Artigo submetido a 13 de Agosto de 2021; versão final aceite a 15 de Março de 2022
Paper submitted on August 13, 2021; final version accepted on March 15, 2022

Entrepreneurial Intention of Unemployed People and the Need for Training and Financial Support for Self-Employed Workers in Times of COVID-19

Intenção Empreendedora dos Desempregados e Necessidade De Formação e Apoio Financeiro aos Trabalhadores Independentes em Tempos de COVID-19

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Abstract

The COVID-19 pandemic caused a severe economic crisis that has led to instability in the labor market. Some workers fell into unemployment and self-employed workers had to face a partial or total stoppage of their activities. This paper aims to study the entrepreneurial intention of unemployed people and the need for training and financial support of self-employed workers. To do so, Probit models are estimated using a survey with workers in Ecuador. The results show that the underlying characteristics that motivate entrepreneurial intention differ across existent unemployed people and people who became unemployed during the COVID-19 lockdown. Women who became unemployed during the COVID-19 lockdown are more likely to have entrepreneurial intentions than men. Less educated existent unemployed people are more likely to have entrepreneurial intentions than more educated ones. People who need financial support also need training support and vice versa. The level of the effects of COVID-19 on economic sectors has a relevant effect on the need for financial support.

Keywords: entrepreneurship, unemployment, COVID-19, self-employment, financial support

JEL Codes: J01, L26

Resumo

A pandemia da COVID-19 desencadeou uma grave crise económica que levou à instabilidade no mercado de trabalho. Alguns trabalhadores caíram no desemprego e os trabalhadores autónomos tiveram que enfrentar uma paralisação parcial ou total das suas atividades. Este estudo tem como objetivo investigar a intenção empreendedora dos desempregados e a necessidade de formação e apoio financeiro dos trabalhadores por conta própria. Para isso, são estimados modelos *Probit* usando uma amostra de trabalhadores do Equador. Os resultados empíricos obtidos mostram que as

caraterísticas subjacentes à intenção empreendedora dos indivíduos diferem entre aqueles que já se encontravam desempregados e os que ficaram desempregados durante o período da COVID-19. As mulheres que ficaram desempregadas durante o período da COVID-19 são mais propensas a ter intenções empreendedoras do que os homens. Os desempregados existentes menos instruídos são mais propensos a ter intenções empreendedoras do que os mais instruídos. As pessoas que precisam de apoio financeiro também precisam de apoio de formação e vice-versa. O nível dos efeitos da COVID-19 consoante os setores económicos tem um efeito relevante na necessidade de apoio financeiro.

Palavras-chave: empreendedorismo, desemprego, COVID-19, auto-emprego, apoio financeiro.

Códigos JEL: J01, L26

1. INTRODUCTION

The COVID-19 pandemic has caused many changes both in health and economic terms. In Ecuador, the existent harsh economic situation has been aggravated by a 2.6% increase in unemployment from 4% in 2019 to 6.6% in September 2021 (INEC, 2021). In addition, workers' income has been reduced. The deteriorated economic panorama in Ecuador has shrunk recruitment and changed labor conditions to more flexibilization. Given this scenario, workers who fell into unemployment and already unemployed people might see entrepreneurship as a viable option to maintain or increase their income. According to a survey conducted by Escuela Politécnica Nacional during the pandemic, 86.43% of unemployed people expressed that they intended to start a business. This share was higher for people who lost their jobs during the COVID-19 lockdown (91.23%) as compared to the average (86.63%). Additionally, it is important to keep in mind that a high share of the labor market corresponds to self-employed people who are generally informal. These workers have been severely affected by the pandemic as they lost their daily sustenance. Self-employed workers were most affected by the lockdown since 89% of them saw their income reduced while 60% of private workers and 36% of public servants experienced a reduction in their income. For this reason, self-employed people need support for their economic reactivation (63%) to a larger extent than private (43.80%) and public workers (37.93%). They need capital injection through loans, technical assistance, training or technological upgrading. According to the survey, 33.87% of self-employed people need financial support and 27.99% need training support.

In the case of Ecuador, most microentrepreneurs have a survival perspective, and existent and newly unemployed people may have a defensive attitude to escape unemployment. Then, microentrepreneurship has a "refuge effect" (Vivarelli, 2004; Thurik et al, 2008). However, the motivations and conditions of unemployed people might differ according to the duration of their unemployment and their opportunity costs. Existent unemployed people could have had more time to analyze the options of entrepreneurship while people who became unemployed during the COVID-19 lockdown have had less time to do so. In addition, existent unemployed people might have made decisions about human capital investment that people who became unemployed during the COVID-19 lockdown are only just beginning to think about. Therefore, the research questions are: What are the factors that drive the entrepreneurial intention of unemployed people? Do these factors differ across types of unemployed people, namely, existent unemployed people and newly unemployed people during the COVID-19 lockdown? With respect to self-employed people who already undertook entrepreneurial activities, it is important to identify what kinds of support they need to sustain their business and stay in the market. The question is: who needs financial support or training support to face the crisis and start a business or keep operating an existent business?

To answer these questions, the objectives of the research are: i. to identify the factors that drive the entrepreneurial intention of both existent unemployed workers and people who became unemployed during the COVID-19 lockdown, and ii. to determine the characteristics of self-employed people who needed training and financial support during the COVID-19 pandemic. To do so, data from a national survey carried out by the Escuela Politécnica Nacional of Ecuador during the pandemic is used. This database accounts for 3,868 observations. To determine the probability of entrepreneurial intention and the need for financial and training support, Probit models are estimated.

Entrepreneurial intention is analyzed for two types of unemployed people, namely existent unemployed people (referred as such, hereafter) and newly unemployed people during the COVID-19 lockdown. The need for training and financial support is analyzed for self-employed people. Sociodemographic characteristics, family conditions and financial aspects are considered as explanatory variables.

This article is organized as follows. Section 2 offers a literature review on entrepreneurial intention. Section 3 describes data and methodology. The results are presented in Section 4 and Section 5 concludes.

2. LITERATURE REVIEW

In crisis management, entrepreneurship has acquired a key role as it enhances employment and growth (Audretsch & Fritsch, 2002; Fölster, 2000). Entrepreneurship is a mechanism that contributes to the continuity of the productive system, maintaining the flow of goods and services and generating confidence for other business owners and the population in general (Herbane, 2010). At the same time, the development of entrepreneurship can be affected by the socioeconomic and political context of a country (Groszkowski & Stryjewski, 2015).

