Group #6 Project Concept Note

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1. Introduction

1.1 The Problem

Informality in Colombia remains high despite the strong efforts of the government to decrease it. The government has declared informality as one of the four main reasons explaining its poor economic performance and has demonstrated the political will to make it easier for entrepreneurs to formalize(World Bank, 2018). Attempting to implement a policy or program to address informality requires that a standard definition of informality become adopted. In this sense, Colombia's Ministry of Labor defines informality as "any worker not making contributions to health or pensions" (Ministerio del trabajo, 2022). According to data from 2021, informal workers in the country amount to 62.3% of the total labor force and from this share, 41.3% are women (Ministerio del trabajo, 2022). Globally, 30% of women are self-employed in the informal sector (Muhammad et al., 2021). According to the UN, women are especially vulnerable as a part of the informal economy because it means women do not have labor protections or social benefits leading to lower pay and an increase of work risks, such as sexual harassment or unsafe conditions (UN Women, 2015).

The impact of informality to the national economy is the lost tax revenue that was not captured by the government, as well as the unmet potential productivity that would increase if businesses were formal(IMF, 2020). After a lot of programs and initiatives such as the Ventanilla Única Empresarial, which is a one stop shop for the steps and forms needed to formalize a business and INVIMA, which is the simplification and cost reduction of forms needed to become a formal business, informality largely remains unchanged. Another important strategy that has been implemented is a series of information campaigns funded by different government bodies to promote the benefits of formalization(Government of Colombia). Detailed information regarding the actual content of the campaigns is not publically available, the government website has only the data regarding the amount of people it was presented to for a portion of 2017. Having carried out all these efforts to decrease informality without a significant change in the sector indicates a misuse of government funds in unproductive measures that did not result in a lower rate of informality. Once the cost for these programs is included in the negative impact of informality to the Colombian government, we can see a market

failure; misallocation of resources being spent in information campaigns instead of other productive strategies.

1.2 Motivation

Assuming entrepreneurs are rational actors maximizing their utilities, being informal is the best strategy for them. However, this simplistic model fails to take into account other aspects that come with the choice of self selecting into informality. Most of the literature focuses on subsidy provision or informational campaigns, so Colombia's implementation of similar strategies is not unfounded. The unchanged informality rate implies that the government's expenditure on programs and strategies incentivizing formalization did not produce successful results because there was no incentive strong enough to make entrepreneurs move into formality. All of these strategies have in common that they target economic or information constraints faced by informal workers and ignore other possible factors entrepreneurs might take into account such as cultural factors or gender norms. Therefore, there is not enough research or government strategies focusing on the diversity of incentives for people to choose informality over formality.

As mentioned in the previous section, a vulnerable group in the informal economy are women. After the start of the COVID-19 pandemic this group became even more vulnerable because of the contact-intensive nature of the majority of women's informal work(IMF, 2021). Even though women are aware of the risks since they live them every day, they continue to choose informality over formality. The strategies implemented by the government have not worked and a possible reason is incorrectly addressing incentives for informality. One of the strongest incentives we can identify is the desire to be with and take care of their family due to cultural norms(Davila and Lluch, 2022). If women have this incentive to remain informal then the monetary subsidies and information campaigns given by the government will not have any significant impact and will only continue draining government resources.

Currently, the Bogota government provides free childcare services for 329 children across the city in 13 different centers through a program called Centro Amar(Bogota Distrito Capital, 2023). In this center children receive care, classes and even food. The purpose of this program is to decrease the rates of child labor caused by informal workers taking their children to work with them. Only having 329 slots in this program means that there is more demand than supply, given the amount of informal workers in the country. With our research results we aim to advocate for more funds to

be allocated to this program instead of other formalization strategies like information campaigns.

The cultural/gender role constraint faced by informal women entrepreneurs we will examine in this project is choosing to remain informal because it implies the woman can spend more time with her children. Our project will provide free childcare and will observe if this creates an incentive for women to formalize knowing their children are safe and in a healthy environment. This hypothesis was designed taking into consideration the qualitative benefits received through the childcare provided. Not only are the children being taken care of, they will be intellectually stimulated and even fed. This is because we are replicating an already existing service by Centros Amar. If our assumption is correct, we will have found evidence to support the claim that the government is misallocating funds in the traditional programs they have implemented and not funding programs that do have a significant effect on formalization rates such as government childcare centers.

2. Samples and Intervention

Theory of Change

ToC Component	Explanation
Goals and objectives	Increased government tax revenue by increased business formalization rate while reallocating resources
Inputs	Free childcare support for the women entrepreneurs
Activities	i) Building strategic approach by diagnosing unrevealed constraints that block business formalization for women's entrepreneurs. ii) Enabling women to take care of their household, while legally doing business
Outputs	Number of women entrepreneurs who formalize their business due to the free childcare support increases
Outcomes	The tax revenue for Colombian government increases from newly registered women entrepreneurs, while keeping same amount of total resources regarding formalization effort
Impact	i) Total government revenue increases. ii) Better policies will be created to increase formalization.

	Further research on behavioral incentives as reasons to stay informal will be inspired.
Assumptions	i) Resource allocation from government programs is perceived as fair by officials and publics ii) Main reason women entrepreneurs are not formalizing their business is they are confronted with inflexible time and insufficient income to care about the wellbeing of their children.

2.1 Samples: Informal women entrepreneurs

Our experiment will take place in Bogota, the capital of Colombia. Within the city, we will visit informal entrepreneurs based on the administrative data. By visiting entrepreneurs, we will conduct a survey to identify their detailed status to divide treatment and control groups. The number of survey subjects will be 500 informal entrepreneurs, and our sample target who are eligible and take free childcare support will be max 50 and the number of the control group will be the same (50) amount as the treatment group. Thus, the total 100 will be the sample size.

