Poverty among the Hungarian Working Population

Emese, Bruder, PhD Candidate
Szent István University
2100 Gödöllő Páter Károly u. 1.
Hungary

Csilla, Obádovics
Associate Professor
University of West Hungary
9400 Sopron, Bajcsy-Zsilinszky utca 4.

Abstract

It is said, that having a job greatly reduces the risk of being poor. However, Eurofound (2010) showed, that 8% of the employed population was at risk of poverty in 2007 within the European Union, in a sense that disposing a per capita household income below 60% of the national median income. The European Union introduced a new indicator for measuring the extent of working poor in 2003. This methodology have been analysed and criticized ever since. In our analysis, we introduce a new methodology with which we map the risk of being poor within the employed population in Hungary, their extent, their social situation etc. Last but not least, we are looking at typical characteristics the working poor share. The common characteristics of the working poor population let us draw the inference of their economic, household, social and labour market characteristics, which drifted them to the group of working poor.

Keywords: working poor, measuring poverty

1. Introduction

The working poor gained a more prominent place in European development strategies since the introduction of the European Employment Strategy in 1997 and the Lisbon Treaty adopted in 2000. The fight for social inclusion in Europe led to the introduction of a new index – in addition to the Laeken indicators -, which is intended to measure the risk of poverty among the employed population. Since its introduction, this indicator has been analysed and criticised by many scholars. (Lelièvre, Marlier and Pétour 2004, Ponthieux 2007, Cazenave 2006)

On one hand, the European approach neglects the conceptual problem that the working poor are at the crossroads of two measurement levels, since the employment is interpreted in an individual level, while the unit of analysis in poverty research is usually the household in most of the European studies. On the other hand, the index assumes that the household income is pooled and distributed equally between the members of the household. This assumption, however, is still in need for a scientific verification. Finally, applying the household incomes in poverty measures may lead to the underestimation of women's risk of poverty, as women are often live with men, whose individual income lifts the household above the poverty line, while men often lives together with women, who are less active in the labour market (Ponthieux 2009).

This study - reinforcing some others - (e.g. Smock 1994, Ponthieux 2009) is looking for an alternative method of handling the concept of working poor and aims at eliminating its conceptual and methodological difficulties. Firstly, this method dissolves a methodologically sensitive problem, namely that the labour market activity is an individual state, while the poverty level is generally interpreted on household level. Secondly, it compasses the question of the income pooling assumption. In order to react on this undoubtedly emerging social problem with appropriate policy measures, it is essential to accurately identify this group of society. The intention of the present analysis lies in this.

2. Literature review

The existing literature is extremely heterogeneous concerning working poor methodology. The rate of working poverty is very sensitive on some key terms, like how we define poor, if we define it in a monetary manner, what kind of income do we take into consideration, or how do we defined a worker. Although researchers agree that the working poor are those, who are working but poor, the methodological/statistical implementations can alter a lot.

The concept of poverty in literature is rather solid in European terms. Most researchers define poverty with a relative poverty line. This means that a person is poor, if the per capita income of his/her household falls below the 50 or 60 percent of the national median income. In order to take into account the needs of the household members, the so-called OECD equivalence scale is usually applied, according to which different members of the household are weighted differently, according to the estimated consumption (needs). The office of the American employment statistics (American Bureau of Labor Statistics, BLS) defines an absolute poverty threshold, which varies depending on the size of the household. The poverty threshold is expressed in dollars. This method is also applied by Klein and Rones (1989) and Gardner and Herz (1992) American researchers. Their Australian colleagues (Robson – Rogers 2005) prefer the European formula; the relative poverty line defined as the 50% of the national median income.

The definition of worker also shows high variety in Europe. As of the French national statistical office (INSEE), a worker is a person, who worked at least six months in the labour market during the reference year, of which minimum one month have been spent in actual employment. The European approach - which is accepted by Eurostat to measure the risk of in-work poverty – determines workers as people who worked at the time of the survey and who spent the reference year, with at least 7 months of actual employment. The least strict definition is accepted by the American BLS, according to whom a worker is a person who spent at least 27 weeks of the reference year on the labour market either working or looking for a job.

In terms of conceptualisation, the next essential question is to determine income on which we base our poverty line. After reviewing the existing literature, a high variety of approaches can be observed. Most of the studies use the per capita income of the household for mapping working poverty. The Eurofound (2010) study for example defines income as the total revenue of individuals living in a household received over the reference year that is, the sum of wages and salaries, social transfers, capital receipts and other items, net of any taxes or social security contributions paid. There are, however, other approaches, which for example, only include income, which directly originates from employment activity (Ponthieux 2009).

