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## Document de travail

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### « Working poor in the EU: an exploratory comparative analysis »

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# Working poor in the EU: an exploratory comparative analysis<sup>1</sup>

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## **Abstract:**

This article explores the determinants of working poverty in the European Union. At the individual and household level, the factors contributing to working poverty differ in importance across countries. Nonetheless, being a lone parent, having low education, having a temporary contract, working part-time or less than full-year, appear to be the most important risk factors. Low pay, under-employment and family structures combine to explain working poverty. At the national level, the correlation between poverty and in-work poverty is strong: countries with low levels of in-work poverty are also the ones which keep overall poverty low. At this level there does not appear to be a dilemma between fighting in-work poverty and overall poverty. The strongest determinant contribution to low in-work poverty is high social spending as a proportion of GDP. The level of spending is more important than the way the spending is done or financed: both the social democratic and the social assurance regimes have good performances in terms of in-work poverty. Women's employment rate, which is generally viewed as being a factor in keeping in-work poverty low, is no more significant when level of social spending is taken into account. This underlines the ambiguous effect of employment on in-work poverty: employment can lift households out of poverty but it can also increase the number of poor workers.

**Key words:** Poverty, In-work Poverty, Welfare regimes.

**JEL classification:** I3, J38.

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## **Introduction:**

Promoting participation in employment is part of the EU strategy to fight the risk of poverty and social exclusion. Promoting a high level of employment is also at the heart of the Lisbon strategy in order “for the European Union to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion”. The European employment strategy states that labour market policies should be combined with an active inclusion strategy in order to fight poverty. The Council of the European Union recommends a balanced approach in its employment report (Council, 2008): member countries should on one hand make work more attractive than benefits and on the other hand create opportunities for the low-skilled. The integration into the labour market is supposed to increase social inclusion and improve the sustainability of social protection systems.

However, whereas it was assumed in the past that employment was a good protection against poverty, the debate around in-work poverty has increased in recent years. Obviously, working is not always sufficient to escape poverty: particular family structures, less than full-time work and low pay can explain the development of in-work poverty. Since 2003, reducing working poverty has become a priority at the European Union level: the employment guidelines specifically recognized the need to tackle in-work poverty and new indicators were defined in the context of the Open Method of Coordination in order to apprehend the number of working poor and their characteristics (Bardone and Guiot, 2005). These indicators were added in 2003 to the original list of “Laeken indicators” on poverty and social exclusion developed by the European Council in 2001 as part of the Lisbon Strategy.

The measure of in-work poverty combines an individual and a household dimension: among the employed population, the working poor are those who live in a household whose equivalised disposable income is below 60% of the national median equivalised disposable income<sup>2</sup>. The employment status is determined on the basis of their “most frequent activity status”. Under this definition an individual is considered employed if he was working at least 15 hours a week for at

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<sup>2</sup> Equivalised income is defined as the household’s total income divided by its equivalent size, in order to take account of its size and composition. Eurostat uses the modified OECD equivalence scale that gives a weight of 1 to the first adult, 0.5 to other household members aged 14 years and over, and 0.3 to children below 14.

least 7 months of the year<sup>3</sup>. This concept is different from the active poor (which include the unemployed population) and the low-wage workers concepts. A worker can be considered as low-wage but not poor or conversely poor but not low-wage (if for example he is the only wage earner in a family with a lot of dependents). According to this definition, in-work poor represented 8% of the employed population in the European Union in 2006. People in employment are less at risk of poverty than the general population: 15% of the EU population was poor in 2006; the risk of poverty stood at 41% for the unemployed and 16% for the retired population. The working poor nonetheless represent around a quarter of the poor population aged 16 and over and therefore should be an important policy concern.

This article will explore the determinants of working poverty in the European Union. Existing studies focus on individual and household characteristics to explain working poverty at the household level. Comparative studies that relate working poverty with welfare regimes are rare. We aim in this article to identify relationships between welfare regimes and working poverty. We try to answer the following questions: what are the determinants of low working poverty at the country level? Which welfare regimes tackle working poverty best? What are the common characteristics of countries with low proportion of working poor?

In a first section, we will examine which individual and household characteristics lead to working poverty in the EU member states. Section 2 deals with characteristics at the country level: which are associated with high and low levels of working poverty? Section 3 explores the relationships between welfare regimes and working poverty.

### **Data:**

This study is based on the latest (2006) Eurostat data, unless otherwise mentioned. Eurostat launched EU-SILC (Community Statistics on Income and Living Conditions), an EU wide survey, in 2003 in order to collect harmonized data concerning Income and Living Conditions in the EU and calculate the so-called “Laeken” Indicators of Social Inclusion. The EU member

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<sup>3</sup> See Peña-Casas and Latta (2004), Chapter 1, for a discussion on the difficulties relating to the definition of the working poor

states plus Iceland, Norway, Switzerland and Turkey participate in this program. Bulgaria, Romania, Turkey and Switzerland have launched SILC in 2006 but data for these countries are not available yet. We therefore use data from 27 countries: the 25 EU member states in 2006 plus Iceland and Norway. EU-SILC operates under a framework regulation of the Council and the Parliament and a series of Commission implementing regulations. Data concerning labour market conditions are based on the results of the European Labour Force Survey (EU LFS). In-work poverty measures concern the population in working age (over 16 and under 65). For more information concerning the data source, see Eurostat (2007, 2008). EU-15 refers to the 15 member states before the 2004 expansion, EU-25 to the 25 member states before the 2007 enlargement; the coverage of this study will be referred as EU25+ (EU-25 + Iceland and Norway).

## **1. Incidence of in-work poverty risk and factors contributing to working poverty**

The European Union is not a homogeneous economic area: not surprisingly, the risk of in-work poverty differs greatly across member states (Figure 1). It stands at 8% in the European Union but is lowest in the Czech Republic (3%), Belgium, Denmark, the Netherlands and Finland (4%). These countries, which are successful in keeping in-work poverty low, will be referred in this study, for practical purpose, as the “successful countries”. In contrast, Greece (14%), Poland (13%) and Portugal (11%) are the countries where the risk of working poverty is the highest.

[Figure 1 here]

Working poverty combines an individual and a household characteristic: it is therefore necessary to take both an individual and a household perspective when analysing the factors that increase the risk of being poor while working. Table 1 presents the risk of in-work poverty risk by main characteristics of the employed population. The characteristics are divided in three categories reflecting the different dimensions of working poverty: personal, job and household characteristics.

[Table 1 here]

In the European Union as a whole, low education, having a temporary contract, working part-time or less than full-year, being a lone parent are important risk factors. Conversely, sex and age do not seem to be important risk factors. There are risk factors in the three dimensions of working poverty (personal, job and household): low pay, under-employment and family structures combine to explain working poverty. Lone parents are particularly vulnerable to in-work poverty: 17% of lone parents who work are poor in the EU-25. Household characteristics are therefore a key risk factor of working poverty. Bardone and Guio show that in 2001 sole earners with children in 2 adults or more households were even more vulnerable to working poverty: 20% of sole earners with children in the EU-15 were working poor against 19% of lone parents. The

authors conclude that “the most important risk factors of in-work poverty relate to the household situation of workers”.

The factors contributing to working poverty differ in importance across the European countries. Gender is a more important factor in Italy, Greece, Spain, Malta and Poland than in other countries: in these countries, in-work poverty risk for men is higher than for women by at least three points. Greece, Italy and Spain are also the countries where the employment gap between men and women is highest: respectively 29.5%, 27.9% and 23.9%. If employed women are less likely than employed men to be poor, it is probably because women at risk of poverty (low qualification, high number of dependents) are less likely to work. In Nordic countries (Denmark, Sweden, Finland and Norway), younger workers are sensibly more vulnerable than other workers. This is probably due to specific living arrangements of young people in Nordic countries where they are more likely to leave their parental home early. However, if the data underestimates family financial support of children living separately, then poverty of young people will be overestimated in countries where co-residence with parents is low. Similarly, the standard of living of families helping children living separately might be overestimated<sup>4</sup>. In Greece and Portugal, it is the eldest workers who are the most at risk. Education is important in every country but more particularly in the least developed European countries: Greece, Portugal and most Eastern European countries. Job characteristics are also important in every country. The differences between countries are not as marked. Having children make singles more vulnerable to “in-work” poverty except in Denmark and Finland. Similarly couples with children are more at risk than the overall population except in Germany, Sweden and Norway.

Table 2 presents the risk of in-work poverty and the share of in-work poor by household type. In-work poverty does not have the same face across European countries: it results from very different living arrangements. The share of single adults with no children in the working poor population is much more important in the Nordic countries (Denmark, Finland, Norway, Sweden) and Germany than in other countries: they account for more than 30% of the working poor in

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<sup>4</sup> Since poverty is measured at the household level, it is assumed that solidarity is total among member of the same household. Conversely, it is likely that parental financial transfers are underreported in living condition surveys such as EU-SILC. The differences in terms of standard of living and poverty levels that are the consequences of living arrangements of young people are therefore partly statistical constructions.



these five countries (41% in Denmark) against 15% in the EU25. This type of household represents a higher share of working poverty in these five countries because the poverty risk differential relative to other households is higher but also because they represent a higher share of the population: 22% of the population live in single adult households in Denmark, 20% in Norway and Sweden, and 18% in Finland and Germany against 13% in the EU25. If single parents face higher risk of in-work poverty in all countries, their share in the working poor population differ mainly because their weight in the overall population vary from country to country: they represent only a very small part of the population in Greece, Spain (2%), Italy, Portugal, and Slovenia (3%), but a much higher in Ireland, the United Kingdom, Sweden and Iceland (8%). Consequently, their weight in the working poor population is more than twice the EU25 average (11%) in Ireland, Iceland and Sweden as well as in Estonia where their in-work poverty risk is particularly high. More than half (53%) of the working poor in the European Union belong to households with 2 or more adults and dependent children. This proportion is especially high in Malta (81%), Poland (74%), Slovakia (70%) and Spain (67%).

[Table 2 here]

Part-time employees are more vulnerable to in-work poverty in all European countries except Belgium where their poverty risk is equally low (4%) than for the overall employed population (Table 3). There are wide differences between European countries in the way part-time employment and in-work poverty inter-relates. In most eastern European countries part-time employment is much lower than the EU25 average (19%): even though their risk of in-work poverty is higher, the share of working poor working part-time is relatively low. It is, to a lesser extent, also the case of southern European countries. Conversely, part-time employment is a more important concern in the United Kingdom: in-work poverty risk is 50% higher than national average for part-time employees who also represent a higher share of employment (26%) than on average in the EU25 (19%). Consequently, part time employees account for 45% of in-work poor in the UK against 27% in the EU25.

