LOW PAY AND SOCIAL EXCLUSION: A CROSS-NATIONAL COMPARISON

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Abstract

This paper examines whether being low paid is associated with the same set of supply-side and household characteristics in five countries; Britain, Luxembourg, Germany, Spain and the USA. The paper uses the harmonised PACO data based on household panel studies and the Spanish European Household Panel survey. The paper examines the following characteristics; age, education, marital status, children, lone parent status, household type, employment status of spouse, and housing tenure. The links between these characteristics and the low paid were examined through a series of cross-tabulations and multivariate analyses. There were similarities across countries and gender groups but also some differences.

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1. Introduction

Low pay is recognised as one way in which individuals and households can suffer social exclusion since it is closely linked with issues of poverty (Sutherland, 1995), and discrimination (Naylor, 1994). The characteristics of the low paid, therefore, are important in policy terms to bodies like the new Low Pay Commission in Britain and the European Union's concerns with social exclusion. In addition the characteristics of the low paid reveal more about the workings of the labour market and how processes of social exclusion are generated and maintained. The extent of low pay has already been documented within individual countries (Dex et al., 1994; Hurstfield, 1987; Sloane and Siebert, 1980) and across European countries (CERC, 1992; Rubery and Fagan, 1994; Bazen and Benhayoun, 1992). The opportunity to perform extensive comparisons on a range of demand and supply-side characteristics across countries has arisen with the introduction of the harmonised data generated by the PACO (Panel Comparability) project. An earlier paper has examined the demand side characteristics of low paid workers from these data (Robson et al 1997). In this paper we set out to investigate whether low pay is associated with the same supply-side and household characteristics of workers in our diverse range of countries - Britain, Germany, Luxembourg, Spain and the USA. The characteristics of low paid workers are also examined using a multivariate logit model in order to identify the separate effects of these characteristics on the probability of being a low paid worker.

There was some early research on the supply-side characteristics of low paid workers in Britain with the limited data contained in the New Earnings Survey. From studies in 1980 and 1986 the low paid were identified as being predominantly very young or elderly, with few educational qualifications and often part-time (Sloane and

Siebert, 1980; Hurstfield, 1987). A study of 1986 and 1991 survey data by Dex et al (1994) found that the low paid were married and young women; those with few (or no) educational qualifications; those working in occupations designated unskilled or semi-skilled or in personal services; those with limited full-time equivalent work experience, especially with limited experience in their current jobs; and those with little training. Women who were receiving low pay also tended to be working part-time, and have children and/or caring responsibilities (Dex et al., 1994).

Previous researchers have also examined the mobility of low paid workers (Gregory and Elias, 1994; Sloane and Theodossiou, 1996). Sloane and Theodossiou (1996) used the first and third waves of the BHPS conducted in 1991 and 1993 respectively to examine the extent to which low pay is a transient phenomenon, and the extent to which low pay is associated with low family incomes and therefore poverty.[1] They found that only 44 per cent of the low-paid in 1991 remained in this category 2 years later. For many workers, therefore, low pay is a temporary phenomenon. However, there was also a substantial group who left the labour market, moving from being low paid to having no pay. A period of low pay may indicate for some a period of investment in human capital, either the individual's own human capital or possibly their children's human capital.

The following section (2) considers the definition of low pay. Section 3 describes the data and their context. Section 4 documents the extent of low pay across the countries we are considering. Section 5 describes our findings about the characteristics of low paid men and women. The extent to which these findings identify labour market processes and our conclusions are set out in Section 6.

2. Defining Low Pay

The definition of the threshold of low pay used in any study will influence the proportion of workers identified as low paid (Dex et al, 1994). Two definitions are most commonly used:

1) Council of Europe (CE): Low pay is earnings below 68 per cent of adult full-time mean weekly earnings.

2) Low Pay Unit (LPU): Low pay is earnings below two thirds of median male weekly earnings.[2]

The justification of these definitions is rarely stated but some measure of subsistence is clearly an underlying motivation. Hence there has been an emphasis in each of the above definitions upon a weekly time framework. However, for studies which focus on labour market issues, as argued previously in Dex et al. (1994), an hourly wage rate is the most appropriate way of defining low pay rather than individuals' weekly earnings or income. This paper uses an hourly version of the LPU definitions. We recognise but cannot take into consideration the important differences in fringe benefits between jobs which can affect the total value of earnings. There is also the issue of whether or not to include overtime in our calculations of low pay. Given the importance which employers place upon workers' flexibility and willingness to perform overtime the case for the inclusion of overtime becomes compelling.

3. Data and Context

The PACO project was initiated with the objective of creating a harmonised and standardised micro-database from existing studies on living conditions of households in Europe. We have used the most recent cross-sections from five of the large-scale nationally representative panel studies contained in PACO; the 1992 Luxembourg Panel Socio-Economique Liewen zu Letzebuerg

(PSELL); the 1990 German Sozio-Oekonomisches Panel/Bundesrepublik Deutschland (SOEP); the 1993 British Household Panel Study (BHPS); and the 1987 US Panel Study of Income Dynamics (PSID). In addition we have been able to include data from the 1994 Spanish European Household Panel Study (SEHP).

The harmonised hourly earnings measure used included: normal wages and salaries; premia for piece-work, incentive pay; commissions; overtime payment; and premia for night and weekend work. PACO did not harmonise the systems of weight variables used (PACO, 1996). The weights for Luxembourg (PSELL) and Britain (BHPS) as well as Spain are rescaled to be equal to the original sample size[3] The weights in the Germany (SOEP) are rescaled to sum to the population size. The weights in the USA (PSID) are rescaled to sum to one percent of the population size. Weighted results are provided throughout our analyses. However, two sample size numbers are reported for Germany and the USA; one with, and one without the weight applied

Before the results are analysed it is important to provide the reader with some background information on the state of the economies of the countries in this study in the years in question. Luxembourg in 1992 had a relatively buoyant economy with low inflation, real wage increases, growth and very low unemployment; the only exception was the steel industry which was in recession. Early in 1990 Germany, following reunification, was growing rapidly, inflation was low although unemployment was high in the East but not so high in the West. At the end of 1992, Britain was experiencing the longest recession in post war history with unemployment at 10 per cent. At the end of 1986, the US economy was in a strong position with high growth and unemployment falling to 5.7 per cent in 1987. Spain in 1994 was beginning to come out of a severe recession of the early 1990s but unemployment rates remained high in the twenty percents as a result of over-rapid structural sectoral adjustment out of

agriculture in the 1970s and 1980s. Against this background we can examine some of the characteristics of low paid workers across countries after first documenting the extent of low pay in these countries.

