Clusters of couples with children: An exploration of their profile and transitions into work

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Policy Studies Institute

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Department for Work and Pensions

Working Paper No 33

Clusters of couples with children: An exploration of their profile and transitions into work

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A report of research carried out by the Policy Studies Institute on behalf of the Department for Work and Pensions

Corporate Document Services

First Published 2006.

ISBN 1 84712 086 5

ISBN13 978 1 84712 086 1

Views expressed in this report are not necessarily those of the Department for Work and Pensions or any other Government Department.

Printed by Corporate Document Services.

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Acknowledgements

The author would like to thank Rowan Foster, Claire Murphy, Victoria Petrie, Elizabeth Rayner, Emily Cattell and Bairbre Kelly of the Department for Work and Pensions for their help and support. Many thanks also to colleagues at the Policy Studies Institute (PSI), Richard Dorsett and David Wilkinson, for their advice and support; and Jenny Yip and Hilary Salter for their assistance in the production of the report.

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Abbreviations and acronyms

CTC	Child Tax Credit
FACS	Families and Children Study
FC	Family Credit
IS	Income Support
JSA	Jobseeker's Allowance
LMI	Low- to moderate-income
LSI	Long-standing illness
SIC	Standard industrial classification
SOC	Standard occupational classification
WFTC	Working Families' Tax Credit
WTC	Working Tax Credit

Conventions used in tables

A large number of tables appear in this report. The following conventions are used:

- figures in square brackets [ ] are based on fewer than 50 cases and should, therefore, be treated with caution;
- 'N/a' denotes Not applicable.

Summary

Background and aims

Since the Labour government came to power and set the goal of reducing child poverty, there have been a number of initiatives aimed at moving individuals and couples from welfare to work and at encouraging them to stay in work. These policies coincided with a labour market expansion and overall, worklessness among families with children has declined. However, the reduction was much smaller among couples with children than among lone parents and in 2004, 536,000 children lived in families where neither parent worked (Dorsett and Kasparova, 2004: 11). The importance of bringing workless couples closer to work calls for better knowledge of the reasons for them to stay out of work and the barriers to work they face.

Available research agrees that workless couples are not an homogeneous group but a mix of diverse household types. The first attempt to identify such subgroups was made by Dorsett and Kasparova (2004). The present research elaborates on these authors' findings and explores the ability to distinguish the subgroups of workless[1] couples with dependent children that would be relatively stable over time. The study utilises survey data collected for the Families and Children Study (FACS) from 1999 to 2003. For each year of this period, it provides an overview of characteristics of workless couples with children and identifies subgroups (or clusters) of families which are more homogeneous with regard to their characteristics than the overall population of workless couples. The robustness of clusters over time is analysed through the development of a measure of their stability, the overall score of stability.

The degree of labour market success enjoyed by each subgroup of workless couples is also examined. This analysis does not aim to quantify the likelihood of work entry associated with couples' characteristics but to provide a basis for more robust

[1] Throughout this report, a 16+ hours per week definition of work is adopted, that is couples are considered workless if neither partner is in work of 16 or more hours a week.

econometric analysis. Therefore, although the exploratory and descriptive nature of this study increases the tentativeness of conclusions, the findings presented in this report advance our knowledge of an important group of families and lay ground for future research.

Workless couples in 1999-2003

The labour market context of workless couples seems to suggest that the incidence of worklessness among couples with children decreases between 1999 and 2003. However, this impression is likely to be created by the changes in the sample of surveyed families that take place in 2000 and 2001. These changes mean that until 2001 the sample represents low- to moderate-income (LMI) couples and only starting from 2001 is it representative of all families with dependent children in Britain. Consequently, the proportions of workless couples are likely to be greater in the 1999 and 2000 samples of LMI couples than in the 2001 to 2003 samples of all couples with children. The stability of labour market statistics from 2001 onwards suggests that the work status of couples with children remained comparatively unchanged between 2001 and 2003.

Characteristics of workless couples are **relatively stable**. Each year, the majority of them are older than 34 years of age and have one child aged under 10. They are likely to be married and live in the social rented sector. Workless couples tend to receive at least one benefit or tax credit and it is much more likely to be Income support (IS) than the Jobseeker's Allowance (JSA). In all five years, only a small proportion of workless couples claim JSA and the main claimant is the man. This low take-up of JSA may be related to having a long standing illness (LSI) which the majority of men report. Overall, men are more likely than women to say their health is not good.

The majority of men and women in workless couples have finished their education aged 16 or younger but women are more likely to have some qualifications. Workless couples are likely to have had some work experience and men are more likely than women to have worked in the past. Consistent with their reports of an LSI, the greatest proportions of men have left employment on health grounds, while women mention pregnancy and their decision to leave work more often than health reasons. Gender differences are apparent in the intentions to enter work as women are more likely to postpone their job search until some time in the future, while men are more likely to say they are looking for work. Among the reasons for inactivity in their job search that are mentioned by at least one partner, their own disability and/or disability of a household member are the dominant explanations.

However, there are **variations** in the characteristics of workless couples across the years. For example, the 1999 couples are more likely to be older and to have one child over the age of 10 than couples in the following years. The proportion of cohabiting couples rises between 1999 and 2003. A snapshot of characteristics relating to the educational attainment and skills of workless couples shows that over time, the likelihood of having work experience grows among workless women and

decreases among workless men. Compared with the previous period, in 2002 and 2003, men demonstrate a greater tendency to stay in education beyond the age of 16. In these years, the proportions of men and women with some qualifications are also higher than in 1999-2001. Job search intensity fluctuates across the years. Couples that are least likely to have work intentions are found in 1999. The importance couples attach to barriers to work also varies. For example, the proportion of couples mentioning health problems decreases between 1999 and 2003. The same trend is observed with regard to costs and the availability of childcare. However, the unwillingness of couples to spend time away from their children grows during this period.

Therefore, the broad conclusions about the stability of workless couples' characteristics are likely to conceal changes in their population over time. Moreover, each year, the diversity of reasons for leaving their last jobs (given by those with work experience) and the variety of barriers to work they face point to the heterogeneity of their population in general. For example, older and less healthy couples with one older child are likely to be part of the same population of workless families as younger and healthier couples with younger children. The needs of these workless families as well as their chances of (re)entering work are likely to differ.

Clusters of workless couples in 1999-2003

To identify families that are relatively homogeneous with regard to their characteristics, the overall population of workless couples each year from 1999 to 2003 is divided into three subgroups, or **clusters**, in such a way that couples in each subgroup have characteristics that distinguish them from couples in other subgroups. Cluster analysis is employed in this task because it is a common statistical tool for solving classification problems.

The grouping is carried out along the following dimensions that workless couples belonging to the same subgroup tend to share:

- the demographic profile of couples;
- their educational characteristics and skills;
- their degree of job readiness; and
- except in 2003, when attitudinal data are not available, their attitudes to work, life on social security benefits and family.

This is an exploratory exercise because cluster analysis helps discover structures in data but it is unable to explain why they exist. The results of cluster analysis are sensitive to a number of arbitrary decisions on the part of the researcher. Consequently, the subgroups represent the most precise partitions of the overall population of workless couples given the sample size, (pre-2002 changes in) its composition and grouping dimensions in each of the five years.

The stability of clusters across the years might help derive a typology of workless couples and enable the development of targeted policy measures for subgroups of workless couples. In order to help assess the relative robustness of clusters over time, a measure of stability (the overall score of stability) has been developed. The score suggests that over time, the composition of each cluster changes but does so to a different degree: the second cluster is most robust, followed by the first cluster, and the third cluster is least stable. Changes in the composition of the third cluster may be the greatest due to its small size in each of the five years. For this reason, the lack of attitudinal data in the 2003 set of grouping dimensions may also have had the greatest impact on the stability of the third cluster.

The composition of each cluster is as follows:

- The **first** cluster tends to consist of couples in their 40s or older with one or perhaps two children over the age of 10. They are most likely to have worked in the past and to be in work of 1-15 hours a week but they are least likely to say that they plan to look for work of 16 or more hours a week. These couples are most likely to explain their inactivity by the absence of the need to work. However, the lack of incentives may not be the only problem that needs focusing on. In 2000, 2001 and 2003 couples in this cluster are most likely to report poor health and mention their own and household members' illness among the reasons for not looking for work.
- The **second** cluster is likely to comprise the youngest families with two or more children, the youngest aged under 11. They are most likely to be in good health, have some qualifications and be job-ready. In all years, at least one partner is likely to plan to look for work in the future and in 1999 to 2001, additionally, one of the individuals is most likely to say they are looking for work. Unsurprisingly, the main barriers to work these couples report are most likely to be related to having young children.
- Over the years, couples in the **third** cluster have very few characteristics in common. However, although the composition of the cluster changes from one cohort of workless couples to another, in 1999-2002, most characteristics of men and women in these couples are likely to hamper their work entry. In almost all cohorts, the third cluster couples are more likely than couples in other clusters to suffer from poor health, live in the social rented sector, lack work experience and have neither qualifications, nor a driving licence. Nevertheless, except in 1999, at least one partner in the third cluster couples is likely to have work intentions.

Movement into work by clusters of workless couples

Since the probability of work entry is likely to be associated with the characteristics of couples, families within the same cluster may have a similar propensity to move into work. The likelihood of movement into work by clusters of workless couples within the 1999-2003 period is therefore examined. The analysis is descriptive in

nature and consequently, it does not quantify the association between the composition of the cluster and its work entry chances, other things held constant. Instead, it provides an overall comparison of work entry rates across the clusters of couples and men and women individually; and where possible, it highlights the characteristics of couples that are likely to influence their movement into work. Additionally, while relatively small sample sizes pose a problem overall, the analysis of movement into work is particularly hampered by their further reduction as panel periods lengthen. This is why some results regarding couples' work entry are treated with a greater caution than others.

The five-year period identifies four possible cohorts of couples for panel analysis: 1999, 2000, 2001 and 2002. Movements into work by clusters of workless couples are examined within each cohort and across the cohorts. The comparison of work entry rates within each cohort should help suggest which types of families are most likely and which are least likely to move into work. Examination across the cohorts should help understand how the changes in the composition of the cluster alter the likelihood of work entry by its families. First, a couple is considered as a single unit changing its work status and then individual transitions within the couple are examined.

Within each cohort, the three clusters show different propensities to move into work. Overall, the first and the second cluster couples are most likely to enter work. The steady flow into work of the **second** cluster couples indicates that their state of worklessness is likely to cease when their children grow older. The **first** cluster couples are as likely to enter work as the second cluster couples but their movement appears to be slower when they suffer from ill-health and/or have no work intentions. The **third** cluster couples seem to be 'entrenched' in worklessness as they are least likely to enter work.

In all clusters, **men** are more likely to move into work than **women**. However, within each cohort, the relative labour market success of each cluster of couples depends on the work entry rates of men and women in the cluster relative to those of men and women in other clusters. For example, in the 1999 cohort, the first cluster men seem to achieve higher work entry rates than the second cluster men. However, the first cluster women seem to settle in their 'mini' jobs and be less likely than women in the second cluster to move into work of 16+ hours a week. Consequently, over time, the work entry rates of the second cluster couples become comparable to those of the first cluster couples.

In all instances where the **first** cluster **men** demonstrate lower work entry rates (in comparison with both men in other clusters and with men in other cohorts), this might be attributed to their health problems. The **cross-cohort** fluctuations in work entry rates shown by the **first** cluster **women** suggest that the nature of their health problems is not as detrimental to their movement into work as is the case with men in this cluster. Although women's rates of work entry are also lower when they suffer from ill-health, it is possible that this reduction is not independent from

changes in the health status of their partners. Given their attitudes to work and that they are most likely to already be in work of 1-15 hours a week, it seems plausible that women in the first cluster increase their working hours to over 15 hours a week when their own health status and that of their partners allows and the quality of the job makes it an attractive option.

Men and **women** in the **second** cluster appear to achieve higher work entry rates when they have qualifications and a driving licence and access to a vehicle. Apart from these factors, health status seems to impact on men's employability, while the unwillingness to use childcare or lack of available childcare seems likely to influence women's ability to move into work.

Whenever **men** and **women** in the **third** cluster move into work, older men and women seem to be less likely to do so than younger men and women, even if they have fewer and older children. Men that have work intentions appear more likely to enter work than men without work intentions. However, the multiplicity of changes to the composition of the third cluster across the cohorts of couples and the small sample sizes increase the tentativeness of the findings relating to the third cluster couples' movement into work.

By pointing to characteristics of clusters that are likely to be associated with their work entry, the analysis of transitions into work provides a basis for the development of a multivariate regression model. The model may provide an assessment of the likelihood of work entry by each cluster and also allow the association between each of the couples' characteristics and their work entry chances to be analysed under the *ceteris paribus* condition, i.e. independently from the influence of all other factors. Additionally, by showing how the analysis of movement into work is hampered by small sample sizes, this study may help future research on workless couples with children to choose a panel that would be least affected by the reduction in sample sizes over time.

Conclusions

By identifying relatively homogeneous subgroups of workless couples with dependent children and assessing their stability over time, this research contributes to the available evidence on these families. Examination of their propensity to move into work makes this study relevant to policies aimed at moving couples into work and encouraging them to stay in work.

Regarding couples in the **first** cluster, this research suggests that they may be able to achieve work entry rates that are comparable to those achieved by the most job-ready couples in the second cluster, even though the first cluster couples are more likely to say that they neither need to work nor plan to do so. It is possible that men choose to stay out of work on health grounds and women change their working hours depending on whether a job looks attractive to them and whether their partners suffer from ill-health. Given that among all workless couples with children, these families are probably best placed to secure a job, the policy challenge for this

group may be to address their attitudes and promote the possibility of work of 16 or more hours a week.

The youngest couples in the **second** cluster may be able to achieve higher work entry rates if their children-related concerns were addressed. However, their unwillingness to spend time away from their children should be considered. It is possible, for example, that an improvement in men's work status would further prompt the second cluster women to stay at home with the children, especially if their income from work would otherwise be spent on childcare. Since these couples tend to enter work over time, both partners may benefit from measures that improve their standing with regard to skills and/or qualifications.

The couples in the **third** cluster seem to be the most disadvantaged and consequently, the least able to make their way into the labour market. Since each cohort appears to face multiple barriers to work, it is difficult to identify policies appropriate to these couples. Indeed, this report does not aim to suggest what these policies might be. However, it seems likely that the greatest efforts would be required to bring the third cluster couples into work.

Finally, since the methods employed in this research are exploratory and descriptive in nature, the findings of this study require further testing. In future studies on couples with dependent children, the problems of changes in the sample composition and in grouping dimensions may need to be minimised. The analysis of movement into work by clusters of workless couples may benefit from deployment of multivariate regression analysis. The panel in such analysis would need to be chosen so that it was least affected by the reduction in sample sizes over time.

1 Introduction

1.1 Background to research

Since the Labour government came to power and set the goal of reducing child poverty, there have been a number of initiatives and changes to the tax and benefit systems that aimed at moving individuals and couples from welfare to work and encouraging them to stay in work. Recognising that couples usually leave worklessness because the male partner enters work, the policies that specifically targeted workless couples focused on partners of benefit claimants. They included the New Deal for Partners (initiated in 1999 and revised in 2004), Joint Claims for JSA (launched in 2001 but available only to childless couples) and Work Focused Interviews for Partners (introduced in 2004). Details of these policies are provided in Dorsett and Kasparova (2004) and Hasluck and Green (2005) and are excluded from this report in order to avoid unnecessary repetition.

These policies coincided with a labour market expansion and overall, the proportion of workless couples with children fell between 1996 and 2002 from nine per cent to six per cent (Hasluck and Green, 2005: 7). However, at three percentage points, this fall was much smaller than the 11 percentage points reduction in worklessness among lone parents during the same period (from 60 to 49 per cent). This statistic reflects a much higher level of worklessness among lone parents compared with couples with children. However, the number of children living in these two groups of households is not as dramatically different. In 2004, 1,290,000 children lived with a single workless parent and 536,000 children lived with two workless parents (Dorsett and Kasparova, 2004: 11).

The importance of bringing workless couples closer to work calls for better knowledge of the reasons for them to stay out of work and the barriers to work they face. Available research agrees that workless couples are not an homogeneous group but a mix of diverse household types. Therefore, it might be difficult to develop a single 'one size fits all' policy to meet their differing needs and more research is required in order to understand these specific needs. Indeed, a review of the latest available evidence conducted by Hasluck and Green (2005) led the authors

to suggest that distinct subgroups of workless couples have to be identified in order to develop policy mixes relevant to each subgroup (p.71, Hasluck and Green (2005)).

1.2 Aims and objectives

Evidence on workless couples, although not always on those with children, is provided by Bonjour and Dorsett (2002), Berthoud (2003), Kasparova *et. al.* (2003), Rafferty (2003), Arrowsmith (2004), Dorsett and Kasparova (2004), and Hasluck and Green (2005) but research into their typology is rather limited. There has been research into subgroups of individuals and their chances of entering work. Beatty and Fothergill (2003), for example, identify five subgroups of workless men but not couples. There are reasons to think that this grouping provides some insight into the worklessness of couples. Men are usually the main earners in the couples. Consequently, their movement into work is the usual route out of worklessness for a couple. The process of 'assortative mating', whereby two individuals partner on the basis of similarity of their social occupational levels, views and skills, also suggests that in couples where men are unlikely to move into work, women are even less likely to do so. However, a couple consists of two individuals making joint decisions on labour supply. They may both enter work and share childcare responsibilities, or decide that one partner provides childcare while the other partner works, or both stay out of work if one partner has caring responsibilities for the other partner.

This research builds on the results of an analysis of workless couples with children and their labour market transitions by Dorsett and Kasparova (2004). Amongst other findings, the authors suggested that workless couples are not an homogenous group of families and identified three subgroups (or clusters) within the overall population of workless couples in 2002. These were:

- older couples with one child who were claiming health-related benefits;
- couples in their 30s who had young children, were in good health and had some qualifications and a positive attitude to work;
- poorly-educated young couples, the women coming from a minority ethnic group, with three or more children and no access to a car (p. 45, Dorsett and Kasparova (2004)).

This report elaborates on these findings and examines workless couples in each year between 1999 and 2003. It exploits the wealth of available data and explores the ability to distinguish the subgroups of workless couples that would be relatively stable over time. Cluster analysis is employed to suggest a broad division of workless couples into subgroups because it is a common statistical tool for solving classification problems. It should be noted that the results of grouping are suggestive in nature because cluster analysis produces different results depending on the number of subgroups, the set of grouping dimensions and the sample size. For the reasons of comparability of clustering results between 1999 and 2003, these conditions are held constant across the cluster analyses as much as it is possible. The stability of the

cluster over time is assessed by its ability to consistently group together families that have similar characteristics, barriers to work and reasons for being workless.

In order to investigate their labour market outcomes, the clusters are compared with regard to their work entry rates between 1999 and 2003. The chances of entering work depend on many factors, such as the age of the partners and their children, their health, qualifications and experience. The descriptive nature of this analysis limits its ability to quantify the likelihood of work entry associated with each factor, controlling for other factors. However, such an assessment is outside the scope of this study. By pointing to characteristics of clusters that are likely to be associated with their work entry, the results of this research provide a basis for more robust econometric analysis in the future. Being longitudinal, the analysis of movement into work may be hampered by the reduction in sample sizes as panel periods lengthen. The instances where small sample sizes are likely to impair conclusions are highlighted in the report.

The issue of interdependency of decisions to enter work is not examined in this study. However, some insight may be provided by considering characteristics of men and women in the couples, their work intentions, attitudes towards work, benefit receipt, and the role of women in the family and their work entry rates. Throughout this report, a 16+ hours per week definition of work is adopted, that is couples are considered workless if neither partner is in work of 16 or more hours a week.

To summarise, by identifying a number of broad subgroups within the population of workless couples, this research indicates the characteristics which tend to be concentrated among certain types of couples. Therefore, it might improve our knowledge of this important client group. By examining the labour market success of these subgroups, this study may additionally help to identify the hardest-to-reach subgroup of workless couples. Finally, the assessment of stability of clusters over time may facilitate the development of policy measures that are tailored to the specific needs of subgroups of workless couples.

1.3 Structure of the report

The report is structured as follows: Chapter 2 describes the sample. The next two chapters (Chapters 3 and 4) exploit cross-sectional properties of the data. Chapter 3 provides 'snapshots' of workless families with children in each year of the 1999-2003 period. It focuses on the characteristics of workless couples that are likely to determine their position in the labour market, such as their demographic profile, health status, educational attainment and work experience. In Chapter 4, the population of couples each year between 1999 and 2003 is divided into clusters in such a way that characteristics of families that comprise one cluster differ from the characteristics of families that comprise another cluster. The chapter ends with a discussion about the robustness of clusters over time.

Since the probability of work entry is likely to be associated with the characteristics of couples, families within the same cluster may have a similar propensity to move into work. In Chapter 5, therefore, the attention turns to movement into work by the clusters of couples, and longitudinal properties of data are utilised. Changes to the workless status of clusters are considered with regard to couples as a whole and each partner separately. Four cohorts of workless couples are distinguished (1999, 2000, 2001 and 2002) and the comparisons of clusters' work entry rates are conducted within each cohort and across the cohorts. The within cohort analysis suggests which types of families and individuals are most likely to enter work and which are least likely to do so. The examination across the cohorts sheds some light onto the association between the composition of the cluster (i.e. couples' characteristics) and the likelihood of work entry by its couples and men and women individually. Conclusions are presented in Chapter 6.

2 Description of the sample

This research focuses on workless couples with dependent children and utilises survey data collected for the Families and Children Study (FACS) from 1999 to 2003. The original families were selected from Child Benefit recipients and in 1999 couples were admitted only if they had low-to moderate-income (LMI). The income threshold was set at the level of the Family Credit (FC) limit plus 35 per cent. These families were re-interviewed in subsequent years and, consequently, the sample of couples with children has a longitudinal element.

However, in 2000 and in 2001 the composition of the sample changed. In 2000, as the FC was replaced with the Working Families' Tax Credit (WFTC), the income threshold was tied to WFTC and slightly increased. This allowed a larger sample size and a greater proportion of couples who were likely to be in work of 16 or more hours a week. In 2001, all restrictions on income were removed and high-earner couples joined the sample. This further increased the sample size and also the proportion of relatively wealthy couples working 16 or more hours a week (for details see Marsh and Rowlingson, 2002; Kasparova *et al*, 2003; Phillips, Miers and Scholes, 2003 and Dorsett and Kasparova, 2004).

These changes to the sample mean that until 2001 the sample represents LMI couples and only starting from 2001 is it representative of all families with dependent children in Britain. Therefore, cross-section comparisons of different characteristics of couples are likely to be distorted. In particular, since high earner couples are not included in the FACS samples until 2001, all pre-2002 cross-sections o*f workless couples do not contain couples that were high-earners* in the previous FACS waves but subsequently left the labour market. These couples appear only in the 2002 and 2003 cross-sections of workless couples. Characteristics of former high-earner couples are likely to differ from characteristics of persistently workless couples and therefore, differences between the cross-section FACS samples may be observed, even if the population of workless couples in Britain did not change from one year to another.

