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Luxembourg Income Study Working Paper Series

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Worlds of Working Poverty. Cross-National Variation in the Mechanisms that Lead Poverty among Workers

Eric Crettaz and Giuliano Bonoli

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1 Introduction

The notion of working poor is frequently used in public debates, but refers to a great variety of different profiles, who experience very different situations. To classify them in the same category may obscure some important aspects of the problem, something which could prove detrimental to social policy efforts. The situation of, say, a single mother with a middle educational level who works part-time and that of a couple of low-skilled, low-wage working parents who work full-time all year round require different policies to provide the necessary support. The existing definitional ‘chaos’ could become particularly problematic should the problem of working poverty expand in the near future.

One way to move forward is to be more precise at the conceptual level, by ‘deconstructing’ the notion of working poverty. In order to do so, it is of paramount importance to understand the main mechanisms that cause workers in post-industrial economies to get a low income. More often than not, ‘poor workers’ is perceived as synonymous to ‘low-wage workers’. In fact, empirical evidence demonstrates that, in most OECD countries, being a low-wage worker does not necessarily lead to poverty, thanks to other income sources, most notably other household members’ earnings and social transfers (Marx and Verbist, 1998, Strengmann-Kuhn, 2003, Andress and Lohmann, 2008, Peña-Casas and Latta, 2004, Swiss Federal Statistical Office, 2008). In addition, many working poor are self-employed; indeed, self-employed workers can have low and volatile earnings - this is particularly true for self-employed without employees. However, a low remuneration rate or a low wage can, obviously, be a poverty factor if no other adult lives in the household or if other adult household members do not work.

In this paper we attempt to deal with the conceptual complications involved in discussions on the working poor. Others have contributed to clarify our understanding of this notion by looking at the composition of the working poor population (Lohmann and Marx 2008). Here we take a different approach, and focus on mechanisms leading to working poverty. On the basis of the existing literature, we identify three such mechanisms: low earnings, low labour force attachment, and large family size. By looking at the mechanisms that produce working poverty, we show that this social problem can take different shapes in different contexts. We look at cross-national variations in working poverty through the lens of the welfare regime approach, and expect working poverty to be of a different kind in different regimes. Empirically, we use Luxembourg Income Study data in order to show that the main sources of working poverty differ across countries selected to represent the different welfare regimes. Our analysis allows us also to highlight the impact of some cash transfer programmes, such as for example family benefits that clearly impact on the profile of the working poor population.

The paper begins by highlighting some of the key problems involved in the definition of the category of the working poor and by looking at definitions that are found in the specialist literature. It then moves on to discuss on a more theoretical level the mechanisms that may lead to working poverty. Third, we present our hypotheses concerning the mechanisms that we expect to prevail in different welfare regimes. These are tested empirically in the final part of the paper.

2 Defining working poverty

A conceptual discussion of the notion of the working poor has to deal with two definitional issues. One of them concerns the well-known problem in defining who is poor, which has kept busy social scientists for several decades, without reaching a definitive conclusion. Even more problematic is defining “who is working”: is one month of employment a year or one hour of work per week sufficient to be considered as a worker?

Who is poor?

Defining poverty by setting a low-income threshold is a challenging task: some indicators have become quite widespread in mainstream research; however, they range from approximately 40 per cent to 55 per cent of median equivalised disposable income. It should be noted that Eurostat does not consider its 60 per cent threshold to be a poverty line: it is an 'at-risk-of-poverty' line; whether the households belonging to this category are 'poor' remains an open question. In fact, the contentious issue of poverty measurement goes far beyond the level of the poverty line. Many heated debates are ongoing in this field. The main lines of conflict pertain to the nature of the phenomenon – does poverty equate to low income or is a multidimensional indicator (of deprivation) more appropriate? – and to the reference level, i.e. is it better to define a minimum level held constant (in real terms, e.g. the cost of a basket of goods and services) or a relative level directly linked to living standards or income of the 'average citizen' (Townsend in Wedderburn, 1974, Sen, 1983, Atkinson, 1989, Glennerster, Hills, Piachaud and Webb, 2004, Leu, Burri, Priester, 1997). The issue of whether to assess poverty in absolute terms - usually deriving a poverty line from a basket of goods and services, kept constant in real terms - or in relative terms - usually a share of median equivalised disposable income - is indeed complex, as both approaches display strengths and weaknesses. But in fact we do not want to further discuss the issue of setting a poverty line, because it is a topic that has already been dealt with in numerous studies.

Who is working?

More problematic, and also more central in our analysis, is the practice of arbitrarily setting a number of hours a week, or months a year, spent in the labour market to determine who is 'working' and who is not. Is a person a 'working' poor if he or she only works one hour here and there? But why, on the other hand, should a person who works part-time, or who only spent a month in the labour market (during the year prior to the interview for instance), not count as a poor worker? Indeed, all definitions of working poverty entail an arbitrary component.

Table 1: Definitions of the working poor in the literature and official statistics

Country	Source	Work definition	Poverty threshold
EU	Eurostat	Employed at least 15 hours / Most frequent activity status in the last year New indicator: in-work at-risk-of-poverty rate → individuals classified as employed (according to their most frequent activity status)	Low-income threshold: less than 60% of the median equivalised household income (relative monetary poverty) At risk of poverty: individuals living in a household with an equivalised disposable income below 60% of the median
France	Institut National de la Statistique et de l'Economie (INSEE) / Academics / National action plan for Social Inclusion 2001-2003/2003-2005	Individuals who have spent at least six month of the year on the labour market (working or searching for a job) / Working at least six months / Have had a job for at least one month during a year	Low-income threshold: less than 50% (60%-70% occasionally) of the median equivalised household income (relative monetary poverty)
Belgium	National Action Plan for Social Inclusion	Individuals who have spent at least six month of the year on the labour market (working or searching for a job) / Working at least six months	Low-income threshold: less than 60% of the median equivalised household income (relative monetary poverty)
Switzerland	Swiss Federal Statistical Office / Academics	All 'active' individuals, regardless of the number of hours they work / all individuals working full-time (i.e. 36 hours or more weekly / at least one individual having a lucrative activity for at least 40 hours a week (one full-time job) - new indicator: individuals who work and live in a household in which the overall volume of work (of all members) amounts to at least 36 hours a week	Administrative flat rates of social security modified (Monetary administrative poverty)

