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Patterns of Low-Wage Employment and Related Indicators in Europe

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In the European Union, one out of six workers is earning a low wage. Behind this figure hides great disparities in different countries. The incidence of low-wage employment varies from 3% in Sweden to 28% in Latvia. This article aims to provide an overview of the low-wage employment in Europe, trying to answer the following questions. What is a low-wage worker? How do the labour market institutions shape the low-wage sector? Is there a link between the incidence of low-wage jobs and labour market performance? What is the link between low-wage employment, wage inequality and poverty at work?

1. Introduction

Wage developments receive a fair deal of attention in the public debate. The focus is most often on the evolution of various forms of nominal wages and sometimes also real wages. Quite frequently the focus is on unit labour costs and real effective exchange rates. This allows linking wages to productivity and competitiveness issues. Meyermans (2012) gives a good overview of wage developments in the countries of the European Union.

One could say that the focus on nominal unit labour costs and real effective exchange rates is the one of the employers. The present article proposes a different perspective on wages, one which is closer to the one of the employees. This is achieved via a focus on low-wages, and on related topics, namely adequate wages and in-work poverty.

Low-wage employment is a widely used term. However, it seems that the indicator "share of low-wage workers" is not always well understood. Hence, this article starts off by defining low-wage employment and by shedding light on recent developments. Next, it tries to link low-wage employment to other indicators of wage levels or the wage distribution.

Low-wage employment is shaped by labour market institutions. It is thus interesting to know the link between institutions, such as trade union, collective pay agreements and minimum wages and low-wage employment.

According to Freeman (1998), it is not clear if a high share of low-wage workers is economically and socially beneficial: "We worry about low wage work because it affects the overall social good. On the one side, as the left stresses, low wage work is potentially a major contributor to poverty and to economic inequality, which often brings with it social division and exclusion. On the other side, as the right stresses, lack of low wage employment is potentially a barrier to full employment." Hence it is interesting to investigate the link between low-wage employment and standard indicators of labour market performance, such as employment and unemployment rates.

Sometimes it is argued that low-wage employment is a stepping stone to jobs with higher wages. If this is true, low-wage employment is not a major problem. However, if low-wage employment is a persistent status, the policy response must be different. Hence, the link between low-wage employment and low-wage transitions will also be assessed.

In-work poverty is often cited in the same breath as low-wage employment and often used interchangeably with it. Nevertheless, this is a different concept which considers the workers within their households. Another topic closely related to low wages is that of pay-satisfaction. This more subjective indicator provides a different perspective on the adequacy of wages in general and low wages in particular.

There is a plethora of articles and studies articles on low-wage employment. They are all tapping different sources on wage data. However, none of these relies systematically on harmonised wage data. Indeed, as pointed out by Lucifora and Salverda (2009), it is rather difficult to find internationally comparable data on low wages. This article tries to address this point by using as much as possible on harmonised data, such as e.g. the European Structure of Earnings Survey, as well as other European data sources.

2. Low-Wage Employment

There are two ways to define and measure low wage work. The *absolute approach* consists in choosing a fixed threshold and to estimate the proportion of workers who earn less than this amount. The threshold, which can e.g. be an income poverty threshold, is defined independently from the wage distribution. The *relative approach* defines a threshold based on the wage distribution within a country and estimates the proportion of workers below this relative threshold. Here the threshold is estimated endogenously, from inside the prevailing wage distribution.

The absolute approach has the advantage that it can be based on an accepted and easily identifiable threshold. It is often used in national studies. However, in temporal or international comparisons (or both), it is very difficult to come up with an absolute threshold that is unambiguously defined for all the countries and all the periods considered. In such a context it is preferable to use a relative threshold. This allows defining the threshold in a unified way over time and across countries. The thresholds chosen here is two thirds of the median wage. This is a common definition used by researchers and analysts interested in low wage work.

The wage indicator used here is an hourly wage. This eliminates the effect of working time on the wage distribution. In other words, it allows carrying out a simultaneous analysis for full-time and part-time workers. Grimshaw (2011) provides a deeper discussion of the choice of the threshold and the reference population.

The data on low-wage employment come from the latest vintage of the European Structure of Earnings Survey. It is a harmonised survey conducted in the 27 EU member states, as well as in some countries beyond. The survey covers enterprises with at least 10 employees in all economic activities except agriculture, forestry and fishing, public administration, and extra-territorial organisations. The survey provides information on relationships between the level of earnings and individual characteristics of employees and their employer. For the purposes of the present article, it provides a harmonised measure of hourly wages and a harmonised coverage of employees across countries. More information on the Structure of Earnings Survey as well as first results on low-wage employment are provided by Bezzina (2012).

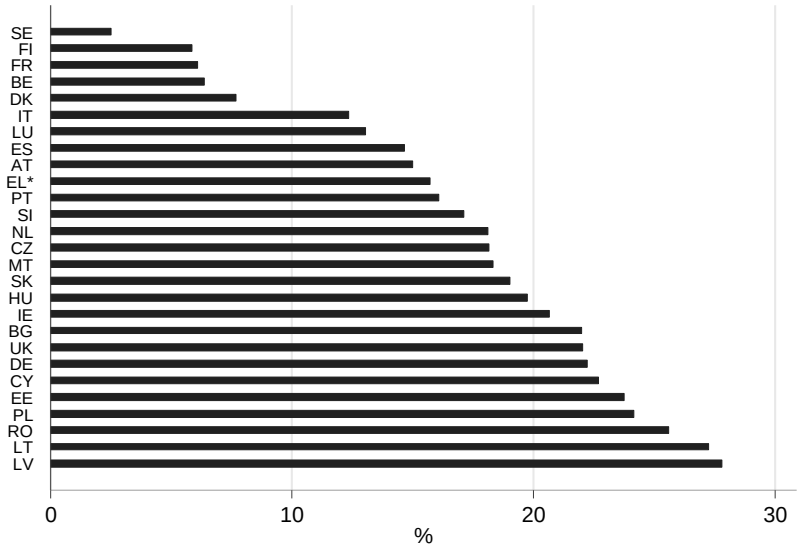
2.1 Patterns of Low-Wage Employment

In the 27 member states of the European Union, more or less one worker out of six (17%) has a low wage. This figure is hiding considerable differences between countries. On the whole, the incidence of low-wage work ranges from 3% in Sweden to 28% in Latvia.

In Sweden, Finland, France, Belgium and Denmark the proportion of low-wage workers is less than 10%. In Italy, Luxembourg, Spain, Austria and Greece, the incidence of low-wage work ranges between 12% and 16%. In Slovenia, the Netherlands, Czech Republic, Malta and Slovakia, the incidence is higher than the EU average but still below 20%. In the remaining countries, more than one fifth of the workers earn a low wage, with the highest incidence being measured in Romania (26%), Lithuania (27%) and Latvia (28%).

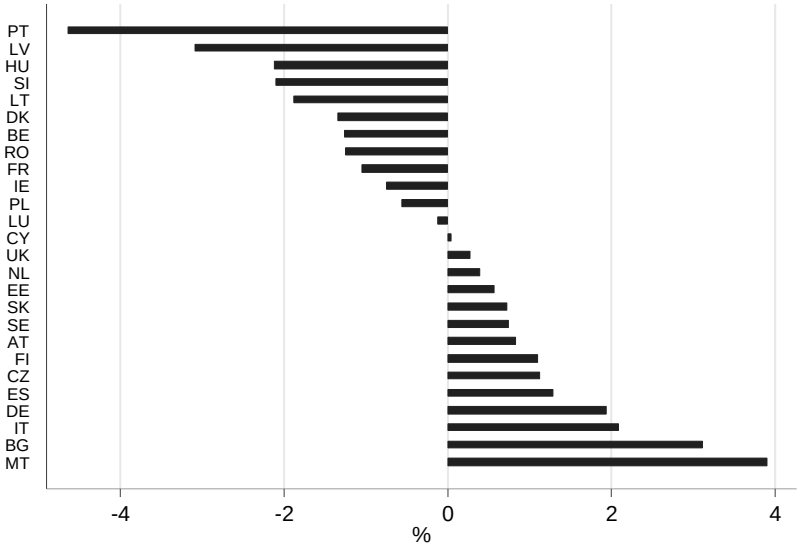
On the level of the EU, the incidence of low-wage work has neither increased nor decreased from 2006 to 2010. The precise situation differs from country to country. In 5 countries the share of low-wage workers has remained constant (UK, CY, IE, LU and NL). In 10 countries, the share has even decreased (PT, LV, SI, BE, LT, HU, PL, RO, DK, FR). The biggest decreases are observed in Portugal (-5% points) and Latvia (-3% points). On the other hand, the incidence of low wage work has increased in 11 countries (MT, BG, DE, ES, IT SK, CZ, AT, FI, EE, SE). The biggest increases have occurred in Malta (+4% points) and Bulgaria (+3% points).