Within a crisis framework, entrepreneurship can be seen from two perspectives. On the one hand, entrepreneurship is an important driver of economic reactivation and a way out of unemployment. On the other hand, the entrepreneurship diaspora that already exists needs to be protected and enhanced. Given this, entrepreneurial intention has caught attention in literature. Within the field of psychology, intention has been defined as the state of mind of a person that makes her/him prone to taking action to do something to achieve goals (Bird, 1988). In this sense, entrepreneurial intention is an important predictor of behavior (actual entrepreneurship) (Thompson, 2009; Panescu et al. 2018). It has been largely studied focusing on university students (Akanbi & Onyema, 2011; Bakotić & Kružić, 2010; Maheshwari, 2021; Sánchez, 2019) with few exceptions focusing on unemployed people (Fedáková et al. 2018).

To study entrepreneurial intention, it is important to define an entrepreneur. In the 12th century, an entrepreneur was defined as a person who carries out an economic activity using production factors, transforming them and combining them to generate a new product or service skills (Baumol, 1993 & Braude; 1985). According to the conventional theory, an entrepreneur is defined as a person who undertakes an activity by taking risks and aiming to get profits from it (Berner et al. 2008). This broader definition includes both people who innovate and people who do not create new products or services. Within this framework, entrepreneurs can be survival driven or growth driven. Survival entrepreneurs, however, are more likely to diversify their economic activities to minimize risk. If they experience income loss, they could face starvation, especially in developing countries (Gómez, 2008).

Engagement in entrepreneurship depends on different factors related to individual characteristics and the social environment. In one instance, entrepreneurial intention stems from the internal disposition of the entrepreneur to initiate changes reflected in innovative opportunities (Herruzo, 2019). Likewise, Arrighetti et al. (2016) characterize the entrepreneur as a person who could identify business opportunities to be independent through entrepreneurship. In other words, entrepreneurship is a process that involves identifying and taking advantage of opportunities to carry out a business project in the context of a certain degree of uncertainty (Silveira et al. 2017). Individual characteristics are important variables in explaining entrepreneurial intention (GEM-ESPAE, 2020). Those characteristics are related to the psychological and behavioral traits of individuals (Souza et al. 2017), such as risk aversion, spirit of innovation, strategic attitude (Petuškienė & Glinskienė, 2017; Torres et al. 2017) and creativity (Capella et al. 2016; Ríos-Manríquez et al. 2018), as well as other individual characteristics such as age, educational instruction, labor environment, professional experience and managerial skills (Alvarez, 2019; Donovan & Labonte, 2020; Silveira et al. 2017). Some studies indicate a positive relationship between the level of education and entrepreneurship (Alvarez, 2019; Block et al., 2020), i.e. the higher the knowledge, the higher the entrepreneurial intention. On the other hand, Díaz & Cancino (2014) and Arrighetti et al. (2016) mention that people decide to become entrepreneurs out of necessity despite having a low level of education. In times of crisis, Civera et al. (2020) identified that people with a higher level of education have greater job opportunities and consequently less intention of becoming entrepreneurs. Education in specific areas

might not be a sufficient condition to start a business; entrepreneurial education is needed. According to an experiment conducted by Sánchez (2019), an entrepreneurship education (EE) program increased students in the treatment group's intention toward self-employment. Financial education is a channel, but entrepreneurial education is needed. In addition, Arrighetti et al. (2016) showed that age and gender do not matter in developing entrepreneurship in times of crisis.

An individual's personal motivation can also be related to the labor need, financing opportunities, access to material or clients, knowledge, social relations (leadership), contacts, among others (Kantis, 2003; Gómez, 2009; Alonso & Galve, 2008; García, Martínez & Fernández, 2010). People undertake entrepreneurship to get out of unemployment as a "refuge effect" (Thurik et al., 2008). In fact, an increase in unemployment rates leads to an increase in the rates of business creation (Williams & Shepherd, 2016). Other individuals decide to start a business as a survival strategy. Sometimes entrepreneurs start out with limitations and do not analyze the needs of a market. At the start, they do not see their business as part of their life plan (Ayala & Manzano, 2016). The social environment related to economic, financial, institutional and cultural factors also influences entrepreneurial intention (OCDE, 2000). Indeed, these factors can support the entrepreneurial process directly or indirectly (Kirzner, 1999). Governments can influence these contextual factors through laws or norms related to the creation of firms.

As for the success of entrepreneurs, different types of support are necessary: economic, training, technological and motivational. The probability of success is high when entrepreneurs have expertise in a specific area since this can promote productivity. However, in many cases, the lack of knowledge or experience is an obstacle to achieving objectives (Aranguren, Larrea & Peña, 1999).

In addition, in some countries there is legal and regulatory support for entrepreneurship, and technical and financial support may come from government and multilateral organizations, private financial institutions or the informal sector. These forms of support can generate a learning process according to Urbano-Pulido et al. (2007).

Financial support is an important resource since the use of one's own funds and maintaining adequate levels of liquidity are key to the survival of an entrepreneurial business (Arias et al., 2007; Block et al., 2020). According to Block et al. (2020), being in good financial condition is one of the first steps in starting a new business. Although there is the option of bank financing, in the beginning, new firms' access to financing is limited due to the requirements for collateral and guarantees, so most of them opt for self-financing (Bosma, 2014; Papaoikonomou et al., 2012). The possibility of obtaining credit for those who wish to start a business is low because of their size and the initial scope of their business (Canedo, Stone, Black & Lukaszewski, 2014). People with the greatest intention of starting a business are those who do not use financial tools (Arrighetti et al., 2016).

3. DATA AND METHODOLOGY

To determine the factors influencing entrepreneurial intention and support for entrepreneurship, data from a national survey conducted by Escuela Politécnica Nacional of Ecuador during the pandemic are used. Specifically, data collection was conducted online during the months of April and May 2020 when the government established Emergency Decree No. 1017 to prevent mass infection of COVID-19 and imposed a lockdown on all non-essential activities. With this decree, it was ordered, among other things, to restrict pedestrian and vehicular traffic as well as the operation of activities involving crowds such as movie theaters and shopping centers, among other measures. The survey consisted of approximately 60 questions, which were divided into three modules: socio-demographic, economic and financial.