US	US Census Bureau (USCB)	Total hours worked by family members greater than or equal to 1,750 hours (44 weeks)	Federal Poverty Line (Absolute monetary poverty)
	US Bureau of Labor Statistics (USBLS)	Individuals who have spent at least six months (27 weeks) of the year on the labour market (working or searching for a job)	Federal Poverty Line (Absolute monetary poverty)
	US researchers in general	Adults working, on average, at least half time (approximately 1,000 hours) / Definition of USCB and USBLS (see above)	Less than 125%-150%-200% of Federal poverty line (Absolute monetary poverty)
Canada	National Council of Welfare (NCW)	More than 50% of total family income come from wages, salaries or self-employment	Statistics Canada's Low-income cut-offs (LICOs) (Absolute monetary poverty)
	Canadian Council on Social Development (CCSD)	Adult members have, between them, at least 49 weeks of either full-time (at least 30 hours a week) or part-time work	CCSD relative low-income threshold (Relative monetary poverty)
	Canadian Policy Research Networks (CPRN)	Full time full year	Relative low-income threshold; less than \$20,000 per year (Relative monetary poverty)
Australia	Social Policy Research Centre	All 'active' individuals, regardless of the number of hours they work	Henderson absolute poverty line (Absolute monetary poverty)

Source: Peña-Casas and Latta, 2004, completed for the present article.

Table 1 provides us with an overview of how researchers have dealt with the definitional issues involved in the working poor debate. Even though this brief review is not exhaustive, it clearly demonstrates the complete absence of agreement among academics and official bodies as to the definition of 'working poor'. Again, it should be emphasised that this is partly due to a lacking conceptual framework, especially in Europe. In a recent past, however, researchers have begun to tackle this problem, most notably Andress, Lohman and their colleagues (Andress and Lohmann, 2008) and Strengmann-Kuhn (2003). In their book, Andress et al. analyse the composition of the working poor population and link that composition to the usual clusters of welfare states that are of widespread use in the social policy literature. This approach clearly demonstrates that the main features of the welfare state, combined with labour market institutions, do explain to a large extent the differences in composition of the working poor population across Europe.

In this paper, we deal with the definitional issue in a pragmatic fashion. The poverty line used here is defined in monetary terms, because antipoverty policies mainly consist in cash transfers or near-cash benefits and their explicit goal is usually to reduce the incidence of low incomes. Where possible, we use two poverty lines: namely 50 percent and 60 percent of median equivalised disposable income¹. However, for some of our calculations, due to a small number of observations in many national datasets, we will set the poverty line at a more 'generous' level, namely 60 per cent of median equivalised income: we will call this line an 'at-risk-of-poverty line', a terminology defined by the European Union.

Regarding the volume of work, for the purpose at hand here, it is certainly more interesting to include all persons who perform some work at a given point in time, rather than excluding some categories of workers from the outset. The ILO conception of including all persons performing at least one hour of gainful employment at the time of the interview in the labour force seems, hence, to be the best approach. Finally, let us underline the fact that a working poor is a *person* whose current labour force status is 'employed' and who lives in a poor *household*.

¹ The equivalence scale used is the OECD modified scale (1 for the first adult, other adults correspond to 0.5 equivalent adult, and each child under 14 corresponds to 0.3 equivalent adults in terms of needs); the use of an equivalence scale is necessary in order to be able to compare households of various size and composition and to account for the economies of scale in multi-person households. The disposable income is the post-tax and transfer income; that is, cash benefits, taxes (payroll taxes, social security contributions, income and asset taxes), including tax credits and tax breaks, alimonies and child benefits, are accounted for. Finally, the weights used for the calculation of the median equivalised income is the product of the household weight by the number of household members, a procedure frequently used in order to give large households an appropriate weight.

Given the absence of the variable 'current labour force status' in the 2000 Swedish data set, we will sometimes use the labour force status in the income reference period as an alternative criterion.

3 The mechanisms leading to working poverty

As mentioned above, in this paper we want to study cross-national variation in working poverty not by looking at the composition of the working poor population, as done by Andress, Lohmann and their colleagues (2008), but by identifying the relative weight of the different mechanisms that lead to the emergence of a working poor problem. On the basis of what we know from the literature on the working poor, we can conclude that there are basically three mechanisms or immediate causes of working poor status: low earnings, low labour force attachment or a high number of dependants, relative to national averages. Working poverty can only be the consequence of one or more of these three factors. They are discussed in more detail next.

