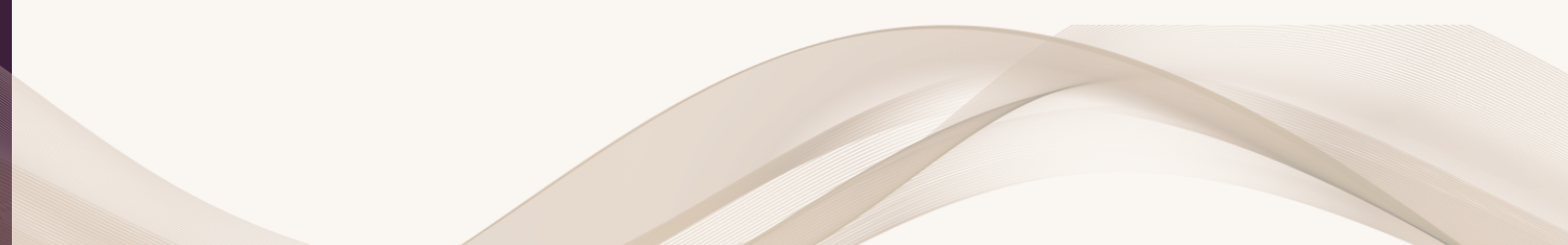
We extend our sincere appreciation to our on-ground partners, Hand in Hand India in Tamil Nadu and Vardhaman Foundation in Punjab, for helping us connect with our study participants and for their guidance during field operations.

We are especially grateful to Indradeep Ghosh, Executive Director at Dvara Research, who has constantly pushed us to think critically about our project objectives and its intended outcomes.

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Executive Summary


This report presents findings from a collaborative action-research initiative between Dvara Research and MeraBills, a digital bookkeeping technology service provider, that examines the money management challenges faced by women nano entrepreneurs (WNEs) and evaluates a digital solution designed to address them. The study was conducted in two contrasting geographic contexts of rural Punjab and urban Tamil Nadu, using qualitative research methods involving 30 WNEs.

The study was motivated by the recognition that WNEs lead distinct financial lives, in which they simultaneously manage household finances and operate informal enterprises. Their money, whether originating from the household or the business, flows freely between the two domains. Despite substantial sums passing through their hands, WNEs are largely underserved by existing financial tools, which are designed around business-only models that fail to reflect the integrated nature of WNEs' financial lives. Furthermore, this intermingling of household and enterprise cash flows, while practically adaptive, limits clarity regarding business profitability, costs, and savings capacity. This, in turn, constrains their ability to make informed financial decisions for both their business and their household.

The research progressed across five iterative stages. *Firstly*, as part of **Problem Diagnosis**, an exploratory fieldwork was conducted among 30 WNEs across rural Punjab and


urban Tamil Nadu, as an open-ended inquiry rather than a predetermined hypothesis. This fieldwork affirmed that most WNEs struggle to manage the intermingling of household and business cashflows. Crucially, it also revealed significant differences in how individual WNEs perceived, prioritised, and responded to this challenge. It therefore became apparent that a one-size-fits-all solution would be inadequate. Therefore, the findings from the fieldwork was synthesised into a threefold WNE typology that serves two purposes: (i) analytically, it brings conceptual clarity to the variation observed among WNEs across three categorical dimensions, viz., psychological, behavioural, and capability, and (ii) practically, it provides a mechanism to identify women most likely to be motivated to address the money management challenges they themselves articulate.

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Analytically, it brings conceptual clarity to the variation observed among WNEs across three categorical dimensions, viz., psychological, behavioural, and capability

ii



Practically, it provides a mechanism to identify women most likely to be motivated to address the money management challenges they themselves articulate

Importantly, these categories are not treated as fixed identities but as positions along a spectrum, where transitions between WNE types are often prompted by changes in family circumstances, personal resolve, or a shift to a more contextually aligned enterprise.

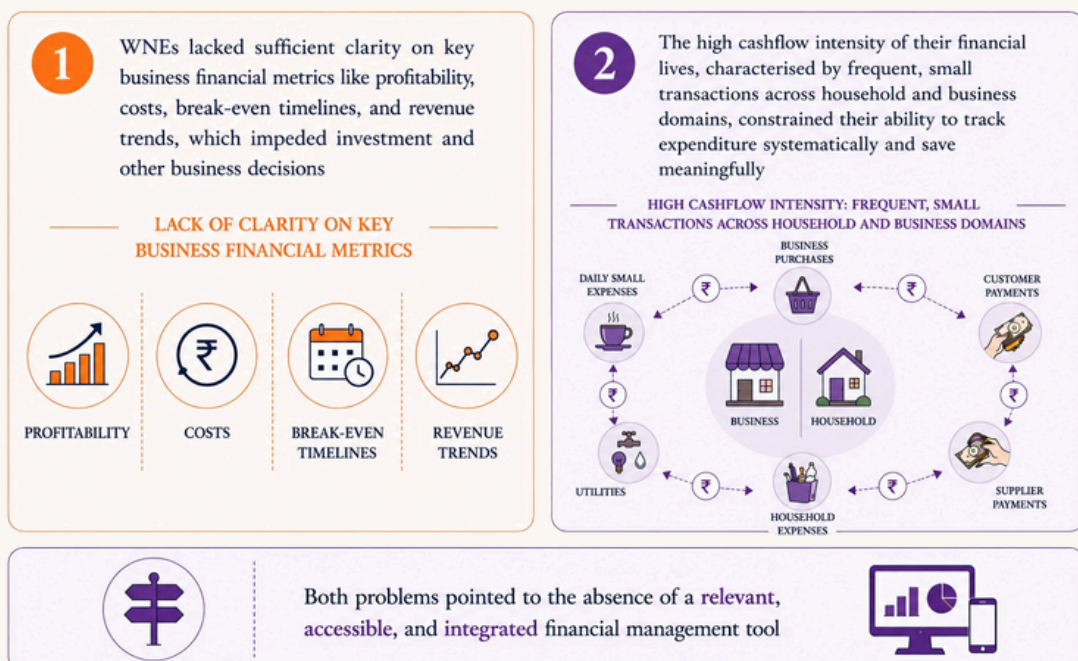
The accompanying Technical Note presents a structured entrepreneur classification survey designed to operationalise the WNE typology at scale.

Furthermore, two core problem statements emerged from the fieldwork. First, WNEs lacked sufficient clarity on key business financial metrics like profitability, costs, break-even timelines, and revenue trends, which impeded investment and other business decisions. Second, the high cashflow intensity of their financial lives, characterised by frequent, small transactions across household and business domains, constrained their ability to track expenditure systematically and save meaningfully. Both problems pointed to the absence of a relevant, accessible, and integrated financial management tool. Importantly, the study found that cultural context meaningfully shaped entrepreneurial orientation and money management behaviour, with important implications for how solutions should be designed and deployed across different regions.

Secondly, with the foundational insights from the problem diagnosis in place, a **Solution Concept** was developed around a digital bookkeeping tool that would enable WNEs to record and track their household and business expenses seamlessly. The concept was thought through carefully to understand its relevance for the different types of WNEs, and a framework was developed for identifying the most relevant users.

Thirdly, **Solution Design** was undertaken where an enhanced version of the MeraBills application was developed by the MeraBills team, incorporating a household finance module alongside the existing business finances features. The prototype enabled category-wise recording of expenditure and savings, budget-setting, and consolidated financial reporting.

Fourthly, a **Prototype Testing** was undertaken, in which 24 WNEs in Tamil Nadu engaged with the tool and provided feedback and suggestions, establishing a proof of concept for the integrated solution. Users reported



greater clarity on household expenditure patterns, reduced cognitive load in tracking spending, and the practical benefits of having credible written records. The richness and specificity of user feedback, spanning requests for income tracking, loan-outstanding monitoring, multi-household account management, and dynamic budget displays, confirmed both the relevance of the tool and the financial sophistication of its intended users. Sustained adoption, however, will require deliberate investment in user trust.

The study concluded with ideation for a **Roadmap to Pilot and Scale**, which outlined the conditions and partnerships required to pilot and scale the digital solution in the next phase.

We believe that the digital money management tool has the potential to meaningfully advance women's financial inclusion by furthering our understanding of the intricate money management practices that WNEs deploy in their financial lives.

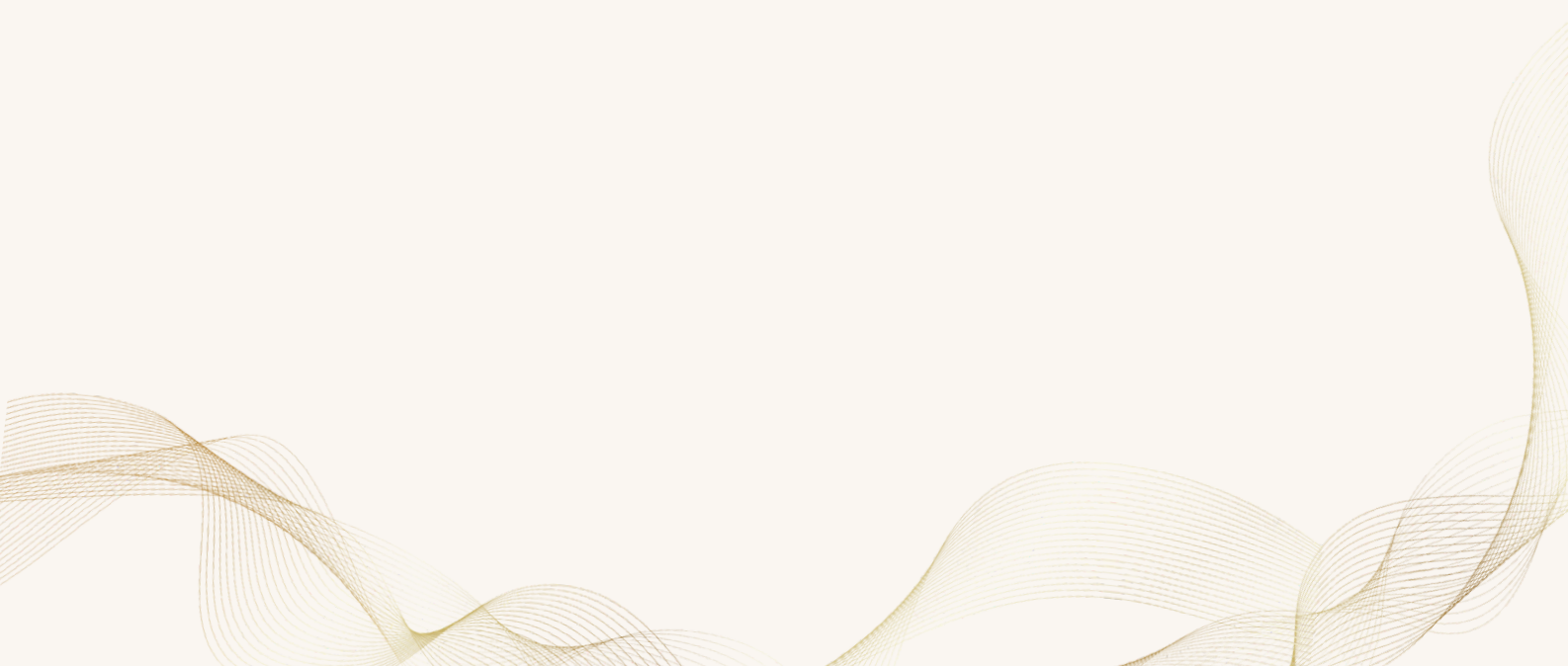
For a WNE, household and business finances are deeply intertwined, and money flows between the two seamlessly. A digital tool that helps them meaningfully record and track their cashflows in these two domains can help unpack the cashflow patterns of nano-enterprise households. Such an understanding can enable Financial Service Providers and Policymakers to measure household incomes of those employed in the informal sector. Moreover, an improved understanding of the cashflows of nano-enterprise households can give rise to a new set of design principles that are anchored directly to their lives and could organically produce new categories of products, tools, and services.

Ultimately, the conviction underlying this research program is that advancing women's financial inclusion demands not only better tools but also a more precise understanding of who WNEs are, what they aspire to, and what kinds of support are genuinely suited to their lives, financial or otherwise.

Section

01

Introduction



1. INTRODUCTION

We began this project with the conviction that India's women nano entrepreneurs (WNEs) lead complex financial lives. As researchers who believe in listening to the voices of low-income households and enterprises, we set out to study and understand this complexity with the goal of offering meaningful solutions that help women bring some sense of ease to the way they deal with money, despite any constraints or insufficiency they may feel. This naturally led us to ask who these women nano entrepreneurs are, what circumstances shape their lives, what kinds of businesses they run, and why.

A lot is still unknown about the day-to-day financial lives of nano entrepreneurs. Existing research tells us that nano entrepreneurs run small-scale, informal businesses that are typically managed solely or with support from family members. Informality implies that they often do not have formal registration certifications, are largely cash-run businesses, and do not use formal record-keeping tools. A distinctive feature of a woman nano entrepreneur is that she often accords equal importance to her roles within the household and in her business. Ensuring that her children are well nourished or that elders are cared for is, for her, as significant as meeting her business goals. A key aspect of her household responsibility also entails managing the money that enters the home. This requires her to optimise resources across various needs within the family in consultation, collaboration, or sometimes even in conflict with household members. It also involves building and strengthening social relationships that are also financial in nature, as they play a crucial role in helping households tide over uncertainties. A woman nano entrepreneur can therefore be

characterised as the Chief Household Nurturer/Manager with substantial sums of money flowing through her hands, on account of her business, her household, and the relationships she helps forge with kin and kith.

The context of scarce resources and competing priorities that often characterise the financial lives of nano entrepreneurs means that daily cashflow management, i.e., ensuring that the desired amount of money is available at the desired time, and tracking and accounting for daily cashflows at both the household and business levels, is of acute importance to their lives. Nano entrepreneurs do this by relying on mental models of account-keeping and often do not differentiate between household and business finance. While this enmeshment of business and household cashflows might not necessarily be a concern in certain contexts (where the business is run part-time, out of home at a small scale, or as a non-serious supplementary occupation), in other contexts, the intertwining of business with household finances might be constraining, especially for those who want to build sustainable businesses or grow their business prospects. Mental models of account-keeping, while being practically efficient for very simple businesses with lumpy cashflows that are easy to remember and track, are grossly insufficient for full-fledged businesses with regular and high volumes of cashflows. In the absence of relevant tools that match their personal and business contexts, women nano entrepreneurs often lack clarity about the performance of their business, and feel a sense of ambivalence when faced with questions such as - whether the business is profitable, what the daily revenue and costs are, whether it has

sufficient cashflows to expand, and how much is owed and to whom.

We believe that a contextually relevant, digital money management tool that helps women nano entrepreneurs easily record and effectively track their cashflows can enhance awareness of their financial position, on both the business and household fronts, and could potentially create conditions for prudent financial behaviour. This is important, particularly given India's current policy environment, where women nano and micro entrepreneurs are seen as agents of change, creating prosperity for their families and generating economic growth at large. Women nano entrepreneurs have thus emerged as a prominent target group for policymakers, philanthropists, and financial service providers. Programs such as the Start-up Village Entrepreneurship Programme under the National Rural Livelihood Mission (NRLM), Stand-up India, MUDRA Yojana, and institutions such as the Credit Guarantee Fund Trust for Micro and Small Enterprises have accelerated access to credit for women nano entrepreneurs. Given this context, effective money management can help women nano entrepreneurs carefully deliberate on the need for credit, assess their repayment capacity, and enhance the utility they derive from accessing and deploying formal credit for their business and household needs.

