

# **The impact of a “progress with your goals” curriculum and its cultural framing among female microfinance clients in Vietnam: Pre-analysis plan**

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**Abstract:** Development interventions are often designed from independent perspectives that prioritize individualism, personal achievement and self-reliance, while individuals in non-Western countries are more likely to relate to interdependent values such as collective well-being, collaboration and traditions. Inspired by previous research, we have developed a “progress with your goals” curriculum that aims to help women to save. We created two versions, one incorporates an independent framing and the other incorporates an interdependent framing. Together with Tinh Thuong Microfinance Organization (TYM), a Vietnamese microfinance institution, we organize a field experiment to study the effect of the training and its different framings on women’s savings and preferences for competition.

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<sup>1</sup> At this point, our baseline survey has been completed (see Section 3.1), and part of the groups has completed up to two training sessions (see Section 2.2.1) and the associated post-session surveys (see Sections 3.2 for a description of the tools and 4.1.4 for the definition of variables). We have not yet linked the participation registration and post-session survey data to the treatment indicators. The first follow-up information on primary outcomes is yet to be collected (see Section 3.3-3.5 for a description of the tools and 4.1.1 and 4.2.1 for the definition of variables).

## 1. Introduction and research questions

In the context of women's empowerment and economic development, microfinance has emerged as a pivotal tool, empowering women to engage in economic activities. While research suggests that the average impact of microfinance is more modest than previously thought (Banerjee, Karlan and Zinman, 2015), recent evidence from Mexico shows that outcomes can be improved by a curriculum that helps microfinance clients to work towards their goals (Rojas Valdes, Wydick and Lybbert, 2022). In this project, we will study whether training can help female members of a Vietnamese microfinance organization to save. The curriculum aims to help women to reflect on their life goals and set smaller savings goals, and to help them to achieve these goals by improving self-efficacy and communication strategies.

Development interventions are often designed from independent perspectives that prioritize individualism, personal achievement and self-reliance, while individuals in non-Western countries are more likely to relate to interdependent values such as collective well-being, collaboration and traditions (Thomas and Markus, 2022). However, the limited availability of empirical evidence makes it difficult to judge whether the interdependent or independent approach is more effective in practice. Like many countries, Vietnam is a transitioning economy influenced by both collectivistic and individualistic values (Nguyen, 2016). Furthermore, our study region, Vinh Phuc province in the north of Hanoi, has rapidly industrialized in the past years. Our study region therefore seems an interesting place to study whether an independent or interdependent approach would be more effective. We thus vary the framing of the curriculum, offering both an independent and an interdependent framing, and we will study its effects on outcomes.

We therefore ask the following question and sub-questions:

1. What is the impact of the “progress with your goals” curriculum on savings, and how does this depend on cultural framing?
  - a. What is the impact of the “progress with your goals” curriculum on savings?
  - b. How does the impact of the “progress with your goals” on savings depend on cultural framing?

Culture also plays an important role in shaping individuals' preference for competition. From Markus and Kitayama's (1991) work on self-construals we derive the hypothesis that independent cultures emphasizing personal achievements and autonomy may foster a

preference for competition. Conversely, in interdependent cultures, where collective well-being and collaboration may take precedence over individual success, the preference for competition may be less pronounced. Gneezy, Leonard and List (2009) study gender-based variations in competition preferences across matriarchal and patriarchal societies, and find that women are relatively more competitive in a matriarchal society. Our distinct framings provide a unique opportunity to study the causal effect of culture on preference for competition.

We therefore ask also the following question:

2. What is the impact of culture on preference for competition?

While we will thus study two research questions that speak to different literatures, and while we are therefore planning to write up the results in different papers, we are writing one pre-analysis plan, because this fits the overlap in study designs and is most transparent.

## **2. Experimental design**

### **2.1. Sample selection**

The sample consists of members from Tinh Thuong Microfinance Institution (TYM), which offers microfinance services to over 385,000 female members. Our study takes place in Vinh Phuc, a rapidly industrializing province in the North of Vietnam, where TYM has about 10,000 female members, who are organized in 231 groups with an average of 43 members per group.

While TYM offers individual liability loans, members meet weekly or monthly with the group leader and the loan officers to repay their loans, apply for new loans, and deposit or withdraw savings. Further, during these meetings, members receive information about new policies and upcoming activities.

The training was advertised to all members in Vinh Phuc via Zalo, a local messaging mobile application, and directly through TYM staff and group leaders. 2502 women registered for the training, from which we selected our sample.

We first applied a set of eligibility criteria. We dropped 23 women that already participated in the pilot survey or training and 1 woman who was administratively associated with two member groups. We then dropped 829 women that were 52 years or older on May 31, 2023. This way we ensured that sampled women were younger than 53 years during the endline survey, so they still had two years to accumulate savings before reaching the Vietnamese

retirement age of 55. We therefore ended up with 1649 women that satisfied our eligibility criteria.

From the women that satisfied the eligibility criteria, we randomly selected members within TYM member groups, while maximally spreading our sample over groups. Specifically, we first selected the first 8 members from all groups: from smaller groups we selected all members, and from larger groups we randomly selected 8 members. We then selected a randomly selected 9<sup>th</sup> member from a subset of the groups: we selected the 9<sup>th</sup> member from groups with 9 members, but not from groups with 10 members, so we avoided to leave out just one eligible member; and further selected the 9<sup>th</sup> member from a random subset of groups with more than 10 members until we filled our primary list with 1140 members, and a replacement list with 50 members.

Enumerators managed to survey 1109 women from the primary list, and complemented this with 31 women from the replacement list, so that we ended up with a sample of 1140 women, spread over 163 member groups.

## **2.2. Treatment arms**

### *2.2.1. Training sessions*

The training consists of four sessions of about 3.5 hours per session. Session 1 focuses on goal-setting. It aims at giving women a moment to reflect on their bigger life goals and teaching them to set smaller SMART saving goals that can help them reach their bigger life goal. In the first activity, women are asked to identify one main future life goal and reflect on its motives. In the second activity, women reflect on how smaller saving goals can help them in achieving bigger goals by hearing an example of another TYM member. Lastly, in the third activity, they learn and practice how to set a SMART goal with their saving goal.

Session 2 focuses on self-efficacy, which we referred to as “confidence” in the training. In this session, women first view a video of a confident woman who achieved her goal of opening a breakfast shop and reflect on *how* the woman achieved her goal (specifically on what skills/strengths she used to achieve her goals). In the second activity, women learn about a specific model, the 3C model for confidence, which they apply to their own situation and specifically to the goals identified in session 1. The first C refers to commitment where women are asked to commit to their goals. The second C refers to competences, in which women are asked to identify their own competences/strengths to achieve their goals. Finally, the last C

refers to courage, where women are asked to identify a potential challenge they may face on the way to achieving their goals and of how they can overcome the challenge by using their strengths.

Session 3 focuses on communication. In this session, women learn how they can communicate their goals. They first watch the same video as in the previous session, focusing on the communication part and are asked to reflect on communication strengths used by the woman in the video. Then in the second activity, they learn about the 3W1H (What, Who, Why, How) model of communication and think of a scenario to practice communicating their goals. After that some women are asked to do a role play with the practice scenario they previously thought about.

Session 4 is a recap of the three previous sessions where women first reflect on what they have learned in the previous sessions. After that, they reflect on the progress they made in each session topic and on challenges they experienced. They are also asked to reflect on how they can further develop their skills and continue applying the learnings from the training.

At the end of each of the first three sessions, participants are asked to undertake some homework exercises before the next session. The homework aims at helping the participants to continue practicing what they learned in the session outside of the classroom and encourages them to share their experiences in Zalo messaging groups that were created for each training group. More information can be found in the participant handbook under supporting documents.

### *2.2.2. Two framings*

We distinguished two versions of the training. One version incorporates an independent framing, which focuses on personal motives, personal achievement, assertiveness, self-reliance and innovation. The other version incorporates an interdependent framing, which focuses on relational motives, family and community well-being, respectfulness, collaboration and traditions (Thomas and Markus, 2022).

We did not vary the framing in the first session, as we wanted to avoid that the framing would affect how participants formulate their goals in the first session. Specifically, we wanted to avoid that saving would be a more prominent goal in one of either treatments.