Since two different populations are analyzed, two datasets are used. For the analysis of entrepreneurial intention, two sub-samples corresponding to existent unemployed people and people who became unemployed during the COVID-19 lockdown are considered. The former accounts for 801 observations whereas the latter accounts for 741 observations. As for the analysis of entrepreneurial support, the sample corresponding to self-employed people records 493 observations.

3.1 The dependent variables

The first model is estimated using entrepreneurial intention as a dependent variable. This variable corresponds to the question: Are you interested in starting a new business? While previous literature

about entrepreneurial intention mainly focuses on university students (Akanbi & Onyema, 2011; Bakotić & Kružić, 2010; Maheshwari, 2021; Sánchez, 2019), this study focuses on the unemployed. For people who have lost their jobs, entrepreneurship is an important alternative to keep their standard of living, especially in the context of crisis where the demand for labor is lower (Fédaková et al. 2018). The survey results show that in Ecuador, 91.23% of people who were unemployed before the lockdown and 82.03% of people who lost their jobs due to the COVID-19 lockdown expressed that they intend to start a business.

The second model is estimated using entrepreneurial support as a dependent variable. The question related to this variable in the survey is: Do you need support to recover your economy or to adapt or change your business? Self-employed people responded to this question in the framework of the economic crisis brought on by the COVID-19 pandemic. In addition, they express the aspects in which they urgently need support. Here, training and financial support are analyzed. These variables are dichotomous variables that take the value of 1 if they express a high level of urgency and 0 otherwise. Using this analysis, this study seeks to determine who needs support and which kind of support in order to reactivate economically. Financial support is analyzed since businesses have lost liquidity due to the lockdown imposed during the COVID-19 pandemic. Training support is also analyzed to determine the need for aid from educational institutions. According to the survey, 27.99% of self-employed people (493 people) require training support and 33.87% need financial support.

3.2 Methodology

To determine the probability of entrepreneurial intention and the probability of needing support for economic reactivation, Probit models are estimated. The model specifications are as follows:

$$P(y = 1|x) = G(\beta_0 + \beta_1 x_1 + \cdots + \beta_k x_k) = G(\beta_0 + x\beta) \quad (1)$$

Where $G(\cdot)$ is a function taking on values strictly between zero and one, $0 < G(z) < 1 \; \forall z \in \mathbb{R}$. In these Probit models, G is the standard normal cumulative distribution function (Wooldridge, 2012). The latent variable, y is one if $y^* > 0$, and y is zero if $y^* \leq 0$. For this study, the latent variables y_i are defined as follows:

$$y_1 = \begin{cases} 1 & if\ the\ respondent\ expresses\ having\ entrepreneurial\ intention \\ 0 & otherwise \end{cases}$$

$$y_2 = \begin{cases} 1 & if\ the\ respondent\ needs\ training\ support\ to\ reactivate\ economically \\ 0 & otherwise \end{cases}$$

$$y_3 = \begin{cases} 1 & if\ the\ respondent\ needs\ financial\ support\ to\ reactivate\ economically \\ 0 & otherwise \end{cases}$$

The explicative variables in all models are grouped into three categories: COVID-19, individual characteristics and financial conditions. The vector of COVID-19 variables includes variables related to the level of effect derived from the COVID-19 pandemic on labor status, income variation and expenditure variation. The vector of individual characteristics includes age, gender, education level, whether the person is in a relationship, labor status, income level, whether the person is foreign born, whether the person has medical insurance, whether the person has training, the number of household members, and the number of income earners in the household. The vector of financial variables includes an index of financial knowledge, whether the person has savings, whether the person has formal or informal credit and whether the person needs credit. The specific description of the independent variables is shown in Table 1.

As the resulting coefficients are not directly interpretable, the marginal effects are used.

Table 1: Description of independent variables

Variable	Description	Models
Age range	Categories:	All models
	18-24 years old	
	25-34 years old	
	35-45 years old	
	Over 45 years old	
Gender	Dichotomous variable set to one if the person is male, zero otherwise.	All models
Education level	Dichotomous variable set to one if the person reached higher education, zero otherwise.	All models
Being in a relationship	Dichotomous variable set to one if the person is in a relationship, zero otherwise.	All models
Household members	Number of members in the household.	All models
Medical insurance	Dichotomous variable set to one if the person has medical insurance, zero otherwise.	All models
Province's capital	Dichotomous variable set to one if the canton is the capital of the province, zero otherwise.	All models
Income earners	Number of income earners in the household.	All models
Financial literacy index	Index of financial knowledge that takes values between [0;1], with 0 indicating no financial knowledge and 1 indicating high knowledge of financial tools.	All models
Workers in the company	Categories:	Models: Financial support; Training support
	Reference category: More than 6 workers	
	Workers [2-5]	
	Sole propietorship	
Credit Amounts	Categories:	Models: Financial support; Training support
	Doesn't need credit	
	High credit amount	
	Medium credit amount	
	Low credit amount	
Expenditure variation due to COVID-19	Categories:	Models: COVID-19 unemployed; Existent unemployed; Financial support
	Expenditure increased	
	Expenditure remains unchanged	
	Expenditure decreased	
Credit type	Categories:	Models: COVID-19 unemployed; Existent unemployed
	Formal credit	
	Informal credit	
	Both credits	
Training	Number of training courses acquired	Models: COVID-19 unemployed; Existent unemployed; Financial support
Savings	Dichotomous variable set to one if the person has savings, zero otherwise.	All models
Ecuadorian	Dichotomous variable set to one if the person is Ecuadorian, zero otherwise. This variable is included only in the entrepreneurial intention models.	Models: COVID-19 unemployed; Existent unemployed
Effect on economic activities	The categories of effect level are recovered from the study conducted by (ILO, 2020).	Models: Financial support; Training support
	High effect: This category includes sectors such as: Manufacturing industry, administrative and support service activities and support activities, wholesale and retail trade, restaurants, mobile food service activities and event catering.	
	Medium-high effect: This category includes sectors such as: Transportation and storage, construction, information and communication.	
	Medium-low effect: This category includes sectors such as: Agriculture, forestry and fishing, mining and quarrying, electricity, gas and water supply, waste management.	
	Low effect: This category includes sectors such as: professional, scientific and technical activities, administrative and support service activities, education.	
Income variation due to the lockdown	Categories:	All models
	Increased income during the lockdown	
	Unchanged income during the lockdown	
	Income reduction between 0 and 50% during the lockdown	
	Income reduction between 50% and 100% during the lockdown	
Income level	Categories:	All models
	No income before lockdown	
	Unified basic salary (UBS)	
	Income of 2.5 UBS	
	Income over 2.5 UBS	
Labor status change due to COVID-19	Categories:	Models: Financial support; Training support
	The person keeps the job	
	The person may lose the job	

	The person has lost the job	
	The person worked fewer hours	
Need for credit	Dichotomous variable set to one if the person needs credit, zero otherwise.	All models
Need for training support	Dichotomous variable set to one if the person needs t raining support, zero otherwise.	All models
Need for financial support	Dichotomous variable set to one if the person needs financial support, zero otherwise.	All models

3.3 Descriptive statistics

In tables 2 and 3, descriptive statistics about entrepreneurial intention and training and financial support by individual and financial characteristics are shown, respectively.