Some approaches suggest that the household as the unit on analysis leads to the false evaluation of the working poor (Wooley and Marchal 1994, Kabeer 1994, Meulders et al. 2009). Ponthieux (2009) argues, that the household acts as a 'fig-leaf' when one would like to determine the individual poverty of the household members, since some people are over the poverty line, because they live together with persons who raise the household income above the poverty threshold. The household approach assigns the same poverty line to all of the household members, neglecting that the individuals contribute to the household income differently. Sen (1983 and 1990) also drew a conclusion by introducing the notion of "perceived contribution response" which suggests that women and girls receive less from household resources because their contributions to household income are valued less than those of men and boys. The present article draws the attention to the fact, that in a society where we register 1.6 divorces to 1 marriage (2009 data) and the divorce ratio increased from 0.31 to 0.45 in 17 years (1990-2007) (Földházi 2009) and where the pooling of all household incomes is not proven, working with the individual incomes may be more appropriate, i.e. the observation unit should be the individual instead of the household.

Ponthieux (2009) - in her above mentioned article - introduced the notion of 'economic poverty' also known as the 'poverty in earned income' which is a concept based on individual incomes. In her paper she only took market income (earned income) into account, which derives directly from employment. These are the wages and salaries, self-employed income, unemployment and sickness benefits. This study, - unlike the Eurofound (2010) study - showed that women are more exposed to the risk of in-work poverty then men. Meulders at al. (2009) also developed a methodology, by which the poverty of individuals can be determined irrespective of their household composition. The present paper takes this methodology over, and introduces the most important parameters of this methodology in the next section.

3. Methodology

The paper analyses the parameters of working poor based on the 2008 wave of EU-SILC (European Union Statistics on Income and Living Conditions). This data is collected by Eurostat, the first wave of Hungarian data was collected in 2004 (wave 2005). The sample size of EU-SILC cross-sectional database throughout Europe is 136,750 households and 282,900 individuals. As of the Eurostat obligation, Hungary has to guarantee a sample size of 7,450 households and 10,250 individuals. The sample size in Hungary have been increasing since 2005, the 2008 dataset includes more than 18,000 records of individuals over 16 years of age. As it is well known, changing some key terms and definitions may cause significant differences in terms of results in any research. Before we present any of our results, we clarify the definitions which we accepted during the analysis. The definition of worker is as follows: the persons who were employed/self-employed full-time during at least 7 months of the reference year. The concept of poverty has been put to individual level and it is defined as those individuals, whose individual income falls below the 60% of the national median of the same income. The individual incomes have been calculated by adding up the individual income of each worker with the individualised household income of the same people. Household incomes like family allowances and housing allowances have been split among the adult or parent members of the household depending on the nature of the specific income. In each case, the computations have been made applying the individual weights provided by Eurostat.

The EU-SILC database provides a broad variety of individual information for example income received from employment, or from self-employment, the amount of unemployment benefit, sickness benefit, pension and disability pension as well as the training/education related allowances. The available information concerning income on household level is for example the family allowance, housing allowance, other transfers and the income from investment. After the determination of all income of the individuals, we calculated the 60% of the median of the same income, which served as a poverty threshold in this analysis. As a consequence, the poverty threshold in Hungary, have been set to 3,688 € / year[1]. Therefore, individuals whose income fell below this poverty line are designated poor, or more precisely, as at-risk of poverty. To summarise, a working poor person need to meet two criteria, to be poor, and to be in-work for at least half of the year.

4. Results

In our research we put the emphasis on identifying the most important attributes that characterise the group of working poor. We are looking for common characteristics that may affect workers' impoverishment. We declare, that without a throughout analysis within this social group and without a deeper understanding and mapping of the problem, finding a solution is impossible. Therefore, by looking at some of the poverty features measured at individual level, we compare the working poor population with the working not poor to see what are the most important differences between them. The comparisons were made using the individual weights given by the SILC database, so the cross tabulations shows the estimated numbers on the total population. As we stated above, it is conventional, that employment reduces the risk of poverty. Our first figure shows that among the full-time employed the proportion of those, who are still poor is 15%. This result contradicts to the above assumption. Applying the individual weights the estimated number of poor within full-time workers is about 526,000 people in Hungary.

