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FAMILY WORKERS: BEHAVIOURAL PATTERNS IN THE EUROPEAN UNION AND IMPLICATIONS FOR THE FIGHT AGAINST POVERTY

Abstract: The aim of this paper is to highlight the main characteristics of family workers in the European Union (how many? who are they?) and the role played within households as a tool to alleviate poverty. The subsequent objective is to evaluate the effect of these characteristics on the condition of family worker in order to identify the main factors that lead a household member to choose this specific employment status. The analysis will be based on EU-SILC 2012 survey, the Eurostat project that aims to monitor the income and living conditions of the European Union households for a responsible planning of economic and social policies.

Keywords: Family workers, European Union, poverty.

1. Introduction

It is well-known that the European economic production system consists mainly of SMEs - micro, small and medium enterprises¹. As a matter of fact, in 2013 across the EU28 there were

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¹ SMEs are defined as businesses which employ less than 250 staff and have an annual turnover of less than € 50 million and/or their balance sheet total is less than € 43 million. They comprise three categories – micro, small and medium – which are defined as follows:

21.2 million SMEs in the non-financial business sector² which employed 88.8 million people and generated € 3,666 trillion in value added. SMEs account for 99.8% of all enterprises, 66.8% of total employment and 57.9% of total value added generated by the non-financial business sector. A large share of European SMEs are family businesses where a relevant economic and social role is played by the *family workers* (European Commission 2013 and 2014).

According to the *International Labour Organization*³ definition, (*unpaid*) *family workers* are persons who help another member of the family to run an agricultural holding or other business, provided: i) there is a direct family link with the owner (son/daughter or husband/wife); ii) they are not considered as employees; iii) they live in the same household as the owner of the business or farm, or, in a slightly broader interpretation, in a house located on the same plot of land and with common household interests; iv) they often receive a remuneration in the form of fringe benefits and payments in kind.

The essential features of the family worker are, therefore, the relationship with the owner of the business, the condition of self-employment, the absence of a monetary remuneration and the sharing the same dwelling of the owner. The *family worker*

<i>Company category</i>	<i>Employees</i>	<i>Turnover</i>	<i>Balance sheet total</i>
Micro	< 10	< € 2 million	< € 2 million
Small	< 50	< € 10 million	< € 10 million
Medium	< 250	< € 50 million	< € 43 million

² The non-financial business sector includes the following industrial sectors: “mining and quarrying”, “manufacturing”, “electricity, gas, steam and air condition supply”, “water supply, sewerage, waste management and remediation activities”, “construction”, “wholesale and retail trade, repair of motor vehicles and motorcycles”, “transportation and storage”, “accommodation and food services”, “information and communication”, “real estate activities”, “professional, scientific and technical activities” and “administrative and support services”. The industries not covered by the analysis include the following: “agriculture, forestry and fishing”, “public administration and defence”; “compulsory social security”, “education”, “human health and social work activities”, “arts, entertainment and recreation”, “other service activities”, “activities of households as employers; undifferentiated goods- and services-producing activities of households for own use” and “activities of extraterritorial organizations and bodies”.

³ *International Classification by Status in Employment* [ICSE-International Labour Organization, ILO] <http://laborsta.ilo.org/applv8/data/icsee.html>.

fits, therefore, fully in what Bourdieu (1986) called *the* [households] *actual or potential resources, linked to possession of a durable network of more or less institutionalized relationships [...] such as those of kinship that are at once necessary and elective, implying durable obligations subjectively felt (feeling of gratitude, respect, friendship and so on) or institutionally guaranteed (rights), thus reducing people social exclusion which represents a significant nonmaterial dimension of poverty* (Sen, 2000).

Such relationships represent, therefore, a particular important resource that can be assimilated to a form of capital, the so-called social capital, which is rooted in networks of interpersonal relationships characterized by mutual trust and that, as stated by Grootaert and van Bastelaer (2001) and Woolcock (2002), has a specific importance especially for those families *who are often described as deficient along other vectors such as human, physical, and financial capital*. The networks of interpersonal relationships have, in fact, a productive capacity that extends far beyond the creation of purely economic results, encouraging the development of civic-minded cooperative behavior models (Knack and Keefer, 1997) that allow families easier access to economic and financial resources, to information or assistance, and from which they can derive benefits such as, for example, a better social status, better education, more and better job opportunities, and so on.

In addition, living in a social context, where mutual trust replaces suspicion and fear, produces a positive effect on the perception of poverty, reducing households socio-economic vulnerability (Helliwell, 2001). The family workers play, therefore, a crucial role within the family, both economic, as they help without remuneration, another member of the family to run a business, and social, as they contribute to fostering trust and cohesion which alleviate household poverty.