[Table 3 here]

The working poor concept differs from the low-wage concept: while working poor combines both an individual and a household dimension, low wage is intrinsically individual. According to Eurostat's definition, a low-wage employee is an employee working at least 15 hours a week whose wage is below 60% of the national median monthly wages. If all households were composed only of employed workers earning the same wages then every low pay employees would be poor and every poor would be low pay. Table 4a&b show how the concepts were intertwined in 1996. Table 4a shows the proportion of working poor and low pay employees as % of all employees, the proportion of working poor among low-pay employees and the proportion of low-pay employees among working poor for EU-15 countries less Sweden and Finland. In table 4b, the employees are divided in 4 categories depending on their low-pay and working poor status. In the studied countries, 20% of low-wage employees were poor and 37% of working poor were low-wage. Being low-wage is therefore an important contributing factor to in-work poverty but not a decisive one. We calculated odds ratio (table 4b) as a measure of the interdependence of the two notions: an odds ratio of 1 means independence and the greater the odds ratio the stronger the relationship between the two groups. Among the studied countries, it is in Greece and France that the notions of low wage and working poor are the most related: the relative risk of being working poor among the low-wage compared to the non low-wage is the greatest in these two countries. Conversely, it is in the Netherlands and Spain where the relationship between the two notions is the weakest. Ireland and the UK are also below average whereas Belgium, Austria, Germany and Portugal are above average.

Although contributing factors have different intensity depending on the studied country, in-work poverty always has the same sources: particular family structures, low-wage, part-time and unstable jobs. This is not surprising considering the definition of in-work poverty (a working individual in a poor household): everything else being equal, what makes the household poorer (less work and pay, more dependents) will increase the risk of in-work poverty.

[Table 4a and b here]

## **2. Working poor in the European Union: a comparative analysis perspective.**

Which characteristics are related to working poverty at the national level? Before an analysis in terms of welfare regimes (section 3), we look at the institutional variables that are linked with in-work poverty.

Figure 2 shows the correlation between poverty (at a 60% level) and working poverty. The correlation is positive and rather strong ( $R^2=0.53$ ): working poverty is highest in countries with high poverty. At this level, there does not seem to be a dilemma - or tension - between fighting poverty in general and fighting in-work poverty. On the contrary, countries which do well in fighting poverty (the Czech Republic, the Netherlands) do also well in keeping in-work poverty low. Countries below the regression line do comparatively better against in-work poverty than poverty in general: this is the case of Belgium and Romania and, to a lesser extent, Ireland, Finland, Denmark and the Czech Republic. Figure 3 shows the relationship between the poverty rate before social transfers (pensions excluded) and in-work poverty risk: the two variables are not correlated ( $R^2=0.003$ ). This means that the correlation between poverty and working poverty is the consequence of social transfers: social transfers that are effective in fighting poverty are also effective in fighting in-work poverty; the hypothesis that there is no dilemma between the two public policy goals is confirmed by this data in the European Union context. Of course, when designing specific public policies to fight poverty, policy makers might have to choose between instruments that are more effective in fighting either working poverty or poverty in general. However, the countries that reduce poverty by social transfers the most are also the ones with the lowest risk of in-work poverty. Figure 4 shows the relationship between in-work poverty risk and the percentage reduction of poverty by social transfers: the correlation is strong ( $R^2 = 0.45$ ).

[Figure 2, 3 and 4 here]

How does social spending reduce in-work poverty? Figure 5 graphs the relationship between social spending (excluding pensions) and in-work poverty. There is a relatively strong correlation ( $R^2 = 0.25$ ): the countries which spend most on social budgets (sickness, invalidity,

unemployment, family, housing, social exclusion) are also the ones with the lowest risk of in-work poverty. Among the successful countries, the Czech Republic stands out: in-work poverty is the lowest in the EU25+ whereas its social spending is below average. Amongst the country with high in-work poverty, Greece and Poland have poor results relative to their level of spending. The Baltic countries have low social spending and high in-work poverty.

[Figure 5 here]

There is a relatively strong correlation ( $R^2=0.23$ ) between the employment rate for women and in-work poverty (Figure 6). This relationship was emphasized by Cazenave (2006). In theory, high employment has an ambiguous effect on working poverty risk. On the one hand, the highest the work intensity at the household level, the lowest the risk of in-work poverty<sup>5</sup>, but on the other hand, reducing the employment of people with high poverty risk might lower the risk of in-work poverty. This might explain why the correlation between working poverty and men's employment is weaker than the one between working poverty and women's employment (Figure 7). Since men are more likely to work than women, non-employment of men in couples is much less likely to result in in-work poverty of their spouse (because they are less likely to work) than non-employment of women. Belgium and the Czech Republic on the one hand and Poland and Greece on the other hand stand out; the first two because of lower working poverty than predicted by the regression while the later have higher working poverty rates. The figure also reveals two clusters of countries each with a geographical intruder: on the successful hand, the Nordic countries (Sweden, Norway, Denmark and Finland) and the Netherlands; and on the other hand the Mediterranean countries (Spain, Italy and Greece) and Poland. Western and Eastern continental countries and the Anglo-Saxon islands stand in the middle.

[Figure 6 & 7 here]

In theory, high unemployment is ambiguous regarding working poverty: if compensation is low, it increases the risk of poverty of the household but if unemployment is long, the concerned

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<sup>5</sup> This holds true everything else being equal but if high employment is attained through a lowering of job quality (number of hours, low pay...), a higher work intensity might not result in lower poverty risk.

worker is not considered employed and is therefore not included in the working poor population. As expected, unemployment rates do not seem to be a good explainer of working poverty (Figure 8): when the outliers are excluded (Greece, Poland), the correlation disappears. Some successful countries have low unemployment (The Netherlands, Denmark) while other have average unemployment (Finland, Belgium). Germany which has the second highest unemployment rate among the studied countries is relatively successful in keeping in-work poverty low.

[Figure 8 here]

A high minimum wage should lower risk of in-work poverty in two ways: not only does it reduce wage disparity of low income workers but it also could exclude workers with the lowest productivity from the labour market. On the other hand, by excluding some workers from the labour market, it can also increase the risk of poverty and in-work poverty of other members of their household. Figure 9 shows a negative correlation between in-work poverty and the level of minimum wage relative to average wage. However, the correlation is relatively weak ( $R^2=0.10$ ). Greece, the Czech Republic and Belgium are the outliers.

[Figure 9 here]

What other labour market institutions are related to in-work poverty? Figure 10 draws the correlation between average weekly hours and in-work poverty. Employees from countries with high rates of in-work poverty tend to work on average longer weekly hours. However, Figure 10 also shows very dissimilar average weekly hours worked among countries that are successful in keeping in-work poverty low: on one hand, in the Netherlands employees average very low weekly hours (due to the prevalence of part-time work among women); on the other hand, working hours are high in the Czech Republic and Finland whereas Belgium and Denmark stand in-between. This shows that there are different successful strategies in order to keep in-work poverty low. It appears here that there is also a Dutch specificity (employment rates for women already showed that there was a Belgian and a Czech specificity). Figure 11 looks at another dimension of labour market institutions: employment protection. We use the employment

protection legislation index elaborated by the OECD. This index is calculated along 18 basic items which summarizes for each country the strictness of regulation for regular contracts, temporary contracts and collective dismissals. Strict employment protection is supposed to lead to segmentation in the labour market between insiders with protected jobs and outsiders with fixed-term, part-time or temporary contracts: this can have an effect on the risk of working-poverty. On Figure 11, we see that there is a weak correlation between strictness of employment protection and in-work poverty: the correlation is due to the southern European countries which cumulate high employment protection and high in-work poverty. Without Spain, Greece and Portugal, the correlation would actually be reversed.

[Figure 10 &11 here]

In Figure 12, we look at the relationship between the average size of households and in-work poverty. We saw in section 1 that that the presence of dependents increased the risk of working poverty. The size of households is an imperfect measure of the number of dependents: it also takes into account the proportion of adults living alone. This should have an opposite effect on in-work poverty since adults living alone have a greater probability of being working poor, especially if there are children. Figure 11 shows a positive correlation between size of households and in-work poverty ( $R^2=0.19$ ). Nordic countries and Germany have both small households and low-in work poverty.

[Figure 12 here]

Obviously, many of the variables that are related to in-work poverty are also inter-related. Table 4 presents least squares estimation of in-work poverty risk for the EU25+ countries, weighted by population size. High social spending (excluding pensions) as a percentage of GDP appears to be a robust predictor of low working poverty. This variable is highly correlated to working poverty even when we include poverty rate in the equation (eq. 2): it not only explains low working poverty but also the better performances regarding low-working poverty relative to the ones regarding poverty. Women's rate of employment is no longer significant when high social spending (excluding pensions) is added to the equation (eq. 4): countries with higher women's