4. The Extent of Low Pay

The USA in 1987 had over a quarter of male workers who were low paid (Table 1). Britain, Luxembourg and Spain all had approximately one fifth of male workers in low paid jobs in the early 1990s. Only in Germany in 1990 was there a comparatively low incidence, 11 per cent, who were low paid. These rankings directly correspond to our initial expectations. However, these ranking were not wholly maintained when considering full-time women employees (Table 2). The USA had approximately one half of its full-time women in low paid employment in 1987. Women in Luxembourg were in a better position - but there were still 36 per cent of women in low paid jobs. Britain and Germany had approximately 30 per cent of full-time employed women who were low paid. In Spain 27 per cent of full-time women were low paid.[4]

A separate consideration of part-time women employees found that low pay was generally more extensive amongst women employed part-time than amongst full-timers, except in Luxembourg and here the ranking of countries corresponded with that for men and with our expectations (Robson et al, 1997). Two thirds of US part-time women were low paid. In Britain the equivalent percentage was 55 per cent. Germany, Luxembourg and Spain all recorded more than a third of part-time women in receipt of low pay. However, relatively few women were employed part time in Luxembourg.

5. Characteristics of the Low Paid

We examined the characteristics of the low paid men and women in our surveys. A range of individual and household characteristics were

examined. We describe here the findings from a small selection of bivariate analyses of the low paid across countries in addition to a multivariate model in which the relative importance of these characteristics were evaluated. Pay is well known to be linked to both age and education or qualifications. We expected to see common relationships across countries in the relationships between age and education and low pay. We were less sure whether marital status, family demographics, spouse's status or other household variables would be related to low pay across countries since there is the potential for family structures, household employment patterns and family and labour market policies to play a part in distinguishing patterns of low pay across countries.

Our multivariate model examined whether a range of supply-side independent characteristics were related to the dichotomous dependent variable of whether individuals had a low paid hourly rate or not. These and other analyses were carried out on men and women separately in order to allow them to have different relationships with the characteristics examined.

Age

The percentages of low pay varied enormously by age, gender, and country. For men and women employed full-time the youngest workers (18-24) all had the highest percentages of low paid workers (Tables 3 and 4); German 18-24 year old men had 40 per cent who were low paid; Spain 54 per cent, Luxembourg 56 per cent, Britain 60 per cent; and the USA 67 per cent. The extent of men's and women's percentage of low paid declined with age in all of these countries. The country rankings of the extent of low pay largely applied across all men's age groups; that is, irrespective of age the USA and Britain had the largest percentages of low paid in every age group and Germany had the lowest. For women the rankings were slightly different; the USA was highest for young workers followed by Luxembourg, and Spain; British and German young women had surprisingly similar

percentages of low paid workers, also positioned lowest in the rankings. The multivariate analysis conducted shows that in part this a composition effect. After controlling for education German and Luxembourg young women had lower levels of low pay than young women in other countries, especially at the lowest levels of education; however, the rankings of the extent of low pay between countries did vary from this at the highest education levels. It is not particularly surprising to find country rankings of the extent of low pay differing according to the gender of the employees. Countries do vary in their extent of service sector jobs which are often the lowest paid, and in the extent to which women occupy the low paying sector despite each labour market displaying some gender segmentation. Also centralised collective bargaining regimes which may have benefitted the low paid in countries like Germany may not have had the same extent of benefit for women as for men if women tend to work outside the coverage of these institutions to a greater extent than men.

There were higher percentages of full-time women than men who were receiving low pay in all age groups and across all countries, with the exception of the 18-24 year olds in Britain (full-time women, 55%; men, 60%). The gap between age groups was less for women than for men. Women differed from men in that the share of the low paid rose again in the 51-64 age group of women, although never to reach the heights experienced in the youth labour market. As far as it was possible to tell given far less data in most countries, the extent of low pay amongst part-time women employees by age and across countries followed the same patterns as those for full-time women employees although at higher rates in each equivalent group.

In the multivariate model age continued to be significant in all countries after controlling for a range of other variables. The youngest age groups of men and women were far more likely to be low paid than other age groups of workers (Tables 5 and 6). In all countries men up to age 50 were significantly less likely to be low paid than the youngest group. For German and Spanish men the likelihood of being

low paid rose slightly for the over 50s compared with the 40s age group. For women the likelihood of being low paid varied more across older age groups. In Britain for example, the 25-40 year olds were least likely to be low paid and as age increased beyond 40, being low paid became more likely, but never reaching the extent of the youngest group; in the USA and Germany the least chance of being low paid was in the 40s age group and in Luxembourg it was the oldest women over 50 who had the lowest probability of being low paid.

Education

In Table 7, the higher the level of education that men have obtained the smaller the percentage who were receiving low pay in every country. Comparing countries after controlling for education, the ranking stays the same at all levels of education; the USA and UK had the highest percentages of low pay and Germany the lowest. More than half the men in the USA with a primary level of education were found to be low paid compared with approximately a quarter of men in Germany, Luxembourg and Spain who had a primary level of education. Germany's famous system of vocational education is represented in these categories by General education. Here too German men had much lower rates of low paid than were evident in other countries. The men with tertiary levels of education had the smallest percentages of low paid; Germany 3 per cent, Luxembourg 6 per cent, Spain 7 per cent. However, in Britain (10 %) and the USA (14%) these rates were still high. Substantial amounts of low pay amongst highly qualified workers is something of an anomoly. The uneven and weak collective bargaining regimes of the USA and Britain may help to explain why the rates are highest in these countries.

Amongst full-time women, as with men, the incidence of low pay declined the higher the level of education achieved (Table 8). Women employed full time had higher percentages of low paid than men at all

levels of educational attainment and across all countries with the exception of those with tertiary education in Spain; 7 per cent of tertiery educated Spanish women and 7 per cent of equivalent men were low paid. In Germany, 61 per cent of full-time women were low paid who had a primary level of education, and this was more than twice the percentage for comparable men. The benefits of collective bargaining in the German labour market appear to have extended to the least qualified men to a far greater degree than they apply to low qualified women; the same was true of General education which captures German vocational education. At each level of education the overall country rankings of the percentage of low paid was evident in the cross-national comparison; the highest being the USA and the lowest most commonly being German percentages of low paid. It is also notable that even relatively highly educated women in the US and Britain had a substantial risk of being low paid.