The aim of this paper is to highlight the main characteristics of family workers in the European Union (how many? who are they?) and the role played within households as a tool to alleviate poverty. The subsequent objective is to evaluate the effect of these characteristics on the condition of family worker in order to identify the main factors that lead a household member to choose this specific employment status. The analysis will be based on EU-SILC 2012 survey, the Eurostat project that aims to monitor the income and living conditions of the European

Union households for a responsible planning of economic and social policies⁴.

2. Family workers: behavioural patterns in the European Union

Unpaid family workers are in all respect part of the workforce according the EU Regulation 1897/2000. In 2012 family workers account for just 1.2% of the European employed. The majority of family workers are women (74.9%) and they account for 1.8% of female employment compared to just 0.6% of male employment (Tab. 1).

Tab. 1 - Status in employment in the European Union (% within gender).

<i>Status in employment</i>	<i>Gender</i>		
	Male	Female	Total
Self-employed with employees	4.1	1.6	2.9
Self-employed without employees	11.8	8.1	10.0
Employee	83.5	88.5	86.0
Family worker	0.6	1.8	1.2
<i>Total</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

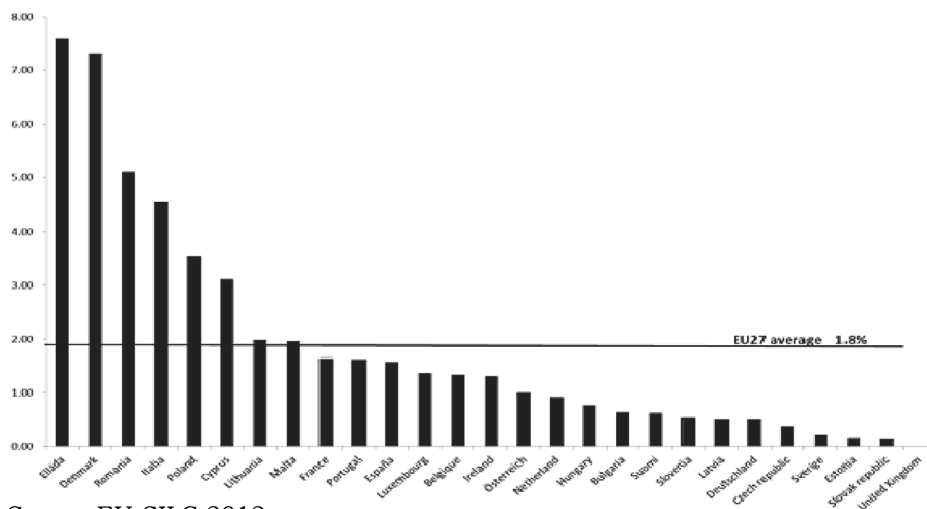
Source: EU-SILC 2012.

In 2012 in about 1.8% of households resident in the European Union (EU27) there is at least one family worker, for a total of about 4.3 million units in around 4 million households.

There is a strong country dimension to the distribution of family workers (Fig. 1). As a matter of fact, the above mentioned percentage has a high variability with values significantly above the average in Greece (7.6%), Denmark (7.3%), Romania (5.1%), Italy (4.6%), Poland (3.6%) and Cyprus (3.1%).

⁴ The data were made available by the research contract Eurostat EU-SILC/2011/18. In the EU-SILC survey, the status *family worker* refers to the main job of individuals aged 15 years and over. If multiple jobs are held or were held, the main job should be the one with the greatest number of hours usually worked.

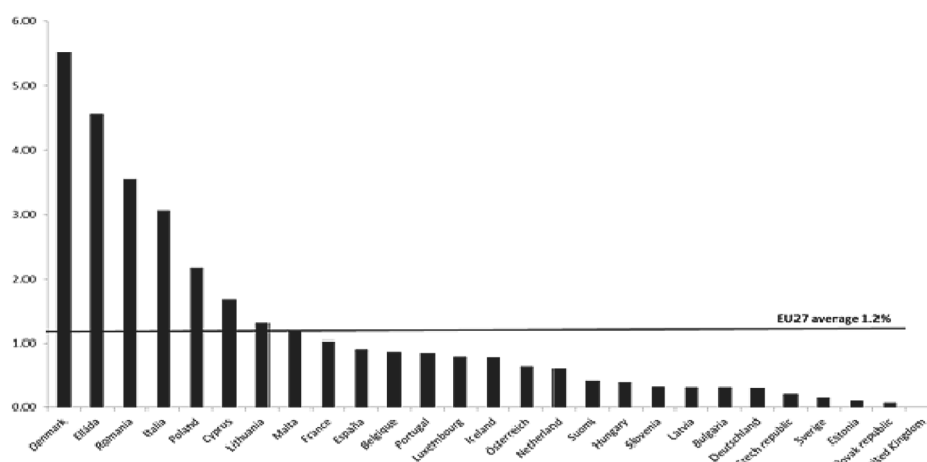
Fig. 1 - Households with at least one family worker (% with respect to households resident in EU27).