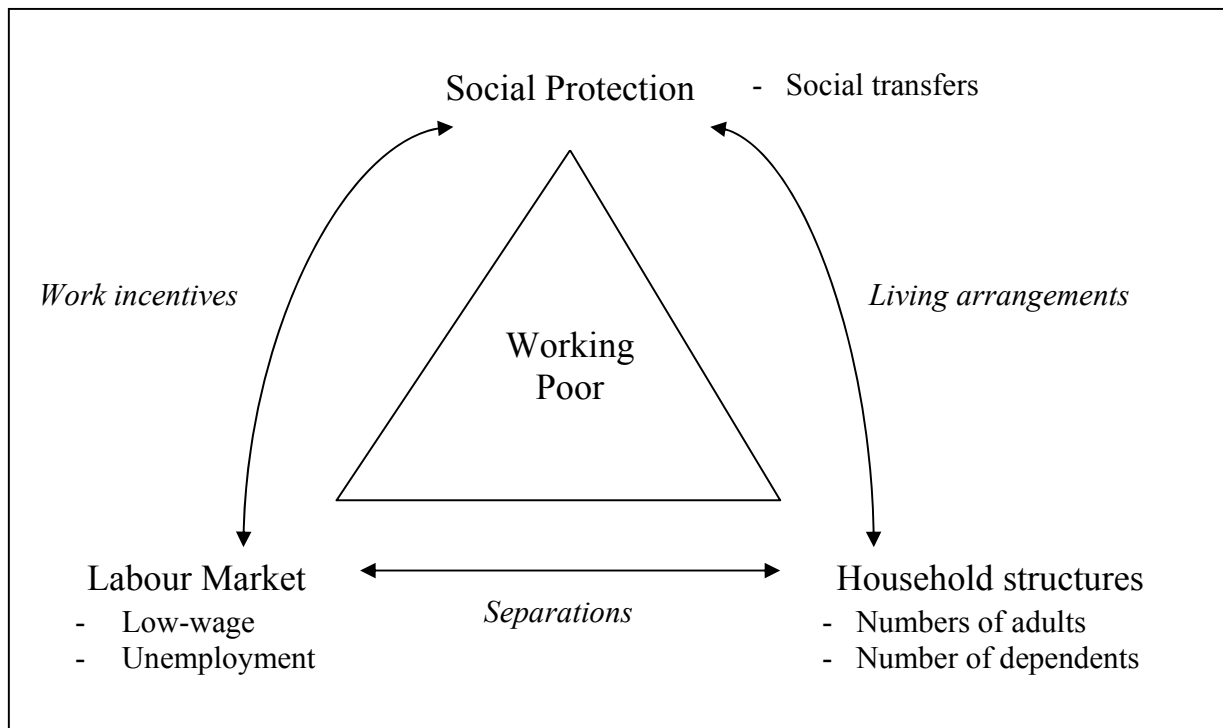
rate of employment are also the ones with higher social spending and the latter variable seems to better explain low working poverty. This is coherent with the theoretically ambiguous effect of employment on in-work poverty risk. Average size of households is the only variable that remains significant when social spending is taken into account (eq. 5 & 6). The household situation of workers seems crucial to understanding working poverty. However, interpretation in terms of causality is not simple because living arrangements are also a consequence of poverty risk: if the risk of poverty increases with the number of dependents, it is also true that the risk of poverty might increase the number of dependents.

[Table 4 here]

### **3. Working poverty and welfare state regimes**

From the analysis in section 1 and 2, we see that working poverty is a result of interactions between three sets of institutions: labour market, household structures and social protection. Labour market institutions determine employment and wages; household structures, the number of dependents active adult support; and social protection, the level of social transfers received by households. These institutions interact: living arrangements are not just the result of a social norm; they are also altered by social protection and labour market institutions. Young people will leave their parental home earlier if they can benefit from housing allowances, if student allowances and loans are generous, and if youth unemployment is low. Older people will be cared by their family when retirement benefits are low. Women's employment and divorce might also be related: women's employment lowers the economic cost of divorce and give women resources to leave unsatisfactory marriages. These resources can also be allocated by social protection. Labour market and social protection interactions result in varying financial incentives to work: generous social protection might lower incentives to work, especially for the less productive workers or the ones for which working is the costlier (for example women because they have to care for children or parents). Social protection instruments can be specifically targeted to working poor and/or low pay workers in order to increase their standard of living and/or increase financial incentives to work. Theoretically, these instruments have an ambiguous effect on in-work poverty: by increasing the standard of living of low pay workers, they reduce their risk of poverty but by increasing financial incentives to work of low qualified workers, these transfers can increase work in poor household and hence in-work poverty (but not overall poverty).





In this section, we look at the relationships between welfare state regimes and working poverty. The literature on welfare state regimes is vast and expanding since Esping-Andersen's seminal book, *The three worlds of welfare capitalism* (1990). Most of the literature consists of classifications of welfare states. State welfare is complex and a classification is necessary to reduce complexity for comparative purposes. Welfare States provisions are numerous and intertwined: it is therefore nearly impossible to uncover a causal relationship between a specific welfare state provisions and policy relevant outcomes.

Which welfare regimes tackle working poverty best? The answer to this question might depend on which classification of welfare state regimes we choose. Given the complexity of the procedure, most classifications are only concerned with a limited number of countries, mostly OECD countries. We therefore try to expand the traditional classifications in order to include all the studied countries.

Esping-Andersen's classification of welfare state regimes is based on a decommodification index. The author defines decommodification as 'the degree to which individuals or families can uphold a socially acceptable standard of living independently of market participation' (Esping-Andersen, 1990). The level of decommodification depends on the eligibility rules of welfare state instruments (the more universal, the more decommodified), on the level of income replacement and on the range of social risks covered (unemployment, disability, sickness and old age). The decommodification concept takes into account both a quantitative and a qualitative dimension of welfare state provisions. Table 5 shows Esping-Andersen classification of our countries of interest. Out of the five successful countries we defined, three belong to the social democratic cluster (Finland, Denmark, and the Netherlands) and one to the social assurance cluster (Belgium); the Czech Republic welfare regime was not analysed by Esping-Andersen. However, the decommodification index calculated by Esping-Andersen does not seem to be a good explainer of working poverty levels: in-work poverty risk is lower in Ireland, the European country with the lowest decommodification index score, than in Sweden, which enjoys the highest score. The decommodification index scores from 1990 should be updated before drawing definitive conclusions but welfare state reforms are slow and rank order of countries would probably not be much different today than in 1990.

[Table 5 here]

Along the line of the literature following Esping-Andersen's classification, Peña-Casas and Latta (2004) identify four types of welfare regimes in the European Union: liberal (Ireland, UK), social assurance (Austria, Belgium, France, Germany and Luxembourg), social democratic (Denmark, Finland, the Netherlands, Norway and Sweden) and Mediterranean (Greece, Italy, Portugal and Spain). The authors find a clear difference between the Mediterranean welfare cluster, which has a proportion of working poor of 12%, with the three other clusters where the proportion is more or less at the same level, twice as low as in the Mediterranean cluster (around 6%). If there is clearly a "bad" model in terms of working poverty, the distinction between the three other clusters is more difficult when we look at the working poor dimension. However, the authors also show that proportion of unemployed poor is much lower in the social democratic cluster: the

social democratic welfare state copes better with active poverty (employed and unemployed) than the other clusters.

Giuliano Bonoli (1997) points to a limit of Esping-Andersen's approach: the later projects elements of two dimensions, which Bonoli classifies as "how much" and "how", on one single dimension (decommodification). Bonoli argues that Esping-Andersen's classification is therefore based essentially on the quantity of welfare provided by welfare states and does not discriminate between the ways this welfare is provided. The author proposes his own two-dimension classification of European Welfare States. He classifies the welfare states according to the quantity of welfare they provide and to where they stand on the Beveridge versus Bismarck dimension. Bismarkian social policies are based on social insurance: the benefits are earnings-related; entitlement is conditional upon contributions which are the base for financing. In Beveridgean social policies, entitlement is universal, benefits are typically flat rate and financing is usually based on general taxation. The author uses two indicators to capture these two dimensions: social expenditure as a proportion of GDP and the proportion of contribution-financing in total social expenditure. He identifies four ideal-types of welfare state (Table 6). Successful countries in fighting in-work poverty are recruited in high spending/Beveridgean and in high spending/Bismarkian regimes: the level of spending seems more important than the way the spending is done. This is confirmed by Figure 13 which plots the relationship between the proportion of contribution-based financing and working poverty in the EU25+: there appears to be no correlation. In Figure 14, we use Bonoli's dimensions to classify the EU25+ countries in the four ideal-types. Bismarkian (resp. Beveridgean) regimes are the ones where contribution-based financing represent more (resp. less) than 55% of total financing. In high-spending countries, social spending (excluding old age) represent more than 13% of GDP. The five successful countries in keeping in-work poverty low belong to three different ideal-types: Denmark and Finland are high-spending Beveridgean, Belgium and the Netherlands, high spending Bismarkian and the Czech Republic low-spending Bismarkian. We also calculated weighted averages of in-work poverty risk for the 4 ideal-types. High spending Bismarkian have the lowest in-work poverty risk (5.3%) while low-spending Beveridgean regimes have the highest (12.2%). Bismarkian welfare regimes seem to have lower in-work poverty than Beveridgean

regimes but we just saw that in-work poverty is not correlated to the proportion of contribution-based financing, so the difference is probably not robust to changing thresholds.

[Figure 13 & 14 here]

## Conclusion

It appears from this study that if countries with different welfare regimes are successful in keeping the proportion of working poor low, high social spending as a proportion of GDP is the main factor contributing to low in-work-poverty. Table 6 summarizes the individual, job, household and national factors contributing to in-work poverty.

In terms of welfare regimes, the following conclusions can be drawn: the Mediterranean regime, with low social spending, low employment and large households has bad performances in terms of working poverty. The liberal regime, with average social spending has average performance. The social democratic regime with high social spending and small households has good performances except, relatively, for Sweden. The social assurance regime has both high social spending and good performances. Overall, the level of spending seems more important than the way the spending is done or financed.

The correlation between poverty and working poverty is strong: countries with low levels of in-work poverty are also the ones which keep general poverty low. Women's employment rate, which is generally viewed as being a factor in keeping in-work poverty low, is no more significant when level of social spending is taken into account.