In the multivariate model, after controlling for other differences, education continued to be significantly correlated to being low paid for men and women in all countries, with the exception of Britain. Whereas in other countries, higher education meant a low chance of low pay, in Britain, the coefficients supported this relationship but largely, they were not significant. We suspect that the main explanation of this difference lies in the measures used; that the 4 PACO education levels do not represent education differences between British workers as well as they distinguish qualifications levels in other countries.

Some predicted probabilities from the models are displayed in Figure 1 for men and Figure 2 for women. Education is varied across the 4 levels from the minimum (zero) up to level 3 for a typical young (18-24 year old) single worker chosen to be childless and living rent free. The figures display the very large probabilities of being low paid for young unqualified and pre-qualified men and women. Whilst the USA had the largest probabilities of being low paid for the groups with a minimum of education, it also tended to have the largest change

resulting from increases in education. Britain was much less responsive than other countries to increases in education for this youngest age group. The probability of being a young low paid worker in Britain was still over 0.5 even for those with the highest education levels. Again, this feature of the results may be caused by the relative failure of these measures to capture education differences in Britain. What is also apparent is that women did better than men at higher levels of education in the UK, USA and Luxembourg but not in Germany.

Marriage and family status

Being married compared with being single significantly reduced the likelihood of being low paid for men in all countries, again after controlling for age and other characteristics (Table 5) Also widowed, divorced or separated men were also less likely than the single to be low paid in Britain, Germany and Luxembourg although not in the USA or Spain. Cohabiting status was not distinguishable from being single in its effect on the likelihood of being a low paid man (Table 5).

Women differed markedly from men with respect to the association between low pay and marital status (Table 6). Being married was only associated with a reduced likelihood of being low paid for Spanish women; in other countries it was mainly insignificant, or in Germany, it increased the likelihood of being low paid. Cohabiting did not have a significant effect on the likelihood of being a low paid woman, with the exception of Luxembourg where it was associated with a reduced likelihood of being low paid (Table 6).

In Britain, Germany and Luxembourg more than half of the low paid workers were found amongst couples with children (Britain, 52%; Germany, 52%; Luxembourg, 58% and Spain, 63%). In the USA only one third of low paid workers were couples with children (35%). Having children, and their number had no significant effect on the

likelihood of men being low paid in Britain, Germany and Luxembourg but it was associated with a significant increase in the likelihood of men being low paid in the USA and Spain (Table 5). For women, having children tended to be associated with an increased risk of being low paid, except in Spain, where is was not significant (Table 6). After controlling for the number of children, the age of the youngest child did not have any significant effect on the chances of either men or women being low paid in any of the countries.

A set of predicted probabilities for married women aged 25-40 with 2 children (plus an employed husband not in low pay and home owning) are set out in Figure 3, varying by education level. Education level makes a large difference to the probability of being a low paid married woman, as we saw earlier. Married women in the USA did not always have the highest probabilities of being low paid. In fact Britain takes this place as often. Also, married women in Germany were often worse off than those in Spain or Germany, not seeming to share with German men the lowest levels of low pay.

Being a lone parent was likely to increase the risk of being low paid for men and women in the USA, but did not have this effect in any of the other countries, for men or women (Tables 5 and 6). The extent of low pay amongst one parent families also varied greatly across the countries in our study. Approaching a fifth of low paid workers in the USA were in one parent families compared with less than one in ten low paid workers in Britain, Germany and Spain. More than half of employed women one parent families in Britain, and more than two thirds of employed women one parent families in the USA respectively were receiving low pay. In Luxembourg nearly a half of employed men one parent households were in receipt of low pay.

Countries family policies may be contributing to these country differences although the relationships are probably complex. We have considerable comparative data about the value of child benefits across European countries from Ditch et al (1995) and Bradshaw (1996).

These show that Luxembourg and to a lesser extent Germany have had very high levels of non-means tested benefits for children in the 1990s such that 3 children could provide a sizeable addition to family income in those countries. Britain's non-means tested contributions to families with children have been much lower, but a means-tested supplement, to which many low paid one earner families would be entitled, have added to the total benefit income such that it has been on par with benefits in Germany. Spain by contrast has offered very little to families with children. It is interesting to note in our results therefore the association of low pay with large family size amongst women employees in Germany, Luxembourg and Britain, but not Spain. It may be that family benefits in these 3 countries allow women to take low paying jobs more easily whereas in Spain, women with families who work may be forced to look for better paying opportunities.

Couples' employment status variations

The extent of low pay amongst men varied, in some countries, according to their spouse's status. For employed men who were the sole earners in couples 24 per cent were low paid in the USA and Britain, 21 per cent in Spain, 17 per in Luxembourg and 12 per cent in Germany. Where men lived in two-earner couples, 24 percent were low paid in the USA, as in the single earner couples. However, in other countries, the percentage of employed men who were low paid was lower amongst dual earners; 14 per cent in Britain and Luxembourg, 10 per cent in Spain and 8 per cent in Germany.

In many ways the household distributions of low pay across countries followed the rankings of the individuals. Households in the USA had the highest percentage containing a low paid worker; 58 per cent of dual earner households had at least one earner who was low paid compared with 45 per cent in Britain, 38-37 per cent in Luxembourg and Germany and 28 per cent in Spain.. The US dual earner households also had the largest percentages with two low paid

earners; 16 per cent of US dual earner couples were both low paid compared with 8 per cent in Luxembourg, 6 per cent in Spain and the UK and 4 per cent in Germany.

The relationships between husbands' and wives' employment status in each country are set out in Table 9 for couples who had at least one earner. Firstly low paid men were more likely to have a non-employed wife than men who were not low paid in all but the USA. The gap was largest in Britain and Germany. Low paid men in the USA and in Britain were also far more likely to have a wife who was low paid if earning than men who were not low paid. These figures together suggest that in British and US households where men are low paid wives are less likely than in other households to be able to compensate as a way of moving households out of low income since wives in these households were more likely than others to be out of employment or low paid themselves.

