

METHODOLOGICAL AND CONCEPTUAL DIFFICULTIES OF ANALYSING THE WORKING POOR POPULATION IN EUROPE

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ABSTRACT

The situation of the working poor received very little attention in Europe until the late '90s, and very few researchers or governmental organizations considered this issue to be of importance. The existence of the group of people who are working, but remain poor, gained a more prominent place in the European debate after 2000, when the European Union adopted the Lisbon Strategy with a focus on employment, economic, and social policies. A new indicator, the in-work poverty risk has been added to the Laeken indicators in 2003. The European Commission defined in-work poverty as those individuals, who are employed for at least half of the year and have an equalized household income below 60% of the national median income. Since its introduction, this indicator has been amply analyzed and criticized. In this paper our objective is to assess the conceptual and methodological questions and difficulties we faced even at the very beginning of the analysis of the working poor. This concerns conceptual formulation of the notion of the working poor, the whole debate on definitions of worker and poverty used in different analysis, the conflict of combining two levels of analysis, household and individual measures, the assumption of sharing within the household, possibilities of individualizing incomes while looking for statistical data support, weaknesses of the EU-SILC 2007 database concerning the individualized working poverty measure, etc.

Keywords: working poor, poverty, inequality

INTRODUCTION

The concept of working poor is often discussed by researchers as it seems that having an employment today is not an escape from poverty. Although all researchers agree that the working poor are persons who are working but who are poor, the statistical implementation of the notion tends to alter a lot. We can understand working poor as poor persons at work, or workers who are poor.

The European Commission emphasised the need for a common indicator which can detect the working poor population. Since the introduction of the European Employment Strategy in 1997 and the launch of the Lisbon strategy in 2000, working poverty has gained a more prominent place in the European debate. In the framework of the European process towards social inclusion and social protection and the European Employment Strategy, the European Union adopted a new social indicator in 2003, the “in work at risk of poverty rate”. This indicator has been amply analysed and criticized ever since (Lelièvre et al., 2004; Ponthieux, 2007; Cazenave, 2006).

In the present analysis, we sum up the conceptual and methodological problems and questions of the working poor population, we show our examples on Visegrád countries (CZ, HU, PL, SK) and the Benelux states (BE, NL, LU) as these two groups of states share a common history but a rather different path in European integration and economic development. We use the European definition of working poor but with fully individualised income measurement using the 2007 wave of the European Statistics on Income and Living Conditions (EU SILC).

Our objective is to draw the attention to the working poor population, to develop the way we can grasp this problem with finding the common characteristics of this group of people in Europe. We would like to know what are the differences within the EU, to what extent the situation is different in Western Europe and Eastern Europe, and what are the causes of being working poor.

CONCEPTS AND DEFINITIONS

The existing literature on working poverty is extremely heterogeneous in methodological terms. The rate of working poor is very sensitive to some basic assumptions made at the beginning of any analysis: the definition of worker, the definition of poor, the reference population, income and the unit of analysis.

Working poor are either understood as poor persons at work, or workers who are poor. *Table 1* shows the extent of working poor based on this two definitions.

Table 1

Percentage of working poor within the total population based on two definitions

	Poor persons at work	Workers who are poor
CZ	2.41	11.00
HU	6.53	20.61
PL	12.77	27.80
SK	8.62	29.75
V4	10.12	23.97
BE	6.49	14.63
NL	17.78	17.80
LU	8.39	20.04
Benelux	13.27	16.62

Most of the approaches neglect that the working poor are at the crossroads of a conceptual problem as employment is an individual status (since individuals who are employed not households) whereas poverty is commonly defined at the level of the household. Consequently, working poor combines two levels of analysis, the individual employment status and the household-based poverty measurement. This is the case in the European approach as well, where being poor is defined based on an equivalised household income. As an equivalence scale, the so called “OECD-

modified equivalence scale” is used, which assigns a value of 1 to the household head, 0.5 to each additional adult member and 0.3 to each child. This method bases on assumptions about economies of scale in consumption as well as on judgments about the needs of each individuals in the household such as children or the elderly (OECD, 2008). However, this causes problems in the interpretation, when we would like to investigate the link between work and poverty.

New approaches suggest, that taking the household as the income recipient unit leads to a false evaluation of poverty (Wooley and Marchal, 1994; Kabeer, 1994; Meulders et al., 2009; Ponthieux, 2009). Table 2 shows the results in the extent of working poor if choosing an individual or a household based income measurement. The methodology of the individual income measurement can be found in the chapter: Methodological notes.