In terms of age range, the highest proportion of people who have entrepreneurial intentions in both the unemployed groups (those who became unemployed during the COVID-19 lockdown and existent unemployed people) corresponds to young people between 18 and 24 years old. The number of unemployed people with entrepreneurial intentions decreases as the age range increases. Women expressed that they intended to start a business more than men did. In the case of the unemployed during the COVID-19 lockdown and who have entrepreneurial intention, 55.11% are women. In the case of the existent unemployed, 56.94% of those who intend to start a business are women. In addition, unemployed people with higher education are more likely to intend to start a business than unemployed people with lower levels of education.

With respect to the relationship status of the respondents, people who are not in a relationship represent a higher percentage of both those unemployed during the COVID-19 lockdown (65.47%) and existent unemployed people (72.53%). In terms of the location of individuals, most unemployed people who desire to start a new business live in the capitals of provinces. Regarding nationality, 85.29% of foreigners that fell into unemployment due to the COVID-19 pandemic intend to start a business and 88.89% of existent unemployed foreigners do. As a result of becoming unemployed, many people were forced to stop contributing to social security. Thus, of those who have intentions of starting a business, 83.33% of the people who became unemployed during the COVID-19 lockdown and 80% of existent unemployed people do not have any type of health insurance. Regarding financial conditions, approximately 80% of both types of unemployed people with entrepreneurial intentions do not have savings. This situation causes concern due to drastic income reductions during the crisis (Alvarez-Sousa, 2019). With regards to the people who became unemployed during the COVID-19 lockdown and have entrepreneurial intention, 56.76% experienced an income reduction between 50% and 100% while 18.02% experienced an income reduction of less than 50%. With respect to the existent unemployed with entrepreneurial intention, the same pattern is observed: 36.88% of the respondents experienced an income reduction between 50% and 100% and 27.01% of the respondents experienced an income reduction lower than 50%.

The highest percentage of unemployed people who intend to start a business corresponds to those who have an income equal to the unified basic salary (60.34% for people who became unemployed during the COVID-19 lockdown and 52.43% for existent unemployed people). Among those with entrepreneurial intentions, 78.68% of the COVID-19 unemployed and 63.73% of the existent unemployed require a loan. The amount of credit that is most needed is between USD 2,500 and USD 10,000.

Financial education is an important aspect for entrepreneurs. The mean number of financial education training courses of those who became unemployed during the COVID-19 lockdown is 0.67 and of existent unemployed people is 0.59. This result shows an evident lack of financial education among the unemployed. In addition, people who became unemployed during the COVID-19 lockdown and who have entrepreneurial intention record on average an index of 19% for financial knowledge while the existent unemployed people with entrepreneurial intention record an index of 12%.

In the case of people who require support for entrepreneurship, 38.41% of those who require training support and 35.93% of those who require financial support are older than 45 years.

Regarding gender, 53.62% of those that require training support and 58.08% require of those that require financial support are men.

Regarding the family conditions of self-employed workers, 52.90% of those who require training support do not have a partner and 47% of those who need financial support do not have a partner. The average number of household members is 4. In addition, a higher percentage of people who need training support and financial support have a high education level. The need for financial knowledge is evident since people who require training support and financial support record an index of 23% and 25% of financial knowledge, respectively. Although savings might constitute an initial equity for entrepreneurs, 75.36% of the people who require training support do not have savings, and 72.46% of the people who require financial support do not have savings. In addition, most self-employed workers who need training (59%) or financial support (54%) do not have medical insurance. Most self-employed workers who need support experienced a drastic income reduction between 50% and 100%. Regarding the size of the business, the self-employed workers who need training and financial support are those that run a business themselves. Furthermore, the majority of self-employed workers who need training and financial support are those that work in sectors that have been highly affected by the COVID-19 pandemic.

Table 2: Entrepreneurial intention of existent unemployed and people who became unemployed during the COVID-19 lockdown

Variables	COVID-19 lockdown unemployed with entrepreneurial intention		Existent unemployed with entrepreneurial intention	
	Frequency	Percentage	Frequency	Percentage
Age range				
18 to 24 years old	218	32.73%	343	52.93%
25 to 34 years old	176	26.43%	119	18.36%
35 to 45 years old	138	20.72%	82	12.65%
Over 45 years old	134	20.12%	81	16.04%
Gender				
Male	299	44.89%	279	43.06%
Female	367	55.11%	369	56.94%
Education level				
No higher education	314	47.15%	288	44.44%
Higher education	352	52.85%	360	55.56%
Relationship status				
In a relationship	230	34.53%	178	27.47%
Not in a relationship	436	65.47%	470	72.53%
Province's capital				
If the canton is the capital of the province	457	68.61%	415	64.04%
Otherwise	209	31.38%	233	35.95%
Covid Expenditure				
Expenditure increased	289	43.39%	262	40.43%
Expenditure remain unchanged	171	25.68%	193	29.78%
Expenditure decreased	206	30.93%	193	29.78%
Savings				
Savings	120	18.02%	124	19.14%
No savings	546	81.98%	524	80.86%
Need for credit				
Need credit	524	78.68%	413	63.73%
Do not need credit	142	21.32%	235	36.27%
Credit amount				
Doesn't need	219	25.29%	358	44.69%