The multivariate analysis of these relationships added some further information since it distinguished between wives who worked full and those who worked part-time. In the case of men (Table 5), a spouse being employed full- or part-time time had no significant effect on the likelihood of the man being low paid in Germany or Luxembourg. In Britain, having a wife who was employed part-time and in Spain having a wife working full-time was associated with a reduced likelihood of the man being low paid after controlling for other factors. In the USA having a wife employed full-time was associated with a higher chance of the man being low paid. For women, (Table 6) having a low paid husband compared with one who was not low paid was associated with a greater chance of the wife being low paid in the USA and in Spain but not in the other countries. The relationships visible within households need also to be viewed from the perspective of weekly income as well as the hourly figures examined here; it may be that the need to reach subsistence levels of weekly household income are responsible for the relationships observed in the hourly wage data.

Housing Tenure variations

Two thirds of the low paid in Britain and Luxembourg, and three quarters of the low paid in Spain lived in owner occupied housing; in Germany and the USA approximately 40 per cent of the low paid resided in owner occupied accommodation. The rest were largely tenants in rented accommodation except in the USA and Spain where 10 and 12 per cent respectively of the low paid were living rent free; these figures were substantially higher than for other countries where at most 2-3 per cent lived rent free. Living rent free can be a way in which parents subsidise the low pay of their children. Alternatively, rent free accommodation is attached to some jobs and the pay reduced to compensate. In this latter case, the USA's highest ranking at the top of the low pay percentages could possibly be modified, placing it more on a par with the UK.

In the multivariate analysis a significant positive relationship was found between being a tenant, living rent free and being low paid (Tables 5 and 6). This relationship existed for men in all countries except Germany, and for women in countries other than Germany and Luxembourg. It is perhaps not unexpected that being low paid was likely to affect the type of accommodation individuals live in and make it less likely to be an owner occupier in most countries. The fact that this is not the case in Germany may be partly related to Germany having the lowest owner occupation rates of these countries, 46 per cent for men, 35 per cent for women compared with the highest rates of 80-81 per cent in Britain and Spain. Also that rent free accommodation was significantly related to low pay is again not surprising, as already discussed above.

6. Labour Market Processes and Conclusions

One of our aims in examining the characteristics of the low paid across countries was to see how individuals' characteristics reveal features of labour market processes in countries. We found that the major differences in the aggregate levels of low pay across countries were most often carried over and persisted after controlling for differences in characteristics of workers in our countries. In this sense we can conclude that labour markets represented in our data are to a large extent structured differently from each other especially at the lower end of the pay spectrum. The USA and to a lesser extent Britain rely fairly heavily on low paid jobs whereas Germany and Luxembourg rely relatively little on having a low paid sector of employment. However, the USA's prime position in the low paid league table may be moderated slightly by a much higher than average amount of free-rented accommodation. If this were accommodation attached to low paying jobs, this would put the UK and the USA more on a par as economies which use low paid labour to a larger extent than the rest of these European economies. On the other hand, there may be more social acceptance by US families that they need to subside younger workers until they have reached pay levels which would allow them to be independent.

The demand characteristics of these economies are probably responsible for the dominance of country rankings over and above many other supply-side characteristics. In particular, we have argued in another paper that labour market institutions and the strength and form of collective bargaining and minimum wage regulation are very important in explaining variations in low pay across these countries (Robson et al, 1997). Germany's strong system of collective bargaining has resulted in her possessing the lowest percentage of low paid workers. The presence of a very low minimum wage and weak bargaining in the USA and a deregulated labour market in Britain were argued to have had a minimal impact on reducing the extent of low paid workers. Although Spain and Luxembourg both had weak

and uneven systems of minimum wages, the presence of legally binding collective agreements and minimum wages, and in Spain the re-organisation and expansion of the public sector, have contributed to lower levels of low pay in these countries.

Within these different structures, all countries exhibited some systematic features. An age structure was visible in the pay of all countries for all genders in which young workers and to a lesser extent the oldest workers were paid the lowest amounts. Low pay was also associated systematically for men with being single, a feature which overlaps with their age for the vast majority of men. In addition education was rewarded with higher pay in all of these countries, although less so for women than for men. Men were often less likely than women to be low paid in all countries although at higher levels of education this was not the case.

The findings that age, gender, education and for men marital status systematically structure and dominate the pay of all of our countries has different implications for social exclusion. Since age is something which changes naturally the low pay which accompanies youth need not contribute to permanent social exclusion. For the vast majority of people the same can be said about being single. However, it is worth considering that single men in older age groups may prove to be more at risk from social exclusion than others. Changes in education are not so easily achieved which means men and women with the minimum of education, and women more so than men, will be at much higher risk of being low paid and suffering longer term social exclusion than those with more education.

As well as these systematic labour market processes there were ways in which countries differed. It was surprising to see the much larger extent of the low paid amongst the highly educated in the USA and in Britain. One possible explanation is that top jobs are in short supply in these countries relative to the others and there is under-employment of educated workers as a result. This seems unlikely. More likely is that

the decentralised wage bargaining which characterises these economies leads to greater wage variation even within occupational categories possibly linked to greater variations in efficiency between firms.

Our comparisons also identified other groups who may be more vulnerable to being low paid and socially excluded in particular countries. Lone parents were more at risk than two parent households especially in the USA as were men with large families in the USA and Spain, and women with large families in all countries except Spain. It is possible that variations in countries' family and social polices may be contributing to these relationships and these may explain the relative vulnerability of particular groups in a country. We briefly considered the possibility of a relationship between benefits for children in different European countries and the likelihood of women with large families being low paid. Unfortunately, this is a much larger topic than can be embarked upon here because of the enormous complexity in the way countries contribute to family incomes and subsidise children and child rearing. In addition there is a need to consider how the hourly labour market pay rates considered in this paper map onto weekly income levels within households and whether the concept of a target household income may explain some of the within-household relationships between spouses' pay we identified A thorough investigation of the labour market and social policy interactions within a longitudinal framework of household circumstances is important if the processes of social exclusion are to be identified fully and tackled.

Notes

1. They defined low pay as earnings which are less than the third decile of the earnings distribution (of combined men and women who are performing full- and part-time work).

2. The Royal Commission on the Distribution of Income and Wealth (1979) defined low pay as being pay below the bottom decile of the weekly pay distribution of full-time male median workers. The TUC has argued that the definition of low pay is earnings below two thirds of male manual mean weekly earnings (Dex et al., 1994).

3. A special weight variable was used for Luxembourg to take into account the inclusion of the extension to the survey in 1991.