Starting from session 2, we distinguished framings in two ways. First, at the start of sessions 2 and 3, we show a video that contains framing, and reflect with the participants about the

strengths shown by the women featured in the video. The videos feature a woman working towards her life goal of opening a small breakfast shop, either in an independent or interdependent way. Appendix Table A1 shows along which dimension of Thomas and Markus (2022) we differentiated the framings, and the full script can be found under supporting documents.

Second, for the activities in sessions 2 and 3, we provided a handout with personal strengths that were shown by the women in the video. Table 1 gives an overview of these strengths. Participants are encouraged to use this when thinking about their own strengths and how they can apply them to their lives for the practice exercises, but the framing is suggestive and not imposed. For further details, we refer to the facilitator guidelines and the participant handbook.<sup>2</sup>

In session 4, the framing will come back as part of the recap.

**Table 1: Application of independent and interdependent strengths in activities**

	<b>Independent framing</b>	<b>Interdependent framing</b>
<i>Goal setting</i>	No differentiation	
<i>Self-efficacy</i>	<p>In the application activity, where participants apply the 3C model, participants are asked to reflect on their own competences (strengths). Participants are given a list of examples of independent strengths from the example of the woman featured in the video to help them reflect:</p> <ol style="list-style-type: none"> <li>1. Self-determined</li> <li>2. Strong-willed</li> <li>3. Self-reliant</li> <li>4. Creative</li> <li>5. Independent</li> <li>6. Adaptable</li> <li>7. Strong-minded</li> <li>8. Critical thinking</li> <li>9. Assertive</li> <li>10. Risk-taking</li> </ol>	<p>In the application activity, where participants apply the 3C model, participants are asked to reflect on their own competences (strengths). Participants are given a list of examples of interdependent strengths from the example of the woman featured in the video to help them reflect:</p> <ol style="list-style-type: none"> <li>1. Family oriented</li> <li>2. Collaborative</li> <li>3. Attentive to others</li> <li>4. Tradition-preserving</li> <li>5. Community-oriented</li> <li>6. Loyal</li> <li>7. Humble</li> <li>8. Considerate</li> <li>9. Respectful</li> <li>10. Sensible to one's environment</li> </ol>

<sup>2</sup> In the facilitator guidelines and training of the trainers, the independent framing is referred to as “leadership” and the interdependent framing as “collective”. To participants, we did not mention that the framing differed, and therefore also did not mention these terms.

<i>Communication</i>	<p>In the application activity, where participants apply the 3W1H model, participants are given a list of communication strengths from the example of the woman featured in the video, building on the independent strengths listed in the previous session:</p> <ol style="list-style-type: none"> <li>1. To show a <b>strong-mind</b> and <b>strong-will</b>: being confident in communicating and articulating opinions, showing determination to pursue ideas/goals, not shying away if faced with opposition when sharing ideas</li> <li>2. To show <b>self-reliance</b>: showing that confidence in one's plan and abilities, and highlighting strengths</li> <li>3. To be <b>assertive</b>: expressing oneself confidently and assertively, and sharing ideas without hesitation</li> <li>4. To use <b>critical thinking</b> and be <b>adaptable</b>: using own judgment and critical thinking if the other does not fully agree with ideas, and welcoming challenges with confidence and flexibility</li> </ol>	<p>In the application activity, where participants apply the 3W1H model, participants are given a list of communication strengths from the example of the woman featured in the video, building on the interdependent strengths listed in the previous session:</p> <ol style="list-style-type: none"> <li>1. To be <b>humble</b> in their communication style: seeking advice and support and listening attentively and with empathy to others' opinions. Showing willingness to <b>collaborate</b> to reach shared goals</li> <li>2. To be <b>attentive</b> to others: being receptive, empathetic, and understanding towards others' emotions and preferences</li> <li>3. To be <b>respectful</b>: showing respect for others' opinions and ideas and seeking advice in a considerate way</li> <li>4. Being <b>considerate</b> of others: considering others' opinions when making decisions, and finding common grounds, for example by showing your <b>loyalty</b> (e.g., making a positive contribution for others as well)</li> </ol>
<i>Recap</i>	<p>Trainers emphasize elements from the respective models and as participants are encouraged to reflect on previous sessions, elements of the framing may emerge in the recap session</p>	

### 2.3. Intervention logistics

The training is planned to be delivered in 38 training groups of 17-24 women from multiple member groups, based on the distance to training locations.

The training is delivered by managers and loan officers of TYM and staff members of its partner organization the Vietnam Women's Union (VWU). Out of 13 trainers, 6 trainers are leading independent training sessions, 6 trainers are leading interdependent training sessions, and 1 experienced trainer is leading both types of training sessions. Each of the 38 training groups is assigned two trainers, who lead all four sessions.

Training sessions are scheduled on Saturdays and Sundays during August-November 2023, with usually two weeks between consecutive sessions. For organizational reasons, the start of the training varies by about two months, because some groups start their training after others have completed them.

To maximize the participation rate, we are planning to organize an extra round of training at the end of the intervention period. Women who are assigned to the training groups, but who could not participate before, will be invited to join this extra round of training.

Participants receive a show up fee of VND 100,000 (= € 3.82 = \$ 4.13) per session and coffee/tea and snacks during the break. In the fourth session, participants can earn some additional money in a game (see Section 3.3.2).

## **2.4. Treatment assignment**

We randomly assigned groups to the two treatment arms and a control arm. To avoid that relatively many big groups would end up together in one arm, and thereby cause an unbalance in the number of individuals per arm, we stratified the randomization based on the size of groups: we sorted the groups on the number of eligible members per group from small to large and created strata of 33 groups (31 groups in the stratum with the smallest groups). The treatment was randomized within these strata, 11 groups to each arm (9 groups to the control group in the stratum with the smallest groups). We ended up with 389 women from 55 groups in the independent treatment arm, 377 women from 55 groups in the interdependent treatment arm, and 374 women from 53 groups in the control arm.

## **3. Data collection**

We will collect data in five different ways. All surveys and protocols are translated to Vietnamese, the mother tongue of our respondents.

### **3.1. Baseline survey**

First, we have conducted a baseline survey during June-July 2023. The baseline surveys are taken in-person by staff of TYM and the Vietnam Women's Union (VWU), making sure that the enumerator and respondent did not know each other before the experiment. The baseline survey contains questions on a range of psychological and financial variables that are relevant to study the effect of the training on savings and will be defined in Section 4.1. The full baseline survey can be found among the supporting documents. As described in Section 2.1, 1140



women have participated in the baseline survey. Baseline survey participants receive a compensation of VND 40,000 (= € 1.53 = \$ 1.56).

### **3.2. Post-session surveys**

Second, after each of the first three sessions, we ask participants to fill in a short survey, either online via their smartphone or on paper. Each of these surveys contains four questions on satisfaction with the session, and two to five questions on the topic of the session. While most of these questions measure SMART goal-setting, self-efficacy or communication in general, we ask one question on savings after the first session, namely to write down the SMART saving goal. After the third session, we also ask for the extent to which participants have completed their homework. The sample consists of all training participants.

### **3.3. Lab-in-the-field measures**

Third, we incorporate a lab-in-the-field experiment within the fourth (and thus final) training session. We first elicit risk preferences using a hypothetical question, and then elicit preference for competition. This lab-in-the-field experiment is organized by the two trainers with the help of two enumerators, and the protocol is included under supporting documents. The sample again consists of all training participants.

#### *3.3.1. Risk preference*

Our risk preference game is based on Gneezy, Leonard and List (2009), who gave participants an endowment and asked how much they would invest in a risky option. Under the risky option, there is an equal chance that the investment will succeed or fail: if the investment succeeds, the participant receives three times the amount invested, but if the investment fails, she loses the amount invested. Together with the potential payoff of a successful investment, the part of the endowment not invested in the risky option will be paid to the participant at the end of the experiment.

To avoid that we will offer an illegal game of chance, we make two changes to the risk preference game of Gneezy, Leonard and List (2009). First, we frame our risk preference question as an investment decision. We ask the respondent to suppose that she is a microentrepreneur who faces an investment decision, whose outcomes depend on uncertain circumstances, with good and bad circumstances equally likely to happen. We then ask the respondent for her preferred combination of payoffs over good and bad circumstances, where the payoff is represented as “VND  $[10 + 2X]$  million if the circumstances are good and VND

[10 −  $X$ ] million if the circumstances are bad” and  $X \in \{0,1,2, \dots, 10\}$ , where  $X$  represents the amount invested in the risky option.