Source: EU-SILC 2012.

Similar remarks can be made if we analyze the phenomenon in terms of employed. Family workers account for more than the EU27 average (1.2%) in Denmark (5.5%), Greece (4.6%), Romania (3.6%), Italy (3.1%), Poland (2.2%) and Cyprus (1.7%) (Fig. 2).

Fig. 2 - Status in employment: % family workers with respect to total employment (EU27).

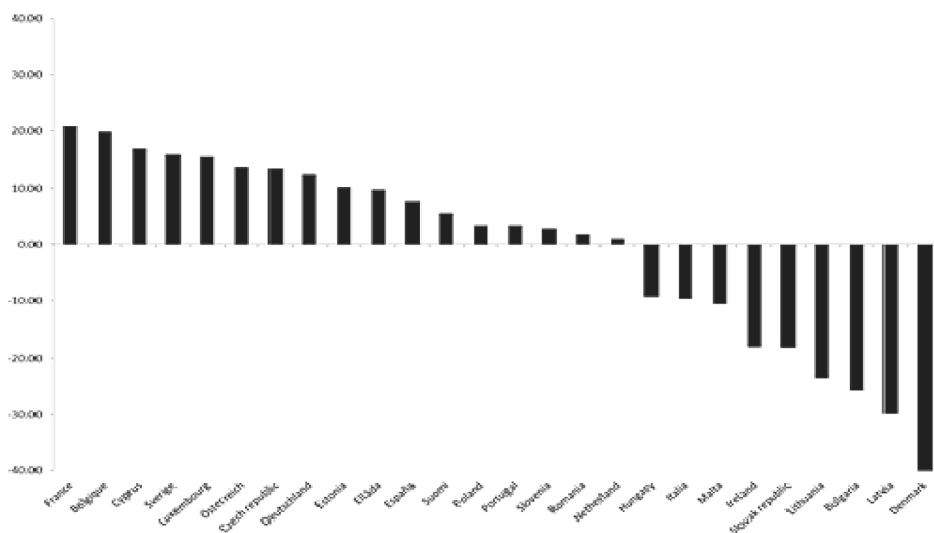


Source: EU-SILC 2012.

However, the status of family workers strongly depends also on their socio-economic characteristics and on those of the household they belong to.

If on the one hand in EU27, as already underlined, the majority of family workers are female (74.9%), on the other hand this figure varies substantially across the 27 countries (Fig. 3) and more specifically from a maximum of 95.8% in France to 34.6% in Denmark. In particular, in the countries where the percentage of family workers with respect to employed is higher than the European average, different trends are detected. For example in Denmark and Greece, with the highest percentage of family workers in Europe with respect to the employed (5.5% and 4.6% respectively), the incidence of females is respectively the lowest (34.6%) and one of the highest (84.7%). Moreover, in Greece the exclusion of family workers reduces the female employment rate by nearly 2%.

Fig. 3 - Family workers and gender: differences between national % female and the EU27 average.



Source: EU-SILC 2012.

Another important aspect characterizing family workers across countries is the age. The median age of employed people in the European Union is 49 years with a range of only 6 years: the minimum value is detected in Cyprus (45) and the maximum value in 98

Bulgaria, Hungary and Finland (51). On the contrary, the median age of family workers in EU27 is 60 years, significantly higher than the previous one, with a difference of 11 years (Tab. 2).

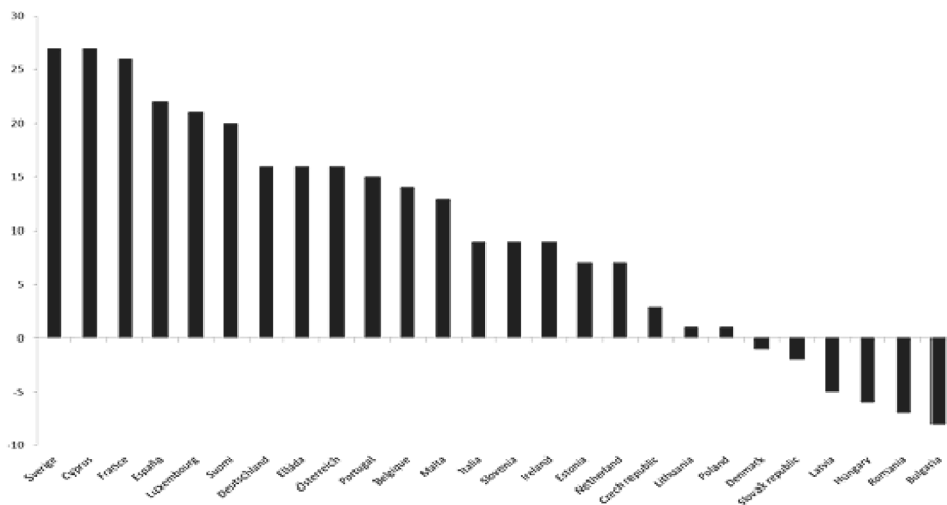
Tab. 2 - Median age of employed in the European Union, according to status in employment.