These differences may have a more pronounced impact on the comparability of clustering results than on cross-section comparisons overall. If ex-high earners have

certain characteristics in common, they are likely to be clustered together and impose a change on the composition of the cluster that would accommodate them. This variation in the cluster's composition, attributable purely to changes in the sample composition, would be impossible to isolate when assessing the robustness of this cluster over time. Therefore, post-2000 cross-section comparisons may be more informative than cross-section comparisons across the entire period.

Two other data caveats have to be mentioned. First, the attitudinal data were not collected in the 2003 FACS survey. Since in cluster analyses, couples' views form one of the grouping dimensions, the lack of data in 2003 should be acknowledged when comparing the subgroups of workless couples across the years. Taking into account the problem of changes in the sample mentioned. This caveat means that only the 2001 and 2002 results of cluster analyses may be strictly comparable.

Second, the longer the period under investigation, the more likely the panel analysis is to suffer from sample attrition. That is, the results of analysis become less robust as the length of the panel increases because owing to attrition, sample sizes become too small to detect statistically significant differences between groups. Variation in the results of analysis increases and their sensitivity to outliers grows when sample sizes decrease. This problem of a small sample size has to be taken into account when analysing movement into work by (smaller) clusters of couples, and especially by those in the 1999 and 2000 cohorts.

Both the cross-section data and the panel data are used in the analysis and the weights are applied to make the samples nationally representative and comparable across the waves. Following Dorsett and Kasparova (2004), the data are restructured to enable the distinction between men and women rather than between respondents and partners. This allows the comparability of the results between the two reports and additionally accounts for differences in the labour market position of men and women.

Since, in this report, couples are defined as workless if neither partner works 16 or more hours a week, the cross-section samples include couples not working any hours or working 1-15 hours a week. The panel analysis restricts the sample to continuous couples. These are couples where the same partners (men and women) are interviewed at each FACS wave.

3 Workless couples in 1999-2003

This chapter provides a description of workless families with children in each year of the 1999-2003 period. First, it shows workless couples in the context of the labour market position of all couples with children in Britain, paying attention to the work status of each partner in the couple. Then it focuses on the characteristics of workless couples that are likely to determine their position in the labour market: their demographic profile, tax credit and benefit receipts, health status, financial well-being, educational attainment, and also work experience and job-readiness. The chapter ends with conclusions on the stability of these characteristics of workless couples over time.

3.1 Work status of a couple

Table 3.1 shows the position of British families with children with regard to the labour market and demonstrates a reduction in the proportion of workless couples between 1999 and 2001. However, this reduction is likely to reflect changes in the sample of families surveyed. As was noted above, in 2000 the income threshold was raised and the sample of surveyed families expanded to include more couples that were in work of 16 or more hours a week. Starting from 2001, higher-income families were also included in the survey and this further increased the sample and the proportion of working couples in it. The results reported in 2001 to 2003, when no changes to the sample take place, suggest relative stability in the incidence of worklessness among couples with children in Britain.

Table 3.1 Who works 16+ hours a week

Column percentages

	1999	2000	2001	2002	2003
Both	21	35	55	55	56
Only female	7	6	4	4	4
Only male	47	43	34	35	34
Neither	25	15	6	6	6
Unweighted base	*2,147*	*2,721*	*5,556*	*5,162*	*5,144*

Base: Cross-sections in each year. All couples with information on work status of partners.

When focusing on workless couples, it is useful to look at those working 1-15 hours a week because for them the transition into work of 16 or more hours a week may be easier than for those outside the labour market. Table 3.2 shows little variation in the proportion of men working less than 16 hours a week but the proportion of women in 'mini' jobs increases from six per cent in 1999 to 12 per cent in 2003. Although not shown here, among couples where at least one partner works 1-15 hours a week, females are more likely to have permanent jobs than men.

Table 3.2 Work status of workless couples

Column percentages

	1999		2000		2001		2002[1]		2003	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Works <16 hours	6	5	8	6	8	8	11	6	12	7
Does not work	94	95	92	94	92	92	89	94	88	93
Unweighted base	*531*	*531*	*408*	*408*	*353*	*353*	*341*	*341*	*319*	*319*

Base: Cross-sections in each year. All partners in workless couples with information on their work status.

[1] At 341 the number of workless couples in 2002 slightly differs from that in Dorsett and Kasparova (2004), where it stood at 345. For reasons of comparability across the years, in this report, the sample excludes couples where family changes meant that the main respondent in 2002 was different from the main respondent in previous years.

3.2 Demographic characteristics of workless couples

Consistently over the years, men in workless couples tend to be older than women and in the majority of couples, both partners are 35 years of age or older (Table 3.3). However, couples are likely to be slightly older in 1999 than in subsequent years.

Table 3.3 Age of partners in workless couples

Column percentages

	1999		2000		2001		2002		2003	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Under 25	9	3	12	7	10	5	12	6	12	7
25-29	15	9	19	12	15	9	13	9	14	9
30-34	19	17	19	16	19	16	19	15	17	14
35-39	19	19	19	19	21	19	25	19	21	20
40-44	17	16	14	16	16	16	13	20	16	18
45 +	21	37	17	31	20	34	18	32	20	31
Unweighted base	*531*	*531*	*408*	*408*	*353*	*353*	*341*	*341*	*319*	*319*

Base: Cross-sections in each year. All partners in workless couples with information on their age.

Family composition seems to be robust over the years. As Table 3.4 demonstrates, the majority of workless couples have no more than two children and their youngest child is likely to be aged under 10. However, in 1999 families are more likely to have one child aged over 10, than in other years. The majority of workless couples are married, although this majority decreases from 77 per cent in 1999 to 70 per cent in 2003.

Persistently over the years, females from ethnic minorities are over-represented among workless couples. At more than 13 per cent, their proportion in workless couples is much higher than the national average of eight per cent (Strategy Unit, 2003, p4). In the same way, while the majority tenure in the UK is owner-occupation, no more than a third of workless couples live in this tenure during 1999-2003; the majority of workless families are social tenants. However, there are variations in their housing tenure across the years: in 2000, 67 per cent of workless couples live in social housing and in 2002, 54 per cent.

Table 3.4 Demographic characteristics of workless couples

Column percentages

	1999	2000	2001	2002	2003
Age of youngest child					
0-4 years	39	45	44	44	41
5-10 years	28	29	29	31	31
11-15 years	23	19	21	17	19
16+ years	10	7	7	8	8
Number of children					
1	39	34	35	33	37
2	27	31	32	32	32
3	19	19	18	20	20
4+	16	16	16	16	11
Unweighted base	*531*	*408*	*353*	*341*	*319*
Partnership status					
Married	77	73	71	70	70
Unweighted base	*519*	*324*	*274*	*338*	*316*
Ethnicity of female					
White	83	86	81	85	84
Unweighted base	*522*	*364*	*348*	*337*	*316*
Housing tenure					
Owner-occupation	27	21	27	33	28
Social rented sector	61	67	59	54	60
Private rented sector	12	13	14	12	13
Unweighted base	*510*	*407*	*353*	*340*	*318*

Base: Cross-sections in each year. All workless couples with information on their respective demographic characteristics.

3.3 Benefits and tax credits received by workless couples

Each year between 1999 and 2003, the majority of workless couples are in receipt of at least one benefit or tax credit (Table 3.5). A closer look at the types of benefits received by workless couples reveals an increase in the take-up of all of them. Where Income Support (IS) is concerned, the proportion of couples receiving it goes up by more than 10 percentage points, from 43 per cent in 1999 to 54 per cent in 2003. The proportion of Jobseeker's Allowance (JSA) claimants rises by about 15 per cent in this period, almost all of the increase being attributed to males. Uniquely to JSA, the majority of workless families are not on it during 1999-2003. A marked increase

in the take-up of IS and JSA observed in 2001 may reflect the change in the composition of the sample described above. It is plausible that working couples that joined the sample in 2000 or 2001 and became workless in later years, have a higher propensity to actively look for work and claim JSA.

Table 3.5 Benefits and tax credits received by workless couples

Cell percentages

	1999	2000	2001	2002	2003
IS	43	42	56	55	54
Unweighted base	*451*	*352*	*351*	*339*	*318*
JSA	4	3	16	16	18
Unweighted base	*412*	*311*	*353*	*341*	*319*
Any health-related benefit[1]	30	47	56	49	50
Any benefit or tax credit at all[2]	83	83	86	84	90
Unweighted base	*531*	*408*	*353*	*341*	*319*

Base: Cross-sections in each year. All workless couples with information on benefits and tax credits received. Each partner or a family may receive more than one benefit and thus appear in more than one row.

[1] Severe Disablement Allowance, Statutory Sick Pay, Incapacity Benefit, Invalid Care Allowance, Attendance Allowance, Disability Living Allowance, Industrial Injuries Disablement Benefit and War Pension.

[2] IS, JSA, all health-related benefits and Family Credit (FC), Working Families' Tax Credit (WFTC), Working Tax Credit (WTC), Statutory Maternity Pay, New Deal Allowance, Retirement Pension and Child Tax Credit. Although some of these credits should not be available to those out of work, the data show some couples receiving FC, WFTC and WTC in respective years.

However, the biggest increase in benefit take-up occurs with regard to health-related benefits: from only 30 per cent of workless couples in 1999, to 50 per cent in 2003. This growth is uneven and especially the increase from 1999 to 2001 is difficult to explain. However, it is possible that as employment rates were growing, healthier couples were more likely to enter the labour market than less healthy couples. In this case, the proportions of less healthy couples in the sample would increase, and even more so as the sample bases decrease from one cross-section to the next. Changes to the sample in 2000 and 2001 do not allow this hypothesis to be tested by comparing proportions of workless couples in the overall population of couples with children over this period. The other reason for the increase may lie in a combination of factors relating to the accuracy of the Families and Children Survey (FACS) data between 1999 and 2001.

3.4 Health status of workless couples

Each partner in the couple was asked to assess their health over the last 12 months as good, fairly good or not good and also to report whether they had a long-standing illness (LSI). Figure 3.1 shows that throughout most of the five-year period, sizeable proportions of workless couples report health problems and men are more likely to suffer from ill-health than women. Nevertheless, between 1999 and 2003, the proportions of men and women who say their health is not good steadily decline: from 40 per cent to 34 per cent in the case of men and from 27 per cent to 21 per cent in the case of women.

Figure 3.1 Health status of workless couples

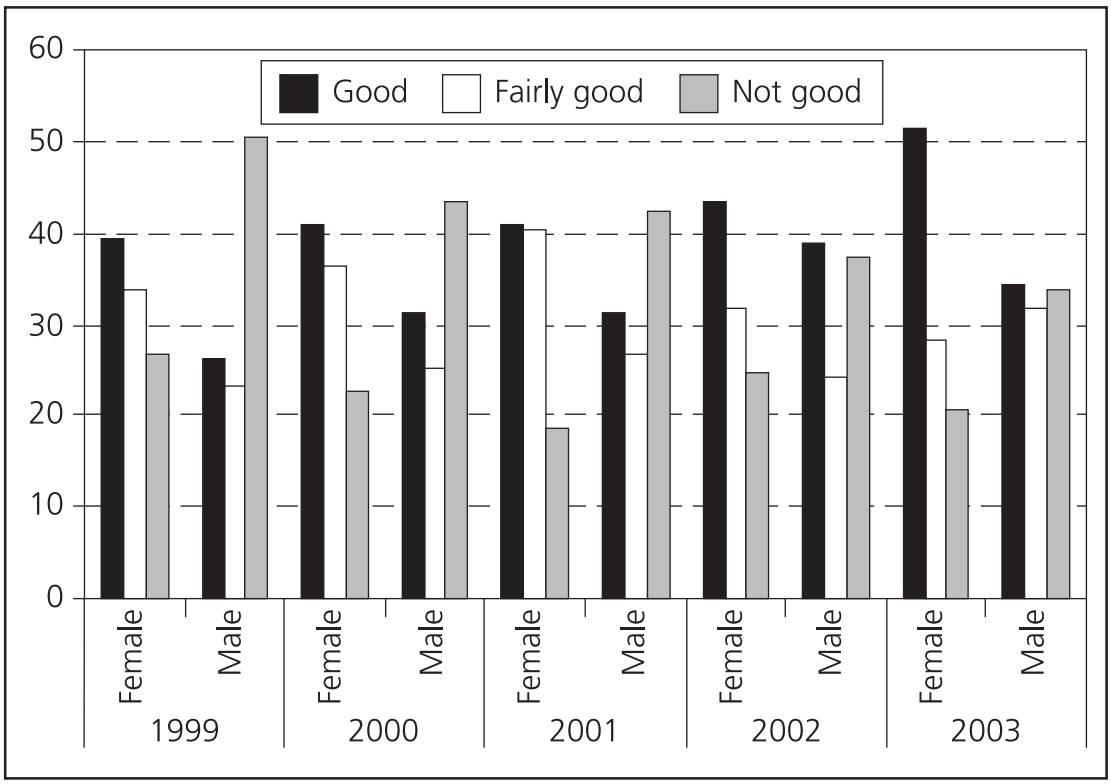
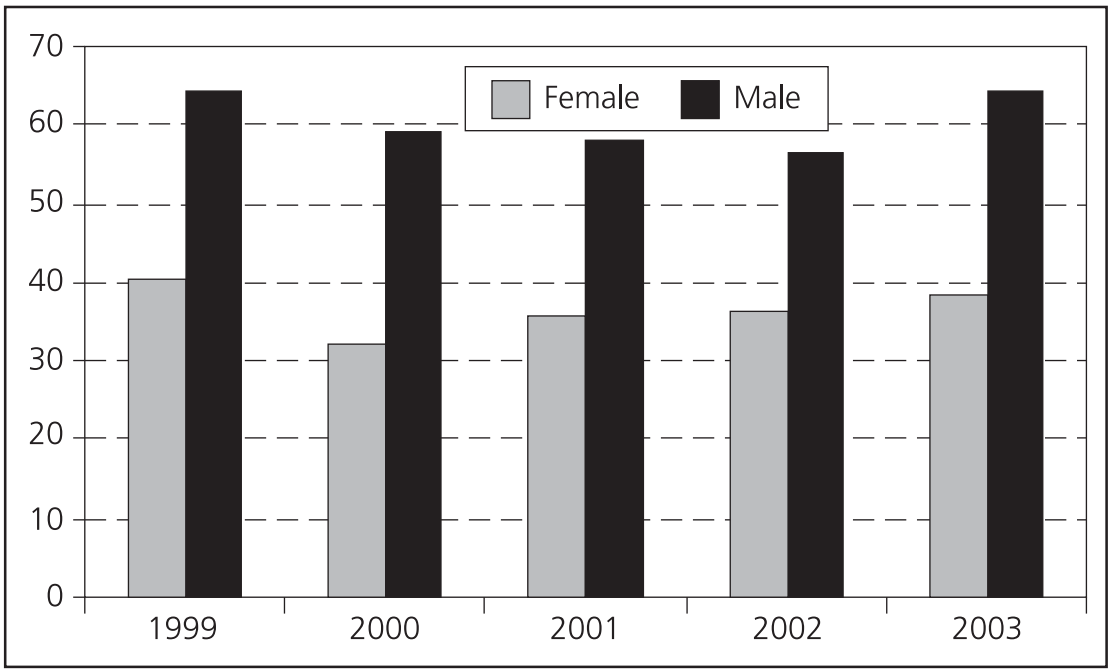


Figure 3.2 shows that the proportions of men and women in workless couples that report an LSI are similar between the start and the end of the period. However, the healthiest men are found in 2002, while the healthiest women are observed in 2000. In accordance with their health status, men are more likely to report an LSI than women.

Figure 3.2 Partners in workless couples reporting an LSI



3.5 Financial well-being of workless couples

Before proceeding with the analysis, it is important to introduce several concepts that are relevant to this section. These include hardship, problem debts and equivalised income – before and after housing costs. Although they are explained in Dorsett and Kasparova (2004), it is worth reviewing them here.

The degree of hardship shows the extent to which a family lacks essential items, lives in poor housing and cannot adequately manage its finances (Vegeris and Perry, 2003). It is measured via the hardship index which is made up of nine indicators: having more than one problem with accommodation; living in overcrowded accommodation; being able to afford to warm the house; worrying about money; having problem debts; and a number of factors reflecting material deprivation with regard to food, clothes, consumer durables and leisure activities. The hardship index can vary between zero and nine. The family is not in hardship if the index is zero, it is in medium hardship if the index is one or two, and it is in severe hardship if the index is three to nine on the nine-point scale.

Problem debts are debts that families cannot repay or where they fail to keep up with the repayment schedule (for details see Kasparova *et al*., 2003). Usually these include rent and mortgage arrears, catalogue purchases where families have fallen behind with the payments, credit card bills where they cannot meet a minimum repayment, utility bill arrears, deductions from social security payments, and so on.

The income measures used in this report refer to the 'benefit unit', i.e. the family consisting of a couple and their dependent children (for details see Vegeris and McKay, 2002). They include income from earnings, benefits (that count as income

against WFTC), other income and savings; and they are equivalised in order to account for family size (number of household members) and composition (number of children, number of adults). Before housing costs (BHC) income is calculated as the sum of usual net pay from employment, all social security benefits (including Housing Benefit but excluding elements of the Social Fund), other income from occupational and private pensions, (imputed) income from investments, maintenance payments and the value of benefits passported with IS and WFTC, less income tax, council tax, national insurance and pension contributions. After housing costs (AHC) income is calculated as BHC income less gross housing costs (rent and mortgage interest payments).

Table 3.6 shows that the proportion of families that are not in hardship more than doubles between 1999 and 2003. This increase is matched by a reduction in the proportion of workless couples that experience severe hardship: from 41 per cent in 1999 to only 17 per cent in 2003. Although the average debt level of those with problem debts rises between 1999 and 2003, the proportion of workless couples that have these debts decreases over time, as does the number of problem debts that workless couples have.

Table 3.6 Hardship and debts of workless couples

Column percentages

	1999	2000	2001	2002	2003
Degree of hardship					
Not in hardship	21	29	34	41	46
Moderate hardship	38	38	45	37	37
Severe hardship	41	34	21	21	17
Unweighted base	*531*	*375*	*353*	*341*	*319*
Number of debts					
No debts	52	49	60	61	65
1-2	31	35	28	28	24
3 and more	17	15	12	11	12
Unweighted base	*531*	*408*	*353*	*341*	*319*
Amount of debt (median)*					
Nominal, £	251.00	272.78	241.00	380.29	380.50
Constant 1999 prices, £	251.00	267.24	231.15	356.83	347.31
Unweighted base	*257*	*204*	*140*	*136*	*118*

Base: Cross-sections in each year. All workless couples with information on debt and hardship.
*Only those with debts.

These trends point to an improvement in the financial well-being of workless couples. Indeed, as Table 3.7 demonstrates, the BHC income and the AHC income of workless couples increase between 1999 and 2003. In real terms, the average BHC equivalised income of workless couples rises by 25 per cent, or from £132.21 to

£164.87 per week. The respective figures for the equivalised AHC income are 24 per cent, or an increase from £98.45 to £122.49 per week.

Table 3.7 Equivalised income of workless couples, £ per week

Column percentages

	1999	2000	2001	2002	2003
Before housing costs					
Nominal	132.21	141.21	161.39	171.03	180.62
Constant 1999 prices	132.21	138.34	154.79	160.48	164.87
After housing costs					
Nominal	98.45	107.56	126.18	130.98	134.20
Constant 1999 prices	98.45	105.38	121.03	122.90	122.49
Unweighted base	*530*	*308*	*353*	*341*	*319*

Base: Cross-sections in each year. All workless couples with information on their equivalised income.

3.6 Educational attainment and skills of workless couples

Table 3.8 illustrates that up to three per cent of workless men and women do not have any formal education at the time of the survey and that the majority of men and women have finished their education aged 16 or younger. Smaller proportions, but still a majority, of men and women have some qualifications, be it academic or vocational, and overall, between 1999 and 2003 women are more likely than men to have some qualifications.

The proportions of men and women with qualifications are greater in 2002 and 2003 than in the previous years (Figure 3.3). The increase observed in 2002 and 2003 might partly be attributed to changes in sample composition. This would imply that men and women that moved out of work in 2002 and 2003 are more likely to have qualifications than men and women that remained workless throughout the 1999-2003 period. Another explanation for this pattern may lie in an increase in the proportion of men staying in education beyond the age of 16.

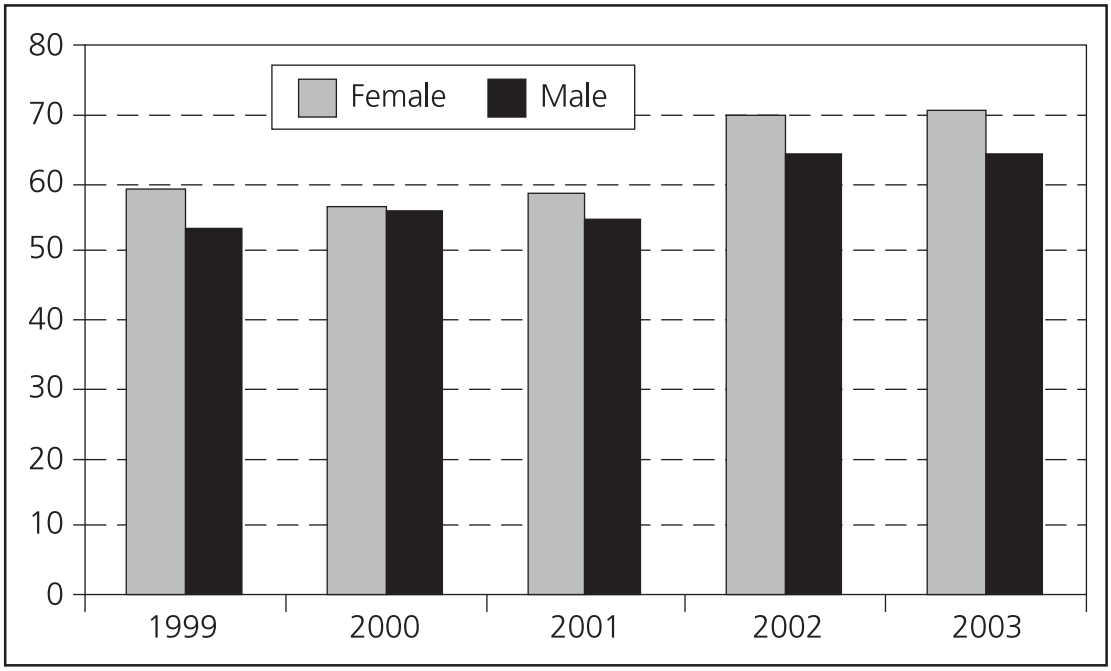
Table 3.8 Age each partner in workless couples left education

Column percentages

	1999		2000		2001		2002		2003	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
No formal education	3	3	2	2	3	2	1	3	2	1
16 or under	72	78	76	77	73	77	72	73	69	73
17-18	17	12	14	14	14	13	19	14	18	12
19+	8	8	8	7	10	9	7	11	11	13
Unweighted base	*528*	*420*	*404*	*351*	*353*	*292*	*340*	*266*	*317*	*193*

Base: Cross-sections in each year. All partners in workless couples with information on their age when they left education.

