

Generational Determinants on the Employment Choice in Italy

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Abstract: The aim of this paper is to explore some crucial factors playing a significant role in employment decision-making. In particular, we aim at investigating the influence of family background on the choice to become a self-employed rather than a salaried; for this end, a series of regression models for categorical data are estimated both on sampled workers, taken as a whole, and by gender separation. In this light, to test if the occupational choice is context-dependent, environmental attributes are also modelled. In addition to a diversity of determinants, obtained results shed light on some differences between self-employed workers by first and second generation. Finally, by testing a two-level small area model, integrating the use of unit and area level covariates, we look into potential differentials of employment patterns across Italian regions.

Keywords: human capital management; self-employment propensity; BRM

1. Background and Introduction

For a long time, self-employment has consistently been regarded as a residual category of gainful occupation not rewarded by a salary or wage. In the last few years, self-employment has been growing in several developed or developing economics, also due to flourishing of innovative non-standard kinds of work. In literature, several empirical studies argue about the main reasons affecting individual propensities to enter self-employment. Broadly speaking, it may be driven by necessity, by ambition to pursue a business opportunity or by a strive for personal independence (Henrekson, 2004). Really, beyond personal attitudes or requirements, also the family-specific background as well as the socio-economic environment may play a strong role in the occupational choice. Indeed, a higher possibility of access to financial capital as well as a privileged chance to inherit the human knowledge may strongly encourage to attempt self-employment. In this light, the aim of our work is twofold. Firstly, to investigate the influence of family background on the choice to become a self-employed rather than a payroll employee; thus, crucial differences between self-employed workers by gender and by first and second generation are also stressed. Secondly, to test if the occupational choice is context-dependent; consequently, some potential differentials of employment patterns across Italian regions are also looked into.

2. A methodological view and data sources

Our analysis draws upon the 2006 Survey on Household's Income and Wealth (SHIW), a biennial split-panel survey carried out by Bank of Italy. With regard to wave 2006, the

sample size consists of 7.768 households and 19.551 individuals. Among other things, it provides detailed information on employment status and sector of activity as well as on the single income and wealth components over the whole previous calendar year. Most importantly, SHIW survey also detects a set of retrospective parental information (*i.e.*, educational qualification, employment status, sector of activity), which allow to account for potential generational changes over time.

In a first step, in order to evaluate how the employment choice may be affected by some personal attitudes as well as by several components of human and financial capital in a generational perspective, maximum likelihood logit models (Allen, 2000), chosen in the sphere of binary response models (BRM), are estimated. Two are the main reasons why we chose logit models. Firstly, although SHIW contains a partial overlap of sampling units, our analysis has exclusively been carried out on one wave (2006), so it need not have modeled correlated data from longitudinal/repeated measures; moreover, parental information are detected, though in a retrospective way, at the same time of the current ones. Secondly, the logit model is suited to the second step of our analysis where a small area model, based on a logistic regression, is implemented. Nevertheless, in a later step, we test a multinomial logit to model the relative influence of explanatory factors into the categories of self-employed and salaried workers as well as their main features.

Let y_i the outcome variable referring to the i_{th} employed individual which is coded 1 if he/she is a self-employed and 0 if a salaried worker. As we assume that “individuals become and stay self-employed when the relative advantages are higher than in dependent employment” (Arum and Muller, 2004), we expect that there is a latent variable, y_i^* , which generates the observed binary y_i 's. Thus, we believe that an underlying decisional process, essentially based on comparison between the utilities of the two employment status, leads out to the choice to become a self-employed rather than a salaried. In other words, each individual is assumed to be a self-employed if the utility in self-employment is higher than the utility of wage-employment. By following some previous studies, we assume that utility depends on income as well as a vector of other individual characteristics and family-specific background. The latent variable y_i^* is supposed to be linearly related to the observed x 's through the structural model:

$$y_i^* = x_i\beta + \varepsilon_i \quad \text{with} \quad i = 1, 2, \dots, n \quad y_i = \begin{cases} 1 & \text{if } y_i^* > \tau \\ 0 & \text{if } y_i^* \leq \tau \end{cases} \quad (1)$$

where the error terms, ε_i , are hypothesized to obey a standard logistic distribution (Long, 1997) and τ is the threshold. By justifying the logit model as derivation from models of individual behaviour, it allows to define the probability (and to interpret it in utility terms) that the event to be a self-employed occurs. In this light, to evaluate how the occupational choice is also affected by surrounding context, the model is enriched by a set of environmental attributes, related to each Italian region where the worker is located and selected by the Istat data base of territorial indicators. Anyway, the data structure is not clustered/nested such that to justify the adoption of a multi-level model.

In a second step, we aim at looking into potential differentials of employment patterns across Italian regions. Really, SHIW survey is designed to provide accurate estimates at a national level or, at least, for large geographical areas. Consequently, in order to yield statistically reliable estimates also at a higher level of territorial disaggregation (*i.e.*, of the regions), we test a logistic regression model with random coefficients (Rao, 2003), a two-level small area model which integrates unit and area level covariates:

$$\theta_{ij} = \log it(p_{ij}) = \log \frac{p_{ij}}{1 - p_{ij}} = x_j' \beta_i \quad \text{with} \quad \beta_i = Z_i \alpha + v_i \quad \text{and} \quad i = 1, 2, \dots, 20; j = 1, 2 \quad (2)$$

where i identifies the i_{th} Italian region and j each of the two demographic sub-groups of male and female workers; v_i are independently and identically distributed random variables with zero mean and known variance, α is a vector of regression parameters, Z_i is the matrix of area-level covariates and x_j is a gender-specific covariate vector.