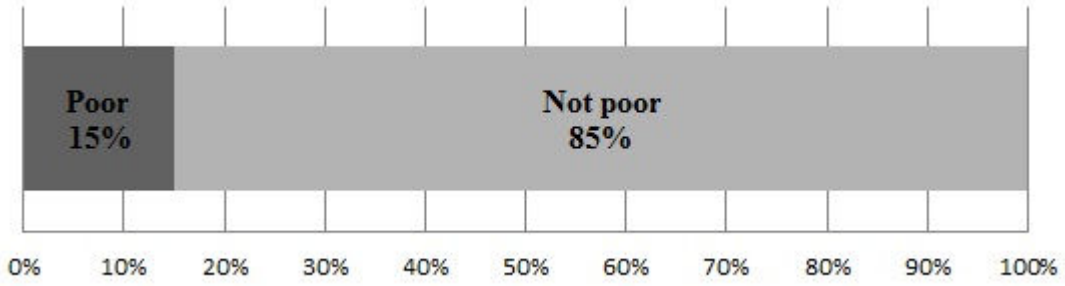

Figure 1: Poverty rate among full-time employees in Hungary
Source: EU-SILC 2008, own calculations

[1] Gross income. EU-SILC only provides gross incomes on individual level for Hungary

The analysis made by Ponthieux (2010) used the 2007 SILC data and based on the equivalent household income as the measure of poverty. Her analysis showed that among the full-time employees a smaller proportion, about 5% falls below the poverty line in Hungary. This leads us to the conclusion that the income of an additional member of the household typically reduces the risk of poverty, ie. relying on incomes earned by other household members lifts the poor members above the poverty line. We can say that the household hides the individuals with high risk of poverty. In this analysis we examine a hypothetical poverty in which individuals can only rely on their own individual income.

First of all we use crosstabulation to check whether the household definition and the individual definition of working poor overlap to each other. Table 1 shows that the assumption, that household hides poverty seems to prove true. 12% of individuals living in not poor household are actually poor as an individual. This is the case when the household can lift the individual above the poverty threshold. The more outstanding result can be seen in the second row. 55.4% of those individuals, how live in a poor households, are not poor as an individual earner. Contrary to the previous data, this is the case when the income of an individual lifts the household above the poverty threshold. As a conclusion, we can say that the latter appears more often in Hungary.

Table 1: Working individuals belonging to households

			Individual		Total
			Not poor	Poor	
Household	Not poor	*Pop. size*	6,431	880	7,311
		%	88.0%	12.0%	100.0%
	Poor	*Pop. size*	227	183	410
		%	55.4%	44.6%	100.0%
Total		*Pop. size*	6,658	1,063	7,721
		%	86.2%	13.8%	100.0%

Sig. 0.000
Source: EU-SILC 2008, own calculations

Table 1 showed the bias between the household and the individual definition of working poor. As next step towards the identification of working poor, we tested the gender aspect of the problem. Both in Eurofound (2010) and Ponthieux (2010) study, a higher rate of men fell below the poverty line than women based on their equivalised household income. This phenomenon is partly due to the fact that men often live with women who are less active in the labour market or with women disposing lower incomes. Here we note that in Hungary, part-time employment is much lower than the European average. Based on the SILC data, 4.8% of employees worked part-time in 2007 in Hungary. This means that in Eurofound (2010) and Ponthieux (2010) Hungarian gender comparisons are only slightly affected with the presence of part-time workers in the country. In the followings, we examine the gender difference in the risk of poverty based on individual incomes. Our results can be seen in table 2.

Table 2: Distribution of working poor and not poor by gender

		Workers		Total
		Not poor	Poor	
Men	*Pop. size**	1,712,763	280,243	1,993,006
	%	85.9	14.1	100.0
Women	*Pop. size**	1,368,247	245,444	1,613,691
	%	84.8	15.2	100.0
Total	*Pop. size**	3,081,010	525,687	3,606,697
	%	85.4	14.6	100.0

Sig. 0.000
*weighted population size
Source: EU-SILC 2008, own calculations

Table 2 shows that women are more exposed to the risk of poverty than men among the full-time employees, in a situation when one can only rely on his/her own earnings. This contradicts to the results made by other researchers on household level analysis, which showed, that men are more likely to be at risk of working poverty. Based on our assumptions, the life cycle also has an influence on being working poor. The younger workers, new entrants to the labour market typically have lower incomes, due to the lack of children, they do not benefit from family allowances or support.

