

EMPOWERED ENTREPRENEURS? SOME EVIDENCE FROM CHILE

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ABSTRACT. In this paper we will take advantage of a new data-set on multidimensional wellbeing in Chile developed by OPHI which, among other things, attempts to measure empowerment and agency. With this individual-level data we propose an original methodology to explain the determinants and effects of entrepreneurship. We work within the context of static models of entrepreneurship that seek to characterize entrepreneurial features. Our approach explicitly considers the possibility that the decision to become an entrepreneur involves a subjective evaluation on the part of the agent involved regarding his own capabilities: to (dare to) engage in an entrepreneurial activity some unobservable agency is required. At the same time, we hypothesize that entrepreneurship leads to individual empowerment. Our working hypothesis is that undertaking an entrepreneurial activity requires some basic (unobservable) agency, but at the same time entrepreneurship leads to the empowerment of the economic agent qua-entrepreneur involved in this activity. This latter effect is related to the very nature of entrepreneurial activities, whereby individuals exercise their creativity and ingenuity in the pursuit of their desired goals and objectives. And this is, of course, also consistent with an understanding of empowerment as the expansion of freedom of choice and action. Our econometric strategy explicitly considers these effects, while taking into account potential endogeneity problems. Our work has implications from the point of view of problems of economic development and entrepreneurship. If entrepreneurship is important from the perspective of human and economic development considered in its broadest sense, that is, considering its effects not only on economic growth as an aggregate indicator of economic wellbeing, but also on the generation of a sense of empowerment on the part of those agents undertaking these types of activities, the promotion of entrepreneurial activities may constitute an important instrument in the tool-kit of policy-makers focused on improving human development in their communities. It is in this same spirit that our work allows us to focus on the fact that entrepreneurial action requires some type of agency. In this sense, an examination of the determinants of entrepreneurship must go beyond risk aversion or specific abilities, and must include the subjective perceptions of the agents involved regarding their standing in life.

1. INTRODUCTION

How is entrepreneurship related to economic development? In standard analyses the relationship is examined in terms of entrepreneurship and economic growth (Schumpeter, 1934; Baumol, 2002; Powell, 2007). But the problem of economic development cannot be reduced to a single economic indicator. Economic growth is a means to an end: to achieving greater wellbeing and higher standards of living. This is what development indicators should be capturing.

The work by the United Nations Development Program (UNDP), especially on the Human Development Report originally launched in 1990 represented a significant initiative in terms of going beyond income or GDP levels as proxies of development (United Nations Development Program, 1990; Anand and Sen, 1997). Nowadays it is recognized that human development has several dimensions (Sen, 1999). This said, here we wish to focus on one such dimension; on the role of empowerment. We propose to examine the relationship between entrepreneurship and empowerment: is entrepreneurship an “input” to human development considered in this way? Since one can also argue that empowerment is an input for entrepreneurship, understanding the determinants of entrepreneurship is a key aspect of our project.

Empowerment is usually discussed when we talk about poverty. Poor agents are not only lacking in material income, but also face different types of vulnerabilities, including some form of social exclusion (Sen, 1999). Empowering the poor thus constitutes a key element of social policy (Narayan, 2002). But this emphasis on poor agents should not be exclusive and one should consider empowerment as an important element of human development across income levels.

Our working hypothesis is that undertaking an entrepreneurial activity requires some basic (unobservable) agency, but at the same time entrepreneurship leads to the empowerment of the economic agent qua-entrepreneur involved in this activity. This latter effect is related to the very nature of entrepreneurial activities, whereby individuals exercise their creativity and ingenuity in the pursuit of their desired goals and objectives. And this is, of course, also consistent with an understanding of empowerment as the expansion of freedom of choice and action.