The Czech Republic which has relatively low social spending is nevertheless a successful country in keeping in-work poverty low. According to Eurostat data, it actually enjoys the lowest risk of in-work poverty in the EU25+. This Czech mystery should be investigated<sup>6</sup>. Among the successful countries, Belgium enjoys the best performance relative to its overall poverty level. It is also, with the Czech Republic, the country with the lowest employment rates for men and for

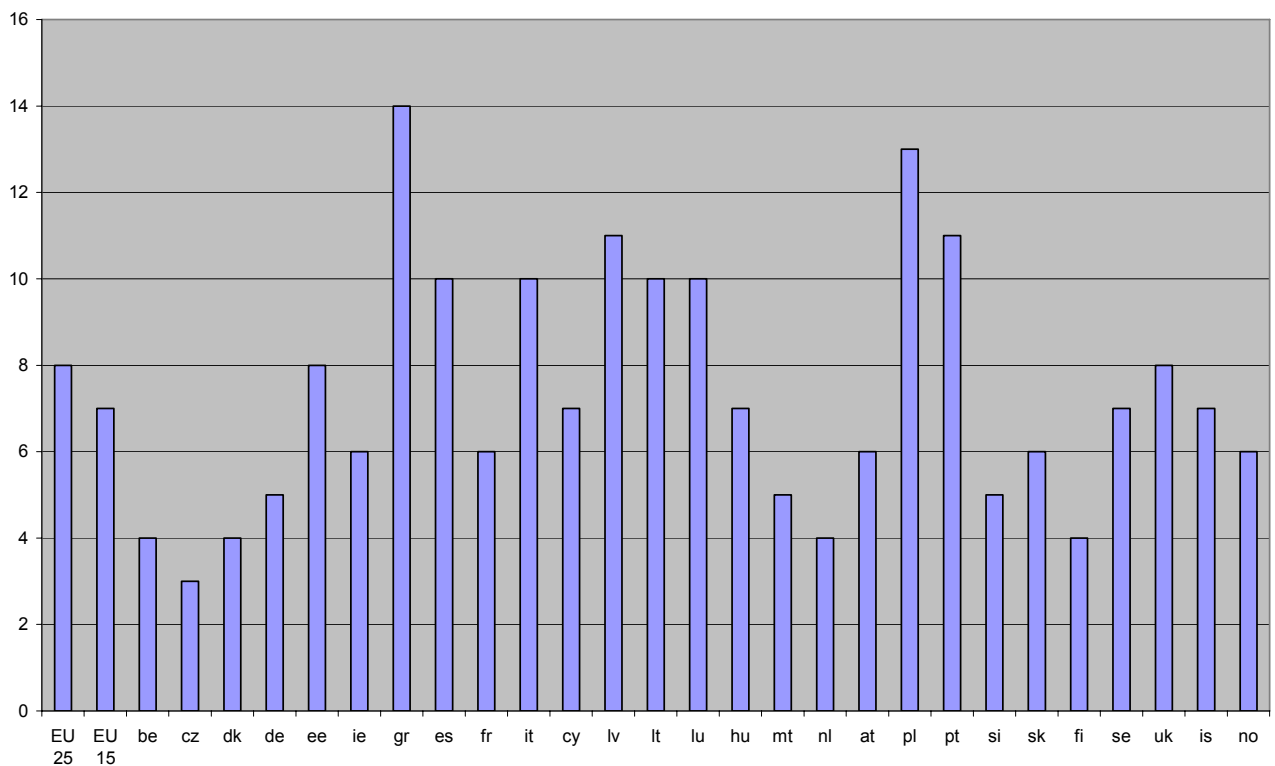
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<sup>6</sup> The question regarding the reliability of the data provided by Eurostat should also be considered.

women. A successful strategy in keeping in-work poverty low might consist in excluding the lower productivity workers from the labour market. More analysis is needed to test this hypothesis. There are several alternative strategies in fighting in-work poverty. It therefore seems relevant to carry out in-depth analysis of successful countries. The Czech Republic model which has very low in-work poverty level relative to its level of social spending and the Belgium model which has the best performance relative to its general poverty level need further attention.

**Figure 1: Risk of poverty for employed individuals by country, 2006**

*In %*



*Source: Eurostat*

- |                        |                    |
|------------------------|--------------------|
| be: Belgium            | pt : Portugal      |
| cz: The Czech Republic | si: Slovenia       |
| dk: Denmark            | sk: Slovakia       |
| ee: Estonia            | fi: Finland        |
| ie: Ireland            | se: Sweden         |
| gr: Greece             | uk: United Kingdom |
| es: Spain              | is: Iceland        |
| fr: France             | no: Norway         |
| it: Italy              |                    |
| cy: Cyprus             |                    |

lv: Latvia  
lt: Lithuania  
lu: Luxembourg  
hu: Hungary  
mt: Malta  
nl: The Netherlands  
at: Austria  
pl: Poland

**Table 1: In-work poverty risk by main characteristics of the employed population, 2006**

*In %*

	eu25	eu15	be	cz	dk	de	ee	ie	gr	es	fr	it	cy	lv	lt	lu	hu	mt	nl	at	pl	pt	si	sk	fi	se	uk	is	no
† Total	8	7	4	3	4	5	8	6	14	10	6	10	7	11	10	10	7	5	4	6	13	11	5	6	4	7	8	7	6
<b>sex</b>	<i>personal characteristics</i>																												
men	8	8	5	3	5	5	6	6	15	11	6	11	7	10	11	10	8	6	5	7	14	12	5	6	5	8	8	7	6
women	7	7	4	4	3	6	9	6	12	8	6	7	7	12	9	10	5	2	4	6	11	11	4	6	4	6	7	7	5
<b>age</b>																													
18-24 years old	9	9	4	4	15	9	5	8	14	8	8	10	10	7	6	14	6	2	4	4	16	7	5	4	10	23	10	11	17
25-54 years old	8	7	4	4	4	5	8	6	13	10	6	10	7	12	11	11	7	6	4	7	13	10	5	7	4	7	7	7	5
55-64 years old	7	7	5	0	3	5	8	7	16	10	6	6	6	12	10	4	4	3	4	6	10	16	6	3	4	3	8	2	3
<b>education</b>																													
iscd0_2	14	13	7	9	7	10	10	10	24	16	8	15	12	23	25	22	15	6	6	13	32	13	11	10	8	8	13	9	7
iscd3_4	7	6	4	4	4	5	9	6	11	8	6	7	8	12	12	7	7	2	5	6	14	5	4	7	6	7	8	7	5
iscd5_6	3	4	2	1	3	4	5	2	4	4	3	3	3	4	2	2	2	1	2	4	1	0	2	3	2	7	4	3	3
	<i>Job characteristics</i>																												
<b>Type of contract</b>	eu25	eu15	be	cz	dk	de	ee	ie	gr	es	fr	it	cy	lv	lt	lu	hu	mt	nl	at	pl	pt	si	sk	fi	se	uk	is	no
Permanent contract	4	4	2	3	4	4	6	4	4	5	4	6	6	9	6	10	5	3	3	6	6	6	4	5	2	5	4	4	4
Temporary contract	12	12	8	7	:	11	14	14	19	11	10	20	22	20	24	18	11	5	5	10	13	10	11	9	11	22	6	10	18
<b>Weekly hours</b>																													
Full-time (> 30 hours)	7	6	4	3	4	4	7	4	13	9	5	9	6	10	9	9	6	4	4	5	11	9	4	6	3	7	5	6	5
Part-time (<= 30 hours)	11	10	4	6	6	8	13	10	26	12	10	14	16	26	25	13	15	8	5	10	23	29	7	10	10	9	12	8	7
<b>Number of months worked</b>																													
Full year	7	7	4	3	4	5	7	5	14	10	6	9	7	11	9	9	6	5	4	6	12	11	4	6	4	7	7	6	5
Less than full year	15	14	12	8	7	10	18	12	19	13	11	18	13	20	22	27	19	6	10	11	20	14	13	12	9	20	26	14	17
	<i>Household characteristics</i>																												
	eu25	eu15	be	cz	dk	de	ee	ie	gr	es	fr	it	cy	lv	lt	lu	hu	mt	nl	at	pl	pt	si	sk	fi	se	uk	is	no
Living alone, no children	9	9	5	7	9	10	10	9	9	8	6	10	12	16	13	14	10	4	7	10	10	19	15	7	10	13	11	9	9
Living alone, with children	17	17	10	20	9	18	26	21	16	23	14	18	23	29	23	39	17	11	17	12	13	28	12	17	8	26	19	21	13
Two adults, no children	5	5	3	1	2	4	4	3	11	6	5	4	10	8	6	5	3	1	2	5	7	10	4	3	3	5	5	4	4
Two adults, with children	9	9	4	5	4	4	7	7	17	14	6	13	5	12	10	11	9	7	5	6	16	11	5	8	4	5	9	6	4
Household without dependants	6	6	4	2	5	6	6	4	11	6	5	5	10	9	8	8	4	1	3	7	8	11	5	3	5	8	6	5	6
Household with dependants	10	9	4	5	4	5	9	8	17	14	7	14	6	13	11	13	9	7	6	6	16	12	5	8	4	7	10	8	5

Source: Eurostat, 2006

**Table: In-work poverty risk and share of in-work poor by household type**

household type	One adult with no dependant children				Single parents with dependant children			Two adults or more with no dependant children			Two adults or more with dependant children		
	<i>In-work poverty risk</i>	<i>In-work poverty risk</i>	<i>Share of population</i>	<i>Share of working poor</i>	<i>In-work poverty risk</i>	<i>Share of population</i>	<i>Share of working poor</i>	<i>In-work poverty risk</i>	<i>Share of population</i>	<i>Share of working poor</i>	<i>In-work poverty risk</i>	<i>Share of population</i>	<i>Share of working poor</i>
<b>countries</b>													
eu25	8	9	13	15	17	5	11	5	36	22	9	47	53
eu15	7	9	13	15	17	5	11	5	36	26	9	45	51
be Belgium	4	5	15	18	10	6	14	3	34	26	4	45	43
cz Czech Republic	3	7	9	15	20	4	19	1	38	13	5	49	58
dk Denmark	4	9	22	<b>41</b>	9	7	13	2	31	16	4	41	34
de Germany	5	10	18	<b>31</b>	18	6	18	4	36	29	4	39	27
ee Estonia	8	10	14	18	26	7	23	4	30	15	7	49	44
ie Ireland	6	9	8	10	21	8	23	3	29	15	7	56	55
gr Greece	14	9	7	5	16	2	2	11	44	<b>35</b>	17	48	58
es Spain	10	8	6	5	23	2	4	6	42	25	14	50	<b>67</b>
fr France	6	6	14	14	14	5	12	5	32	27	6	48	48
it Italy	10	10	12	13	18	3	6	4	39	16	13	48	65
cy Cyprus	7	12	5	8	23	2	6	10	30	<b>43</b>	5	62	43
lv Latvia	11	16	9	12	29	5	12	8	32	23	12	53	54
lt Lithuania	10	13	11	14	23	6	14	6	28	17	10	56	56
lu Luxembourg	10	14	12	16	39	4	15	5	32	16	11	53	55
hu Hungary	7	10	9	12	17	5	11	3	34	15	9	52	63
mt Malta	5	4	7	6	11	2	5	1	37	7	7	54	<b>81</b>
nl Netherlands	4	7	15	22	17	4	14	2	34	17	5	48	50
at Austria	6	10	15	23	12	4	7	5	35	29	6	46	43
pl Poland	13	10	9	7	13	3	3	7	28	15	16	59	<b>74</b>
pt Portugal	11	19	6	10	28	3	7	10	38	<b>35</b>	11	54	51
si Slovenia	5	15	7	19	12	3	7	4	35	28	5	54	49
sk Slovakia	6	7	8	8	17	3	8	3	31	16	8	58	<b>70</b>
fi Finland	4	10	18	<b>36</b>	8	5	8	3	34	26	4	43	35
se Sweden	7	13	20	<b>31</b>	26	8	<b>25</b>	5	28	20	5	44	27
uk United Kingdom	8	11	14	18	19	8	17	5	39	24	9	41	42
is Iceland	7	9	9	12	21	8	24	4	22	13	6	61	52
no Norway	6	9	20	32	13	6	14	4	29	19	4	45	32