However, for a money management tool to be relevant, it should encompass women's needs from the perspective of their role both as an entrepreneur and as a household manager/nurturer.

For a woman nano entrepreneur, money flows fluidly from her business to her home and vice versa. Therefore, a tool that allows her to navigate the two domains of her finances seamlessly could increase the relevance and usage of such tools. Over time, data generated through these tools can further our understanding of the intricate money management practices that women nano entrepreneurs deploy in their financial lives. Such an understanding can give rise to a new set of design principles that are anchored directly to the lives of women nano entrepreneurs and could organically produce new categories of products, tools, and services. Digital money management tools, therefore, have the potential to meaningfully advance women's financial inclusion by helping them save better, access suitable credit, and gain confidence in using digital financial services.


Given this context, the objective of this research is to validate the need for a money management tool for women nano entrepreneurs and to identify and test effective solutions to streamline their financial lives.

Our research is anchored on the following questions:

- What are the key challenges women nano entrepreneurs face in managing their money?
- What are the unique circumstances of women nano entrepreneurs? How can a digital money management tool attune itself to these circumstances to offer a solution that women would find of meaning and relevance in their lives?


- Who among the broader category of women nano-entrepreneurs would find this digital solution most relevant, and why?

01




What are the key challenges women nano entrepreneurs face in managing their money?

02



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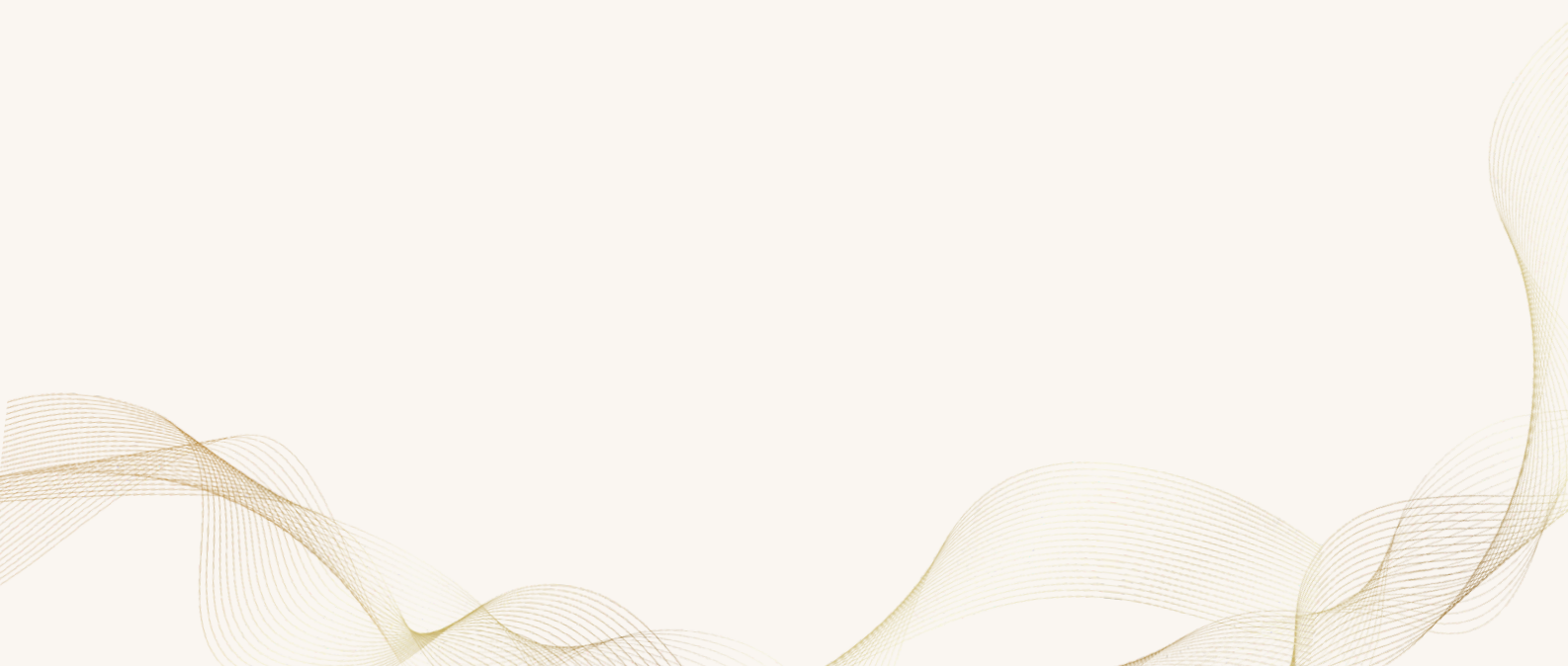


Who among the broader category of women nano-entrepreneurs would find this digital solution most relevant, and why?

Section

02

Problem Diagnosis



2. PROBLEM DIAGNOSIS

2.1 Partner and Field Study Methodology

To pursue this research program, Dvara Research has partnered with MeraBills, a Technology Service Provider that offers bookkeeping services and generates business intelligence for its users. **MeraBills is a free, simple, and easy-to-use Android app that helps small and micro business owners understand, plan, and grow their businesses.** Our rationale for partnering with MeraBills is to work collaboratively in order to translate research into meaningful design inputs for the MeraBills app. Specifically, the objective of this partnership is to facilitate app enhancements such that women nano entrepreneurs are able to effectively manage their household finances along with their business finances.

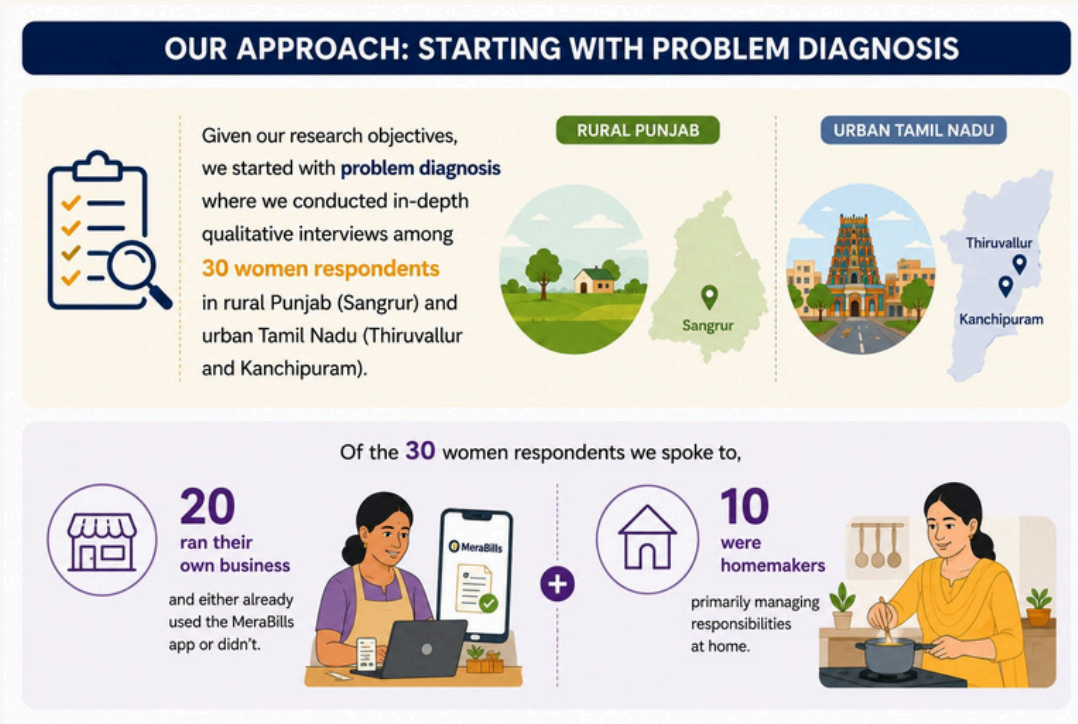
Given our research objectives, we started with problem diagnosis where we conducted in-depth qualitative interviews among 30 women respondents in rural Punjab (Sangrur) and urban Tamil Nadu (Thiruvallur and Kanchipuram).^[1] Of the 30 women respondents we spoke to, 20 ran their own business and either already used the MeraBills app or didn't, while the remaining 10 were homemakers primarily managing responsibilities at home.

The rationale for conducting primary research in two completely different contextual environments was to find underlying commonalities in the money management challenges women nano entrepreneurs face and design solutions that would work for different profiles.^[2]

Respondents for field interviews were chosen in partnership with local Civil Society Organisations (CSOs) that MeraBills works with to facilitate app training and customer onboarding. This shaped the respondent profile in a crucial way. It gave us access to women across a wide spectrum—those running active enterprises, those experimenting on a smaller scale, and those currently not in business but playing important roles in household money management. Because CSOs know the local households well, they were able to bring in women with different levels of economic activity, digital familiarity, and exposure to financial services. Overall, the sampling process helped ensure that the conversations were not restricted to any single type of woman. Instead, it allowed us to meet a range of women, from those deeply embedded in household management, to women balancing business and family, to those with visible aspirations but no enterprise yet.

[1] Refer to the survey instrument used for Problem Diagnosis [here](#).

[2] This ensures that the solution being tested is not being over-fitted for a specific cultural context or persona of women nano entrepreneurs.



The in-depth interviews allowed us to understand our respondents' lives and their context. The questionnaire used for the interviews included modules on intra-household dynamics and household roles and responsibilities, existing money management practices of household members and challenges they faced in dealing with money, and finally their own ideas of success and their aspirations and goals, both for themselves and their families. Women nano entrepreneurs were additionally asked about the nature of their business and the prospects they see for their business.

The women we met in both Tamil Nadu and Punjab were largely married and in the age group of late twenties to early forties. Most

respondents in Punjab had completed up to upper primary education, with only a few having attained tertiary education. In Tamil Nadu, a substantial number of respondents held college degrees or other forms of tertiary education. Together, these 30 interview notes led to a better understanding of the challenges WNEs face in managing money and arriving at a solution in the form of a holistic digital tool that women nano entrepreneurs could use to manage their financial lives. In this report, we summarise our learnings from primary research, list the topmost constraints that women nano entrepreneurs face in handling finances, and present design solutions that can be integrated into the MeraBills app.

2.2 Understanding the Cultural Context that Shapes Women Nano Entrepreneurs

In this section, we provide a broad review of the differences between the cultural contexts of the two states, Punjab and Tamil Nadu. Since the key objective of this project is to study the money management challenges that WNEs experience and to design a solution that addresses these challenges, it becomes important to build an appreciation of their cultural context. Doing so enables a deeper understanding of the beliefs and values they hold, the norms and behaviours they practice, and the aspirations and worldviews that guide their lives. To elaborate our point further, we first offer a brief explanation of what we mean by culture, why we should take cultural context seriously, and the role of culture in shaping development outcomes.

Culture is defined as a symbolic logic of meaning making, i.e., a mechanism by which people construct meaning in their lives.^[3] Alternatively, culture is the shared way of thinking and behaving of a group of people that has meaning for them even if it appears unintelligible to an outside observer. Elements that constitute culture are- language, beliefs, religion, values, art, music, and dance forms, artifacts that represent aspects of culture, etc. Studying the cultural context means stepping away from a binary (rational versus irrational) framework of understanding human behaviour and acknowledging that people do not behave rationally or irrationally, but rather they behave meaningfully.^[4]

[3] This definition is borrowed from the 2024 Inclusive Finance India chapter titled 'Exploring the phenomenon of debt distress and possible solution' by Dwijaraj Bhattacharya and Indradeep Ghosh from Dvara Research.

[4] For a detailed discussion on this theme, refer to the book *Theory of Everyone* by Michael Muthukrishna and the chapter on Cultural Evolution in the *Handbook of Evolutionary Psychology*

Henrich and Muthukrishna (2021) in their paper 'The origins and psychology of human cooperation' highlight that human beings are a cultural species^[5] and that much of human behaviour is shaped by culture- the values, beliefs, behaviours, norms, skills, know-how and technologies every human being possesses.^[6] Taking cultural context seriously, therefore, allows us to discover the ultimate causes of human behaviour rather than staying at the level of proximate causes. For example, a proximate cause of low-income households' limited use of bank accounts for saving is the high transaction costs associated with availing banking services (bank branches are far away, paperwork is onerous, etc.). The ultimate cause, however, lies in the preference for relational forms of saving, i.e., low-income households save in ways that allow them to maintain and strengthen their social capital (such as savings through Self-Help Groups or Chit Funds Groups). Saving in a bank account simply doesn't help them achieve this purpose.

[5] Henrich and Muthukrishna in their 2021 paper on *The Origins and Psychology of Human Cooperation* describe how "human beings are addicted to culture, i.e., human beings acquire a substantial portion of their phenotype by tapping into a large body of non-genetic information that has been filtered and accumulated over generations. This process, termed cumulative cultural evolution, creates a storehouse in the form of strategies, attentional biases, motivations, tastes, and cognitive heuristics that are necessary for human beings to accomplish even the basics of survival (e.g., finding food), which most other species manage to do with little to no cultural input".

[6] The authors in their paper also discuss the framework of dual inheritance theory in understanding human behaviour. Dual inheritance theory describes how genes, culture, and individual learning interact to shape our behaviour, explaining how human beings evolved as a cultural species. In this section though, we emphasise the role of culture in shaping human behaviour, which is implicitly influenced by genes, as the dual inheritance theory suggests.

There is now a growing body of research that illustrates how the outcomes of development policy interventions are shaped by the cultural context of the populations they target. For instance, Ashraf et al. (2020)^[7], in their paper on bride price and female education, show how cultural norms play an important role in shaping the impact of development interventions. They find that ethnic groups in Indonesia that traditionally engage in bride price payments (payment made by the husband and/or his family to the wife's parents at marriage) increased female enrolment in response to a school construction program. Within these ethnic groups, higher female education at marriage was associated with a higher bride price payment received, providing a greater incentive for parents to invest in girls' education and take advantage of the increased supply of schools. Similarly, in low-income settings where households are often embedded in deep networks of social relationships, the outcome of any development policy intervention is often shaped by its interaction with these social structures. For example, both Squires (2024)^[8] and Riley (2024)^[9], studying the social context of microentrepreneurs in Kenya and Uganda, respectively, find that relational obligations have a bearing on microentrepreneurs' proclivity to invest in their businesses.

The authors view these relationships from an 'economic returns' point of view, terming these

[7] Ashraf, N., Bau, N., Nunn, N., & Voena, A. (2020). Bride price and female education. *Journal of Political Economy*, 128(2), 591-641.

[8] Squires, M. (2024). Kinship taxation as an impediment to growth: Experimental evidence from Kenyan microenterprises. *The Economic Journal*, 134(662), 2558-2579.

