

The Determinants of Transitions from Wage-work to Self-employment in Colombia: an Empirical Analysis

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Abstract

The purpose of this paper is to study the various factors such as individual abilities, household structure, liquidity constraints or economic conditions, influencing the decision of mobility from wage work towards self-employment using Colombian data. In particular, we are interested in estimating the effect of financial constraints on entry into self-employment. Moreover we are concerned about capturing differences in the probabilities of switching into self-employment with and without employees, controlling for personal characteristics.

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1 Introduction

In Colombia, as in many developing and developed countries, the magnitude of self-employment has been increasing since the 1970's, the self-employed have become an important class of workers in the labor markets. In Colombia 27.6 percent of the workforce was self-employed in 1982 while this figure increased to 32.6 percent in 1996¹. And more recently, self-employment has begun to be considered as an important source of new jobs and an alternative to paid employment. Government programs have been introduced to promote this employment status as a number of countries have started to look at self-employment as a possible answer to unemployment and poverty problems. In Colombia Supportive policies have been implemented in 1993 and 1994 to promote micro-businesses creation, but those programs have not brought the expected results. Hence it appears of interest to investigate what are the main determinants of the transition towards self-employment, in order to understand how to conduct effective policies to encourage independent job creation. To our knowledge, there are very few empirical studies of transitions to self-employment concerning developing countries (Maloney (1998) on Mexico, and Earle and Sakova (2000) on transition economies), even though independent jobs are much more numerous in those countries than in developed countries².

The purpose of this article is to study the various factors such as individual abilities, household structure and liquidity constraints, influencing the decision of mobility from wage work towards self-employment using data from the Colombian National Household survey (ENH). In particular we are interested in estimating the effect of financial constraints on entry into self-employment. Moreover we are concerned about capturing differences in the probabilities of switching into self-employment with and without employees.

Static analyses, which follow Rees and Shah (1986)³, provide a descriptive picture of the characteristics of the self-employed. The cross-sectional estimates confound the probability of becoming independent and the ability of the individual of remaining self-employed. The data used here provide information about the work the individual

¹According to the National Household Survey.

²In Europe and North America, self-employment rates were around 10 percent during the nineties. For example, self-employment accounted for 12.7 % of the paid workforce in the UK in 1993, 8.2 % in the US.

³See, for example, Meyer (1990) and Taylor (1996).

had just before the one he has at the time of the survey. They allow to conduct a dynamic analysis of transitions to self-employment and of their key determinants.

For our empirical estimations, we apply binomial and multinomial logit models to study the transition from employment to self-employment.

The paper is organized as follows: section 2 summarizes some theoretical and empirical predictions about the effects of several variables on transitions towards self-employment. Section 3 describes the data. Section 4 describes the empirical specification and the methodology used. The main results are discussed in section 4 while section 5 summarizes and concludes.

To anticipate the results, we find a significant role of credit market imperfections in determining entry into self-employment in the case of transitions towards self-employment with employees.

2 Determinants of mobility in the literature

The focus of our paper is to study the determinants of transition from wage-work to self-employment. The question we try to answer is what induces an individual to choose to become self-employed rather than stay employed ?

In both the theoretical and empirical literature, interest in self-employment as increased recently. From the theoretical perspective, the roles of attitudes towards risk, entrepreneurial ability, taxation, uncertainty and capital requirements have been studied.

On the theoretical level, there are commonly two types of approaches to job mobility, and more precisely in the study of transitions to self-employment. Mobility between statuses of employee and entrepreneur can be modeled either in a competitive framework or in a non-competitive one⁴. In the case of Colombia, the hypothesis of imperfect credit markets seems relevant. If we suppose the presence of binding liquidity constraints, some would-be entrepreneurs, because they do not have sufficient access to financing, are obliged to remain employees instead of becoming self-employed. In Evans and Jovanovic (1989) and in Blanchflower and Oswald (1998), the amount of capital the individual possesses is taken into account in the calculation of the expected earnings as an independent, and hence influences the decision of mobility. What arises from those studies is that the amount of assets has a positive

⁴For a detailed survey of models of self-employment in a competitive market see De Wit (1993).

influence on mobility towards self-employment. Magnac and Robin (1990) reach the same conclusion: starting capital has a positive influence on mobility, considering that it allows to reduce interest rates and that here the liquidity constraints take the peculiar form of increasing rates on financial loans.