<i>Status in employment</i>	<i>Age (median)</i>
Self-employed with employees	52
Self-employed without employees	53
Employee	48
Family worker	60
<i>Total</i>	<i>49</i>

Source: EU-SILC 2012.

The difference in median age between family workers and the overall employed people is even more marked in some countries such as Sweden and Cyprus (+27), France (+26), Spain (+22), Luxembourg (+21), Finland (+20) where the family worker is ‘old’ with a median age of 70 years or more. The lowest values are recorded in Bulgaria, Romania, Hungary and Latvia, where we find the youngest family workers in Europe (Fig. 4).

Fig. 4 - Family workers and age: differences between median age of family workers and median age of employed in EU27.



Source: EU-SILC 2012.

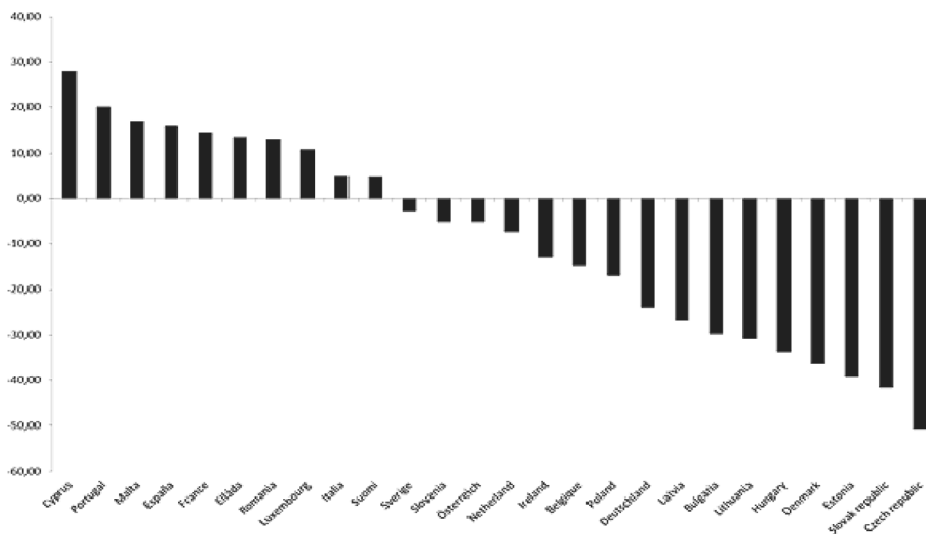
The family workers generally have a medium-low educational qualification. As a matter of fact, around 60% of family workers have a qualification lower than or equal to the lower secondary while this percentage does not reach 30% with respect to overall employed people in European Union (Tab. 3).

Tab. 3 - Family workers and overall employed people in the European Union, according to educational qualification (% EU27).

<i>Educational qualification</i>	<i>Family workers</i>	<i>Overall</i>
Pre-primary	4.4	0.6
Primary	32.0	10.3
Lower secondary	22.6	16.0
Upper secondary	31.9	42.4
Post-secondary	1.4	3.3
Tertiary	7.7	27.3
<i>Total</i>	<i>100.0</i>	<i>100.0</i>

Source: EU-SILC 2012.

Fig. 5 - Family workers and educational qualification: differences between national percentage of low educated and EU27 average.



Source: EU-SILC 2012.

The incidence of low levels of education within family workers is higher than 70% in Cyprus, Portugal, Malta, Spain, France, Greece and Romania (Fig. 5), that is, where family workers are more frequent.

The condition of family worker is not always well perceived; 35.9% of family workers claims to be self-employed and therefore they declare the true status; however, the majority of family workers claim to be non-active, in particular retired and fulfilling domestic tasks (Tab. 4).

Tab. 4 - Family workers and overall employed people in the European Union, according to self-defined economic status (% EU27).