Figure 1: Proportion of low-wage earners in 2010



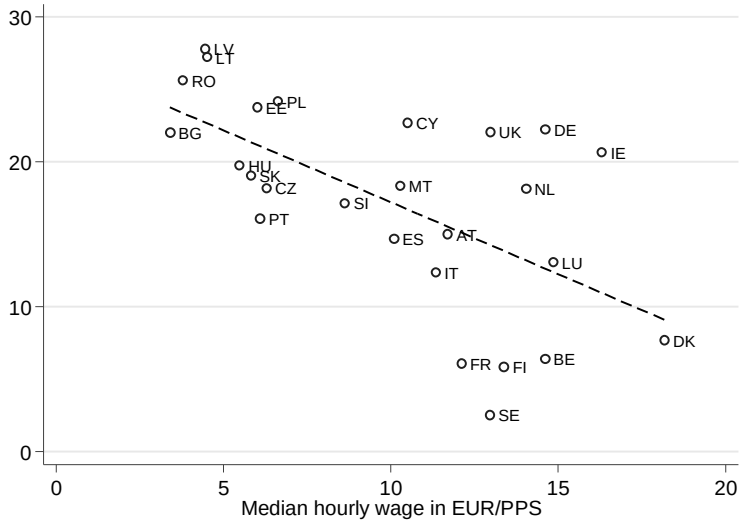
Source: Eurostat - Structure of Earnings Survey. * The data for EL referes to 2006

Figure 2: Change in the proportion of low-wage earners between 2006 and 2010 (in % points)



Source: Eurostat - Structure of Earnings Survey

Figure 3: The incidence low-wage employment compared to the median hourly wage in 2010



Source: Eurostat - Structure of Earnings Survey

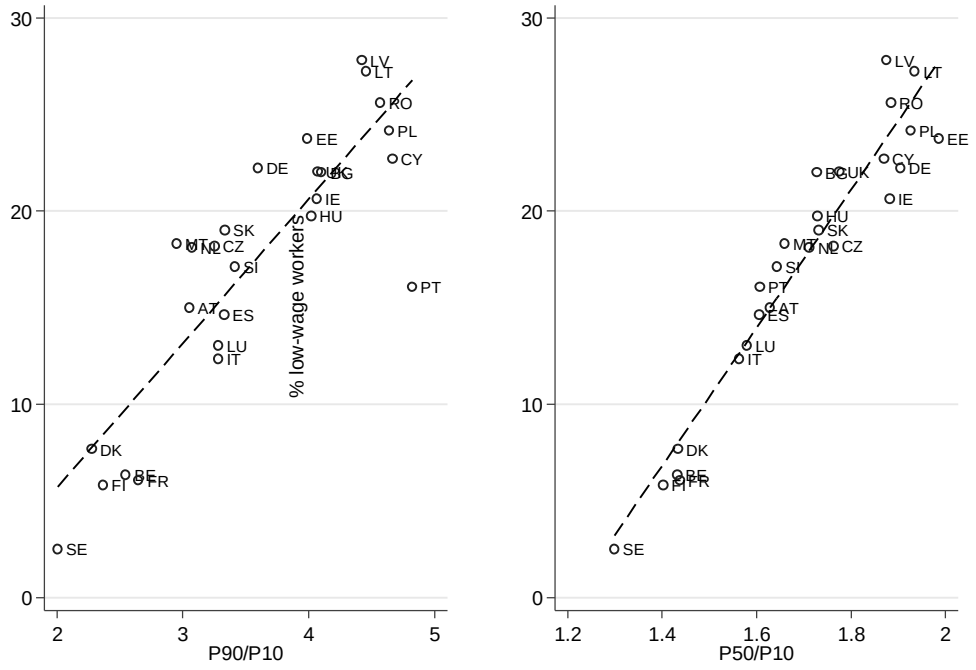
The countries with the highest wages have the lowest incidence of low-wage work. This is a general tendency, to which there are some exceptions, such as Germany, Ireland and the United Kingdom. The median hourly wages, expressed in purchasing power standards, are quite high in these countries. On the other hand the incidence of low-wage work is quite high there too. The following paragraphs provide some insight into this.

The share of low-wage workers is sometimes interpreted as an indicator of precariousness or deprivation. One could be tempted to confirm that impression by using the preceding graph. However, if the low-wage threshold is defined in relative terms, this interpretation is not entirely correct. Indeed, a general increase in wages does not automatically translate into a decrease of the share of low-wage earners. If wages increase, the median wage increases and so does the low-wage threshold. As a result, the number and the share of low-wage workers do not necessarily decrease. If in addition the wage increase privileges workers with higher wages, in the upper half of the distribution, the share of low-wage workers can even increase. A similar reasoning can be applied to a case of a generalised wage decrease. This means that a wage decrease does not necessarily translate into a higher incidence of low-wage work. In such a case, the workers would be worse off, but it would not show up in this indicator. Hence, the incidence of low-wage work measures the extent of wage inequality, and especially the inequality in the lower part of the distribution, rather than precariousness or deprivation.

This becomes clear when the share of low-wage workers is compared to more typical indicators of dispersion and inequality. One of these indicators is the ratio of the 90th percentile to the 10th percentile of the wage distribution. The ratio measures the distance between the top 10 % (90th percentile) to the bottom 10 % (10th percentile) of the wage earners. A higher ratio corresponds to a greater distance and hence to a higher level of inequality. In a similar way, a p50/p10 ratio can defined so as to measure the distance between the middle and the bottom of the distribution.

In the left-hand panel of the figure below, the share of low-wage earners is plotted against the p90/p10 ratio. There is a very strong positive relationship between the two indicators. A higher p90/p10 ratio systematically corresponds to a higher share of low-wage workers. The correlation coefficient is 0.86. In the right-hand panel, the share of low-wage earners is plotted against the p50/p10 ratio. The relationship is even stronger, as documented by a correlation coefficient of 0.95.

Figure 4: Incidence of low-wage employment compared to the p90/p10 and p50/p10 ratios



Source: Eurostat - Structure of Earnings Survey

2.2 Institutional Drivers of Low-Wage Employment

Collective bargaining institutions do have an impact on the incidence of low-wage work. Indeed, low-wage work is shaped by the power of the trade unions, the strength of bargaining coverage and the degree of coordination and centralisation in wage bargaining.

Stronger unions are able to negotiate more solidary wage agreements (Grimshaw, 2011). The solidarity plays between the different sectors. Productivity gains can be redistributed from more productive to less productive sectors. In an intermediate setting with sector specific unions, there can be redistribution between more and less productive employees. Hence, a high bargaining coverage makes sure that a high share of the workers is protected. This reduces the scope for discrimination and inequality and hence for low wages. Centralised and coordinated systems work in the same way. They are able to redistribute productivity gains and to be or inclusive, in the sense that they can enforce protection of workers with a lower bargaining power.

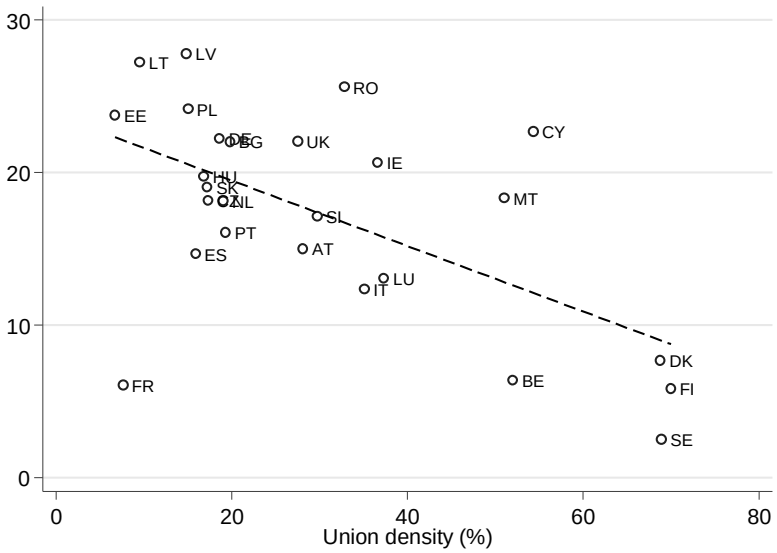
The power or influence of unions can be measured by the union density, which is defined as the share of employed workers who are member of a trade union. In the case of the EU member states, a lower union density is generally associated with a higher incidence of low-wage work. One notable outlier is France. With the exception of Estonia, it has the lowest union density of all the member states (8%). However, at the same time it has, with 6%, one of the smallest shares of low-wage workers. The case of Cyprus is interesting too. On the one hand majority of workers (54%) are member of a trade union. This is one of the highest rates in the EU. In the same time it has also one of the highest shares of low-wage workers. If France and Cyprus are taken out of the analysis, the negative relationship between union density and the incidence of low-wage work becomes even

clearer. The correlation coefficient jumps from -0.59 to -0.80. The slope of the regression line is -0.21, which implies an elasticity of -0.48. Hence, if union density increases by 1%, the share of low-wage workers decreases by 0.48%. If France and Cyprus are left out, the slope is -0.29, implying an elasticity of -0.76.