- i) **Low hourly earnings.** The most intuitive mechanism likely to lead to working poverty is the fact of being badly paid. Low wages can be measured in many ways, one of the most common being two-thirds of median wage measured at the individual level. An alternative could be half median earnings. Several researchers have pointed out that low wages alone are seldom the cause of working poverty (Andress and Lohman, 2008, Nolan and Marx, 2000, Welzmüller, 1990, US Department of Labor, 2002, Strengmann-Kuhn, 2003, Peña-Casas and Latta, 2004, Marx and Verbist, 1998). However, few will object that being paid a low wage vastly increases the risk of ending up in working poverty. It is very important to understand that if someone has low earnings because he or she works part time, the mechanism leading to working poverty may not be a low wage rate, but low labour force attachment, as discussed below. We operationalise the notion of low wages by taking into account the number of hours usually worked, as well as the number of weeks spent in the labour market over the income reference period (the year before the interview). If an active person usually works part-time, or did not work over the entire reference period considered, her annual earnings are multiplied correspondingly, leading to the calculation of hypothetical 'full-time year round earnings'. For those who worked full-time over the entire period, this indicator is simply their yearly earnings. The median of the earnings obtained is multiplied by 0.5 to establish a low-wage threshold. This indicator (low pay in full-time year round equivalents) is calculated for all household members who are wage-earners. ...
- ii) **Low labour force attachment.** Working poor status may also be related to low labour force attachment. This mechanism is proteiform and hits underemployed workers (defined as individuals who would like to work more), intermittent workers, as well as persons - usually women - who cannot or are not willing to work more due to the presence of children in the household. It should be noted that many part-time workers have lower wage rates than full-time workers or are not entitled to the same benefits at later life stages. In addition, one cannot expect a part-time job to necessarily provide earnings sufficient to cover the needs of a single person, let alone those of a family. The rise in double earnership observed in most OECD countries puts families with a non-working spouse in a relatively more difficult situation than during the post-war years, when single-earnership was the norm. We operationalise the notion of labour force attachment by dividing the amount of work performed by household members in full time equivalents by the number of adults. We focus on heads of households and their spouses (if any) aged 18-65. In most cases, this corresponds exactly to the number of potential workers in a household. In some cases, however, there may be working adult children who are not taken into account. This should not lead to a large distortion of results for the US, Germany and Sweden, but could be problematic for Spain, as most Spaniards live with their parents until they are in their thirties. We get back to this point below, when discussing country profiles.

For example, a couple with children where one parent works full-time and the other one has a 50 per cent job will have a labour force attachment of 0.75 (1.5 full time equivalents / 2 adults = 0.75).

- iii) **A large number of dependants (children) in the household.** As shown in several studies, having many children is a mechanism that can lead to poverty. Having a third or a fourth child is a dangerous choice for a couple to make - in terms of poverty risk. In many cases earnings and/or non-labour income cannot be described as 'low', but do not suffice to meet the needs of a family of, say, five persons. The same number of children may be more likely to lead to poverty for one-parent families than for two-parent families. In fact, after a break-up or a divorce, even just two children may become problematic, because the needs of the two resulting households (the ex-husband who lives alone and the mother with the children, most of the time) increase significantly, up to 30 percent (Kammerman, 1995). What matters, as a result, is not the absolute number of children in a household, but rather the ratio of children to adults. For this reason, we operationalise this mechanism by dividing the number of children by the number of working-age adults (18-65 years). A family of four (two parents and two children) will have a children to adults ratio of 1, just like a single parent with one child. A family of five (two parents and three children) will have a children to adults ratio of 1.5.

These are the mechanisms that can lead to working poverty. They can be seen as necessary but not sufficient conditions for working poor status to occur. Put it another way, a working poor will have at least one of the features describes above (low wage rate or low labour force attachment or a large number of dependants). However, none of these factors necessarily leads to working poor status. What is more plausible is to assume that the accumulation of these mechanisms will increase the likelihood of being a working poor.

The mechanisms act and interact at the individual and at the household level, so that below, we will be able to distinguish different type of working poor depending on the origins of their status. It should however be noted, that the extent to which these mechanisms actually do produce working poverty depends on the tax and transfer system of a given country. For example, a low wage rate coupled with tax credits may lift many low paid workers above the poverty line, or a generous family benefit system may offset the disadvantaged that hits large families. We take this factor into account when discussing the various profiles of the working poor in different welfare states.

4 Worlds of working poverty in OECD countries

Our key hypothesis is that the relative importance of the three mechanisms that generate working poverty will vary across countries, according to the well-known regime typology (Esping-Andersen 1990). The key feature of labour market regulation and social policy that distinguish welfare regimes are likely to impact on the extent to which each of the three mechanisms will be at play in a country.

- **Social Democratic welfare states (Nordic countries)** are characterized by a very strong emphasis on collective bargaining, which is highly centralized and coordinated. This explains why these countries tend to have strongly compressed wage distributions. Social democratic welfare states also emphasise high labour market participation, for all groups and in particular women, thanks to affordable state-provided childcare services and active labour market policies. Social transfers, though generous in international comparison, are not the main tools in the fight against working poverty even if they also contribute to the reduction of working poverty. In Social democratic welfare state we do not expect any of the three mechanisms to be particularly strong. Working poverty should be a quantitatively limited phenomenon and results from a random combination of mechanisms 1 to 3.

- **Liberal welfare states (English speaking countries)** are also characterized by a strong emphasis on employment for all but in a context of high earnings inequality and strict work requirements for non-working individuals. Some liberal welfare states (UK, US) have introduced non negligible in-work benefits, in the shape of tax credits, which supplement the earnings of many low paid workers, but these are unable to offset the extremely high levels of inequality produced by the labour market. In these countries, we expect working poverty to be mostly the result of low wages and high children to adults ratio. Low labour force attachment should play a less important role.

- **Conservative-corporatist welfare states (Continental Europe)** rely mostly on passive income maintenance and strong job guarantees, with a serious problem of access to employment for labour market outsiders. Wage inequality is somewhere in-between the Social democratic and liberal welfare states. In addition, family policy, in the shape of family benefits, can play an important role. Our expectation for these countries is that working poor status will be mostly the result of low labour force attachment.

- **Southern European welfare states** share many key features with the conservative corporatist variant. However, they differ on one important dimension: the limited family policy. For this reason, our expectation for Southern European welfare estates is that working poor status will be mostly the result of low labour force attachment and/or high children to adults ratio.

These hypotheses will be tested on a sample of four countries selected so as to represent each one of the four welfare regimes: Sweden, the US, Germany, and Spain.