[9] Riley, E. (2024). Resisting social pressure in the household using mobile money: Experimental evidence on microenterprise investment in Uganda. *American Economic Review*, 114(5), 1415-1447.

as 'kinship taxation', as they find that individuals who face greater pressure to share resources have a reduced likelihood of investing in business expansion and growth.^[10]

The research highlighted above points to the need for paying attention to the cultural context in designing public policy interventions. Culturally blind interventions may be ineffective at best and produce unintended consequences at worst. By contrast, culturally wise interventions that explicitly acknowledge and integrate the cultural context into their design are more likely to succeed, generating welfare-enhancing effects (Schimmelpfennig and Muthukrishna, 2025; Thomas et al., 2025).^[11]

Having set the premise for the significance of studying cultural context in development policy, we now delve into understanding the cultural differences in the two states, Tamil Nadu and Punjab. While our questionnaire did not include separate questions to probe the cultural aspects of our respondents' lives, the format of our in-

[10] The authors of the two studies cited here view social obligations largely from an economic point of view, wherein the costs and benefits of maintaining these relationships are analysed in monetary terms, and the reduced likelihood of business expansion among microentrepreneurs who face greater pressure from families to share resources is likened to a form of 'tax'. This, however, presents an incomplete picture. We know from existing research that social capital plays an outsized role in helping LIHs cope with resource scarcity and uncertainty, with their perceptions of success and well-being rooted in their social connections. Given this perspective, it is possible that households with greater social capital might be forgoing business investments deliberately to fulfil their desire of spending time in maintaining and building social relationships, a theme which remains unexplored.

[11] Schimmelpfennig, R., & Muthukrishna, M. (2025). Cultural evolutionary behavioural science in public policy. *Behavioural Public Policy*, 9(4), 652-682; Thomas, C. C., Premand, P., Bossuroy, T., Sambo, S. A., Markus, H. R., & Walton, G. M. (2025). How culturally wise psychological interventions can help reduce poverty. *Proceedings of the National Academy of Sciences*, 122(46), e2505694122.

depth interviews allowed us to tease out the broad cultural differences between two segments in the two states.

Overall, cultural values in rural Punjab are rooted in traditional and sustenance-based norms, whereas in urban Tamil Nadu, they are more strongly anchored in monetary considerations, which tend to take precedence over other evaluative perspectives. Below, we summarise the themes that emerged from our conversations with respondents in Punjab and Tamil Nadu that led us to this conclusion.

Respondents in Punjab placed a greater emphasis on family well-being, respect and love for parents, and doing the best for their children. Most of them were part of large joint families and cared a great deal about performing their household duties and ensuring that a harmonious balance prevailed between their household and enterprise roles. This reflected in the way WNEs in Punjab perceived their businesses. For them, family almost always came before their enterprise, and their enterprise pursuits were merely at the service of ensuring financial stability and well-being for their families. Building household consensus was important in anything they wanted to pursue. Individual ambitions were usually framed through family well-being rather than personal advancement. Moreover, the desire for growth was almost non-existent. Respondents and their families appeared content with their current circumstances and prioritised maintaining livelihood security, social continuity, and basic well-being over monetary maximisation.

Respondents in Tamil Nadu placed less emphasis on traditional family values and hierarchical authority, and greater emphasis on individual agency and autonomy. While joint family structures were present, kinship ties were comparatively less binding. Household consensus was not always sought, and intra-household relations were shaped by negotiation, contestation, and control. Women in Tamil Nadu pursued enterprise both to supplement household income and to secure their family's future; at the same time, enterprise served as a means of self-expression-enabling women to build an independent identity, establish their worth within and beyond the household, and exercise greater influence over household decisions. Consistent with this orientation, economic growth rather than mere sustenance emerged as the more salient aspiration in Tamil Nadu.

Secondary data also points to some stark differences in the socio-economic outcomes observed between the two states. Tamil Nadu ranks 2nd in Gross State Domestic Product (GSDP), while Punjab ranks 16th. The female worker population ratio is higher in Tamil Nadu (39%) compared to Punjab (22%). Gross Enrolment Ratio in higher education is 47% in Tamil Nadu compared to 28% in Punjab. 62.5% of Punjab's population is rural compared to 52% in Tamil Nadu. Consequently, agriculture contributes 26% of Punjab's GSDP compared to 13% of Tamil Nadu's GSDP.

Cultural values and enterprise orientation: Rural Punjab versus Urban Tamil Nadu

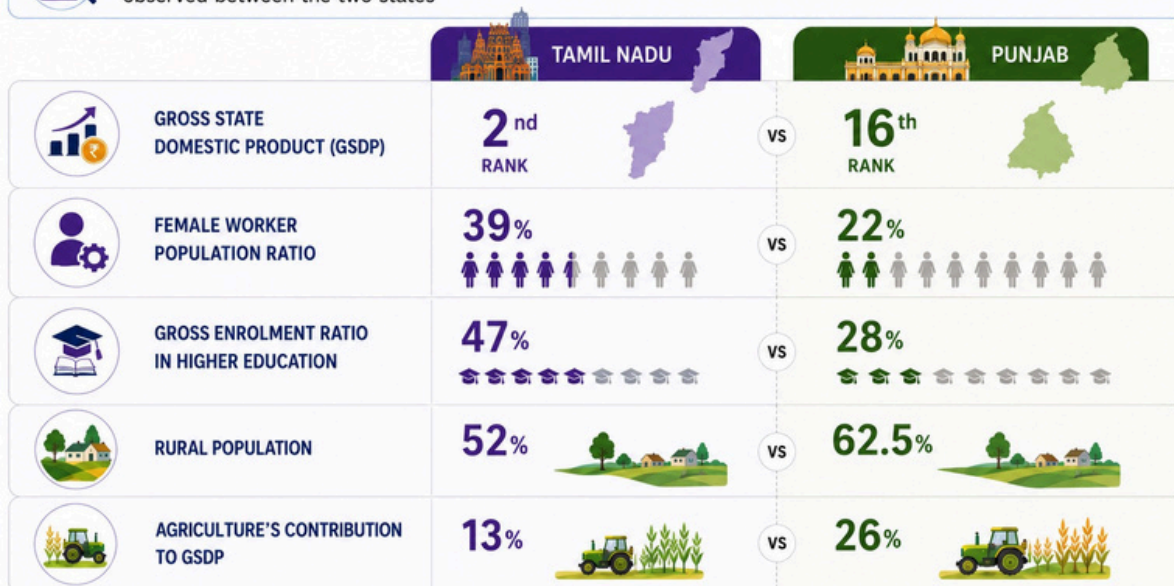
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Rural Punjab	Urban Tamil Nadu
Respondents place greater emphasis on family's well-being, respect and love for parents, and doing the best for their children	Respondents in Tamil Nadu place less emphasis on traditional family values and hierarchical authority, and greater emphasis on individual agency and autonomy
Most of them were part of large joint families and cared about performing their household duties that a harmonious balance prevailed between their household and enterprise roles	While joint family structures are present, kinship ties are comparatively less binding
Family always came before their enterprise, and their enterprise pursuits were merely at the service of ensuring financial stability and well-being for their families	Enterprise is pursued both to supplement household income and to secure family's future; at the same time, enterprise serves as a means of self-expression-enabling women to build an independent identity, establish their worth within and beyond the household, and exercise greater influence over household decisions
Building household consensus is important in anything they wanted to pursue	Household consensus is not always sought, and intra-household relations are shaped by negotiation, contestation, and control
Individual ambitions are framed through family's well-being instead of personal advancement	Consistent with this orientation, economic growth rather than mere sustenance emerged as the more salient aspiration
There exists a lack of desire for growth. There is contentment with current circumstances and priority lies in maintaining livelihood security, social continuity, and basic well-being over monetary maximisation	

SECONDARY DATA HIGHLIGHTS STARK SOCIO-ECONOMIC DIFFERENCES



Secondary data also points to some **stark differences** in the socio-economic outcomes observed between the two states



Together, these cultural and socio-economic factors shape the motivations, attitudes, and behaviours of WNEs, which have a significant bearing on the specific problem of interest to us in this project, i.e., the kinds of money management challenges WNEs face and the solutions that may be amenable to their context. In the following sections, therefore, we take a deliberate approach to categorising WNEs by their psychological and behavioural traits as well as the capabilities they demonstrate in their personal and professional endeavours. We do this with the understanding that these three dimensions together interact with each other to form the overall persona of an individual.

2.3 Classifying Women Nano Entrepreneurs

The field work for the project was designed to understand different kinds of women entrepreneurs. Given MeraBills's existing money management tool and the intermediating CSOs' role in training women entrepreneurs, it was operationally easy to identify and sample WNEs across three categories: stay-at-home women who manage household finances, women running enterprises and using MeraBills app, and women running enterprises who do not yet use the MeraBills app. This initial categorisation ensured diversity in the WNEs sampled. Furthermore, it is pertinent to note that most respondents were in the 30 to 45-year-old age bracket, with some representation from women aged 50 and above, and all were married. This detail is significant in the context of WNEs, given that women of this

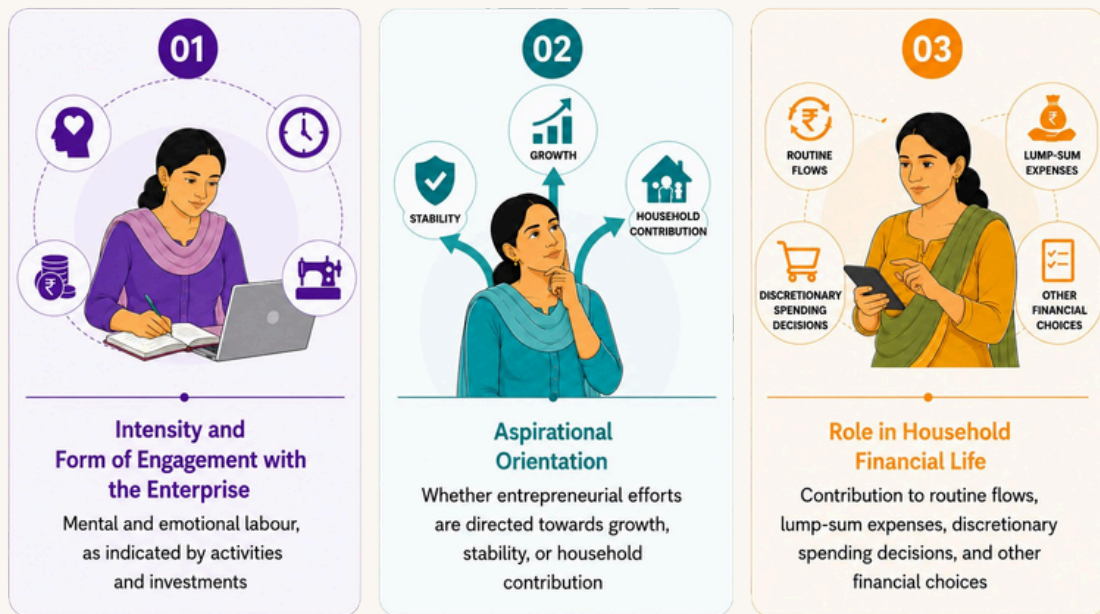
age typically prioritise their caregiving duties around children and elderly family members and are therefore often time-constrained. Another reason for its relevance is that traditional households often assign daughters-in-law the role of apprentice homemakers, who must slowly learn the ropes of running a household in the first few years of marriage, and they are seen to build stature and authority over time through the skilful performance of their familial duties.

Following the field work, we reclassified WNEs into a new set of three categories for analytic and descriptive purposes: Gung-Ho Entrepreneur, Rooted Entrepreneur, and Tepid Entrepreneur. This recategorization, we believe, more accurately captures the subtle differences in entrepreneurial orientation and provides clearer identification markers for further enquiry.

This reclassification of WNEs is grounded in three main characteristics:

- WNE's intensity and form of engagement with the enterprise – mental and emotional labour, as indicated by activities and investments
- WNE's aspirational orientation – whether entrepreneurial efforts are directed towards growth, stability, or household contribution
- WNE's role in household financial life – contribution to routine flows, lump-sum expenses, discretionary spending decisions, and other financial choices.

Re-classification of WNEs based on three main characteristics



As we will discuss in later sections, these three characteristics are explicitly visible markers, and it was through the interaction among these dimensions that the three categories of WNEs emerged. We found both MeraBills Users and Non-Users across all three categories, and therefore, the initial sampling categories do not map directly onto the final analytic classification. Furthermore, while this classification is grounded in observable characteristics, the specific and meaningful contribution of our findings lies in examining the psychological and behavioural underpinnings that shape and cement such capabilities, as we will discuss in later sections of this report.

Gung-Ho Entrepreneur

These entrepreneurs are strongly motivated to grow and expand their enterprises and are willing to take calculated risks. Their businesses contribute significantly to household income and are therefore treated as serious economic activity by the household. Such entrepreneurs view their

businesses both as a means of improving household well-being and as an expression of their personal ambition and identity. They are driven by a desire to stand out and succeed. They are able to learn independently in rapidly changing environments and do not feel constrained by adversity, instead tending to thrive under it.

Rooted Entrepreneur

These entrepreneurs seek to build a sustainable livelihood for themselves and their families through a stable enterprise. They are not actively pursuing business growth but instead are motivated by earning sufficient surplus to meet their varied needs, such as household expenditure, children's future, emergency buffer, etc. These entrepreneurs tend to be risk-averse and typically start and remain small. For these entrepreneurs, their business is at the service of the household, and they consciously strive to strike a harmonious balance between their roles within the household and the enterprise.

THREE TYPES OF NANO ENTREPRENEURS

 GUNG-HO ENTREPRENEUR	 ROOTED ENTREPRENEUR	 TEPID ENTREPRENEUR
<p>These entrepreneurs are strongly motivated to grow and expand their enterprises and are willing to take calculated risks</p>	<p>These entrepreneurs seek to build a sustainable livelihood for themselves and their families through a stable enterprise</p>	<p>These entrepreneurs display low levels of interest and investment in their enterprise and show limited motivation to build or grow it</p>
<p> Their businesses contribute significantly to household income and are therefore treated as serious economic activity by the household</p>	<p> They are not actively pursuing business growth but instead are motivated by earning sufficient surplus to meet their varied needs, such as household expenditure, children's future, emergency buffer, etc.</p>	<p> They are observed to disengage over time.</p>
<p> Such entrepreneurs view their businesses both as a means of improving household well-being and as an expression of their personal ambition and identity</p>	<p> These entrepreneurs tend to be risk-averse and typically start and remain small</p>	<p> They don't perceive the enterprise as a meaningful pathway to achieving their broader life goals.</p>
<p> They are driven by a desire to stand out and succeed</p>	<p> For these entrepreneurs, their business is at the service of the household</p>	
<p> They are able to learn independently in rapidly changing environments and do not feel constrained by adversity, instead tending to thrive under it</p>	<p> They consciously strive to strike a harmonious balance between their roles within the household and the enterprise</p>	

Tepid Entrepreneur

These entrepreneurs display low levels of interest and investment in their enterprise and show limited motivation to build or grow it. They are observed to disengage over time because they don't perceive the enterprise as a meaningful pathway to achieving their broader life goals.

2.3.1 Psychological Markers Shaping Women Entrepreneurship

In our pursuit to understand what shapes women entrepreneurs' orientation towards their enterprises, we queried them on their sense of self, what they believed would make them successful, what their success would mean for themselves and others in their lives, and their relationship with money. This line of probing was intended to surface the relational and temporal

contours of these women's everyday worlds. Here, we draw from Granovetter's concept of embeddedness, which holds that economic action is not carried out by atomised individuals but is instead situated within ongoing structures of social relations.^[12]

Granovetter distinguishes between relational embeddedness, i.e., the personal ties and trust networks an actor inhabits and structural embeddedness, i.e., the broader configuration of those networks. Our probing sought to encompass both these dimensions. It surfaces how each woman's sense of effort, risk, reward, and self-worth is shaped not simply by individual psychology but by the web of household relationships, community expectations, and

[12] Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91(3), 481–510.

social histories within which she is embedded. These contours (or types) of embeddedness function as a lens through which entrepreneurs interpret their circumstances and their enterprise.