Union density is a classical indicator to characterize the social and industrial relations in a country. However, it only gives a partial picture. It is useful to complement the union density by other indicators, such as the coverage of collective agreements. If collective agreements are mostly negotiated by unions, they apply equally to members and non-members of the unions. The coverage rate of collective agreements measures the share of workers who are covered by the provisions of a collective agreement. Indeed, the fact of being affiliated with a trade union does not give a direct advantage to the workers as far as their wages and working conditions are concerned. However, the fact of being covered by a collective agreement is beneficial for workers.

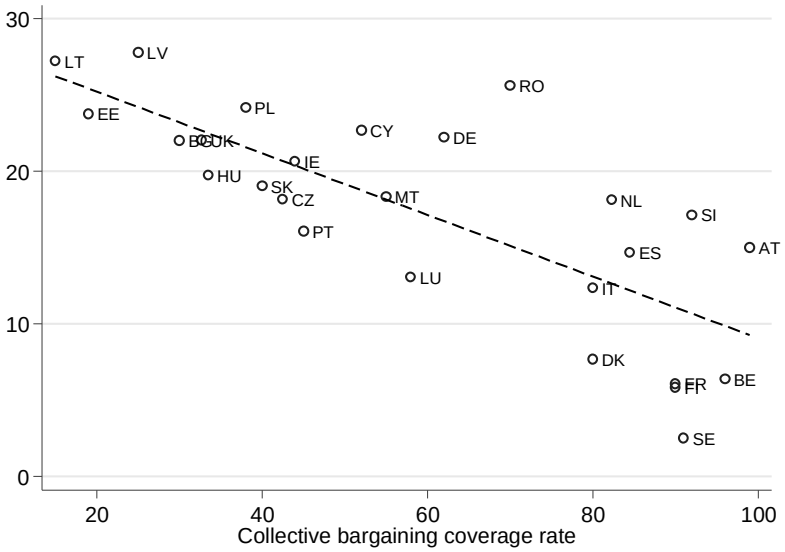
The figure below plots the share of low wage workers against the coverage of collective bargaining. As for the union density, the relationship is a negative one. It is even stronger than for the union density. The countries with higher collective bargaining coverage tend to have a lower incidence of low-wage work. The correlation coefficient is -0.76. Collective bargaining is an instrument that allows to reduce the incidence of low-wage work and hence to reduce overall wage inequality. The slope of the regression line is -0.20, which implies an elasticity of -0.88. If the collective bargaining coverage increases by 1%, the share of low-wage workers drops by 0.88%.

Figure 5: Low-wage work and Union density in the European Union



Source: Eurostat - Structure of Earnings Survey and ICTWSS Database

Figure 6: Low-wage work and collective bargaining coverage in the European Union



Source: Eurostat - Structure of Earnings Survey and ICTWSS Database

The degree of coordination of wage bargaining has an effect on the incidence of low-wage work. In the table below, the 27 member states of the EU are classified into 4 groups according to the method devised by Kenworthy (2001). The groups are ranked according to the degree of coordination in wage bargaining. The lowest degree of coordination takes place in group 1 and the highest degree of coordination is found in group 4. For each group an unweighted average incidence of low-wage work is computed. It appears from the table that the incidence of low-wage work decreases with the level of coordination. The low-wage incidence decreases from 24% in the first groups to 20% in the second group, 8% in the third group and 15% in the fourth group.

Table 1: Coordination of wage bargaining and the incidence of low-wage work

			% of low-wage earners
1	Fragmented bargaining, mostly at company level	EE, LT, LV, MT, PL, UK	24
2	Mixed or alternating industry- and firm level bargaining, with weak enforceability of industry agreements	BG, CY, CZ, FR, HU, IE, LU, RO, SK	20
3	Industry bargaining with no or irregular pattern setting, limited involvement of central organizations, and limited freedoms for company bargaining	DK, FI, PT, SE, SI	8
4	Mixed industry and economy-wide bargaining: a) central organisations negotiate non-enforceable central agreements (guidelines) and/or b) key unions and employers associations set pattern for the entire economy	AT, BE, DE, ES, IT, NL	15
Total			17

Source: ICTWSS Database & Eurostat – Structure of Earnings Survey

The presence of a minimum wage, as well as its level can have an influence on the incidence of low-wage work. A first effect of a minimum wage is to raise the general level of wages at the bottom of the distribution. The lowest wages are moved closer to the middle of the distribution. One result is a decrease in the incidence of low-wage work. There might also be an adverse effect. If a minimum wage is introduced, wages situated further up in the distribution may increase as well. This would typically be done to preserve the returns to seniority and skills.

In 20 out of the 27 EU member states, there exists a national minimum wage. The table below classifies the countries according to presence or absence of a national minimum wage. For each group the low-wage incidence is computed using an unweighted mean. It turns out there is a higher share of low-wage earners in countries with a minimum wage than in countries without a minimum wage. This result does not mean that a minimum wage is fostering inequality and low-wage jobs. Having a closer look at the two groups, it appears that the countries with no national minimum wage have a higher bargaining coverage, with an average of 81%. This share is only 63% in the countries with a minimum wage. Moreover, the coordination of collective bargaining tends to be higher in countries with no minimum wage than in countries with a minimum wage. Among the 7 countries, all but one are classified in the groups 3 and 4 (see the table above). However, among the countries with a national minimum wage, 14 are classified in the categories 1 and 2.

If both the coverage and the minimum wage are taken into account via a regression model, this can be confirmed formally. Three models have been estimated. In the first model, only the union coverage is regressed on the share of low-wage earners. This corresponds to the regression line in Figure 6. In the second model, an indicator for a national minimum wage is regressed on the share of low-wage earners. This corresponds to the results from the

Table 2 above. In the third model, the fraction of low-wage earners is explained simultaneously by the bargaining coverage and the national minimum wage. The effect of the minimum wage drops from +6 points to +1 point and becomes insignificant from a statistical point of view.

Table 2: Minimum wages and incidence of low-wage work

		% of low-wage earners
No national minmum wage	AT, CY, DE, DK, FI, IT, SE	13
National minimum wage	BE, BG, CZ, EE, EL, ES, FR, HU, IE, LT, LU, LV, MT, NL, PL, PT, RO, SI, SK, UK	19
Total		17

Source: Eurostat – Minimum Wage Statistics and Structure of Earnings Survey

Table 3: The impact of bargaining coverage and minimum wages on the share of low wage earners

	Model 1	Model 2	Model 3
Collective bargaining coverage	-0.20***		-0.19***
National minimum wage		6.33*	1.13
Constant	29.26***	12.62***	27.91***

legend: * p<0.05; ** p<0.01; *** p<0.001

Source: ICTWSS database and Eurostat – Structure of earnings survey

The level of the minimum wage does also have an impact on the share of low-wage earners. The figure below compares this share to the so-called Kaitz index. This index is defined as the ratio of the minimum wage to the average wage. The relationship between the Kaitz index and the share of low-wage workers is negative in the 20 EU countries having a national minimum wage. A higher Kaitz index means that the minimum wage is closer to the middle of the wage distribution, as measured by the average wage. The minimum and average wages being closer means that there is less inequality and hence fewer low-wage workers. The correlation coefficient is -0.46 and the slope of the regression line is -0.58. This implies an elasticity of -1.30. As a result, a 1% increase in the Kaitz index will decrease the share of low-wage earners by 1.30%. Lithuania and Latvia are two outliers in the overall picture. The Kaitz index in these two countries is comparable to the one found in Ireland or Portugal. However, the shares of low-wage employment in the latter countries are much smaller than in Latvia and Lithuania.