In this paper we will take advantage of a new data-set on multidimensional wellbeing in Chile developed by the Oxford Poverty and Human Development Initiative (OPHI) which, among other things, attempts to measure empowerment and agency. This data-set is an extension of the Chilean CASEN survey, a cross-section survey that provides information regarding the socioeconomic conditions of the national population in Chile. With this individual-level data we propose an original methodology to explain the determinants and effects of entrepreneurship. We work within the context of static models of entrepreneurship that seek to characterize entrepreneurial features (e.g., Djankov et al., 2005, 2006). Our approach explicitly considers the possibility that the decision to become an entrepreneur involves a subjective evaluation on the part of the agent involved regarding his own capabilities: to (dare to) engage in an entrepreneurial activity some unobservable agency is required. At the same time, we hypothesize that entrepreneurship leads to individual empowerment. Our econometric strategy explicitly considers these effects, while taking into account potential endogeneity problems.

Our work has implications from the point of view of problems of economic development and entrepreneurship. If entrepreneurship is important from the perspective of human and economic development considered in its broadest sense, that is, considering its effects not only on economic growth as an aggregate indicator of economic wellbeing, but also on the generation of a sense of empowerment on the part of those agents undertaking these types of activities, the promotion of entrepreneurial activities may constitute an important instrument in the tool-kit of policy-makers focused on improving human development in their communities. It is in this same spirit that our work allows us to focus on the fact that entrepreneurial action requires some type of agency. In this sense, an examination of the determinants of entrepreneurship must go beyond risk aversion or specific abilities, and must include the subjective perceptions of the agents involved regarding their standing in life.

2. ENTREPRENEURSHIP AND HUMAN AND ECONOMIC DEVELOPMENT

In this section we will argue that at the individual level entrepreneurship is not only about profits, and that at the macro level, entrepreneurship is not only about economic growth. The upshot is that entrepreneurship is important for human and economic development considered in a wider sense.

Profit and loss constitute important economic signals, and are thus important determinants of entrepreneurial activities. The informational role of profit and loss is equivalent to that of prices when we talk about the allocation of resources (Mises, 1951). Rational agents act on the basis of these signals in terms of their allocation of their entrepreneurial talent. And yet it seems that understanding individual-level occupational choice must involve a richer view of human motivations. Joseph A. Schumpeter referred to these points in his seminal work on entrepreneurship, where he noted the role of non-hedonistic elements in this sense. Here he included, in a very eloquent phrasing, “the will to conquer: the impulse to fight, to prove oneself superior to others, to succeed for the sake, not of the fruits of success, but of success itself”, and “the joy of creating, of getting things done or simply of exercising one’s energy and ingenuity” (Schumpeter, 1934, p. 93).

More recently, it has been shown that being an entrepreneur does not really pay in terms of economic rewards (Hamilton, 2000). This has led to arguments in the sense that one should look to other payoffs to entrepreneurship, including its non-monetary benefits. Benz (2009) has mentioned the importance of “greater autonomy, broader skill utilization, and the possibility to pursue one’s own ideas” as potential drivers along these lines.

These are important points which must be addressed when examining the determinants as well as the effects of entrepreneurship. We will return to the first point below, but regarding the latter point, this perspective leads us to expect that at the macro level entrepreneurship is valuable not only because of its effects on economic growth, although we should note that these direct effects are of course significant.

Entrepreneurship involves the exercise of human ingenuity and creativity, and it is in this sense that it is related to economic growth. The specific mechanism through which entrepreneurship influences economic growth has been most thoroughly (and

one could even say, convincingly) explained by Joseph Schumpeter (1934, 1950). In this framework entrepreneurs act by undertaking innovative activities, which influence economic growth through the well-known process of “creative destruction”. The marketplace is therefore characterized by a continuous process of entry and exit of business firms which, in turn, leads to high efficiency in terms of what modern economists call total factor productivity. It is this process that leads to high rates of economic growth. Naturally, such activities take place under an institutional setup that is conducive to the development of (productive) entrepreneurial activities. As the structure of incentives in the economy, institutions are key in terms of the allocation of entrepreneurial talent (Baumol et al., 2007). Economic growth, entrepreneurship and institutions go hand-in-hand¹. At the same time, entrepreneurship is also an engine for the creation of new jobs, and is important for the process of human and economic development in a wider sense. Regarding this first point, entrepreneurial activities have a clear effect both on job creation and job destruction; this is, after all, the logic of the process of creative destruction referred to above, which is inextricably related to a process of creation and destruction of jobs (Cox and Alm, 1992). As Cox and Alm (1992) clearly explain, the history of industrial evolution is indeed a history of creative destruction, whereby new firms, which come about as the result of the activities of innovative entrepreneurs, have fundamentally changed existing industries thereby creating new jobs as well as destroying many others as they changed the ways things were done in the economy².