4. We carried out a sensitivity exercise to see how far our results changed by adopting a different definition of low pay. As well as the Low Pay Unit definition, we used 50 per cent of male median hourly earnings. Tables 1, 2 and 3 present the different extents of low pay arising from the two definitions. For men we found that changing the definition resulted in approximately 10 per cent difference in the extent of low pay in all countries. The difference was greater amongst full-time women workers, and ranges from 14 per cent in Spain to 24 per cent in Luxembourg. In the case of part-time women workers the difference approached one quarter of workers in Britain and Luxembourg, and a fifth of workers in Spain and Germany. In contrast, the USA has a smaller difference of 8 per cent, but it retained the highest overall proportions of low paid workers. However, the rankings across countries varied less than the figures on which they were based. Throughout the rest of this paper low pay has been calculated as those workers in receipt of less than 66 per cent of male median hourly earnings.

TABLES AND FIGURES

Table 1 **Percentage of employed men with earnings below specified levels**

Portion of male median earnings	Britain		Germany		Luxem-bourg		USA		Spain	
(%)	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N
66	21	1978	11	2450 * 11242788	19	1072	27	3394 * 57186	19	3445
50	10	1978	5	2450 * 11242788	7	1072	16	3394 * 57186	9	3445
Difference between 66 and 50	11	1978	6	2450 * 11242788	12	1072	11	3394 * 57186	10	3445

Source: PACO, SEHP * unweighted data

Table 2 **Percentage of full-time employed women with earnings below specified levels**

Portion of male median earnings	Britain		Germany		Luxem-bourg		USA		Spain	
(%)	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N
66	32	1152	30	1057 * 4678383	36	437	47	2509 * 41787	27	1482
50	16	1152	13	1057 * 4678383	12	437	29	2509 * 41787	13	1482
Difference between 66 and 50	16	1152	17	1057 * 4678383	24	427	24	2509 * 41787	14	1482

Source: PACO, SEHP. * unweighted data

Table 3 Percentage of employed men in age group with earnings below 66% of male median earnings.

Age Group	Britain		Germany		Luxem-bourg		USA		Spain	
	(%)	N	(%)	N	(%)		(%)	N	(%)	N
18-24	60	263	40	250 * 860502	56	125	68	269 * 4364	54	374
25-40	17	894	9	1040 * 4951796	19	504	27	2121 * 31602	17	1667
41-50	12	477	9	631 * 2877101	9	296	18	560 * 10880	10	702
51-64	13	343	8	529 * 2553389	9	147	19	444 * 10340	14	591
All	21	1978	11	2450 * 11242788	19	1072	27	3394 * 57186	19	3335

Source: PACO, SEHP * unweighted data

Table 4 Percentage of employed full-time women in age group with earnings below 66% of male median earnings.

Age Group	Britain		Germany		Luxem-bourg		USA		Spain	
	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N
18-24	55	212	54	217 * 930527	67	102	74	284 * 4575	63	208
25-40	24	508	23	462 * 2065332	28	232	44	1548 * 23157	20	817
41-50	25	291	18	219 * 856311	26	67	38	360 * 6793	21	274
51-64	37	142	31	159 * 826213	(15)	37	49	317 * 7262	25	150
All	32	1152	30	1057 * 4678383	36	437	47	2509 * 41787	27	1449

Source: PACO, SEPS Figures in brackets are based on small cell sizes * unweighted data

Table 5: Logistic Regression on likelihood of being a low paid man by country

	Britain		Germany		Luxem-bourg		USA		Spain	
	B	S.E.	B	S.E.	B	S.E.	B	S.E.	B	S.E.
Age 25-40 years	-1.7208	0.2001 ***	-1.3097	0.2062 ***	-1.4446	0.2332 ***	-0.8866	0.1616 ***	-1.0419	0.1492 ***
Age 41-50 years	-1.8337	0.2557 ***	-1.6316	0.2565 ***	-1.6928	0.3126 ***	-1.2577	0.1952 ***	-1.6173	0.1930 ***
Age 51 -64 years	-1.8418	0.2876 ***	-1.1664	0.2668 ***	-1.7152	0.3924 ***	-1.3278	0.2140 ***	-1.4311	0.1996 ***
Education - Compulsory level	-0.1319	0.8560	-0.1585	0.2664	-0.9638	0.3496 ***	-0.6929	0.2110 ***	-0.6130	0.1174 ***
Education - General level	-0.6384	0.8531	-0.5772	0.2469 **	-0.8735	0.1929 ***	-1.6632	0.2032 ***	-1.2909	0.1728 ***
Education - Tertiary level	-1.3888	0.8570	-1.8408	0.4147 ***	-1.5742	0.3921 ***	-2.3122	0.2106 ***	-1.7699	0.1628 ***
Marital Status - Married	-0.7998	0.1936 ***	-0.9731	0.2256 ***	-1.0870	0.2287 ***	-0.5098	0.1658 ***	-0.8831	0.1371 ***
Marital Status - Cohabiting	-0.0783	0.4911	-0.2203	0.2842	-0.2721	0.6214	-0.0929	0.2270	-0.0641	0.2723
Marital Status - Widowed, Divorced or Separated	-0.7665	0.3274 **	-0.2956	0.3506 ***	-1.1877	0.5154 **	0.0664	0.1993	-0.1234	0.3496
Number of Children	0.0120	0.0809	0.1278	0.0786	0.1410	0.0978	0.1002	0.0414 **	0.0823	0.0443 *
One Parent Family	-0.1899	0.4065	0.3390	0.3533	0.7470	0.3829 *	-0.5658	0.4071	-0.3105	0.2139
Wife employed full-time	0.2106	0.1657	0.0640	0.1904	0.1570	0.3580	0.2906	0.1007 ***	-0.2996	0.1588 *
Wife employed part-time	-0.6148	0.2293 ***	-0.0093	0.2525	0.2139	0.4259	-0.0253	0.1718	-0.3561	0.3516
Housing Tenure - Tenant	0.9803	0.1547 ***	0.2306	0.1621	0.6429	0.1933 ***	0.8753	0.0965 ***	0.3648	0.1365 ***
Housing Tenure - Living Rent Free	1.0662	0.4445 **	0.5372	0.4505	0.5179	0.4295	2.1212	0.2043 ***	1.1048	0.1700 ***
Constant	1.0963	0.8591	0.0248	0.3067	0.8252	0.2546 ***	1.4551	0.2817 ***	0.5864	0.1690 ***
Number of observations	1835		2227		1070		3301		3300	
Chi-Square (15)	390.338		199.378		184.156		620.746		560.559	
Iterations	4		5		4		4		4	
Log Likelihood	1448.908		1405.831		892.227		3474.031		2796.148	