Figure 7: Low-wage workers and the level of the minimum wage in 2010

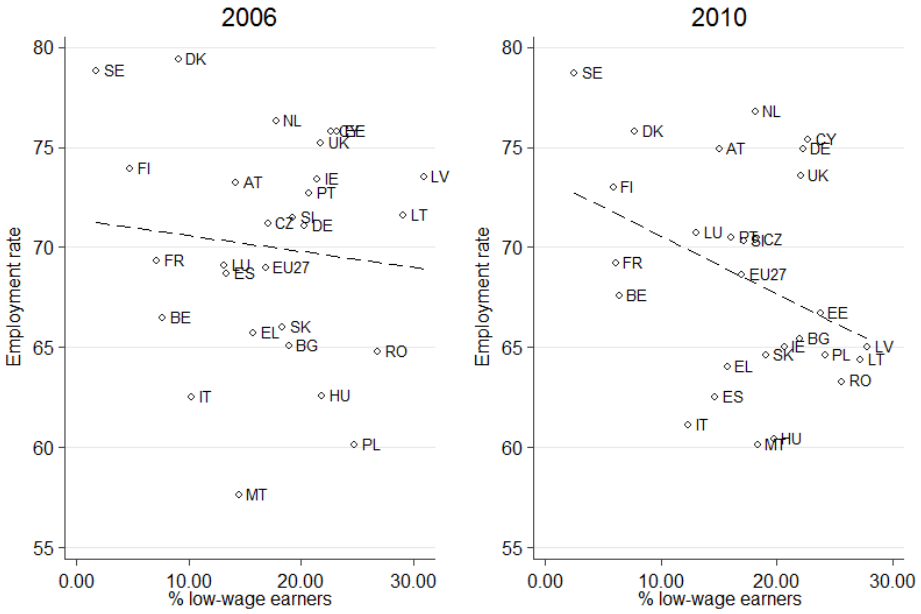
Source: Eurostat - Minimum Wage Statistics snd Structure of Earnings Survey

2.3 Low-Wage Employment and Labour Market Performance

From a theoretical point of view, the relationship between low-wage employment and labour market performance is not clear. In competitive labour market models there is a trade-off between earnings inequality, and hence low-wage employment, and labour market performance. However, this result has been challenged by more sophisticated labour market models and empirical research.

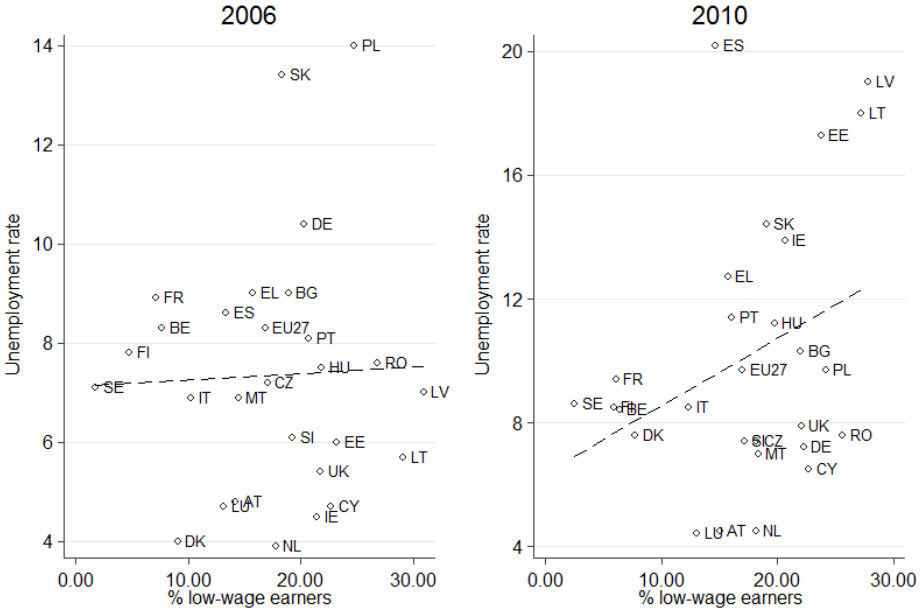
In the European Union the “classical” trade-off between inequality or low-wages and (un)employment cannot be confirmed empirically. The results tend to go into the opposite direction, i.e. high employment and low unemployment tend to be linked with a weaker incidence of low-wage employment. In 2006, the link is quite weak. The correlation coefficient between employment rates and the share of low-wage employment is only -0.10. In 2010, this picture changes and becomes clearer. The correlation between low-wage employment and the overall employment rate is now -0.37. For unemployment, a similar pattern can be observed. In 2006, with a coefficient of 0.04, there is virtually no correlation between the unemployment rate and the incidence of low-wage workers. In 2010, the correlation increases to 0.34. A visual inspection suggests that this higher correlation coefficient is driven by the poor labour market performance in the three Baltic countries (EE, LT and LV). If they are left out, the correlation coefficient falls back to its value of 2006.

Figure 8: Low-wage employment and overall employment rates



Source: Eurostat - Structure of Earnings Survey and Labour Force Survey

Figure 9 : Low-wage employment and overall unemployment rates



Source: Eurostat - Structure of Earnings Survey and Labour Force Survey

The picture becomes a bit clearer, when one focuses on the labour market outcomes of specific sub groups. The groups considered here are the young workers, aged 15 to 24, and the low-skilled workers, i.e. those who have never gone beyond a lower secondary education level (ISCED categories 0, 1 and 2). Moreover, if one uses long-term unemployment (duration of at least a year) rather than overall unemployment the correlations become stronger.

The results here are purely descriptive and show the variety of situations and patterns that exist at the level of the European Union. The main conclusion to be drawn is that the situation is rather complex. A variety of labour market models coexist in the EU. On the other hand, these correlations highly depend on the countries used in the analysis. If the group of countries is enlarged the results are likely to change.

Unfortunately, at this time it is not possible to significantly enlarge the sample of countries. One of the strong points of this publication is the use of comparable data sources.

However, enlarging the sample beyond the EU becomes difficult as the availability of really comparable data, especially for wages, is not guaranteed automatically. A database has to be constructed, which is an interesting and relevant exercise, but beyond the scope of this article.

Table 4: Correlations between the share of low-wage employment and indicators of labour market performance in the 27 EU member states

	% low-wage earners	
	2006	2010
Overall employment rate	-0.10	-0.36
Overall unemployment rate	0.04	0.34
Long-term unemployment	0.21	0.39
Low-skilled employment rate	-0.36	-0.42
Low-skillled unemployment rate	0.08	0.34
Youth employment rate	-0.20	-0.22
Youth unemployment rate	0.22	0.17

Source: Eurostat – Structure of Earnings Survey and Labour Force Survey

The selection of countries retained in this kind of analysis can have a serious impact on the results. This is shown by the meanwhile famous replication study of Herndon et al. (2013). A sensitivity analysis could be useful here too. As it is not possible to extend the present sample, it can be reduced. A not too arbitrary subset of countries would be the 17 countries which are member of the eurozone. Leaving out the 10 countries which are not member of the eurozone has a quantitative and qualitative impact on the results. The magnitude of the correlations coefficients changes and in some cases the sign changes too. Eventually, the direction of the change is not unambiguous. The situation does not become clearer and the results become a bit more inconclusive.

Focussing on the Euro Zone countries only can be justified on the ground that these countries have a higher degree of economic integration than the entirety of the 27 EU member states. This can have an impact on the functioning of the labour market. On the other hand, by excluding the non-euro countries means excluding Denmark and Sweden, which have a good labour market performance and perform well on low-wage employment. It also means excluding countries like Lithuania, Latvia and Romania which the highest shares of low-wage employment. In addition, these countries, and especially Lithuania and Latvia have quite high unemployment rates. Thus countries with more “extreme” situations are excluded. This may explain the fact that the results on the remaining countries are much more inconclusive.

Table 5: Correlations between the share of low-wage employment and indicators of labour market performance in the 17 eurozone countries

	% low-wage earners	
	2006	2010
Overall employment rate	0.39	0.05
Overall unemployment rate	-0.17	0.18
Long-term unemployment	0.06	0.24
Low-skilled employment rate	-0.01	-0.11
Low-skillled unemployment rate	0.02	0.21
Youth employment rate	0.21	0.17
Youth unemployment rate	-0.49	-0.05

Source: Eurostat – Structure of Earnings Survey and Labour Force Survey

2.4 Low-Wage Employment and Low-Wage Transitions

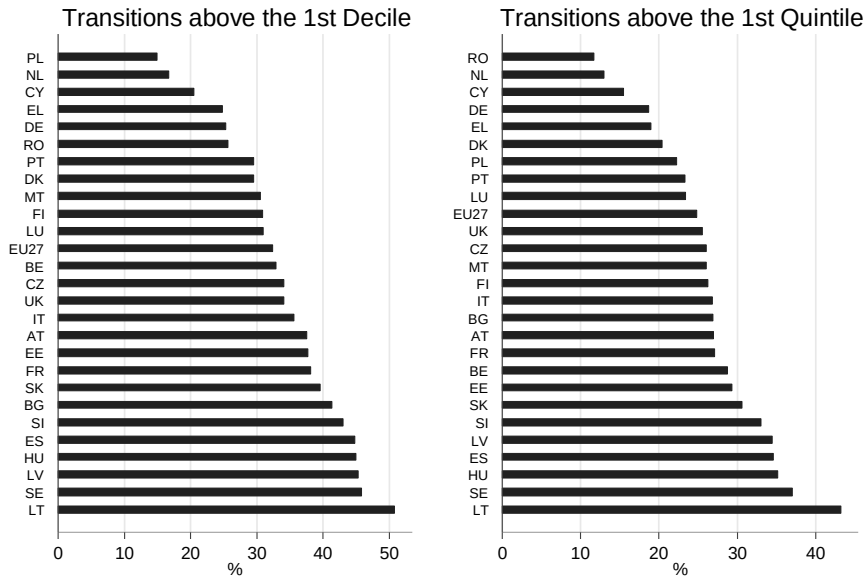
Low-wage employment is problematic if it is a permanent status. If low-wage jobs are a stepping stone to jobs with higher wages, low-wage employment is not a major problem. However, if low-wage is a persistent status, the policy response must be different. Hence, it is useful to study the link between low-wage employment and low-wage transitions.