<i>Self-defined economic status</i>	<i>Family worker</i>	<i>Overall</i>
Employee working full-time	5.3	40.2
Employee working part-time	1.6	9.1
Self-employed working full-time	27.3	6.8
Self-employed working part-time	8.6	1.3
Unemployed	3.9	6.7
Pupil, student, further training, unpaid work experience	2.0	1.5
In retirement /in early retirement / has given up business	34.2	25.8
Permanently disabled or/and unfit to work	2.2	2.6
In compulsory military community or service	0.0	0.0
Fulfilling domestic tasks and care responsibilities	11.9	4.4
Other inactive person	3.1	1.5
<i>Totale</i>	<i>100.0</i>	<i>100.0</i>

Source: EU-SILC 2012.

Nearly 60% of family workers belong to the poorest households (1st and 2nd quintile - Tab. 5) and around 70% belong to households with difficulties to make ends meet (Tab. 6).

Summing up the main findings, the family workers are predominantly female, aged, low educated, non-active (retired or fulfilling domestic task), belonging to low income households unable to make ends meet. However, the characteristics of family workers vary considerably across the European countries as the results of the multiple correspondence analysis (MCA) show, highlighting the distinct role played by family workers within each country.

Tab. 5 - Family workers and overall employed people in the European Union, according to household disposable income (% EU27).

Household disposable income	<i>Family worker</i>	<i>Overall</i>
1 st quintile	37.2	20.5
2 nd quintile	21.4	18.2
3 rd quintile	16.6	19.0
4 th quintile	12.3	20.7
5 th quintile	12.4	21.5
<i>Total</i>	<i>100.0</i>	<i>100.0</i>

Source: EU-SILC 2012.

Tab. 6 - Family workers and overall employed people in the European Union, according to household ability to make ends meet (% EU27).

<i>Household ability to make ends meet</i>	<i>Family worker</i>	<i>Overall</i>
With great difficulty	13.7	9.6
With difficulty	20.2	15.4
With some difficulty	35.2	27.9
Fairly easily	20.3	27.0
Easily	8.2	15.0
Very easily	2.4	5.0
<i>Total</i>	<i>100.0</i>	<i>100.0</i>

Source: EU-SILC 2012.

3. Family workers: an insight look at Europe through a multiple correspondence analysis and the estimation of a probit model

3.1 Data and methodology

The multiple correspondence analysis (MCA) is carried out so as to depict the main associations between the family worker country of residence and a set of variables describing, respective-

ly, the family workers socioeconomic characteristics and those of the household they belong to: age, gender, marital status, consensual union, education, self-defined current economic status, work intensity status, branch of activity, general health, household type, equivalized disposable income, ability to make ends meet, poverty and deprivation indicator.

A complete list of all variables used in this analysis is provided in the Appendix (Tab. A1).

Subsequently, the effect of individual and socioeconomic characteristics on the status of family worker has been evaluated through a statistical model. Since the dependent variable is binary (Are you a family worker? Yes, No), a binary response model is appropriate; here we consider a *probit* one.

In general, a binary response model is a type of regression that expresses the probability of an event by means of a nonlinear function of the regressors, $\Pr(Y=1 | X)=F(X\beta)$; in the probit specification the function $F(\cdot)$ is the cumulative distribution function of the standard normal distribution. In such a model, the estimates obtained for the parameters β 's are useful to understand the effect of the corresponding covariates on the response probability; as a matter of fact, even if this effect does not coincide with the β value, its extent is directly proportional to it.

3.2 Results of the MCA

The variability explained by the first two factorial axes of MCA is 74.2% (computed with the correction formula due to Benzécri (1979)). The interpretation of the results will be limited to the first and second factorial axes, as they seem to give answer to the questions this paper aims to investigate. A detailed description of the results is presented in Figure 6.

Actually, the results of the MCA show that in Europe the role of family worker within the household depends on two aspects:

- i) his/her age, gender and consequently the self-defined economic status (measured by the first factorial axis);
- ii) the household economic status and distress (measured by the second factorial axis).