In Colombia, as in many Latin-American countries, mobility from employment towards self-employed is assimilated to the study of inter-sector-based mobility, and more precisely to the transition from employment in the formal sector towards self-employment in the informal sector, so, most of the time, we won't make the difference. The definition of self-employment adopted in the present study includes employers and own account workers. An employer is a person who operates his/her own economic enterprise or engages independently in a profession/trade and hires one or more employees. An own account worker is a person who operates his/her own economic enterprise or engages independently in a profession/trade and hires no employee. We use equally the notions of entrepreneur, self-employed worker, or independent worker to refer to self-employed.

The question of the determinants of occupational mobility can be addressed within a comparative advantage framework (see for example Evans and Leighton, 1989; Rees and Shah, 1986). Individuals who have found a business opportunity must decide whether they want to follow it or not. Their decision will depend on the comparison of the expected utility they perceive for each alternative occupation. If the expected utility of self-employment is higher than the utility of wage-work they will switch to self-employment. Several factors may affect the expected returns of each activity. 'Traditional variables' examined in empirical studies of potential determinants of self-employment choice⁵ are education, labor market experience, age, job stability, capital, marital status, spouse's educational attainment, spouse's employment status, the number of children, health status, religion and macroeconomic variables such as local unemployment rate. A few studies also include family background variables, such as the employment status of the father or psychological characteristics of the individuals (e.g., locus of control) and group characteristics such as the role of ethnic enclaves (Borgas, 1986). We will discuss here some of those economic and demographic variables that may affect the choice of employment status.

Age: The experience needed to become self-employed can only be acquired after several years in working life, and if we consider that the liquidity constraints are binding, the capital accumulation process can take time. In those two cases, the

⁵Empirical studies of self-employment are reviewed in Le (1999).

probability of mobility will increase with age. On the other hand it is often said that the old are less likely to take risks than the young. In addition, entrepreneurial work confers responsibilities that can be mentally demanding. Then, if when approaching the conventional retirement age there is increased aversion to mentally demanding work, self-employment can become less attractive. The Old may also be relatively more averse to the more demanding work entailed by self-employment (Rees and Shah, 1986)

Most of the empirical studies find that the probability of starting a business is positively correlated with age (Van Praag and Van Ophen (1995), Meyer (1990)), or that the probability of becoming self-employed is independent of age and experience until a certain age (forty years old in Evans et Leighton, 1989; fifty in Evans and Jovanovic, 1989²). A study of the Colombian labor market by Huyette (1997) strengthens this result, he notes that employees are rather young workers which job is unstable, while independents works are more stable and concern an older population.

Usually, authors explain this relation by the fact that it takes time to collect the amount of capital necessary to start a business, and it means that entrepreneurs might face liquidity constraints.

Education: The impact of the level of education on the propensity to become self-employed cannot be determined *a priori*.

In Lucas' (1978) model, education enhances individual managerial ability and hence increases the probability of choosing self-employment. Education can serve as a filter such as more educated workers tend to be better informed implying that they are more efficient at assessing self-employment opportunities (Rees and Shah, 1986). Carrasco (1999) finds for Spain that the more educated an individual, the higher his probability of entering self-employment (and an even stronger positive effect for the transition towards self-employment with employees).

On the other hand, qualifications that make good entrepreneurs are not necessarily those resulting from formal qualifications acquisition (Lentz and Laband, 1990). Formal qualifications don't inevitably enhance the self-employed human capital the same way they do for salaried workers. It is also possible that high levels of education may facilitate entry into wage employment and thus depress the likelihood of self-employment. De Wit (1993) finds a negative and statistically significant relationship between the propensity of becoming self-employed and education.

Marital status and number of children: There is no consensus about the

effect of marriage and family responsibilities on mobility towards self-employment in the literature.