The insights generated from the interviews have been synthesised into five psychological markers for clarity and comparability. These markers are not thought of as individual traits but as expressions of each woman's particular type of embeddedness, i.e., the specific relational and temporal position she occupies within her social world.

- (i) **Expression:** The predominant *emotion* they exhibit in relation to their overall circumstances, the initiation of their entrepreneurial journey, and their current pursuit of it
- (ii) **Motivation:** The *temporal orientation*, i.e., the orientation of the self to the arc of one's lifetime that shapes their view of the past, present, and future, and also becomes the source and direction of motivation
- (iii) **Path:** The pathways they are able to *imagine* pursuing for reaching their overarching life goals

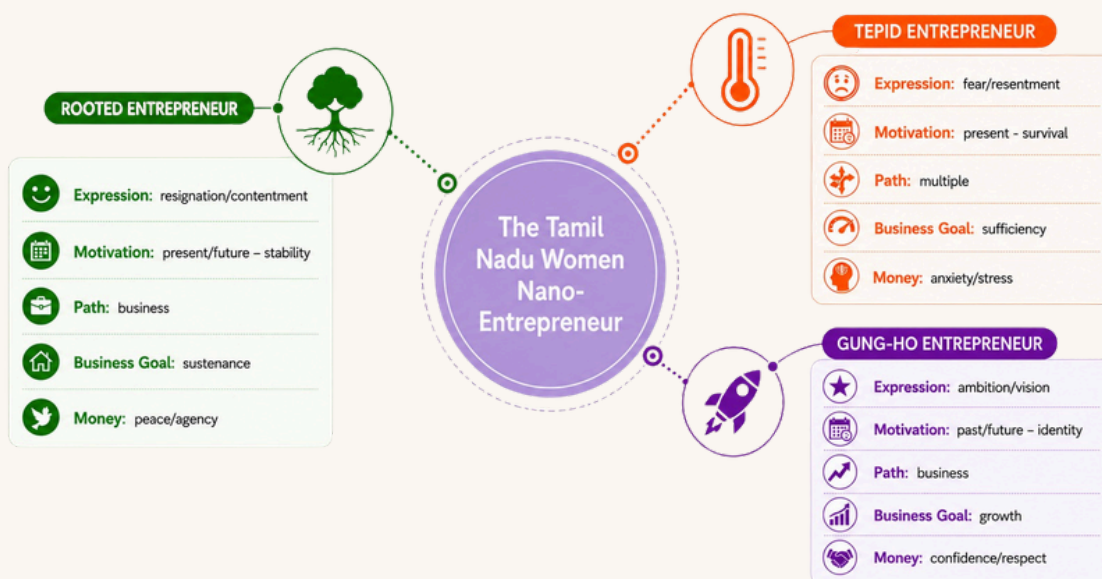
- (iv) **Business Goal:** Their *expectation* for what the enterprise will help them achieve
- (v) **Money:** Their emotional *relationship* with money

This synthesis, we believe, brings more nuance to the important distinctions between the three WNE categories. The five markers are by no means exhaustive, but they serve the purpose of describing the psychological imperatives and subtle variations in orientation between the three categories of WNEs to a sufficient extent. Furthermore, articulating these psychological stances helps make sense of the behaviours observed among these three categories of women, which can be understood as emergent from the nature of their embeddedness. In essence, the relational and structural conditions within which these women are embedded shape their psychological orientations, which in turn influence their behaviours and attitudes toward their enterprises. Therefore, the psychological is treated as analytically upstream of the behavioural, and the interpretations of psychological markers are used to explain observed behavioural patterns.



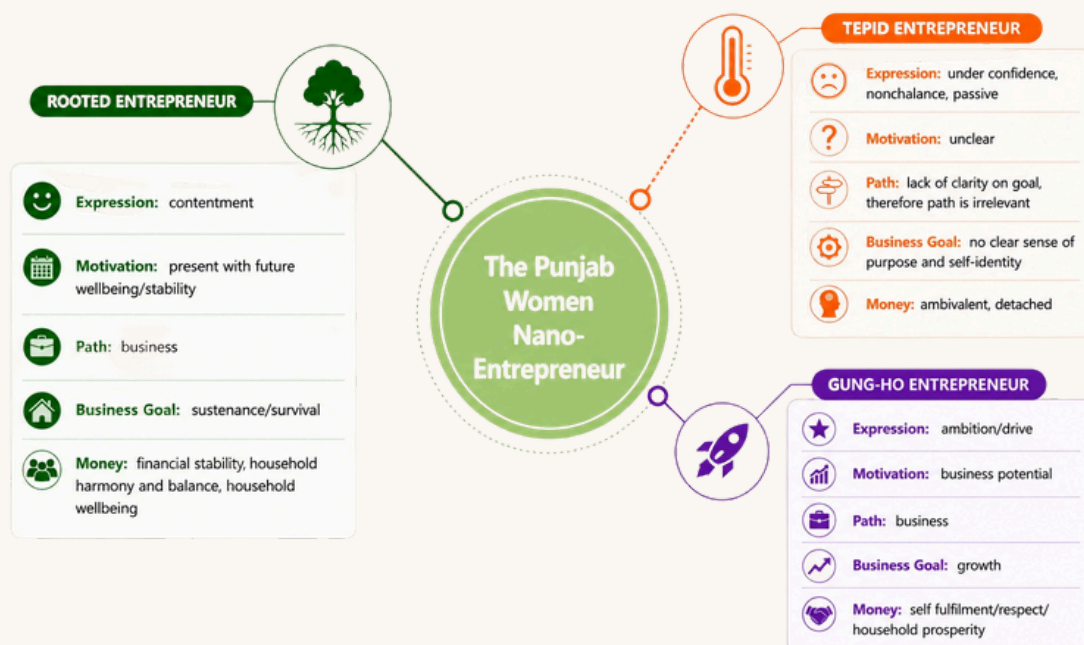
We have delineated these expressed, observed, and intuited findings from Tamil Nadu in Figure 1.

FIGURE 1: PSYCHOLOGICAL MARKERS OF WOMEN NANO ENTREPRENEURS IN TAMIL NADU



The same findings summarizing the expressed, observed, and intuited findings from Punjab are given below in Figure 2.

FIGURE 2: PSYCHOLOGICAL MARKERS OF WOMEN NANO ENTREPRENEURS IN PUNJAB



There are notable differences across the five psychological markers between women in Tamil Nadu and Punjab, particularly among Tepid Entrepreneurs. These differences reflect the distinct socio-economic and cultural contexts within which entrepreneurial identities and motivations are shaped in the two states. Nevertheless, for Rooted and Gung-Ho Entrepreneurs in both states, we observed a near-similar pattern of embeddedness despite variations in the intensity with which they experience it.

The Tepid Entrepreneurs in Tamil Nadu predominantly expressed fear and/or resentment of their current circumstances. This fear and resentment stemmed either from their family's financial predicament or their own position within the household dynamics. Their motivation largely stemmed from their present - a survival-oriented impulse to cope with and overcome immediate constraints. It is pertinent to note that the business they pursued was often only one among multiple paths they imagined to achieve their end goal. They frequently cited alternate or supplementary routes, such as support from family members or additional income sources, and the enterprise in question functioned as only one modality among many.

As a result, they were only partially invested in their business as a vehicle for achieving their goals. Their goal, with their business, therefore, was to achieve a basic level of financial sufficiency. Depending on their situation, this goal was imagined as a means to either bolster their household's finances or improve their standing within the family. Money for these Tepid Entrepreneurs in Tamil Nadu was experienced as a source of stress and anxiety, and their relationship with money management was far from positive.

STORIES OF TEPID ENTREPRENEURS

Thanigai
(Name changed)

She retails **curated dresses and accessories** from her home to friends and family

More recently, she has started an **idli-dosa batter business**, which occupies her spare time

Married for 40 years

Her husband runs a stable load vehicle rental business that takes care of the family comfortably

Thanigai was part of an **SHG** and an **entrepreneurship training program**, which inspired her to start a business with her mother's initial investment

While she would like to expand her business further, she is **not sure** if her business would help with the **home loan** that the family is repaying currently

She would therefore **wait for the home loan to be finished** before taking any bold decisions about her business

She considers her business a side hustle and is **not very keen on managing her accounts**, as it could be a source of stress, especially regarding her spending

She would rather **let tomorrow take care of itself**

Amanpreet

(Name changed)



43, lives in a village in Sangrur



Lives with her husband, who has retired from the army, and their daughter, who is studying in class 12



With time on her hands, she has started a small **cosmetics and grocery shop** while also taking occasional **tailoring orders**



The business is **managed alone**, and she serves a few customers daily by keeping the shop open from early hours



Her daughter sometimes helps with UPI payments, though Amanpreet herself **does not use digital payments**



Household and business finances are separate

Her husband manages household expenses, and she handles her shop's limited inventory expenses



She is not looking to grow or invest further into her business, and it is used more to occupy her spare time



She records small credit sales in a diary



Most transactions are handled in cash

Tepid Entrepreneurs in Punjab largely expressed nonchalance, passivity, and under confidence, perhaps owing to the limited participation that daughters-in-law typically have in financial decision-making. Their motivation for entrepreneurship was therefore diffused, and the path of their chosen business appeared utilitarian in nature, i.e., they wanted to productively occupy available time or space within the household rather than to pursue a defined outcome. This appeared to stem from a relational sense of self, reflecting a

a strong sense of duty and responsibility that is grounded in an internalised understanding of household roles. Unlike their counterparts in Tamil Nadu, these entrepreneurs in Punjab did not articulate a distinct financial goal for their business. Their relationship with money was marked by ambivalence and detachment, and money did not emerge as a central concern or focus in their lives.

STORIES OF ROOTED ENTREPRENEURS

Thamarai

(Name changed)



Born in Dindivanam and moved to Thiruvallur after marriage



Her Husband lost his steady job at a manufacturing firm and transitioned to contract work



she started a tailoring shop with two friends who also knew tailoring



Over the past six years, she has built a steady clientele of about 40 regular customers



She conducts tailoring and aari work training sessions



She makes most financial decisions herself



She manages her business accounts in a notebook, which she tallies every month.



She handles her share of household expenses, such as milk and vegetables



while her husband takes care of groceries.



Her business provides her financial stability, and she prefers sustaining what she had built.



Confident with money and digital payments, she aspires to open another tailoring unit someday, though she remains cautious about taking that risk.

Sukhman

(Name changed)



Sukhman, aged 41, studied till the eighth standard and was married at 17



She lives in Sangrur with her husband, a daily wage labourer, and two college-going children,



she started a kirana store in 2011 to supplement the household income



She runs the shop from early morning till late at night, with help from family members.



Manages most transactions in cash, keeping a small notebook only for credit sales



She handles routine household expenses herself and discusses larger financial matters with her son and husband.



As a member of a self-help group since 2015, she saves regularly and has accessed loans when required



She relies mainly on mental tracking to manage money, saying expenses were mostly fixed



Her business helps towards maintaining household stability and supports her children's future

Rooted Entrepreneurs, across both Tamil Nadu and Punjab, broadly expressed either contentment or resignation, two different psychological states that emerged from distinct internal orientations. Contentment was evident when women perceived their present circumstances as adequate and stable, allowing them to prioritise continuity, balance, and the maintenance of hard-won security. Resignation, by contrast, surfaced when women had adjusted their expectations downward, accepting their current situation as the most feasible outcome given structural constraints and past experiences. In both cases, this translated into a state of stasis, where the present was either experienced as satisfactory or reconciled with as the best attainable reality. Their motivation lay in maintaining present comfort and family harmony, both in the immediate present and in the foreseeable future. Accordingly, their plans reflected anticipated household needs, such as children's future education costs, rather than aspirations for growth or distinction. Their business served as the primary path through which this stability was sustained, and their investment in it was calibrated to its ability to continue providing this stability. They articulated a clear understanding of the role their enterprise played in both their financial and personal lives. Their goal for their business was to sustain existing income levels, lifestyle, or familial circumstances, reflecting a preference for stability over further expansion, growth, or change. In Tamil Nadu, their relationship with money was generally positive, characterised by a sense of peace or agency when managing their finances. In Punjab, money was framed more as a tool for household well-being, rather than an asset valued for its own sake.

The Gung-Ho Entrepreneurs in both Tamil Nadu and Punjab expressed ambitions and visions that transcended the current scale of their enterprises. Their motivation appeared to draw strongly from past experiences, enabling them to imagine a markedly different and improved future. In Tamil Nadu, for instance, women who had experienced hardship, often shaped by parental sacrifice, were motivated by these struggles to create a better future. Conversely, those who had enjoyed relative comfort earlier in life but later experienced a downturn were driven by a desire to reclaim or surpass their past prosperity. Their identity formation, i.e., the psychological process through which one develops a clear and stable sense of who they are, exhibited clear polarity. They were motivated either by a desire to emulate figures from their past or by a determination to avoid becoming like them. Thus, their motivations seemed to be shaped by strong influential figures, which then conditioned their future orientation. In Punjab, the Gung-Ho Entrepreneur we encountered was shaped by exposure, during her formative years, to market-oriented cities and towns where success was visibly associated with growth and prosperity. This appeared to foster ambition and vision, in contrast to other women entrepreneurs in Punjab who largely remained within their district of residence. Across both states, the path, i.e., the enterprises these women pursued, was clearly oriented towards their goals, and they were fully invested in optimising business outcomes. Their goal for the business was unequivocally growth, and they aspired to realise the full potential of their business. Their relationship with money was strongly positive, and money management was experienced as a source of confidence, self-worth, and social respect.

STORIES OF GUNG-HO ENTREPRENEURS

Thendral (Name changed)



Thendral grew up in Vandavasi in a poor household and lost her father early.

She studied till the eighth standard and started working in an export company as a teenager.

After marriage, her husband's illness left her as the main earner.

She took up her late mother's anganwadi job but soon realised that the income was insufficient to run her family.

Thendral started a tailoring business from home and began selling sarees and dress materials after her anganwadi hours.

All major decisions—household or business—are led by her.

She cares about her Anganwadi work with children and feels emotionally attached and responsible for the children there.

She enjoys tailoring and takes interest in learning new cut patterns and techniques that earns her the appreciation of her customer.

She manages both her household and business finances herself, maintaining notes of expenses, income, and dues.

She thinks a lot about the future and approaches it with a sense of hope and fortitude.

Thendral senses the potential of her small ventures and often thinks about ways to expand them, though she frequently feels stretched between her anganwadi work, stitching, sales, and household chores.

HER GOAL

Her goal is to build a house and eventually open a tailoring shop that she could run after her anganwadi hours.

These psychological markers are influenced to a significant extent by both the cultural landscape and the individual life experiences of these entrepreneurs. The meaning ascribed to money, which is shaped subtly yet powerfully by prevailing cultural forces, plays a crucial role in shaping visions of success. In the economically more advanced market-oriented regions of Tamil Nadu, where our interviews were conducted, women's exposure to a wider array of goods and services expanded their sense of possibility, shaping both their aspirations and their perception of what money could enable. In contrast, women in the relatively remote parts of Punjab encountered far fewer goods of aspiration, resulting in ambitions that were bounded by what was immediately visible within their community.

Individual factors, such as the relative economic standing of the woman's natal home compared to her marital household, further shaped perceptions of money and agency.