Figure 3.3 Partners in workless couples with some qualifications



There are also gender differences in the type of qualifications that partners obtain. According to Table 3.9, in 1999-2002, women are more likely to have academic qualifications, while men are more likely to have vocational qualifications. However, by 2003, the proportion of men with academic qualifications increases, as does the proportion of women with vocational qualifications. Consequently, in 2003 the gap between the genders with regard to academic or vocational qualifications almost disappears.

Table 3.9 Type of qualification obtained by each partner in workless couples

Column percentages

	1999		2000		2001		2002		2003	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Highest academic qualification										
Higher degree	1	2	1	1	1	2	1	2	1	3
First degree	3	2	4	3	4	6	5	8	5	8
GCE A-level/SCE Higher grades (A-C) and equivalent	3	4	5	5	5	4	5	7	6	7
GCSE grade A-C and equiv	21	15	23	19	23	17	27	15	23	20
GCSE grade D-G and equiv	18	12	18	14	18	12	19	13	19	9
Other academic qualifications	2	2	2	1	2	2	2	6	3	7
None	53	62	48	56	46	57	41	50	43	46
Unweighted base	*528*	*422*	*407*	*396*	*353*	*343*	*341*	*332*	*318*	*273*
Highest vocational qualification										
Level 5 NVQ or equivalent	9	0	4	0	4	0	9	1	8	0
Level 4 NVQ or equivalent	3	10	8	4	6	3	9	5	9	14
Level 3 NVQ or equivalent	6	5	8	7	12	7	10	7	9	6
Level 2 NVQ or equivalent	9	8	5	11	2	7	5	10	7	7
Level 1 NVQ or equivalent	7	9	0	8	0	10	5	10	4	9
Other vocational qualification	0	9	2	6	2	4	2	4	2	8
None	66	58	73	64	74	68	58	63	60	57
Number of vocational qualifications										
0	66	58	73	64	74	68	58	63	60	57
1	29	35	22	26	18	22	30	27	29	30
2	4	5	4	7	5	7	8	8	8	6
3+	0	2	1	4	3	3	4	2	3	7
Unweighted base	*531*	*504*	*408*	*399*	*353*	*343*	*339*	*322*	*318*	*162*

Base: Cross-sections in each year. All partners in workless couples with information on their qualifications.

Academic qualifications attained by men and women are mainly GCSE grades A-C and D-G or equivalent and women are more likely to achieve than men at these levels. However, men are doing better than women in obtaining their first degrees: the proportion of women with a first degree goes up only from three to five per cent between 1999 and 2003, while for men the respective figures are two and eight per cent. This suggests that over time the population of workless couples tend to include more men staying in education beyond the age of 16 and obtaining a first degree.

Starting from 2000, however, women seem to be better at attaining higher levels NVQ or equivalent, while men seem to be better at obtaining Level 1 and Level 2 NVQ or equivalent. Among partners with vocational qualifications, the majority of

men and women have just one vocational qualification. The proportions of those without a vocational qualification differ between the genders and fluctuate across the years but the gender differences level out by 2003.

Finally, Table 3.10 shows that the majority of men have a driving licence and access to a vehicle, while the majority of women do not. These proportions vary over the years but more so in the case of men than in the case of women. The lowest proportions of men and women with a driving licence and vehicle access are observed in 2000.

Table 3.10 Licence and car access by each partner in workless couples

Column percentages

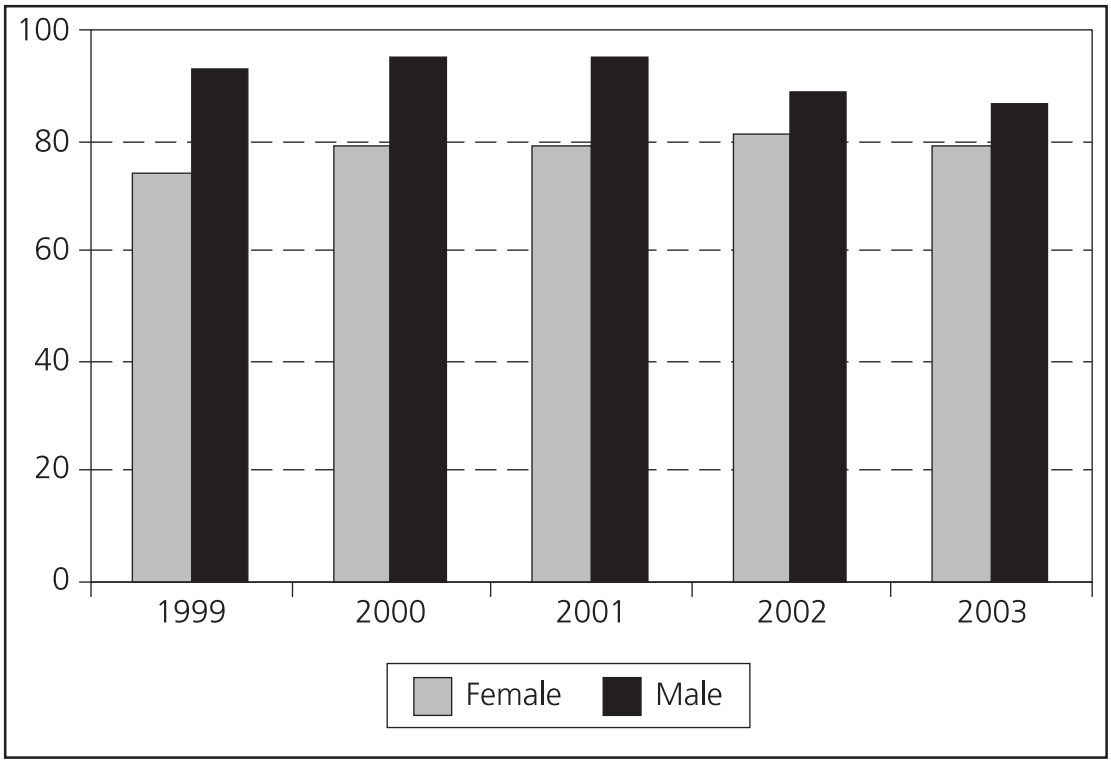
	1999		2000		2001		2002		2003	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Has licence and regular access to car/van	30	57	27	54	32	58	33	61	32	59
Has licence but no regular access to car/van	4	12	6	9	4	9	3	8	2	3
No licence	66	31	67	37	64	33	65	31	65	38
Unweighted base	*529*	*422*	*403*	*315*	*351*	*259*	*340*	*219*	*316*	*21*

Base: Cross-sections in each year. All partners in workless couples with information on their driving skills and vehicle access

3.7 Past work experience of workless couples

Figure 3.4 demonstrates that the majority of men and women in workless couples have had some work experience, although men are more likely to have worked in the past than women. However, over time, the gap between men and women decreases because the proportion of women with work experience steadily increases and the proportion of men declines after 2001. This finding is consistent with the tendency to stay longer in education observed among men.

Figure 3.4 Partners in workless couples with work experience



Women in workless couples used to work predominantly in services, such as health and education, and in the retail, catering and hotel industry (Table 3.11). The retail, catering and hotel industry and also manufacturing feature as those where men were most likely to be employed. The proportions of workless men and women who used to work in these industries in the past do not change much between 1999 and 2003. However, since employment in services grew while employment in manufacturing declined, the over-representation of women in services and men in manufacturing may partly give rise to the tendencies demonstrated by Figure 3.4. An increase in part-time employment, where women are more likely to be found than men, may also explain why the proportions of women with work experience grow over time.

Table 3.11 Employment of each partner in workless couples by industry

Column percentages

	1999		2000		2001		2002		2003	
SIC codes	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**
Agriculture, forestry and fishing	0	2	0	1	1	3	0	2	1	2
Mining and quarrying	0	1	0	0	0	1	0	1	0	0
Manufacturing	14	22	11	23	12	20	13	22	8	23
Electricity, gas and water supply	0	1	0	1	0	0	0	0	0	0
Construction	0	15	0	17	0	19	0	14	1	14
Retail, hotels and catering	29	21	32	23	31	23	30	19	30	20
Transport and communication	2	13	2	13	1	9	3	13	4	13
Banking, finance, insurance business services and leasing	12	11	11	8	13	10	10	10	13	12
Other services (including health, education and other public administration)	43	13	45	13	42	13	44	19	43	17
Unweighted base	*174*	*248*	*144*	*189*	*138*	*220*	*151*	*237*	*147*	*221*

Base: Cross-sections in each year. All partners in workless couples with work experience and information on their SIC codes.

Finally, both men and women in workless couples were most likely to have elementary occupations but women were also occupied in personal services, while men were in skilled trades and process, plant and machine operatives (Table 3.12). Tellingly, in 2002 and 2003 the proportion of men who used to work as managers and senior officials rises sharply and from 2001, the proportion of men with experience in sales and customer services declines. These tendencies are likely to stem from the changes in the composition of the sample of surveyed families that took place in 2000 and 2001.

Interestingly, in 2002, there is an increase in the proportion of women who used to work as managers and senior officials but one year later these women might have been back to work because in 2003, their proportion is low again. The same is true regarding women who used to work in administrative and secretarial occupations. Their proportion among workless women is higher in 2001 than in any other year of the 1999 to 2003 period.

Table 3.12 Employment of each partner in workless couples by occupation

Column percentages

SOC codes	1999		2000		2001		2002		2003	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Managers and senior officials	1	7	2	6	5	7	8	14	3	13
Professional	4	3	3	3	5	7	5	2	5	6
Associate professional/ technical	7	4	7	5	5	5	2	8	7	7
Administrative/secretarial	7	5	9	3	14	3	11	1	10	1
Skilled trades	4	21	1	27		29	1	22	2	21
Personal services	25	10	17	6	20	4	24	4	23	3
Sales/customer services	14	4	13	2	16	2	14	2	15	4
Process, plant, machine operatives	9	23	10	22	10	23	8	25	5	19
Elementary	29	23	37	26	25	20	26	21	30	25
Unweighted base	*176*	*344*	*148*	*262*	*139*	*236*	*151*	*244*	*147*	*225*

Base: Cross-sections in each year. All partners in workless couples with work experience and information on their SOC codes.

When asked about the reasons for leaving their last job, women most often quote pregnancy but also their decision to leave work and health problems, while men tend to stress health problems, redundancy/dismissals and the type of job contract (Table 3.13). This diversity of reasons forcing couples to leave the labour market sheds some light on the composition of the population of workless couples. This is not an homogeneous group of families but includes younger couples that have recently started their families as well as older couples suffering from ill-health. The couples are expected, therefore, to have different views on (re)entering the labour market and the next section examines their job search activity.

Table 3.13 Reasons for leaving job given by each partner in workless couples

Column percentages

Reasons for leaving last job	1999		2000		2001		2002		2003	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
It was a fixed-term or temporary job	6	12	4	12	6	13	5	13	4	11
Were made redundant or dismissed	11	24	13	26	13	26	14	23	14	29
Family-related reason	15	3	13	4	6	4	8	7	15	6
Were pregnant	26	N/a	23	N/a	27	N/a	23	N/a	21	N/a
Health reasons	17	37	15	32	12	34	14	34	14	31
Own decision	16	12	18	13	17	7	18	11	12	11
Other reason	9	11	15	13	19	17	17	12	20	11
Unweighted base	*143*	*227*	*108*	*167*	*99*	*139*	*104*	*130*	*94*	*118*

Base: Cross-sections in each year. All partners in workless couples with work experience who gave reasons for leaving the last job.

3.8 Job search of workless couples

There are marked differences between men and women in their job search behaviour and these differences are consistent across the years. Table 3.14 illustrates that men are more likely to say they are looking for work, while women are more likely to say they plan to look for work in the future. In only four to seven per cent of workless couples do both men and women say they are looking for work. Until 2002, the gap between men and women without expectations to look for work is not big but in 2002 and 2003, women are more likely to be passive with regard to the job search than men. Thus, in 2002 and 2003, 32 per cent and 36 per cent of men say they do not expect to look for work, while the respective figures for women are 43 and 44 per cent. Interestingly, in these two years women are more likely to work 1-15 hours a week than in 1999 to 2001. This suggests that in 2002 and 2003 females are more likely to be settled in their 'mini' jobs.

The level of individual job-readiness varies over the years too, the most job-ready men and women being found in 2002 when 12 per cent of women and 38 per cent of men say they are looking for work. Men and women that plan to look for work are most noticeable in 2000 and 2001, whereas the highest proportion of individuals that say they have no work intentions is observed in 1999.

Table 3.14 Job search of each partner in workless couples

Column percentages

	1999		2000		2001		2002		2003	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Looks for work	13	36	12	37	13	32	12	38	10	36
Expects to look for work	41	19	52	31	54	34	46	31	47	28
Doesn't know when will look or doesn't expect to look	46	45	36	32	33	34	43	32	44	36
Unweighted base	*529*	*420*	*403*	*315*	*339*	*248*	*339*	*219*	*318*	*225*

Base: Cross-sections in each year. All partners in workless couples with information on their job search activity.

Table 3.15 shows how these gender differences translate into couples' job search behaviour.[2] In all five years between 1999 and 2003, the greatest proportions of workless couples are those where at least one partner expects to look for work in the future. The two second largest groups consist of couples where neither partner expects to look for work and where only men are looking for work. However, these proportions fluctuate between 1999 and 2003.

The proportion of couples where at least one partner postpones searching for a job grows and the most remarkable increase is observed in 2000 and 2001. The proportion of women saying that they expect to look for a job grows from 41 per cent in 1999 to 52 per cent and 54 per cent in 2000 and 2001 respectively. In the same period, among men the increase from 19 per cent to 31 per cent and to 34 per cent is observed. However, in 2000, this increase takes place as the proportion of couples where neither partner has work intentions decreases: among women – from 46 per cent in 1999 to 36 per cent in 2000 and among men – from 45 per cent in 1999 to 32 per cent in 2000. In 2001, the increase in the proportion of couples where at least one partner expects to look for work increases further but this coincides with a decrease in the proportion of couples where only the men are looking for work. In 2001, the proportion of couples where men say they are looking for work is five percentage points lower than in 2000, while the proportion of couples where neither partner expects to look for a job is two percentage points greater. In 2000, therefore, compared with 1999 some intensification of job search activity by workless couples may have been observed, while in 2001, compared with 2000 the opposite may have been true.

[2] Unweighted bases differ between Table 3.14 and Table 3.15 because the former table shows the job-readiness of each partner separately, while the latter table demonstrates the job-readiness of a couple which is possible to determine having information on at least one partner. This also explains discrepancies between the two tables in the proportions of men looking for work.

Table 3.15 Job search of workless couples

Column percentages

Partners in couples	1999	2000	2001	2002	2003
Female looks for job, male does not	8	7	6	8	5
Male looks for job, female does not	23	23	16	20	20
Both look for job	6	5	7	4	5
At least one expects to look for job	32	44	46	39	38
None looks for work or expects to look for job	32	21	26	29	32
Unweighted base	*531*	*408*	*349*	*341*	*319*

Base: Cross-sections in each year. All workless couples with information on their job search. Due to rounding percentages might not add up to 100.

Table 3.16 demonstrates the reasons for not looking for work mentioned by at least one partner in workless couples. It suggests that their own disability and/or disability of a household member are the dominant explanations. However, consistent with the reports on their health status, the proportion of couples that point to these reasons decreases between 1999 and 2003. By contrast, the proportion of those who say they do not want to spend time away from their children increases. From being the third most frequently cited reason at the beginning of the period (almost 30 per cent of couples point to this barrier to work in 1999), it becomes the second most frequently mentioned reason (chosen by almost 40 per cent of couples) in 2003. Interestingly, problems with affordability of childcare steadily diminish in their importance between 1999 and 2003. This may have some relation to the improvement in couples' financial well-being noticed above. After 2000, availability of childcare is also less frequently mentioned as a barrier to work, possibly reflecting improvements in its affordability. Finally, the proportion of couples mentioning the lack of skills and/or qualification decreases in 2002 and 2003. This may reflect the influx of couples who used to work in 2000 and 2001 when they were included in the sample of surveyed families.

Table 3.16 Reasons for not looking for work

Cell percentages

	1999	2000	2001	2002	2003
Cannot afford childcare	10	9	7	8	5
Childcare not available	9	12	8	4	3
Own illness/disability	54	48	50	45	47
Child's illness/disability	10	11	12	9	8
Other household member disability	33	29	29	24	24
No work available	3	2	3	1	2
No skills/qualification	8	5	10	3	3
Studying/on training scheme	3	3	4	4	6
Better off not working	6	5	5	7	3
Don't want to spend time apart from children	29	33	39	38	38
Would not be able to pay rent/mortgage	1	2	1	1	0
Bad transport			1	1	1
Don't need to work	3	4	5	8	6
No reason	10	10	10	12	11
Pregnant	2	2	3	1	2
Retired	5	2	1	1	2
Other	0	7	7	8	7
Unweighted Base	*506*	*392*	*338*	*329*	*308*

Base: Cross-sections in each year. All workless couples where at least one partner does not look for work and gives reasons for being inactive. Since couples may report more than one reason for not looking for a job, the percentages of couples reported for each year do not add up to 100.

3.9 Conclusion

This chapter examines characteristics of workless couples with children in the five years between 1999 and 2003. Their demographic profile, tax credit and benefit receipts, health status, financial well-being, educational attainment, and also work experience and job-readiness are in focus as those features that are likely to determine their position in the labour market.

The chapter starts with providing the labour market context within which workless couples are situated. The results seem to suggest that the incidence of worklessness among couples with children decreases between 1999 and 2003. However, this impression is likely to be created by the changes in the sample of surveyed families that take place in 2000 and 2001. These changes mean that until 2001 the sample represents low- to moderate-income (LMI) couples and only starting from 2001 is it representative of all families with dependent children in Britain. Consequently, the

proportions of workless couples are likely to be greater in the 1999 and 2000 samples of LMI couples than in the 2001 to 2003 samples of all couples with children. The stability of results from 2001 onwards suggests that the work status of couples with children remains comparatively unchanged between 2001 and 2003.

Characteristics of workless couples are relatively **stable**. Each year, the majority of them are older than 34 years of age and have one child aged under 10. They are likely to be married and live in the social rented sector. Workless couples tend to receive at least one benefit or tax credit and it is much more likely to be IS than JSA. In all five years only a small proportion of workless couples claim JSA and the main claimant is the man. This low take-up of JSA may be related to having an LSI which the majority of men report. Overall, men are more likely than women to say their health is not good.

The majority of men and women in workless couples have finished their education aged 16 or younger but women are more likely to have at least some qualifications. Workless couples are likely to have had some work experience and men are more likely than women to have worked in the past. Consistent with their reports of an LSI, the greatest proportions of men have left employment on health grounds, while women mention pregnancy and their decision to leave work more often than health reasons. Gender differences are apparent in the intentions to enter work as women are more likely to postpone their job search until some time in the future, while men are more likely to say they are looking for work. Among the reasons for inactivity in their job search that are mentioned by at least one partner, their own disability and/or disability of a household member are the dominant explanations.

However, there are **variations** in the characteristics of workless couples between 1999 and 2003. For example, the 1999 couples are more likely to be older and to have one child over the age of 10 than couples in the following years. The proportion of cohabiting couples rises over this period. A snapshot of characteristics relating to the educational attainment and skills of workless couples shows that over time, the likelihood of having work experience grows among workless women and decreases among workless men. Compared with the previous period, in 2002 and 2003, men demonstrate a greater tendency to stay in education beyond the age of 16. In these years, the proportions of men and women with some qualifications are also higher than in 1999-2001. Job search intensity fluctuates across the years. Couples that are least likely to have work intentions are found in 1999. The importance couples attach to barriers to work also varies. For example, the proportion of couples mentioning health problems decreases between 1999 and 2003. The same trend is observed with regard to costs and availability of childcare. However, the unwillingness of couples to spend time away from their children grows during this period.

Therefore, the broad conclusions about the stability of characteristics of workless couples are likely to conceal changes in their population over time. Moreover, each year, the diversity of reasons for leaving their last jobs (given by those with work experience) and the variety of barriers to work they face point to the heterogeneity

of their population in general. Dorsett and Kasparova (2004) distinguish three subgroups of workless couples in 2002 and show that, for example, older and less healthy couples with one older child are part of the same population of workless families as younger and healthier couples with younger children. The needs of these subgroups are likely to differ and one of them may stand a better chance of (re)entering work than another. The next chapter, therefore, examines how workless couples may be divided into more homogenous subgroups. The degree of success in securing a job that these groups enjoy is the subject of investigation in the penultimate chapter.

4 Clusters of workless couples in 1999-2003

The previous chapter provided an overview of characteristics of workless couples each year between 1999 and 2003. It suggested relative stability in their demographic profile, educational attainment and other characteristics over time. However, research shows that workless couples are such a heterogeneous group that reasons for being out of work differ from one type of family to another (see Dorsett and Kasparova, 2004; Hasluck and Green, 2005).

This chapter provides a closer look at the cohorts of workless families between 1999 and 2003 to identify clusters (or subgroups) of families which are more homogeneous with regard to their characteristics. Each year the population of workless couples is divided into subgroups in such a way that characteristics of families that comprise one subgroup are different from the characteristics of families that comprise another subgroup.

To identify the clusters of workless couples, a two-step procedure is adopted. First, by means of principal component analysis, a number of correlated variables are combined to construct new uncorrelated variables (or principal components) that retain as much information about the data as is possible. Second, by means of cluster analysis, the overall population of workless couples is divided into subgroups according to the dimensions determined by the principal components. A description of these methods is provided in Appendix 1.

As a result of principal component analysis, the following dimensions are used in the grouping of workless couples:

- the demographic profile of couples;
- their educational characteristics and skills;
- degree of job readiness; and
- except in 2003, when attitudinal data are not available, couples' attitudes to work, life on social security benefits and family.

Each dimension (or principal component) is comprised of the factors used in the analysis presented in the previous chapter. For example, the demographic profile of couples is composed of such factors as partners' age, the age of their youngest child, the number of children. Partners' attitudes to work and family represent the views of each partner in a couple on the merits of work, benefit dependency and the role of a woman in the family. Educational characteristics and skills consist of details of educational attainment and driving skills of both partners. The degree of job readiness is assessed via job search intentions or activity as these are described by each partner in the couple.