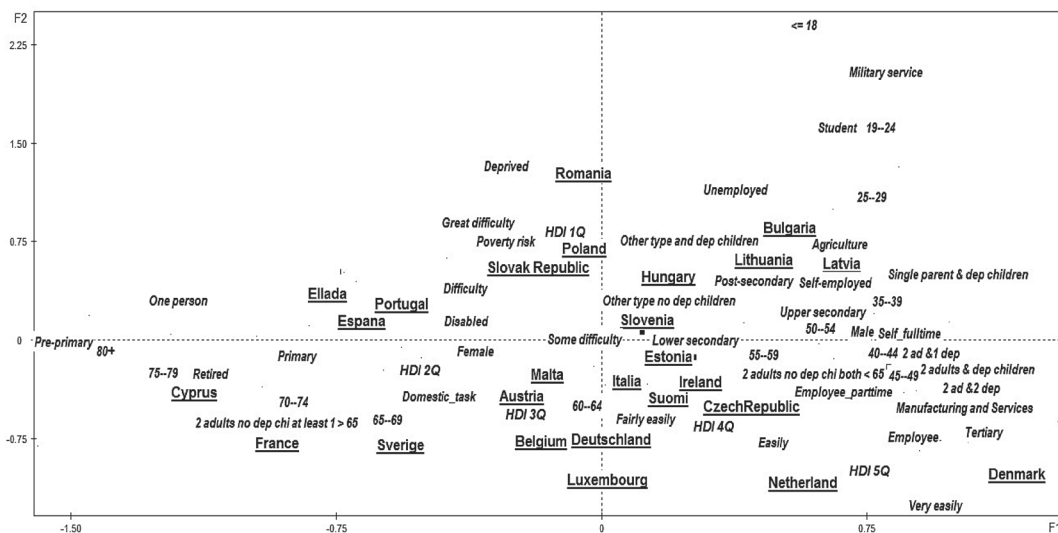
In particular, on the left side of the graph we find those countries where the family workers are predominantly female, on average older than 65 years, define themselves retired or fulfilling do-

mestic tasks. The countries form two distinct groups: the one, in the 3rd quadrant, where the status of family worker can be associated with non-active people who wish to spend free time usefully (Cyprus, France and Sweden); the one in the 2nd quadrant, where the status of family worker can be associated with non-active people who need to work for economic reasons (Greece, Spain, Portugal, and so on).

On the contrary, on the right side of the figure we find countries where the family worker defines his/herself active (employed or unemployed). This is the case of the poorest countries, primarily those in Eastern Europe where the status assumes the true identity of self-employment or in a broader sense active for the youngest unemployed.

In wealthier countries, the North-European, the status of family worker is rather similar to that of the employed, as they claim to be.

Fig. 6 - Multiple correspondence analysis: projection of active variables on F1 and F2.



Source: EU-SILC 2012.

3.3 Results of the probit model estimation

As already pointed out in section 3.1, in order to understand the effect of a covariate on the probability of being a family worker, we can look at the corresponding parameter estimates of the probit model. Table A2 in the Appendix shows that the signs of the estimated parameters are coherent with expectations and MCA⁵. In particular, the probability of being a family worker remarkably increases if the worker is a female and lives in a thinly populated or intermediate area; furthermore, it grows with age (see Fig. 7) and decreases with educational level (see Fig. 8), while it is higher if the worker belongs to a household at risk of poverty or, conversely, high-income, is married and lives in a Mediterranean or Northern country⁶.

As regards the performance of the estimated model, a good indicator is the percent correctly predicted and the results are rather satisfying and encouraging. As a matter of fact, such a percentage is 74.1 on the whole, 72.91 for family workers and 74.11 for not family workers, respectively⁷.

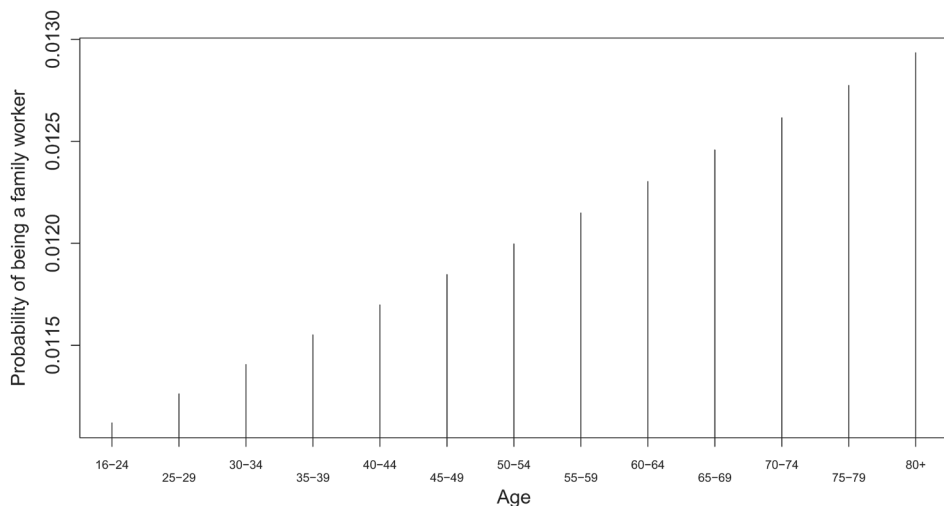
Our final aim was to evaluate if the family workers play a relevant role as a tool to alleviate household poverty. We therefore considered the available variable 'ability to make ends meet', observed at household level, as a good proxy of the perceived poverty and we explained it by means of few covariates. In particular, as explanatory variables of perceived poverty we considered the household income (certainly the primary influence factor of per-

⁵ It is worth noting that not all the active variables considered in the MCA have showed significant effect in the probit model and, viceversa: some variables included in the probit model (like tenure status and degree of urbanization) do not significantly contribute to the identification of the first two factorial axes and therefore have been excluded from the first analysis.