Differences in household negotiation also reflected broader cultural patterns of women's economic participation. Tamil Nadu, which has among the highest women workforce participation in India, has cultivated stronger notions of self-identity and economic agency among women. Consequently, economic independence is often actively negotiated as a matter of right within existing gender roles. In contrast, in rural Punjab, where women's mobility and economic participation are more constrained, economic contribution is more

Ajeet

(name changed)





Ajeet, 42, lives in a village in Sangrur with her husband, two college-going children, and father-in-law



She is a graduate in English Literature and former school teacher



She left her job after her mother-in-law's death to take charge of the household



Alongside teaching, she had earlier pursued hand embroidery as a hobby, which later became the foundation for her business



During the pandemic, she decided to formalise it, investing in her first embroidery machine and gradually expanding to two larger machines



She earns steady profits and employs three workers



She maintains records of income and expenses in notebooks and on the MeraBills app, which she updates regularly



Household and business finances overlap but are planned jointly

 2 Embroidery Machines	 3 Workers Employed	 Steady Profits
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HER GOAL

In the future she hopes to **add one new machine each year** to her growing enterprise



constrained, economic contribution is more commonly viewed as a means of supporting household well-being, rather than as a pathway to identity formation or influence. At the household level, factors such as the spouse's earning capacity and the woman's potential to contribute meaningful additional income further shaped decision-making dynamics. Together, these differences influenced both the nature of intra-household negotiations and their consequent impact on the women entrepreneur's business aspirations.

As distinct as these categories may appear, we, as researchers who have engaged closely with these women, understand them as being at different points on their entrepreneurial journey. Tepid Entrepreneurs are often in the process of finding a path, Rooted Entrepreneurs are tending to a path they have settled into, and Gung-Ho Entrepreneurs are










actively forging a path forward. A Tepid Entrepreneur who begins with an unaligned enterprise might later transition to a Rooted or Gung-Ho Entrepreneur, often through an entirely different business that aligns better with her priorities, skills, and life circumstances. Similarly, a Rooted Entrepreneur managing a stable business might get motivated to become a Gung-Ho Entrepreneur due to a change in family circumstances, say, when the family needs more money for college, health care, or marriage. This may propel the hitherto Rooted Entrepreneur to pursue growth with a new vigour. Such transitions depend on personal context, the fit between personality and enterprise, and the degree of polarity (ups and downs) experienced over their life course, that tested their psychological resolve. These idiosyncratic factors together shape the kind of motivation that aligns with an individual's understanding of success, stability, and meaning.

2.3.2 Behavioural Markers Shaping Women Entrepreneurship

Behavioural markers are thought to operate at the intermediate level, mediating between underlying psychological orientations and the observable capabilities that are to be described in the subsequent section. Figure 3 synthesises the behavioural markers that emerge from this enquiry and interpretation of the psychological markers that we have discussed above. These markers reflect how women nano entrepreneurs cognitively interpret and organise their emotional experiences, sense of self, and perceived responsibilities, translating them into relatively stable orientations toward enterprise, household negotiation, and notions of success. While rooted in their psychological

experience, which itself is shaped by the nature of their embeddedness, these behavioural aspects are more explicitly articulated as patterns of business motive, business strategy, and negotiation style. Specifically, business motive captures what these women seek to pursue through entrepreneurship; business strategy reflects how they habitually approach decisions about resource investment, risk, and growth; and negotiation style describes how they navigate competing claims and relationships within the household and beyond. In doing so, they form the cognitive bridge through which psychological orientation and imperatives are channelled into concrete entrepreneurial capabilities.

Figure 3: Behavioural Markers of Women Nano Entrepreneurs

	PUNJAB			TAMIL NADU		
	 Gung-Ho	 Rooted	 Tepid	 Gung-Ho	 Rooted	 Tepid
 Business Motive	Primary Earner/ Support HH	Support HH	Use spare time	To earn well	To earn	To do something
 Business Strategy	Growth	Sustenance	None	Growth	Sustenance	Personal
 Household Negotiation	Collaborative	Consensus	Plays a minor role	Assertive, persuasive	Consensus-based	Vying for agency, Complacent

2.3.3 Capability Markers shaping Women Entrepreneurship

Figure 4: Capability Markers of Women Nano Entrepreneurs

	PUNJAB			TAMIL NADU		
	Gung-Ho	Rooted	Tepid	Gung-Ho	Rooted	Tepid
Education	Graduate above	12th	8th or 10th	8th to Graduate	12th to Graduate	10th to Graduate
DFS Readiness	High	Low	Low	High	High	High
Business Expertise	High	Medium	Low	High	Medium to High	Low
Social Networks	Wide and Dense	Limited and Dense	Limited and Sparse	Wide and Dense	Limited and Dense	Limited and Sparse

Laid out above, in Figure 4, is a tabulation of the capability markers of Tepid, Rooted, and Gung-Ho Entrepreneurs from our field study.

We have made a distinction between Tamil Nadu and Punjab in recognition of the fact that the prevailing socio-economic culture of the region and the value system it engenders plays a significant role in how these markers manifest, leading to both subtle and pronounced variations across states.

In Punjab, we saw that higher levels of education tend to coincide with higher levels of business enthusiasm. This pattern does not hold in Tamil Nadu, where even those with relatively lower education are gung-ho about their

business. A similar pattern was evident with Digital Financial Services (DFS) readiness in Punjab, where DFS adoption was concentrated among Gung-Ho Entrepreneurs, while Rooted and Tepid Entrepreneurs exhibited low readiness. This may be attributed to the overall low penetration of DFS in rural Punjab, where our interviews were conducted. Here, Gung-Ho Entrepreneurs, owing to their openness to learning and willingness to take risks, emerged as early adopters of this technology. Contrastingly, in Tamil Nadu, all three categories of entrepreneurs exhibited high levels of DFS readiness, pointing to a wider diffusion of DFS and its trickle-down across user segments.

With regard to expertise in the entrepreneur's chosen line of business, we observed a consistent pattern across both regions. Gung-Ho Entrepreneurs demonstrated high levels of expertise, Rooted Entrepreneurs exhibited medium to high expertise, while Tepid Entrepreneurs displayed low expertise. One possible explanation is that while expertise can be progressively built over time, Gung-Ho Entrepreneurs are sufficiently invested in their enterprises to actively acquire skills and knowledge, whereas Rooted Entrepreneurs may have plateaued at a level adequate for sustaining stability. Tepid Entrepreneurs, by contrast, appeared to be at an early or exploratory stage, with limited investment in skill accumulation.

When it comes to engagement with household finances, we observed broad similarities across Tamil Nadu and Punjab. Gung-Ho Entrepreneurs were highly involved in household financial matters, Rooted Entrepreneurs participated to the extent defined by mutually agreed household roles, and Tepid Entrepreneurs had relatively low involvement. At this relatively low level of analytic granularity categorisation, cultural differences between the two states appeared muted. It is important to note, however, that the categories of high, medium, and low engagement are comparative within each state and should not be interpreted as directly comparable across states.

Finally, we observed remarkably similar patterns across Tamil Nadu and Punjab with respect to social networks. Gung-Ho Entrepreneurs tended to have wide and dense networks spanning diverse circles. Rooted Entrepreneurs maintained dense but relatively narrow networks, and Tepid Entrepreneurs were connected to fewer individuals within similarly narrow circles. Drawing on theories of social capital, one could hypothesise that Gung-Ho

Entrepreneurs possess both strong bonding capital^[13] and bridging capital,^[14] Rooted Entrepreneurs rely primarily on bonding capital with limited bridging ties, and Tepid Entrepreneurs, particularly in the initial stages, exhibit weak bonding as well as bridging capital.

2.3.4 From Categorisation to Fit: Designing Finance Around Entrepreneurial Orientation

The psychological, behavioural, and capability markers outlined in the previous two sections do not fully explain the origins of entrepreneurial acumen and perseverance. However, they are analytically useful insofar as clusters of key differentiating characteristics can help identify an entrepreneur's category with a reasonable degree of confidence. For instance, a Gung-Ho Entrepreneur in Tamil Nadu may not exhibit every marker described here. Nonetheless, the co-occurrence of markers such as strong business motivation and expansive social networks or high business expertise and growth aspiration significantly increases the likelihood that a woman entrepreneur is indeed gung-ho about her enterprise.

Such heuristic categorisation is crucial not only for delivering appropriately tailored services, but more importantly for avoiding the misalignment of women entrepreneurs with products that conflict with their aspirations, attitudes, and visions of success.

[13] Bonding Capital refers to the close ties within homogeneous groups—such as family, close friends, or tightly knit communities—that provide emotional support, trust, and mutual aid but may also reinforce social exclusivity. (Putnam, 2000).

[14] Bridging Capital refers to social networks and relationships that connect individuals or groups across diverse social divides—such as ethnicity, class, or geography—facilitating access to new information, opportunities, and broader social integration. (Putnam, 2000).

In the case of credit, for example, extending early-stage credit to a Tepid Entrepreneur, who may still be exploring or clarifying their business paths, could prove counterproductive by sharply increasing their cost of failure. For such entrepreneurs, solutions that enhance clarity around profits, costs and break-even may be more appropriate, enabling them to make informed decisions about whether to continue, pivot, or exit their enterprises. Credit, by contrast, might be relevant for Rooted Entrepreneurs under specific circumstances when family needs expand or when clear but untapped opportunities emerge within an otherwise stable business. In other situations, interventions that help optimise existing operations, reduce costs, build savings, or plan for household financial security may better serve her interests. Gung-Ho Entrepreneurs are typically best positioned to benefit from credit, as their orientation towards growth and their propensity to invest in high-return opportunities align well with a credit product that implicitly carries growth obligations.

This exercise in inductive categorisation, therefore, has concrete practical implications that go beyond mere theorisation. Instead, it represents an attempt to serve women entrepreneurs in a manner that is meaningful for their overall well-being. Taken together, this categorical analysis underscores that women's nano entrepreneurship cannot be understood through a single lens. Psychological imperatives shape orientational stances, which in turn condition observable behaviours that determine how entrepreneurship is experienced and enacted. Recognising these layers allows for a more nuanced reading of women's entrepreneurial journeys and cautions against one-size-fits-all interventions. It also underscores the importance of context, timing,

and fit in the design of financial and non-financial solutions, thereby strengthening the case for differentiated, women-centric approaches to enterprise support.

The Technical Note accompanying this report provides a methodology for classifying WNEs at scale.

2.4 Understanding the Money Management Practices of Women Nano Entrepreneurs

Women's approach to money management reflected both their relationship with enterprises and their embeddedness in household life. They described money management as not just a functional activity, but an everyday responsibility deeply woven into household life. However, the practices, methods, and emotions associated with it differed across women nano entrepreneurs, reflecting variations in exposure, enterprise scale, and household dynamics.

Gung-Ho Entrepreneurs

Gung-Ho Entrepreneurs were active participants in both household and business life. They managed their enterprise while also handling day-to-day household money flows. At home, they oversaw routine expenses such as groceries, school fees, and utilities, and had a greater say in discretionary spending - whether for children's education or festival purchases. In business, they were also tracking sales, managing stock, collecting dues, and deciding on reinvestments. They were seen as capable, dependable, and trusted for their judgement.

Their approach to money was deliberate and organised. They wanted to know where their money went and how it could be better used. Most kept some form of written or mental

record of money flows and tried to draw value from it. In both Tamil Nadu and Punjab, many women-maintained notebooks, diaries, or used mobile apps to record transactions. Although in most cases household and business accounts overlapped, Gung-Ho Entrepreneurs were able to recall transactions specific to each. Many of them saw value in keeping business and household finances separate and showed interest in learning how to do it more systematically.

Rooted Entrepreneurs

Rooted Entrepreneurs saw themselves as steady contributors- sometimes in a supplementary role and at other times as equal partners in supporting the household life. They managed household provisions, ensured that essential needs were met, and tried to set aside small savings whenever possible. Financial responsibilities were shared within the family. Their businesses were modest in size.

They largely relied on mental accounting. Written notes existed in some cases but were fragmentary and acted as small reminders about dues or loans rather than systematic ledgers. While they lacked formal records, their intuitive sense of cashflows was strong. In Tamil Nadu, women in this group used simple systems like mental tracking or rough notes to stay organised. In Punjab, the few notes they kept were for credit owed by others or reminders of informal loans.

Tepid Entrepreneurs

Tepid Entrepreneurs we met played a negligible role in managing household finances. Day-to-day spending, such as groceries and utilities, as well as larger financial decisions, were mostly handled by other family members. Their household involvement was mostly limited to managing daily groceries, with little engagement in broader money management. Their businesses were small and often pursued intermittently.

Record-keeping was nearly non-existent - very

few women in Tamil Nadu or Punjab maintained any records of the money passing through their hands, often feeling it was unnecessary given the low scale of business activity and the limited role they played in managing household financial affairs. Most relied on memory or on other household members to track money transactions.

Overall, most women nano entrepreneurs maintained adequate mental clarity for daily transactions but lacked consolidated visibility over total inflows and outflows. Household and business finances were deeply intertwined - while this flexibility helped women respond to immediate needs, it also created confusion about actual business performance and household spending. Most household money flows remained unrecorded, managed instead through memory and routine. Note-taking was most visible where transactions were frequent and tied to business activity, particularly credit sales. Even then, these records were personal tools for remembering, not formal accounts. The separation of business and household accounts existed more as an idea than as a consistent practice, though several women, especially among the more enterprising, expressed interest in learning how to manage their finances better.

2.5 Preferences Revealed – Money Challenges and Solution Needs

Below, we summarise the money management challenges articulated by the 3 categories of women nano entrepreneurs.

Gung-Ho Entrepreneur

For a Gung-Ho woman entrepreneur, her business meant the world to her. She wanted her business to achieve its full potential and pursued it with passion.

However, given the economic status of WNEs we interviewed, limited financial resources coupled with modest skill levels made it difficult for them to envision a full-fledged business plan. But, even when they did, they faltered in following through and struggled to reinvest in their business due to competing priorities. Gung-Ho Entrepreneurs also spoke about suffering losses due to their penchant for high-risk. The lack of support networks and formal training in business management further meant that they found themselves lacking in their capabilities and technical know-how.

On the business front, Gung-Ho Entrepreneurs reported lacking clarity about their business costs and revenues, which hindered their ability to make investment-related decisions. Given their salient role in managing household finances and the high volume of money flowing through their hands, they also reported difficulties in tracking their cash flows due to the mixing up of household and business funds. Since Gung-Ho Entrepreneurs were more likely to have access to formal loans, they needed greater clarity on the financial health of their business to assess their repayment capacity. Moreover, given the location of these businesses and the strong intra-community ties they were embedded in, Gung-Ho Entrepreneurs spoke about facing social pressure to sell their products and services on credit to friends and neighbours, which later became a hassle due to the follow-ups required for repayment.

On the household front, Gung-Ho Entrepreneurs reported facing difficulty saving adequately either because they had limited surplus or because they found it hard to cut down on unnecessary expenses. As a result, saving for a rainy day or building a corpus for long-term financial security was a

prominent source of worry. Gung-Ho Entrepreneurs also reported the need to demonstrate business profitability, which stemmed from a desire to establish the credibility of their enterprise in the eyes of family members.

Rooted Entrepreneurs

A Rooted Entrepreneur cared most about her household, and her business was merely at the service of the household. The Rooted Entrepreneurs we met found a way to harmoniously integrate their household responsibilities with business priorities. This orientation led them to seek sustainable ways of running their business rather than pursue scale or high returns. However, it also brought certain unique challenges, such as low customer demand and negligible profits, which in turn limited the capital available for further business investments.

With regards to their business finances, Rooted Entrepreneurs reported primarily relying on mental models of account-keeping. Therefore, while they had an intuitive sense of how much money their business made, they lacked clarity on the granular aspects of their day-to-day business expenses, revenues, and profits. They also reported challenges in following up with customers to whom they sold products/services on credit.