It is important to note that both principal component and cluster analyses are data exploratory tools. They involve arbitrary decisions on the part of the researcher on the number of principal components and on the number of clusters. Cluster analysis simply discovers structures in data without explaining why they exist. Being a statistical tool for solving classification problems, it is sensitive to changes in the sample, the number of subgroups and the choice of grouping dimensions.

In this research cluster analysis is employed to arrive at the precise partition of the overall population of workless couples but it should be recognised that the results are shaped by the decisions made, as mentioned above. For example, it is obvious that the greater the number of subgroups, the more homogeneous each subgroup is. However, in a particular study, when deciding on the number of clusters a balance needs to be struck between the degree of similarity between the couples in the cluster and the number of cases available for statistical analysis.

Since cluster analysis is sensitive to the choice of grouping dimensions and to changes in characteristics of the overall population of workless couples over time, the division into subgroups may produce different results each year between 1999 and 2003 if either of these aspects varies over time. Regarding characteristics of workless couples between 1999 and 2003, their analysis was presented in the previous chapter. According to it, some variations in the composition of clusters may be expected, reflecting changes in the cohorts of workless couples between 1999 and 2003. With regard to the set of grouping dimensions, it changes in 2003 because the attitudinal data are not collected that year. Therefore, the results of grouping in 2003 may not be strictly comparable with the results of partition in previous years.

The degree of variation in the composition of clusters across the cohorts of workless couples determines their robustness. The cluster whose composition changes the least from one cohort to another is the most robust. The relative stability of clusters of workless couples therefore may highlight the bundles of characteristics that are persistently associated with the workless status of couples. In this way, robustness of clusters might help understand which subgroups of workless couples are harder-to-reach and why. In this chapter the results of cluster analyses carried out for each of the 1999 to 2003 cohorts of workless couples with children are presented in turn. They are followed by an assessment of the robustness of clusters and a summary of main findings.

4.1 Clusters of workless couples in 1999

Cluster analysis conducted on a cross-section of workless couples in 1999 arrived at a division of the overall population into three clusters containing 31, 42 and 27 per cent of couples each. Their demographic profile and health status, educational attainment and skills, job search behaviour and work intentions are described in detail in Appendix 2.1.

In summary, the **first** cluster mainly consists of men and women in their early 40s with their youngest child aged under 11. They are likely to be married and live in their own accommodation. Compared with couples in other clusters, these families are least likely to be on benefits. They are most likely to stay in education until at least 17 years of age and have some qualifications. Both men and women in this cluster are most likely to have a driving licence and access to a vehicle.

They are also most likely to be in 'mini' jobs, i.e. working less than 16 hours a week, and females in these couples are most likely to look for work of 16 or more hours a week. When asked about reasons for not looking for a job these couples tend to say that they do not need to work and that they are better off not working. Both partners in this cluster tend to have positive views towards working women.

The **second** cluster is more likely than the other clusters to bring together younger couples in their early 30s with two or more young children, the youngest aged under five. They tend to cohabit and live in the social rented sector; females in these couples are likely to be white. Compared with couples in the other two clusters, these couples are most likely to be in good health and at least one partner, most often the male, is likely to claim JSA. Consistent with their benefit status, couples where men are looking for work are most likely to be found in the second cluster. This cluster is also most likely to contain couples where at least one partner expects to look for work in the future.

This deferral of job search is explained by the presence of young children in these families because couples in this cluster are more likely than couples in the other clusters to point to their unwillingness to spend time away from their children and to affordability and availability of childcare as reasons for not looking for a job. Compared with partners in the other clusters, men and women in this cluster are least likely to think that one must have a job to feel a full member of society. At the same time, they tend to believe that a woman should be able to choose whether to stay at home or go to work, even if the children are under five years of age. These liberal views are consistent with their attitude to benefits. They are unlikely to think that only the poorest should be entitled to them.

Lastly, the **third** cluster is likely to group together families with one older child. Although these couples are unlikely to be much older than couples in the first cluster, they are most likely to suffer from ill-health and a long standing illness (LSI). Their health status is consistent with their benefit status: couples in the third cluster are more likely than couples in the other clusters to be on a health-related benefit

and on Income Support (IS). Unsurprisingly, they are more likely to mention their own illness or the ill-health of a household member as reasons for not looking for work.

However, ill-health is unlikely to be their only barrier to work. Men and women in this cluster are least likely to have any qualification and women, additionally, are least likely to have worked in the past or to have a driving licence. It is possible that these couples assess their chances to enter work as poor and as a result they are less likely than couples in other clusters to have work intentions. Both partners in the third cluster are most likely to have conservative views: they are likely to value work greatly but think that a woman should stay at home with the children if they are ill or young. They also tend to believe that only the poorest families should be entitled to social security benefits.

4.2 Clusters of workless couples in 2000

As a result of cluster analysis, the 2000 cohort of workless couples is divided into three clusters containing 33, 42 and 25 per cent of couples each. The analysis presented in Appendix 2.2 suggests that the **first** subgroup is likely to be dominated by men and women in their 40s with one child older than 10. They tend to be married and live in owner-occupation. Compared with couples in the other clusters, both women and men grouped in the first cluster are most likely to have stayed in education until at least the age of 17 and both partners are most likely to have a driving licence and vehicle access.

Women and men in the first cluster are most likely to have some work experience and women, additionally, are most likely to work less than 16 hours a week. Men in these couples tend to suffer from ill-health and these couples are more likely than couples in other clusters to be on a health-related benefit. Their own and a household member's illness, along with bad transport links and the absence of the need to work, are most often mentioned by couples in this cluster as reasons for not looking for work. Indeed, the first cluster is more likely than the other clusters to accommodate couples where neither partner plans to look for work or increase their working hours. Men and women in this cluster tend to have a positive attitude towards work and think that women should be able to go to work even if their children are younger than five years old.

The **second** cluster predominantly consists of men and women in their late-20s – early 30s with their youngest child aged under five. They are likely to cohabit in the private rented sector and women in this cluster are most likely to be white. Compared with couples in the other clusters, these families are least likely to be on IS, they are likely to report good health and are most likely to have some qualifications. These characteristics may explain why at least one partner in this cluster is most likely to expect to look for a job in the future and women, additionally, are likely to say they are looking for work. Where these couples are not looking for work, they tend to mention affordability and availability of childcare and also their

unwillingness to spend time away from the children as reasons for that. Both partners in this cluster are likely to think that everyone should be entitled to benefits, so that decent standards of living are guaranteed to everyone. They tend to believe that women should be able to choose whether to stay at home or go to work, regardless of the age of their children, but they do not think that one must work to feel a member of society.

The **third** cluster is likely to group together men and women in their late 30s. Compared with couples in the other two clusters they are most likely to have more than two children of various ages and live in the social rented sector. These couples are least likely to have work experience, they tend to leave education when they are 16 years of age or younger, they are least likely to obtain some qualifications and their women are unlikely to have a driving licence. Still, this cluster is more likely than the other clusters to consist of families where men say they are looking for a job.

Among the reasons for not looking for work mentioned by the families in the third cluster, those relating to health are the dominant explanations. Thus, 46 per cent of couples in the third cluster point to their own illness and 29 per cent point to an illness of a household member; unwillingness to spend time away from their children is mentioned by 39 percent of couples. However, the third cluster couples are not more likely than couples in the other clusters to point to these barriers to work. When they are asked about their attitudes to work and family, men and women in this cluster tend to reveal that having a job is very important for them to feel a full member of society but that the woman should stay at home with the children if they are ill or young. They also tend to think that only the poorest families should be allowed social security benefits.

4.3 Clusters of workless couples in 2001

Similarly to the previous years, the 2001 population of workless couples is divided into three clusters with 31, 47 and 22 per cent of couples in each. According to the analysis presented in Appendix 2.3, older couples with one older child are most likely to be found in the **first** cluster. The partners in this cluster are likely to be married and to be owner-occupiers. Both men and women are most likely to have a driving licence and access to a vehicle. Compared with the other clusters, men and women in this cluster are most likely to have health problems and suffer from an LSI which is confirmed by their benefit receipt status. Couples where at least one partner is on a health-related benefit are most likely to be found in the first cluster. These couples are also least likely to have a JSA claimant and men are least likely to have any qualification. Men and women in this cluster are less likely than men and women in the other clusters to intend to look for a job and explain this mainly by their own or a household member's illness. They are likely to have a positive attitude towards women going to work even if their children are aged under five. However, compared with men in other clusters, the first cluster men do not tend to think that having almost any job is better than being unemployed.

The **second** cluster is likely to accommodate the youngest couples with two or more children aged under 11; the partners tend to cohabit and live in the private rented sector. They are most likely to be in good health and are least likely to be on a health-related benefit. Men in these couples tend to leave education at 16 years of age or earlier and both men and women are most likely to have some qualifications. These couples are more likely than couples in the other clusters to have a JSA claimant (most often the male) and at least one partner, usually the male, is likely to say they are looking for work or expect to do so in the future. Compared with couples in the other two clusters, these couples are most likely to mention the unwillingness to spend time away from the children, studying and being better off out of work as the reasons for not looking for work. Both partners in this cluster tend to think that entitlement to benefits should not be restricted to the poorest families and that one does not have to work to feel a member of society. They are also least likely to have strict views on whether women should stay at home or go to work if their children are younger than five years of age.

Men and women aged between 34 and 39 tend to be clustered together in the **third** subgroup. They are likely to have more than three children, women in these couples tend to come from ethnic minorities and they are likely to live in the social rented sector. Compared with couples in the other clusters, the third cluster couples are more likely to be on benefits, particularly on IS. The majority of men in this cluster, similarly to the majority of men in the first cluster, are likely to report poor health, although they are less likely than men in the first cluster to have an LSI. Women in this cluster tend to leave education at 16 years of age or earlier, while men tend to stay in education until at least 17 years of age. However, both men and women in these couples are least likely to have work experience and/or a driving licence. Although the third cluster is most likely to include couples where at least one partner expects to look for work at some point in the future, women in this cluster are least likely to look for a job and at least one partner most often mentions problems relating to childcare as reasons for not looking for work. Men and women in this cluster are more likely to attach importance to having a job than men and women in the other two clusters. However, they tend to think that women should stay at home with the children if they are young or ill. These couples are most likely to have conservative views, that is to think that only the poorest families should be entitled to social security benefits.

4.4 Clusters of workless couples in 2002

Workless couples in 2002 are also divided into three clusters containing 42, 35 and 23 per cent of couples each. The analysis presented in Appendix 2.4 suggests that the **first** cluster tends to group together oldest couples. They are unlikely to have more than two children and their youngest child is most likely to be 11 years of age or older. These couples tend to be married and to own their house. They are least likely to be on benefits, particularly on IS or Jobseeker's Allowance (JSA). Men and women in this cluster are most likely to stay in education until at least 17 years of age

and to have some qualifications and a driving licence and access to a vehicle. These couples are most likely to have some experience of full-time work in the past and are also most likely to work under 16 hours a week in 2002.

However, compared with couples in the other clusters, these couples are least likely to look for a job. Although the majority of them point to health problems as reasons for not looking for work, they are more likely than couples in the other clusters to say that they do not look for work because they do not need to work. Their views are consistent with their job search behaviour. Both partners in this cluster tend to think that they do not need to have a job to feel a full member of society. Yet, females in this cluster are less likely than females in the other clusters to expect women to stay at home looking after the children if they are aged under five. This combination of views is consistent with their belief that having almost any job is not necessarily better than having no job.

The **second** cluster is most likely to comprise couples in their late 20s (women) and early 30s (men) who have more than three children and whose youngest child is aged under five. These couples tend to cohabit and live in the private rented sector. Women in these couples are likely to be white, both partners tend to be in good health and at least one of them is likely to be a JSA claimant. Although these couples are least likely to have a driving licence and are most likely to have left education at 16 years of age or earlier, compared with partners in the other clusters, at least one partner in the second cluster is most likely to expect to look for a job. Reasons for inactivity in job search that these couples are more likely to mention than couples in the other clusters include affordability and availability of childcare, child's illness and their unwillingness to spend time away from the children. Men in the second cluster are more likely than men in the other clusters to think that having any job is better than being unemployed. However, both partners tend to believe that women should be able to choose whether to stay at home or go to work even if their children are aged under five. Regarding social security benefits, both men and women in the second cluster are unlikely to think that only the poorest families should be entitled to them.

Couples in the **third** cluster are likely to have three children, their youngest being under 11 years of age. Women from ethnic minority communities are most likely to be found in this cluster. These couples tend to live in social housing and receive benefits, in particular IS and a health-related benefit. They are more likely to suffer from ill-health and to have an LSI than couples in the other clusters. Unsurprisingly, in the third cluster men and women are most likely to mention their own health problems or an illness of a household member as reasons for not looking for work. These couples are least likely to have any qualifications and work experience. However, the third cluster is most likely to include couples where men say they are looking for work and both partners in this cluster tend to attach a great value to having any job. However, they tend to expect women to stay at home if their child is ill or of a school age. They are also more likely than couples in the other clusters to think that only the poorest should receive social security benefits.

The partition of the 2002 population of workless couples in this report resembles that obtained by Dorsett and Kasparova (2004). However, the current and previous analyses differ in the dimensions that are used to divide the overall population of workless couples into the subgroups. While Dorsett and Kasparova (2004) cluster workless couples according to their demographic characteristics and attitudes, the current research additionally accounts for couples' educational attainment and skills and job readiness. This difference explains the slight dissimilarity between the groupings obtained by the previous and current cluster analyses.

4.5 Clusters of workless couples in 2003

In 2003 the population of workless couples is divided into three subgroups with 29, 46 and 25 per cent of couples in each. However, the results of the cluster analysis conducted in 2003 are not strictly comparable with those obtained for previous years, because in 2003 families were not asked about their attitudes towards work, social security benefits and family. Consequently, no altitudinal dimension could be used in the cluster analysis conducted for this year. The difference between pre-2003 and 2003 cluster analyses in the sets of grouping dimensions needs to be recognised when drawing conclusions on the robustness of clusters across the cohorts of workless couples with children. This means that a change in the composition of clusters in 2003, if it is observed, may partly stem from the absence of attitudinal characteristics from the set of grouping dimensions used in the 2003 cluster analysis.

The results of cluster analysis relating to the 2003 cohort of workless couples are presented in Appendix 2.5. They show that the **first** cluster is likely to consist of older couples who are married and have one child aged over ten. They are most likely to report health problems and an LSI and to be on a heath-related benefit. Ill-health might have forced them out of the labour market because they are likely to have worked in the past. In fact, women in cluster one are more likely than women in the other clusters to be in work of 1-15 hours a week in 2003, although they are less likely to have any qualification. Compared with couples in the other clusters, the first cluster couples are least likely to claim JSA and neither partner is likely to have work intentions. When asked about reasons for not looking for work, they tend to point to their own and/or a household member's illness and the absence of the need to work.

The **second** cluster is likely to bring together younger couples with more than two children, the youngest child aged under 11. Women in this cluster are most likely to be white and cohabit with their partners in the social rented sector. Compared with couples in the other two clusters, these couples are most likely to be on benefits and particularly on IS. Both men and women in the second cluster are least likely to stay in education beyond 16 years of age, to work under 16 hours a week and to have a driving licence. However, these couples are more likely to expect to look for work than couples in the other clusters. Factors that make them postpone their job search include child's illness and unwillingness to spend time away from their children.

The **third** cluster groups together couples in their mid-30s with two children who live in owner-occupation. Women in these couples are most likely to have an ethnic minority background. Compared with the couples in the other clusters, these couples are most likely to report good health and to have at least one partner claiming JSA. Both men and women in this cluster are most likely to stay in education beyond the age of 16, to have some qualifications and a driving licence and vehicle access. Although they are less likely to have worked in the past than couples in the other clusters, their men are more likely to work 1-15 hours a week than men in other clusters and couples in this cluster tend to have at least one partner looking for a job. Among the reasons for not looking for work that these couples mention more often than other couples are the lack of skills and qualifications and/or being on a training course or studying.

4.6 Robustness of clusters

This section summarises the characteristics of clusters of workless families obtained as a result of cluster analyses, and assesses the robustness of their composition across the five cohorts of workless couples from 1999 to 2003. Ideally, a cluster is robust if the characteristics of couples that comprise it do not change from one cohort to another. Robustness of clusters might therefore help derive a typology of workless couples. The typology should enable the development of targeted policy measures for subgroups of workless families. However, conclusions on the robustness of clusters can only have a suggestive nature. This is because some of the observed variation in the composition of clusters may arise from the changes in the sample and in grouping dimensions and not from the changes in the population of workless couples over time.

To assess the robustness of clusters, a crude measure of their stability, the overall score of stability, has been developed (for details see Appendix 3). Table 4.1 presents the results of calculations. For each cluster, it demonstrates the overall score of stability and its constituent elements, the robustness scores for each year.

Table 4.1 Robustness scores and the overall score of stability

	Annual robustness scores					Overall
	1999 cohort	2000 cohort	2001 cohort	2002 cohort	2003 cohort	score of stability
Cluster 1 (4 factors are common*)	7.4	10.8	9.8	10.6	7.2	36.8
Cluster 2 (8 factors are common*)	10.0	9.0	10.2	10.4	7.6	39.2
Cluster 3 (1 factor is common*)	4.2	6.6	6.4	7.2	2.8	27.2

* Attitudes are included because the assumption is made that they do not change between 2002 and 2003 if they are stable between 1999 and 2002.

The calculations are based on the information about the composition of clusters in each year, between 1999 and 2003. This information is summarised in three tables, one for each cluster, presenting their composition across the five years (Table 4.2 to Table 4.4). References to these tables are made below and few words are necessary to explain their format. The tables contain the characteristics associated with the couples in each cluster. The areas are shaded in the same colour if a characteristic is present in more than one cohort of couples. Visually, therefore, the greater the shaded area in the table, the more robust the cluster. Had all areas been shaded in the same colour, this would have meant that the characteristics of couples comprising the cluster had not changed across all five years and the composition of the cluster had been the same in all five cohorts of couples, between 1999 and 2003. To demonstrate the proximity of each cluster to this ideal case, Table 4.1 provides information on the number of characteristics common to the cluster across all five cohorts of couples.

The overall score of stability (Table 4.1) shows that the second cluster remains most robust between 1999 and 2003, while the third cluster is least stable. It is not surprising that the cluster that consistently groups together the smallest number of couples shows the greatest variation in its composition. Indeed, the number of couples grouped together in the most robust (second) cluster is the greatest in four years out of five. Therefore, caution is required when drawing conclusions regarding the robustness of the third cluster because in addition to the pre-2002 changes in the sample and 2003 changes in grouping dimensions, the small size of this cluster may also be responsible for its lack of stability over time.

The relative position of the three clusters in Table 4.1 is supported by the description of their composition presented in Table 4.2 to Table 4.4. The first cluster is less robust to changes across the years than the second cluster, even though the demographic profile of its couples is relatively stable (Table 4.2). In all cohorts the **first** cluster is likely to consist of couples that are most likely to be forty years of age or older, married, and to be owner-occupiers. Except in 1999, they are likely to have one or perhaps two children aged over ten. These families are least likely to have work intentions, although such contentment with their workless status is broken in 1999 when females tend to say they are looking for work. In three out of five years, couples in this cluster are least likely to claim JSA, i.e. be actively looking for work. When asked for reasons for not looking for work, with the exception of the 2001 cohort, these couples are most likely to say that they do not need to work more than 16 hours a week.

Table 4.2 Characteristics of couples in the first cluster

Cluster 1	1999	2000	2001	2002	2003
Age of partners (median)	40 and 44	42 and 47	43 and 50	39.5 and 45	44 and 52
Number of children		1	1	1-2	1
Age of youngest child	Under 11	11+	11+	11+	11+
Housing tenure	Owner-occupation	Owner-occupation	Owner-occupation	Owner-occupation	
Partnership	Married	Married	Married	Married	Married
Health status*		Poor health	Poor health		Poor health
On IS			No	No	
On JSA			No	No	No
Work experience**	Yes	Yes	Yes	Yes	Yes
Qualifications	Yes		One partner (Men) – No	Yes	One partner (Women) – No
Driving licence	Yes	Yes	Yes	Yes	
Age left education	17+	17+		17+	
Work intentions	Women look for work	No	No	No	No
Reasons for not looking for work	No need to work, better off not working	No need to work, bad transport links		No need to work	No need to work
'Having any job is better than being unemployed'	No	No	No	No	N/a

* Accounts for health status, an LSI, receipt of a health-related benefit, leaving work on health grounds and not looking for work for health reasons.

** Accounts for work of 1-15 hours.

The areas are shaded if couples have the characteristic in more than one year.

The first cluster couples however seem to have good potential to secure a job. They were likely to work 16 or more hours a week in the past and are most likely to be in work of 1-15 hours a week. With the exception of the 2001 and 2003 populations of workless couples, at least one partner in this cluster is most likely to have stayed in education beyond the age of 16. In 1999 to 2002, these couples are most likely to have a driving licence and vehicle access. They tend to have positive views towards women working full-time rather than staying at home with the children even if their children are aged under five. However, they are unlikely to think that having almost any job is better than being unemployed and therefore the lack of incentives to enter work or increase working hours to over 15 a week may be one of the factors explaining their workless status.

In the 2001 and 2003 cohorts, the first cluster is unlikely to contain couples who stayed in education until after they reached 16 years of age. These changes to the composition of the cluster might diminish the propensity of its couples to enter work. This effect may be amplified by a worsening of their health status during these

years. In 2000, 2001 and 2003, partners in this cluster are most likely to report poor health and an LSI and mention ill-health of their own and a household member's as reasons for not looking for a full-time job. This suggests that not only improvements on incentives but also help in dealing with their health problems may be required for these couples to advance their position in the labour market.

The **second** cluster is most robust (Table 4.1 and Table 4.3). Although there are changes to the composition of this cluster across the cohorts, each year it tends to bring together couples in their early 30s with two or more children, the youngest aged under ten. Females in these couples are likely to be white and cohabit with their partners in the rented sector, whether it is the social rented sector as in 1999 and 2003 or the private rented sector as in 2000 to 2002. Except in 2003, the second cluster couples are likely to report good health, and except in 2000 and in 2003, at least one partner, mainly the male, is likely to claim JSA. In four out of five cohorts, these couples tend to leave education at 16 years of age or earlier.

Unsurprisingly, the main barriers to work that the second cluster couples report are related to having young children. At least one partner in these couples is most likely to mention affordability and availability of childcare, child's illness and the unwillingness to spend time away from their children as reasons for not looking for work. In this cluster, at least one partner, mainly the male, is likely to say they are looking for work or expect to look for work in the future. Men and women in the second cluster tend to have liberal views. They are likely to think that all families should be allowed social security benefits and not just the poorest ones. Consistently with this attitude, they are least likely to think that to feel a full member of society one must have a job. Additionally, they are most likely to believe that women should be able to choose between staying at home and going to work even if their children are aged under five. Given the composition of their families, it seems plausible that they would try to enter work once their children grew older or childcare became more affordable and/or more easily available.