⁶ In this analysis, European countries have been grouped into four areas: Mediterranean, Northern, Eastern and Central-Western. The Mediterranean area includes Cyprus, Greece, Italy, Malta, Portugal and Spain; the Northern one includes Denmark, Finland, Netherlands and Sweden; the Eastern area includes Bulgaria, Czech Republic, Estonia, Hungary, Lithuania, Latvia, Poland, Romania, Slovenia and Slovakia; finally the Central Western area includes all the remaining countries. This choice is due to two main reasons: i) to reduce the complexity of the model; ii) to obtain geographical units in which the number of family workers is not low or even null (as, for example, in the case of UK).

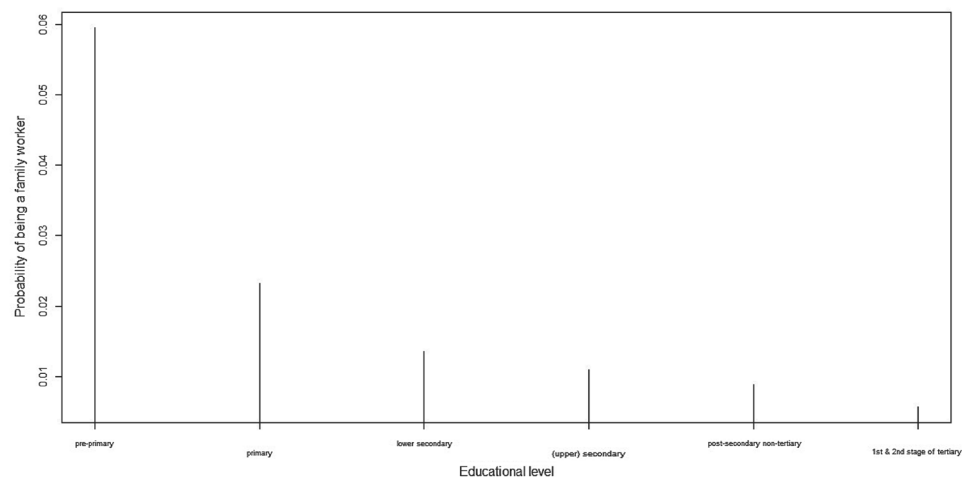
⁷ It is worth noting that these values have been obtained taking into account that the two possible categories of the worker condition (being or not a family worker) have not the same probability.

Fig. 7 - Estimated probabilities in the probit model according to age.



Source: Our elaboration of EU-SILC 2012.

Fig. 8 - Estimated probabilities in the probit model according to educational qualification.



Source: Our elaboration of EU-SILC 2012.

ceived poverty), an indicator variable for the presence of a family worker and two indicator variables for the geographical areas where the family workers are more frequent (precisely, the Mediterranean and the Eastern areas). We estimated an ordered logit

Tab. 7 - Estimated response probabilities in the ordered logit model, for a family worker and a non-family worker.

Response categories	Presence of family worker	
	Yes	No
With great difficulty	.105	.113
With difficulty	.167	.173
With some difficulty	.291	.293
Fairly easily	.239	.234
Easily	.143	.137
Very easily	.055	.051

Source: Our elaboration of EU-SILC 2012.

model⁸, which showed a statistically significant effect of the presence of a family worker on the response variable; furthermore, this effect is coherent with our expectations. More precisely, conditionally on the household income and the two geographical areas, the parameter estimate corresponding to the family worker variable is positive; this implies that the presence of a family worker yields positive effects on the perception of poverty. Actually, looking at the estimated probabilities corresponding to all the response categories, reported in Tab. 7, it is evident that a family with family workers has a lower probability of making ends meet with difficulties (some or great) and a bigger probability to do it easily (fairly or very).

These results confirm the idea that the presence of family workers in a household can help to alleviate poverty (at least the perceived one).