With regards to their household finances, little or no surplus was a key source of worry for the women we spoke to, limiting their ability to save adequately. Some women also reported lending to others in their social network as a form of saving. However, managing and tracking how much was lent to whom proved challenging. Rooted Entrepreneurs further highlighted difficulties in meeting various household needs, including children's education, family medical expenses, and meeting social obligations such as

spending on gifts and ceremonies. Finally, issues in accounting for total spending, i.e., how much was spent for what purposes and when, also emerged as a prominent challenge for Rooted Entrepreneurs.

Tepid Entrepreneurs

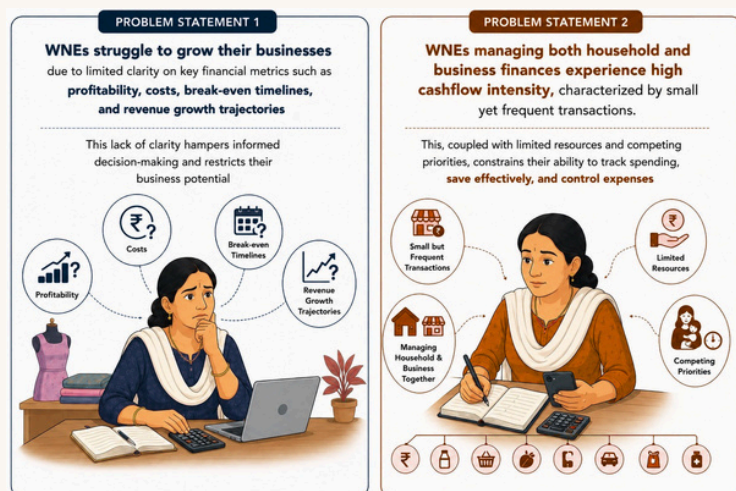
Tepid Entrepreneurs generally lacked interest in and passion for their business, which is reflected in how their business performed and the money management practices and challenges they reported. Their passive outlook towards business made acquiring and retaining customers difficult. However, the nature of tepidity among Tepid Entrepreneurs varied depending on their personal circumstances. For some entrepreneurs, tepidity stemmed from being passive and complacent, while for others it came from a feeling of fear, anxiety, and resentment. While the former kind of Tepid Entrepreneurs exhibited a sense of indifference to their business pursuits, the latter kind attempted to work on their business in a meaningful way, although they were held back by negative emotions. Some Tepid Entrepreneurs, therefore, faced challenges similar to those reported by Rooted Entrepreneurs- lacking clarity on how the business was performing and facing difficulty in deploying capital towards business expansion.

Finally, several Tepid Entrepreneurs played a negligible role in managing money at home or influencing household financial decisions. For those entrepreneurs who did play a role in handling household cashflows, the inability to save due to limited surplus, and the difficulty in accounting for spending were key causes of concern.

In order to design meaningful solutions, we attempt to synthesise our learnings from this section into two key problem statements, the first one from a business financial management perspective, while the second from a household financial management perspective. These problem statements largely apply to the categories of Gung-Ho Entrepreneurs and Rooted Entrepreneurs, given the convergence in the kinds of money management challenges reported by these entrepreneurs.

Problem Statement 1- WNEs struggle to grow their businesses due to limited clarity on key financial metrics such as profitability, costs, break-even timelines, and revenue growth trajectories. This lack of clarity hampers informed decision-making and restricts their business potential.

Problem Statement 2- WNEs managing both household and business finances experience high cashflow intensity, characterized by small yet frequent transactions. This, coupled with limited resources and competing priorities, constrains their ability to track spending, save effectively, and control expenses.



Section

03

Solution Concept



3. SOLUTION CONCEPT

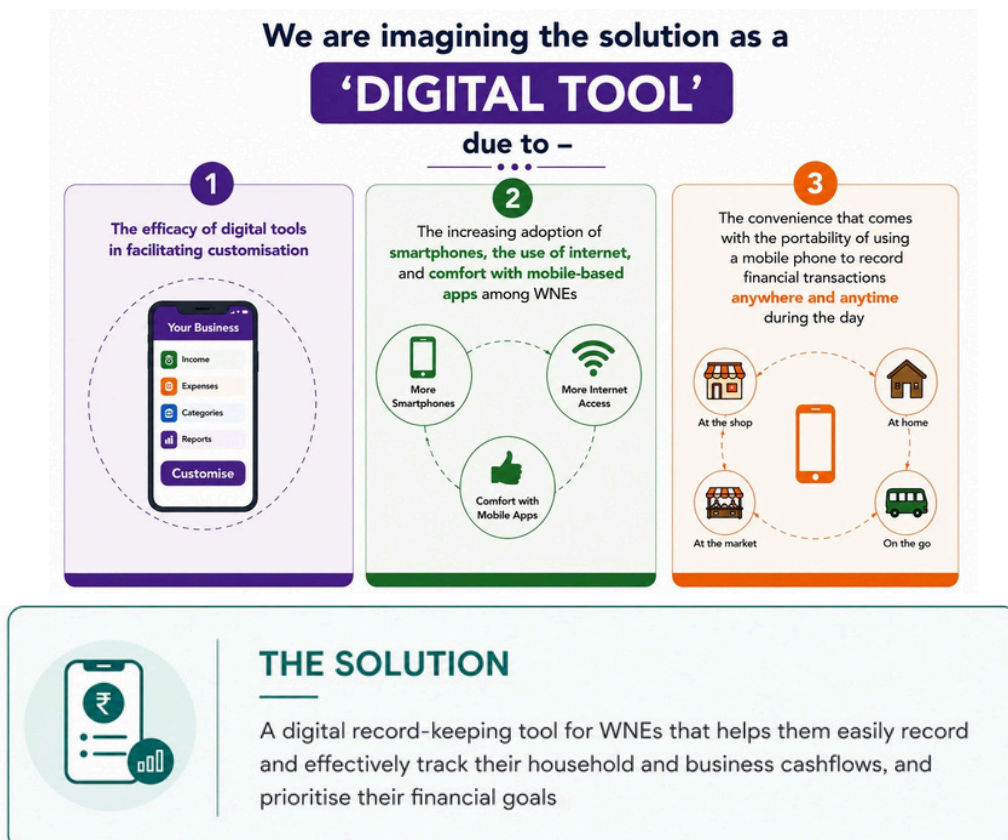
3.1 The Digital Solution

The two problem statements tell us that cashflow management is of salience in the lives of WNEs and that they require more rather than less active financial management. Moreover, cashflow visibility in one domain (home or enterprise) could positively influence behaviour in the other. We believe that the lack of relevant tools prevents WNEs from using cashflow management solutions. A record-keeping tool that helps WNEs effectively manage their cashflows by documenting, classifying, and grouping transactions could bring more clarity to their professional and personal financial lives, helping them make informed decisions along the way, and potentially leading to prudent financial behaviour. Moreover, such a tool can also act as a stepping-stone in the creation of new categories of financial products and services

for this segment, as cashflow analysis rather than balance sheet analysis is a way to begin understanding their financial lives. We are imagining the solution as a ‘digital tool’ due to-

- The efficacy of digital tools in facilitating customisation
- The increasing adoption of smartphones, the use of internet, and comfort with mobile-based apps among WNEs
- The convenience that comes with the portability of using a mobile phone to record financial transactions anywhere and anytime during the day

The Solution- A digital record-keeping tool for WNEs that helps them easily record and effectively track their household and business cashflows, and prioritise their financial goals



3.2 Identifying the Most 'Relevant' User for the Proposed Digital Solution

While arriving at the right solution is important, equally important is identifying the relevant user for the solution. At this stage, it is therefore useful to ask who among the broader category of WNEs would find the digital solution most relevant, and why? In other words, what characteristics make them likely users of the tool?

To arrive at this answer, we use a framework that allows us to identify the most relevant user by categorising individual characteristics into three interrelated dimensions- psychological,

behavioural, and capability-based. Psychological markers form the foundation of an individual's personality, shaping their motivations, attitudes, emotions, and perceptions. These psychological traits manifest in observable behaviours, which in turn influence the capabilities an individual develops over time. Together, these three dimensions interact with each other to form the overall persona of an individual. Figure 5 summarises this logic and describes the characteristics of an individual who may find the proposed digital record-keeping tool most relevant to their context.

Figure 5: Characteristics of 'Relevant' Users for the Proposed Digital Solution



Based on our field work, we believe that entrepreneurs with the following characteristics would find the proposed solution most relevant^[15]

- **Psychological marker:** Individuals who are adaptable, resilient, inventive, curious, imagine new possibilities, aren't averse to risks, have high self-esteem, and a sense of purpose
- **Behavioural marker:** Individuals who play a lead or supporting role in managing household finances, who run businesses that contribute meaningfully to household income, who pursue business growth or

stability, who either leverage existing capabilities or build new capabilities for meeting household and business goals, and who seek support from their social networks

- **Capabilities marker:** Individuals who are functionally literate, comfortable using DFS apps, have at least 6 months of business experience, and can tap into their social networks for financial and non-financial support

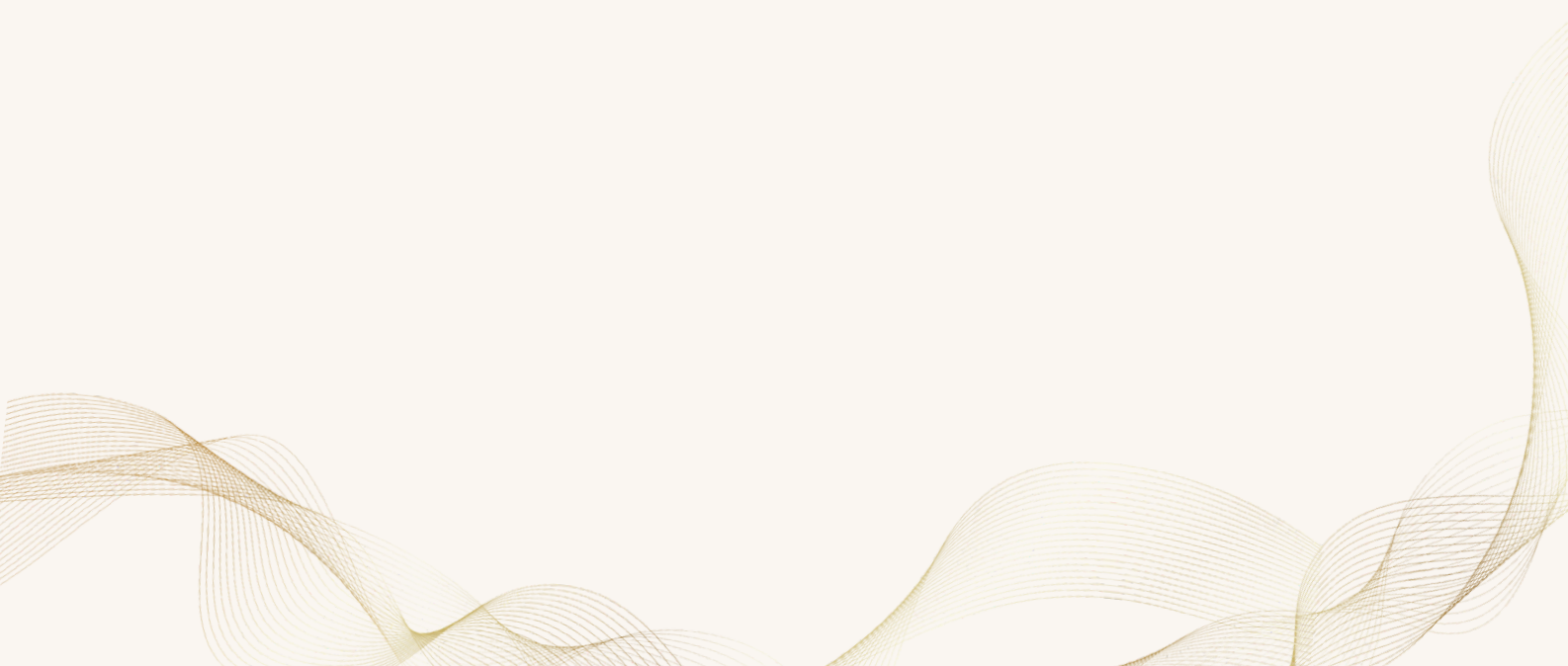


[15] For a detailed description of the survey instrument used for entrepreneur classification along with the methodology for classifying and scoring entrepreneurs into the 3 entrepreneur categories, please refer to the Technical Note accompanying this report.

Section

04

Solution Design



4. SOLUTION DESIGN

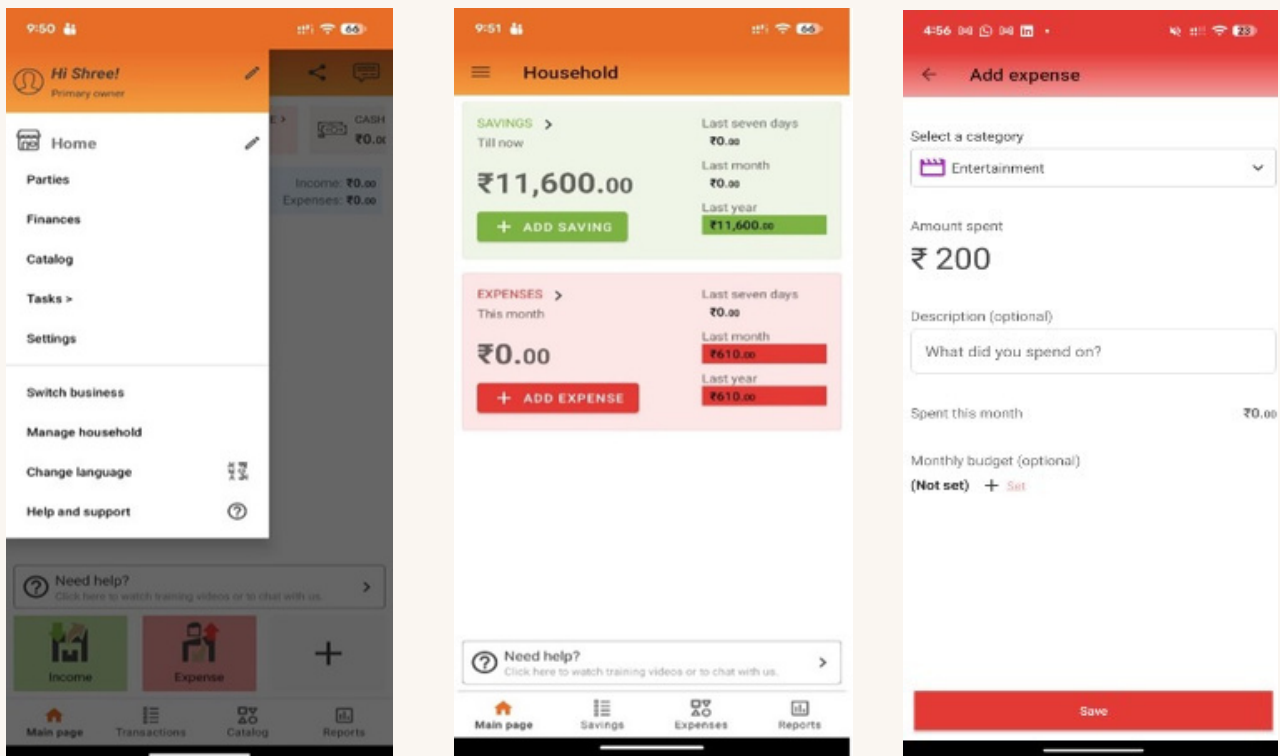
The MeraBills application, in its current version, allows users to track business cashflows and gain clarity about business performance, provided they consistently enter their business transactions. WNEs who rely on mental models for record-keeping can benefit significantly from transitioning to this digital tool. However, given the dual role WNEs play in managing household as well as business cashflows, a use case emerged from our field work for the app to also support household financial management.