Table 4.3 Characteristics of couples in the second cluster

Cluster 1	1999	2000	2001	2002	2003
Age of partners (median)	31 and 34	29 and 33	31 and 34	27 and 31	30 and 35
Number of children	2+	2	2-3	4+	3+
Age of youngest child			Under 11		Under 11
Housing tenure	Social rented sector	Private rented sector	Private rented sector	Private rented sector	Social rented sector
Partnership	Cohabiting	Cohabiting	Cohabiting	Cohabiting	Cohabiting
Ethnicity of women	White	White	White	White	White
Health status*	Good health	Good health	Good health	Good health	Poor health
Children-related concerns**	Yes	Yes	Yes	Yes	Yes
On IS		No			Yes
On JSA	Yes		Yes	Yes	
Qualifications		Yes	Yes		
Driving licence				No	No
Age left education	16 or under		Men-16 or under Women - 17+	16 or under	16 or under
Work intentions	Men look for work, at least one partner expects to do so	Women look for work, at least one partner expects to do so	Men look for work, at least one partner expects to do so	At least one partner expects to look for work	At least one partner expects to look for work
'Women should be able to choose whether to go to work, even if a child is under five'	Yes	Yes	Yes	Yes	N/a

* Accounts for health status, an LSI, receipt of a health-related benefit, leaving work on health grounds and not looking for work for health reasons.

** Accounts for problems with affordability and availability of childcare, unwillingness to spend time away from children and child's illness as reasons for not looking for work.

The areas are shaded if couples have the characteristic in more than one year.

The **third** cluster is the least stable (Table 4.1 and Table 4.4) and the only factor common to couples in this cluster in all cohorts seems to be their attitudes to work, family and social security benefits (except 2003, when no attitudinal data are available). In all years, except 2003, the third cluster men and women are least likely to have work experience. Nevertheless, these couples tend to value work greatly and consider having a job as a condition to feel a full member of society. However, they are likely to believe that women should stay at home with their children, especially if the children are young or ill. Regarding social security benefits, these couples tend to think that only the poorest families should be entitled to them. It is not surprising

therefore that in all years, except 1999, at least one partner in the third cluster couples is likely to have work intentions. In some cohorts, the third cluster men are more likely than men in other clusters to say that they are looking for work; and in other cohorts, at least one partner in this cluster tends to expect to do so in the future or say they are looking for work already.

Table 4.4 Characteristics of couples in the third cluster

Cluster 1	1999	2000	2001	2002	2003
Age of partners (median)	41 and 46	35.5 and 40	34.5 and 39	37.5 and 40	33 and 36.5
Number of children	1	3+	4+	3	2
Age of youngest child	11+	Under 11	3.5 (median)	Under 11	3 (median)
Housing tenure		Social rented sector	Social rented sector	Social rented sector	Owner-occupation
Ethnicity of women			Ethnic minority	Ethnic minority	Ethnic minority
Health status*	Poor health	Poor health		Poor health	Good health
Children-related concerns**			Yes		Yes
On IS	Yes		Yes	Yes	
On JSA					Yes
Work experience***	No – women	No	No	No	Women- No experience, Men work 1-15 hours
Qualifications	No	No		No	Yes
Driving licence	No – women	No – women	No		Yes
Age left education		16 or under	Women - 16 or under Men -17 +		17+
Work intentions	No	Men look for work	At least one partner expects to look for work	Men look for work	At least one partner looks for work
'Having a job is very important but the woman should stay at home with the children if they are young or ill'	Yes	Yes	Yes	Yes	N/a

* Accounts for health status, an LSI, receipt of a health-related benefit, leaving work on health grounds and not looking for work for health reasons.

** Accounts for problems with affordability and availability of childcare, unwillingness to spend time away from children and child's illness as reasons for not looking for work.

*** Accounts for work of 1-15 hours.

The areas are shaded if couples have the characteristic in more than one year.

Few other characteristics are common to couples in the third cluster in some cohorts but not others. The greatest similarity is observed between couples in the 2000, 2001 and 2002 cohorts. In 2000 and 2002, the demographic profile of couples seems to differ little[3]. In these two years, additionally, both partners are most likely to suffer from ill-health and to have no qualifications; women tend to leave education before they reach 17 years of age; and men are more likely than men in other clusters to say that they are looking for work. The characteristics that are present in one of these years but not in another are usually those featured in 2001[4].

To a certain degree, the demographic characteristics of couples in the third cluster are similar between the 2001 and 2003 cohorts[5]. However, overall, the composition of the third cluster in 2003 is different from that in all previous years, especially in 1999[6]. The dramatic difference in the composition of the third cluster is difficult to explain without having information about couples' attitudes to work, benefits and family in 2003. As was noted above, the composition of all clusters in 2003 is likely to be affected by the fact that the set of grouping dimensions used in the 2003 cluster analysis differs from the set of grouping dimensions used in the 1999-2002 cluster analyses. Additionally, each year, the number of couples grouped in the third cluster is the smallest and therefore variations in the composition of the third cluster are expected to be the greatest.

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[3] They are likely to be in their mid-to late-30s, have more than two children, the youngest aged under 11, and live in the social rented sector.

[4] In 2001 and 2002, couples are most likely to receive IS and women tend to come from ethnic minorities. In 2000 and 2001, couples are least likely to have a driving licence. The characteristics that distinguish 2001 from the other two years relate to the family composition. In 2001, the third cluster couples tend to have four or more children, the youngest aged under five. Consistent with that, in 2001 but not in 2000 or 2002, couples are most likely to report problems with childcare costs and availability as reasons for not looking for work. The composition of these families may also explain why they are less job-ready than couples in 2000 or 2002: in 2001, couples are most likely to postpone their job search.

[5] Although in 2003 they are likely to have fewer children, their youngest child is also aged under five. The age profile of couples is comparable between these two years and women in 2003 are also most likely to come from ethnic minorities. Moreover, like in 2001, in 2003 the third cluster families tend to report that problems with childcare costs prevent them from looking for work.

[6] In 1999, the median age of partners is 41 and 46 years for women and men respectively, while in 2003 it is 33 and 36.5 years. The age of their youngest child tends to vary from over ten years of age in 1999 to under five years of age in 2003. In 2003, but not in 1999, women are most likely to have an ethnic minority background. The 1999 couples tend to have no qualifications or driving licence, whereas the 2003 couples tend to have these. In 1999 both partners are least likely to have work intentions, while in 2003 at least one partner is most likely to expect to look for a job. In fact, only in 2003 are couples most likely to report good health, claim JSA, have some qualifications and a driving licence and access to a vehicle.

The only broad conclusion that may be drawn regarding the composition of the third cluster is that, with the exception of the 2003 cohort, the characteristics of these couples seem to be predominantly those negatively associated with the likelihood of work entry. The third cluster couples are most likely to struggle with a combination of ill-health, lack of educational attainment, skills and work experience, and social housing tenancy. And yet, in 2000 and 2002, men in the third cluster are more likely to say that they are looking for work than men in other clusters and in 2001, at least one partner in this cluster is likely to expect to do so in the future.

The lack of stability in the composition of the third cluster makes it difficult to suggest policy measures appropriate to these couples. The multiplicity of barriers to work these couples are likely to face suggests that these policies may need to be complex. Additionally, efforts aimed at moving these couples into work are likely to be greater than those invested into helping couples from the other two clusters.

4.7 Conclusion

In this chapter, the overall population of workless couples each year from 1999 to 2003 is divided into three subgroups, or **clusters**, so that couples in each cluster have characteristics that distinguish them from couples in other clusters. Cluster analysis is employed in this task because it is a common statistical tool for solving classification problems. The grouping is carried out along the following dimensions that workless couples belonging to the same subgroup tend to share:

- the demographic profile of couples;
- educational characteristics and skills;
- degree of job readiness; and
- except in 2003, when attitudinal data are not available, their attitudes to work, life on social security benefits and family.

This is an exploratory exercise because cluster analysis helps discover structures in data but it is unable to explain why they exist. The results of cluster analysis are sensitive to a number of arbitrary decisions on the part of the researcher. Consequently, the subgroups represent the most precise partitions of the overall population of workless couples given the sample size, (pre-2002 changes in) its composition and grouping dimensions in each of the five years. Nevertheless, compared with descriptives presented in the previous chapter, cluster analyses provide a more detailed picture of the population of workless families and thus allow better understanding of the reasons for them to be out of work.

The stability of clusters across the years might help derive a typology of workless couples and enable the development of targeted policy measures for subgroups of workless couples. To help assess the relative robustness of clusters over time, a measure of stability (the overall score of stability) has been developed. The score suggests that over time, the composition of each cluster changes but does so to a

different degree: the second cluster is most robust, followed by the first cluster, and the third cluster is least stable. Changes in the composition of the third cluster may be the greatest due to its small size in each of the five years. For this reason, the lack of attitudinal data in the 2003 set of grouping dimensions may also have had the greatest impact on the stability of the third cluster.

The **first** cluster is likely to consist of couples in their 40s or older with one or perhaps two children over the age of ten. They are most likely to have worked in the past and to be in work of 1-15 hours a week but they are least likely to say that they plan to look for work of 16 or more hours a week. These couples are most likely to explain their inactivity by the absence of the need to work. However, the lack of incentives may not be the only problem that needs focusing on. In 2000, 2001 and 2003 couples in the first cluster are more likely than couples in the other clusters to report poor health and mention their own and household members' illness among the reasons for not looking for work.

The **second** cluster is likely to be comprised of the youngest families with two or more children, the youngest aged under 11. They are most likely to be in good health, have some qualifications and be job-ready. In all years, at least one partner is likely to plan to look for work in the future and in 1999 to 2001, additionally, one of the individuals is most likely to say they are looking for work. Unsurprisingly, the main barriers to work these couples report are most likely to be related to having young children.

Over the years, couples in the **third** cluster have very few characteristics in common. However, although the composition of the cluster changes from one cohort of workless couples to another, in 1999-2002, most characteristics of men and women in these couples are likely to hamper their work entry. In almost all cohorts, the third cluster couples are more likely than couples in other clusters to suffer from poor health, live in the social rented sector, lack work experience and have neither qualifications, nor a driving licence. Nevertheless, except in 1999, at least one partner in the third cluster couples is likely to have work intentions.

Sensitivity of cluster analysis to changes in the sample, the size of the sample and the choice of grouping dimensions imply that the results might have been different had the sample been larger and comparable across the years, and with attitudinal data available in 2003. In future studies on couples with dependent children, therefore, the problems of changes in the sample composition and in grouping dimensions may need to be minimised.

5 Movement into work by clusters of workless couples

In this chapter, the attention turns to couples' movement into work.[7] The descriptive analysis therefore utilises longitudinal properties of the data and examines changes to the workless status of couples within the 1999-2003 period. This five-year period identifies four possible cohorts of couples for panel analysis: 1999, 2000, 2001 and 2002. The analysis of movement into work relating to the first cohort is concerned with the 1999 population of workless couples and four panels are available for analysis: 1999-2000, 1999-2001, 1999-2002 and 1999-2003. The analysis of movement into work relating to the second cohort is concerned with the 2000 population of workless couples and three panels are available for analysis: 2000-2001, 2000-2002 and 2000-2003. In this way, with the longest panel being 1999-2003, each cohort allows the examination of couples' employment transitions in up to four years.

Obviously, within each transition period couples may enter work and leave it again but for reasons of clarity, these intermediate states are ignored. For example, a couple is counted among those remaining workless between 1999 and 2000 if it was out of work at the time of both the 1999 and 2000 Families and Children Survey (FACS) surveys, even if in the period between these two surveys the couple moved into and out of work.

Since the probability of work entry is likely to be associated with the characteristics of couples, families within the same cluster may have a similar propensity to move into work. The comparison of work entry rates among clusters of workless couples **within each cohort** should help suggest which types of couples are most likely and which are least likely to move into work.

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[7] Couples are considered in work if at least one partner works 16 or more hours a week.

However, it is also possible to compare the rates of work entry among workless couples **across the cohorts**. This is because a one-year transition takes place between 1999 and 2000 as well as between 2000 and 2001; a two-year transition takes place between 1999 and 2001 as well as between 2000 and 2002 and so on. The examination across the cohorts should help understand how the changes in the composition of the cluster alter the likelihood of work entry by its couples.

The robustness of the cluster across the years suggests that new couples joining it over time are as likely to enter work as couples who left the cluster following their movement into work. Therefore, changes to the composition of the cluster are likely to show in variations in its propensity to move into work across the cohorts. Within each cohort, the higher the propensity of the cluster to enter work, the more likely it is that the proportions of couples entering work increase as the transition period lengthens and hence the number of panel cases decreases. If the cluster consists of couples that tend to remain workless over time, the reverse is likely to be true. In this case, within each cohort, as the transition period lengthens (and hence the number of panel cases decreases), the proportion of couples remaining out of work is likely to increase and the proportion of workless couples entering work is likely to remain stable or decrease.

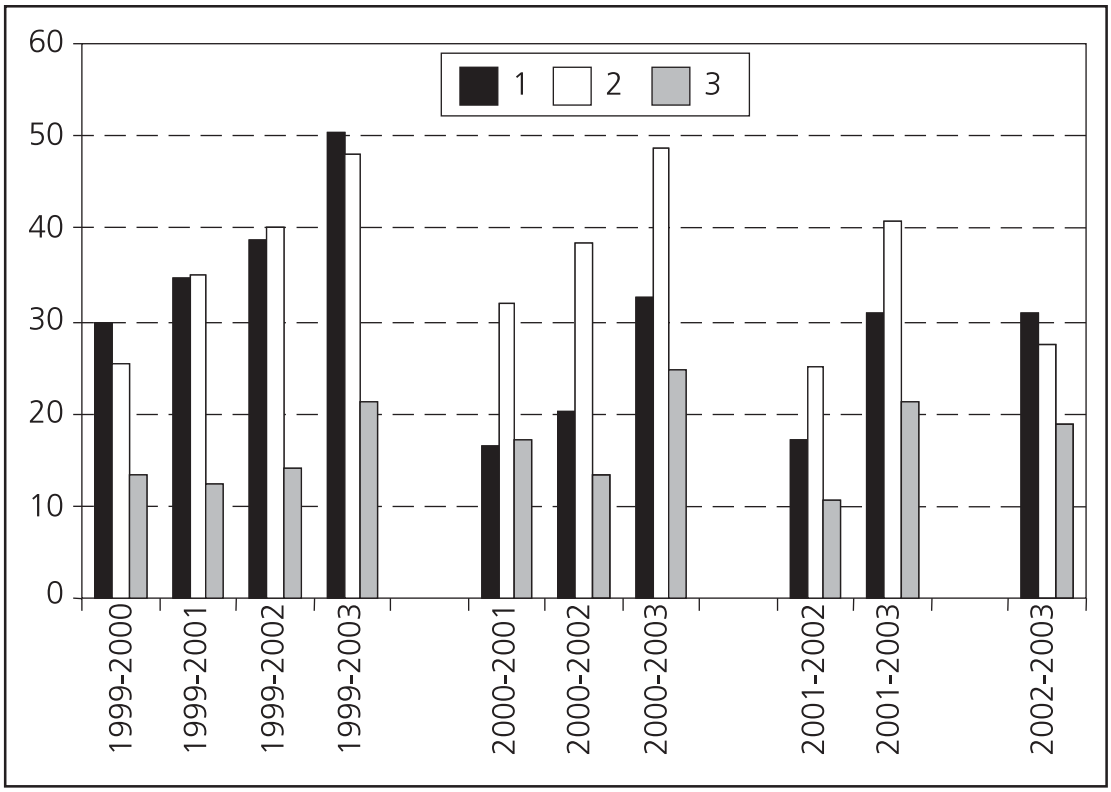
The analysis of work entry by clusters of workless couples is presented below. It is complemented by the analysis of work entry by individual partners in couples to gain further insight into how couples change their employment status. In each section, movement into work by clusters of workless couples is examined first within the cohorts and then across the cohorts. The analysis is descriptive in nature and therefore it does not quantify the likelihood of work entry by the cluster associated with each of the couples' characteristics independently from other characteristics. Instead its aim is to provide an overall comparison of work entry rates across the clusters of couples and men and women individually and where possible, to highlight the characteristics of couples that are likely to influence their movement into work. The small number of cases available for analysis is particularly challenging for the longitudinal study. The resulting increase in the tentativeness of the findings is recognised when drawing conclusions on the likelihood of work entry by the clusters. This is especially the case where the third cluster of couples is concerned because it is the smallest subgroup in all cohorts of workless couples.

5.1 Work entry by clusters of workless couples

5.1.1 Which cluster is most likely to enter work? Within-cohort analysis of couples' movement into work

As Figure 5.1 suggests, **in the 1999 cohort**, the first cluster couples achieve the highest work entry rates where the one-year transition is concerned, i.e. between 1999 and 2000[8]. However, two and three years later, the rates of work entry are comparable between the first and the second cluster. The two clusters differ in a number of dimensions, but the one most relevant to the 1999 cohort is likely to be family composition. Couples with older children in the first cluster are less likely to report barriers to work such as cost and/or availability of childcare or other problems related to children; their women are more likely to be looking for work than women in the other clusters. By contrast, couples in the second cluster are most likely to point to concerns related to their young children as a barrier to work; their men tend to look for work and at least one partner is most likely to expect to look for work in the future.

Figure 5.1 Proportions of couples in each cluster entering work: by cohorts and panels



[8] The number of cases in the four-year transition where the first cluster of the 1999 cohort is concerned (47 couples) is too small to use it in comparisons.

The 1999 cohort therefore suggests that having children under the age of five is likely to hinder couples' movement into work. However, given its nature, this barrier to work seems to become less important over time and couples in the second cluster are likely to catch up with couples in the first cluster as their children grow up and problems with childcare ease naturally. The four-year transition shows 48 per cent of the second cluster couples in work of 16 or more hours a week.

In the 2000 and 2001 cohort, couples in the second cluster are most likely to enter work, regardless of the transition period. Similarly to the 1999 cohort, in these two cohorts the second cluster couples are most likely to point to children-related concerns, while families in the first cluster are least likely to mention these barriers to work. However, compared with the first cluster couples, the second cluster couples tend to have good health and be job-ready. This relative underachievement of the first cluster highlights the significance of health problems and lack of work intentions as barriers to work among them.

Within the 2002 cohort, the first cluster couples are again most likely to enter work. That year, they are less likely to be job-ready than couples in the second cluster but the second cluster families tend to be bigger than the first cluster families and their children are likely to be much younger. Therefore, similarly to the 1999 cohort, the 2002 cohort suggests that family composition is a factor affecting the chances of couples in the second cluster to move into work.

Couples in the **third cluster** seem to be least likely to enter work **regardless of the cohort** or the transition period. Only between 2000 and 2001 is the likelihood of work entry comparable between the third and the first clusters. However, the two-year transition of the 2000 cohort demonstrates that the first cluster is doing better. This comparison appears to suggest that even though men in the third cluster are more likely than men in the first cluster to say that they value work greatly and that they are looking for work, the third cluster couples are still not more likely to enter work than the first cluster couples.

Moreover, within the cohorts where the number of panel cases available to analysis permits conclusions, the third cluster couples seem to show stability in their work entry rates as the panel period lengthens[9]. This implies that the likelihood of work entry among the third cluster couples does not increase over time. It seems therefore, that couples in the third cluster are 'trapped' in worklessness and this may be attributable to the combinations of their characteristics and barriers to work they face. The descriptive analysis suggests that between 1999 and 2002, each year couples in the third cluster are unlikely to have characteristics that may improve their work entry chances, other than a positive attitude to work and in some cohorts, job-readiness.

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[9] Thus, in both the 1999-2000 and the 1999-2001 panels, 13 per cent of couples move into work, while the number of cases declined from 78 couples in the former panel to 56 couples in the latter panel.

5.1.2 Which changes to the composition affect clusters' employability? Cross-cohort analysis of couples' movement into work

Figure 5.1 shows that work entry rates among the **first cluster couples** in the 2000 and 2001 cohort are significantly lower than in the 1999 and 2002 cohort, regardless of the length of the transition period.[10] It is also noticeable that work entry rates are comparable between couples of the 1999 and 2002 cohort and between couples of the 2000 and 2001 cohort.

These work entry rates displayed by the first cluster couples across the cohorts support the conclusions on the robustness of this cluster drawn in the previous chapter. In 1999, couples in this cluster are likely to have a set of characteristics that enable their transition into work of 16 or more hours a week. They are likely to have worked in the past and to be in work of 1-15 hours in 1999; they tend to have some qualifications and driving licence; and women in this cluster are likely to say they are looking for work (Table 4.2). In 2000 and 2001, the profile of the cluster changes and couples are more likely to have health problems and are less likely to look for work. The likelihood of their work entry is lower in the 2000 and 2001 cohorts than in the 1999 cohort. In 2002, the composition of the first cluster is very similar to that in 1999 with few exceptions. First, in 2002, the first cluster females do not seem to plan to increase their working hours to 16 or more a week. This may decrease the likelihood of work entry by couples in this cluster. However, second, in 2002, couples in the first cluster tend to have older children than in 1999. This may increase their chances to enter work. If these effects partially offset each other, the rates of work entry may be similar between the 1999 and 2002 cohorts of couples. Indeed, the proportion of couples that entered work in 2002-2003 is comparable to that in 1999-2000.

The patterns of work entry demonstrated by the first cluster couples across the cohorts strengthen the case for an association between the likelihood of work entry, and work intentions, family composition and health status. The magnitude of changes in work entry rates associated with variations in the characteristics of the first cluster couples suggests that family composition and work intentions of women have a less pronounced effect on work entry rates of this cluster than health status. A more precise comparison of these effects however is impossible without multivariate regression analysis.

The second cluster confirms its status as most robust: Table 5.1 demonstrates that comparable proportions of its couples enter work across the cohorts, except in

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[10] Thus, in one year, only 16 per cent of the 2000 cohort couples enter work, compared with 30 per cent of the 1999 cohort. In two years' time the respective rates are 20 per cent and 35 per cent. The picture is similar where the 2001 and 2002 cohorts are concerned. In one year, 17 per cent of the 2001 couples enter work compared with 31 per cent of the 2002 couples.

2000. Couples in the 2000 cohort show a higher propensity to enter work than couples in the previous or subsequent cohorts. The descriptive analysis presented in the previous chapter demonstrates that in 2000, couples in the second cluster are likely to have just two children, while in other years they are likely to have bigger families.

Additionally, in 2000, the second cluster couples are slightly less likely than couples in other clusters to report their child's illness as a barrier to work. The situation is the reverse in all other years, when couples in this cluster are slightly more likely than couples in other clusters to say that they are not looking for work because their child is ill. This may explain the greater job-readiness of the second cluster couples in 2000 compared with the other years. Therefore, this analysis suggests that family composition and children's health are important to couples in the second cluster willing to move into work.