Table 2: Working poor rate and at-risk-of-poverty rate among workers, and poverty rate, in 2000 US, Spain, Germany, and Sweden (in per cent)

Country	Working poor rate (person is active at the time of the interview)	Working poor rate (personal status over reference period is 'employed')	At-risk-of-poverty rate among workers (active at time of interview)	At-risk-of-poverty rate among workers (employed over reference period)	Poverty rate (50% of median, regardless of work status)
US	7.2	6.0	11.4	10.0	17.0
Spain	6.1	4.0	10.1	8.0	14.2
Germany	4.5	2.9	7.3	5.0	8.4
Sweden	n/a	3.1	n/a	5.3	6.6

Source: Own calculations based on Luxembourg Income Study data.

Poverty rate from Luxembourg Income Study (LIS) Key Figures, as of January 2009.

These figures can usefully be completed with information on wages and employment performance:

Table 3: Employment and unemployment rates and low-wage incidence in 2000 in the US, Spain, Germany and Sweden (in per cent):

Country	Harmonised unemployment rate	Employment rate	Low-wage incidence
US	4.0	74.1	24.7
Spain	11.1	57.4	16.2
Germany	7.5	65.6	12.9
Sweden	5.6	74.2	6.1

Source: OECD website, labour statistics and country statistical profiles, as of June 2009.

These countries, indeed, vary greatly in terms of outcomes (table 3): the working poor rate (and the at-risk-of-poverty among workers) in the US is approximately twice as high as in Sweden² and Germany, based on a relative definition of poverty, namely an income below 50 per cent (60 per cent) of median equivalent disposable income. Overall relative poverty levels are highest in the US, nearly three times as high as in Sweden. It should be noted that the difference between Germany and Sweden is probably not significant, and, thus, we consider that the working poverty level is similar in these two countries; other calculations based on other datasets confirm this finding (Lohmann and Marx, 2008). Spain's (working) poverty rate is approximately halfway between the US and the tandem Sweden/Germany. Interestingly, if the work definition is restricted to those who were active during the income reference period, the working poor rate is lower, because casual and intermittent workers are not necessarily included, as the comparison between the first and the second column of table 2 demonstrates.

Table 3 clearly demonstrates that the US and Sweden exhibited, in 2000, the best labour market performances. The incidence of low-wage employment is much higher in the US than in Europe and wide differences exist among the EU countries analysed here. In the meantime, the situation has

² The current labour force status is not available in the Swedish dataset 2000, hence the use of the labour force status over the income reference period in columns 2 and 4 of table 2.

changed significantly in some of these countries, but this does not play a role here. What matters is to analyse the interplay of the situation in the labour market, the welfare regime and the mechanisms that lead to working poverty at a given point in time.

5 Further aspects of the operationalisation

Some important and tricky empirical challenges must be underlined. First, the working poor (luckily) represent a small share of the labour force in post-industrial countries. The labour force itself does not include a large minority of the population (retired and other non-active persons). In addition, in all surveys dealing with the financial situation of households, income questions inevitably yield non-response rates that are not marginal. All this indicates that large samples are requested; otherwise the results would not be statistically reliable, due to high margins of error (large confidence intervals). Another complicated issue regards the definition of 'disposable' income, that is, the income a household has at its disposal once social security contributions and taxes have been paid, and cash benefits received. As the tax and benefits system varies from country to country, this poses very challenging difficulties for comparative research. However, some datasets allow this kind of analyses. A first dataset is the Luxembourg Income Study, which entails comparable income data from the vast majority of OECD countries. Data are derived from national surveys, and the most important variables (for analyses of the financial situation of households) are made as comparable as possible. At the time of the redaction of the present chapter, wave VI of the Luxembourg Income Study is available for the United States and Sweden, but not for Germany and Spain. Hence, the following calculations rely on wave V (around 2000) for the US, Germany, Sweden and Spain. More problematic is the fact that some of the Swedish data used here date back to the mid-1990s wave, because in wave V (2000) many variables related to volume of work are not available. As no other Scandinavian dataset entails these variables either, be it for wave V or wave VI, we have to settle for Sweden 1995 to calculate the degree of labour force attachment and the share of low FTYRE among poor workers, which is certainly an important drawback. Last but not least, the number of children under 14 is not available in the 1995 Swedish dataset; hence, an equivalent 'weight' of 0.3 instead of 0.5 has been attributed to children between the age of 14 and 17 years old, which means that for a small minority of households the equivalised income might be slightly overestimated. In the analyses below, the Swedish child-to-adult ratio among the working poor is calculated with 2000 data, in which the number of children under 14 is available. It should be added that the situation in Sweden in the mid-1990s was quite grim, as the unemployment rate soared and reached rates as high as eight per cent, a very unusual level for Sweden; at the turn of the century, however, the Swedish economy was back on track (Halleröd and Larsson, 2008). Hence, Swedish results based on the 1995 dataset have to be interpreted with some caution, while the other countries' results do not cause a major concern.

Another important dataset in this context could be the Survey on Income and Living Conditions coordinated by Eurostat in all EU member States (and Switzerland). SILC's main advantage is that indicators are calculated in a harmonised way and data are collected in a similar fashion. But, obviously, SILC does not entail US data; as indicated above, the US plays an important role in our analysis.

6 Results and discussion

The results we obtain from the Luxembourg Income Study are shown in figures 1, 2, and 3 below. Using the 50 per cent threshold yields results that are based on too small a number of cases, thus generating large confidence intervals. Hence, in what follows, the 60 per cent of median income threshold is used. This is not really satisfactory, as it represents a probably overgenerous threshold, and, in line with the EU's terminology, we consider this threshold as an 'at-risk-of-poverty line'.

Hence, in the following figures, the 'working poor' are individuals who are active at the time of the interview and live in a household with a disposable equivalised income below 60 per cent of median income; that is, workers who are at risk of poverty. Among them, approximately six of ten are poor, i.e.

live in a household with a disposable income below 50 per cent of the median, as the comparison between the first two and the next two columns of table 3 indicates.