With the objective of enabling the tracking of household finances, a prototype was conceptualised as an enhanced version of the existing MeraBills application that could support household financial management alongside the app's existing business financial management functionalities. The design of household

finance features was guided by the most pressing areas of household financial management for WNEs: tracking spending, controlling expenses, and saving effectively. Special attention was paid to designing an interface that minimized complexity and remained consistent with the existing MeraBills application, so that the household feature felt as familiar to the user as the business feature. Ease of navigation, low-text interactions, contextually relevant categories, preferred language functionality, navigation videos and tips, and flexibility in recording transactions were some design features that were optimised to enhance the ease of using the application.

Key functionalities of the prototype are presented in Figure 6.

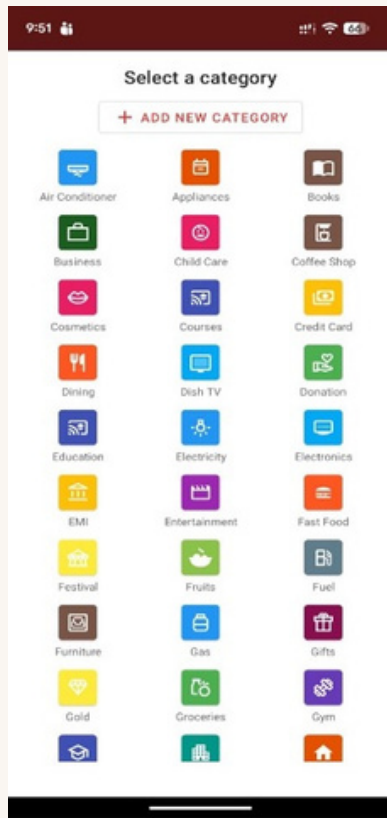
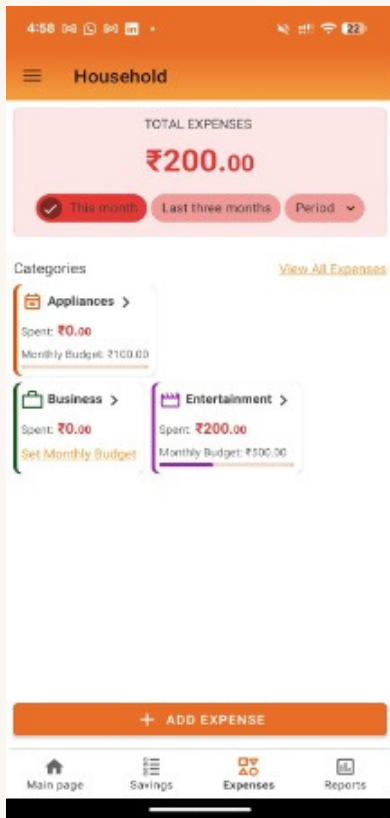
Figure 6: Prototype Features for Household Finance Management



The application allows users to manage both household and business financial transactions using the same login and user profile.

The household section consists primarily of two modules: Savings and Expenses. Homepage gives a quick overview of their current financial position by displaying consolidated savings and expenditure information across different time periods.

Within both the savings and expenses modules, users can enter transactions by selecting relevant categories, adding descriptions, and specifying amounts. The application also provides users with the option to set spending limits and savings goals for all categories.



The savings and expenses module helps users track category-wise spending/savings and compare them against self-defined monthly budgets.

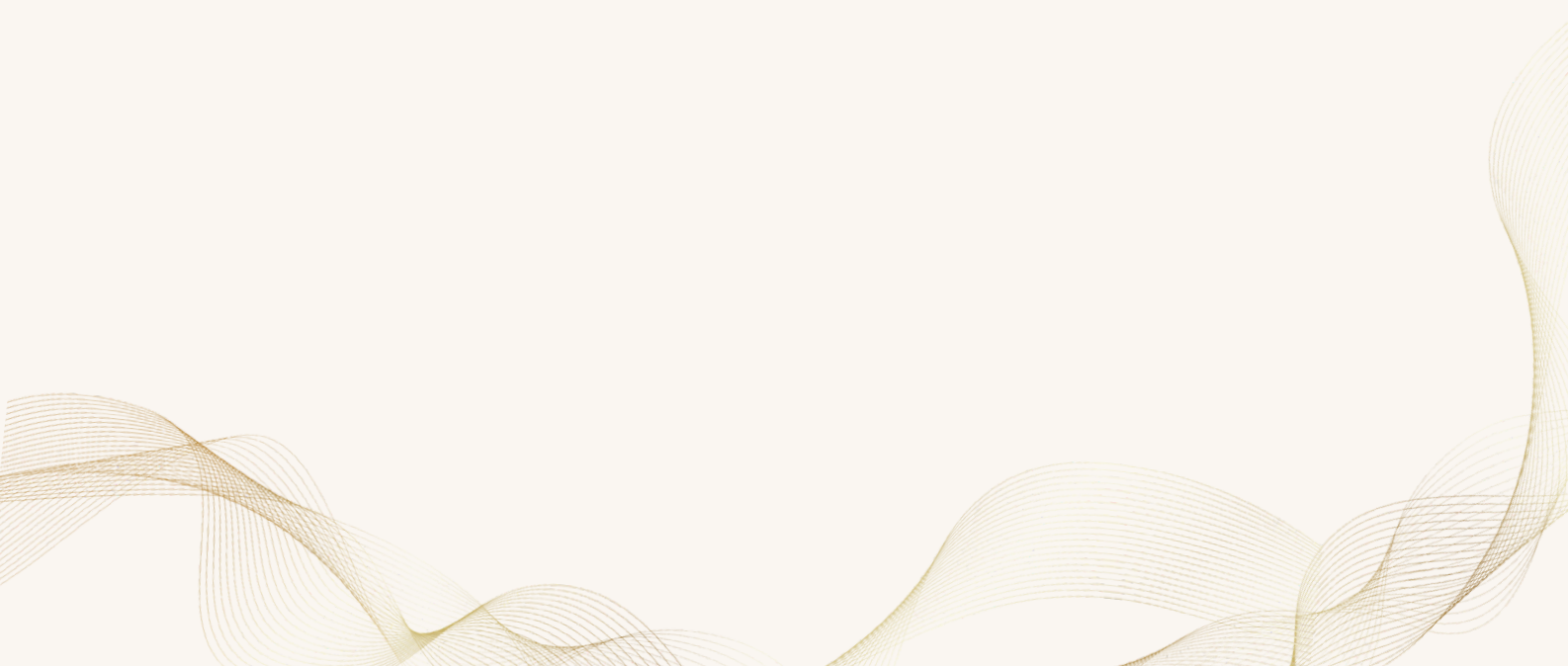
For regular entry transactions, the application includes a wide range of pre-defined categories relevant to household life such as groceries, childcare education, festivals, medical expenses, rent etc., At the same time, users are also given the flexibility to create their own categories based on their own needs and priorities

The report section provides users with a consolidated visual overview of their savings and expenses through charts and category-wise distributions. Users can review financial information across multiple time periods, including one month, three months, six months, and one year.

Section

05

Prototype Testing



5. PROTOTYPE TESTING

To understand how women interacted with the prototype in their everyday lives, the enhanced version of the application was tested with 24 women nano entrepreneurs^[16] in Kanchipuram, Tamil Nadu, selected by our on-ground partner organization.^[17]

Participants were invited to a common venue for a half-day training to familiarise them with the application and address any technical or conceptual difficulties they might face while using it. A follow-up focus group discussion session was designed to capture early impressions from the participants.

The training combined presentation-based explanations with hands-on practice sessions. Participants were introduced to the purpose of the application, its key functionalities, and the logic underlying the household financial management feature. Demonstrations were conducted on how to record transactions, category wise savings and expenses, setting budgets or savings goals, and accessing reports. Adequate time was also provided for participants to install the newer version of the application, explore different modules under the household management section on their own and practice recording transactions with support from the MeraBills team wherever required.

The training sessions were intentionally designed to be practical, interactive, and paced according to participants' familiarity with smartphones and digital applications. Following the training, focused group discussions^[18] were conducted to capture participants' early impressions of the application, perceived relevance, and immediate concerns regarding usability.

Participants were then given a period of approximately two weeks to use the application on their own in their day-to-day contexts. This duration ensured that women had sufficient time to engage with the app in accordance with their routine spending and savings activities.

At the end of the two-week period, we met with the users to conduct a survey. The survey included two components. The first component was an entrepreneur classification survey consisting of three modules- respondent and business profile, behavioural profile, and a psychological profile. While the respondent and business profile helped us record information about the respondent's context, the behavioural and psychological profile helped us elicit respondents' motivations, attitudes, emotions, and behaviours.

[16] It is pertinent to note that since these WNEs were working with our partner NGO and they agreed to participate in this trial, this cohort exhibits higher levels of adoption readiness than the general WNE population.

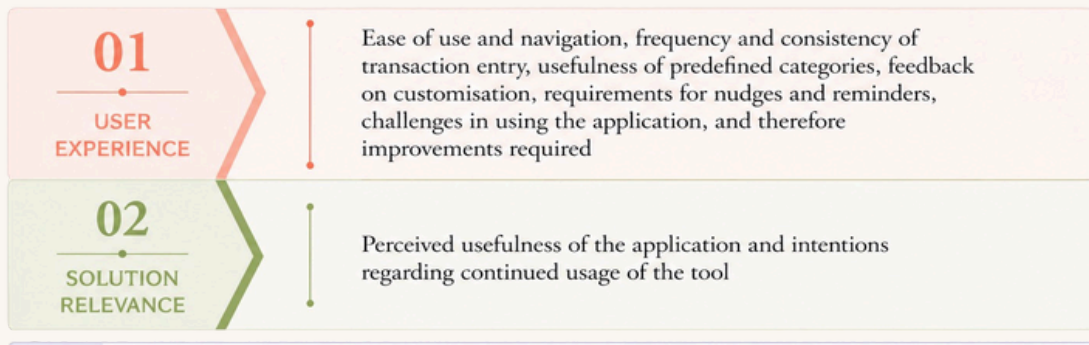
[17] Hand in Hand in collaboration with MeraBills.

[18] Refer to the FGD questionnaire instrument [here](#)

This allowed us to categorise the 24 WNEs into the three entrepreneur types, as described earlier in the report.^[19] The second component was an in-depth user interview conducted to capture user experience and the relevance of the app among users. The interview process included both closed-ended and open-ended questions to capture the narratives and reasoning that accompanied the inferences users attached to their experience of using the tool. Broadly, the in-depth interviews sought to understand:

- User experience- ease of use and navigation, frequency and consistency of transaction entry, usefulness of predefined categories, feedback on customisation, requirements for nudges and reminders, challenges in using the application, and therefore improvements required
- Solution relevance- Perceived usefulness of the application and intentions regarding continued usage of the tool

Purpose of indepth interview



 [19] For a detailed description of the survey instrument used for entrepreneur classification along with the methodology for classifying and scoring entrepreneurs into the 3 entrepreneur categories, please refer to the Technical Note accompanying this report.

5.1 Results from User Experience and Validation Survey

In this section, we describe the results from the user experience and validation survey.^[20] The survey results are categorised into two sections that follow this one. In the next section, which is the first of the two, we summarise the specific feedback users shared about the prototype (an early version of the app), both in terms of enhancements to the existing functionalities that the prototype offers, and also suggestions for additional features, in line with their preferences and money management practices. In the section after that, we summarise our takeaways regarding the usefulness of the app in the lives of the users. In other words, we validate the proposed solution with a view to establishing a proof of concept. In doing so, on the one hand, we discuss the factors that could instil trust in the app and therefore foster app usage, and on the other hand, lay out the potential unintended consequences of the proposed solution in the lives of app users. It must be noted that while this phase of our project also allowed us to pilot the entrepreneur classification survey among the 24 entrepreneurs who were part of the prototype testing phase, we have not bifurcated our results from the user experience and validation survey by entrepreneur type. Our reasoning is as follows:

- The entrepreneur classification survey was conducted as a pilot exercise to test the survey instrument for question clarity, survey flow and length, and to validate response options. The survey instrument needs to be tested across a larger sample and might need further revisions. The current classification of WNEs as per the survey is only provisional. Therefore, reading the feedback from WNEs as per their categorisation and making suggestions based on that might be premature.
- The classification survey instrument can be validated only if it confirms our hypothesis that Gung-Ho Entrepreneurs and Rooted Entrepreneurs, as per our categorisation, have a greater relevance for the app. This can be measured through usage statistics on the app. However, a sample size of 24 does not allow us to rigorously test this hypothesis.
- Furthermore, the users were allowed only a two-week period to test the relevance of the app for their context. We believe that a two-week window is insufficient to ascertain adoption and usage rates for any category of WNE. Therefore, the user experience interviews are considered dipstick exercises aimed at unearthing broad themes of engagement and use.

[20] Refer to the survey instrument used for the User Experience and Validation Survey [here](#)

5.2 Suggestions on the Prototype Design

Table 1 lists feedback received from users on the prototype.