Regarding **the third cluster couples**, it is hard to comment on a pattern of their movement into work across the cohorts because the sets of their characteristics and barriers to work differ from one year to another. As was noted above, this variation in the composition of the cluster is to be expected, given the small number of couples gathered in this cluster in each cohort. In fact, the number of cases in this cluster restricts the cross-cohort comparison to one-year transitions.

The one-year transitions of the third cluster couples across the cohorts suggest that the older 1999 couples with no work intentions are less likely to enter work than the younger 2000 couples where men are most likely to say that they are looking for work. This comparison suggests that the age of men and women and work intentions of men are the factors affecting the chances of the third cluster couples to enter work.

The 2001 couples in the third cluster display the lowest work entry rates. In these couples, women are most likely to come from ethnic minorities, have many children, the youngest aged under five, and couples tend to defer their job search and mention problems with childcare among the reasons for not looking for work. The comparison of their characteristics with the characteristics of the 2000 couples suggests that the combination of non-white female ethnicity, the absence of a driving licence on the part of the men and the necessity to maintain large and young families reduces the chances to enter work to a greater degree than the combination of poor health status and lack of qualifications.

In 2002, the rates of work entry among the third cluster couples are similar to those in 2000. The two cohorts appear to differ only in the characteristics of their women. In 2002, women are most likely to come from an ethnic minority and in 2000, they are least likely to have a driving licence. In both cohorts however, men are most likely to say they are looking for work. It may seem therefore that men's work intentions are significant to couples' work entry, while ethnicity and driving skills among women have a similar impact.

5.2 Work entry by individual partners in couples

5.2.1 Who moves into work? Within-cohort analysis of movement into work by men and women

This section offers a more detailed look at couples' movement into work. The couple is considered as a unit consisting of two individuals that may, or not, move into work. Since the work status of a couple changes when at least one of the partners moves into work, such an approach should illustrate how the couple leaves its state of worklessness.

Table 5.1 does not distinguish cases where both partners in the couple move into work, although they form part of the results presented for each gender. Couples of this type are all but non-existent in the third cluster and this cluster consistently shows the lowest rates of work entry. The first and the second clusters most often have an equal chance of including couples where both partners move into work and the two transitions where this is not the case are discussed separately.

Table 5.1 The likelihood of work entry by individuals in couples

Column percentages

Clusters	1		2		3		All	
	Female	Male	Female	Male	Female	Male	Female	Male
1999-2000	7	25	8	19	2	11	7	19
Unweighted base	*97*	*98*	*144*	*145*	*78*	*78*	*319*	*321*
1999-2001	11	29	14	25	3	11	10	23
Unweighted base	*77*	*77*	*100*	*100*	*56*	*56*	*233*	*233*
1999-2002	14	36	18	32	[5]	[10]	14	28
Unweighted base	*63*	*63*	*88*	*88*	*42*	*42*	*193*	*193*
1999-2003	[32]	[43]	24	35	[12]	[9]	24	32
Unweighted base	*47*	*47*	*68*	*68*	*29*	*29*	*144*	*144*
2000-2001	5	13	12	25	4	14	8	18
Unweighted base	*97*	*97*	*108*	*108*	*67*	*67*	*272*	*272*
2000-2002	8	19	13	33	[6]	[9]	9	23
Unweighted base	*68*	*68*	*82*	*82*	*43*	*43*	*193*	*193*
2000-2003	[24]	[25]	18	38	[10]	[19]	18	29
Unweighted base	*48*	*48*	*62*	*62*	*34*	*34*	*144*	*144*
2001-2002	6	15	5	24	2	8	5	18
Unweighted base	*76*	*76*	*124*	*124*	*55*	*55*	*255*	*255*
2001-2003	17	25	10	35	[6]	[16]	11	28
Unweighted base	*57*	*57*	*102*	*102*	*39*	*39*	*198*	*198*
2002-2003	17	21	6	23	10	9	12	19
Unweighted base	*95*	*95*	*75*	*75*	*51*	*51*	*221*	*221*

Base: Panels for each cohort of couples. All workless couples with information on their work status at the beginning and at the end of the period.

Table 5.1 suggests that the most common route out of worklessness is for the man to enter work. When the woman moves into work this usually complements the transition into work by the man. Two instances illuminate this point. In 2000-2001 and 2002-2003, clusters one and two differ in the proportion of couples where both partners move into work. In both cases, clusters that are most likely to contain such couples are those where women are most likely to enter work. For example, in 2002-2003, when women in the first cluster seem to achieve higher work entry rates than women in the second cluster, the first cluster is more likely than the second cluster to contain couples where both partners enter work.

However, men's movement into work alone is not sufficient to explain the relative labour market standing of clusters presented in the previous section where couples were considered as a whole. The relative labour market success of each cluster of *couples* depends on the success of both the *men* and the *women* in this cluster, relative to other clusters.

In the 1999 cohort, the first cluster **men** appear more likely to enter work than the second cluster men regardless of the length of transition period. This is not surprising given that men in the first cluster are likely to be as healthy as are men in the second cluster but they are also most likely to work 1-15 hours a week, stay in education until at least 17 years of age and have a driving licence and access to a vehicle. Regarding **women** in this cohort, in the first year there seems to be no difference between the two clusters. However, the two- and three-year transitions show that women in the second cluster are more likely to enter work, although as the previous chapter has shown, women in the first cluster may have greater potential to secure a job of 16 or more hours a week. This suggests that as their children grow up, women in the second cluster are likely to use this opportunity to move into work. Their role in determining the couple's work status shows in the relative comparability of clusters one and two with regard to work entry when couples are considered as single units. In contrast, the 1999 women in the first cluster seem to settle in their 'mini' jobs and be less likely than women in the second cluster to move into work of 16+ hours a week.

In the 2000 cohort, both **men** and **women** in the second cluster are more likely to enter work than men and women in the first cluster[11]. This relative success of both individuals in the couple explains why the second cluster couples are likely to achieve the highest work entry rates in the 2000 panels. Indeed, as discussed earlier, the second cluster men and women are likely to have higher potential to enter work not only compared with men and women in the other two clusters but also compared with the second cluster men and women of other cohorts. In the 2000 cohort, men and women in the second cluster tend to be healthier than men and women in the other clusters. They also are more likely to have qualifications and compared with

[11] Although this is not the case in the last panel where women are concerned, the number of the first cluster cases available for analysis is too small for the results to be considered reliable and used in interpretations.

the first cluster men and women, they, additionally, tend to be more job-ready. Compared with the second cluster men and women in the other cohorts, the 2000 couples are likely to have smaller families, their children are slightly less likely to have an illness and they seem to be more job-ready.

In the 2001 cohort, **men** in the second cluster again seem to achieve greater work entry rates than men in the first cluster regardless of the transition period. This might be expected of men who are likely to be younger, healthier and more likely to have some qualifications and look for work. Compared with men in the second cluster, men in the first cluster are only more likely to have a driving licence and vehicle access. Interestingly, the two-year transition suggests that **women** in the first cluster are more likely to enter work than women in the second cluster despite suffering from ill-health. It is true that compared with women in the second cluster, the first cluster women in addition to being relatively free from problems related to having young children, have the advantages of already being in work of 1-15 hours a week and having a driving licence and access to a vehicle. However, the second cluster women, in addition to being the healthiest, are most likely to have some qualifications and stay in education until at least 17 years of age. This suggests that the nature of health problems experienced by the first cluster women might not be detrimental to their ability to increase their working hours.

Within the 2002 cohort, couples in the first cluster seem to achieve the highest rates of work entry. Table 5.1 illustrates that the first cluster owes this to its **women** who are more likely to enter work than women in other clusters. It is not surprising that women with fewer and older children who have stayed in education beyond the age of 16, have a driving licence and vehicle access and are already in work of 1-15 hours, are more likely to enter work within one year than women with more and younger children or women from ethnic minorities who suffer from a long standing illness (LSI) and have neither work experience nor qualifications.

Interestingly, it seems that women in the third cluster are as likely to enter work as are men in this cluster. Moreover, they appear more likely to enter work than women in the second cluster. The similarity of characteristics between men and women in the third cluster may partly explain the comparability of their work entry rates. However, it is less understandable why the third cluster women enter work at a slightly higher rate than the second cluster women. Since the number of couples in the third cluster is too small for conclusions to be robust, these findings have to be treated with caution.

The problem of the small size of the third cluster means that only two broad observations can be made with regard to the work entry of individuals in this cluster. First, except for the 2002-2003 transition described above, within each cohort men seem to be more likely to enter work than women. In this respect, this cluster does

not differ from clusters one and two. However, in contrast with the other clusters, within each cohort, the rates of work entry seem hardly to change from one transition to the next, suggesting that both men and women in the third cluster may be 'trapped' in the workless state[12].

5.2.2 What impedes each gender's work entry? Cross cohort analysis of movement into work by men and women

The comparison of work entry rates across the cohorts suggests that **men** in **the first cluster** may have the same pattern of movement into work as couples in this cluster. Their rates of entry seem to be higher in 1999 and 2002 and lower in 2000 and 2001. In contrast, the rates of work entry among **women** do not tend to vary so much between 1999 and 2002 and appear to be only slightly lower in 2000 and 2001. However, changes to the composition of the cluster originate not only from variations in men's characteristics over time. Both men and women in the first cluster are likely to suffer from ill-health in cohorts 2000 and 2001. Therefore, it seems that health problems of men show in their lower work entry rates in these cohorts, while illness of women does not have as great an impact on their movement into work.

This finding suggests that until 2002 the work entry chances of couples in the first cluster may be lower because their men tend to suffer from ill-health. This is consistent with the finding that the change in couples' work status is likely to be driven by men's movement into work. However, men's illness may also impact on work entry decisions of women in this cluster. If both men and women experience health problems, women might decide to stay at home or work for not more than 15 hours a week in order to be better able to care for their partners.[13]

Women in the 2002 cohort appear more likely to enter work than women in other cohorts. Judging by their characteristics, their rates of work entry may be expected to be comparable to those of women in the 1999 cohort. In 2002, the first cluster women are less likely to have work intentions than in 1999 but they are more likely to have a child aged over ten. However, a higher rate in the 2002 cohort may reflect the inclusion of high-earner couples among those sampled in 2001. For example, in 2002 there are 22 workless women that were in work in 2001; the majority of them (13 women) are grouped together in the first cluster. In 2003, nine women are back in work and again the majority of them (six women) are those who were in the first cluster in 2002. Therefore, the first cluster may contain a higher proportion of women who are likely to be churning between the states of worklessness and employment. However, data beyond 2003 are required to test the robustness of this suggestion.

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[12] As mentioned above, the increase observed within each cohort as the transition period lengthens is likely to be related to sample attrition and a consequent decrease in the number of cases available for analysis.

[13] It is also conceivable that at a below eight per cent level, work entry rates among the first cluster women of the 1999 to 2001 cohorts are so small that a reduction associated with having an LSI is not as noticeable as it is in the men's case.

Work entry rates demonstrated by men in **the second cluster** look comparable across the 2000 to 2002 cohorts, but are relatively low in the 1999 cohort. The difference between **men** in the cohorts seems to point to the importance of good health for men's chances of securing a job because men in all post-1999 cohorts are more likely to report good health than men in the 1999 cohort. Additionally, in 2000 and 2001 the second cluster men are more likely to have qualifications than in other years; this may also explain the lower rates of entry among men in the 2002 cohort compared with men in the 2000 and 2001 cohorts.

Regarding **women** in the second cluster, those in the 1999 and 2000 cohorts seem to have higher chances of moving into work than those in the 2001 and 2002 cohorts. The cluster changes very little over time: the 2000 women are most likely to have qualifications and the 2002 women are least likely to have a driving licence. This suggests that these two factors are associated with the likelihood of work entry among women, amongst a number of others. However, the 2001 women in the second cluster move into work at a lower than expected rate. That year, they are most likely to have some qualifications, stay in education until at least the age of 17, their youngest child is most likely to be aged between five and ten (and unlike the second cluster women in other cohorts they do not mention problems relating to childcare) and yet, they seem to demonstrate the lowest work entry rates. However, they differ from women in all other cohorts in the reasons they give for not looking for work: they are most likely to mention their unwillingness to spend time away from their children. If their decision to enter work is not independent from the decision of their partner, it is possible that as men in this cohort enter work, women decide to stay at home with the children.

The cross-cohort analysis of movement into work by the second cluster men and women suggests that having qualifications and/or a driving licence affects the work entry chances of both men and women. Apart from these factors, health status seems to impact on men's employability, while the unwillingness and/or lack of opportunity to arrange care for their children appears to influence women's ability to obtain a job.

The previous section that considered couples as single units has touched on the characteristics of **men** and **women** in **the third cluster**. In 1999 to 2001, the cross-cohort variations in work entry rates of individuals (men and women) comprising this cluster seem to be similar to those of couples in this cluster. Similarly to couples, men and women individually seem to demonstrate higher work entry rates in 2000 than in 1999 or especially in 2001. It was suggested that work entry rates among men and women may be influenced by their age and in the case of men, additionally by the degree of their job-readiness. Older men and women seem to be less likely than younger men and women to enter work, even if they have fewer and older children. However, the combination of the necessity to maintain a large family where the youngest child is aged under five, the lack of driving skills among men and non-white female ethnicity seems likely to reduce the work entry chances of men and women in the third cluster to a greater extent than the combination of poor health status and lack of qualifications.

In 2002, work entry rates of men and women in the third cluster are contrary to those one might expect. Characteristics of men in 2002 resemble those in 2000 but the proportion of men entering work in 2002-2003 is comparable to the proportion of men entering work in 2001-2002, i.e. much lower than might be expected. Yet, work entry rates of couples in the 2000 and 2002 cohorts seem to be comparable. This comparability is achieved because women in 2002 appear more likely to enter work than women in 2000.

The third cluster women in these two cohorts (2000 and 2002) differ in their ethnicity and the likelihood of having a driving licence. In 2002, the third cluster women tend to have an ethnic minority background; in 2000 the third cluster women are unlikely to have a driving licence. Since women of the 2002 cohort seem to achieve higher work entry rates than women of the 2000 cohort, ethnicity may have a smaller (negative) impact on the likelihood of work entry than non-attainment of driving skills. However, it is difficult to explain why in 2002 men's chances to enter work are lower than in 2000. One of the reasons may lie in the small number of cases in the 2002-2003 panel: at 51 it is the smallest panel of all. Had the number of couples in this panel been greater, the proportions of men and women entering work might have been different.

Another reason may lie in the ethnicity of men in the third cluster. If women from ethnic minorities tended to partner men from ethnic minorities, lower work entry rates among men in the 2001 and 2002 cohorts would suggest that men's ethnicity may influence their chances to enter work. However, FACS surveys do not collect information on the ethnicity of respondents' partners (mostly men) and this makes it impossible to verify whether in 2002, men in the third cluster are also likely to come from ethnic minorities. Therefore, the small sample sizes[14] and the absence of data on men's ethnicity make the interpretation of results for the third cluster men and women rather speculative.

5.3 Conclusion

Chapter 5 examines couples' movement into work between 1999 and 2003. This period allows the analysis of four cohorts of couples and movements into work are examined within each cohort and across the cohorts. The chapter first considers a couple as a unit changing its work status and then focuses on individual transitions within the couple. The analysis is descriptive in nature and consequently, it does not quantify the association between the composition of the cluster and its work entry chances, other things held constant. Instead, it provides an overall comparison of work entry rates across the clusters of couples and men and women individually; and

[14] The maximum total number of men and women in the third cluster is 78, observed in the 1999-2000 transition; the maximum numbers of men and women that moved into work (21 and 20 respectively) are found in the 2000-2001 and 2002-2003 transitions (Table 5.1).

where possible, it highlights the characteristics of couples that are likely to influence their movement into work. Additionally, while relatively small sample sizes pose a problem overall, the analysis of movement into work is particularly hampered by their further reduction as panel periods lengthen. This is why some results regarding couples' work entry are treated with a greater caution than other.

The three clusters show different degrees of labour market success. **Within each cohort**, the first and the second cluster couples are most likely to enter work. The steady flow into work of the **second** cluster couples suggests that their state of worklessness is likely to cease when their children grow older. It seems that the **first** cluster couples are as likely to enter work as are the second cluster couples but their movement appears to be slower when they suffer from ill-health and/or have no work intentions. The **third** cluster couples seem to be 'entrenched' in worklessness as they are least likely to enter work.

In all clusters, **men** are more likely to move into work than **women**. However, within each cohort, the relative position of each cluster of *couples* with regard to their labour market success depends on the work entry rates of *men and women* in the cluster relative to those of *men and women* in other clusters. For example, in the 1999 cohort, the first cluster men appear to achieve higher work entry rates than the second cluster men. However, the first cluster women seem to be settled in their 'mini' jobs and less likely than women in the second cluster to move into work of 16+ hours a week. Consequently, over time, the work entry rates of the second cluster couples become comparable to those of the first cluster couples. In the 2002 cohort, when the FACS sample is representative of all families with children in Britain, women who are churning between worklessness and employment appear likely to be over-represented in the first cluster and their transitions into employment seem to lead this cluster to achieve the highest work entry rates. However, data beyond 2003 are required to test the robustness of this suggestion.

In all instances where the **first** cluster **men** demonstrate lower work entry rates (be these compared with men in other clusters or with men in other cohorts), this might be attributed to their health problems. **The cross-cohort** fluctuations in work entry rates shown by the **first** cluster **women** suggest that the nature of their health problems is not as detrimental to their movement into work as is the case with men in this cluster. Although women's rates of work entry also seem to be lower when they suffer from ill-health, it is possible that this reduction is not independent from changes in the health status of their partners. Given their attitudes to work and that they are most likely to work 1-15 hours a week, it seems plausible that women in the first cluster increase their working hours to over 15 hours a week when their own health status and that of their partners allows and the quality of the job makes it an attractive option.

Men and **women** in the **second** cluster seem to achieve higher work entry rates when they have qualifications and a driving licence. Apart from these factors, health status appears likely to impact on men's employability, while the unwillingness to use childcare or lack of available childcare seems likely to influence women's ability to move into work.

Whenever **men** and **women** in the **third** cluster move into work, older men and women seem to be less likely to do so than younger men and women, even if they have fewer and older children. Men that have work intentions appear more likely to enter work than men without work intentions. The multiplicity of changes to the composition of the third cluster over time does not allow an association between changes in work entry chances and a single characteristic to be established. Only an association between the combination of characteristics and changes in the likelihood of work entry can be detected. Thus, the combination of the necessity to maintain a large family where the youngest child is aged under five, the lack of driving skills among men and non-white female ethnicity seems to reduce the work entry chances of men and women to a greater extent than the combination of poor health status and lack of qualifications.

By pointing to characteristics of clusters that are likely to be associated with their work entry, the analysis of transitions into work provides the basis for the development of a multivariate regression model. The model may provide an assessment of the likelihood of work entry by each cluster and also allow the association between each of the couples' characteristics and their work entry chances to be analysed under the *ceteris paribus* condition, i.e. independently from the influence of all other factors. Additionally, by showing how the analysis of movement into work is hampered by small sample sizes, this study may help future research to choose a panel that would be least affected by the reduction in sample sizes over time.

6 Conclusion

The goal of reducing child poverty is closely linked to tackling worklessness among couples with children. By focusing on these families, this report aims to further the understanding of the population of workless couples with children. The development of policy measures that are tailored to their specific needs, rather than a 'one-size-fits-all' approach, should allow for a focused reduction of barriers to work and better targeting of public resources. Accordingly, this research explores the subgroups of workless couples and examines their relative stability over time. By examining their propensity to move into work, this study is highly relevant to policies aimed at moving couples into work and encouraging them to stay in work.

This report contributes to the available evidence on workless couples. Apart from Dorsett and Kasparova (2004), most studies consider workless individuals and families with children as a single group and examine changes in their work status associated with their characteristics, such as health, age, family composition, qualifications, experience, etc. (see Kasparova *et al*, 2003; Berthoud, 2003). At the same time, there is a broad agreement that although each of the factors have an influence on families' work status, they combine differently across the workless families. In other words, the workless population is not homogeneous and certain reasons for worklessness, and barriers to work tend to be concentrated among certain types of families (Dorsett and Kasparova, 2004; Hasluck and Green, 2005).

The typology of workless couples with children presented in Dorsett and Kasparova (2004) is developed further in this report. The period under analysis is extended to cover the years 1999 to 2003. Furthermore, the propensity of each type of family to move into work is examined across four cohorts of workless couples with children: 1999, 2000, 2001 and 2002. Additionally, the issue of interdependency of partners' decisions to enter work is likely to be an important factor. While this is not examined directly, some insight may be provided by considering the characteristics of men and women in the couples separately when investigating their movements into work.

Throughout this report, a 16+ hours per week definition of work is adopted and couples are considered workless if neither partner is in work of 16 or more hours a week. The main **research tasks** include: the identification of clusters of workless

couples with children; the analysis of the stability of these clusters over time; and the examination of their chances to move into work. Cluster analysis, which is a common statistical tool for solving classification problems, is employed to suggest a broad division of workless couples into subgroups in such a way that couples in each cluster have characteristics that distinguish them from couples in other clusters.

This research suggests a division of the overall population of workless couples with children into three broad clusters. The **composition** of each cluster varies to different degrees between 1999 and 2003. To assess the robustness of each cluster, a stability score is developed. The score indicates that the second cluster is most robust, followed by the first cluster, and the third cluster is least stable. The **first cluster** is likely to consist of couples who do not expect to look for work. They tend to explain this lack of work intentions by the absence of the need to work. These couples are likely to be in their 40s or older with one or perhaps two children over the age of ten. They are most likely to have worked in the past and to be in work of 1-15 hours a week. Given that in their opinion having almost any job is not necessarily better than being unemployed, it seems plausible that they tend to value job quality over the financial gains associated with work. Due to changes in the characteristics of couples' health status over time, the composition of this subgroup is less stable than that of the second cluster.

The **second cluster** tends to bring together the youngest families with two or more children, the youngest aged under 11. They are likely to be in good health, have some qualifications and be job-ready. In all years, at least one partner is likely to expect to look for work in the future and in 1999 to 2001, additionally, one of the individuals is most likely to say they are looking for work. The main barriers to work these couples report are related to having young children.

The **third cluster** appears least robust. Over the years, couples in this cluster are likely to have very few characteristics in common. Moreover, in 2003, when no attitudinal data are available for analysis, the composition of this cluster is dramatically different from that in all previous years[15]. Such variation in the composition of this cluster is expected given that it contains the smallest number of couples. However, a distinguishing feature of this cluster is that in 1999-2002, most characteristics of men and women in these couples are likely to hamper their work entry. In most of the years, they are most likely to suffer from poor health, live in the social rented sector, lack work experience and have no qualifications or a driving licence. It is

[15] The lack of attitudinal data in 2003 poses a general problem of comparability of results between 2003 and the previous years. It shows in a lower stability score across all clusters that year. It is possible to argue that because the views of households change over time, attitudes should not be included in cluster analyses as a grouping dimension. However, since the purpose of this research is to provide a snapshot typology of workless couples, the inclusion of partners' views allows insight into their preferences as factors that influence their decision to enter work.

encouraging therefore that, except in 1999, at least one partner in the third cluster couples is likely to have work intentions.