From a somewhat different perspective, it is important to add that small and medium sized enterprises are, in general, the most important employers in the economy. To the extent that entrepreneurship involves the creation of small and medium sized enterprises we can directly observe a process of job creation in the economy. The flipside of this, on the other hand, is that most new business startups fail after few years of existence. But then one could argue that this is another face of the process of creative destruction, or at least of the freedom associated to entrepreneurship.

From the more general perspective we wish to underscore here, the fact that entrepreneurial activities involve the development of human capacities and ingenuity implies that it has a positive influence on human development. Along these lines, the notion of entrepreneurship mattering for development has been advanced by Gries and Naudé (2011) who propose a formal model within the context of the “capabilities approach” a-la Sen (1999). Here entrepreneurship only has effects on human development when it is not a “necessity”, as opposed to a choice. This is related to the well-known differences on the motivations to engage in entrepreneurial activities (Larroulet and Couyoumdjian, 2009). But here will propose a different mechanism for such influence.

¹This said, empirically much work needs to be done in terms of analyzing the relationship between entrepreneurship and economic growth. The difficulty involved with issues of double causation as well as problems with the quality of aggregate data on entrepreneurship are critical points here.

²This process is, certainly, not without costs, as in the short-run it involves important relocations of workers, which may be hard to achieve given the existence of different mismatches between the demand and supply of labor. It has happened once and again, however, that the natural rate of unemployment does not seem to be negatively affected by this process of creative destruction which continues to take place in the economy.

3. EMPOWERMENT AND ENTREPRENEURSHIP

Agency and empowerment are important components of human development and human welfare. Regarding empowerment, this concept not only seems quite vague, as it entails several different meanings, but is moreover a subjective variable. This may be problematic for any exercise that attempts to examine its relationship with other variables³. In all, valuable efforts are being recently undertaken to deal with these problems as can be seen, for example, in the work by Narayan (2005) and Ibrahim and Alkire (2007). These and other authors have also noted the importance of this concept in terms of human and economic development (e.g., Sen, 1999). As an additional example one can also consider the work by Yunus (1999) who has remarked on the importance of these issues when discussing female poverty, and has underlined ways to move forward in empowering women in less-developed countries.

Here we will consider as our working definition of empowerment the fact that it reflects an expansion of freedom of choice and action, which includes an expansion of the assets and capabilities of the poor (Narayan, 2005). In this context one can argue that empowerment has an inherent social value. It is important to note, at any rate, that empowerment may also have instrumental value as it involves greater participation and thus leads to more accountability across a polity as well as to larger levels of organizational capacity (Narayan, 2002; Ibrahim and Alkire, 2007). Empowerment is related to agency, but agency is a more comprehensive concept that actually refers to a wider notion of capabilities (Sen, 1999).

When we talk about empowerment we are taking for granted that there exist barriers that limit an agent from making choices and taking action in terms of improving his or her wellbeing. It is the fact that these barriers can be removed as agents are empowered that constitutes the value of empowerment; agents are also less afraid to act and more confident when they are empowered. In other words, here we are dealing with problems related to social exclusion, and empowerment is a possible answer to these fundamental obstacles. It is in this sense that empowerment may be key in terms of addressing the problem of multidimensional wellbeing (Narayan et al., 2000; Narayan, 2002).

As noted above, in this paper we are interested in how empowerment is related to entrepreneurship; this is connected to the broader effects entrepreneurship has on economic development. What is especially important to note is that engaging in an entrepreneurial activity allows an agent to exercise his or her ingenuity and pursue his or her dreams. This is consistent with an understanding of empowerment as the expansion of freedom of choice and action.