Table 3: Distribution of working poor and not poor by age categories

		Workers		Total
		Not poor	**Poor**	
< 25 year	*Pop. size**	130,936	70,675	201,611
	%	64.9%	35.1%	100.0%
25 - 34 years	*Pop. size**	849,265	159,537	1,008,802
	%	84.2%	15.8%	100.0%
35 - 44 years	*Pop. size**	864,542	87,768	952,310
	%	90.8%	9.2%	100.0%
45 - 54 years	*Pop. size**	852,839	140,957	993,796
	%	85.8%	14.2%	100.0%
55 - 64 years	*Pop. size**	368,856	66,143	434,999
	%	84.8%	15.2%	100.0%
> 65 years	*Pop. size**	14,572	607	15,179
	%	96.0%	4.0%	100.0%
Total	*Pop. size**	3,081,010	525,687	3,606,697
	%	85.4%	14.6%	100.0%

Sig. 0.000
*weighted population size
Source: EU-SILC 2008, own calculations

Table 3 shows that the youngest age group is the most seriously affected with working poverty. For the same age category Ponthieux (2010) calculated 4% of working poverty in Hungary, which may indicate that the household's financial safety at this age is strong. The average age of the working poor and working not poor are significantly differ from each other. The t-test confirmed, that the difference between the average age of the two groups is not accidental, but due to systematic effects. The average age of the working poor is below those of not poor.

Table 4: Average age of working poor and not poor

	N*	**Mean**	**St. Deviation**	**St. Error**
Working not poor	3.081.010	41,25	10,600	0,006
Working poor	525.687	39,22	12,132	0,017

Sig_t 0,000
*weighted population size
Source: EU-SILC 2008, own calculations

The existences of skills, knowledge are key factors of avoiding poverty. The educational system and the lifelong learning institution make the continuous expansion of knowledge and persistent improvement available. However, the low wages of new entrants and sectorial low wages greatly increase the risk of poverty. We can examine the proportion of working poor by educational attainment level in table 5.

Table 5: Distribution of working poor and not poor by educational attainment[2]

		Workers		Total
		Not poor	Poor	
ISCED 1	*Pop. size**	20,064	10,833	30,897
	%	64.9%	35.1%	100.0%
ISCED 2	*Pop. size**	287,748	113,138	400,886
	%	71.8%	28.2%	100.0%
ISCED 3	*Pop. size**	1,821,123	352,157	2,173,280
	%	83.8%	16.2%	100.0%
ISCED 4	*Pop. size**	171,056	21,655	192,711
	%	88.8%	11.2%	100.0%
ISCED 5	*Pop. size**	781,019	27,904	808,923
	%	96.6%	3.4%	100.0%
Total	*Pop. size**	3,081,010	525,687	3,606,697
	%	85.4%	14.6%	100.0%

Sig. 0.000
*weighted population size
Source: EU-SILC 2008, own calculations

The results shown in table 5 prove that in some cases, having a degree from higher educational institution is not enough to avoid the risk of poverty. 3.4% of workers holding a diploma fell in the category of the working poor based on 2008 data. The foreseen transformation of higher education in Hungary, might result in a more competitive wage in the labour market for graduates, however, it should be noted that the educational attainment level is still an extremely important factor in avoiding poverty. We just have to have a look at the rate of working poor in the lowest educational level (35.1%). Experiencing poverty is not only due to the characteristics of individuals, but can also derive from external endowments. The household size significantly affects the per capita income. In our analysis, we ignore the cost of bringing up a child, but trying to look at the extent of the risk how a child contributes to the increase or decrease of poverty. To this end, we examine the number of children the working poor and not poor typically raise. It is important to note that in our calculations, the family allowances were divided equally between the parents.

Table 6: Distribution of working poor and not poor by the number of children

		Workers		Total
		Not poor	Poor	
No child	*Pop. size**	1,364,038	293,497	1,657,535
	%	82.3%	17.7%	100.0%
1 child	*Pop. size**	882,315	160,593	1,042,908
	%	84.6%	15.4%	100.0%
2 children	*Pop. size**	659,797	58,589	718,386
	%	91.8%	8.2%	100.0%
3 or more children	*Pop. size**	174,860	13,008	187,868
	%	93.1%	6.9%	100.0%
Total	*Pop. size**	3,081,010	525,687	3,606,697
	%	85.4%	14.6%	100.0%

Sig. 0.000
*weighted population size
Source: EU-SILC 2008, own calculations

[2] ISCED 1: Primary education
ISCED 2: Lower secondary education
ISCED 3: (Upper) secondary education
ISCED 4: Post-secondary non tertiary education
ISCED 5: First stage of tertiary education (not leading directly to an advanced research qualification)

Table 6 reveals that working individuals with three or more children have to face the lowest risk of poverty. This may arise from the Hungarian family support system; child allowances greatly reduce the risk of poverty.