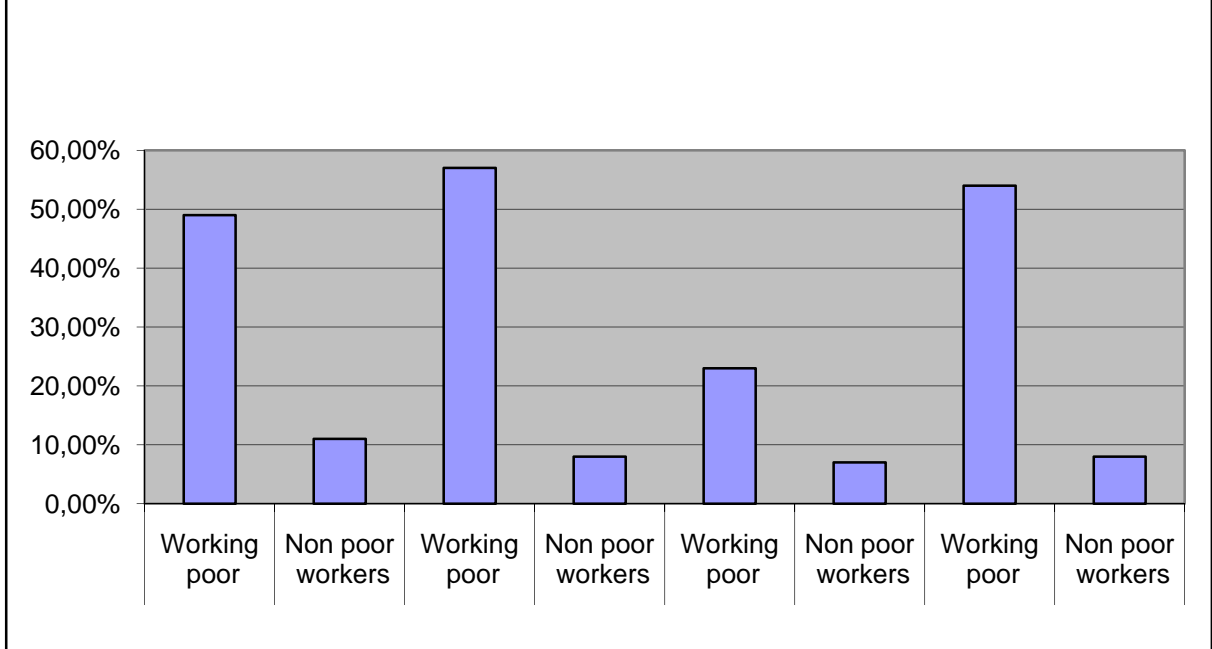
Our first aim is to assess the impact of the three mechanisms outlined above, and to verify whether the relative impact of each factor differs from one welfare regime to the other, by comparing the situation of poor and non-poor workers in each country under review. Second, if we identify differences between regimes, the main features of each welfare regime that explain, at least partly, the weight and impact of each working poverty mechanism will be identified.

As to the first approach, we compare the mean and median values of labour force attachment and child-to-adult ratio, as well as the incidence of (hypothetical) low full-time year-round earnings as a proxy for the remuneration rate of a wage-earner. Lets us start, then, by describing the importance of each factor.

Low wage rate:

Figure 1 is very revealing when comparing low-income and better-off workers:

Figure 1: Share of workers with ‘full-time year round earnings’ below 50 per cent of the median



Source: Own calculations based on Luxembourg Income Study data.

Even if the relationship between low-wage employment and working poverty is far from straightforward, as already demonstrated by many authors, our conclusion is clear-cut: Being on low wage-rate employment seems to be an important factor everywhere – as the incidence of low pay is very weak among non-poor workers and much stronger among the working poor; the difference is less marked in Spain. Interestingly, the incidence of ‘low full-time year-round earnings’ is not higher in the US than in Sweden for instance despite a much higher incidence of low-wage employment. However, as the incidence of working poverty is much higher in the US than in Sweden, the share of the workforce made up of poor workers on low-wage employment is noticeably higher.

Low labour force attachment

The labour force attachment at the household level is expressed as the ratio of the volume of work performed by the head of household and his or her spouse (if any) to their full work potential, namely a full-time job for each partner. The following figure compares poor and non-poor workers, both in terms of median and mean work attachment:

Figure 2: Median and mean work attachment expressed in percent of the full work potential



Source: Own calculations based on Luxembourg Income Study data.