Second, we do not incentivize our risk elicitation question. Note that recent research suggests that financial incentives do not affect risk elicitation (Hackethal et al., 2023).

### *3.3.2. Preference for competition*

Our ball toss game is based on Gneezy, Leonard and List (2009), who first gave participants the choice between piece-rate and competition, and then gave them ten attempts to toss a ball in a bucket. Under piece-rate, respondents will receive a fixed amount for every time they successfully toss the ball in the bucket. Under competition, respondents will receive a three times higher amount for every time they successfully toss the ball in the bucket, but only if they outperform their matched respondent.

Inspired by Healy and Pate, we have added a third option, which we call cooperation. Under cooperation, respondents will receive half of the amount for each of their own successful tosses plus half of the amount for each of the successful tosses of their matched respondent.

In our game, respondents thus choose between piece-rate, cooperation and competition. To avoid that respondents base their choice on the framing of the game, we labeled piece-rate as Option 1, cooperation as Option 2 and competition as Option 3, where the order was determined after piloting the game, and intended to optimize the explanation.

Participants receive their payoff at the end of the session. The payoff can vary between VND 0 for zero successes and competition losers, and VND 300,000 (= € 11.47 = \$ 12.40) for competition winners with ten successes. As at most half of the participants can become a competition winner, the average payoff cannot exceed VND 150,000 (= € 5.74 = \$ 6.20).

## **3.4. Phone surveys**

Fourth, we will conduct a short midline survey in February 2024, three to five months after completion of the training. The midline surveys are taken by phone by the loan officer of the respondent and will contain a subset of the questions from the baseline survey. The sample consists of all respondents surveyed at baseline.

## **3.5. Endline survey**

Fifth, we will conduct an endline survey around June-July 2024, one year after the baseline survey and seven to nine months after the completion of the training. Like the baseline surveys,

the endline surveys are taken in-person by staff of TYM and VWU, making sure that the enumerator and respondent did not know each other before the experiment, and excluding trainers. The sample consists of all respondents surveyed at baseline. Endline survey participants receive a compensation of VND 40,000 (= € 1.53 = \$ 1.56).

## 4. Variables

In this Section, we define the variables that we will use in our analysis. In Section 4.1, we discuss the survey-based variables that we use to study research question 1 and that we may use to study the other research questions as well. In Section 4.2, we will discuss the lab-in-the-field measures that we use to study research question 2 only.

### 4.1. Survey-based variables

In this Section, we define our survey-based variables as well as our measure for participation in the training. We will indicate whether these variables are available at baseline (B), post-session (P1,P2,P3,P4), midline (M) and/or endline (E).

#### 4.1.1. Primary outcomes

Our two primary outcomes are *TYM savings last month* and *TYM savings balance*.

*TYM savings last month* (B,M,E) is the flow of savings measured as the sum of the amounts put in TYM required savings (baseline survey question F3), voluntary savings (F8) and term savings (F13) accounts in the past month in Vietnamese Dong (VND), winsorized at the 99th percentile.<sup>3</sup>

*TYM savings balance* (B,M,E) is the stock of savings measured as the sum of balance on TYM required savings (F2), voluntary savings (F7) and term savings (F12) accounts in VND, winsorized at the 99th percentile.

We have chosen these specific savings variables as primary outcomes for two reasons. First, women from our sample are already saving at TYM. While it is required for TYM members to save a minimum of VND 120,000 (= € 4.59 = \$ 4.96) per month, almost all women are also holding voluntary savings at TYM. Second, the training is organized in partnership with TYM. Although the training curriculum does not explicitly suggest participants to save at TYM, we

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<sup>3</sup> Throughout this PAP, if the respondent indicates not to have any object, we assume that both the stock and the flow equal 0.

therefore think that participants may choose to save at TYM. Third, TYM members can track their savings in an app, so we expect the measurement error in these variables to be relatively small.

#### *4.1.2. Secondary outcomes*

Our secondary outcomes are variables about other savings, loans and income.

*Other savings balance (3 categories)* (B,M,E) is the stock of savings measured as the sum of balance on a selection of three other accounts, winsorized at the 99th percentile:

- a. Savings at a bank (other than TYM) (F17)
- b. Savings in cash (F21)
- c. Savings in an informal savings group (F25)

*Other savings balance (9 categories)* (B,E) is the stock of savings measured as the sum of balance on nine other accounts in VND, winsorized at the 99th percentile:

- a. Savings at a bank (other than TYM) (F17)
- b. Savings in cash (F21)
- c. Savings in an informal savings group (F25)
- d. Savings in the form of gold / precious metals / diamonds (F29)
- e. Crops in storage (F33)
- f. Livestock (F37)
- g. Business items for production or sale (F41)
- h. Money lent to anyone (F45)
- i. Other savings (F49)

*TYM loans balance* (B,E) is the stock of loans measured as the sum of the outstanding amounts of TYM loans in VND (E8), winsorized at the 99<sup>th</sup> percentile.

*Other loans balance* (B,E) is the stock of loans measured as the sum of the outstanding amounts of other loans in VND (E18 and E19), winsorized at the 99<sup>th</sup> percentile.

*Household income last month* (B,E) is the amount of income that the respondent and her household members earned in the last month in VND (D1), winsorized at the 99<sup>th</sup> percentile.

*Income last month* (B,E) is the amount of income that the respondent earned herself in the last month in VND (D3), winsorized at the 99th percentile.

*Free budget last month* (B,E) is the amount of income that the respondent could freely spend herself in the last month in VND (D5), winsorized at the 99th percentile.

These outcomes may reveal additional impact of the intervention or explain where any effect on TYM savings comes from.

#### 4.1.3. *Intermediate outcomes*

*Has goal TYM savings* (B,M,E) is 1 if the respondent indicated an amount of savings at TYM that she would like to have in 5 years from now (F53) and 0 otherwise.

*Goal TYM savings* (B,M,E) is the amount of savings at TYM that the respondent would like to have in 5 years from now (F53), winsorized at the 99th percentile. This variable is available for 1022 respondents.

*Has goal other savings* (B,M,E) is 1 if the respondent indicated an amount of savings outside TYM that she would like to have in 5 years from now (F54) and 0 otherwise.

*Goal other savings* (B,M,E) is the amount of savings outside TYM that the respondent would like to have in 5 years from now (F54), winsorized at the 99th percentile. This variable is available for 971 respondents.

*Self – efficacy* (B,M,E) is the mean of responses to eight statements on self-efficacy that are answered on a 5-point Likert scale<sup>4</sup> and collapsed to a 3-point scale, with “Strongly disagree” and “Disagree” re-coded to -1, “Neither disagree, nor agree” to 0, and “Agree” and “Strongly agree” to 1, so that negative (positive) values indicate disagreement (agreement). The reason for collapsing answers to a 3-point scale is that the frequency of “Strongly disagree” or “Strongly agree” answers significantly varies across enumerators, so that we are not sure how to interpret differences between “Strongly disagree” and “Disagree”, and “Agree” and “Strongly agree”, respectively. These statements are taken from Bossuoy et al. (2022), who selected seven statements from Schwarzer and Jerusalem (1995) and one from Rosenberg (1965):<sup>5</sup>

- I can successfully solve problems if I put in enough effort. (I1)

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<sup>4</sup> Throughout our baseline survey, we consistently used the following answer options for statements: “Strongly disagree”, “Disagree”, “Neither agree, nor disagree”, “Agree” and “Strongly agree”.

<sup>5</sup> Throughout our baseline survey, we consistently formulated statements about the respondent in the first person.

- When I want to do something, I will find a way to do it even if someone doesn't support me. (I2)
- It is easy for me to stay on the path I have set out for myself and achieve my goals in life. (I3)
- I am confident that I am able to cope well with unexpected events. (I4)
- I can stay calm when I am faced with difficulties because I have the ability to adapt. (I5)
- When I have to solve a problem, I can usually find more than one solution. (I6)
- If I find myself in a difficult situation, I can usually find a solution. (I7)
- I am able to do things as well as most people. (I8)

*Communication* (M,E) is the mean of the nonmissing responses to three statements on communication that are answered on a 5-point Likert scale and collapsed to a 3-point scale as above:<sup>6</sup>

- I am able to clearly communicate my goals to others.
- I dare to share what I want with others.
- When I disagree with my husband, I feel comfortable telling him so. (K5)

The first two of these questions were not part of the baseline survey, but will be part of the endline survey, so we define *Communication* at endline only. The third of these questions is asked only if the respondent reported to be married (B1=2) or live together with her partner without marriage registration (B1=5), and therefore for 91.8% of our sample only. For the remaining 8.2%, *Communication* is thus the mean of the re-coded responses to the first two statements. As the missing variable may be answered structurally different, we adjust this value by adding one-third of the difference between the means of the first two variables and the mean of the last variable for respondents who to be married (B1=2) or live together with her partner without marriage registration (B1=5).<sup>7</sup>

The following three variables are adapted from the *Family bonding* variable in Gillmore et al. (1992) and applied to the partner, family and community, respectively.