Low	282	32.56%	221	27.59%
Medium	260	30.02%	151	18.85%
High	105	12.12%	71	8.86%
Medical insurance				
Have medical insurance	111	16.67%	129	19.91%
No medical insurance	555	83.33%	519	80.09%
Ecuadorian				
Total unemployed foreigners/Total foreigners	29	85.29%	8	88.89%
Ecuadorians with intention/National total	637	77.59%	640	81.95%
Credit type				
Both credits	103	21.82%	62	18%
Formal credit	195	41.31%	150	45%
Informal credit	174	36.86%	124	37%
Income variation due to the lockdown				
Income increased in lockdown	7	1.05%	8	1.23%
Income remained the same in lockdown	161	24.17%	226	34.88%
Income reduction between 0 and 50% during the lockdown	120	18.02%	175	27.01%
Income reduction between 50% and 100% during the lockdown	378	56.76%	239	36.88%
Income level				
No income before lockdown	4	0.62%	126	26.64%
Unified basic salary (UBS)	391	60.34%	248	52.43%
Income of 2.5 UBS	213	32.87%	67	14.16%
Income over 2.5 UBS	40	6.17%	32	6.77%
Quantitative variables	**mean**	**Min**	**mean**	**Min**
Financial literacy index [0;1]	0.19	[0-0.75]	0.12	[0-0.62]
Household members [1;10]	4.53	[1-10]	4.61	[1-10]
Income earners [0;10]	1.4	[0-9]	1.33	[0-9]
Training [0;8]	0.64	[0-5]	0.59	[0-5]

Table 3: Training and financial support of self-employed people

Variables	**Training support (self-employed people)**		**Financial support (self-employed people)**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Age range				
18 to 24 years old	9	6.52%	11	6.59%
25 to 34 years old	30	21.74%	40	23.95%
35 to 45 years old	46	33.33%	56	33.53%
Over 45 years old	53	38.41%	60	35.93%
Gender				
Male	74	53.62%	97	58.08%
Female	64	46.38%	70	41.92%
Education level				
No higher education	59	42.75%	52	31.14%

Higher education	79	57.25%	115	68.86%
Relationship status				
In a relationship	65	47.10%	88	52.69%
Not in a relationship	73	52.90%	79	47.31%
Province's capital				
If the canton is the capital of the province	94	68.12%	123	73.65%
Otherwise	44	31.88%	44	26.35%
Expenditure Covid				
Expenditure increased			56	33.53%
Expenditure remain unchanged			57	34.13%
Expenditure decreased			54	32.34%
Need for credit				
Need credit	107	77.54%		
Do not need credit	31	22.46%		
Savings				
Savings	34	24.64%	46	27.54%
No savings	104	75.36%	121	72.46%
Medical insurance				
Have medical insurance	56	40.58%	77	46.11%
No medical insurance	82	59.42%	90	53.89%
Income variation due to the lockdown				
Increased income during lockdown	2	1.45%	3	1.80%
No income variation during lockdown	17	12.32%	16	9.58%
Income reduction between 0 and 50% during the lockdown	29	21.01%	34	20.36%
Income reduction between 50% and 100% during the lockdown	90	65.22%	114	68.26%
Income level				
No income before lockdown	8	5.80%	6	3.59%
Unified basic salary (UBS)	46	33.33%	45	26.95%
Income of 2.5 UBS	61	44.20%	71	42.51%
Income over 2.5 UBS	23	16.67%	45	26.95%
Labor status change due to COVID-19				
The person keeps their job	34	24.64%	35	20.96%
The person has worked fewer hours	32	23.19%	45	26.95%
The person may lose their job	23	16.67%	34	20.36%
The person lost their job	49	35.51%	53	31.74%
Number of workers				
One worker	80	57.97%	93	55.69%
2-5 workers	43	31.16%	53	31.74%
More than 6 workers	15	10.87%	21	12.57%
Economic activity				
Low effect	35	25.36%	35	20.96%
Medium effect	6	4.35%	8	4.79%
Medium-high effect	37	26.81%	43	25.75%
High effect	60	43.48%	81	48.50%

Need for training support				
Need for training support			167	33.87%
No need			326	66.13%
Need for financial support				
Need for financial support	138	27.99%		
No need	355	72.01%		
Quantitative variables	**mean**	**Min-Max**	**mean**	**Min**
Financial literacy index [0;1]	0.23	[0-0.75]	0.25	[0-0.75]
Household members [1;10]	4.22	[1-10]	4.33	[1-10]
Income earners [0;10]	1.72	[0-8]	1.72	[0-5]
Training [0;8]			1.08	[0-5]

4. RESULTS

Tables 4 and 5 show the Probit estimations determining the factors that influence unemployed people's entrepreneurial intention as well as self-employed people's need for support to reactivate economically to keep their businesses running, respectively.

Regarding entrepreneurial intention, Table 4 shows the results for existent unemployed people in column (1) and people who became unemployed during the COVID-19 lockdown in column (2). In general, according to the ROC curve, the discrimination ability of the models for people who became unemployed during the COVID-19 lockdown and for existent unemployed people is high at 93% and 92%, respectively. The model for existent unemployed people correctly predicts 98% of the positive values and 38% of the negative values. The model for people who became unemployed during the COVID-19 lockdown predicts 99% of the positive values and 18% of the negative values.

Table 4: Probit estimations of the entrepreneurial intention of people who became unemployed during the COVID-19 lockdown and existent unemployed people

	COVID-19 unemployed		**Existent unemployed**	
Variables	**Model**	**Marginal Efect**	**Model**	**Marginal Efect**
INDIVIDUAL CARACTERISTICS				
Reference category: More than 45 years old				
18 to 24 years old	-0.0771	-0.00514	-0.265	-0.00806
	(0.345)	(0.0240)	(0.455)	(0.0168)
25 to 34 years old	0.0199	0.00127	-0.304	-0.00985
	(0.299)	(0.0189)	(0.386)	(0.0162)
35 to 45 years old	0.167	0.00988	0.657	0.0116
	(0.314)	(0.0174)	(0.647)	(0.00744)
Male	-0.545**	-0.0375*	0.212	0.00547
	(0.191)	(0.0158)	(0.287)	(0.00690)
Higher education	0.180	0.0117	-1.089**	-0.0272**
	(0.197)	(0.0130)	(0.331)	(0.0147)
In a relationship	0.335*	0.0206*	0.984*	0.0282*
	(0.220)	(0.0128)	(0.387)	(0.0160)
Household members	0.0380	0.00244	0.176	0.00460
	(0.0593)	(0.00378)	(0.0941)	(0.00309)
Medical insurance	-0.0610	-0.00406	0.0214	0.000552
	(0.257)	(0.0176)	(0.347)	(0.00883)
Ecuadorian	0.428	0.0399		
	(0.422)	(0.0529)		