The empowerment associated or brought about by entrepreneurial activities can be perceived by considering the problem of micro-entrepreneurship. Following Yunus (1999) the concept of entrepreneurship has had a remarkable resurgence in the last decade or so. The idea of micro-credit is, however, much older, and can be traced back at least to the 18th and 19th century (Hollis and Sweetman, 1998). Here it is interesting to note that while the economic evaluation of microcredit programs is still going on in the academia (Banerjee et al., 2013), some of its greatest promoters have

³At any rate we would agree with Narayan (2002) in the sense that “an exploration of local terms associated with empowerment around the world always leads to lively discussion”.

argued that its effects are not only monetary, or economic; human development, and empowerment should count as a significant benefit in this respect (Yunus, 1999). This does not mean that we now know about a universal policy recipe that will guarantee development along these lines; this is certainly not the case (Duflo, 2012).

While the mechanisms at play are still being reviewed in the literature the role of social capital must also be mentioned in this context. Kwon and Arenius (2010) have noted the positive relationship between social capital and entrepreneurship, and the fact that social capital has an “economic payoff” has likewise been examined in the literature (e.g., Knack and Keefer, 1997). All of this points to the fact that it may be important to consider the effects of entrepreneurship in a wider sense.

Our argument is based on the belief that in principle almost all agents are purposeful and can exercise their ingenuity in their regular activities in their labor activities. The evidence presented by Collins et al. (2009) and Vargas Llosa (2008) is especially noteworthy in this context. An entrepreneurial spirit appears in all walks of life, and across all income levels. In this paper we will argue that the universal trait involved in entrepreneurship is mediated by a specific individual attribute or subjective evaluation on the part of the agent involved. This consists of an initial level of agency, which is related to a subjective sense of individual worth. Having greater autonomy and the possibility of working independently can be expected to lead to a sense of empowerment. But engaging in an entrepreneurial activity also generates a sense of individual empowerment. The problem we will thus be facing is one of endogeneity. We discuss this issue next.

4. DOES BEING AN ENTREPRENEUR MATTER FOR INDIVIDUAL EMPOWERMENT?

Entrepreneurial activities involve purposeful behavior which we must analyze at the individual level. Proceeding along these lines implicitly involves considering optimizing agents that are assumed to be rational and maximize their expected utility as they conceive it in a subjective sense.

Empirical work on the “determinants of entrepreneurship” has been based on theoretical formulations that consider entrepreneurship as a rational model of occupational choice. The equilibrium character of these models allows us to consider a snapshot of the relationship between individual characteristics and labor market conditions. Recent contributions in this field include the work by Djankov et al. (2005, 2006) and Ardagna & Lusardi (2008). This perspective involves explaining entrepreneurship in an empirical tradition that goes back to longitudinal studies by Evans & Leighton (1989) and Blanchflower & Oswald (1998). These specifications involve an implicit understanding of what entrepreneurship is all about and, thus, what individual features may be relevant for characterizing entrepreneurs.

While it could be said that this type of analysis, where entrepreneurship is viewed as self-employment and several specific individual attributes are considered important, faces several limitations, it still offers a good starting point for an examination of the determinants of entrepreneurship and its relationship with other variables. In the case of Chile, this approach has been followed by Flores et al. (2011), who use longitudinal data from the Encuesta de Protección Social. These authors consider a static model as

well as what they label a “retrospective” model of entrepreneurial behavior. The latter model highlights the importance of an agent’s experience in terms of his or her decision to engage in an entrepreneurial activity.

These types of empirical studies on the characterization of entrepreneurs are highly sensitive to data availability. As we will consider below, we work with a unique dataset on multidimensional wellbeing in Chile (including capabilities and empowerment) which, however, is only available for 2008.

Our approach to the problem of entrepreneurship is based on a model where the decision to be an entrepreneur depends on unobserved individual characteristics (A) in the following way:

$$(4.1) \quad \psi_i = f_1(A_{(i)}, X_{1(i)})$$

where X_1 is a vector of other individual characteristics (sex, age, etc.)

Equation (4.1) postulates that being an entrepreneur (ψ) requires certain individual attributes. That is, to (dare to) engage in an entrepreneurial activity specific individual traits are necessary. We denote these characteristics as agency (A). Agency is an unobservable stock variable. We proxy the initial level of agency with human capital, while we consider that there is a flow effect of agency as well. In this sense, here we have the basics of a simple production-function formulation of agency.