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<sup>6</sup> Throughout this PAP, with de-meaning we mean to subtract the mean of the control group at baseline.

<sup>7</sup> This is similar to taking the mean of mean-centered answers, but preserving the mean and thus the interpretation of absolute values.

*Partner connectedness* (B,E) is the mean of responses to four statements on partner connectedness that are answered on a 5-point Likert scale and collapsed to a 3-point scale as above, of which the responses to the italicized statements will first be reverse-coded:

- I feel close to my husband. (K1)
- My husband supports me in difficult times. (K2)
- *My husband does not try to understand my problems.* (K3)
- *My husband is usually not very interested in what I say or do.* (K4)

As the question in baseline survey section K are asked only if the respondent reported to be married (B1=2) or live together with her partner without marriage registration (B1=5), *Partner connectedness* is defined for 91.8% of our sample only.

*Family connectedness* (B,E) is the mean of responses to four statements on family connectedness that are answered on a 5-point Likert scale, of which the responses to the italicized statements will first be reverse-coded, collapsed to a 3-point scale as above:

- I feel close to my family members. (L1)
- My family members support me in difficult times. (L2)
- *My family does not try to understand my problems.* (L3)
- *My family is usually not very interested in what I say or do.* (L4)

*Community connectedness* (B,E) is the mean of responses to four statements on community connectedness that are answered on a 5-point Likert scale and collapsed to a 3-point scale as above, of which the responses to the italicized statements will first be reverse-coded:

- I feel close to women in my community. (M1)
- Women in my community support me in difficult times. (M2)
- *Women in my community do not try to understand my problems.* (M3)
- *Women in my community are usually not very interested in what I say or do.* (M4)

The variables on goals, self-efficacy and communication are closely related to the three concepts covered in the training, and we expect them to be affected by the training in general. In contrast, the partner, family and community connectedness specifically relate to the interdependent framing, and we thus expect them to differ across the framings.

#### 4.1.4. Uptake

*Participation session  $k$* , for  $k = 1, 2, 3, 4$  (P1, P2, P3, P4), equals 1 if the respondent participated in session  $k$  and 0 otherwise.

*Satisfaction session  $k$* , for  $k = 1, 2, 3$  (P1, P2, P3), is the mean of responses to four questions<sup>8</sup> on satisfaction that are answered on a 5-point Likert scale and collapsed to a 3-point Likert scale as above:

- Did you like the training?
- Were you able to complete the exercises in this training?
- Do you think the trainer explained the exercises well?
- Do you think you can use what you have learned in your life?

*Self – efficacy (P2)* is the mean of responses to a selection of four out of eight baseline survey statements on self-efficacy that are answered on a 5-point Likert scale and collapsed to a 3-point scale as above:

- When I want to do something, I will find a way to do it even if someone doesn't support me. (I2)
- It is easy for me to stay on the path I have set out for myself and achieve my goals in life. (I3)
- I am confident that I am able to cope well with unexpected events. (I4)
- I am able to do things as well as most people. (I8)

*Communication (P3)* is the mean of responses to a selection of two out of three baseline survey statements on communication that are answered on a 5-point Likert scale and collapsed to a 3-point scale as above:

- I am able to clearly communicate my goals to others.
- I dare to share what I want with others.

*Homework (P3)* is the product of:

- the answer to Have you done the homework exercises for sessions 1 and 2? (with answer options 1 “Never”, 2 “For one session” and 3 “For both sessions”) minus 1, and

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<sup>8</sup> As this concerns questions rather than statements, we used a different scale: “Not at all”, “Not so much”, “Acceptable”, “Much” and “Very much”.



- the answer to How did you do it? (with answer options 1 “Very briefly”, 2 “Briefly”, 3 “Elaborate” and 4 “Very elaborated”).

While *Participation session k* can be used to study compliance, and all of these variables can be compared across both treatment arms.

#### 4.1.5. Moderating variables

*Present – biased* (B) equals 1 if the difference between the smallest amount in million VND that the respondent would prefer to receive in 1 month over receiving VND 1 million (= € 38.24 = \$ 41.34) in tomorrow (as measured by S1-S14 in steps of 0.05 million from 1.00 million to 1.65 million) exceeds the difference between the smallest amount in million VND that the respondent would prefer to receive in 7 months over receiving VND 1 million in 6 months (as measured by S16-S2 in steps of 0.05 million from 1.00 million to 1.65 million), and 0 otherwise.<sup>9</sup> With this definition, we are following Dupas and Robinson (2013).

*Independent selfhood* (B) is the mean of responses to 24 statements on selfhood that are answered on a 5-point Likert scale, collapsed to a 3-point scale as above. The statements are all statements from our selection of four out of eight subscales of the Culture and Identity Research Network Self Construal Scale Version 3 (CIRN-SCS-3; Vignoles et al., 2016). Each subscale has an independent pole and an interdependent pole (italicized items), and we reverse-code the latter:

- Self-direction versus reception to influence:
  - I always make my own decisions about important matters, even if others might not approve of what I decide. (O1)
  - *I usually ask my family for approval before making a decision. (O3)*
  - *I usually follow others’ advice when making important choices. (O8)*
  - I decide for myself what goals to pursue even if they are very different from what my family would expect. (O12)
  - *I usually do what people expect of me, rather than decide for myself what to do. (O15)*
  - I usually decide on my own actions, rather than follow others’ expectations. (O19)

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<sup>9</sup> Because of an error in the relevance criterion of baseline survey questions S15 and S30, we leave out these two questions.

- Self-reliance versus dependence on others:
  - I tend to rely on myself rather than seeking help from others. (O4)
  - *In difficult situations, I tend to seek help from others rather than relying only on myself. (O7)*
  - *Being able to depend on others is very important to me. (O13)*
  - I prefer to rely completely on myself rather than depend on others. (O16)
  - *I prefer to ask other people for help rather than rely only on myself. (O20)*
  - I try to avoid being reliant on others. (O22)
- Self-expression versus harmony:
  - I show my true feelings even if it disturbs the harmony in my family relationships. (O2)
  - *I prefer to preserve harmony in my relationships, even if this means not expressing my true feelings. (O5)*
  - *I try to adapt to people around me, even if it means hiding my feelings. (O9)*
  - I prefer to express my thoughts and feelings openly, even if it may sometimes cause conflict. (O17)
  - *I try not to express disagreement with members of my family. (O21)*
  - I like to discuss my own ideas, even if it might sometimes upset the people around me. (O23)
- Self-interest versus commitment to others:
  - I usually give priority to my personal goals, before thinking about the goals of others. (O6)
  - My own success is very important to me, even if it disrupts my friendships. (O10)
  - *I value good relations with the people close to me more than my personal achievements. (O11)*
  - I protect my own interests, even if it might sometimes disrupt my family relationships. (O14)
  - *I usually give priority to others, before myself. (O18)*
  - *I would sacrifice my personal interests for the benefit of my family. (O24)*

*Age* (B,M,E) is the age in years on May 31, 2023, excluding the fractional part, as calculated from the date of birth (A4).

*Preference for Western media* (B) is the relative preference for Western movies and music, compared to Vietnamese movies and music, and is constructed as the difference between the responses to the following two statements that are answered on a 5-point Likert scale and collapsed to a 3-point scale as above:

- I like Western movies and music. (R6)
- I like Vietnamese movies and music. (R3)

While *Time preferences* and *Present – bias* may explain heterogeneous impacts of the training in general, we expect that *Independent selfhood*, *Age* and *Preference for Western media* may explain heterogeneous impacts of the framings.

#### 4.1.6. Balance variables

In our balance tests, we include the baseline values of our primary outcomes, secondary outcomes, intermediate outcomes and moderating variables, as well as other variables that we describe below.