The target sample is women micro-entrepreneurs who have at least one child aged from 4 months to 17 years old to take care of. Conditions need to be identified by the survey are below:

- Gender of entrepreneurs
 - We will target only women entrepreneurs because of the basic cultural
 assumption that women are prevented from formalizing their business
 because remaining informal ensures they have a flexible work schedule. This
 flexibility is a priority because women prefer to take care of their children and
 families.
- Number of children
 - We will target women entrepreneurs who have at least one child to take care
- Age of children
 - -This program will be for children between the ages of 4 months to 17 years old. This age frame was decided by analyzing the current ages being accepted into childcare centers "Centro Amar." Currently during the day they take children ages 6 to 17 years old, however we are expanding the age span to 4 months of age to match the Centro Amar night childcare scheme.
- Experience of taking information campaigns.

- To isolate effect of childcare program, we will target women entrepreneurs who have not participated in information campaign before
- For the control group, we will use women entrepreneurs who have participated in information campaign before

Size of Business

- To make a similar financial conditions among samples, we will target microenterprises because they represent 96% of economic units in Colombia (ILO, 2014)
- The classification of microenterprise will follow the Law 590, 2000: Number of employees are up to 10, and total assets are up to legal minimum wage
- Willingness to receive free childcare support
 - If the target samples are determined to be eligible to receive free childcare support, then we need to figure out their willingness to receive the support.
 After we confirm their willingness via a signed form, we will evaluate impact based on samples among them.

2.2 Intervention: Free childcare support

In our experiment, we will evaluate the impact of free childcare support: how many women micro-entrepreneurs who get free childcare support register their business after the 6 months duration of the program. The free childcare support will be provided to all of their children, and available childcare centers will be selected by us considering proper tuition fee level. The free childcare support will be administered as follows:

- 1. Two weeks after the survey, eligible women micro-entrepreneurs who have willingness to receive the free childcare support will be informed to submit relevant evidence to prove their eligibility within one month
- 2. The number of samples who will be informed will be restricted at 50 (The other 50 samples are control group)
- 3. Once they prove to be eligible, we will inform them the list of available childcare centers near their home within 2 weeks
- 4. Within the list, the they submit invoice (including registration fee, tuition fee, etc) within 1 month to us
- We will check the invoice and directly remit the relevant fees to the center within the registration period, and notify the subjects their children's enrollment statement
- 6. The subjects who receive free childcare support will submit the certification of childcare center registration within 1 week, and every quarter

- 7. We will randomly visit 10 childcare centers every quarter to ensure that the children who receive the free support are attending regularly
- 8. We will also require the subjects to submit their certification of business registration if they formally register their business

2.3 Randomization

We will randomize when we have identified informal entrepreneurs to visit, when we select eligible subjects to receive free childcare support if they are over 50, and when we select control groups to make an equal number between both groups. The randomization method will be simple randomization using a computer program.

2.4 Data sources

We plan to obtain data from the National Administrative Department of Statistics of Colombia ("DANE") and IPA to approach survey subjects, and will mainly collect data by survey. To check how many subjects registered their business, we will obtain registration information from both the Ministry of Commerce Industry and Tourism (MoCIT) and directly collect registration certification as evidence from the subjects.

3. Hypotheses and Outcomes

3.1 Primary Outcomes

We hypothesize that women entrepreneurs will formalize their businesses with the provision of child care services from the government. The benefits of this intervention are twofold. This will increase tax revenue and provide child-care services to women entrepreneurs. In the short-run we are interested in the number of business registration among women entrepreneurs who will take advantage of the opportunity for free child care. In the long run, we are interested in the increased tax revenues resulting from an increased number of formally registered businesses.

We are also interested in whether these interventions provide a different effect or the same effect on these women entrepreneurs. For example, will childcare support increase formalization more than information campaigns. This is particularly important to the research given the current data on the ineffectiveness of information campaigns.

3.2 Mechanisms

The following outcomes will be observed to test this hypothesis:

Ha: The provision of childcare services will increase the rate of formalization among informal female entrepreneurs.

The number of women entrepreneurs who formally register businesses

- 1. Number of initial applications made by women entrepreneurs
- 2. Number of women entrepreneurs who presented the required documentation
- 3. Number of follow-ups made by entrepreneurs on the status of the application
- 4. Number of officially registered entrepreneurs

Number of children enrolled in child care

- 1. The number of children officially registered in child care centers by women entrepreneurs
- 2. The number of child care centers the government will provide to facilitate the intervention
- 3. The cost of running additional child care centers by the government
- 4. The tradeoff between the cost of the intervention and the tax revenue from formalization

3.3 Downstream outcomes

The endline outcomes of the intervention hypothesize how child care services will impact formalization and tax revenue in the long run. We anticipate that more female entrepreneurs seeking child care services will formalize their businesses as the program becomes more popular.

- 1. Number of incomplete applications
- 2. Number of follow-ups made by entrepreneurs on the status of their applications
- 3. Number of follow-ups made by entrepreneurs on the status of the application
- 4. Number of officially registered entrepreneurs

4. Primary outcomes and hypotheses

It is also important for us to observe the impact of childcare services on children. It's important to observe how this affects them emotionally and mentally given the separation from their primary parent, in this particular study women will be the primary caretakers of children. Additionally we are interested in how this intervention will affect their development, specifically the services provided at the child care centers.

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