Table 2

The extent of working poor within the total population based on individual and household income measurement, %

	Individual	Household
CZ	1	3
HU	3	6
PL	6	12
SK	4	5
V4	5	9
BE	3	4
NL	5	5
LU	5	9
Benelux	4	5

Source: *own calculation* (individual), *Eurofound*, 2010 (household)

The European "at risk of poverty rate" using the equivalence scale implies the clear assumption that the incomes are fully pooled and shared within the household members. However, an equal division of income within the household seems an abstract notion rather than a real life fact. Studies have evaluated the degree of income pooling within households, Sen (1990), among others also drew a disproof conclusion by introducing the notion of “perceived contribution response” which suggests that women receive less from household resources because their contributions to household income are valued less than those of men. We argue that individual measures are more appropriate in a society where the divorce rates grow continuously since the 1960s (González and Viitanen, 2006). We would like to see how each individual would perform if he/she could only rely on his/her own income.

Consequently, the income pooling and sharing assumption particularly hinders the correct assessment of women’s poverty situation. Women often live with men whose income lifts them up above the poverty threshold, while men often live with women who has no income at all i.e. not economically active (Ponthieux, 2009). This

is the reason why women are underrepresented among the working poor in EU studies (e.g. *Eurofound*, 2010). Poverty of the working poor is not always the result of their individual activity status (the same individual activity may or may not result in poverty, depending on the family size and the labour market status of other members of the household). On the other hand, unfavourable situations of activity leading to low earnings no longer fall within the category if this income is counterbalanced by the household, and pass the poverty threshold. As a result, many poor worker is not considered poor because other household members lifts the household above the poverty threshold. This way, the household acts as a “fig-leaf” of poverty. In the same time, some household members are shown as poor, because they have other dependent household members they have to share their income with, but this income is not enough to escape poverty. In this case, the “earner” of the family uses the same amount of household resources as the dependent or inactive household members? As a consequence, based on individual income measurement women are more exposed to working poverty than men. In contrary, based on household measurement, men are shown as more subjected to this problem. *Table 3* shows the extent of working poor by gender within the total population based on individual and household income measurement.

Table 3

The extent of working poor by gender within the total population based on individual and household income measurement

	Individual		Household	
	men	women	men	women
CZ	1%	2%	3%	3%
HU	4%	3%	7%	5%
PL	5%	6%	13%	10%
SK	4%	5%	5%	5%
V4	4%	5%	10%	8%
BE	2%	4%	4%	4%
NL	2%	8%	5%	5%
LU	2%	7%	9%	9%
Benelux	2%	6%	5%	5%

Source: *own calculation* (individual), *Eurofound*, 2010 (household)

In the definition of poverty, the European literature is quite solid. The majority of researchers defined being poor on the bases of a relative poverty threshold (equalised household income being under the 50% or 60% of the national median income). As an equivalence scale, the above mentioned “OECD-modified equivalence scale” is used. The American Bureau of Labour Statistics (BLS) set an absolute poverty threshold expressed in dollars. This threshold varies by the size of the family. This method is used by *Klein and Rones* (1989) and *Gardner and Herz* (1992). Australian researchers like *Robson and Rogers* (2005) use again, the European

style, relative poverty threshold, but set to 50% of the national median income level. Changing these definitions makes the result on working poor incomparable.

The definition of worker shows a much diverse picture even only in Europe. As for the French INSEE definition, worker is a person who has spent at least 6 months in the labour market in the reference year with a minimum of 1 month of employment. The European approach - what Eurostat adopted in the in-work poverty risk indicator - defines the workers as those people who are actually working at the time of survey and who has spent at least 7 months in employment during the reference year. The BLS definition of worker, namely a person who has spent at least 27 weeks in the year of reference in the labour market by working or looking for a job. Consequently, the American definition is the least strict, it does not require one day of actual employment in the reference year to be classified as a worker.

In methodological terms, the different patterns of the labour markets in Europe can have a significant effect on the working poor. For example, taking employment rate (which is alters a lot) from 53% in Poland to 76% in the Netherlands in 2007 (Eurostat website). The rising of the employment rate will result in the rising of the median income and consequently the rising of the poverty threshold, which makes more people falling below the poverty threshold. The other aspect of national and territorial inequalities of labour market, that the part-time work is much more spread in the Western Europe i.e. in Benelux States, especially in the Netherlands. The more frequent appearance of part-time work (with lower income compared to full-time work) results in more people falling under the poverty threshold. This effect also disfigures the extent of working poor in different countries. *Table 4* shows the share of full-time and part-time workers within the total population.