The question cannot be answered directly by using the structure for earnings survey, the source of the figures for low-wage employment. However, using data from EU-SILC it is possible to compute the share of workers who move from the first income decile to a higher decile. However, in 10 countries the share of low-wage workers is higher than 20%, and in some others it is close to 20%. Thus it makes sense to have a look as well as transition outside the first quintile, i.e. the bottom 20% of the distribution.

In the EU member states, the upward transition rate from the first decile is 32%. This means that nearly one worker out of three who was in the first income decile in a given year has moved to a higher decile one year later. The most sticky wage distributions are observed in Poland and the Netherlands where only 15%, respectively 17% of the workers from the decile were able to move to a higher decile one year later. The highest transition rates are observed in Lithuania (51%) and Sweden (46%).

One worker out of four in the EU who has an income in the first quintile this year is able to move to the second quintile or higher next year. For the first quintile, the lowest transition rates are observed in Romania (12%) and the Netherlands (13%). The workers in Sweden (37%) and Lithuania (43%) have again the highest chances to move upwards.
The link between low-wage employment and low-pay transitions is negative, which means that countries with smaller low-wage sectors have more upward mobility in the lower part of the wage distribution. However, the link is feeble. Indeed the regression lines in the figure below are close to being horizontal. This impression is confirmed by correlation coefficients close to zero: -0.06 in the case of transitions from the first decile and -0.07 in the case of transitions from the first quintile.

Figure 10: Upward transitions from the 1st decile and the first quintile in 2010



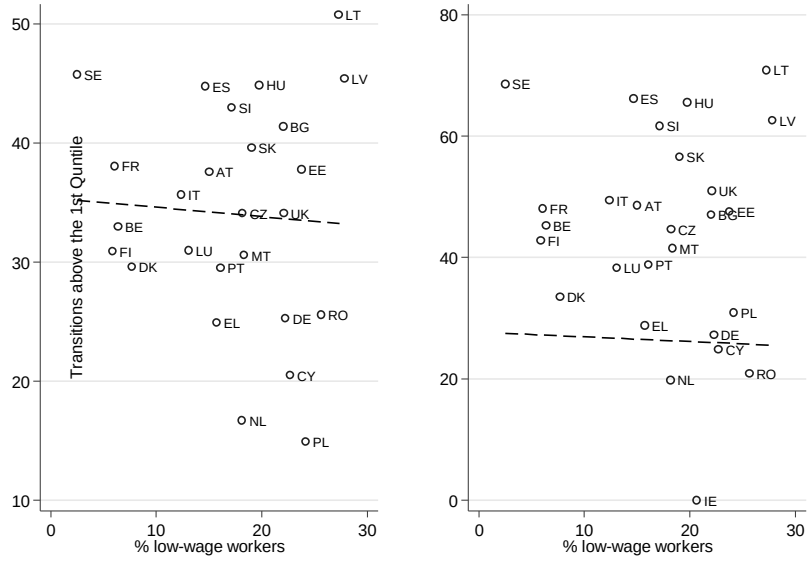
Source: EU-SILC

A close look at the figure reveals that there are especially two countries going against the trend: Lithuania and Latvia. This can be seen clearly from the left hand panel. These two countries have the highest shares of low wage workers and simultaneously the highest shares of upward transitions. If these two countries are taken out of the analysis the picture changes quite a lot. The negative correlation between low-wage employment and low-pay transitions become much stronger: -0.32 in the case of transitions from the first decile and -0.38 in the case of transitions from the first quintile.

Union density and collective bargaining coverage are important drivers of low-wage employment. A priori, the impact of these two institutions on low-way transitions is not clear. On the one hand, one may argue that a high presence of trade unions, as measured by union density and a high coverage by collective agreements is likely to foster working conditions and to give good career prospects to the workers. On the other hand, trade unions tend to prefer policies and agreements which favour their members. Ries (2011) has shown that in the case of Luxembourg, trade union membership is quite in the first and second deciles of the wage distribution. This is explained by the fact that there is a membership fee to enter a union. This is likely to deter low-wage earners from joining a union. To the extent that collective agreements are negotiated by trade unions, the above arguments can be generalised. Thus it is not clear either if wide collective bargaining coverage has a positive or negative impact on low-pay transitions.

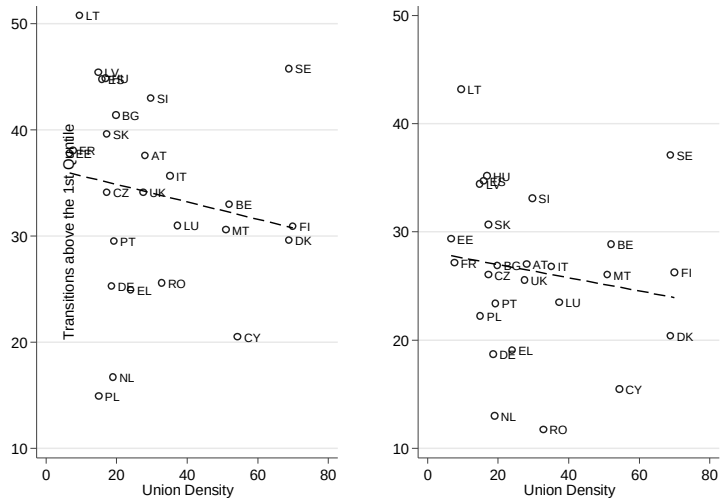
There appears to be a negative relationship between union density and low-pay transitions. The higher the union membership rate, the lower the transitions out of the first decile and the first quintile. The relationship is rather moderate, as shown by correlation coefficients of -0.17 and -0.16. However, a closer look at the graphs reveals that Sweden has a kind of outlier position. It features one of the highest union densities in the EU and at the same it has one of the highest low-pay transitions rates. If Sweden is left out, the relationship becomes stronger and the correlation coefficients between union density and transitions are falling to -0.32.

Figure 11: Low-wage employment and low-pay transitions in 2010



Source: EU-SILC & Structure of Earnings Survey

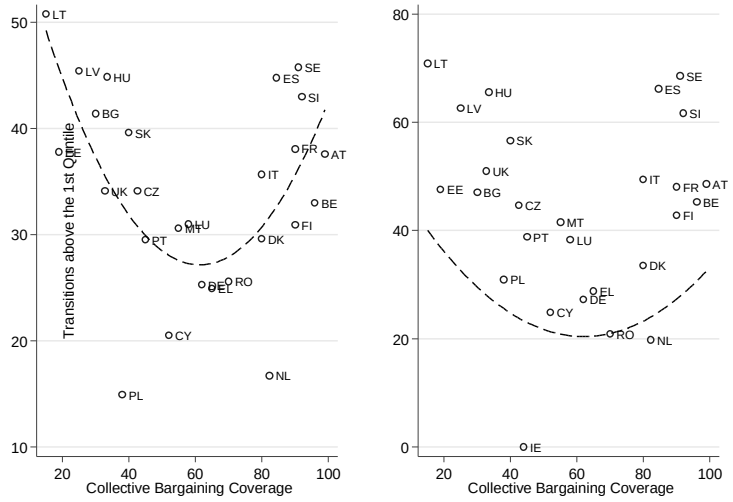
Figure 12: Low-wage transitions and union density in 2010



Source: EU-SILC & ICTWSS Database

The link between collective bargaining coverage and low-pay transitions is not a monotonic one. A look at the scatterplots reveals that there is a kind of u-shaped relationship. The curves in the figures below come from a regression of transition rates on bargaining coverage and its square. Up to a coverage rate of 60%, the transition rates decrease. Next, for countries with coverage rates higher than 60%, the increases as coverage increases. It might be the case that in countries with a higher bargaining coverage (> 60%), the collective agreements are more inclusive and more likely to take into account the interests of all the workers.

Figure 13: Low-wage employment and collective bargaining coverage in 2010



Source: EU-SILC & ICTWSS Database

3. Adequate Wages

Low-wage employment can be considered as an "analytical" approach to adequate earnings. It is analytical in the sense that an analyst defines a low-wage threshold which is then applied without exception, as described above. There is an alternative, more direct approach to gauge the adequacy of earnings. This approach relies on the opinion of the workers. Indeed, who else if not the workers, knows best if the wage paid is "adequate". The European Working Conditions Survey (EWCS) allows exploring this track. In the waves 2005 and 2010, the following question has been asked to all the workers.