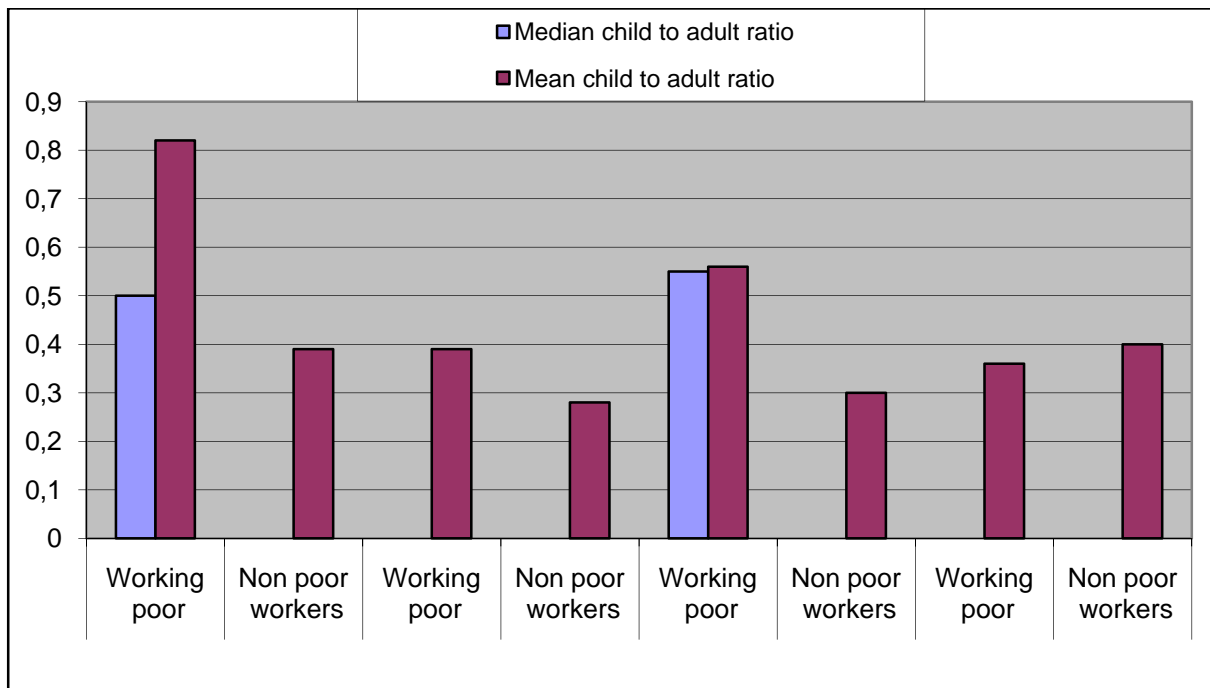
The level of labour force attachment seems to be a mechanism of working poverty everywhere, except in Sweden, where poor and non-poor workers have similar employment levels, which at first may seem counterintuitive. We get back to this fact in the following section devoted to country profiles. Sweden and the US are the countries in which low-income active persons work the most (Sweden exhibiting the highest levels) while the labour force attachment is lower in Germany and lowest in Spain. Comparing the mean and the median among the working poor indicates whether the distribution of work is symmetric or not. In all countries but Sweden, mean labour force attachment is slightly higher than the median, the difference being largest in Spain.

High number of children relative to the number of working-age adults

This indicator produces more surprising results at first sight. It should be noted that in all four countries the median non-poor worker does not have children – more precisely at least half of them do not live with children (a divorced father who does not live with his children, e.g., has a child-to-adult ratio of zero).

Let us consider now the mean number of children per adult. In the US and in Spain it is an important working poverty factor, as the mean value is notably higher among the working poor (more than twice as high in the US, 86 per cent higher in Spain). In Germany the mean is hardly higher among poor workers, due to very generous family cash benefits, amongst other factors, and in Sweden the average ratio is even higher among non poor workers. This is very counterintuitive, but understandable if one considers that in Sweden poor workers are mostly younger people who have left the parental home early, and because family policy is generously designed. The fact of having children is clearly not a factor of poverty in that country.

Figure 3: Median and mean child-to-adult ratio



Source: Own calculations based on Luxembourg Income Study data.

We have already given a certain number of indications on why these mechanisms vary from one country to another. Now we have to discuss country profiles in relation to our hypotheses in a more systematic fashion.

United States

The main mechanisms are, very often, low wage rates and lower labour force participation, even if the latter is a less decisive factor than in Germany and Spain, as the American working poor have a relatively high labour force attachment. This is not surprising because increasing labour market participation of disadvantaged groups was the main aim of the welfare reform brought about by the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (Clinton administration) and the repeated increases in the generosity of the Earned Income Tax Credit. Indeed, working poverty has been a growing concern since the reform was implemented, as it was feared that former welfare recipients would merely enter working poverty; for instance, in Los Angeles county, almost 100,000 welfare recipients found work between 1990 and 1997, but 74 per cent of former recipients earned sub-poverty income (Joassart-Marcelli, 2005). The fact that the incidence of the low 'full-time year-round' earnings is not higher than in Germany and Sweden can be surprising given the fact that the incidence of low-wage employment is notably higher in the US. However, even if the share is similar among poor workers in these three countries, the fact that the incidence of working poverty is much higher in the US means that the percentage of the workforce on low-wage employment living in poverty is significantly higher. Moreover, in Sweden and Germany, as will be analysed below, the working poor are young, with many of them under thirty, an age at which the incidence of low-wage employment is much higher.

Having children is a significant poverty factor, which is not very surprising given that working parents have to buy child care services in the market, which can be a financial burden for low-income families even in the presence of a large low-wage personal services sector; in addition, there are no child benefits in cash (Esping-Andersen, Gallie, Hemerijck, Myles, 2002). Yet, the Earned Income Tax Credit (EITC) has been strongly expanded since the early 1990s and it benefits working families with children mainly. In fact, it is generally considered by American scholars that many families are 'lifted out of poverty' by the EITC - out of poverty by American standards. This means that these families are not necessarily lifted above 60 per cent of median equivalised disposable income – not even above 50 per cent, probably. The following example is revealing in this regard: a microsimulation was carried out by Swiss researchers in order to assess the poverty reduction potential of the EITC in Switzerland, using purchasing power parities to set the boundaries of the various ranges (phase-in, plateau, phase-

out) that characterise the design of the EITC. The authors conclude that the EITC is not generous enough to significantly reduce working poverty in Switzerland (Gerfin, Leu, Brun, Tschöpe, 2002). Another factor that has not been indicated so far deserves attention, namely the fact that household size is similar among poor and non-poor workers (median value is three for both groups according to own calculations based on the same database). This may seem surprising as poor workers tend to have more children. This, however, is in line with the finding that poverty incidence among single-parent families is extremely high in the US (e.g. according to the key figures of the Luxembourg Income Study); according to LIS-based own calculations not shown here, the working-poor rate is also much higher among single parents than among couples.