Province's capital	-0.264	-0.0152	-0.0686	-0.00174
	(0.249)	(0.0119)	(0.345)	(0.00849)
FINANCIAL VARIABLES				
Need for credit	3.170***	0.754***	1.747***	0.159*
	(0.521)	(0.152)	(0.390)	(0.0756)
Number of income earners/ household	-0.221	-0.0142	0.0300	0.000781
	(0.118)	(0.00805)	(0.206)	(0.00534)
Financial literacy index	-2.745*	-0.176*	-1.041	-0.0272
	(1.218)	(0.0708)	(1.349)	(0.0373)
Reference category: Doesn't need credit				
High credit amount	-1.365	-0.218	-0.379	-0.0133
	(0.810)	(0.245)	(0.519)	(0.0263)
Medium credit amount	-1.616**	-0.185	0.135	0.00334
	(0.566)	(0.121)	(0.496)	(0.0117)
Low credit amount	-1.970***	-0.265*		
	(0.504)	(0.133)		
Savings	0.904*	0.0340***	0.257	0.00560
	(0.352)	(0.0101)	(0.359)	(0.00726)
Reference category: Both credits				
Formal credit	0.173	0.0108	-0.586	-0.0172
	(0.250)	(0.0149)	(0.468)	(0.0178)
Informal credit	-0.204	-0.0139	-0.693	-0.0249
	(0.345)	(0.0251)	(0.514)	(0.0256)
COVID-19 VARIABLES				
Reference category: Income remained same during lockdown				
Income reduction between 0 and 50% during the lockdown	0.00558	0.000357	-0.326	-0.0105
	(0.352)	(0.0224)	(0.473)	(0.0185)
Income reduction between 50% and 100% during the lockdown	-0.568*	-0.0353*	-0.329	-0.0102
	(0.253)	(0.0161)	(0.467)	(0.0173)
Reference category: Unified basic salary (UBS)				
No income before lockdown			-0.574	-0.0236
			(0.503)	(0.0310)
Income of 2.5 UBS	0.368	0.0220 °	0.604	0.0107
	(0.224)	(0.0120)	(0.455)	(0.00778)
Income over 2.5 UBS	0.315	0.0157	-0.765	-0.0414
	(0.478)	(0.0183)	(0.654)	(0.0558)
Reference category: Expenditure remained unchanged				
Expenditure increased	0.284	0.0175	0.265	0.00685
	(0.252)	(0.0158)	(0.325)	(0.00826)
Expenditure decreased	-0.124	-0.00838	0.864*	0.0162
	(0.234)	(0.0166)	(0.404)	(0.00924)
Training	0.115	0.00738	0.0146	0.000381
	(0.133)	(0.00850)	(0.139)	(0.00366)
Observations	495		281	
McFadden's	30%		44%	
Specificity	18%		38%	
Sensitivity	99%		98%	
Correctly classified	93%		92%	
Value ROC curve	89,17%		93,79%	

Standard errors are in parenthesis. * p<0.05, ** p<0.01, *** p<0.001

According to the results, the underlying characteristics that motivate entrepreneurial intention differ between the existent unemployed and people who became unemployed during the COVID-19 lockdown. During the COVID-19 economic crisis, men are significantly less likely to start a business than women. By contrast, gender does not play a role in the entrepreneurial intention of the existent unemployed.

Regarding age, no difference in entrepreneurial intention is found across age ranges in either of the two groups of unemployed people. Among existent unemployed people, those with higher education are less likely, by 2.7 percentage points, to have entrepreneurial intentions than people with lower levels of education. In the case of people who became unemployed during the COVID-19 lockdown, the level of education does not influence entrepreneurial intention.

Another demographic characteristic that increases the probability of entrepreneurial intention for both existent unemployed people and people who became unemployed during the COVID-19 lockdown is being in a relationship.

Regarding financial characteristics, both types of unemployed people who need credit record higher entrepreneurial intentions than those who do not need credit. People who became unemployed during the COVID-19 lockdown and who have savings are more likely, by 3.4%, to engage in entrepreneurship than those who do not have savings. Those people with a high level of financial knowledge are less likely to start a new business. People's debt condition does not influence their need for training support.

Regarding the effect of COVID-19, the results show that people who became unemployed during the COVID-19 lockdown and who experienced a drastic income reduction are less likely, by 3.5%, to have entrepreneurial intention with respect to those unemployed people during the COVID-19 lockdown whose income was not affected.

Surprisingly, the level of income is not significant in determining the entrepreneurial intention for existent unemployed people or people who became unemployed during the COVID-19 lockdown.

Table 5: Probit estimations of the training and financial support for self-employed people

	Training support		**Financial support**	
Variables	**Model**	**Marginal Effect**	**Model**	**Marginal Effect**
INDIVIDUAL CHARACTERISTICS				
Reference category: More than 45 years old				
18 to 24 years old	-0.301	-0.0817	0.154	0.0567
	(0.300)	(0.0726)	(0.276)	(0.104)
25 to 34 years old	0.0185	0.00562	0.444*	0.167*
	(0.204)	(0.0621)	(0.192)	(0.0742)
35 to 45 years old	0.0756	0.0231	0.154	0.0557
	(0.166)	(0.0511)	(0.155)	(0.0568)
Gender	-0.0301	-0.00910	0.0755	0.0269
	(0.149)	(0.0452)	(0.143)	(0.0509)
Higher education	-0.558**	-0.181**	0.207	0.0724
	(0.173)	(0.0591)	(0.166)	(0.0567)
Relationship	-0.102	-0.0310	-0.172	-0.0617
	(0.149)	(0.0455)	(0.145)	(0.0522)
Household members	-0.0302	-0.00913	0.0782	0.0279
	(0.0458)	(0.0139)	(0.0464)	(0.0165)
Medical insurance	-0.153	-0.0462	0.151	0.0538
	(0.152)	(0.0459)	(0.144)	(0.0514)
Province's capital	-0.210	-0.0660	0.0656	0.0232
	(0.182)	(0.0596)	(0.176)	(0.0617)
FINANCIAL VARIABLES				
With debt	0.317	0.0908		