This question is used as an indicator of adequate earnings or "wage satisfaction". The workers who agree or strongly agree with this statement are considered as satisfied with their wage. This is how the words "satisfied" or "satisfaction" have to be understood here.

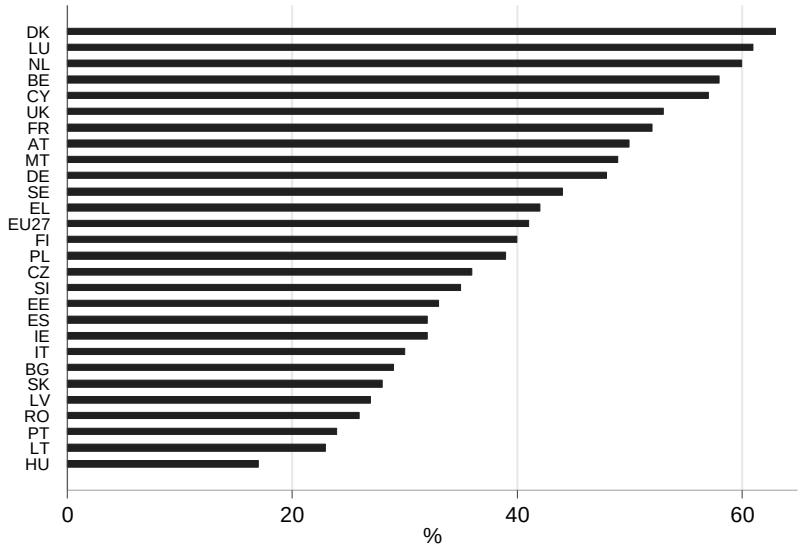
> *Q77 How much do you agree or disagree with the following statements describing some aspects of your job?*
>
> *B - I am well paid for the work I do*
>
> - *Strongly agree*
> - *Agree*
> - *Neither agree nor disagree*
> - *Disagree*
> - *Strongly disagree*

3.1 Patterns of Adequate Wages

In 2010, 41% of the workers in the EU member states agree with the statement that they are well paid for the job they do. However, the satisfaction rate varies considerably across the member states. The highest rates are measured in Denmark (63%), Luxembourg (61%), the Netherland (60%), Belgium (58%) and Cyprus (57%). In the United Kingdom (53%), France (52%), and Austria (50%), a majority of workers is satisfied with their wages. Malta (49%), Germany (48%), Sweden (44%) and Greece (42%) the level of satisfaction lies above the EU27 average. The lowest rates are measured in Hungary (17%), Lithuania (23%) and Portugal (24%), where less than 1 worker out of 4 is satisfied with the wage he receives

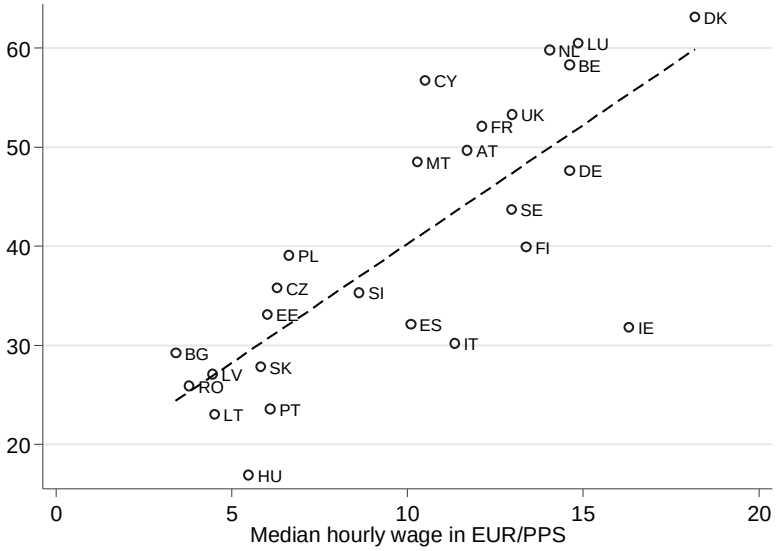
When Cyprus is excluded, the four countries with the highest satisfaction rates are also countries where the overall level of wages is high. Other high-wage countries are following more or less closely. Indeed, it appears that there is a strong positive correlation between the overall level of wages and the satisfaction rate. The correlation coefficient is 0.77. Cyprus is a notable exception in this regard. First of all, Cyprus has a relatively high level satisfaction about wages. With 57%, they rank on the 4th position. However, the level of the median wage is relatively low. Here Cyprus only ranks on the 13th position. Ireland has one of the highest median wages, but only 32% of the workers agree that they are well paid, putting Ireland on the 19th position regarding satisfaction.

Figure 14: Share of the workers who think that they are well paid for the job they do (2010)



Source: European Working Conditions Survey 2010

Figure 15: % of workers "well paid" and the general wage level 2010



Source: European Working Conditions Survey and Structure of Earnings Survey

Fairness matters too when the workers have to decide if they are well paid or not. Here fairness is measured by the incidence of low-wage employment. Indeed the share of low-wage workers is an indicator of wage inequality. It turns out that the level of satisfaction is lower in countries with higher levels of inequality. The correlation coefficient is -0.44. Cyprus is again an exception here. They have one of the highest degrees of satisfaction about wage (57%). Nevertheless, at the same time they have with 23% a relatively high share of low-wage workers. In the Netherlands, there is a similar pattern: a relatively high share of low-wage workers (18%) and a high degree of satisfaction about wages (61%).

The link between adequate earnings and wage inequality becomes even stronger if the p90/p10 ratio is used to measure wage inequality rather than the share of low-wage employment. Indeed, the correlation coefficient between the share of well paid workers and the p90/p10 ratio is -0.52.

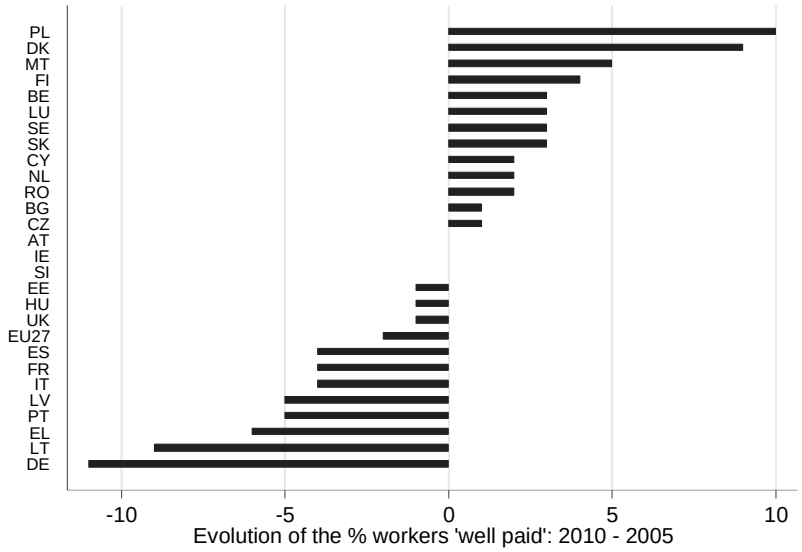
At the level of the 27 EU member states, the part to workers who agree that they are well paid has decreased by 2 points from 2005 to 2010. This rather low figure on the aggregate level hides some considerable national differences. The agreement has increased by 9 points in Denmark and 10 points in Poland. On the other said of the ranking, the share of workers thinking that they are well paid has decreased by 11 points in Germany, 9 points in Lithuania and 6 points in Greece. In all the other countries, the share of workers who agree that they are well paid has changed by 5 points or less in absolute value.

A natural explanation for a rise or a decline in the satisfaction rate would be the growth of (real) wages. Higher real wage growth could explain an increase in the satisfaction with wages. A lower real wage growth or even a decline of real wages could be the source of a drop in the satisfaction rate. The evidence only weakly supports this point. Indeed, the relationship between real wage growth over the period 2005-2010 and the change in the satisfaction is positive. However, as can be seen from the figure below, the relationship is weak. The countries are scattered around the graph, more or less far from the regression line. This impression is confirmed by the calculation of the correlation coefficient which is only 0.18.