Given such a diversity of clusters, it is reasonable to expect different degrees of labour market success for each. Therefore, the issues to consider are: how likely these clusters are to move into work, what help they may need and how it should differ between men and women in each cluster.

Regarding **couples' movement into work**, the three clusters fare differently, although in all clusters, men are more likely to move into work than women. Overall, the first two clusters are most likely to enter work. However, couples in the **first cluster** seem to slow down their work entry when they suffer from ill-health. A steady flow of couples in the **second cluster** suggests that their state of worklessness may cease when their children grow older and problems with childcare ease naturally. The **third cluster** couples appear likely to be 'entrenched' in worklessness as they are least likely to enter work.

Since work entry rates differ between men and women, it is interesting to observe how barriers to work differ between **individual partners** in each cluster. (Older) men and women in the **first cluster** seem to be less likely to participate in the labour market when they have health problems. However, the impact of health problems on men's work entry rates may be greater than on women's. This difference is likely to reflect a higher propensity to enter work among men overall. It may also indicate that the nature of women's own heath problems is not as detrimental to their movement into work as is the case with men in the first cluster. However, women may attach a higher importance to their own health problems and decide to assume caring responsibilities rather than move into work if their partners stay out of work on health grounds. Therefore, the lack of financial incentives may not be the only problem. In addition to it, health status seems likely to affect men's decisions to enter work and the quality of the job and their partners' health status may be expected to influence women's work decisions.

While health status seems to impact on the work entry rates of men in all clusters, (the youngest) men in the **second cluster**, who are the healthiest, are least likely to postpone their involvement in the labour market on health grounds. Men and women in the second cluster appear likely to achieve higher work entry rates when they have qualifications and a driving licence. Apart from these factors, the unwillingness and/or lack of opportunity to arrange care for their children may influence women's ability to obtain a job.

Men and women in the **third cluster** seem likely to face multiple barriers to work. The process of 'assortative mating', whereby individuals partner with each other on the basis of similarity of social occupational level, views and skills, may partly explain why both men and women in the third cluster are less likely to enter work than men and women in the other two clusters. The combination of barriers to work the third cluster couples face is likely to make the goal of securing a job less attainable for them than for couples in the other two clusters. Moreover, if their positive attitudes

towards work reflected their preferences for a traditional family model, where men work and women look after the children, the propensity of the third cluster women to move into work might be relatively low.

Possible measures that assist couples joining the labour market may be related to removing barriers to work. The analysis suggests that couples in the **first cluster** may be able to achieve work entry rates that are comparable to those achieved by the most job-ready couples in the second cluster, even though the first cluster couples are more likely to say that they neither need to work nor plan to do so. It is possible that men choose to stay out of work on health grounds and women change their working hours depending on whether a job looks attractive to them and whether their partners suffer from ill-health. Given that among all workless couples with children, these families are probably best placed to secure a job, the policy challenge for this group may be to address their attitudes and promote the possibility of work of 16 or more hours a week as an attractive option.

The youngest couples in the **second cluster** may be able to achieve higher work entry rates if their children-related concerns were addressed. However, their unwillingness to spend time away from their children should be recognised. It is possible for example that an improvement in men's work status would prompt the second cluster women to stay at home with the children, especially if their income from work should otherwise be spent on childcare. Since these couples tend to enter work over time, both partners may benefit from measures that improve their standing with regard to qualifications.

The couples in the **third cluster** seem to be the most disadvantaged and consequently, the least able to make their way into the labour market. Since they appear to face multiple barriers to work, it is difficult to identify policies appropriate to these couples. Indeed, this report does not aim to suggest what these policies might be. However, it seems likely that the greatest efforts would be required to bring the third cluster couples into work.

Finally, since the methods employed in this research are exploratory and descriptive in nature, the findings of this study require **further testing**. Thus, cluster analysis discovers structures in data but it is unable to explain why they exist. Its sensitivity to changes in the sample, the size of the sample and the choice of grouping dimensions imply that the results might have been different had the sample been larger and comparable across the years, and with attitudinal data available in 2003. In future studies on couples with dependent children, therefore, the problems of changes in the sample composition and in grouping dimensions may need to be minimised.

With regard to the analysis of movement into work, its descriptive nature does not allow a quantitative assessment of the likelihood of work entry under the *ceteris paribus* condition. The analysis of work outcomes among the clusters of workless couples therefore may be advanced through deployment of multivariate regression analysis. More robust econometric analysis is outside the scope of this research but the findings of this study provide the basis for its application in future work by

pointing to characteristics of clusters that are likely to be associated with their work entry. This research also shows that while relatively small sample sizes pose a problem overall, the analysis of movement into work is particularly hampered by their further reduction as panel periods lengthen. In this way, this study may help future research on workless couples with children to choose a panel that would be least affected by the reduction in sample sizes over time.

Appendix A
Methods

Principal components analysis is a statistical method commonly used in research prior to conducting cluster analysis. Essentially, a set of correlated variables are transformed into a smaller set of uncorrelated variables called principal components. The principal components are linear combinations of the original variables that capture the maximum variance in the data. The first principal component explains the greatest amount of variation. The second principal component explains the maximum amount of variation unexplained by the first, and so on. Crucially, principal components are independent from each other. This independence of principal components and their small number make the clustering algorithms more effective.

There can be as many possible principal components as there are variables but only the first few principal components really matter in terms of explaining the variation in the data. The number of components is determined by the so-called eigenvalues that show the variance accounted for by each principal component. Principal components with the largest eigenvalues correspond to the dimensions that have the strongest correlation in the dataset. Since consecutive principal components account for less and less variability, the decision on their number basically depends on finding out when there is only little variability left.[16]

The nature of this decision is arbitrary. In this research, principal components with eigenvalues greater than 2.9 are retained where the analysis is concerned with the 1999 to 2002 cross-sections and principal components with eigenvalues greater than 1.8 are retained and used in the 2003 cluster analysis. Given these eigenvalues, in the 1999 to 2002 analyses, the following principal components, or grouping dimensions explain the variation in the data:

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[16] For example, only factors with eigenvalues greater than one should be retained because otherwise the principal component explains not more variation than the equivalent of one original variable (Kaiser, 1960).

- the demographic profile of couples;
- their educational characteristics and skills;
- degree of job readiness;
- attitudes to work, life on social security benefits and family.

In 2003, only the first three dimensions are used in clustering because the attitudinal data are not available that year.

Partition (or k-means) cluster analysis is an exploratory data analysis tool which divides the overall population of interest into a specified number of subgroups (Everitt *et al*, 2001). As a result of this division the degree of association between two objects is maximal if they belong to the same group and minimal otherwise. The k-means method produces exactly k different clusters of greatest possible distinction and cluster variability is measured with respect to their means for the classifying variables (hence the name k-means clustering).

There are a variety of different measures of inter-observation distances and inter-cluster distances. In this study, the square of Euclidean distance was used (Clatworthy *et al*, 2005). This is the most common distance measure, computed by finding the square of the distance between each variable, summing the squares, and finding the square root of that sum. The following formula expresses the Euclidean distance between two observations

$P = (p_1, p_2, ..., p_n)$ and $Q = (q_1, q_2, ..., q_n)$ with *n* characteristics, or dimensions:

$$\sqrt{(p_1 - q_1)^2 + (p_2 - q_2)^2 + ... + (p_n - q_n)^2} = \sqrt{\sum_{i=1}^{n} (p_i - q_i)^2}$$

Cluster analysis seeks to obtain very different means for most, if not all dimensions, used in the analysis. In the case of partitioning into two clusters along two dimensions, for example, ideally, the first cluster has high means on principal component one and low means on principal component two, while the second cluster has low means on principal component one and high means on principal component two.

Being an exploratory tool, cluster analysis can be used to discover structures in data but not to provide an explanation. It produces different results depending on the number of clusters requested, the set of grouping dimensions and the sample size. These results may be highly imbalanced with regard to the number of cases contained in each cluster. Given the sample size available to this research, groupings into two, three and four clusters were examined in this study to arrive at the best partition (into three clusters) for each year between 1999 and 2003.

Appendix B
Clusters of workless couples in 1999-2003

B.1 Clusters of workless couples in 1999

Table B.1 and Figure B.1 to Figure B.3 demonstrate clear differences between the second and the other two clusters in the **demographic profile** of workless couples. The second cluster is likely to consist of the youngest couples with the youngest children. They are most likely to have more than one child, be social tenants and cohabit. By contrast, the older couples in the first cluster are more likely to be married and live in their own accommodation. The third cluster couples tend to be the oldest and they are most likely to have one older child (16 years of age or more).

Table B.1 Summary of demographic characteristics of clusters in 1999

Column percentages

	Clusters in 1999			All
	1	2	3	
Median age of female	40	31	41	36
Median age of male	44	34	46	40
Median age of youngest child	8	4	10	6
Median number of children	2	2	2	2
Married	93	58	87	77
White (female)	73	96	73	83
Housing tenure				
Owner-occupation	59	5	24	27
Social rented sector	25	87	62	61
Private rented sector	16	7	14	12
Unweighted base	*167*	*225*	*139*	*531*

Base: Cross-section. All workless couples with information on their demographic characteristics.

Figure B.1 The age of partners in clusters in 1999

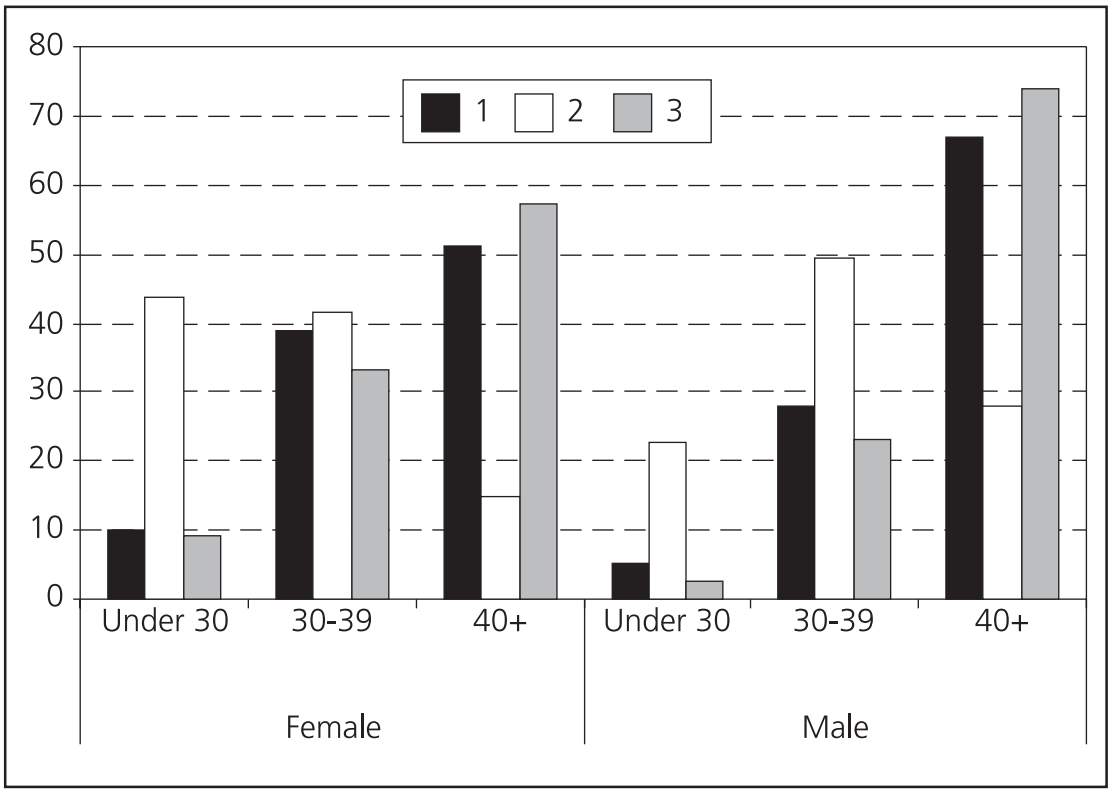


Figure B.2 The age of youngest child in clusters in 1999

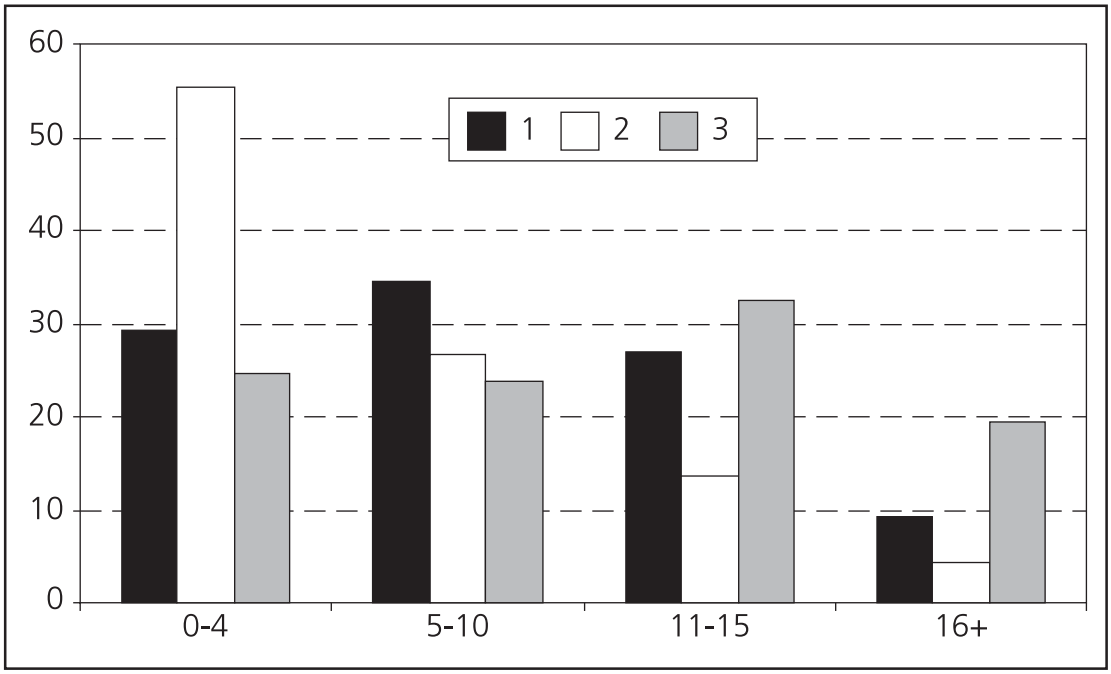
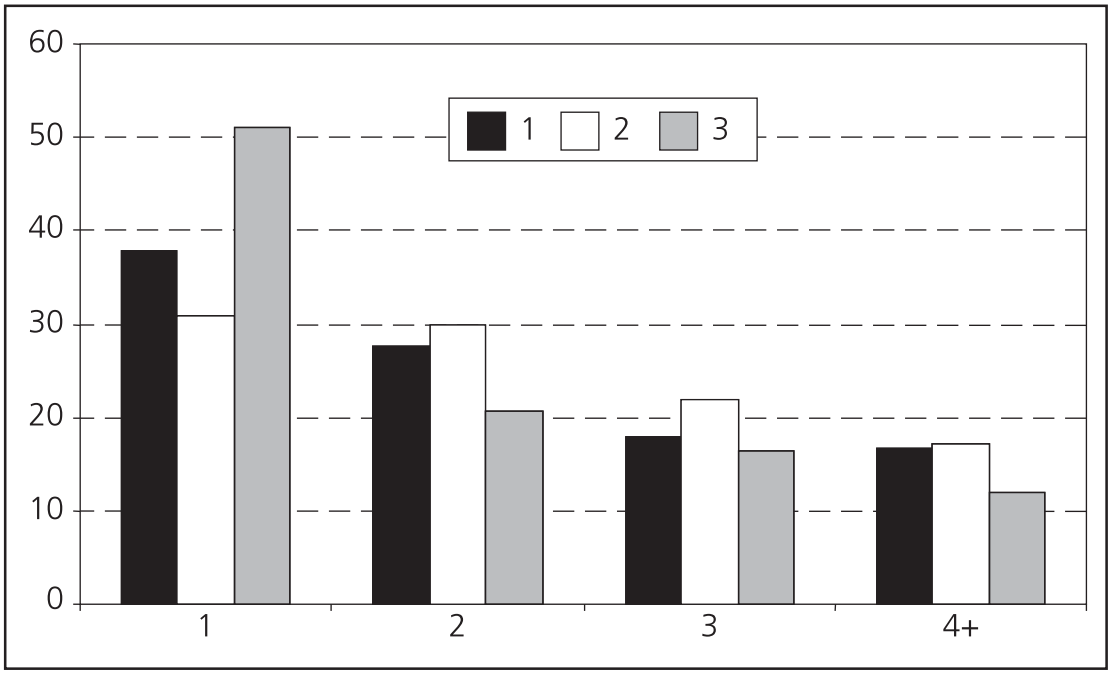


Figure B.3 Number of children in workless couples in 1999



In order to gain some insight into **barriers to work** among the clusters, Table B.2 shows a grouping of couples according to benefits and tax credits they receive. The youngest couples in the second cluster are most likely to have at least one Jobseeker's Allowance (JSA) claimant and the oldest couples in the third cluster are most likely to be on a health-related benefit. The latter subgroup is also most likely to receive Income Support (IS). Least likely to receive any benefit at all are couples in the first cluster.

Table B.2 Benefits and tax credits received by workless couples in 1999

Cell percentages

	Clusters in 1999			All
At least one spouse receives	**1**	**2**	**3**	
IS	30	43	56	43
JSA	1	8	1	4
Health-related benefit	23	28	41	30
Any benefit at all	73	88	87	83
Unweighted base	*167*	*225*	*139*	*531*

Base: Cross-section. All workless couples with information on benefits and tax credits received. Each partner or a family may receive more than one benefit and thus appear in more than one row.

This picture is consistent with the one provided by Table B.3 and Figure B.4. Couples most likely to suffer ill-health are clustered in the third subgroup and couples that tend to report good health are clustered in the second subgroup. The second cluster owes its status of being the healthiest to the women: while there seems to be no distinction between the first and the second clusters regarding men's health, the second cluster is more likely than the first cluster to contain women who say their health is good.

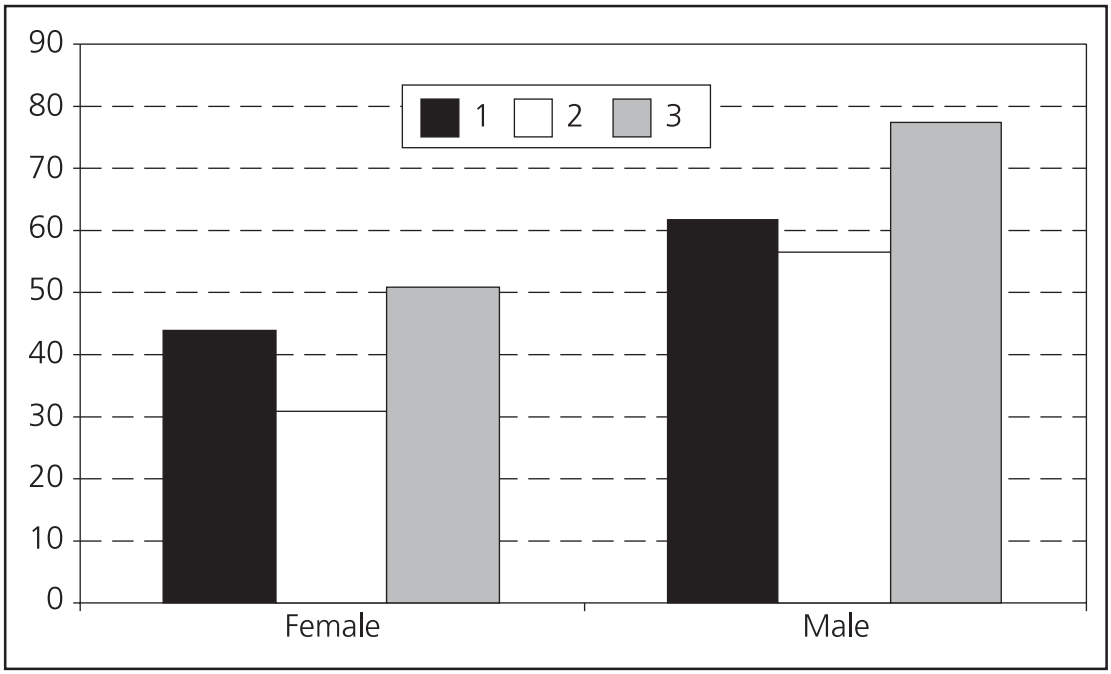
Table B.3 Health reported by partners in workless couples in 1999

Cell percentages

	Clusters in 1999			All
Health status	**1**	**2**	**3**	
Female				
Good	39	46	31	39
Fairly good	32	37	30	34
Not good				
Male				
Good	29	29	21	26
Fairly good	28	28	12	23
Not good	43	43	67	51
Unweighted base	*167*	*225*	*139*	*531*

Base: Cross-section. All workless couples with information on the health status of each partner.

Figure B.4 Partners in workless couples with an LSI in 1999



Turning to couples' **educational attainment and work experience**, Figure B.5 demonstrates that couples in the third cluster are least likely to have any qualification. Women in the third cluster are also least likely to have ever worked and this contrasts with the women in the first cluster who are most likely to have had some work experience. The first cluster women are also more likely to be in work of 1-15 hours a week than women in other clusters (Figure B.6). Additionally, couples in the first cluster are most likely to have stayed in education until at least 17 years of age (Figure B.7) and to have a driving licence and vehicle access (Figure B.8). Couples in the second cluster are more likely than couples in the other two clusters to have left education before they reached 17 years of age.