Some authors postulate that marriage will enhance the probability of entrepreneurial behavior, like Pickles and O'Farrell (1987) who think that marriage can provide the "emotional and psychological stability" which positively influences the probability of entrepreneurship. They say that:

"Founders frequently work extremely long hours, especially in the early stages of the development of their business, and this may involve an unusual domestic division of labor with their spouses. The unpaid (or lowly paid) services of a wife are often drawn upon in the early stages of the business to manage accounts, act as a secretary or as caretaker-manager when the founder is away on sales trips." (Pickles and O'Farrell, 1987, p.430)⁶

Whether an individual is married or not can be believed to affect one's willingness to start as an entrepreneur. If the spouse allows the entrepreneur to save personnel costs or supplies the household with an income, marriage will play in favor of mobility (Van Praag and Van Ophen, 1995). In this case, a married person will be more prepared to take risks, and also family support may make self-employment less demanding than it would be otherwise.

On another side, as pointed out by Carrasco (1999), a married person, or an individual with children will be less entitled to undertake risky ventures because of his familial responsibilities.

We think that the effect of marriage on mobility can be positive if the spouse perceives earnings, therefore the variable of interest is more the amount of the earnings of the individual's spouse. On the other hand, it is more likely that having children induces responsibilities that might prevent an individual from becoming self-employed.

Financial capital: In the literature, the impact of liquidity constraints on the decision to become an entrepreneur has been widely discussed. The importance of financial capital as been demonstrated through the impact of different variables: the initial capital required to set up a self-employment enterprise can be obtained through accumulation, gifts, inheritances or loans. Using US and UK micro data, Evans and Leighton (1989), Bernhardt (1994) and Van Praag and Van Ophen (1995) conclude that imperfect credit markets constrain entrepreneurs. Carrasco (1999)'s findings for

⁶The remark can equally stand for both male and female spouses.

Spain agree with these results, but the author finds that liquidity constraints only affect significantly the probability of becoming self-employed with employees. Lopez Castaño (1987) depicts a three-phased life cycle mobility (with Colombian data) in which the third phase is the transition of older workers from wage work towards self-employment. The phase as wage worker would serve to accumulate capital prior to mobility, because individuals face liquidity constraints (see also Huyette, 1997)

Earnings: The effect of earnings on mobility is ambiguous, it seems to depend on which type of mobility is taken into account: transition towards self-employment as survival activity, or transition towards self-employment as manager of a dynamic business.

- Negative effect of earnings on mobility:

It can be assumed that individuals who switch from wage work to self-employment tend to be people who were receiving relatively low wages (who have changed jobs frequently, and who experienced relatively frequent or long spells of unemployment as wage workers). This hypothesis is consistent with the disadvantage theory which views entrepreneurs as misfits⁷ cast off from wage work (Evans and Leighton, 1989).

Carrasco (1999) also finds that relatively poor workers (unemployed without benefits) are more likely to move to self-employment (*ceteris paribus*).

Lautier (1987) pointed out the relatively high turnaround rate in wage work that characterizes developing countries and more especially Latin-American countries and Huyette (1997) finds that salaried jobs in Colombia⁸ are characterized by a high instability.

- Positive effects of earnings on mobility:

The effect of incomes on mobility depends on the number of working individuals in the household. If there is only one working agent in the household, the earnings can be seen as the independent status opportunity cost, and mobility decreases with earnings. If both spouses are working and have a regular income, the household's earnings can play the role of a safety net in case the venture fails. In this alternative earnings have a positive effect on mobility (Holtz-Eakin et al. 1994).

⁷Light (1979) argues that disadvantaged workers in the labor market are more likely to start a business. Discrimination, like language barriers, ignorance of customs, poverty and unemployment, may push individuals into self-employment. But in order for this theory to make economic sense, it must be assumed that these disadvantages reduce wage earnings relatively more than self-employment earnings.

⁸The data come from 1988 household survey covering the ten biggest towns of Colombia.

Roubaud (1994) observes that Mexican wage workers in the modern sector set up as independent later than those from the informal sector. He explains this structural mobility by the fact that workers from the modern sector have the possibility (higher wages) to accumulate savings before they start a business, but this strategy takes time to be implemented. We can deduce from this remark that earnings should have a positive effect on mobility towards self-employment.