While standard theoretical models on entrepreneurship focus on risk-aversion (Kihlstrom and Laffont, 1979), and individual heterogeneity, especially in ability (Lucas, 1978; Lazear, 2005), here we want to highlight the importance of explicitly considering subjective perceptions on self-worth, which we have labeled as agency, as important determinants of entrepreneurship. We believe this points to an important and neglected element of individual decision-making.

As our next step we wish to examine whether engaging in entrepreneurial activities matters for individual empowerment. On the basis of our previous discussion we propose that engaging in an entrepreneurial activity leads to greater empowerment, but this effect is mediated by agency; that is:

$$(4.2) \quad \phi_i = f_2(\psi_i, X_{2(i)})$$

where X_2 is a vector of other individual characteristics.

We recognize that here there is an endogeneity problem: the relationship under examination can also come about through an inverse route, such that empowerment brings about entrepreneurship. Other studies have addressed this two-sided relation before. For example, Abbasian and Bildt (2009) have studied the relation between entrepreneurship and empowerment in the context of immigrant women in Sweden and concluded that entrepreneurship is indeed effective in this sense. On the other hand, the role of microcredit in this context has been recognized in other studies that focus on female micro-entrepreneurs (Oxaal and Baden 1997; Parveen and Leonhäuser 2004; for a more extensive review of this literature, see Samman and Santos 2009).

Our econometric strategy aims to address these issues. For this we use an Endogenous Dummy Ordered Probit (ED-OP) model (Bratti and Miranda, 2010; Miranda and Rabe-Hesketh, 2006)⁴. This methodology allows us to consider the effects of entrepreneurship on the intensity of empowerment.

5. DATA AND RESULTS

In this paper we take advantage of a survey administered by the Oxford Poverty and Human Development Initiative (OPHI) in Chile in 2008 on the basis of the CASEN survey⁵. This survey includes a sample of 2,052 households that had been interviewed for the 2006 CASEN survey. This represents 7,952 individuals who re-took the income, employment, healthcare education, and housing modules of the CASEN survey, as well as answered the new questions devised by OPHI on the multidimensional wellbeing⁶.

As a proxy of entrepreneurship (ψ_i) we consider self-employment according to the response in the OPHI-CASEN survey; this is a binary variable where $\psi_i = 1$ represents an entrepreneur. In order to measure the flow of agency, we consider a variable that reflects perceptions about values (“I generally feel very capable” (*SMC2*), measured in a 4-point scale which, however, we have transformed into a continuous variable. We reiterate that the stock of agency is proxied by human capital levels; i.e. education.

The construction of the variables that are supposed to capture empowerment follow the indicators designed by Ibrahim and Alkire (2007), that are included in the OPHI survey applied in Chile. We have already referred to the fact that empowerment is a subjective variable. The efforts at dealing with this issue have involved constructing variables that reflect the different meanings of this term. Recognizing the importance of these methodological issues we have considered three different variables that capture different features of what we understand as empowerment. The variables we have used seek to capture the fundamentals of the concept under examination in the sense of assessing whether agents have control over their personal decisions, whether they have individual autonomy, and whether they feel they are changing aspects in their lives. Specifically, the three questions from the OPHI survey deal with: (i) the agent’s perceptions as having some control on his or her daily decision-making (*GCD*); (ii) the agent’s perception about his or her ability to make a difference in society (*CC*)

⁴Interestingly, this is a model that has been applied in the context of a study of the Chilean educational system (Larroucau, 2015).

⁵The CASEN survey, Encuesta de Caracterización Socioeconómica Nacional, is a cross-section survey that provides information regarding the socioeconomic conditions of the national population in Chile. The survey has been carried out over a representative sample of households throughout the country since 1985, on a bi and tri-annual basis.

⁶The questionnaire in English is available at the OPHI web-page, at http://www.ophi.org.uk/wp-content/uploads/Translation-Chile_survey_final_English.pdf

and; (iii) the agent's perception about his or her individual autonomy (*PLI*)⁷. These variables are recorded along a scale that increases in the level of empowerment. This is a 4-point scale in the case of an agent's control on daily decisions (*GCD*) and perception on individual autonomy (*PLI*), and 5-point in the case of perception on making a difference in society (*CC*). When we consider total empowerment we define these component variables as binary and build an ordinal variable (from 0 to 3) that measures the level of entrepreneurship that represents the sum of these empowerment levels. The descriptive statistics for all our variables are presented in the Appendix.