Table 1: Prototype Feedback

 Existing features that need enhancement	 Rationale (in the context of WNEs' money management practices)
<ul style="list-style-type: none"> Ability to enter expenses retroactively (a calendar option to choose the dates) 	<ul style="list-style-type: none"> Users might not always be able to record expenses on the same day
<ul style="list-style-type: none"> Customisation of icons for various expense categories (adding logos, photos, etc.) 	<ul style="list-style-type: none"> Ease of reference at the time of recording and tracking
<ul style="list-style-type: none"> Addition of new expense categories (such as flowers, game, Moi Virundhu, lending to others, LIC deposits, monthly investments in savings schemes, etc.) 	<ul style="list-style-type: none"> Suggested expense categories are relevant to their socio-cultural context
<ul style="list-style-type: none"> Tagging expenses by whether made in cash or digitally 	<ul style="list-style-type: none"> For ease of tallying the total balance left in bank account/cash, against expenses made
<ul style="list-style-type: none"> User interface for viewing expenses incurred by expense categories and time buckets (last 7 days, last month, etc.) not intuitive 	<ul style="list-style-type: none"> Users are unable to find this functionality in the app very easily
<ul style="list-style-type: none"> Clumsy interface in terms of searching and selecting relevant expense category, due to a long list of expense icons that make finding the relevant category difficult- adding a search functionality would help 	<ul style="list-style-type: none"> Ease of recording transactions and reducing frictions
<ul style="list-style-type: none"> Parts of the app are in English (default mode); Require Tamil language support 	<ul style="list-style-type: none"> Suggested language changes in the app are relevant to users' cultural context
<ul style="list-style-type: none"> A feature for setting total budget rather than category-wise budget 	<ul style="list-style-type: none"> Users might not have full visibility over budgets for separate expense categories, especially for small expense categories
<ul style="list-style-type: none"> A feature for recording expenses by events/functions such that various expenses incurred for that expense can be recorded and tracked 	<ul style="list-style-type: none"> Users think of expenses not in isolation but in relation to specific events- noting it this way increases the relevance of the app to their context

Suggestions for new functionalities		Rationale (in the context of WNEs' money management practices)
	Password protection for the app	Not stemming from a place of user wanting to hide her expenses but rather from the need to have greater ownership and privacy over who can access details of household finances
	Income recording and tracking	Users want a consolidated view/ picture of their household finances (whole cycle of money). Currently expenses and savings only capture cash outflows. Users also want the app to help them track their cash inflows such as income amount and sources, loans they have acquired, etc.
	Integration of the enterprise and household feature on the app	Users want the enterprise profits recorded in the MB app to automatically show up as income in the MB app, so that the two sources of information can speak to each other, rather than sitting in silos
	Loan outstanding (value and volume)	The loan tracking feature ideally should also allow them to track their loan outstanding across various sources
	Opening balance picture on the main screen that changes dynamically based on expenses made by the user	Users want to see their budget at the start of the month, so that they can make their expenses accordingly. Dynamic tracking and changing of opening balance tells users how much they have left so that they can make their spending decisions accordingly
	Ability to view total household income and expenses in the last one year and other time frames along with expense and income patterns by categories	To build a sense of achievement and pride about how much money the household was able to accumulate and spend; Studying and analysing expense and income patterns is useful from the perspective of better financial planning
	Recording and tracking finances for more than one household	Some users manage finances for more than one household (parents/parents-in-law), in which case a feature for being able to switch accounts from one household to another would be useful
	Ability for multiple users within the same family to record and track finances for a single household	In instances where multiple family members are engaged in managing household finances, a feature that allows users to separately enter income and expenses that they are responsible for will allow (i) a consolidated picture of household finances and (ii) help with tracking expenses made by each individual for relevant expense categories and income tracking from different streams
	Reminders for making deposits, loan repayment dates, getting back money lent to a relative/friend, etc.	Users make several transactions in a day-having reminders will ease their cognitive load in terms of mentally tracking the various financial obligations they are responsible for

5.3 Validation of the Solution Design

5.3.1 Proof of Concept

The depth of feedback on enhancements to existing prototype functionalities, along with the wide range of suggestions for new features, clearly indicated the app's relevance among users who participated in the prototype testing phase. Below we summarise the perceived benefits of the solution that emerged from the survey:

- Greater clarity on household expenditure patterns-** Survey respondents unanimously highlighted greater clarity about total household expenses as the main utility offered by the app. This, they said, allowed them to understand their expense patterns by expense categories and cut back on spending as required to achieve their savings goal, a prominent money management challenge highlighted by WNEs in the first leg of our field work. Financial stress due to insufficient cashflows against the backdrop of recurring unanticipated expenses and rising inflation (as perceived by users) meant that managing cashflows to shape their income and meet expenses (both anticipated and unanticipated) was a prominent goal of their financial lives (15 out of 24 users said that they did not have any surplus left after meeting basic needs, and therefore struggled to save). The prototype, by offering greater clarity on their outflows, helped them better manage this goal.
- Ease of recording expenses digitally-** The ease of recording expenses on a mobile phone and the ability to view these expenses by categories (food, clothing, festivals, etc.), total amount (total expense across all categories), and time period (such as last 7 days or last month, etc.) were perceived as facilitating ease and convenience in the process of recording and tracking spending patterns.
- Better intra-household coordination over household finances-** Users felt that recording expenses helped them explain and justify their spending to other family members. Users appreciated being able to show their spouse and other household members the total expenditure incurred across different expense categories, as well as the surplus remaining. The relevance for this value proposition emerged through conversations with users, who highlighted the need for coordination in managing household spends, particularly where spending patterns follow clear division of labour i.e., where women and men are involved in different domains of household financial responsibilities and decision making (interviews revealed that women typically managed day-to-day household expenses, such as vegetables, milk, and other groceries with little to no involvement from their husbands in these spending decisions). In such contexts, diligent record-keeping was perceived as a useful mechanism for clarifying and justifying expenses, thereby improving intra-household coordination.
- Intentional cashflow management-** Users also highlighted that the habit of regularly recording expenses made their

spending patterns more apparent and the need for intentional cashflow management more salient. This salience was also clearly demonstrated through the suggestions prototype users made for new app functionalities. Users wanted the app to reflect a 360-degree view of their finances, i.e., in addition to the existing feature of tracking expenses and recording savings, they also wanted the prototype to allow for tracking income and loan outstanding across various sources.

Overall, responses from the survey demonstrated how carefully users thought about, and acted upon, their money management needs, indicating that the WNEs we spoke to required more rather than less active financial management across both their enterprise and household domains. **The prototype testing, therefore, establishes a proof of concept for the relevance of a single, integrated app** that helps WNEs easily record and effectively track their household cashflows, alongside the existing functionality that the app provides in tracking and analysing cashflows on the enterprise front.

Moreover, we believe that the **digital money management tool has the potential to meaningfully advance women's financial inclusion by furthering our understanding of the intricate money management practices that WNEs deploy in their financial lives.** For a WNE, household and enterprise finances are deeply intertwined and money flows between the two seamlessly. While this might call into question the need for two modules in the app, creating an artificial distinction that doesn't exist, several entrepreneurs, especially Gung-Ho and Rooted, expressed a need for separating household and business cashflows. Such segregation, they believed, would offer greater

clarity over business profits, business investment needs, household spending patterns, and income flows, thereby enabling more informed decision-making. Yet, their context might still lead them to consider certain household cashflows as business-related (for example, buying a refrigerator that is used for both household and business purposes) and certain business cashflows as household-related (for example, using money from the shop cashbox for making monthly chit fund deposits). A record of these patterns across both household and business domains can bring to light the kinds of cashflows that are at the intersection of household and business domains for a WNE. The digital money management tool can therefore offer a much more high-resolution picture of the cashflow patterns of nano-enterprise households. A key implication of this work, then, is the improved ability to assess incomes of informal-sector households, a theme that remains a significant policy priority.

5.3.2 User Engagement

While establishing a proof of concept is important, tracking user engagement is a crucial metric in ascertaining the relevance of any app. Given the small window between the onboarding of prototype-users and the collection of feedback from them, tracking user engagement is outside the scope of this report. However, prototype users in their survey response shared factors that could build greater confidence and trust in the usability of the app. Firstly, prototype users expressed a need for password protection for the app. This need did not necessarily stem from a place of users wanting to hide aspects of their financial lives, but rather from a desire for greater control and privacy over who could access their cashflow details. Secondly, prototype

users and their families were concerned about data privacy and were hesitant about using the app to track their household finances, out of the fear of people outside their family, especially the government, having access to this information. Thirdly, prototype users were also concerned about losing their data. All of this means that while users saw relevance of the app in their daily lives, fostering engagement on an app which tracks household cashflows (that are by default more personal and private than enterprise cashflows) requires significant efforts towards building user trust. An implication of this learning is that technology service providers catering to informal and nano WNEs would benefit from making the app more trustworthy. This is a theme that is gaining traction as products and services are becoming increasingly digital, and aspects of customer protection in this realm, such as suitable user interface and experience, reliable grievance redress mechanisms, data protection and privacy, are becoming prominent policy issues.

5.3.3 Unintended Consequences

This section so far discusses the results from the user experience and validation survey with respect to the solution that was tested among 24 WNEs. As described in this section, we find that the solution design tested in this study is relevant and suitable for the context of WNEs, thereby successfully demonstrating a proof of concept for the product, i.e., a money management digital tool that helps WNEs manage both their household and enterprise finances. While this proof of concept gives us the necessary insight to move to the next phase of the project, wherein we prepare to pilot and scale the solution, this is also a good moment in our

journey to pose questions about potential unintended consequences of the proposed solution in the lives of WNEs. A growing body of research claims that product innovation and policy interventions should align with existing cultural norms rather than attempt to overturn them. Moscona et al. (2026)^[21] in their paper titled ‘Searching for fish in trees? Economic development when context matters’, writing about development policy interventions in general, argue that efforts to change cultural norms often rely on fragile assumptions and may generate unintended consequences; instead, interventions that take social and cultural traits as given and design within those contexts are more likely to succeed. In their paper, the authors cite the work of Hirschman (1967)^[22] who first introduced the terms “trait-making” and “trait-taking” and wrote that while a trait-making project is one that “must change some aspect of the structure somewhere if it is going to be successful”, a trait-taking project “fits easily into a given social and cultural structure and does not attempt to modify it”.

We believe that our solution design closely aligns with the “trait-taking” approach because we do not seek to modify the social and cultural context of WNEs but rather seek to design a solution that suits their context. We do this by designing the digital money management tool, keeping in mind their existing money management practices, challenges, and preferences, implying that the need for a solution emerged from the women themselves. Our

[21] Moscona, J., Nunn, N., & Robinson, J. A. (2026). Searching for Fish in Trees (縁木求魚)? Economic Development when Context Matters.

[22] Hirschman, A. O. (1967). Development Projects Observed. Brookings Institute Press.

“trait-taking” approach is also exemplified by the fact that we do not impose the solution on WNEs or offer any incentive for take-up, but simply make it available to them, with only their intrinsic motivation determining their adoption and usage behaviour. Moreover, while the tool requires a shift in user behaviour from mental and physical tracking to digital tracking of cashflows, we recognise that not all WNEs will be amenable to and interested in making this shift. Therefore, we believe that app relevance for users will vary by entrepreneur type. We explicitly recognise this reality and account for this in our research design by designing an entrepreneur classification survey, such that targeting and training efforts can be more streamlined to reach the ‘relevant’ (i.e. ‘motivated’) users.^[23]

Nevertheless, despite the “trait-taking” approach of this project, unintended consequences might still manifest. We believe that asking the right questions and collecting granular data to answer these questions will help in addressing some of these potential unintended consequences. An indicative list of

these questions is listed below -

- Does digitally recording and tracking household cashflows change intra-household family dynamics adversely? Similarly, what are the effects of this practice on inter-household dynamics within the community, if any?
- Are there particular kinds of expenses that the household cuts back more on such as spending on social obligations, lending to others in their social networks, etc.? If so, does this have an adverse effect on the social capital of households?
- Does increased salience of cashflow management in the short-term create a tunnelling effect for WNEs, potentially leading to a negative impact on their ability to manage medium- and long-term finances?
- Are users at a greater risk of misuse of their personal data? Are there data breaches as a result of using the app, and if so, what are its consequences?

 [23] As articulated in the earlier sections of this report, our hypothesis is that the tool will be most relevant for Gung-Ho and Rooted entrepreneurs, given their psychological bearings and business motivations. This hypothesis, however, remains to be tested, an exercise that we hope to carry out in the next phase of this project

Section

06

The Roadmap to Pilot and Scale



6. THE ROADMAP TO PILOT AND SCALE

Our research follows an action-oriented approach, iteratively integrating field learnings into the solution design. We believe that the proposed solution has the potential to create a positive impact at scale through our collaboration with thoughtful partners at MeraBills, who are working towards the mission of empowering micro entrepreneurs through accessible technology.

The work on this action-research project has just begun, and there are several phases that we envision for this project. This report synthesizes learnings from our field work conducted as part of phase 1 of the project, which focuses on diagnosing the problem, identifying and designing the solution, and testing an early prototype of the solution with potential users. As part of this phase, we also classify WNEs into a new set of three categories and develop a questionnaire to identify entrepreneurs who would find the solution most relevant. We believe this is an important exercise that can help organisations like MeraBills and other grassroots organisations working with WNEs streamline their targeting and training efforts.

Future work in this project could entail **(i) refining the Minimum Viable Product (MVP) by incorporating suggestions received by prototype users through the User Experience and Validation Survey and (ii) pilot testing the MVP among a larger cohort of WNEs, roughly 5000 users, to assess user engagement, app relevance by entrepreneur type, and the short-term and medium-term impact of the app on the money management practices of WNEs.**

The pilot testing will involve helping WNEs onboard onto the new version of the app, training them on using new app features, and following their app-usage behaviour to gauge the utility that they derive from the app. Qualitative and quantitative modes of research will be conducted among participants of the pilot study to understand if the solution is helping women effectively manage their money and advance their financial wellbeing, and if there are any unintended consequences that the solution may be leading to in their lives. Data that the app generates can also shed light on the cashflows of WNEs and help us understand how the design of financial products and services can be attuned to their context.

Finally, if the pilot delivers positive results, the project will move to the final phase, where Dvara Research, along with MeraBills, will aim to scale the digital tool to ensure that the app reaches the right hands and empowers WNEs in ways that best suit their needs. Scaling the solution, however, will require strategic partnerships between MeraBills and relevant stakeholders. Below, we describe the stakeholder categories and the potential nature and value-add of these partnerships.

- **Policymakers-** Strategic partnerships with the NRLM program under the Ministry of Rural Development, the Self-Help Group Bank Linkage Program steered by NABARD, and with other government programs that target WNEs, could be crucial to scaling the solution. Government

institutions could tap into their institutional knowledge of working with WNEs in diverse geographies to support the process of introducing relevant entrepreneurs to the digital money management tool.

- **Financial Service Providers (FSPs)-** Partnerships with FSPs who cater to the financial needs of nano entrepreneurs could also be beneficial, as the use of a digital money management tool among nano entrepreneurs is expected to bring greater clarity on their cashflow position (both on the household and enterprise front), leading to nano entrepreneurs making informed decisions about the need for credit and their repayment capacity. Over time, the cashflow data generated through the MeraBills app could also be potentially used to underwrite credit for nano entrepreneurs, thereby bridging a key gap in access to suitable formal credit. At an aggregate

level, the cashflow data can also be used to analyse and study the financial lives of nano entrepreneurs, which could in itself lead to the creation of new product categories for this segment.

- **Knowledge Partners-** Knowledge Partners, such as Dvara Research and other policy research organisations could build a learning agenda by integrating a continuous Monitoring and Evaluation exercise into the scaling phase of this project to understand the impact of the digital money management tool on the financial and social lives of WNEs. Through such knowledge partnerships, a variety of policy relevant questions could be studied that could have direct implications for the design and delivery of the solution. For instance, what methods are most effective to onboard and train entrepreneurs to foster user engagement and retention on the app, etc.?



Contact Us

About Dvara Research

Dvara Research is an independent, non-partisan, not-for-profit policy research institution based in India. Its mission is to ensure that every low-income household and every small enterprise has complete access to suitable financial services and social security through a range of channels that enable them to use these services securely and confidently.

Since 2008, Dvara Research has deeply analysed, and carefully written about, financial inclusion and social protection in India from policy, regulatory, and practitioner perspectives that are anchored to its mission. Its work has gained the trust and respect of policymakers and regulators, and since its inception, Dvara Research has been a research-partner of choice for such key policy-making bodies as the Reserve Bank of India, Securities & Exchange Board of India, Pension Fund Regulatory & Development Authority etc.

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About MeraBills

MeraBills is a free, multilingual Android-based business management platform designed to strengthen the financial resilience and growth of nano and micro enterprises, with a particular focus on women entrepreneurs in underserved communities. The platform enables business owners to digitally record income and expenses, manage customers, suppliers, inventory, and cash flow, generate profit and loss statements, and access real-time business insights through a simple, intuitive interface that works even in low-connectivity environments.

Beyond bookkeeping, MeraBills has evolved into an AI-enabled business growth platform that assists entrepreneurs with product catalogue creation, pricing, inventory management, digital marketing, and marketplace readiness. By helping entrepreneurs build reliable digital business records and financial histories, MeraBills improves enterprise visibility, supports better business decision-making, and strengthens readiness for formal financial services, including access to credit. Simultaneously, its monitoring dashboards provide implementing organisations and government agencies with aggregated, real-time insights into enterprise performance, enabling more effective programme management, impact measurement, and evidence-based policy decisions.

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