Source: Eurostat, 2006 ; author's calculation



**Table 3: in-work poverty risk and share of working poor of part-time employees**

*En %*

<b>countries</b>	<b>all</b>	<b>Part-time employees</b>		
	<i>In-work poverty risk</i>	<i>In-work poverty risk</i>	<i>Share of workers</i>	<i>Share of working poor</i>
eu25	8	11	19	27
eu15	7	10	21	30
be Belgium	4	4	22	22
cz Czech Republic	3	6	5	10
dk Denmark	4	6	24	32
de Germany	5	8	26	41
ee Estonia	8	13	8	14
ie Ireland	6	10	:	:
gr Greece	14	26	6	11
es Spain	10	12	12	15
fr France	6	10	17	29
it Italy	10	14	13	19
cy Cyprus	7	16	8	18
lv Latvia	11	26	7	15
lt Lithuania	10	25	10	23
lu Luxembourg	10	13	17	23
hu Hungary	7	15	4	9
mt Malta	5	8	10	18
nl Netherlands	4	5	46	52
at Austria	6	10	22	36
pl Poland	13	23	10	19
pt Portugal	11	29	11	29
si Slovenia	5	7	9	15
sk Slovakia	6	10	3	5
fi Finland	4	10	14	35
se Sweden	7	9	25	30
uk United Kingdom	8	12	26	45
is Iceland	7	8	17	22
no Norway	6	7	29	36

*Source: Eurostat, 2006; author's calculation*

**Table 4a & b: Low wage workers and working poor in the European Union, 1996**

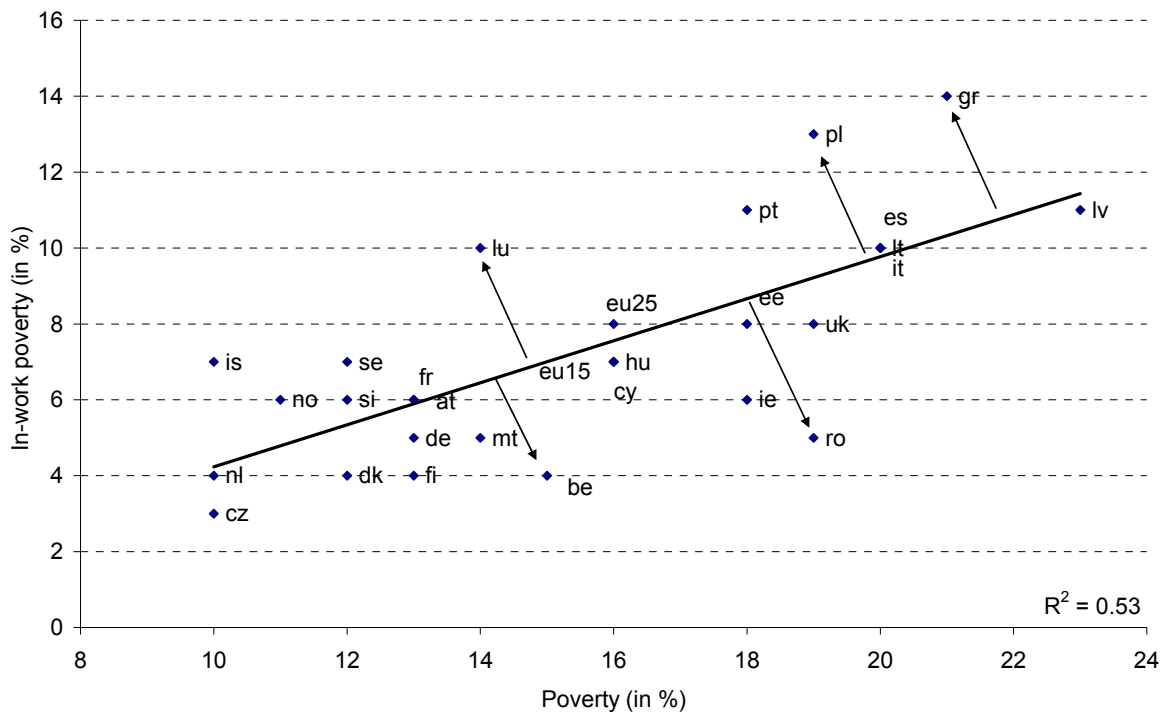
Country	Working poor as % of all employees	Low-wage employees as % of all employees	Working poor as % of all low-wage employees	Low-wage employees as % of all working poor
Austria	6	16	16	40
Belgium	6	9	18	26
Denmark	4	7	13	21
France	7	13	21	38
Germany	10	17	24	41
Greece	9	17	27	52
Ireland	6	18	14	38
Italy	10	10	25	27
Luxembourg	8	16	18	38
Netherlands	7	16	15	33
Portugal	5	6	18	21
Spain	9	13	19	28
UK	7	21	15	44
EU-13	8	15	20	37

Source: Eurostat (2000)

Country	Working poor & Low Wage	Working poor & not Low Wage	Low wage & not working poor	Not low wage & not working poor	Odds-ratio
Austria	2.6	3.4	13	81	4.5
Belgium	1.6	4.4	7	87	4.3
Denmark	0.9	3.1	6	90	4.3
France	2.7	4.3	10	83	5.2
Germany	4.1	5.9	13	77	4.1
Greece	4.6	4.4	12	79	6.6
Ireland	2.5	3.5	15	79	3.7
Italy	2.5	7.5	8	83	3.7
Luxembourg	2.9	5.1	13	79	3.4
Netherlands	2.4	4.6	14	79	3.0
Portugal	1.1	3.9	5	90	5.0
Spain	2.5	6.5	11	80	2.9
UK	3.2	3.9	18	75	3.4
EU-13	3.0	5.0	12	80	4.0

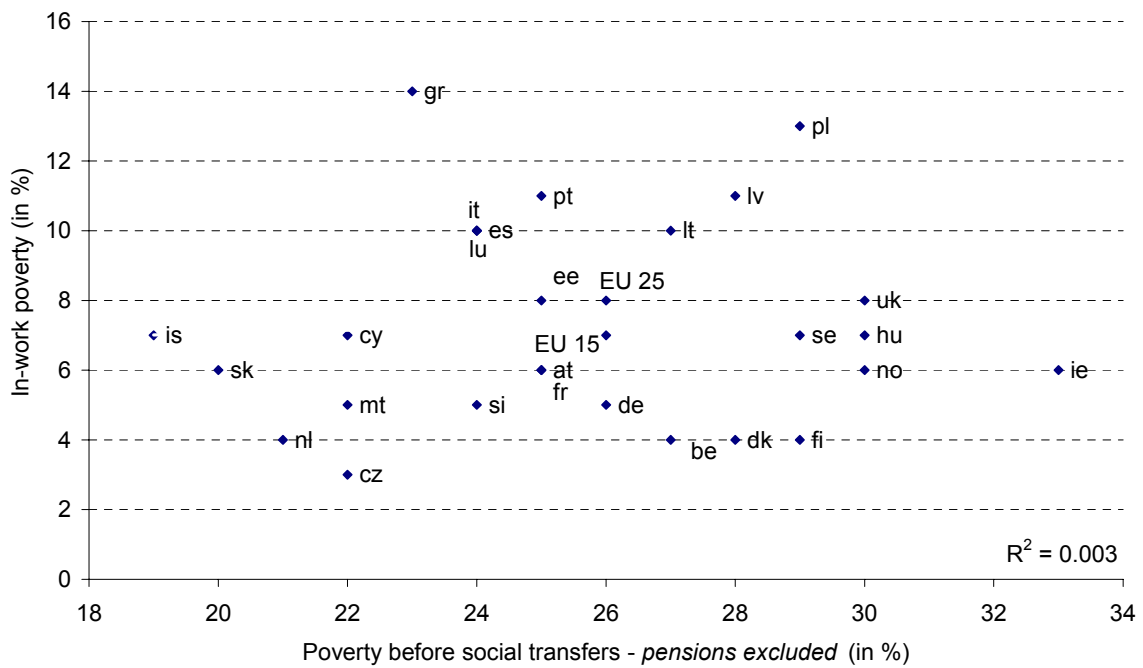
Source: Eurostat (2000), author's calculations.