*Has partner* (B,M,E) equals 1 if the respondent reported to be married (B1=2) or live together with her partner without marriage registration (B1=5), and 0 otherwise.

The following two variables directly relate to the first training session, but are already scored high as baseline, and therefore not included among the intermediate outcomes:

*Goal – setting importance* (B,E) is the mean of responses to five statements on the importance of setting goals that are answered on a 5-point Likert scale and collapsed to a 3-point scale as above. The statements are inspired by Rojas Valdes, Wydick and Lybbert (2022):

- It is important to dream for a better future. (G1)
- It is important to have goals for my family. (G2)
- It is important to have goals and specific plans for my personal development. (G3)
- It is important to set goals for my household savings. (G4)
- It is important to set goals for my personal savings. (G5)

*Goal – setting SMART* (B,M,E) is the mean of responses to five statements on SMART goal-setting, based on the five criteria of the SMART acronym, that are answered on a 5-point Likert scale and collapsed to a 3-point scale as above:

- I set goals and make concrete what I want to accomplish. (H1)

- I set goals and know how to track the progress towards the goal. (H2)
- I set goals and state what can realistically be achieved. (H3)
- I set goals and make sure they are relevant for my life purpose. (H4)
- I set goals and specify in which time period I aim to achieve the goal. (H5)

The following three variables could potentially explain a lack of impact, but have too little negative cases to be included among the moderators:

*Respondent controlling household resources* (B) is the mean of the non-missing responses to five statements on the respondent's control over household resources that are answered on a 5-point Likert scale and collapsed to a 3-point scale as above. These statements are a selection of the statements used in Bossuroy et al. (2022):

- My opinion matters in decisions regarding the money your partner earns. (J1)
- My opinion matters in decisions regarding current household expenses. (J2)
- My opinion matters in decisions regarding major household purchases. (J3)
- I can make my own decisions without the advice of anyone regarding current household expenses. (J4)
- I can make my own decisions without the advice of anyone regarding household purchases. (J5)

The first of these questions is asked only if the respondent reported to be married (B1=2) or live together with her partner without marriage registration (B1=5), and therefore for 91.8% of our sample only. For the remaining 8.2%,

*Respondent controlling household resources* is thus the mean of the re-coded responses to the last four statements. As the missing variable may be answered structurally different, we adjust this value by adding one-fifth of the difference between the means of the first variables and the mean of the last four variables for respondents who to be married (B1=2) or live together with her partner without marriage registration (B1=5).

*PHQ – 2 proxy for depression* (B) equals 1 if the sum of the answers to the following questions that are answered on a 1-4 frequency scale is 5 or higher.<sup>10</sup> These questions are taken from the Patient Health Questionnaire-2 (PHQ-2) of Kroenke, Spitzer and Williams (2003):

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<sup>10</sup> This corresponds to a score of 3 or higher in Kroenke, Spitzer and Williams (2003).

- Over the last 2 weeks, how often have you had little interest or pleasure in doing things?  
(P1)
- Over the last two weeks, how often have you been feeling down, depressed or hopeless?  
(P2)

*Partner controlling respondent's behavior* (B) is the mean of responses to six statements on the partner's control over the respondent's behavior that are answered on a 5-point Likert scale and collapsed to a 3-point scale as above. These statements are a selection of the statements used in MOLISA, GSO and UNFPA (2020):

- My husband tries to keep me from seeing my friends. (Q1)
- My husband tries to restrict contact with my family of birth. (Q2)
- My husband insists on knowing where I am at all times. (Q3)
- My husband gets angry if I speak to another man. (Q4)
- My husband is often suspicious that I am unfaithful. (Q5)
- My husband expects me to ask his permission before seeking health care for myself.  
(Q6)

As the questions in baseline survey sections Q are asked only if the respondent reported to be married (B1=2) or live together with her partner without marriage registration (B1=5), *Partner controlling respondent's behavior* is defined for 91.8% of our sample only.

*Maximal discount rate in the present and the future* (B) is the maximum of the difference between the smallest amount in million VND that the respondent would prefer to receive in 1 month over receiving VND 1 million (= € 38.24 = \$ 41.34) in tomorrow (as measured by S1-S14 in steps of 0.05 million from 1.00 million to 1.65 million) and the difference between the smallest amount in million VND that the respondent would prefer to receive in 7 months over receiving VND 1 million in 6 months (as measured by S16-S29 in steps of 0.05 million from 1.00 million to 1.65 million), minus 1.<sup>11</sup> With this definition, we are following Dupas and Robinson (2013).

When including variables in regressions, we set missing values to 0. Their effects on outcomes are absorbed by other the dummy variables *Has goal TYM savings*, *Has goal other savings* and *Has partner*, respectively.

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<sup>11</sup> If the respondent always prefers to receive the early amount, we set the discount rate at 0.7.

## 4.2. Lab-in-the-field measures

In this Section, we define our lab-in-the-field game (G) measures.

### 4.2.1. Competition

We define *Competition* (G) as follows:

$$\text{Competition} = \{0 \text{ if cooperation } 1 \text{ if piece} - \text{rate } 2 \text{ if competition}\}$$

This way, increasing values for *Competition* imply that the respondent's payoff:

- i. increasingly depends on her own performance, and
- ii. becomes independent (1) or even negatively dependent (2) on the performance of the matched respondent.

*Competition* thus captures the degree to which respondents want to make their payoff dependent on their own performance.

### 4.2.2. Risk preference

*Risk preference* (G) denotes the preference for risk, and is defined as  $X$ , the amount invested in the risky option in million VND.

## 5. Empirical strategy

In this Section, we discuss the empirical strategy. Each of the Subsections describes the analysis for one of our research questions.

### 5.1. Impact of the “progress with your goals” curriculum and its framing on savings

#### 5.1.1. Balance

Table 2 reports summary statistics across treatment arms for all variables that are defined at baseline in Section 4.1 as well as the subscales of our variable *Independent selfhood*. Further, Table 1 reports p-values for two-sided test of equality of means across Training and Control (T vs. C) and Independent vs. Interdependent (T1 vs. T2) after controlling for stratum fixed effects and clustering standard errors at the level of TYM member groups. We do not observe structural differences across groups. However, as one could expect with so many variables and multiple comparisons, we find some statistically significant differences: on average, women in the training groups exhibit higher self-efficacy, are more likely to be present-biased and have more control over household resources than women in the control

group, and women in the independent treatment group have lower other savings balance and score lower on our SMART goal-setting scale than women in the interdependent treatment group.

**Table 2: Balance across treatment arms**

	Independent (T1)			Interdependent (T2)			Control (C)			T vs. C	T1 vs T2
	N	mean	sd	N	mean	sd	N	mean	sd	p	p
<i>Primary outcomes:</i>											
TYM savings last month (million VND)	389	0.492	0.417	377	0.522	0.522	374	0.519	0.488	0.698	0.463
TYM savings balance (million VND)	389	7.71	7.43	377	8.72	11.13	374	8.59	10.26	0.594	0.172
<i>Secondary outcomes:</i>											
Other savings balance (3 categories) (million VND)	389	26	64	377	29	64	374	29	75	0.732	0.682
Other savings balance (9 categories) (million VND)	389	116	222	377	159	274	374	145	305	0.674	0.046
TYM loans balance (million VND)	389	17.9	19.6	377	19.0	19.5	374	15.9	18.6	0.055	0.448
Other loans balance (million VND)	389	145	429	377	138	396	374	146	393	0.811	0.857
Household income last month (million VND)	389	21.4	10.8	377	21.6	9.9	374	20.8	10.9	0.421	0.782
Income last month (million VND)	389	8.54	5.50	377	8.44	4.77	374	7.82	5.21	0.196	0.897
Free budget last month (million VND)	389	1.56	1.43	377	1.64	1.52	374	1.55	1.47	0.741	0.647
<i>Intermediate outcomes:</i>											
Has goal TYM savings	389	0.879	0.326	377	0.915	0.279	374	0.896	0.306	0.974	0.415
Goal TYM savings (million VND)	342	40.2	41.1	345	40.2	52.7	335	38.9	44.8	0.738	0.973
Has goal other savings	389	0.820	0.385	377	0.873	0.334	374	0.864	0.344	0.693	0.349
Goal other savings (million VND)	319	281	457	329	251	396	323	259	496	0.972	0.495
Self-efficacy	389	0.711	0.329	377	0.738	0.312	374	0.633	0.378	0.007	0.437
Partner connectedness	354	0.691	0.432	349	0.754	0.393	343	0.695	0.408	0.524	0.228
Family connectedness	389	0.771	0.370	377	0.806	0.339	374	0.750	0.367	0.337	0.404