Source: PACO, SEHP ***= 1 per cent significance level, **=5 per cent significance level *=10 per cent significance level

Table 6: Logistic Regression on likelihood of being a low paid woman by country

	Britain		Germany		Luxem-bourg		USA		Spain	
	B	S.E.	B	S.E.	B	S.E.	B	S.E.	B	S.E.
Age 25-40 years	-1.3322	0.1807 ***	-1.4684	0.1968 ***	-1.7465	0.2556 ***	-1.0963	0.1596 ***	-1.2726	0.1940 ***
Age 41-50 years	-1.2028	0.2029 ***	-1.7560	0.2313 ***	-1.9052	0.3661 ***	-1.2889	0.1899 ***	-1.7522	0.2373 ***
Age 51 -64 years	-0.7527	0.2334 ***	-1.4678	0.2456 ***	-2.1949	0.4885 ***	-0.7408	0.2021 ***	-1.8142	0.2758 ***
Education - Compulsory level	0.1059	0.7254	0.0720	0.2227	-1.0405	0.2955 ***	-1.3049	0.4000 ***	-0.5642	0.1581 ***
Education - General level	-0.7217	0.7250	-0.7363	0.2112 ***	-1.3042	0.2311 ***	-2.0527	0.3861 ***	-1.4706	0.2000 ***
Education - Tertiary level	-1.4235	0.7285 *	-1.5291	0.3264 ***	-2.8849	0.4697 ***	-2.7822	0.3896 ***	-2.7140	0.1982 ***
Marital Status - Married	0.1636	0.1694	0.5438	0.2230 **	-0.1817	0.2589	-0.2210	0.1824	-0.4472	0.1819 **
Marital Status - Cohabiting	0.0180	0.3609	-0.1019	0.2622	-1.7558	0.8473 **	-0.2237	0.2768	-0.1150	0.3402
Marital Status - Widowed, Divorced or Separated	0.0955	0.2227	0.3097	0.3026	-0.3418	0.3726	0.0670	0.1619	-0.4207	0.2540 *
Number of Children	0.4055	0.0619 ***	0.1205	0.0725 *	0.2544	0.1267 **	0.2090	0.0456 ***	0.0190	0.0573
One Parent Family	0.2080	0.2233	-0.2861	0.3131	0.0314	0.3812	0.5620	0.1572 ***	-0.1291	0.2146
Wife employed full-time	-0.0910	0.1197	-0.2142	0.1431	-0.2538	0.2872	0.2794	0.1370 **	-0.1365	0.1542
Wife employed part-time	-0.2728	0.1730	-0.1656	0.2107	-0.3248	0.2956	0.1234	0.1143	-0.2814	0.2241
Housing Tenure - Tenant	0.0588	0.2120	0.2393	0.2988	0.9096	0.5693	0.8474	0.1328 ***	0.9254	0.3005 **
Housing Tenure - Living Rent Free	0.7851	0.1374 ***	0.0310	0.1281	0.0571	0.2131	0.2999	0.0991 ***	0.2869	0.1717 *
Constant	1.3065	0.4520 ***	-0.0736	0.4795	-0.2253	0.5800	0.7109	0.2463 **	0.4786	0.2788 *
Number of observations	0.7409	0.7346	0.9504	0.2881 ***	1.9706	0.3066	2.7205	0.4334 ***	1.6251	0.2409 ***
Chi-Square (15)	1923		1445		644		2818		1700	
Iterations	313.833		153.747		154.328		452.049		456.779	
Log Likelihood	3 2267.774		3 1743.425		4 695.170		3 3428.234		4 1629.968	

Source: PACO, SEHP ***= 1 per cent significance level, **=5 per cent significance level *=10 per cent significance level

Table 7 Low pay by highest obtained school education: percentage of employed men with level of education with earnings below 66% of male median earnings.

Level of Education	Britain		Germany		Luxembourg		USA		Spain	
	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N
Primary education 1st to 6th grade[1]	(100)	1	24	177 * 264757	28	276	54	149 * 2003	28	1242
Compulsory education	32	459	24	405 * 1185550	13	92	47	502 * 7312	23	872
General education,[2] technical/ occupational/ vocational education, and apprenticeship	24	762	11	1525 * 7717324	18	546	30	1583 * 24986	13	463
Tertiary education[3]	10	747	3	324 * 2009668	6	127	15	1131 * 22566	7	840
All	21	1970	11	2431 * 11177300	19	1056	27	56867 * 3365	19	3417

Source: PACO, SEHP Figures in brackets are based on small cell sizes * unweighted data
Luxembourg - 14 cases were not classified under these headings

[1] Germany to 4th grade
[2] Preparation for university or other third level education not directly leading to a profession
[3] This includes university and technical college or institute educations

Table 8 Low pay by highest obtained school education: percentage of employed full-time women with level of education with earnings below 66% of male median earnings.

Level of Education	Britain		Germany		Luxembourg		USA		Spain	
	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N
Primary education 1st to 6th grade[4]	(0)	0	61	108 * 148238	55	99	85	75 * 861	47	372
Compulsory education	49	268	47	238 * 848004	28	71	75	288 * 4168	41	312
General education,[5] technical/ occupational/ vocational education, and apprenticeship	31	488	26	627 * 3162330	35	216	51	1362 * 22189	21	245
Tertiary education[6]	21	391	16	71 * 453890	(6)	42	30	747 * 14150	7	552
All	32	1148	30	1044 * 4612463	36	432	47	2472 * 41368	27	1481

Source: PACO, SEHP Figures in brackets are based on small cell sizes * unweighted data
Luxembourg - 3 cases were not classified under these headings

[4] Germany to 4th grade
[5] Preparation for university or other third level education not directly leading to a profession
[6] This includes university and technical college or institute educations

Table 9 Relationships between pay of husbands and wives

Britain

Husband / Wife	Low paid	Not low paid	Not employed
Low paid	20	22	42
Not low paid	26	40	58
Not employed	54	44	-
Total	100	100	100
N	261	1177	553