Figure 16: % of workers "well paid" and the share of low-wage employment (2010)

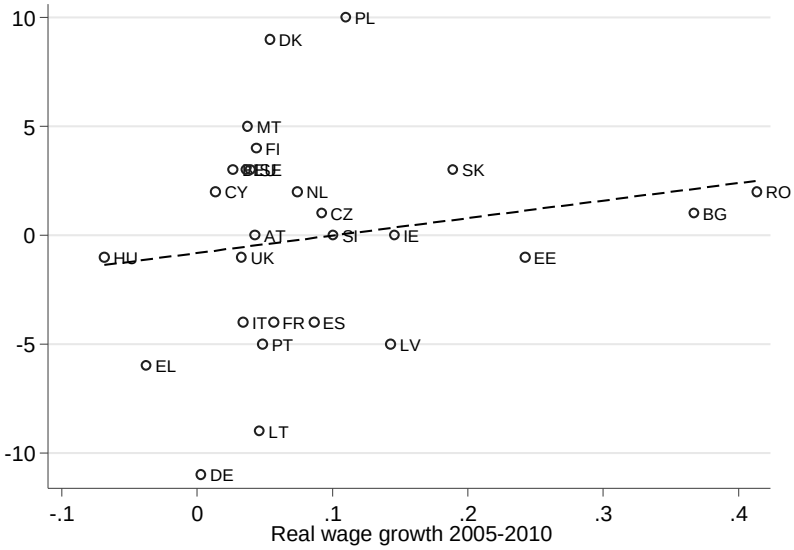
Source: European Working Conditions Survey and Structure of Earnings Survey

Figure 17: Evolution of the percentage of workers "well paid" from 2005 to 2010



Source: European Working Conditions Survey, 2005 and 2010

Figure 18: Evolution of the percentage of workers "well paid" and real wage growth 2005-2010



Source: European Working Conditions Survey and AMECO database

3.2 Adequate Wages and Labour Market Institutions

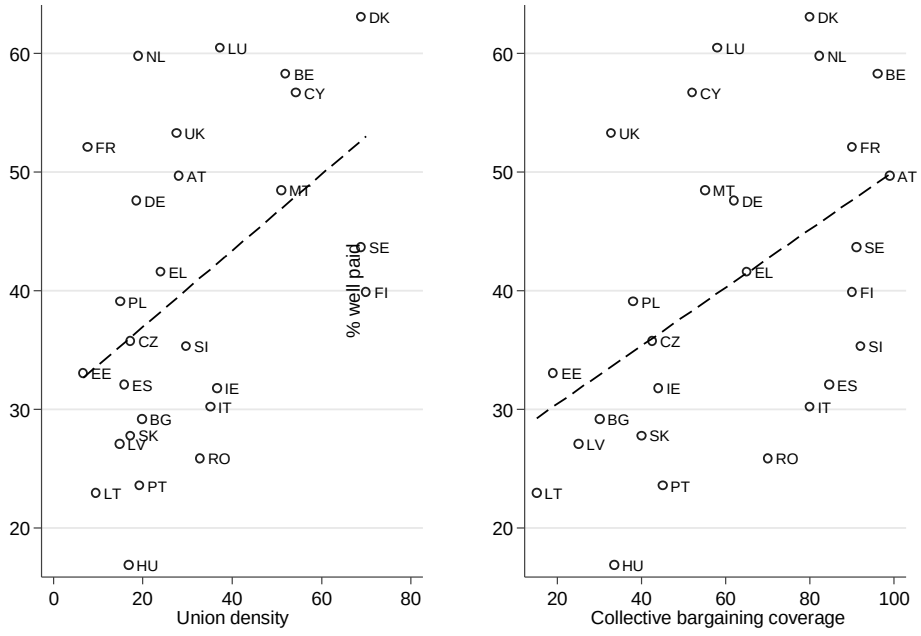
Labour market institutions are likely to influence to satisfaction about wages. As seen above, the overall wage level and the fairness of wages matter. Higher wages and a less unequal distribution contribute are related to higher share of workers who think that they are well paid. Hence, wage setting institutions can have an influence too on the workers' satisfaction. As before, two types of institutions are considered: collective wage bargaining and minimum wages.

On the side of the collective bargaining institution's, it turns out that the union density and the collective bargaining coverage are positively related to the wage satisfaction. Hence, the more inclusive a collective bargaining system, the more workers agree that they are well paid. The correlation coefficient between the share of well paid workers and bargaining coverage is 0.48 and the one between the share of well paid workers and union density is 0.46.

Minimum wages give the workers an income guarantee. In addition, their impact is not necessarily limited to the bottom of the distribution. They can have spillover effects over wider parts of the wage distribution. The introduction of a minimum wage can have a positive impact on wage further up, as returns to skills and/or seniority need to be preserved.

In countries with national minimum wages the share of workers who agree that they are well paid is lower than in countries with no minimum wage. This finding may be paradoxical at first glance. However, it has been shown in the previous section that the countries without national minimum wage have more inclusive collective bargaining coverage. Moreover, there is a higher degree of bargaining coordination in these countries than in the countries with a minimum wage. Thus, the result here is driven by different policy mixes in different countries. Abolishing minimum wages without replacing them by an alternative, such as e.g. more inclusive bargaining systems, will hardly be beneficial.

Figure 19: Share of "well paid" workers and wage bargaining institutions



Source: European Working Conditions Survey and ICTWSS database

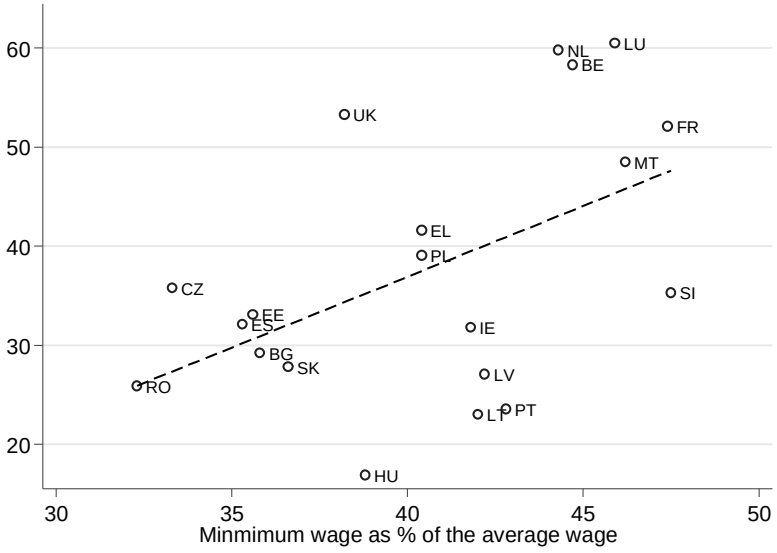
Table 6: Minimum wages and "well paid" workers

		% "well paid"
No national minmum wage	AT, CY, DE, DK, FI, IT, SE	46
National minimum wage	BE, BG, CZ, EE, EL, ES, FR, HU, IE, LT, LU, LV, MT, NL, PL, PT, RO, SI, SK, UK	38

Source: European Working Conditions Survey and Eurostat Minimum Wages Statistics

It has been documented above that the level of wages is strongly related to the share of workers who consider themselves well paid. As a result, it is not surprising to observe that there is also a positive correlation between the level of the minimum wage, as measured by the Kaitz index, and the share of well paid workers. The closer a minimum wage is to the average wage, the more workers agree that they are well paid. The correlation coefficient in this case is 0.50.

Figure 20: Share of well paid workers and the level of the minimum wage in 2010



Source: European Working Conditions Survey and Eurostat Minimum Wage Statistics

4. Working Poor

The "working poor" indicator is often cited in the same breath with the share of low-wage earners. Frequently both indicators are confounded and working poor are cited instead of low-wage earners and vice versa. Nevertheless both indicators are different and capture different phenomena.

The definition of the working poor is straightforward: "individuals who are classified as employed and at risk of poverty". A person is said to be at risk of poverty if it has an equivalised disposable income below 60 % of the national median equivalised disposable income. Two points have to be noted:

- The definition of the working poor involves both an individual and a household dimension. The employment status is defined on an individual basis. However, the risk of poverty is defined at the household level.
- Every type of income of the household is taken into account to compute the poverty threshold, not only wages. Income from self-employment is included too. Moreover the income is the disposable one, i.e. net of taxes and transfers.

This has to be contrasted to the share of low-wage earners, which is a purely individual concept, exclusively relying on gross wages.

The definition of the working poor implies that low wages are not their only driver or determinant. More precisely, there are three types of determinants:

- *Low earnings*. Wages and other work-related income are still the biggest source of household incomes.
- *Precarious employment*. A person is considered in employment if that was a person's preponderant activity status during a reference year. It can happen that a person considered as employed has not been employed during the whole year. Such interrupted employment histories contribute to in-work poverty. Moreover, part-time employment contributes too. The definition of the activity status treats part-time and full-time employees in the same way.
- *Household structure*. An employed person can be at risk of poverty if his wage or income derived from work is low. However, even persons with high earnings can be at risk of poverty. This determine this risk, the earnings are spread over all the members of the household. Thus if a person earning a high wage is the sole breadwinner in a relatively large household, this person is at risk of poverty. Conversely, a low-wage earner is not necessarily at risk of poverty if there is sufficient income from other sources.