Community connectedness	389	0.695	0.407	377	0.753	0.372	374	0.656	0.424	0.161	0.258
<i>Moderators:</i>											
Present-biased	389	0.293	0.456	377	0.257	0.438	374	0.171	0.377	0.002	0.345
Independent selfhood	389	0.003	0.216	377	-0.004	0.211	374	-0.031	0.210	0.107	0.778
- Self-direction	389	0.072	0.364	377	0.045	0.364	374	0.028	0.353	0.278	0.501
- Self-reliance	389	0.673	0.350	377	0.717	0.315	374	0.643	0.367	0.157	0.274
- Self-expression	389	-0.388	0.428	377	-0.428	0.422	374	-0.417	0.411	0.847	0.480
- Self-interest	389	-0.345	0.389	377	-0.350	0.392	374	-0.379	0.399	0.431	0.913
Age on May 31, 2023	389	39.19	7.34	377	39.03	7.26	374	39.87	7.02	0.154	0.864
Preference for Western media	389	-1.07	0.98	377	-1.14	0.95	374	-1.19	0.93	0.302	0.574
<i>Other balance variables:</i>											
Has partner	389	0.910	0.287	377	0.926	0.263	374	0.917	0.276	0.979	0.465
Goal-setting importance	389	0.883	0.304	377	0.945	0.182	374	0.880	0.257	0.192	0.059
Goal-setting SMART	389	0.857	0.341	377	0.938	0.201	374	0.844	0.343	0.097	0.009
Respondent controlling household resources	389	0.645	0.422	377	0.655	0.398	374	0.563	0.408	0.021	0.842
PHQ-2 proxy for depression	389	0.031	0.173	377	0.029	0.169	374	0.024	0.153	0.591	0.902
Partner controlling respondent's behavior	354	-0.717	0.386	349	-0.764	0.355	343	-0.732	0.396	0.848	0.289
Maximal discount rate in the present and the future	389	0.395	0.261	377	0.375	0.267	374	0.402	0.293	0.551	0.465

*Notes:*

p-values for the two-sided test of equality of means across Training and Control (T vs. C) and Independent vs. Interdependent (T1 vs. T2) after controlling for stratum fixed effects and clustering standard errors at the level of TYM member groups.

### 5.1.2. Compliance

We have tried to maximize compliance to the treatment by selecting our sample from women who registered for the training. We will study compliance by considering participation in each of the four training sessions. As the framing differs from session 2 onwards, compliance to the treatment in sessions 2-4 is important to be able to study the effect of the framing. In case there is incomplete compliance to treatment, our impact estimates can be interpreted as intent-to-treat estimates.

### 5.1.3. Main econometric specifications

To study impact of the “progress with your goals” curriculum on savings, we will estimate the following ANCOVA specifications (McKenzie, 2012):

$$y_{ijst} = \beta_0 + \beta_1 \text{Training}_{js} + \beta_2 y_{ijs0} + \theta_s + \varepsilon_{ijst} \quad (1)$$

where  $y_{ijst}$  is the (primary, secondary or intermediate) outcome variable from Sections 4.1.1-4.1.3 for individual  $i$  in group  $j$  from randomization stratum  $s$  at midline or endline,  $\text{Training}_{js}$  is a dummy that equals 1 for either of the treatments and 0 for control,  $y_{ijs0}$  is the baseline value of the outcome variable and is included whenever available,  $\theta_s$  represents stratum fixed effects, and standard errors will be clustered at the group level.

We will test  $H_0: \beta_1 = 0$  vs.  $H_a: \beta_1 \neq 0$ .

To study how the impact of the “progress with your goals” curriculum depends on cultural framing, we limit the sample to those that were directly exposed to framing, i.e. those that are assigned to the training and participated in at least the second or third session.<sup>12</sup> We estimate the following ANCOVA specifications:

$$y_{ijst} = \beta_0 + \beta_1 \text{Independent}_{js} + \beta_2 y_{ijs0} + \theta_s + \varepsilon_{ijst} \quad (2)$$

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<sup>12</sup> As framing is absent from the first session, we expect participation in the second session to be balanced across treatment arms. Participants who missed the second session could potentially hear about the framing from other group members. If this causes the likelihood of participation in at least the second or third session to be significantly different across treatment arms, we will further limit the sample to those that participated at least in the second session. If also the likelihood of participation in the second session turns out to be significantly different across treatment arms, we will expand our sample to all those assigned to the training, including those that missed one or more sessions.

where  $y_{ijst}$  is the (primary, secondary or intermediate) outcome or uptake variable from Sections 4.1.1-4.1.4,  $Independent_{js}$  is a dummy that equals 1 for the independent treatment and 0 for the interdependent treatment, and standard errors will be clustered at the group level.

We will test  $H_0: \beta_1 = 0$  vs.  $H_a: \beta_1 \neq 0$ .

#### 5.1.4. Further heterogeneity checks

To study how the impact of the “progress with your goals” curriculum depends on present-biasedness, we estimate the following ANCOVA specifications:

$$y_{ijst} = \beta_0 + \beta_1 Training_{js} + \beta_2 Moderator_{ijs0} + \beta_3 Training_{js} Moderator_{ijs0} + \beta_4 y_{ijs0} + \theta_s + \varepsilon_{ijst} \quad (3)$$

where  $Moderator_{ijs0}$  is the baseline value of *Present – biased*, and standard errors will be clustered at the group level.

To study how the effects of cultural framing depends on independent selfhood, age and preference for Western media, we estimate the following ANCOVA specifications:

$$y_{ijst} = \beta_0 + \beta_1 Training_{js} + \beta_2 Moderator_{ijs0} + \beta_3 Training_{js} Moderator_{ijs0} + \beta_4 y_{ijs0} + \theta_s + \varepsilon_{ijst} \quad (4)$$

where  $Moderator_{ijs0}$  is the baseline value of *Independent selfhood*, *Age* and *Preference for Western media*, respectively, and standard errors will be clustered at the group level.

We are not convinced that we are sufficiently powered to pick up heterogeneous impacts along these dimensions, and therefore consider these heterogeneity checks as exploratory.

#### 5.1.5. Correction for multiple hypotheses testing

We classify the analysis of treatment effects on our primary outcomes as our main interest, and the analysis of secondary outcomes, intermediate outcomes and further heterogeneity checks as exploratory analysis.

We employ two strategies to control for multiple hypothesis testing. First, we will construct standardized summary indices of our primary outcomes within each follow-up wave (Anderson, 2008), and across follow-up waves (McKenzie, 2012). Second, when it comes to individual outcome measures, we will calculate both single-estimate p-values as well as sharpened q-values that hold constant the false discovery rates when testing the multiple treatment effects on our primary outcomes from multiple follow-up waves (Anderson, 2008). For exploratory purposes, we will also construct standardized summary indices of our

secondary outcomes, intermediate outcomes and take-up variables for each follow-up wave, and calculate both single-estimate p-values as well as sharpened q-values that hold constant the false discovery rates when testing the multiple treatment effects on our primary outcomes from multiple follow-up waves.

#### 5.1.6. *Survey attrition*

We will test for non-random attrition based on the baseline variables specified above for balance testing, and by treatment status. In case we observe significant differences across training and control or across independent and interdependent treatments, we will employ two approaches to explore the robustness of our results for this comparison. First, in our ANCOVA specification, we will include a vector of the control variables selected by the Post-Double Selection Lasso procedure of Belloni, Chernozhukov and Hansen (2014) from the set of balance variables described in Section 4.1.6, following the example of Anderson and McKenzie (2022). This procedure selects control variables that are strong predictors of the outcome as well as variables that predict the treatment status, which helps to account for the imbalances. Second, we will estimate Lee bounds that directly account for differential attrition.

### 5.2. **Effect of culture on preference for competition**

#### 5.2.1. *Balance*

See Section 5.1.1.

#### 5.2.2. *Compliance*

See Section 5.1.2.