Sector: It is likely that the specific experience acquired as wage-worker in a sector of activity, can be helpful in setting up a business. So we can expect that individuals who are employed in the sectors where the independent activity is the most developed (i.e. manufacturing industry, commerce and services in the case of Colombia, according to the National Household Survey of 1996), are relatively more likely to become entrepreneur.

Size: We can suppose that working in a small company enhances the probability of becoming self-employed, while working for a big company produces the opposite impact. This can be explained by the fact that working in a small firm can prepare to start one. On the other hand, workers from big companies have little incentives to leave them when they are being granted attractive benefits and career perspectives.

3 Data Set

We use data from the Colombian national household survey ("Encuesta Nacional de Hogares" etapa 92, ENH) of June 1996, conducted by the National department of Statistics ("Departamento Administrativo Nacional de Estadística", DANE). The ENH covers the population of the 7 biggest metropolitan areas of Colombia⁹, it reports interviews for about 19 500 households. To study the mobility of workers, it is necessary to take into account at least two periods of time: the initial occupation and the arrival one. We use the survey that contains an informal part with questions related to the work preceding the one of the worker at the time of the survey (jobs changes that occurred during the last six months).

Following much of the existing empirical literature, we confine the analysis to male heads of household who are aged between eighteen and seventy years old. We

⁹Barranquilla, Bucaramanga, Bogotá, Cali, Manizales, Medellín and Pasto.

restricted the sample to male individuals because of the differences in male and female labor market behavior, and the fact that women have lower self-employment rates¹⁰. We excluded the youngest and oldest man because of their different rules of behavior. The agricultural sector is not covered by the survey, but it is supposed to own special characteristics of self-employment. The restriction to head-of-household is imposed by the data in order to include in the regressions variables related to the household structure. A number of other studies have analyzed self-employment transitions for these groups. For example, Fuchs (1982) examines self-employment among older individuals, Blanchflower and Meyer (1994) among younger individuals, and Devine (1994) focuses on female self-employment. These exclusions are made mainly in order to focus on situations where workers are likely to face the choice between self-employment and wage/salary employment, choice depicted in models of self-employment.

We selected individuals who were wage-worker in period $t-1$ (7 133 observations). Out of those individuals 2 422 (33.9%) switch to self-employment in period t . (see Appendix Table 3)

We have gathered together self-employed worker and boss or employer in the category of independent worker. In the survey definitions, self-employed workers are individuals who run their own business, or exercise their profession at their own account, without using any paid employee. On the contrary, bosses or employers employ one or more salaried worker.

The dependent variable used in these estimations is equal to 1 if the individual who was wage worker in period $t-1$ becomes self-employed in period t . Hence we observe real entrants into self-employment and not the characteristics of a stock of self-employed. The advantage of using this data set is that information prior to the transition to self-employment (such as employment status, the sector of activity and the size of the firm in which the individual was employed) can be used as explanatory variables. Unfortunately in our data assets are declared in time t , but we can suppose that they are not very far from the amount of assets in $t-1$. Hence there may be a problem of potential endogeneity and a positive relationship between assets and self-employment might mean that people with more wealth become entrepreneurs, or equally that entrepreneurs accumulate more wealth. A survey realized by Le (1999) has found that empirical results are very similar in both cross-sectional and transition analysis of self-employment regarding variables of interest.

¹⁰In our data (heads of household), 15 % of the self-employed are women.

In appendix we report information about the sample, the frequencies of observed transitions (Table 3 and Table 4), variables definitions and summary statistics.

4 Empirical model and Methodology

To study the effect of economic and socio-demographic variables on the transitions into self-employment, we use a discrete choice model. Individuals who are maximizing their expected utility will switch from wage-work to self-employment if the expected utility of self-employment exceeds the expected utility of wage-work. We specify an index function as follows :

$$I_i^* = X_{1i}\beta_1 + X_{2i}\beta_2 + \varepsilon_i \quad i = 1, \dots, N$$

where I_i^* is the expected utility differential between self-employment and wage-work, X_{1i} denotes a vector of individual socio-demographic characteristics and X_{2i} a vector of individual economic characteristics affecting the choice between self-employment and wage-work. ε_i is a disturbance term that includes unobserved variables.