Germany

Husband / Wife	Low paid	Not low paid	Not employed
Low paid	13	12	38
Not low paid	14	25	62
Not employed	73	63	-
Total	100	100	100
N	192	1663	427
	827779	7295863	1964195

Luxembourg

Husband / Wife	Low paid	Not low paid	Not employed
Low paid	8	5	37
Not low paid	6	13	63
Not employed	86	82	-
Total	100	100	100
N	125	603	287

USA

Husband / Wife	Low paid	Not low paid	Not employed
Low paid	40	26	44
Not low paid	20	32	56
Not employed	40	42	-
Total	100	100	100
N	776	1556	293
	10170	32813	5872

Spain

Husband / Wife	Low paid	Not low paid	Not employed
Low paid	8	6	29
Not low paid	7	23	71
Not employed	85	71	-
Total	100	100	100
N	491	2230	493

Source:PACO, SEHP

Figure 1 Predicated probabilities of being low paid for young single men, childless and living rent free

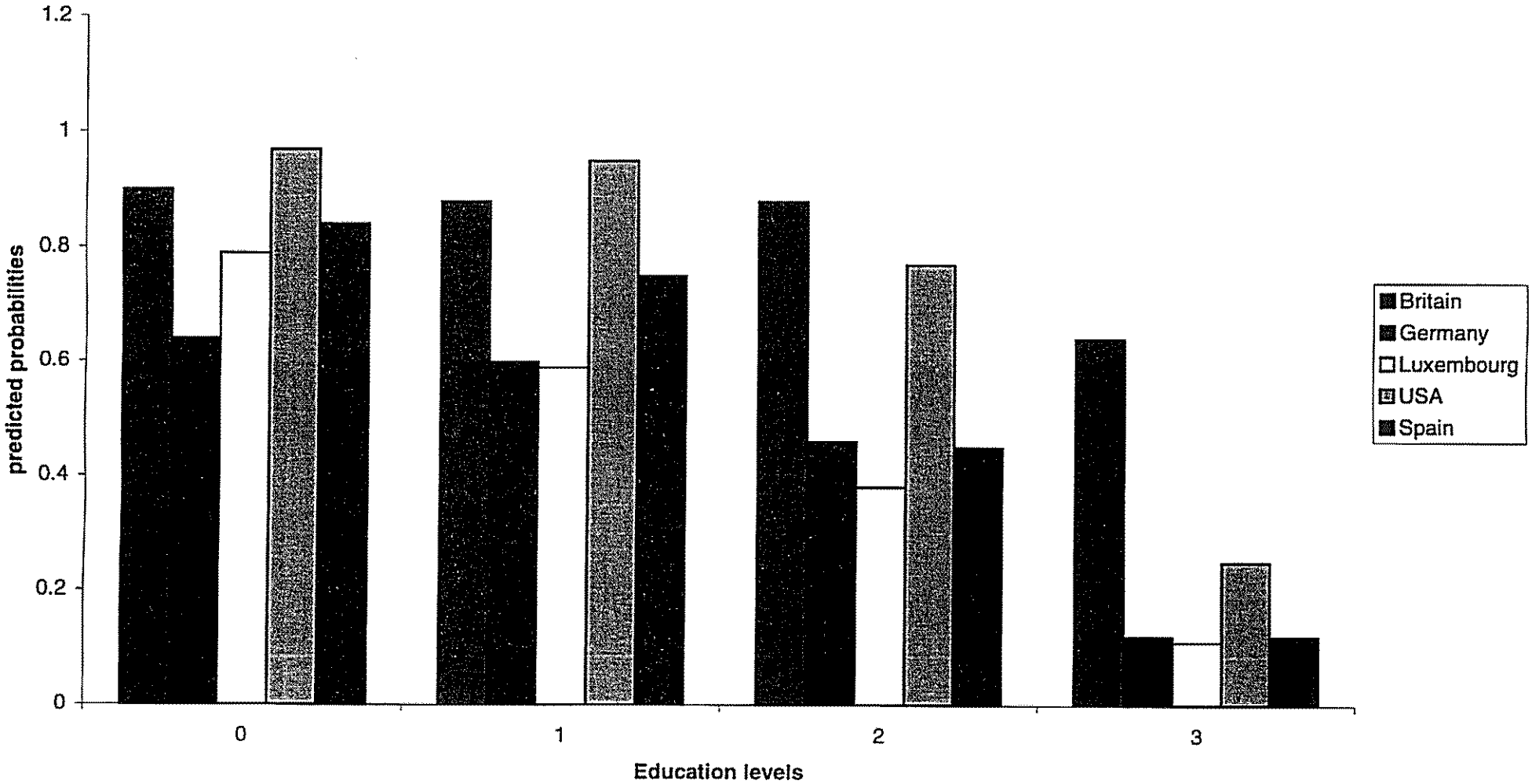


Figure 2 Predicted probabilities of being low paid for young single women, childless living rent free