#### 5.2.3. *Main effect on preference for competition*

To study research question 2, we will estimate the following ordered logit specification on the sample of women in either of the treatments who participate in the lab-in-the-field experiment:

$$Competition_{ijs}^* = \beta_0 + \beta_1 Independent_{js} + \theta_s + \varepsilon_{ijs} \quad (5)$$

$$Competition_{ijs} = \begin{cases} 0 & \text{if } Competition_{ijs}^* \leq 0 \\ 1 & \text{if } 0 < Competition_{ijs}^* \leq \mu_1 \\ 2 & \text{if } \mu_1 < Competition_{ijs}^* \end{cases}$$

where  $Competition_{ijs}^*$  is a latent preference for competition for individual  $i$  in group  $j$  from randomization stratum  $s$ , and standard errors will be clustered at the group level.

The probability that respondent  $i$  from group  $j$  will select  $Competition_{ijs} = k$  is:

$$\begin{aligned} P(Competition_{ijs} = k) &= P(\mu_{k-1} < Competition_{ijs}^* \leq \mu_k) \\ &= F(\mu_k - \beta_0 - \beta_1 Independent_{js} - \theta_s) \\ &\quad - F(\mu_{k-1} - \beta_0 - \beta_1 Independent_{js} - \theta_s) \end{aligned}$$

where  $Competition_{ijs}$  is the lab-in-the-field measure defined in Section 4.2.1 and  $F$  is the logistic cumulative density function  $F(z) = \frac{e^z}{1+e^z}$ .

We will test  $H_0: \beta_1 = 0$  vs.  $H_a: \beta_1 > 0$ .

As a robustness check, we will estimate two logit specifications:

$$Competition_{ijs}^* = \beta_0 + \beta_1 Independent_{js} + \beta_2 X_{ijs0} + \theta_s + \varepsilon_{ijs} \quad (6)$$

with respectively

$$Competition_{ijs} = \begin{cases} 0 & \text{if } Competition_{ijs}^* \leq 0 \\ 1 \text{ or } 2 & \text{if } Competition_{ijs}^* > 0 \end{cases}$$

and

$$Competition_{ijs} = \begin{cases} 0 \text{ or } 1 & \text{if } Competition_{ijs}^* \leq 0 \\ 2 & \text{if } Competition_{ijs}^* > 0 \end{cases}$$

where  $X_{ijs}$  is a vector of the control variables selected by the Post-Double Selection Lasso procedure of Belloni, Chernozhukov and Hansen (2014) from the set of balance variables described in Section 4.1.6, following the example of Anderson and McKenzie (2022). Standard errors will be clustered at the group level.

The probability that respondent  $i$  from group  $j$  will select  $Competition_{ij} = k$  is:

$$\begin{aligned} P(Competition_{ijs} = k) &= P(\mu_{k-1} < Competition_{ijs}^* \leq \mu_k) \\ &= F(\mu_k - \beta_0 - \beta_1 Independent_{js} - \theta_s) \\ &\quad - F(\mu_{k-1} - \beta_0 - \beta_1 Independent_{js} - \theta_s) \end{aligned}$$

where  $F$  is the logistic cumulative density function  $F(z) = \frac{e^z}{1+e^z}$ .

We will test  $H_0: \beta_1 = 0$  vs.  $H_a: \beta_1 > 0$ .

#### 5.2.4. Mediation by risk preference

To study to which extent a potential effect is mediated by risk preference, we will estimate the following OLS specification:

$$Risk\ preference_{ijs} = \beta_0 + \beta_1 Independent_j + \theta_s + \varepsilon_{ij} \quad (7)$$

where  $Risk\ preference_{ijs}$  is the lab-in-the-field measure defined in Section 4.2.2.

We will test  $H_0: \beta_1 = 0$  vs.  $H_a: \beta_1 > 0$ .

Subsequently, we will add the variable  $Risk\ preference_{ij}$  as explanatory variable to our initial ordered logit specification:

$$Competition_{ij}^* = \beta'_0 + \beta'_1 Independent_j + \beta'_2 Risk\ preference_{ij} + \theta'_s + \varepsilon'_{ij} \quad (8)$$

We will compare  $\widehat{\beta'_1}$  with  $\widehat{\beta_1}$  from equation (5), where the ratio  $\frac{\widehat{\beta'_1}}{\widehat{\beta_1}}$  indicates the part that is not mediated by risk preference, and we will test whether this  $\widehat{\beta'_1}$  significantly differs from 0 and  $\widehat{\beta_1}$  respectively.

#### 5.2.5. Survey attrition

We will test for non-random attrition based on the baseline variables specified above for balance testing, and by treatment status. In case we observe significant differences across independent and interdependent treatments, we will put more trust in our robustness check and will estimate Lee bounds to explore the robustness of our results.

## 6. Power calculations

Following Duflo et al. (2007) and McKenzie (2012), the minimum detectable effect (MDE) for two-sided tests for our ANCOVA specifications can be calculated as follows:

$$MDE = (t_{(1-\kappa)} + t_{\alpha/2}) \sqrt{\frac{1}{N_T} + \frac{1}{N_C}} \sqrt{1 + (m-1)\rho} \sqrt{\frac{1}{1-\pi} \frac{1}{c-s}} \sqrt{1-\varphi^2} \sigma$$

Table 3 presents our parameter estimates and resulting MDEs for two-sided tests. We do this for both comparisons: training vs. control and independent vs. interdependent. Further, we calculate a lower bound MDE based on conservative parameter assumptions and an upper bound based on best-case parameter assumptions. We note here that the MDEs for the one-

sided tests specified in Section 5.2 is 11.3% lower than the MDEs for two-sided tests reported in the Table 3.

We believe these MDEs are reasonable, given that (i) for research question 1 we use survey-based outcomes that are closely linked to the training's focus on savings and (ii) for research question 2, the lab-in-the-field measures are measured within the framed training, when we expect the potential effects of the cultural framing on preferences to be highest. While we think we are sufficiently powered, the variance is non-negligible, so we will be careful with the interpretation of point-estimates.

**Table 3: Parameter estimates and resulting MDEs for two-sided tests**

		Training vs. control		Independent vs. interdependent	
		Lower bound	Upper bound	Lower bound	Upper bound
$\kappa$	Power	0.80	0.80	0.80	0.80
$\alpha$	Significance level	0.05	0.05	0.05	0.05
$N_T$	Sample size treatment	766	766	389	389
$N_C$	Sample size control	374	374	377	377
$m$	Member group size	6.99	6.99	6.99	6.99
$\rho$	Intra-group correlation <sup>1</sup>	0.00	0.00	0.00	0.00
$\pi$	Attrition	0.00	0.10	0.00	0.10
$c$	Compliance to treatment	1.00	0.90	1.00	0.90
$s$	Non-compliance to control	0.00	0.00	0.00	0.00
$\varphi$	Autocorrelation	0.50	0.00	0.50	0.00
$MDE$	Minimum detectable effect	0.153	0.207	0.176	0.237

*Notes:*

<sup>1</sup> Average intra-group correlation in baseline data for our primary survey-based outcomes, as specified in Section 4.1.1.



## 7. Ethics

We ensured to respect the ethical principles described in the Belmont report (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). First, we followed respect for persons by writing a Data Management Plans that ensures privacy and confidentiality and by obtaining informed consent from each participant before conducting the questionnaire.

Second, we followed the beneficence principle by aiming at minimizing potential harm to participants and maximizing the potential benefits for individuals and society. The training was designed in close collaboration with the local partner organization to ensure that the topics and framings are suitable and relevant for the beneficiaries. We did our best to avoid sensitive topics, and we made the framing suggestive rather than imposed. Further, the training was delivered by experienced female trainers.

Third, we respected the principle of justice by ensuring that the distribution of the benefits and burdens of research was fair and equitable. As the impact of the training is unknown, and research is being undertaken, we had to limit the sample size. Participants were selected randomly in the treatment arms or control group, and we were transparent that not everybody would be selected to participate in the training. If the training is proven to have a positive impact, it will be rolled out by the partner organization to benefit more individuals.

We obtained ethical clearance for this study from the Institutional Review Board of the Faculty of Economics and Business at the University of Groningen, which can be found under supporting documents.