After the analysis of some important features of working poverty, we involve some territorial elements in order to track the spatial aspects of working poor as well. In terms of Hungary, Eurostat undertook statistical representativeness on EU-SILC data on regional level (NUTS 1), they do not publish county-level or micro-regional level data. Detailed spatial analysis is not possible with regional level data, but we decided to deal with it in our study, sine it may give an overall picture of the spatial distribution of working poor. Table 7 shows the distribution of working poor and not poor in the breakdown of the three regions of Hungary.

Table 7: Distribution of working poor and not poor by region

		Workers		Total
		Not poor	Poor	
Central Hungary	*Pop. size**	1,039,374	129,367	1,168,741
	%	88.9%	11.1%	100.0%
Transdanubia	*Pop. size**	1,004,988	160,055	1,165,043
	%	86.3%	13.7%	100.0%
Great Plain and North	*Pop. size**	1,036,648	236,265	1,272,913
	%	81.4%	18.6%	100.0%
Total	*Pop. size**	3,081,010	525,687	3,606,697
	%	85.4%	14.6%	100.0%

Sig. 0.000
*weighted population size
Source: EU-SILC 2008, own calculations

In Great Plain and North approximately 240 thousand workers fall below the poverty line over 1.2 million full-time employees (weighted data). The Central Hungarian region has the lowest proportion of working poor; the relatively high incomes of the capital might contribute to this. Our method does not allow tracking regional differences in the purchasing power of income, we assume, that purchasing power differences level out income differences.

The crosstabulation with population density (Table 8) does not enable us getting information about the spatial presence of the working poor, but gives a somewhat more sophisticated view than the regional subdivisions. As of the EU-SILC methodology densely populated area is a contiguous set of local areas, each of which has a density superior to 500 inhabitants per square kilometre, where the total population for the set is at least 50,000 inhabitants. The intermediate area is a set of local areas, not belonging to a densely-populated area, each of which has a density superior to 100 inhabitants per square kilometre, and either with a total population for the set of at least 50,000 inhabitants or adjacent to a densely-populated area. A region is thinly-populated if it does belong neither to a densely-populated nor to an intermediate area.

Table 8: Distribution of working poor and not poor by population density

		Workers		Total
		Not poor	Poor	
Densely populated area	*Pop. size**	1,124,959	126,978	1,251,937
	%	89.9%	10.1%	100.0%
Intermediate area	*Pop. size**	639,004	108,570	747,574
	%	85.5%	14.5%	100.0%
Thinly-populated area	*Pop. size**	1,317,047	290,139	1,607,186
	%	81.9%	18.1%	100.0%
Total	*Pop. size**	3,081,010	525,687	3,606,697
	%	85.4%	14.6%	100.0%

Sig. 0.000
*weighted population size
Source: EU-SILC 2008, own calculations

Importing population density to the analysis allows us to get information about the number of working poor living in rural areas. The population density is typically lower in rural areas where the labour market activity is often aligned to seasonal agricultural work. However, urban areas are also affected with working poverty. This proves that in urban areas a great proportion of workers are touched by the risk of poverty despite the more reasonable incomes offered by larger settlements.

5. Summary

The European Union adopted the 'in-work poverty risk' social indicator in 2003, which was added to the Laeken indicators. The European definition of the working poor are those full- or part-time workers who live in a household whose equivalent per capita income is less than 60% of national median income. This indicator has been adopted and used by many researchers, as a kind of unquestionable indicator neglecting the fact that it has been built upon many presumptions; even though it may result in significant differences in the perception of the risk of working poverty as well as in the struggle against poverty.

The poverty measure based on individual incomes avoids the conceptual difficulties that accompany the topic of working poverty. The term combines two observation levels: the individual level (as employment is an individual status) and household level (because poverty is measured in the level of the household). It allows us to analyse poverty without presuming the pulling of household income, thus contributing to the more accurate identification working poor.

A notable bias is present between the European household definition and our individual definition of working poor. The analysis showed that the two definitions do not overlap. There are individuals living in not poor household who are actually poor as an individual and there are individuals, how live in poor households, but who are not experiencing poverty as an individual earner.

Comparisons between working poor and the non-poor groups showed that there are significant differences between these sub-groups based on the EU-SILC 2008 database. By using individual measure of poverty we found that there is a high proportion of working poverty in those workers, who does not have a child. The increase in the number of children results in the decrease of working poverty. We examined the spatial comparisons of working poverty, which led to the conclusion that the greatest proportion of working poor can be found in thinly-populated, typically rural areas. In spite of higher incomes in the densely populated, urban areas, these places neither hold out a low risk of working poverty.

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