We implement the ED-OP model by firstly estimating a model for the determinants of entrepreneurial behavior along the lines of model (1) above. Our vector of individual characteristics includes sex, age, age squared, schooling, relation to head of household, civil status, having a bank account, rural, and an agency variable as mentioned above (which is a response to the "I generally feel very capable" question in the survey).

We also estimate a model for empowerment and for levels of empowerment. Our model includes the following variables: sex, age, age squared, schooling, relation to head of household, conjugal or civil status, size of family group, and rural.

Our results are derived from three models:

- Ordered Probit (OP): here we estimate a single equation, empowerment as explained by entrepreneurship. This result is not corrected for the endogeneity we expect to find in this relation.
- Endogenous Dummy Ordered Probit (ED-OP): here we estimate two equations, one explaining empowerment and another explaining the probability of engaging in an entrepreneurial activity.
- Selection Endogenous Dummy Ordered Probit (SED-OP): this model combines three equations, one explaining empowerment, another explaining the probability of engaging in an entrepreneurial activity, and a final equation estimating an agent's empowerment level. The idea here is to control for endogeneity by focusing on the levels of empowerment and its potential influence on entrepreneurship.

Our estimations show interesting results in this sense.

As we can see below, the SED-OP and ED-OP models present similar patterns. For general empowerment (Table 1), the model cannot be applied because of the nature of our data, since we have too few observations on non-empowered agents (see Appendix).

⁷The OPHI survey also includes a variable measuring financial independence from the state when retiring from the job-market which we have not considered as it is especially complicated to interpret in the Chilean case given the nature of the existing pensions system which is based on individual savings accounts. Family relations may be important as additional mechanisms for old age retirement. Basic pensions guaranteed by the state are, however, very low, which provides an additional motivation for individual savings.

Table 1. Empowerment

	Indicator	Not Empowered	Level of Empowerment		
			1	2	3
Entrepreneurship (exogenous)	Parameter	0.000	-0.001	-0.008	0.009
Ordered Probit (OP)	Std Error	0.000	0.002	0.026	0.029
Entrepreneurship (endogenous)	Parameter	-0.009	-0.056***	-0.590**	0.656***
Endogenous Dummy Ordered Probit (ED-OP)	Std Error	0.007	0.022	0.169	0.188
Entrepreneurship (endogenous)	Parameter	yes	yes	yes	yes
Selection Endogenous Dummy Ordered Probit (SED-OP)	Std Error	yes	yes	yes	yes
Corr (Entrepreneurship, Empowerment)	ρ	-0.039			
Corr (Entrepreneurship, Level of Empowerment)	ρ	-0.009			
Corr (Empowerment, Level of Empowerment)	ρ	-0.089**			

*** statistical significance at 1%, ** statistical significance at 5%, * statistical significance at 10%

Results are much more interesting when we consider the individual empowerment variables.

For an agent's control on daily decisions (Table 2) we find positive effects on entrepreneurship only when individuals declare they have control over all their decisions. The effect of unobserved variables that can influence an agent's control on daily decisions and the decision levels for this variable present a statistically significant negative correlation.

Table 2. Control on daily decisions

	Indicator	Decisions are no taken	Level of Empowerment (<i>CGD</i>)		
			some	most	all
Entrepreneurship (exogenous)	Parameter	-0.007	-0.012	-0.008	0.027
Ordered Probit (OP)	Std Error	0.006	0.012	0.008	0.026
Entrepreneurship (endogenous)	Parameter	-0.136***	-0.252***	-0.169***	0.556***
Endogenous Dummy Ordered Probit (ED-OP)	Std Error	0.046	0.081	0.055	0.178
Entrepreneurship (endogenous)	Parameter	-0.330**	-0.619**	-0.421**	1.370**
Selection Endogenous Dummy Ordered Probit (SED-OP)	Std Error	0.159	0.292	0.205	0.648
Corr (Entrepreneurship, Empowerment)	ρ	0.195***			
Corr (Entrepreneurship, Level of Empowerment)	ρ	-0.072**			
Corr (Empowerment, Level of Empowerment)	ρ	-0.709***			

*** statistical significance at 1%, ** statistical significance at 5%, * statistical significance at 10%

Regarding the perception on making a difference in society (Table 3) we find that entrepreneurial activities generate a strongly positive effect that is also increasing as empowerment levels increase (note the likelihood to make changes).