Table 4

Percentage of full-time and part-time workers within all workers

	Full-time	Part-time	All
CZ	96.90	3.10	100.00
HU	95.27	4.73	100.00
PL	90.72	9.28	100.00
SK	97.50	2.50	100.00
V4	93.00	7.00	100.00
BE	78.32	21.68	100.00
NL	62.47	37.53	100.00
LU	82.48	17.52	100.00
Benelux	68.91	31.09	100.00

Source: Based on *SILC*, 2007

The working poor analysis has difficulties which lie in the database. Unfortunately many data are unfilled or missing over the European countries, which result in incomparable results, or even the country has to be excluded from the analysis. The most important variable, the individual net incomes are missing from many

countries, which make the individual analysis hard to be done. However, there is an approach which eliminates this problem, by inflating the poverty threshold by the so called “net-gross ratio” introduced by *Ponthieux* (2010). We adopted this method while we see its advantages and disadvantages as well.

METHODOLOGICAL NOTES

In this analysis, the working poor population is analysed in 7 EU countries, the Visegrad countries (CZ, HU, PL, SK) and the Benelux states (BE, NL, LU) using the 2007 wave of the EU-SILC. This database is an instrument aiming at collecting, timely and comparable cross-sectional and longitudinal multidimensional micro data on income, poverty, social exclusion and living conditions in EU countries. The sample size of the countries are 23059 in CZ, 22297 in HU, 42852 in PL, 14864 in SK, 15493 in BE, 25905 in NL and 10419 in LU. We made our calculations by applying the cross-sectional personal weights provided by Eurostat. In our analysis, the definition of worker is those individuals were employed/self-employed full-time or part-time at least through 7 months of the reference year. The definition of poor is defined as those individuals, whose individual net income is under the 60% of the same national median income.

Meulders et al. (2009) developed a methodology in order to analyse poverty based on the resources of each individual, whatever the characteristics of the household in which he/she lives. This approach allows overcoming the three main difficulties that are raised by the European Commission’s definition of the working poor. Using an individual measure of income to determine the poverty status avoids the conceptual problem that employment is an individual state whereas the poverty risk is commonly determined through a household approach. It further allows going without an income pooling assumption and as such contributes to a more correct identification and understanding of the working poor, especially of its female population. In order to correctly design policies to reduce in work poverty, a precise identification of the working poor is essential.

We individualise all income sources received by the household and add these incomes to real individual incomes in order to obtain total individual incomes. With this approach, we would like to show how each individual would perform, if he/she could rely only on his/her own income. We calculate total income from EU-SILC personal and household data. Concerning total income, there are variables which are provided by the database individually (employee cash or near cash income, cash benefits or losses from self-employment, unemployment, old-age, survivors’, sickness and disability benefits, as well as education-related allowances) and there are household-based variables (family/children related allowances, other social exclusion benefits, housing allowances, cash transfers received and income from capital investments). After individualising household income, we computed the net revenue of each individual, and calculated the 60% of the median of these incomes by country, which serve as the poverty threshold.

There are countries where only the gross income variables are available (CZ, HU, SK, NL) for these countries, we applied an inflation rate on the poverty thresholds.

The inflation rates (Net-gross ratio: NGR) have been developed by *Ponthieux* (2010), by dividing disposable (net) household incomes with the gross household incomes. Ponthieux computed the NGR rate as a ratio of the weighted sum of total disposable household income (variable HY020) to the weighted sum of total household gross income (variable HY010), negative incomes are expressed as zero. The ratio can be applied in our analysis because it includes the same variables we used to calculate total income, only company car (PY021) and income received by people aged under 16 (HY110) is additional, and the missing variables are non-cash employee income (PY020) and interest repayments on mortgage (HY100). The poverty threshold inflation rates are as follows: CZ: 0.938; HU: 0.893; SK: 0.923; NL: 0.844. For the rest of the countries an inflation rate of 1.00 has been applied.

In result, the poverty thresholds have been set to 2,427 € in CZ, 1,663 € in HU, 1,659 € in PL, 1,698 € in SK, 9,491 € in BE, 7,521 € in NL, 14,306 € in LU. Those individuals who dispose a yearly income lower than the poverty threshold are designated 'poor' (or rather at-risk of poverty), and those who dispose higher income are 'not poor'. To sum up, the working poor population has to match three criteria, to be poor (dispose lower income than the 60% of the national median), to be a worker (full-time or par-time at least 7 months in the reference year) and to be 15-64 years old (in order to exclude pupils, young earners and old pensioners from the analysis).