	(0.175)	(0.0473)		
Income earners	0.0245	0.00738	-0.184*	-0.0659*
	(0.0843)	(0.0255)	(0.0782)	(0.0278)
Financial literacy index	-0.413	-0.125	0.406	0.145
	(0.448)	(0.135)	(0.415)	(0.148)
Reference category: More than 6 workers				
Workers[2-5]	0.172	0.0532	-0.170	-0.0597
	(0.257)	(0.0814)	(0.234)	(0.0805)
Sole propietorship	0.00336	0.00101	-0.232	-0.0834
	(0.247)	(0.0746)	(0.223)	(0.0810)
Savings	-0.0787	-0.0236	-0.348*	-0.121*
	(0.168)	(0.0498)	(0.155)	(0.0518)
Need for financial support	1.099***	0.360***		
	(0.142)	(0.0469)		
COVID-19 VARIABLES				
Reference category: Income remained same during lockdown				
Income increased during lockdown	-0.458	-0.114	0.0108	0.00387
	(0.526)	(0.104)	(0.491)	(0.176)
Income reduction between 0 and 50% during the lockdown	-0.221	-0.0640	-0.0955	-0.0337
	(0.287)	(0.0794)	(0.291)	(0.102)
Income reduction between 50% and 100% during the lockdown	-0.219	-0.0673	0.183	0.0645
	(0.265)	(0.0833)	(0.275)	(0.0956)
Reference category: Unified basic salary (UBS)				
No income before lockdown	0.778	0.284	1162 *	0.437 *
	(0.586)	(0.233)	(0.711)	(0.225)
Income of 2.5 UBS	-0.185	-0.0554	0.150	0.0538
	(0.172)	(0.0509)	(0.173)	(0.0621)
Income over 2.5 UBS	-0.430	-0.120*	0.355 *	0.130 *
	(0.231)	(0.0593)	(0.220)	(0.0822)
Reference category: Sectors of low effect				
Sectors of high effect	-0.387*	-0.113*	0.549**	0.200**
	(0.192)	(0.0533)	(0.180)	(0.0658)
Sectors of medium-high effect	-0.362*	-0.103*	0.0986	0.0355
	(0.192)	(0.0512)	(0.190)	(0.0692)
Sectors of medium-low effect	-0.719	-0.164**	-0.147	-0.0507
	(0.373)	(0.0581)	(0.299)	(0.0996)
Reference category: The person keeps job				
The person may lose their job	-0.546*	-0.143**	-0.0448	-0.0159
	(0.243)	(0.0542)	(0.235)	(0.0827)
The person has lost their job	-0.408	-0.115	-0.0881	-0.0312
	(0.229)	(0.0598)	(0.216)	(0.0757)
The person worked fewer hours	-0.472*	-0.133*	-0.0537	-0.0191
	(0.217)	(0.0564)	(0.211)	(0.0747)
Reference category: Expenditure remained unchanged				
Expenditure increased			0.0675	0.0242
			(0.174)	(0.0629)
Expenditure decreased			-0.120	-0.0426

			(0.166)	(0.0581)
Trainings			0.0273	0.00976
			(0.0664)	(0.0237)
Need for training support			1.103***	0.410***
			(0.150)	(0.0531)
Observations	474		474	
McFadden's	21.00%		18%	
Specificity	93.04%		88%	
Sensitivity	41.86%		50%	
Correctly classified	79.11%		75%	
Value ROC curve	79.40%		76.77%	

Standard errors are in parenthesis. * p<0.05, ** p<0.01, *** p<0.001

As for the models of the necessity of training and financial support for self-employed people, shown in Table 5, their discrimination ability is high with 79% and 76.7%, respectively. The training support model correctly predicts 93% of the positive values and 41% of the negative values. The financial support model predicts 88% of the positive values and 50% of the negative values.

The results show that the characteristics of self-employed people who need support to reactivate economically differ depending on the type of support that they need. For instance, young people between 25 and 34 years old are more likely to need financial support than people older than 45 years. Gender makes no difference in terms of the need for training or financial support. As expected, highly educated people are 18% less likely to need training support than people with low levels of education. The same result was expected for financial support. However, a non-significant effect of the level of education is found.

Regarding financial variables, the probability of the need for financial support reduces as the number of income earners increases. People with savings are less likely, by 12%, to need financial support than people without savings. Income level is also an important determinant of the need for financial support. Our results indicate that this financial necessity is relevant for self-employed workers with extreme income levels, namely, no income and the highest income. Self-employed workers with no income before the lockdown are 43 percentage points more likely to need financial support than people earning one unified basic salary. The number of workers in self-employed people's businesses is indifferent for the need for financial and training support.

Self-employed workers who operate in sectors highly affected by the crisis are more likely, by 20%, to need financial support than those who operate in sectors of low effect, but are less likely, by 11%, to need training support. In addition, the results show that self-employed people who worked fewer hours due to the COVID-19 lockdown and those that thought that they may lose their job are less likely to need training support. These circumstances are not relevant in determining the necessity of financial support. Finally, self-employed people who need financial support are 36 percentage points more likely to need training support with respect to self-employed workers who do not need financial support, and conversely, people who need training support are 41 percentage points more likely to need financial support than those that do not need training support.

5. DISCUSSION OF RESULTS

5.1 Entrepreneurial intention

During the COVID-19 economic crisis, women are more likely to start a business since women may lose their jobs disproportionately with respect to men. This result contrasts with many studies (Alvarez-Sousa, 2019; *GEM-ESPAE*, 2020; Schlaegel & Koenig, 2014) that obtained that men are more likely to become entrepreneurs than women. However, women as household heads may search more intensively for income than men when their own family members are suffering or do not have adequate conditions (George et al. 2016). In our survey, 54.73% of women lost their jobs compared to 45.27% of men. This also may be related to the level of effect the pandemic had on industries where women mostly work. In the most affected sectors, women represent 45.02% of the labor force. In addition, an increase in caretaking responsibilities could make women reduce their labor supply

in the formal labor market or make them prefer to undertake a productive activity from home in order to attend to domestic activities, including children's online learning (Donovan & Labonte, 2020).

Although education is a key internal resource that more qualified workers have when undertaking entrepreneurial activities (Fedáková et al. 2018; Alvarez-Sousa, 2019), they are more likely to seek formal jobs instead of starting their own business while unqualified workers engage in entrepreneurship because they likely have fewer possibilities to find formal jobs (Akanbi & Onyema, 2011). As for unemployed people with lower levels of education, they are more prone to engaging in necessity-driven entrepreneurship rather than growth-driven entrepreneurship (Díaz & Cancino, 2014). More educated people are more likely to have success in entrepreneurial activities if they also have entrepreneurship education (Bakotić & Kružić, 2010). Unemployed people in a relationship are more likely to start a business. According to Aldo & Salem (1996) and Manea & Nichita (2019), the family network plays a strategic role since it functions as social capital and is fundamental in the beginning of an enterprise in times of crisis.