**Figure 2: Poverty and in-work poverty in the EU-25+**



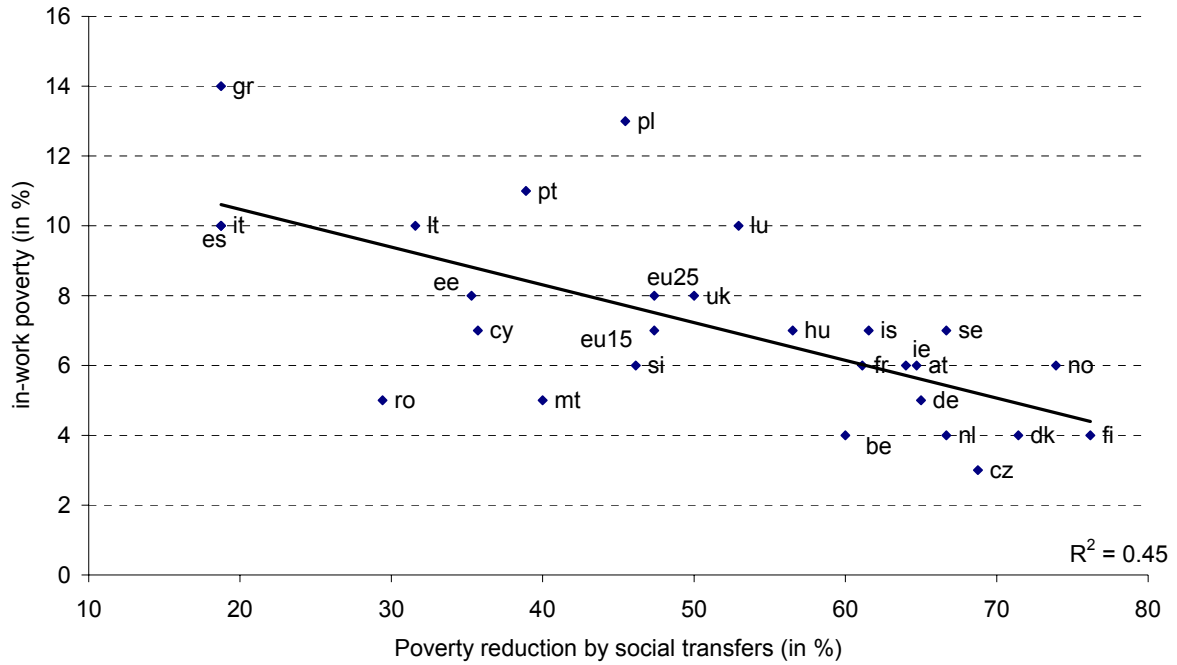
Source: Eurostat

**Figure 3: Poverty before social transfers and in-work poverty in the EU-25+**



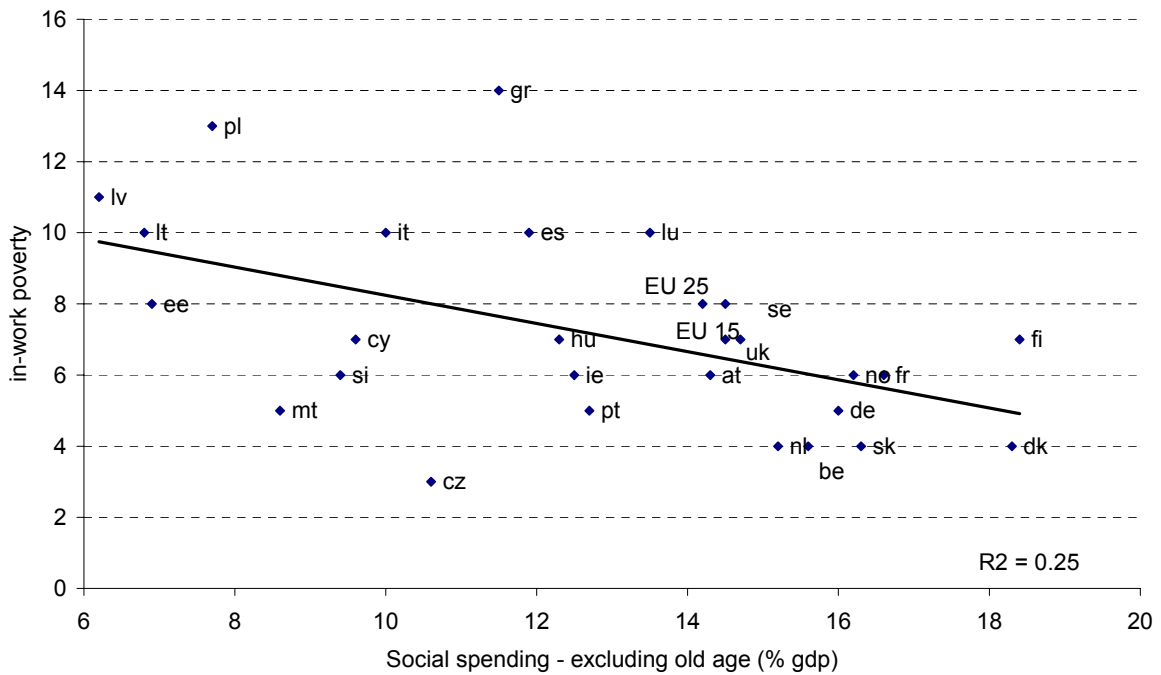
Source: Eurostat

**Figure 4: Poverty reduction by social transfers and in-work poverty in the EU-25+**



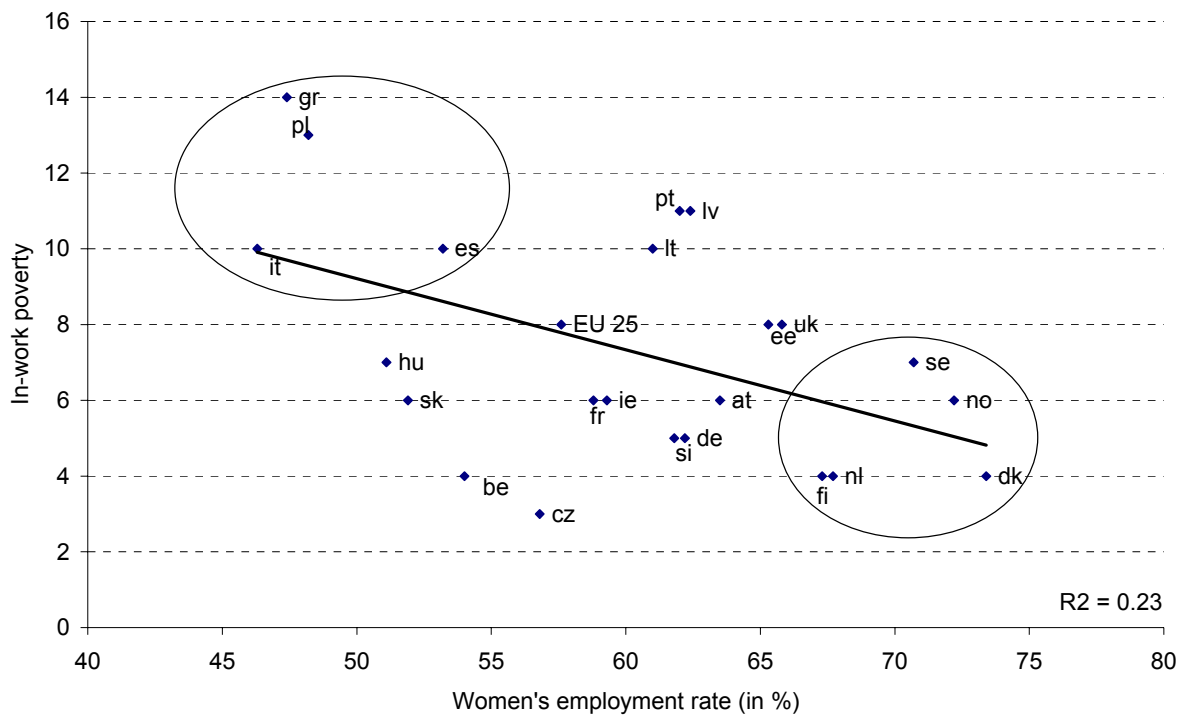
Source: Eurostat

**Figure 5: Social spending and in-work poverty in the EU-25+**



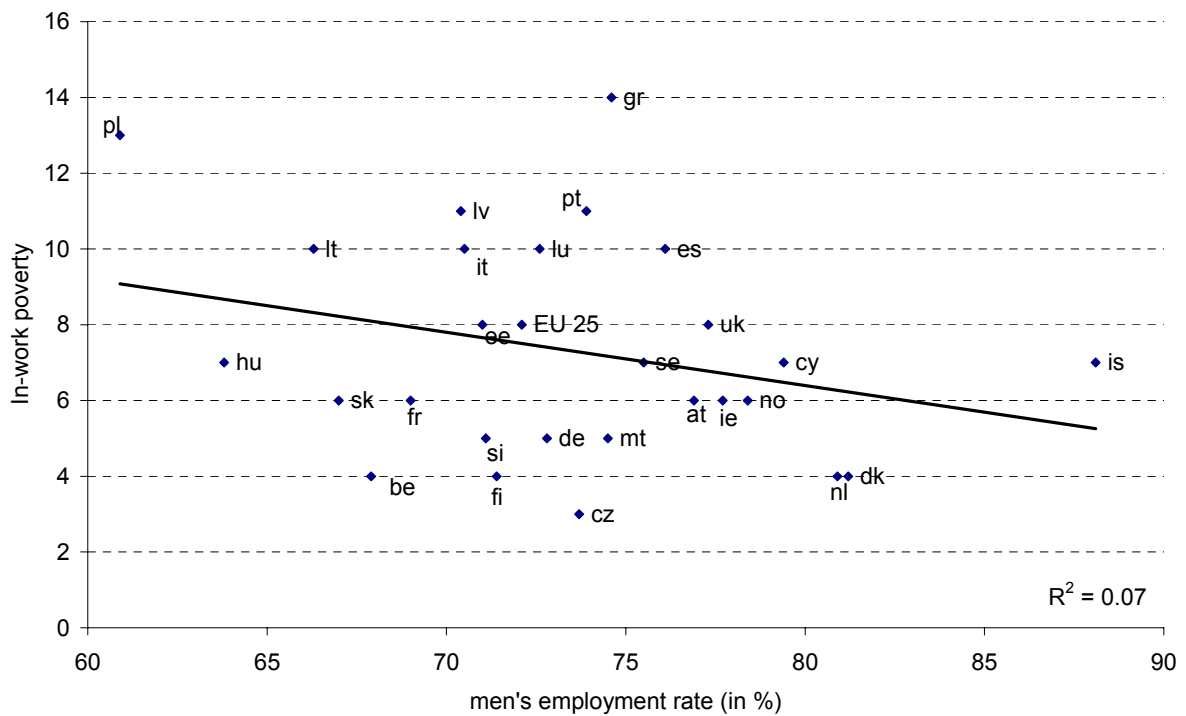
Source: Eurostat

**Figure 6: Rate of employment for women (15-64) and in-work poverty in the EU-25+**



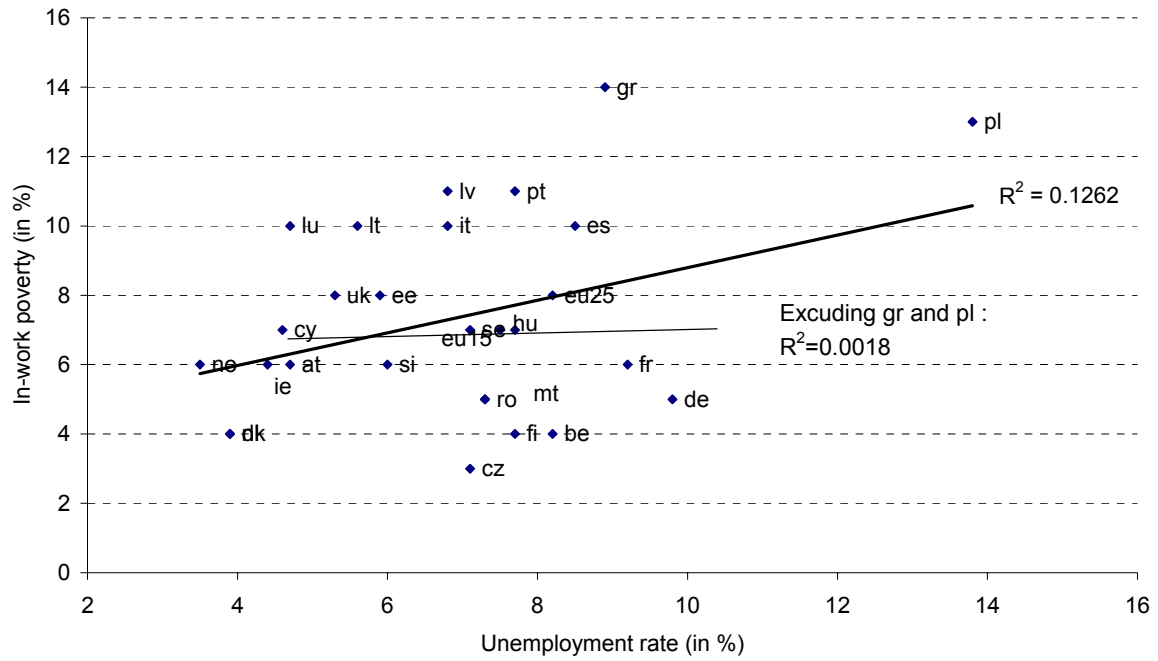
Source: Eurostat

**Figure 7: Rate of employment for men (15-64) and in-work poverty in the EU-25+**



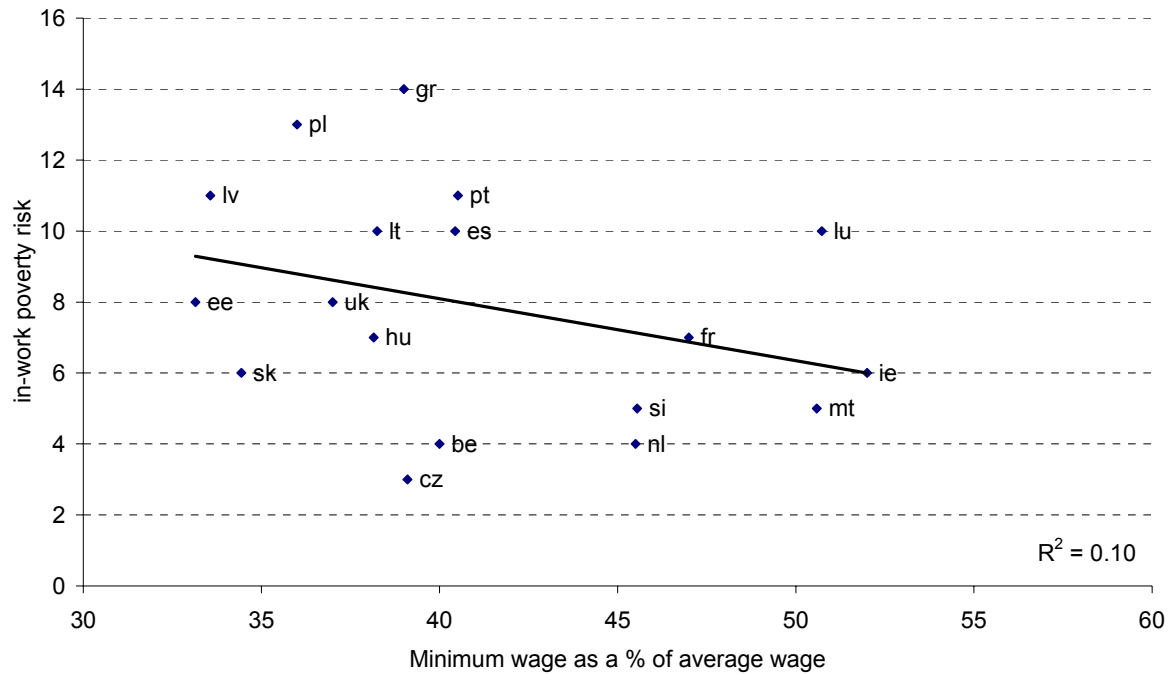
Source: Eurostat

**Figure 8: Unemployment rates and in-work poverty in the EU-25+**



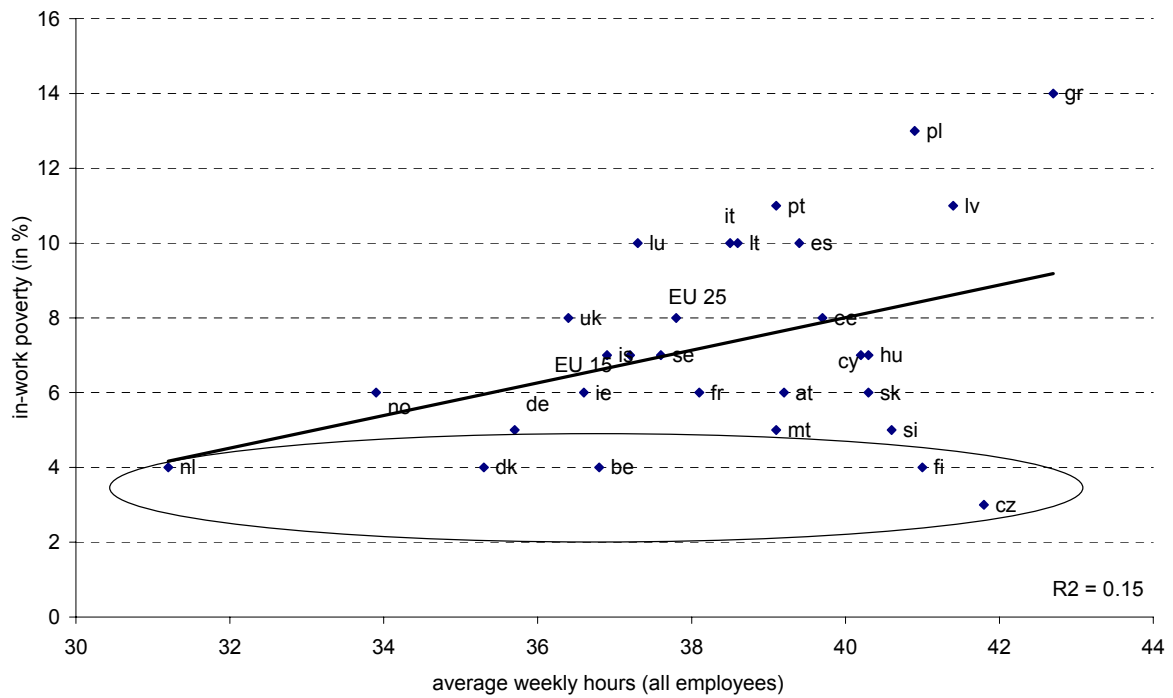
Source: Eurostat

**Figure 9: Minimum wage as a % of average wage and working poverty**



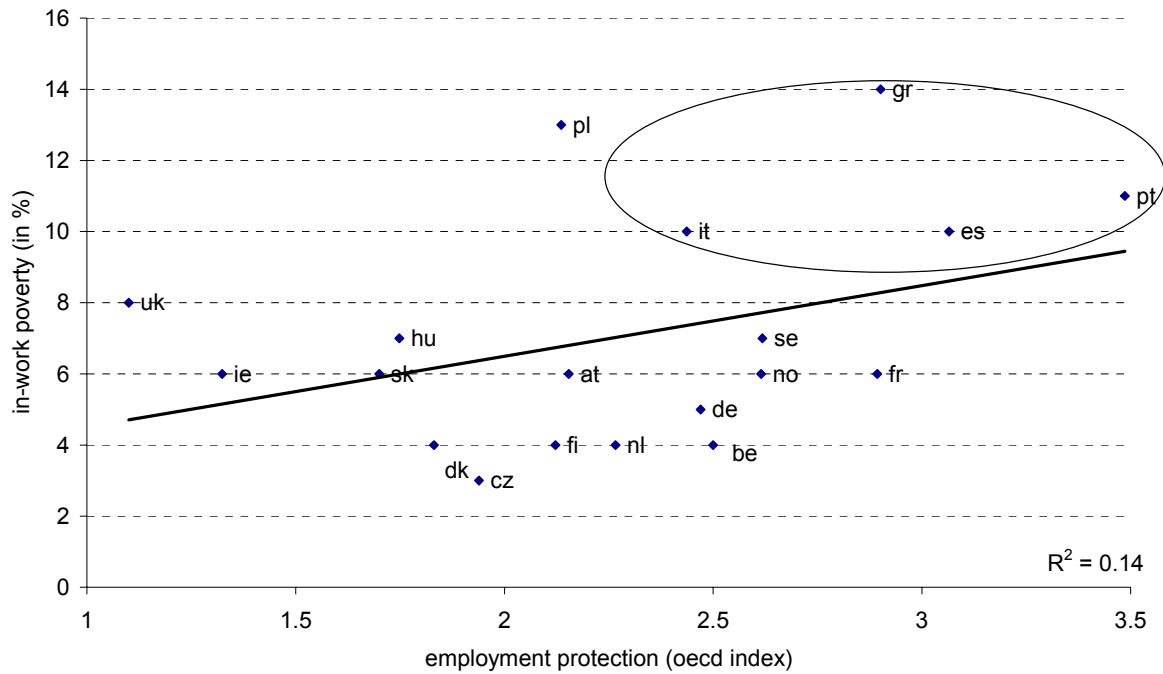
Source: Eurostat

**Figure 10: average weekly hours and in-work poverty in the EU-25+**



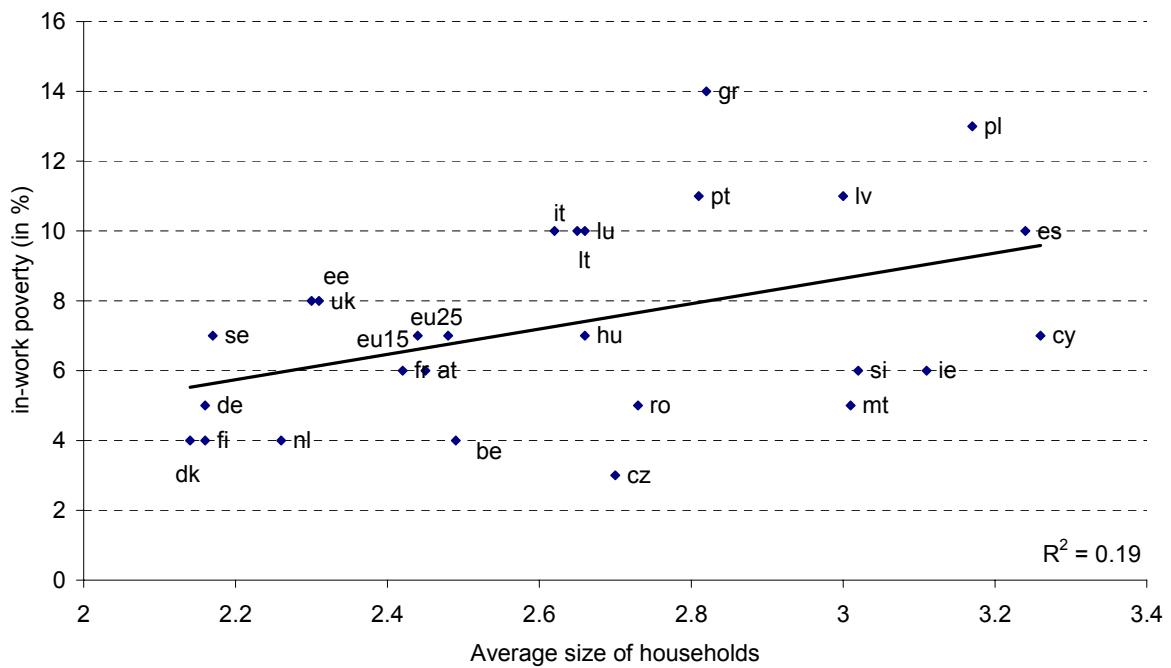
Source: Eurostat

**Figure 11: employment protection and in-work poverty in the EU**



Source: Eurostat, OECD