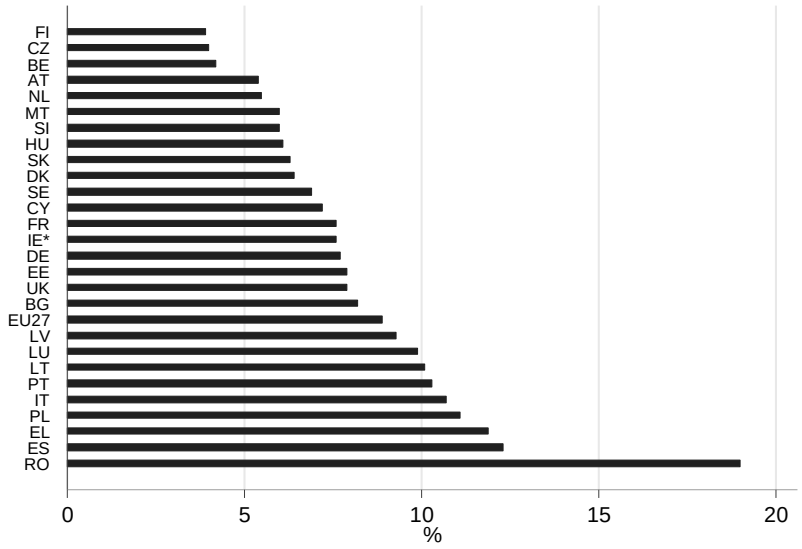
Ponthieux (2010) provides a thorough discussion on the different elements of the definition of in-work poverty.

At the level of the European Union, 8.9% of the workers have been at risk of poverty in 2010. The lowest levels have been measured in the Czech Republic (3.9%) and Finland (4.0%) and Belgium (4.2%). The highest rates are measured in Romania (19.0%), Spain (12.3%) and Greece (11.9%).

The in-work poverty rate moves only slowly over time. In the 27 member states it is moving around 9% over the period from 2005 to 2011. In the 17 countries of the eurozone, the rate has slowly increased from 7.3% in 2010 to 8.6% in 2011. Just as the share of low-wage earners, the in-work poverty rate is an indicator which is moving sluggishly.

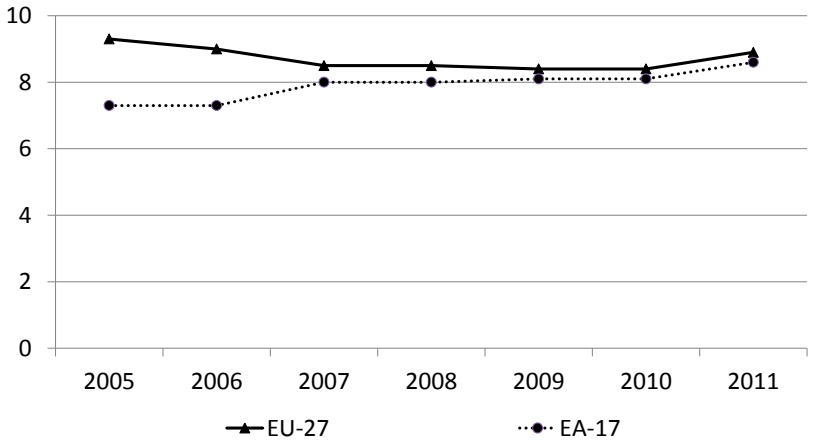
There is a very strong correlation between the in-work poverty rate and the risk of poverty rate. For the year 2011, the coefficient is 0.78. The elasticity between the two rates is 1.45. Thus, if the risk of poverty rate increases by 1%, the in-work poverty will increase by 1.45%. The reasons for this strong relationship come from the definition of the in-work poverty rate, as outlined above. Indeed, the latter depends directly on the general at risk of poverty threshold.

Figure 21: In-work poverty rates in 2011



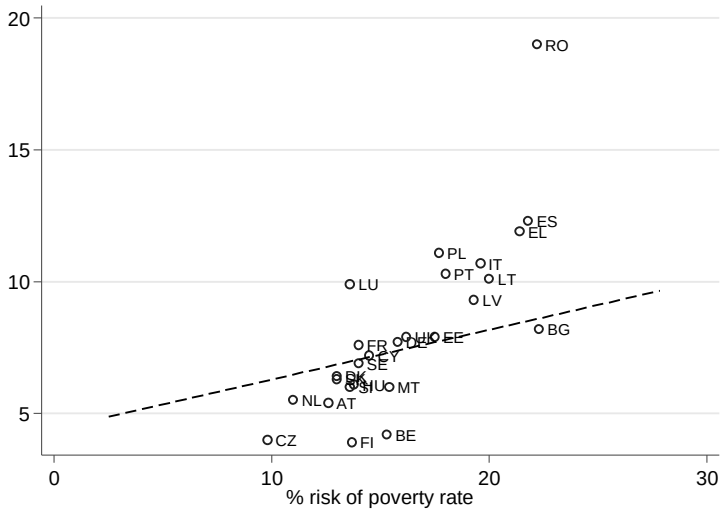
Source: Eurostat - EU-SILC * The data for IE refers to 2010

Figure 22: Evolution of in-work poverty rates in from 2006 to 2010



Source: Eurostat – EU-SILC

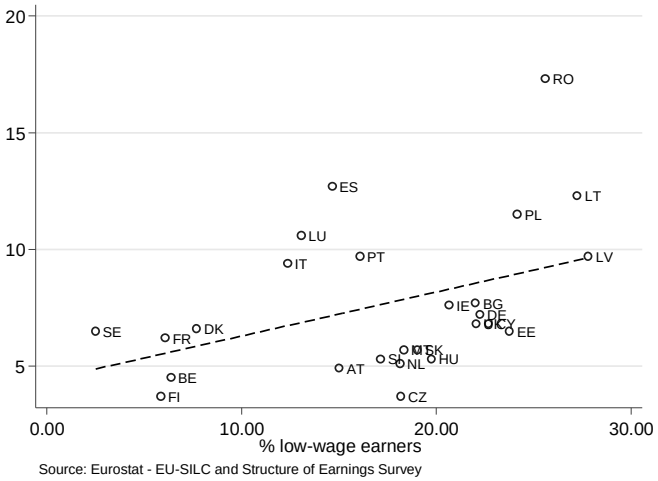
Figure 23: In-work poverty rates and risk of poverty rates in 2011



Source: Eurostat - EU-SILC

The link between in-work poverty rate and the share of low-wage earners goes into the expected direction. A higher share of low-wage earners corresponds to a higher in-work poverty risk. The correlation coefficient is 0.41 much lower than in the case of the at-risk of poverty rate. The elasticity is 0.41. The reason for this weaker relationship is due to the heterogeneity of national experiences with low-wage work and in-work poverty. The Czech Republic has a share of low-wage workers that is a bit higher than in Spain or Portugal. However, the in-work poverty rates in the Czech Republic are more than 2 times lower than in Portugal and more than three times lower than in Spain. Romania with 26% and Latvia with 28% have high shares of low-wage earners. However, the in-work poverty rate in Romania is nearly two times higher than in Latvia.

Figure 24: In-work poverty rates and the share of low-wage earners in 2010



Source: Eurostat - EU-SILC and Structure of Earnings Survey

5. Conclusion

This paper gives a comprehensive overview on low-wage employment, adequate wages, and in-work poverty. The aim is to illustrate their patterns and their interdependencies, as well as their articulation with labour market institutions. The strong point of this paper is the use of highly harmonised data, especially for wages. This data is made available through the European Structure of Earnings Survey.

Within the European Union there are large differences concerning the incidence of low-wage work. Moreover, there is no clear cut trend over time. A very strong correlation between inequality measures and low-wage employment has been uncovered. This means that the share of low-wage workers, as defined here, should be considered is an indicator of wage inequality rather than deprivation or precariousness.

Data shows that there is no straightforward empirical evidence for the trade-off between low wages and labour market outcomes. On the one hand there is some evidence that lower shares of low-wage work tend to be associated with higher employment or lower unemployment rates. However, these results are not very clear cut and may depend on the countries used for the analysis. On the other hand there is no link between low-wage work and upward pay transitions. All these results are of a descriptive nature and should not be considered as causal relationships.

The overall satisfaction about wages tends to be higher in countries where the wage level is higher. Moreover, in countries with higher shares of low-wage employment, the overall satisfaction with wages is lower. This suggests that inequality and fairness matter when the workers have to assess their satisfaction.

In-work poverty is often confounded with low-wage work. The former is a much more complex phenomenon than the latter. Indeed, in-work poverty is more encompassing. It considers households rather than workers. Moreover, the household income it is not limited to earnings, but includes other types of sources such as e.g. public transfers. From a conceptual point of view, low-wage employment is only one determinant of in-work poverty among other. This is confirmed by the empirical analysis.

In the future, it would be interesting to extend the database into two directions. First, more countries should be added, so as to give a broader and more complete picture of low-wage employment. Data for some other European countries is available via Eurostat, as the European surveys are not exclusively limited to EU countries. Second, the list of indicators could be extended. There are indeed other institutional and contextual factors which can influence low-wage employment. These factors should be clearly identified and harmonised indicators should be developed.

6. References

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