We always calculated V4 and Benelux total values by weighting the country values by the size of the total population in 2006 available at Eurostat.

The advantage of applying NGR ratio is that to include all countries into our analysis is rather simple. The disadvantage lying in applying the NGR ratio is on one hand that we only judge the individual net value by the household values which might reduce the comparability of the results. On the other hand, we have to take into account when we read the results, that applying a common NGR neglects that those who earn less, pay less taxes, and those who earn more, pay more (women are more likely to earn less). This method actually increases the existing net income differences.

CONCLUSION

In 2003, the European Union adopted a new indicator, the "in work at risk of poverty rate". This indicator is often accepted and used as a kind of immutable object regardless of the fact that it is based on assumptions that are only rarely discussed and questioned although they have particularly strong consequences for the calculation of the in work poverty risk and for the design of policies to combat in work poverty. The purpose of this paper was to show the volatility in the measure of the proportions of working poor with respect to different methodological choices has to be made at the beginning of any analysis. By showing this volatility, we aimed at tackling some of these generally unquestioned assumptions.

We found that different understanding of working poor can have significant effect on the result, we showed how the extent of working poor change if we take the "poor persons at work" or the "workers who are poor" population.

The working poor are at the crossroads of two levels of analysis. Using an individual measure of income to determine the poverty risk avoids the conceptual

problem that employment is an individual state whereas the poverty risk is commonly determined through a household approach. It further allows going without an income pooling assumption and as such contributes to a more correct identification and understanding of the working poor, especially of its female population.

The European household based definition of the poverty risk actually measures the proportions of workers who are poor because they have too many dependents. On the contrary, when the poverty risk is computed on the basis of individual income, what is measured is the proportion of workers who, because of their employment conditions, earn a wage that is insufficient to stay out from poverty. The difference between the two measures illustrates the impact of household structure. When equivalent household disposable income is replaced by individual net income we get a more precise idea of the protective role played by employment against the risk of poverty.

We found, that different labour market characteristics have influence in the extent of working poverty, i.e. the employment rate and the share of part-time workers have shows huge alterations within the EU. At last but not least, the missing data of EU-SILC database highly damages the reliability of the results.

REFERENCES

- Cazenave, M.C. (2006): Les travailleurs pauvres dans les pays développés : acquis et controverses. Paris, Matisse, Les Travaux de l'Observatoire 2005-2006, 199-225. p.
- Eurofound (2010): Working poor in Europe. European Foundation for the Improvement of Living and Working Conditions, Dublin
- Gardner, J.M., Hertz, D.E. (1992): Working and poor in 1990. Monthly Labor Review
- González L., Viitanen, T. (2009): The effect of divorce laws on divorce rates in Europe. In: European Economic Review, 53. 2. 127-38. p.
- Kabeer, N.: (1994): Reversed realities: gender hierarchies in development thought. Verso, London
- Klein, B.W., Rones, P.L. (1989): A profile of the working poor. Monthly Labor Review
- Lelièvre, M., Marlier, E., Pétour, P. (2004): Un nouvel indicateur européen: les travailleurs pauvres. In: Les indicateurs dans l'Union européenne: avancement et perspectives, dossiers Solidarité et Santé de la DREES, 2.
- Meulders, D., O'Dorchai, S., Plasman, R., Rycx, F. (2009): Genre et revenu: analyse et développement d'indicateurs. Final report of the research project: Belgian Gender and Income Analysis (BGIA), 472. p.
- OECD (2008): Growing Unequal? Income Distribution and Poverty in OECD Countries. Directorate for Employment, Labour and Social Affairs, 310. p.
- Ponthieux, S. (2007): The working poor – Limits of the EU indicator “in-work poverty risk”, limits of the statistical category “working poor”, and exploration of a notion of “poverty in earned income”. Paris, Insee, ECINEQ, 15. p.

- Ponthieux, S. (2009): The working poor as a statistical category – Methodological difficulties and exploration of a notion of poverty in earned income. Paris, INSEE
- Ponthieux, S. (2010): In-work poverty in the EU. Eurostat Methodologies and Working Papers
- Robson, D., Rodgers, J. R. (2008): Travail to No Avail? Working Poverty in Australia. In: Economics Working Paper Series, University of Wollongong
- Sen, A.K. (1990): Gender and Cooperative Conflicts. In: Tinker, I. (ed.): Persistent Inequalities: Women and World Development. New York : Oxford University Press, 123-149. p.
- Woolley, F., Marshall, J. (1994): Measuring inequality within the household. In: Review of Income and Wealth, 40. 4. 415-431. p.