4. Conclusion

Despite the slight relevance within the total employment, the family workers play an important role within households: an economic and social resource with a different function depending on

⁸ This methodological choice depends on the fact that the response variable is a categorical one, with the following six ordered categories: *with great difficulty*; *with difficulty*; *with some difficulty*; *fairly easily*; *easily*; *very easily*.

the country of residence, as the MCA and the estimated probit model show.

Future research should be devoted to understand if and to what extent the status of family worker is affected by times of crisis, and then, in the countries where the family workers are predominantly young if it represents a choice or is due purely to economic reasons and difficulties in job searching.

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Appendix

Tab. A1 - List of EU-SILC Indicators considered in the analysis.

Label	Variable name	Categories
AGE	Age	<= 18
		19-24
		25-29
		30-34
		35-39
		40-44
		45-49
		50-54
		55-59
		60-64
		65-69
70-74		
75-79		
80+		
GEN	Gender	Male
		Female
MST	Marital status	Never married
		Married
		Separated
		Widowed
		Divorced
COU	Consensual union	Yes, on a legal basis
		Yes, without a legal basis
		No
EDU	Educational qualification	Pre-primary
		Primary
		Lower secondary
		Upper secondary
		Post-secondary
		Tertiary education
EMP	Self-defined current economic status	Employee working full-time
		Employee working part-time
		Self-employed working full-time
		Self-employed working part-time
		Unemployed
		Pupil, student, further training
		In retirement
		Disabled
		In compulsory military service
		Fulfilling domestic tasks
Other inactive person		
LWI	Low work intensity status	No LWI
		LWI

Label	Variable name	Categories
BRA	Branch of activity	Agriculture Manufacturing Construction Wholesale retail Transport and storage Hotels and restaurants Information and communication Financial and insurance activities Real estate, renting and business activities PA Education Health and social work Other
HTH	General health	Very good Good Fair Bad Very bad
TYPE	Household type	One person household 2 adults both adults < 65 years 2 adults at least one adult ≥65 year Other without dependent children Single parent and ≥ 1 dep chi 2 adults one dependent child 2 adults two dependent children 2 adults and ≥ 3 dep children Other households and dep children Other type
HDI	Equivalized disposable income	1st quintile 2nd quintile 3rd quintile 4th quintile 5th quintile
AME	Ability to make end meet	With great difficulty With difficulty With some difficulty Fairly easily Easily Very easily
POI	Poverty indicator	Not at risk of poverty At risk of poverty
SMD	Severely materially deprived	Not severely deprived Severely deprived

Tab. A2 - Parameter estimates of the Probit model.

Covariates	(base category) categories	<i>Estimate</i>	<i>s.e.</i>	<i>p-value</i>
Age		.011	.003	0.000
Tenure status	(outright owner)			
	owner paying mortgage	-.251	.022	0.000
	tenant/subtenant	-.285	.029	0.000
	reduced or null rent	-.117	.024	0.000
Degree of urbanisation	(densely populated area)			
	intermediate area	.166	.019	0.000
	thinly populated area	.384	.017	0.000
Poverty indicator	(not at risk of poverty)			
	at risk of poverty	.346	.017	0.000
Household type	(2 adults, at least 1 over 65, no kids)			
	one person	.032	.030	0.293
	2 adults under 65, no dependent kids	.102	.026	0.000
	other without dependent kids	.159	.027	0.000
	1 parent, 1 or more dep. kids	-.140	.064	0.029
	2 adults, 1 or more dep. kids	.025	.032	0.429
	other with dependent kids	.215	.030	0.000
	other	.212	.141	0.131
Marital status	(never married/widowed)			
	married	-.003	.017	0.874
	separated	-.199	.067	0.003
	divorced	-.422	.042	0.000
Equivalent disposable income	(quintiles 1-3)			
	4th quintile	-.043	.023	0.063
	5th quintile	.114	.023	0.000
Educational level	(pre-primary)			
	primary education	-.466	.034	0.000
	lower secondary education	-.701	.036	0.000
	upper secondary education	-.789	.037	0.000
	post-secondary non-tertiary education	-.875	.053	0.000
	1st & 2nd stage of tertiary education	-1.049	.041	0.000

Covariates	(base category) categories	<i>Estimate</i>	<i>s.e.</i>	<i>p-value</i>
Health status	(very good)			
	good	-.110	.019	0.000
	fair	-.150	.023	0.000
	bad/very bad	-.146	.027	0.000
Gender	(male)			
	female	.467	.014	0.000
Deprivation indicator	(not severely deprived)			
	severely deprived	-.079	.021	0.000
Geographical area	(Eastern)			
	Mediterranean	.342	.018	0.000
	Northern	.368	.032	0.000
	Central and Western	-.093	.024	0.000
<i>constant</i>		-2.178	.059	0.000