Both types of unemployed people with a need for credit are more likely to have entrepreneurial intentions. Liquidity, obtained by means of credit, is a necessary condition to start a new business and it is crucial for survival entrepreneurs (Block et al., 2020). However, Bosma (2000) points out that bank financing is sometimes not considered the most viable option for new companies due to its uncertainty. For this reason, a large number of new ventures resort to self-financing through personal savings (Bosma, 2000; Papaoikonomou et al., 2012). This is consistent with the fact that people who became unemployed during the COVID-19 lockdown and who have savings are more likely to engage in entrepreneurship than those who do not have savings.

People with higher intention to start a business are those that know less about financial tools (Arrighetti et al., 2016). Nevertheless, Campos (2018) and OECD (2009) argue that knowledge of financial tools increases the success of a new business.

People who became unemployed during the COVID-19 lockdown and who experienced a drastic income reduction are less likely to have entrepreneurial intention. This could be explained by their duration of unemployment. As they fell into unemployment recently, they immediately searched for jobs, leaving the decision to start a new business aside. Thus, the opportunity cost of undertaking entrepreneurial activities can be high for people who became unemployed during the COVID-19 lockdown.

5.2 Need for training and financial support

The characteristics of self-employed people who need support to reactivate economically differ depending on the type of support they need.

Young people between 25 and 34 years old are more likely to need financial support than people older than 45 years. This result is consistent with a higher propensity for entrepreneurship during the age range of 25 to 34 (Alvarez-Sousa, 2019). Although highly educated people need training support to a lower extent than people with low levels of education, for Sánchez (2019), entrepreneurial education is very important when starting a business.

When the number of income earners increases, there is a high summative household income, which leads to more financial stability in the household (Mora & Escardíbul, 2008; Sundin, 2014) and therefore, a lower probability of the need for financial support. Additionally, as more income earners exist, consumption smoothing is more likely. In the same sense, when the level of savings is high, it is less likely that self-employed people need financial support. This effect is supported by a result obtained by López et al. (2011) for Ecuador that indicates that the majority of respondents (81%) financed their ventures with their own capital and few of them used formal sources of financing (12%). Self-employed workers earning more than two times the unified basic salary are also more likely to need financial support. This situation shows that financial support is a key element not only to help vulnerable people reach a minimum standard of life, but also to help entrepreneurs reactivate economically.

Most importantly, the level of effect of the COVID-19 pandemic is relevant for the necessity of training and financial support of self-employed people. Specifically, those self-employed workers who operate in highly affected sectors such as manufacturing, wholesale and retail trade, and accommodation and food service activities need more financial support to reactivate economically

with respect to sectors less affected such as professional, scientific and technical activities. By contrast, self-employed people in highly affected sectors need training support to a lesser extent than self-employed people in sectors with a low level of effect. This indicates that the most urgent necessity of microentrepreneurs is financial support, rather than training support. According to Kantis et al. (2020), Latin American entrepreneurs have liquidity problems since they do not have financial reserves. Further, only one in four entrepreneurs can access financing and 71% of the entrepreneurs surveyed need a working capital loan. Of those needing a capital loan, 80% need a seed amount of credit to reactivate economically. In addition, 66% of those surveyed need training and technical assistance in the use of technological services.

Finally, the need for financial support is accompanied by the need for training support. It could indicate that entrepreneurs need to implement selling strategies that would require gaining new knowledge, particularly in the technological field, such as digital payments. For technological implementation, they need both training and financial support.

6. CONCLUSIONS

This study investigated two important situations during the COVID-19 lockdown: i. the entrepreneurial intention of unemployed people distinguishing between existent unemployed people and people who became unemployed during the COVID-19 lockdown, and ii. Self-employed people's need for training and financial support. The study concludes that the underlying characteristics that motivate entrepreneurial activities are different across types of unemployed people. While the less educated people among the existent unemployed are more prone to undertaking entrepreneurial activities than the more educated unemployed people are, the level of education among people who became unemployed during the COVID-19 lockdown is not relevant. Likewise, people who became unemployed during the COVID-19 lockdown who have financial education are less likely to have entrepreneurial intention than those who do not know about financial tools. Since existent unemployed people with low levels of education and people who became unemployed during the COVID-19 lockdown with low financial knowledge are more likely to start a business, it could be deduced that they are going to engage in entrepreneurial activities with a survival perspective rather than a growth perspective. However, laws related to economic reactivation exist only to support entrepreneurs with growth perspective and neglect the needs of survival entrepreneurs. This study, then, makes emphasis and call for attention to policy makers to assist these people who seek a way out of unemployment in the framework of this time of crisis.

In addition, the underlying characteristics of self-employed people who need training and financial support were identified. The findings show that self-employed workers who need training also need financial support and vice versa. However, those who need financial support more urgently are mainly young people between 25 and 34 years old and people who work in the industries most affected by the COVID-19 pandemic. An interesting insight about financial support is that it is needed both by people with no income before the lockdown and by people with high income levels, demonstrating that funding is a key element in reactivating the economy. As expected, self-employed workers who need training support have not only a lower level of formal education but also a low level of financial education. Additionally, mechanisms of consumption smoothing, such as savings and more income earners in a household, allow self-employed workers to face the economic crisis without financial support.

While interesting findings are obtained, this study is not without limitations. Since the survey was conducted online, there could be a bias towards people with internet access. Moreover, information on entrepreneurial attitudes and family entrepreneurial history is not included as it not available in the survey. This study could be enlarged by analyzing actual entrepreneurship statistics on activity during COVID-19 times. Altogether, important policy recommendations can be driven from these results. First, a training program including financial education is required for self-employed workers to keep their businesses alive. Second, policy actions should focus on self-employed workers to help them to reactivate economically. It is worth mentioning, however, that national regulations discourage self-employed workers from registering as microentrepreneurs due to high taxes for them. Additionally, microcredits in the formal banking system are extremely expensive with interest rates that range from 20% to 28%. This restricts self-employed workers' access to formal

credit. Therefore, new financial products for emergent credits with lower interest rates need to be created by the formal bank system.

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