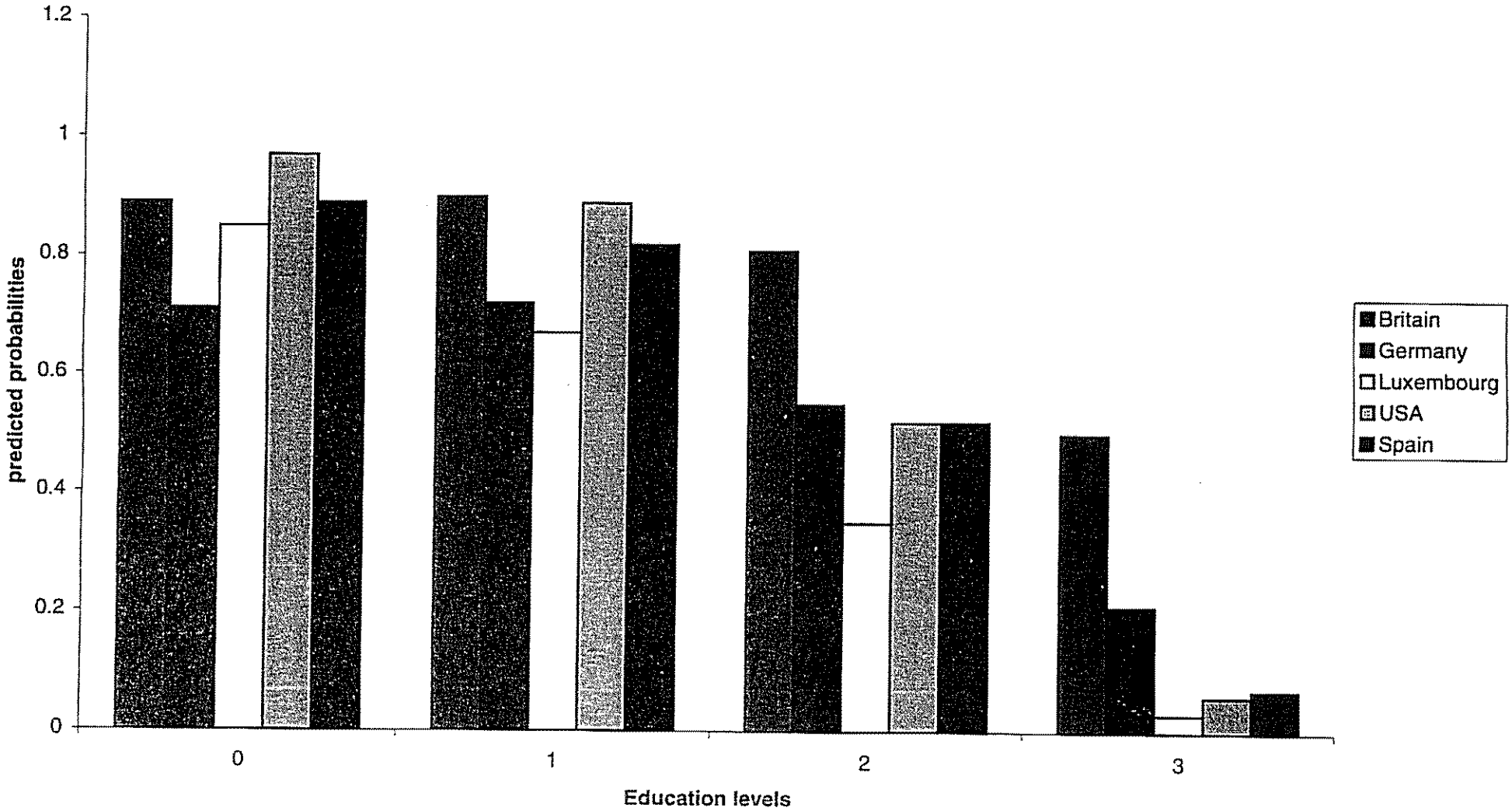
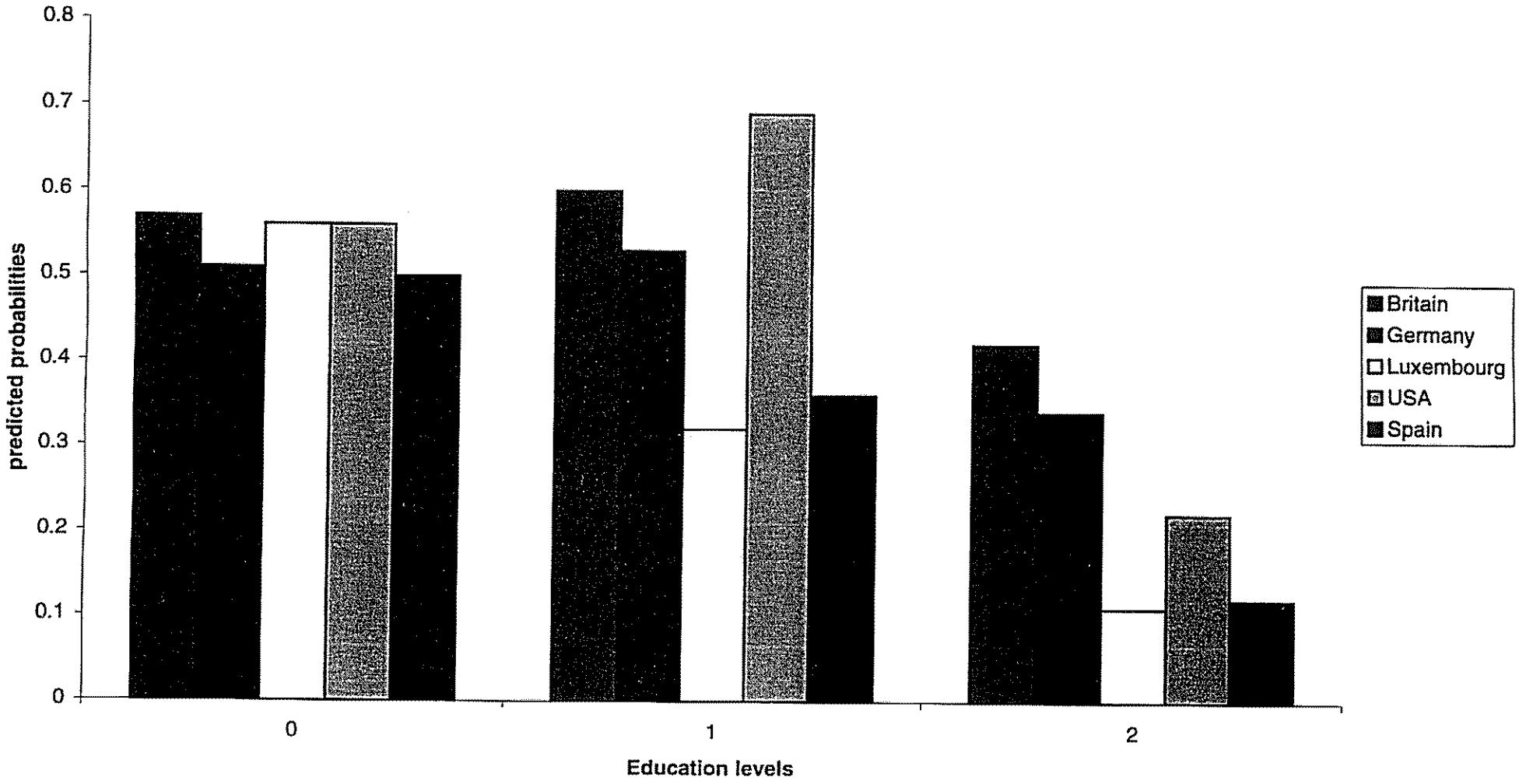


Figure 3 Predicted probabilities of being low paid for married women 25 - 40, 2 children not under 5, employed husband but not low paid, home owner



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