The effect of unobserved variables that can influence an agent's perception on making a difference in society and different levels of empowerment have a statistically significant negative correlation which suggests that the non-consideration of these variables would affect the perception to generate such differences.

Table 3. Making a difference in society

	Indicator	No changes	Level of Empowerment (<i>CC</i>)			
			yes much	yes some	yes easily	yes very easily
Entrepreneurship (exogenous)	Parameter	-0.029	-0.009	0.007	0.011	0.019
Ordered Probit (OP)	Std Error	0.020	0.006	0.005	0.007	0.013
Entrepreneurship (endogenous)	Parameter	-0.495***	-0.161***	0.128***	0.191***	0.336***
Endogenous Dummy Ordered Probit (ED-OP)	Std Error	0.136	0.045	0.039	0.054	0.094
Entrepreneurship (endogenous)	Parameter	-0.894***	-0.291***	0.231***	0.346***	0.608***
Selection Endogenous Dummy Ordered Probit (SED-OP)	Std Error	0.248	0.083	0.070	0.098	0.172
Corr (Entrepreneurship, Empowerment)	ρ	-0.046				
Corr (Entrepreneurship, Level of Empowerment)	ρ	0.076**				
Corr (Empowerment, Level of Empowerment)	ρ	-0.666***				

*** statistical significance at 1%, ** statistical significance at 5%, * statistical significance at 10%

Finally, considering the perception on individual autonomy variable (Table 4), our results show that engaging in entrepreneurial activities generates a positive on this measure of empowerment only when an agent perceives high levels of empowerment.

In the case of the effect of unobserved variables that can influence an agent's perception of individual autonomy we also observe a statistically significant negative correlation

Table 4. Perception on individual autonomy

	Indicator	No freedom	Level of Empowerment (<i>PLI</i>)		
			some	much	all
Entrepreneurship (exogenous)	Parameter	-0.006	-0.018	-0.016	0.041
Ordered Probit (OP)	Std Error	0.004	0.012	0.011	0.027
Entrepreneurship (endogenous)	Parameter	-0.196***	-0.512***	-0.416***	1.125***
Endogenous Dummy Ordered Probit (ED-OP)	Std Error	0.041	0.082	0.072	0.177
Entrepreneurship (endogenous)	Parameter	-0.299***	-0.785**	-0.662***	1.747***
Selection Endogenous Dummy Ordered Probit (SED-OP)	Std Error	0.084	0.199	0.178	0.438
Corr (Entrepreneurship, Empowerment)	ρ	-0.306***			
Corr (Entrepreneurship, Level of Empowerment)	ρ	0.175***			
Corr (Empowerment, Level of Empowerment)	ρ	-0.543***			

*** statistical significance at 1%, ** statistical significance at 5%, * statistical significance at 10%

6. FINAL REMARKS

In this paper we have presented a characterization of entrepreneurship noting the influence of unobservable agency, such that being an entrepreneur requires certain individual subjective traits. These have been important in terms of considering who is an entrepreneur.

At the same time, our econometric results show that undertaking entrepreneurial activities leads to greater individual empowerment, but this effect increases with empowerment levels.

Our work is valuable from the point of view of the literature on entrepreneurship for different reasons. We have explored new determinants of entrepreneurship, focusing on subjective wellbeing. This is an important factor that must be considered in models of entrepreneurial behavior. On the other hand, regarding the effects of entrepreneurship we find that it is necessary to consider not only the effects on economic growth, but also on the generation of a sense of empowerment on the part of those agents undertaking these types of activities.