3. Main empirical results and concluding remarks

In this work, we focus on all those individuals who are either self-employed or salaried workers, so as stated by themselves in a question concerning their main employment status. In such a way, not-employed individuals are leaved out. In this light, the ratio between self-employed workers – defined as anyone working in his/her own business or professional practice, any own-account or craft worker and any contingent worker on own account – and salaried, computed on SHIW data, is close to 25%.

In the first step, the model aims at sketching a general profile of several individual and family background determinants in employment decision-making. Some explanatory variables are directly available, whereas some others are purposely constructed on the basis of SHIW data. Although the choice of which parameterization to use is arbitrary, it does not affect the estimate of the slopes β 's or associated significance tests but only the estimate of β_0 . Also the probabilities are not affected by the identifying assumption (Long, 1997); so, we assume, at least in this first stage, that $\tau = 0$. Alternatively, we could assume that $\beta_0 = 0$ and estimate τ .

Substantially coherent with several other empirical studies, preliminary results of our analysis (table 1) highlight how being a *man* with *Italian citizenship*, *older* and *not-married* may increase the likelihood to become a self-employed. *Individual* and *parents' education* level and *parental work status*, as proxies for measurement of workers' human and social capital as well as of generational dimension, have a significant effect (negative and positive, respectively) on the probability to become a self-employment; indeed, propensity to enter self-employment slightly enhances when both the parents are (or were) self-employed workers, stressing how family-specific background may strongly influence the choice to become a self-employed (second generation) rather than a salaried. In addition to some other significant determinants as proxies of financial capital, whose potential endogeneity implications are explored, it is also interesting to examine the possible combined effects on the employment choice of individual-level and environmental variables. Briefly, we note how people living in richer regions, in terms of higher gross domestic product and lower unemployment rate, seems to be less likely to enter self-employment. As they say, self-employment may be considered as a potential way *to wage a war against* the increasing unemployment. Crime levels also appear to negatively affect the propensity to become a self-employed. In other words, it emerges a negative relationship between the self-employment choice and the level of “regional socio-economic well-being”.

By following some other empirical studies, we also test gender-separation models to give further insights into gender differences with regard to reasons may contribute to understanding of why women are usually less likely to be self-employed. In particular,

we note how the effect of having parents self-employed is stronger for males and how marriage usually reduces women's chances of self-employment more than men's (table 1). Finally, the model has also been estimated by parental work status (not reported); among other things, it denotes a lower effect of education and a stronger effect of income for the second (at least one of the parents is self-employed) and first generation, respectively.

Table 1: *Coefficients and standard errors of logit models ($\tau = 0$)*

Independent variables	Whole sample	Male	Female
Intercept	- 3.8600*** (.7486)	- 3.2552*** (.7756)	- 4.7851** (2.2538)
<i>Individual-level</i>			
Gender (1 if <i>male</i>)	0.4465*** (.1714)	—	—
Citizenship (1 if <i>Italian</i>)	0.6944** (.3513)	0.5191 (.3632)	2.0672 (1.5589)
Age (<i>years</i>)	0.0286** (.0133)	0.0192** (.0082)	- 0.0052 (.0149)
Marital status (1 if <i>married</i>)	- 0.1591** (.0725)	- 0.1454* (.0857)	- 0.1734** (.0852)
Education (<i>years of schooling</i>)	- 0.0679*** (.0179)	- 0.0651*** (.0189)	- 0.0874** (.0427)
Parents' education (<i>years of schooling of the parent with higher education</i>)	- 0.0127** (.0063)	- 0.0122** (.0059)	- 0.0119** (.0057)
<i>Parental work status</i>			
- Self-employed parents (<i>both</i>)	0.0072** (.0035)	0.0067** (.0029)	0.0039** (.0018)
- Self-employed parents (<i>only one</i>)	0.0051** (.0023)	0.0043** (.0021)	0.0034** (.0016)
Annual individual income	0.00002** (1E-05)	0.00001** (4E-06)	0.00001 (7E-06)
Home owner (1 if <i>worker or his/her family owns the home where he/she lives</i>)	- 0.2230 (.1520)	- 0.2831* (.1685)	- 0.1752 (.3758)
<i>Area-level</i>			
Unemployment rate	0.0239* (.0127)	0.0202* (.0120)	0.0751** (.0361)
Gross Domestic Product (<i>instrumental</i>)	- 0.0087** (.0043)	- 0.0071** (.0036)	- 0.0087** (.0043)
Crime rate	- 0.0119** (.0059)	- 0.0100*** (.0034)	- 0.0092** (.0044)
Log likelihood	- 814,963	- 658,975	- 148,348

Significance levels: *** 99%; ** 95%; * 90%

Source: Authors' elaborations on SHIW data and Istat (2006)

In the second step, we test a two-level small area model to provide more reliable estimates of the incidence of self-employment by gender within each Italian region. Firstly, an individual-level model is fitted; secondly, area-level covariates, affecting individual's probability to be a self-employed, are identified; finally, individual-level and area-level models are combined. Once the selection of some critical auxiliary variables is completed, we test them according to a stepwise procedure; in such a way, a slight gain in efficiency (on average, close to 11%) of the proportion of self-employment by gender at a regional level is obtained. Even though a larger set of covariates and diagnostics have to be assessed, preliminary findings of our analysis allow to "sketch" a territorial profile of self-employment patterns across Italian regions.

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