The individual will choose to become self-employed if $I_i^* > 0$. I_i^* can not be observed but we have the information on individuals who have switched to self-employment, so we build a binary variable taking the value 1 if the individual moves to self-employment and 0 otherwise. The probability that an individual is self-employed at time t knowing that he was wage-worker at time $t - 1$ can be expressed as a conditional expectation

$$P(I_{it}^* > 0 \mid X_{1i(t-1)}, X_{2i(t-1)}) = F(X_{1i(t-1)}\beta_1 + X_{2i(t-1)}\beta_2)$$

where we specify F as the logistic cumulative distribution function. When the information was available in the data, we have used individual's characteristics before the transition to avoid confusion between consequences and causes of transition.

We estimate a binary logit model for paid worker, and a multinomial logit model when we distinguish transitions to self-employment with and without employees. It is important to make this distinction while it may exist differences in the effects of

the variables on the decision of mobility depending on the transition considered (with or without employees).

5 Empirical results

In this section we estimate the influence of socio-demographic and economic characteristics on the probabilities of transition from wage-work to self-employment. The qualitative impact of the variables are discussed in terms of sign and statistical significance. We also focus on the heterogeneity of the self-employed group, in which we distinguish between self-employed with and without employees. The specifications include variables concerning demographic characteristics (age, education), family structure (spouse working, children), economic characteristics (assets, sector of activity, size of the firm). In Table 1 are reported the binomial logit estimates, and in Table 2 the multinomial logit estimates.

The probability of mobility increases with age¹¹. This result can be explained, if we consider that liquidity constraints are binding, by the fact that it takes time to accumulate capital prior to mobility (Evans and Leighton 1989; Evans and Jovanovic 1989). It is also possible that many workers in Colombia use the "cesantías" (severance payments savings accounts) as initial capital in order to start a micro-business (Huyette, 1997). The employers are required to make a yearly contribution equivalent to one month of the yearly salary at that moment in time, to a capitalized fund ("Fondo de Cesantías"), which would be accessible to the worker in the event of separation. It plays the role of unemployment money or redundancy payments. Huyette (1997) explains that those "cesantias" can serve as initial capital only if the stay in employment has lasted a while, consequently, we can suppose that for those workers mobility occurs later in life.

We note that mobility does not decrease for individuals older than the conventional retirement age¹² (it does not decrease before 70 years old, the superior limit of our sample). It can come from the fact that in Colombia many people, because

¹¹When introducing the variable *Age* in four categories, the coefficients were positive and statistically significant in each categories.

¹²The minimum retirement age is 55 years old for women and 60 years old for men.

of the weakness of the pensions and social security system, turn to self-employment late in life.

We find a negative effect of education (secondary and university education compared to no schooling and primary education) on the probability of switching, this could mean that formal education does not provide the qualifications necessary to find business opportunities or to start your own firm. This negative effect is even stronger in the case of university education, it is possible that superior education be more valuable as an employee (in terms of salary and carrier opportunity) than in self-employment.

The results show that having a working spouse increases the likelihood of switching, supporting the idea the spouse's earnings can play the role of a "safety net". An interesting comment by Huyette (1997) concerning the case of Colombia is that social security is linked to the formal sector, but can be, depending on the situation, extended to close relatives (eligible party). Those relatives can then work in the informal sector while enjoying the social security of their spouse. This fact can explain a positive effect of being married to an individual currently employed in the formal sector on mobility.

Having one or more children under the age of 19 years old decrease the probability of becoming self-employed, supporting the idea that familial responsibilities might prevent mobility.

We find evidence supporting the results also found by Evans et Jovanovic (1989) and Taylor (1996) of the existence of liquidity constraints¹³, while the coefficient of the variable *Earnings* is positive and statistically significant.

The variable representing the sector of activity¹⁴ has a positive coefficient showing that sector specific experience can serve in setting up a business.

Working as wage worker in a small firm enhances the probability of switching to self-employment.

In Table 2 we distinguish between transitions from wage-work to self-employment with or without employees. We make this distinction because there is a large het-

¹³This result must be considered with caution while the assets variable used here is the total earnings declared by the individual at time t .

¹⁴The variable sector is coded 1 when the sector of activity in $t - 1$ is Manufacturing industry, or Commerce, restaurants and hotels, or Community, social and personal services. Those are the sectors of activity where self-employed workers are more numerous.