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7. APPENDIX

Table 5. Mean differences (or ratios) between self employed and non self employed

Variable	Non Self employed (N = 2,596)	Self employed (N= 812)	Difference
Men	0.62	0.69	0.07***
Age	39.4	47.0	7.60 ***
Schooling years	10.7	9.79	0.96***
Single	0.33	0.18	0.15***
Head of household	0.45	0.63	0.18***
Woman w/couple	0.23	0.25	0.02
Check account	0.02	0.03	0.01
Rural	0.28	0.27	0.02
Labor expectations	2.79 (865)	3.09 (389)	0.30***
SMC2	3.46 (961)	3.55 (447)	0.09**

*** statistical significance at 1%, ** statistical significance at 5%, * statistical significance at 10%

Table 6. Mean differences (or ratios) between empowered and non empowered

Variable	Non Empowered (N = 2,008)	Empowered (N= 1,400)	Difference
Men	0.65	0.61	0.05***
Age	37.9	45.95	8.01 ***
Schooling years	10.7	10.19	0.57***
Single	0.38	0.16	0.23***
Head of household	0.31	0.75	0.44***
Number	4.39	3.60	0.79***
Rural	0.27	0.28	0.01
Labor expectations	2.46 (15)	2.89 (1,239)	0.42
SMC2	3.00 (17)	3.49 (1,391)	0.50***

*** statistical significance at 1%, ** statistical significance at 5%, * statistical significance at 10%

Table 7. Mean differences (or ratios) between empowered and non empowered as function of Financial Independence (*IFVJ*)

Variable	Non IFVJ (N = 342)	IFVJ (N= 1,059)	Difference
Men	0.57	0.62	0.05
Age	44.38	46.42	2.04 ***
Schooling years	9.04	10.54	1.50***
Single	0.18	0.15	0.03
Head of household	0.73	0.77	0.04
Household size	3.68	3.58	0.10
Rural	0.33	0.27	0.06**
Labor expectations	2.68 (289)	2.94 (950)	0.27***
SMC2	3.40 (339)	3.51 (1,051)	0.12***

*** statistical significance at 1%, ** statistical significance at 5%, * statistical significance at 10%

Table 8. Mean differences (or ratios) between empowered and non empowered as function of Agent's Perceptions as having some control on his daily decision making (*GCD*)

Variable	Non GCD (N = 261)	GCD (N= 1,142)	Difference
Men	0.86	0.55	0.31***
Age	46.80	45.76	1.04
Schooling years	9.39	10.36	0.96***
Single	0.08	0.18	0.10***
Head of household	0.87	0.73	0.15***
Household size	3.91	3.54	0.37***
Rural	0.26	0.29	0.03
Labor expectations	2.82 (231)	2.89 (1,008)	0.07
SMC2	3.46 (258)	3.49 (1,136)	0.03

*** statistical significance at 1%, ** statistical significance at 5%, * statistical significance at 10%

Table 9. Mean differences (or ratios) between empowered and non empowered as function of Agen's Perception about his ability to make a difference in society (*CC*)

Variable	Non CC (N = 1,011)	CC (N= 311)	Difference
Men	0.60	0.63	0.03
Age	45.77	45.52	0.25
Schooling years	10.03	10.82	0.79***
Single	0.16	0.16	0.01
Head of household	0.74	0.79	0.04
Household size	3.67	3.49	0.18**
Rural	0.28	0.28	0.00
Labor expectations	2.80 (889)	3.12 (280)	0.32***
SMC2	3.46 (1,005)	3.57 (311)	0.12***

*** statistical significance at 1%, ** statistical significance at 5%, * statistical significance at 10%

Table 10. Mean differences (or ratios) between empowered and non empowered as function of Agent's perception about his individual autonomy (*PLI*)

Variable	Non PLI (N = 2,249)	PLI (N= 1,159)	Difference
Men	0.64	0.62	0.03
Age	38.80	45.95	7.15 ***
Schooling years	10.62	10.34	0.28**
Single	0.36	0.15	0.21***
Head of household	0.36	0.76	0.0***
Number	4.31	3.58	0.74***
Rural	0.28	0.28	0.00
SMC2	2.49 (214)	2.96 (1,040)	0.48***
Capacity feeling	3.11 (254)	3.57 (1,154)	0.45

*** statistical significance at 1%, ** statistical significance at 5%, * statistical significance at 10%

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