**Figure 12: average size of households and in-work poverty in the EU-25+**



Source: Eurostat



**Table 5: Least squares estimation of in-work poverty risk, EU25+, weighted by population**

	1	2	3	4	5	6
c	18.60*** (1.08)	8.90*** (2.57)	22.56*** (2.99)	17.77*** (2.02)	10.29*** (3.60)	2.07 (3.35)
poverty rate		0.33*** (0.08)				0.31*** (0.07)
social spending (excl. pensions)	-0.80*** (0.07)	-0.49*** (0.09)		-0.85*** (0.13)	-0.59*** (0.11)	-0.32*** (0.07)
women employment rate (15-64)			-0.26*** (0.05)	0.027 (0.056)		
average size of households					2.19** (0.91)	1.94** (0.68)
R <sup>2</sup>	0.82	0.89	0.51	0.82	0.85	0.92

\*\*\* significant at the 1% level; \*\* significant at the 5% level; \* significant at the 10% level

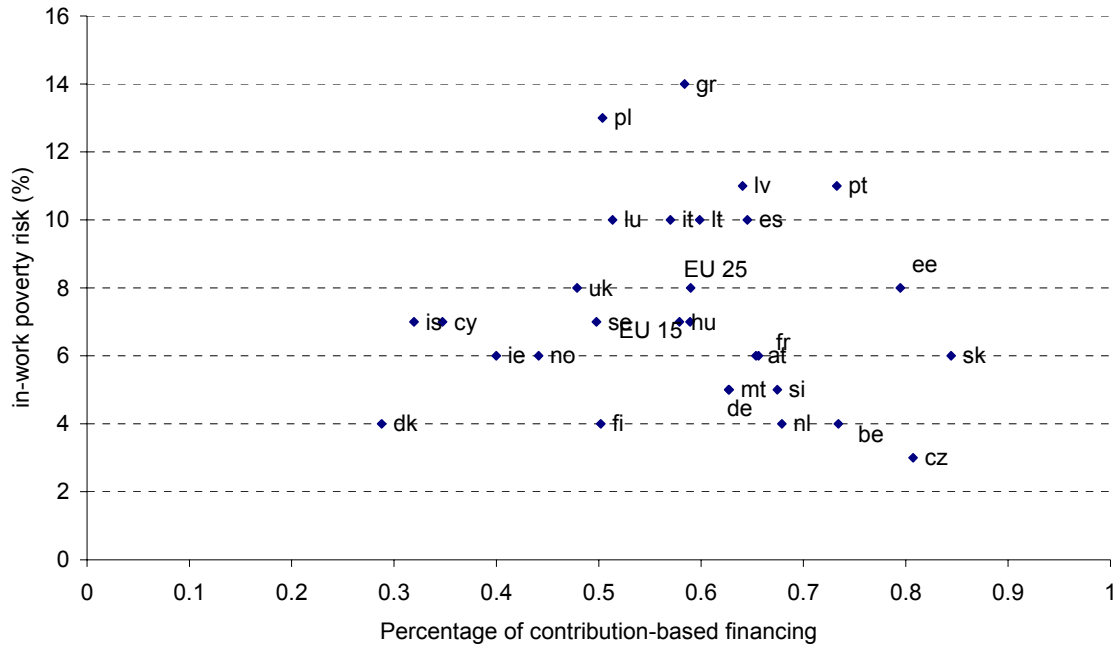
*Standard errors in parenthesis*

*\*\*\* Significant at the 1% level; \*\* significant at the 5% level; \* significant at the 10% level*

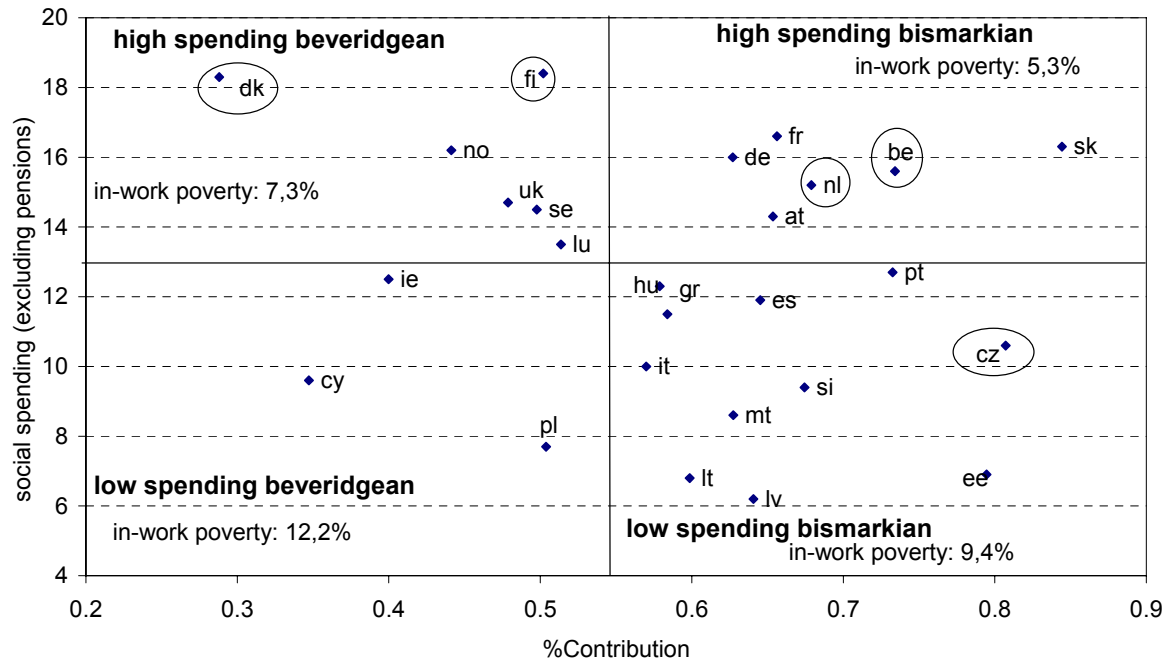
**Table 5: Welfare States classifications and working poverty**

<b>Esping-Andersen (1990)</b>		In-work poverty risk in %				
<b>Liberal</b>	<b>7%</b>					
Ireland			6%			
United Kingdom			8%			
<b>Conservative</b>	<b>6.3%</b>					
Italy			10%			
France			6%			
Germany			5%			
<u>Finland</u>			4%			
<b>Social Democratic</b>	<b>5.2%</b>					
Austria			6%			
<u>Denmark</u>			4%			
<u>Belgium</u>			4%			
<u>The Netherlands</u>			4%			