Table 1: Probability of Entering Self-employment from wage-work. Logit Estimates, Binomial Model

<i>Variable</i>	Coef.	<i>t</i> -statistic
Constant	-2.530***	-7.33
Age	0.058***	3.43
Age ²	-0.0002	-0.94
Second. educ.	-0.168***	-2.77
Univ. educ.	-0.408***	-4.43
Spouse	0.410***	7.49
Children	-0.126*	-1.89
Earnings.10 ⁻⁵	0.011***	2.98
Sector	0.108*	1.96
Size ¹	-0.377***	-6.77
Number of Obs.	7086	
Log Likelihood	-4288.576	

*** Indicates statistical significance at the 1% level.

** Indicates statistical significance at the 5% level.

* Indicates statistical significance at the 10% level.

2. Education: no schooling and primary education is taken as the reference group.

3. Size is coded 1 for firms of more than ten employees. See Appendix for variables definitions

Table 2: *Probability of Entering Self-employment from wage-work. Logit Estimates, Multinomial Model.*

<i>Variable</i>	<i>With Employees</i>		<i>Without Employees</i>	
	Coef.	<i>t</i> -statistic	Coef.	<i>t</i> -statistic
Constant	-4.370***	-8.31	-2.601***	-6.50
Age	0.078***	3.08	0.051***	2.63
Age ²	-0.0004	-1.38	-0.0001	-0.46
Second. educ.	0.041	0.45	-0.259***	-3.74
Univ. educ.	0.055	0.45	-0.676***	-5.93
Spouse	0.784***	10.13	0.178***	2.72
Children	-0.043	-0.43	-0.175**	-2.26
Earnings.10 ⁻⁵	0.020***	5.14	-0.002	-0.33
Sector	0.233***	2.89	0.040	0.63
Size ¹	-0.592***	-7.43	-0.249***	-3.87
Number of Obs.	7 086			
Log Likelihood	-5 792.384			

*** Indicates statistical significance at the 1% level.

** Indicates statistical significance at the 5% level.

* Indicates statistical significance at the 10% level.

Notes: 1. In the multinomial model, the alternative "remaining wage-employed" is taken as the comparison group.

2. Education: no schooling and primary education is taken as the reference group.

3. Size is coded 1 for firms of more than ten employees. See Appendix for variables definitions.

erogeneity among self-employed, and it is likely that the economic and demographic characteristics of the workers do not affect the probabilities of mobility the same way depending on the type of transition. Traditionally, the unregulated small firm sector is considered as a residual sector of wage/salary employment, playing the role of a safety net. In Colombia, the independent status can be in some cases associated to survival activity (see for example Huyette (1997) who describes the street business in Medellín) but there seems to be also a dynamic micro-activity. The Colombian government has conducted supportive programs for the micro-businesses in the years 1993 and 1994, unfortunately they did not bring the expected results. The results from a study of the Mexican informal sector (Roubaud, 1994) shows that a majority (62 %) of the micro-entrepreneurs declare to have chosen this activity. Maloney (1998) also finds for Mexico that self-employment constitutes the largest source of employment after formal salaried employment, and that it appears to be a desirable destination for many workers.

Regardless of the type of transition considered, mobility increases with age.

The effect of education is positive but not significant for transitions to self-employment with employees and negative and significant in the other alternative. The negative effect of education disappears when focusing on transitions to self-employment with employees, hence we can suppose that high level of education is useful for finding business opportunities and for managing other workers in this type of transition.

The hypothesis of family responsibilities as a burden reducing mobility towards independence does not hold in the case of transition with employees, the coefficient of the variable *children* being negative although not significant. Having a working spouse enhances the probability of mobility in both cases.

The coefficient on the wealth variable provides evidence of the importance of access to capital markets on the probability of becoming self-employed only for the transitions towards self-employment with employees. This result is consistent with the findings of Carrasco (1999) that liquidity constraints appear to be important in determining decision of mobility to self-employment, mainly for those wage-workers who become self-employed with employees.

Finally we can observe that past experience as a wage-worker in manufacturing industry, commerce or services only affects positively transitions with employees.