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## 9. Appendix table

Table A1: Differentiation of framing along the dimensions of Thomas and Markus (2023)

	Independent framing		Interdependent framing	
	Thomas and Markus (2023)	Video script	Thomas and Markus (2023)	Video script
<i>Drivers of behaviors</i>	<p><b>Personal, internal:</b> Agency comes from within the person. Behavior and decision-making derive from expression of personal preferences, attitudes, autonomy, free choice, pursuit of personal goals, and influence over others and one's environment.</p>	<p>"I always knew I wanted to own <b>my own business</b>, to have more time for myself and to be more independent, but it felt like a far-off dream."</p> <p>"When I first shared my idea with my husband a few years ago, he was not so supportive [...] After discussing it with my husband, I took the job at a bakery to learn the necessary skills and I started saving every month."</p> <p>"I would like to share something important with you. After much consideration, <b>I decided</b> that I want to open my own breakfast business. Now my job at the factory requires me to work long hours, I have very little time for myself. I already thought of a saving plan and of how <b>I can achieve this goal</b> by taking a new job at a bakery to learn the skills."</p> <p>"At times, others also doubted me, and questioned my ideas for my business. Some older women members of TYM told me that my non-traditional ideas for Banh Mi might not be profitable, but I used <b>my own judgment</b> to evaluate their perspective [...] Whenever I faced such doubts, I <b>expressed my opinion</b> with confidence, while respecting others."</p>	<p><b>Relational, contextual:</b> Agency derives from attunement to one's social context. Behavior and decision making entail responsiveness to others, pursuit of relational choice and goals, and the meeting of social norms, obligations, expectations, and duties.</p>	<p>"I always knew I wanted to start a <b>business to support my family</b>, but it felt like a far-off dream."</p> <p>"I first discussed my idea with my husband some years ago, and he supported me all the way [...] After my husband agreed to my idea, I asked him for advice on my savings plan. His support and opinion were very important for me."</p> <p>"I have very little time for our family. I also believe that if this business is successful and profitable, it can <b>fulfill some needs of our family</b>. My mother worked so hard her whole life being a Bánh Mi street vendor. <b>I could work with her</b> to learn from her experience and skills and to continue a <b>family-tradition</b>. "</p> <p>"I knew that success would depend not just on the <b>support</b> and <b>collaboration</b> of my family, but also of other members of the community. I was <b>humble</b> and confident to <b>ask for advice from others in my community</b>."</p>

<i>Desirable attitudes</i>	<p><b>Socially differentiating:</b> People tend to strive toward socially differentiating attributes (e.g., uniqueness, high personal achievement and high self-esteem) that make them stand out.</p>	<p>“[...] I will use my <b>creativity</b> skills to make innovative recipes. I know this may not align with your wishes, but I believe that is a good decision, and I am determined and confident that <b>I can achieve this goal with my hard work and dedication</b>”</p> <p>“But I tried to always welcome challenges with confidence and to learn from these mistakes. I <b>adapted</b> and saw myself grow in this job, which gave me the confidence to keep going.”</p>	<p><b>Socially integrating:</b> People tend to strive toward socially integrating attributes (e.g., loyal, pious, and dependable) that strengthen or maintain relationships and help them fit in.</p>	<p>“I also believe that if this business is successful and profitable, it can <b>fulfill some needs of our family</b>. My mother worked so hard her whole life being a Bánh Mì street vendor. I <b>could work with her</b> to learn from her experience and skills and to continue a <b>family-tradition</b>.”</p> <p>“But because I was always <b>loyal</b> to my family, supporting them in the hard times, they also helped me in these difficult moments [...]”</p>
<i>Values</i>	<p><b>Individualizing:</b> People tend to act in line with individualizing, universalizing moral foundations that prioritize rights of the individual, that is, equality and autonomy.</p>	<p>“It was also important for me to keep a <b>strong mindset</b>. I knew that pursuing this goal was the best decision, as I had always dreamed of having my own business and it would help me gain more <b>independence</b>.”</p> <p>“Even though I faced some doubts, community members saw that I was <b>adaptable</b> to changing situations and ready to tackle challenges with <b>my own unique capabilities</b> and innovative ideas.”</p>	<p><b>Binding:</b> People tend to act in line with binding, communal moral foundations that prioritize group cohesion, that is communalism, loyalty, respect for authority, purity, and divinity.</p>	<p>“I knew that success would depend not just on the <b>support</b> and <b>collaboration</b> of my family, but also of other members of the community. I was <b>humble</b> and confident to <b>ask for advice from others in my community</b>.”</p> <p>“As community members saw I was <b>loyal</b> and committed to community development, always joining community activities, including charity events, where I was <b>attentive to the needs of others</b>, they were eager to support my traditional business that would contribute to the community.”</p>

<i>Regulatory focus</i>	<p><b>Promotion-oriented:</b> Given a promotion orientation, people often aspire to realize changes from the status quo and disruptive innovations.</p>	<p>“I learned that standing out from others could help me be more competitive in this food industry, so I used my <b>creativity</b> skills and thought of <b>innovative recipes</b>. For example, I always liked Korean shows when I was younger, so I thought of a Korean-inspired Bulgogi Banh Mi for my shop.”</p> <p>“I started with my small Banh Mi shop and expanded it into a modern breakfast business where I offer several choices of <b>innovative</b> products like the Korean influenced Banh Mi, fresh juices, sticky rice, cakes, and more. My shop is very different from others and my customers like it a lot. They are intrigued and interested in my <b>innovative</b> products, and they enjoy my cuisine and the effort I put behind all my recipes and finding the best products.”</p>	<p><b>Prevention-oriented:</b> Given a prevention and security orientation, people often aim to preserve traditions and continuation of a lineage.</p>	<p>“For generations, my mother had been making Banh Mi as a street vendor, I wanted to <b>collaborate</b> with her to continue the tradition and share with others while expanding the business. My mother gave me a lot of support throughout my journey as she saw I was committed to learn and to preserve <b>traditions</b> and continue my family’s lineage.”</p> <p>“I started with my small Banh Mi shop working together with my mother and expanded it into a breakfast business where I offer <b>traditional</b> Banh Mi, and other products like fresh juices, sticky rice, and cakes, as some of my peers suggested to me. I share the stories and traditions behind these dishes with my customers, and they enjoy the <b>traditional</b> Vietnamese taste and the stories of my family-inspired business. ”</p>
<i>Social networks and relationship models</i>	<p><b>Dispersed, weaker ties:</b> Social networks tend to be dispersed and composed of weaker ties with more impersonal exchange relationships. Relationships are volitional, freely chosen; relational mobility is high.</p>	<p>Not explicitly addressed</p>	<p><b>Dense, stronger ties:</b> Social networks tend to be dense and composed of strong, enduring ties among close others. Relationships emphasize loyalty; relational mobility is low.</p>	<p>Not explicitly addressed</p>

Social capital	<p><b>Bridging:</b> People seek out information from individuals across diverse social groups</p>	<p>“I already thought of a saving plan and of how <b>I can achieve this goal</b> by taking a new job at a bakery to learn the skills.”</p> <p>“When I first took the job at the bakery, I made a lot of mistakes as I didn’t know much about the food and drink industry. I kept persisting and remained open to learn from my own mistakes as I was <b>determined to pursue my goal</b>. I learned from my job at the bakery and from entrepreneurs from the media. ”</p>	<p><b>Bonding:</b> People rely on and trust close others for information, in line with reciprocity and sharing norms.</p>	<p>“My mother worked so hard her whole life being a Bánh Mì street vendor. I <b>could work with her</b> to learn from her experience and skills and to continue a <b>family-tradition</b>.”</p> <p>“For generations, my mother had been making Banh Mi as a street vendor. I wanted to <b>collaborate</b> with her to continue the tradition and share with others while expanding the business. My mother gave me a lot of support throughout my journey as she saw I was committed to learn and to preserve <b>traditions</b> and continue my family’s lineage. She showed me the traditional ways to make Banh Mi, she shared with me the best places to source the ingredients, and she put in good words with her customers so that they would support my business.”</p>
Social structures	<p><b>Equality emphasizing:</b> In social structures where people are situated as free and equal, people act to influence others and the world.</p>	Not addressed	<p><b>Hierarchy emphasizing:</b> In hierarchical social structures, people act by adjusting their behavior to meet their social roles and rank and to maintain social order and harmony.</p>	Not addressed
Norms	<p><b>Loose:</b> In looser societies, some norms are not as strongly enforced, and individual deviance is tolerated, often encouraged.</p>	Not addressed	<p><b>Tight:</b> In tighter societies, norms are more strongly enforced and individual deviance is less tolerated, occurring when authorized.</p>	Not addressed