Norway			6%			
Sweden			7%			
<b>Bonoli (1997)</b>		in-work poverty risk (%)		in-work poverty risk (%)		
<b>High spending / taxation-based</b>	<b>5.3</b>			<b>High Spending / contribution-based</b>	<b>4.8</b>	
Sweden			7	<u>Netherlands</u>		4
<u>Denmark</u>			4	France		6
<u>Finland</u>			4	<u>Belgium</u>		4
Norway			6	Germany		5
<b>Low spending / taxation based</b>	<b>7.0</b>			<b>Low Spending / contribution-based</b>	<b>11.3</b>	
United Kingdom			8	Italy		10
Ireland			6	Spain		10
				Greece		14

**Figure 13: Percentage of contribution-based financing and in-work poverty risk, EU25+**



**Figure 14: Welfare State classifications and successful countries in keeping in-work poverty low.**



O: Successful countries in keeping working poverty low

**Table 6: Summary of factors contributing to in-work poverty intensity**

<b>Individual</b>	
sex	0
age	+
education	++
<b>Job</b>	
type of contract	++
weekly hours	++
number of months worked	++
low-wage	++
<b>Household</b>	
Presence of children	++
<i>Living alone with children</i>	+++
<b>National</b>	
Level of social spending	+++
Size of households	++
Rate of employment for women*	++ / 0 *
Rate of employment for men*	+ / 0 *

*\* these factors are no longer significant when social spending is taken into account.*

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