6 Conclusion

In this paper, we investigated the determinants of the choice of leaving wage-work to become self-employed. Our main findings can be summarized as follows. The probability of switching to self-employment for wage worker increases with age and with assets, showing that would be entrepreneurs face liquidity constraints. This probability also depends on the characteristics of the paid employment activity, while individuals working in a small firm have a higher probability to switch to self-employment. Education does not seem to be an important determinant of mobility. Differences appears between mobility to self-employment with or without employees, the independent status being composed of very heterogeneous classes of workers:

- In the case of mobility towards self-employment without employees, education does not enhance the probability of transition, and liquidity constraints are not binding. Part of this mobility may concern individuals cast-off from wage-work, who start survival activities (like, for example, selling various objects or services in the street) that do not require much initial capital. This interpretation is consistent with the disadvantage theory which views entrepreneurs as misfits, the least favored wage-worker being those moving to self-employment. But it is also possible that another part of those workers choose to start micro-activities (that do not require much initial capital) and are not forced into this sector by necessity. They may decide to set up as self-employed for other reasons than monetary considerations, because they value the independence (being your own boss) associated to this status.

- mobility resulting from the strategy towards independence¹⁵ of wage workers with relatively high earnings, and high levels of education. This mobility is chosen, and takes time to be implemented if liquidity constraints are binding.

While the data used here only refer to a point in time (one transition considered), we cannot investigate the effect of macro-economic variables like the growth rate in the economy or the unemployment rate on self-employment transitions. In further work we intend to carry on a duration analysis with life histories in order to examine the dependence of exit from wage-work to self-employment on the length of time in wage-work (accumulated capital), but also on the individual's history and external variables.

¹⁵See the three-phased life cycle mobility of Lopez Castaño (1987).

Appendix

Data Set

Source : National household survey of June 1996 which contains an informal part ("Encuesta Nacional de Hogares" etapa 92), provided by the National Statistical Office (Departamento Administrativo Nacional de Estadística, DANE).

Sample : Wage worker are individuals who declared themselves worker or employee from the public or the private sector, or domestic employee. Self-employed are those who declared themselves self-employed worker, or boss or employee.

We selected male individuals head of household aged between 18 and 70 years old that were wage-worker in the job held before the one at the time of the survey. The sample contains 7 133 observations (Individuals). This sample consists in individuals who are employed at time ($t-1$) and continue employed or switch to self-employment in time t . 4 711 observations correspond to transitions from employment to employment, and 2 422 from employment to self-employment.

Variables

Age: Age of the respondent in years.

Education: We consider three categories: no schooling or primary education, secondary education and university (superior) education.

Spouse: The variable takes the value one if the spouse works and 0 otherwise.

Children: The variable is coded 1 for individuals with one or more children under the age nineteen.

Earnings: Income received by the individual including rental income, interest and dividends and corrected from errors due to missing information and sub-declaration. In Colombian pesos.

Sector: This variable is coded 1 if the job in time $t-1$ was in one of these branches of activity: Manufacturing industry; Commerce, restaurants and hotels; Community, social and personal services. It is coded 0 otherwise.

Size: The size of the firm in which the individual was employed in time $t-1$. The variable is coded 1 if the firm had eleven employees or more and 0 otherwise.

Table 3: Number of Observations per Transition

Initial State	Destination State		
	Self-employed with employees	Self-employed Without employees	Employed
Employment	901	1521	4 711

Table 4: Summary Statistics

Variables	Type of transition		
	All	Salaried/Salaried	Salaried/Self-employed
Age (years)	39.90 (11.12)	38.09 (10.49)	43.43 (11.46)
No schooling and primary ed. (percent)	35.78	32.57	42.02
Secondary education (percent)	47.64	50.10	42.85
University education (percent)	16.59	17.33	15.14
Spouse works (percent)	37.14	34.81	41.66
Have children (percent)	76.66	78.84	72.42
Earnings. 10^{-5} (pesos)	5.86 (15.09)	5.34 (8.59)	6.88 (22.93)
Sector (percent)	62.02	61.95	62.17
Size (percent)	62.62	65.02	57.97

Entries are means, with standard deviations in parentheses.

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