Sweden

This is probably the country for which we have obtained the most puzzling findings. First, there is virtually no difference in terms of mean and median labour force attachment between poor and non-poor workers. The overall high work attachment of poor workers is not surprising in a country with a very high labour market participation rate. Our results are in line with others; for instance, Halleröd and Larsson note that a vast majority of the working poor in Sweden work more than 30 hours a week (Halleröd and Larsson, 2008). Another, at first sight, surprising feature is the fact that non-poor workers have more children than the working poor. This is due to the fact that child care services are largely available and affordable in Sweden and that parental-leave schemes are very generous (Fagnani and Math, 2008); put differently, the opportunity cost of having children in Sweden is very low in international comparison (Armingeon and Bonoli, 2006). Indeed, child poverty is very low in Sweden (Whiteford and Adema, 2007). But a perhaps more revealing indication is that the median Swedish low-income worker lives alone (own calculations based on the same data set), while the median among non-poor workers is 2.1 household members; in a country in which two-earner couples constitute the very dominant form of household arrangement and set the level of median income, being a single worker is a disadvantage. Moreover, many Swedish poor workers are young and single (Halleröd and Larsson, 2008); young Swedes tend to leave the parental home early in international comparison. Our calculations are revealing: at least half the Swedish working poor are less than thirty years of age, as in Germany.

In Sweden, having a relatively low wage seems to be a precondition to working poverty (Halleröd and Larsson, 2008), which is a widespread characteristic of young employees, not only in Sweden. In this regard, working poverty in Sweden, in a social-investment perspective, is probably a less problematic social issue, as it often concerns young, single and childless adults (according to our findings, at least half of them live alone); child poverty is very low, owing to generous family policy and high maternal employment rates (Whiteford and Adema, 2007). Working poverty, then, does not massively affect children, nor does it seem to have a long-lasting character; as LIS-based own calculations not shown here demonstrate, the working-poor rate drops after age twenty-five. However, the problem of working poverty should not be ignored, as it is a growing problem among Swedish employees (Halleröd and Larsson, 2008).

The 1995 Swedish figures on low wage rates and labour force attachment, however, should be interpreted with caution, as they rely on family units rather than households (contrary to the 2000 data), which leads to an overestimation of the number of households by some 12 per cent. It is estimated that around 50 % of family units in the first decile of equivalised disposable income are children between 18-29 years who are considered as independent units. Hence the average volume of work among low-income workers is probably underestimated in 1995.

Germany

A significant poverty factor among workers is the degree of labour market participation, as the difference between low-income workers and the rest of the workforce is marked. Indeed, poverty among full-time workers who benefit from standard employment conditions ('Normalarbeitsverhältnis') display a very low poverty rate – as of 2004, only 3.3 per cent had an income below 60 per cent of median income (Andress and Seeck, 2007). Unemployment was high at the turn of the century in Germany, and female employment rate quite low, owing to the fact that the German welfare regime relies on a modified male-breadwinner model that does not aim at maximizing women's participation in

employment; it is still expected that women leave the labour market for some years when they become mothers (Andress and Seeck, 2007, Giesselmann and Lohmann, 2008). If male partners have relatively low earnings, this can then easily lead to financial difficulties; however, child poverty is low in Germany, due in large part to a generous tax credit program which has been very significantly increased in a recent past ('Kindergeld', Andress and Seeck, 2007). The other mechanism that plays a significant role is to have relatively low earnings per unit of time. In fact, this is the main difference between both groups of workers. This mechanism probably plays a bigger role in the Eastern part of the country, as low-wage workers are much more likely to be the main, if not the sole, wage-earner of the family, while most low-paid employees in Western Germany usually are 'secondary earners' – mostly women – whose earnings allow the household to escape poverty (Giesselmann and Lohmann, 2008).

Another factor is certainly important: as mentioned above, the working poor are usually young, as they have virtually the same age as the Swedish working poor. According to Giesselmann and Lohmann (2008), based on another indicator and another database, 4 in 10 workers with an income below 60 percent of median income are under 31 years of age. This is also reflected by the fact that the median working poor lives in a smaller household than his/her non-poor counterpart (2 versus 2.7 members, own calculations based on the LIS 2000 dataset).

The fact of having children in Germany is not a decisive poverty factor, even if poor workers tend to have more children than the rest of the labour force, but the difference is not as striking as in the US or Spain. In fact, this is due to very generous cash benefits for families with children: child allowances represented 11.8 percent of the income of a family with two children relying on the earnings of a full-time industrial worker, while this share amounted to 4.7 percent in 1995 (Andress and Seeck, 2007). Interestingly, Germany's generous family policy (more than 3 per cent of GDP is spent on family policy around the mid-2000s, according to the social spending database of the OECD, a level only slightly lower than Sweden's) largely prevents child poverty and contributes to the reduction of working poverty among working parents; however, as it is largely based on cash transfers, and far less on childcare services than in Sweden (Fagnani and Math, 2008), the outcomes are perceivable in terms of maternal employment levels.

Spain

In Spain, low labour force participation seems to be an important poverty factor, even if the impact of this mechanism is less marked than in the other 'Bismarckian' country reviewed here, namely Germany. Interestingly, the difference between the mean and the median is largest in Spain, probably owing to the fact that part-time jobs only represent a small share of available positions. Hence, women either work full-time or not at all when they have children (European Foundation for the Improvement of Living and Working Conditions, 2007, Moreno, 2002). Put differently, single earner couples are more widespread than in most countries (Gutiérrez Palacios, Guillén Rodríguez, Peña-Casas, 2009). This 'all-or-nothing phenomenon' among mothers probably explains the dissymmetric distribution of labour market participation of head of households and their spouse in Spain. All in all, the Spanish working poor display the lowest mean and median work attachment, due to a higher unemployment rate and a lower female participation rate; however, these factors have changed significantly in Spain in a recent past, with an increasing female workforce participation (Guillén and Alvarez, 2002). Between 2000 and today, female participation rate has skyrocketed (OECD website, labour statistics), which may contribute to a decline in working poverty, but also to an increasing gap between single-earner and dual-earner couples.

Having children can also be a poverty factor, as the mean as well as the median child-to-adult ratio is higher among the working poor, which is not completely surprising in a country with a low level of spending on family policy (Fagnani and Math, 2008). However, due to the importance of the family, one of the most characteristic traits of the Spanish welfare regime (Garrido and Gutiérrez, 2009, Moreno, 2002), the effect of the limited provision of childcare services is reduced.

These results are in line with those obtained by García Espejo and Ibáñez Pascual with a logistic regression of the working poor rate on various poverty factors – occupational profiles, household type,

demographic factors - based on SILC data, concluding that the main factors are labour market attachment and the number of dependents (García Espejo and Ibáñez Pascual, 2007).

An important remark is of order here, namely the fact that household size is bigger in Spain (Gutiérrez Palacios, Guillén Rodríguez, Peña-Casas, 2009); our calculations indicate a median household size of four persons among poor workers, and three among the rest of the workforce. This is due to the fact, among other factors, that the vast majority of young Spaniards leave the parental home in their thirties, in very striking contrast with Sweden for instance. This factor is important, because the labour force attachment calculated in the present chapter are based on the situation of the head of household and his or her spouse/partner. Hence, the conclusions drawn may be slightly distorted for the Spanish case; young adults' income is accounted for, but not their labour force participation. So the reader should always keep in mind that we are talking about the head of household and his/her spouse when analysing labour market participation. Another important consequence is that these households with many workers benefit from economies of scale in their consumption, which probably contributes to a reduction in the working-poor rate.

Finally, a rather surprising finding is the relatively low incidence of low pay among poor workers, when both the hours per week and the weeks per year are accounted for, as available data do not seem to suggest that wage dispersion is more compressed in Spain than in Sweden for instance – the opposite is true. As indicated, the role played by the Spanish families in the provision of welfare is fundamental, by allowing economies of scales in consumption. The aforementioned research carried out by García Espejo and Ibáñez Pascual (2007) also concludes that the incidence of low pay is low among poor workers in Spain. Indeed, the incidence of low-wage jobs (below two-thirds of median hourly gross wage) in 2000 was much higher among workers on fixed-term contracts (approximately 30 per cent) than among workers with a permanent contract (less than 10 per cent, Blázquez Cuesta, 2008). As the share of non-permanent contracts falls sharply with age (Garrido and Gutiérrez, 2009), this explains why the incidence of low-wage jobs is high among young and prime-age workers (73 per cent are under 40) and much lower in their parents' age brackets.

7 Conclusions

It is undisputable that working poverty is by far not merely a matter of low earnings, and that the relationship between individual earnings and household income is loose, as has been demonstrated by many authors. However, it seems to be a very important factor that should not be downplayed in social policy analysis. But other factors are also very important, notably household size and composition as well as labour market participation, as has already been demonstrated by others in terms of the composition of the working-poor population (see e.g. Andress and Lohman, 2008).

Family policy broadly understood, that is including family cash benefits, of course, but also parental leave schemes and the provision of child care services, seems to be the most important welfare state related factor – in terms of the relative weight of the three mechanisms leading to working poverty. This factor plays a decisive role in terms of the cross-sectionally measured levels of working poverty, but also in a social-investment, life-course perspective, as it allows working parents to have a lower likelihood of falling into poverty, and, hence, reduces the share of children of working parents who grow up in poverty. There is growing evidence that poverty has a detrimental effect on mental health and cognitive development of children. Two theoretical models explain this impact. The first is the Family Stress Model: as families experience economic hardship (low income, debts, a job loss), an economic pressure is felt at the household level in the form of unmet material needs, the inability to pay bills and painful cutbacks on even necessary expenses. This economic pressure makes parents and other caregivers subject to emotional distress (e.g. anxiety, anger, depression) and sometimes behavioural problems, including in some cases substance abuse and antisocial behaviour. This in turn leads to interparental conflict and sometimes to harsh and inconsistent parenting practices which can cause emotional and behavioural problems for children. Six independent studies were carried out – five in the US and one in Finland – which measured various dimensions of the Family Stress Model. The results are quite consistent and give credit to this model (Conger and Conger, 2008). Another

model, the Investment Model, is primarily concerned with the advantages for the developing child of family financial prosperity: learning materials available in the home, stimulation of learning, either directly or through support of specialized tutoring or training, residing in a location that fosters a good development, and so on. In the case of the Investment Model, less evidence is available; however, it seems to indicate that this model is valid too. In fact, 'Theoretically, the findings suggest that the different approaches taken by the IM and FSM are complementary and may well be interrelated' (Conger and Conger, 2008: 76).

This leads us, hence, to another conclusion, namely that working poverty in Sweden and Germany is probably 'less serious', less detrimental a social problem than in Spain and the US; first, because the incidence is weaker, but also because many working poor are young and childless workers who may well escape poverty once they start living with a partner who works too; in addition, they will benefit from generous family-policy schemes should they have children.

It is important to note that the datasets used here date back to the turn of the century and even to the mid-1990s for certain indicators for Sweden. The situation in the labour market in the latter country improved markedly between the mid-1990s and the mid-2000s. In the US, economic growth has been rather stagnant after 2000. More importantly, Continental European countries have experienced significant changes, particularly Germany and Spain: 'It is no exaggeration to say that Continental welfare states are in the midst of a general paradigmatic shift...towards...activating and employment-friendly as well as gender-neutral welfare systems' (Hemerijck and Eichhorst, 2009: 23). But as already indicated, what matters is to understand the interplay of the various mechanisms analysed above at a given point in time, given the particular social policy and labour market patterns found in a country at that time. However, it may be interesting to realise similar analyses once wave V of the Luxembourg Income Study is available for the four countries analysed here (which is not the case for Germany and Spain as of the writing).

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