Figure B.5 **Partners in workless couples with qualifications and work experience in 1999**

Figure B.6 **Partners in workless couples working 1-15 hours a week in 1999**

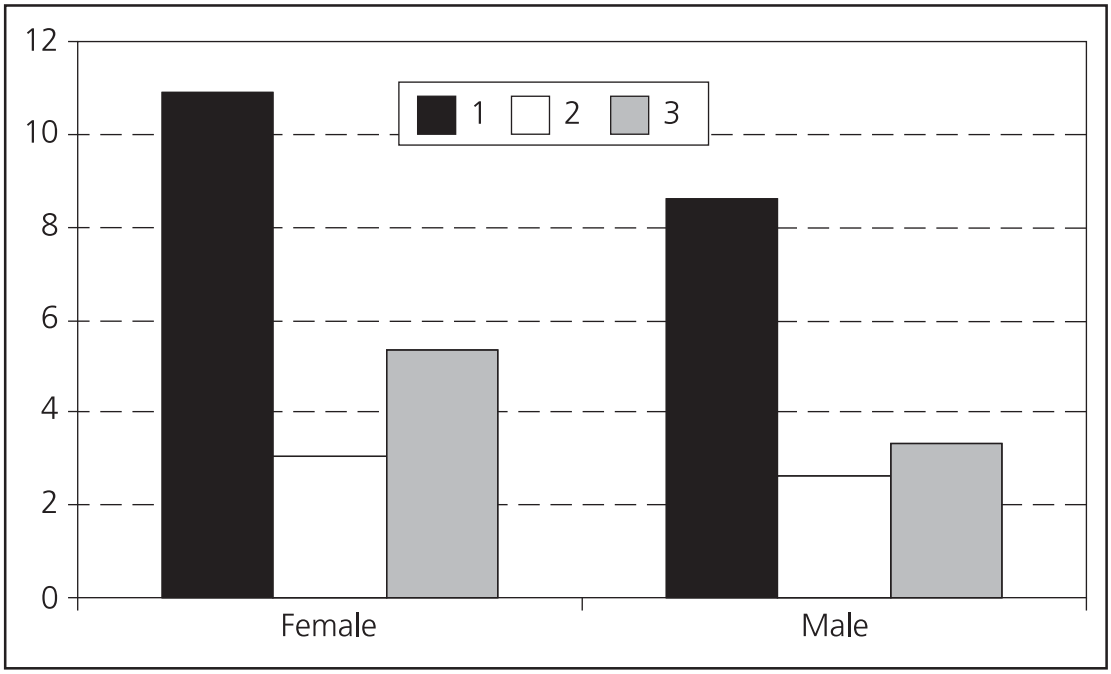


Figure B.7 **Partners in workless couples in 1999, by age they left education**

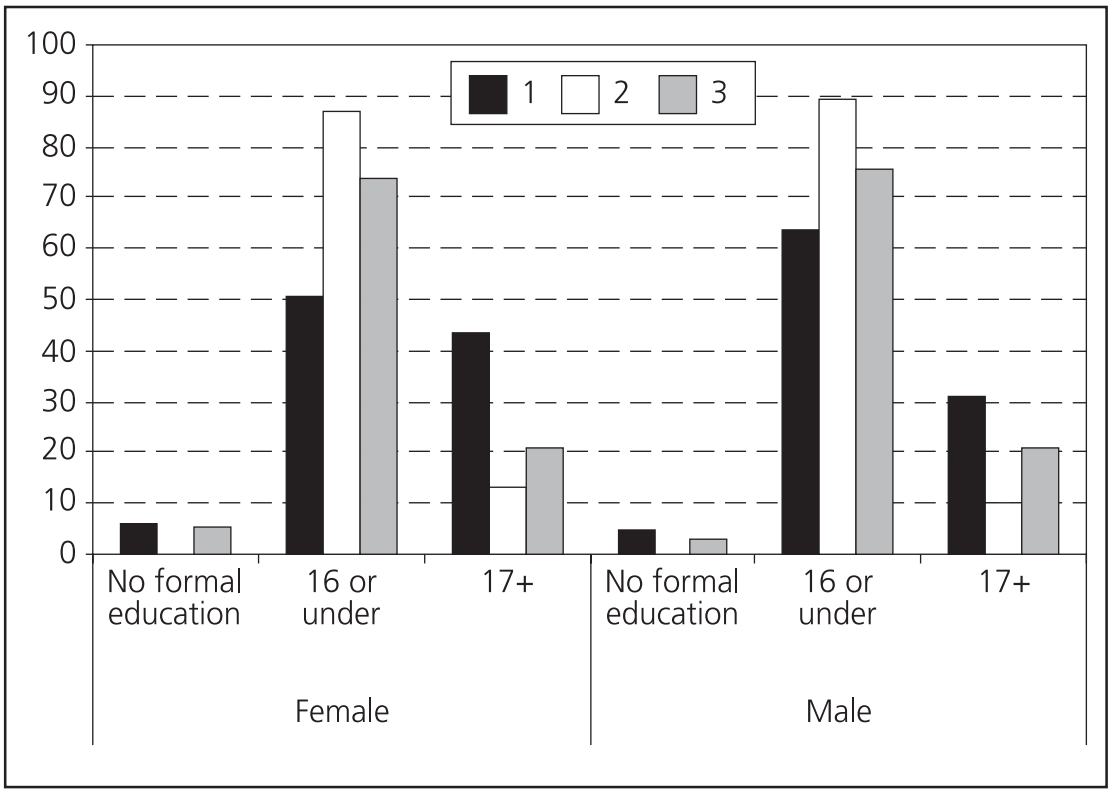
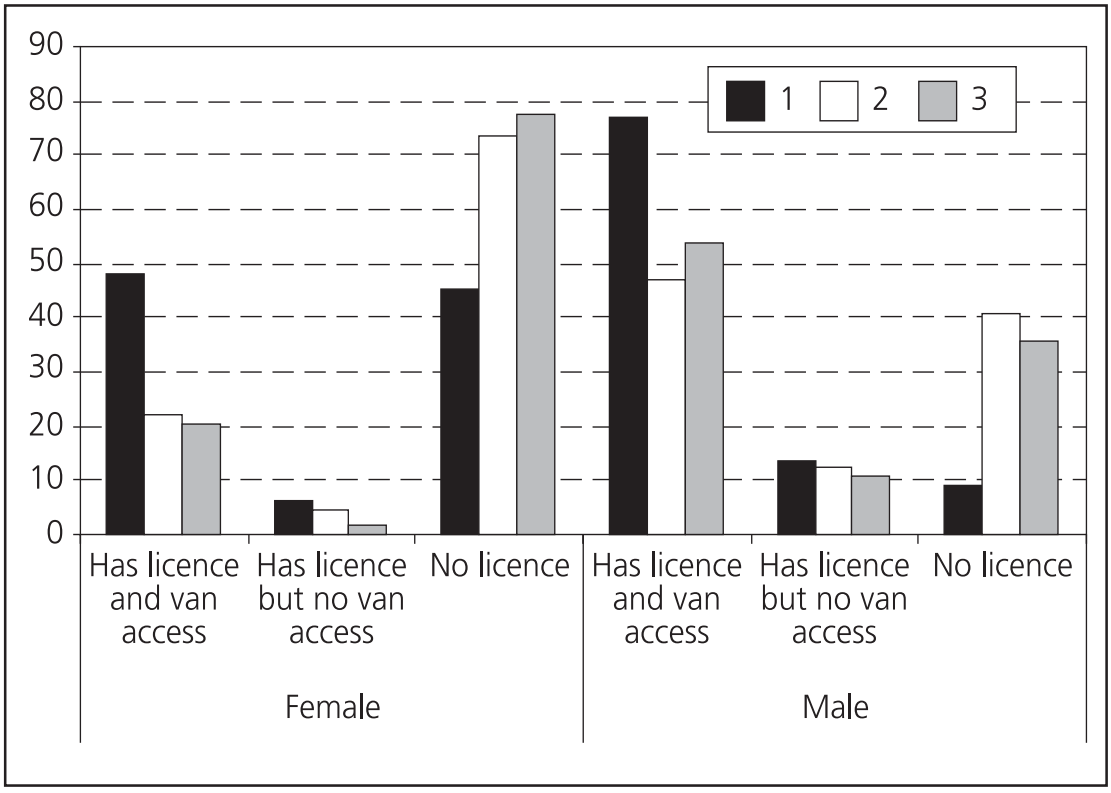


Figure B.8 **Licence and vehicle access by partners in workless couples in 1999**



Couples in the second and the third clusters differ slightly where their education and skills are concerned. Although the (healthier and younger) second cluster couples are more likely to have left education at an earlier age than the third cluster couples, they are also more likely to obtain some qualifications later in life. Regarding their driving skills, the two clusters do not differ much: women in the third cluster and men in the second cluster are slightly less likely to have a driving licence than women in the second cluster and men in the third cluster respectively.

These characteristics of each cluster are consistent with their **job search** behaviour (Table B.4). The first and the second cluster couples are more likely than couples in the third cluster to have at least one partner looking for a job and this is especially true of women in the first cluster and men in the second cluster. In striking contrast, the majority of the third cluster couples have no plans to look for work even in the future.

Table B.4 Job search by partners in workless couples in 1999

Column percentages

	Clusters in 1999			All
Job search status	**1**	**2**	**3**	
Female looks for job, male does not	13	7	3	8
Male looks for job, female does not	21	28	18	23
Both look for job	7	7	2	6
At least one expects to look for job	34	37	25	32
Neither looks for work or expects to look for job	27	22	53	32
Unweighted base	*167*	225	139	531

Base: Cross-section. All workless couples with information on their job search.

It is interesting to see which factors couples in each cluster report as **reasons for not looking for work**. These are reported by those individuals in couples who are not looking for work and therefore the presented information refers to all workless couples in 1999 excluding those where both partners say they are looking for work. Table B.5 demonstrates that the second cluster couples are more likely than couples in the other clusters to point to problems relating to children (i.e. childcare costs and availability, and child's illness) and to their unwillingness to spend time away from their children. Predictably, the third cluster couples are most likely to mention problems relating to health, – their own or other household members'. There is no specific reason that couples in the first cluster are more likely to mention than couples in the other two clusters, although almost half of the population in this cluster point to health problems and almost a third say they do not want to spend time away from their children.

Table B.5 Reasons for not looking for work given by partners in 1999

Cell percentages

	Clusters in 1999			All
Reasons for not looking for work	**1**	**2**	**3**	
Cannot afford childcare	7	17	4	10
Childcare not available	7	12	7	9
Own illness/disability	51	45	71	54
Child's illness/disability	4	14	10	10
Other household member disability	23	32	46	33
No work available	3	4	2	3
No skills/qualification	9	6	8	7
Studying/on training scheme	4	3	1	3
Better off not working	7	5	5	5
Don't want to spend time apart from children	25	35	23	29
Would not be able to pay rent/mortgage	0	1	1	1
Don't need to work	6	1	3	3
No reason	12	11	7	10
Pregnant	3	0	3	2
Retired	5	6	4	5
Other	1	0	0	0
Unweighted base	*156*	*213*	*137*	*506*

Base: Cross-section. All workless couples where at least one partner does not look for work and gives reasons for being inactive. Since couples may report more than one reason for not looking for a job, the percentages do not add up to 100.

Focusing on couples' **attitudes** to work and social security benefits, the first cluster couples are likely to have a positive attitude towards work (Table B.6). The second cluster couples tend to believe that a woman should be able to choose whether to stay at home or go to work, even if the children are under five years of age. Compared with couples in other clusters they are least likely to think that one must have a job to feel a full member of society or that only the poorest families should be entitled to social security benefits. By contrast, the third cluster couples are most likely to value work greatly and to believe that only the poorest families should be entitled to social security benefits. More than couples in the other clusters, they tend to expect a woman to stay at home with the children if they are ill or young.

Table B.6 Attitudes of couples in 1999

Column percentages

	Female				Male			
	1	**2**	**3**	**All**	**1**	**2**	**3**	**All**
A person must have a job to feel a full member of society								
Agree	30	20	56	33	62	28	73	51
Uncertain	20	10	16	14	15	17	11	15
Disagree	50	70	27	53	22	56	16	35
Women have the right to choose to be supported by the state at home with their children								
Agree	42	67	64	59	39	58	53	52
Uncertain	28	25	25	26	29	30	24	28
Disagree	30	8	11	15	32	11	23	20
It is wrong for a woman with children under five years old to go out to work								
Agree	28	23	63	36	37	25	64	41
Uncertain	17	18	19	18	16	21	15	18
Disagree	55	59	19	47	47	53	21	41
Having almost any job is better than being unemployed								
Agree	49	38	72	51	63	35	73	54
Uncertain	24	18	18	20	13	17	15	16
Disagree	26	44	10	29	23	47	12	30
Only the poorest families should be allowed social security benefits								
Agree	9	8	37	16	22	8	37	21
Uncertain	22	12	26	19	13	15	25	18
Disagree	69	80	37	65	64	77	39	62
Unweighted base	*133*	*206*	*125*	*464*	*90*	*164*	*113*	*367*

Base: Cross-section. All partners in workless couples with information on their attitudes.

B.2 Clusters of workless couples in 2000

Table B.7 and Figure B.9 to Figure B.11 show clear differences between the first and the second cluster in the **demographic characteristics** of the couples they contain. The former cluster is most likely to group together the oldest couples whose youngest child reached 11 or more years of age, while the latter cluster is most likely to bring together the youngest couples with the youngest child aged under five. In line with these characteristics, couples in the first cluster tend to have only one child, while couples in the second cluster tend to have more than one child. Compared with couples in the other clusters, couples in the first subgroup are most likely to be married and women in this cluster are most likely to have an ethnic minority background. The opposite is true of couples in the second subgroup: they are most likely to cohabit and women in this cluster are most likely to be white. With regard to housing tenure, the division into clusters is similarly clear cut. Couples in the first

cluster are most likely to be owner-occupiers, couples in the second cluster tend to rent from private landlords and couples in the third cluster are most likely to be social tenants.

Table B.7 Summary of demographic characteristics of clusters in 2000

Column percentages

	Clusters in 2000			All
	1	2	3	
Median age of female	42	29	35.5	35
Median age of male	47	33	40	38
Median age of youngest child	10	2	5	5
Median number of children	2	2	2	2
Married	94	52	78	73
White (female)	79	95	81	86
Housing tenure				
Owner-occupation	45	10	8	21
Social rented sector	49	72	81	67
Private rented sector	6	18	11	13
Unweighted base	*133*	*173*	*102*	*408*

Base: Cross-section. All workless couples with information on their demographic characteristics.

Figure B.9 The age of partners in clusters in 2000

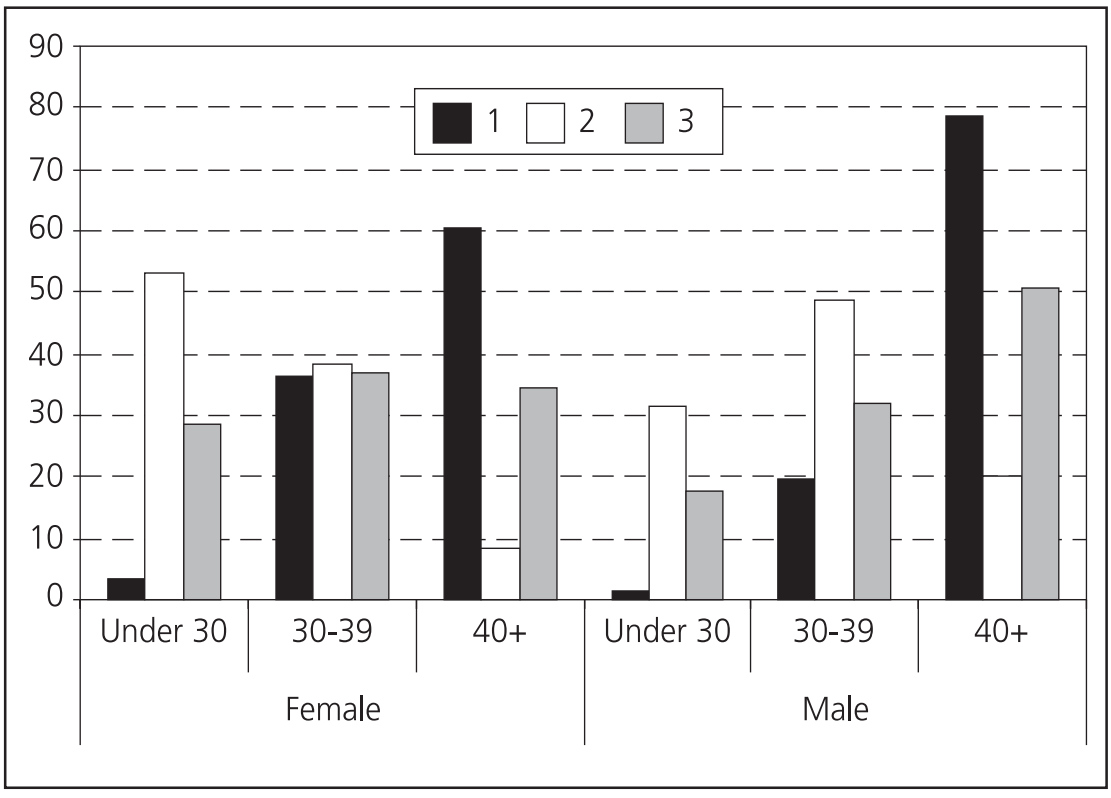


Figure B.10 The age of youngest child in clusters in 2000

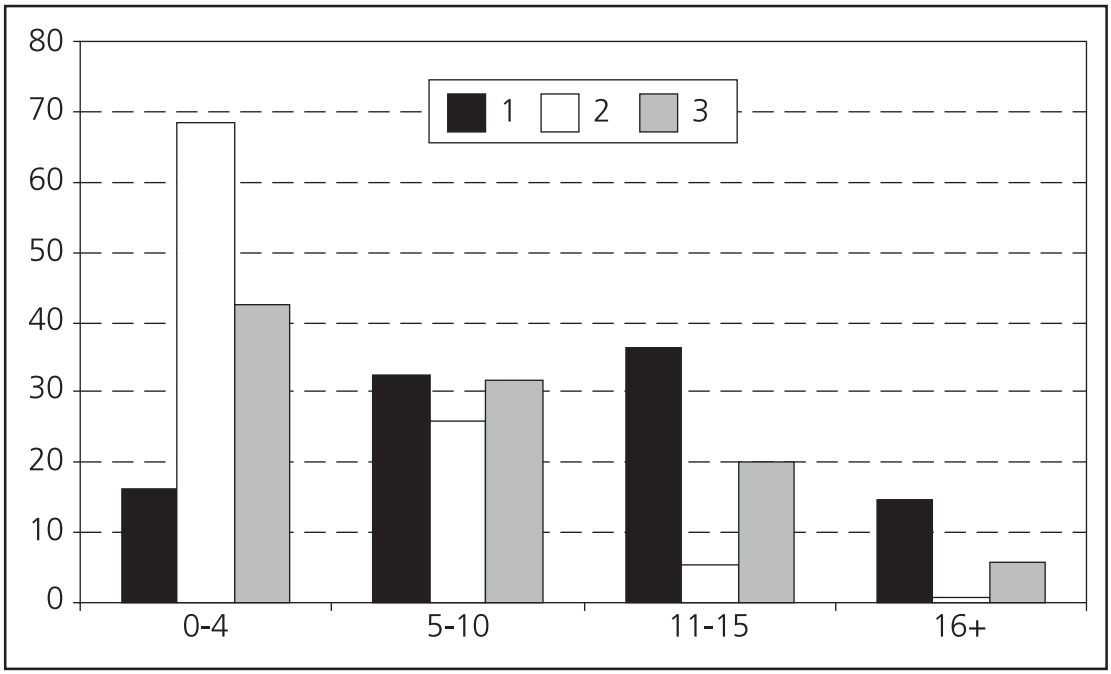
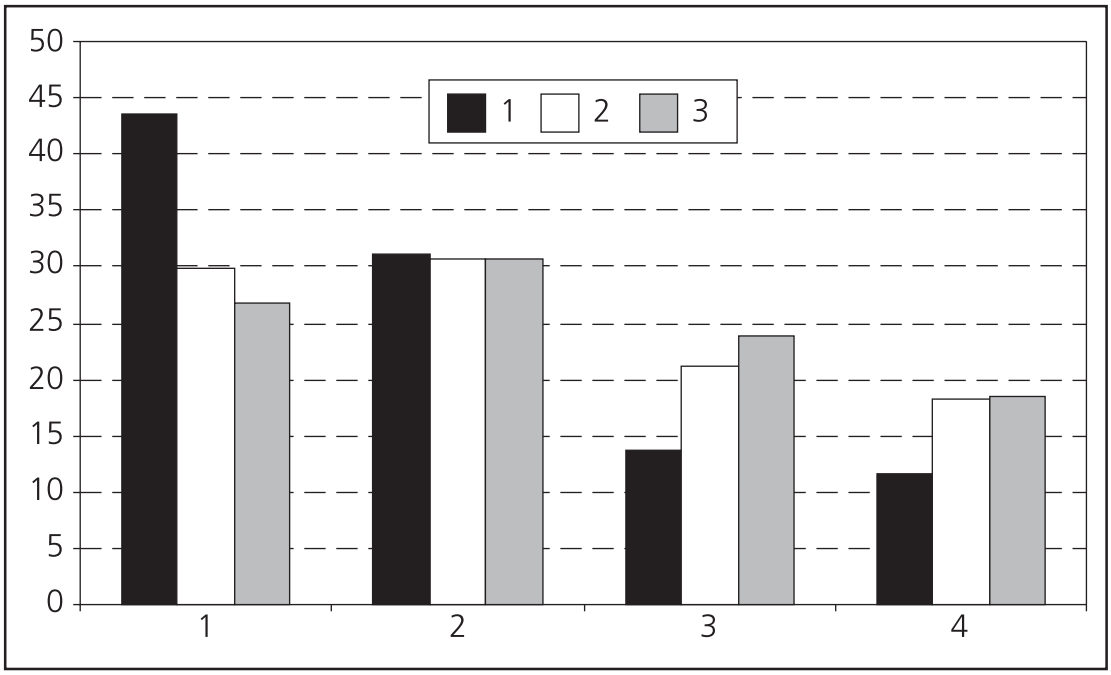


Figure B.11 Number of children in workless couples in 2000



Regarding **possible barriers to work**, the first cluster tends to contain a much higher proportion of couples where at least one partner is on health-related benefits and this finding is likely to reflect the poor health status of men in this cluster (Table B.8 and Table B.9). In contrast with men in clusters two and three, the majority of the first cluster men say their health is not good. The second cluster is most likely to accommodate healthy females and the third cluster is most likely to contain healthy men. (This may explain why there is hardly any difference between the second and

the third cluster regarding tax credits and benefits received by the couples in these clusters.) Unsurprisingly, while the majority of men in workless couples report a long-standing illness (LSI), men in the first cluster are more likely than men in other clusters to have an LSI (Figure B.12). Women in workless couples are less likely to have an LSI than men in general but women in the second cluster are less likely to have an LSI than women in other clusters.

Table B.8 Benefits and tax credits received by workless couples in 2000

Cell percentages

	Clusters in 2000			All
At least one spouse receives	**1**	**2**	**3**	
IS	45	39	43	42
JSA	2	3	3	3
Health-related benefit	57	43	42	47
Any benefit at all	79	86	85	83
Unweighted base	*133*	*173*	*102*	*408*

Base: Cross-section. All workless couples with information on benefits and tax credits received. Each partner or a family may receive more than one benefit and thus appear in more than one row.

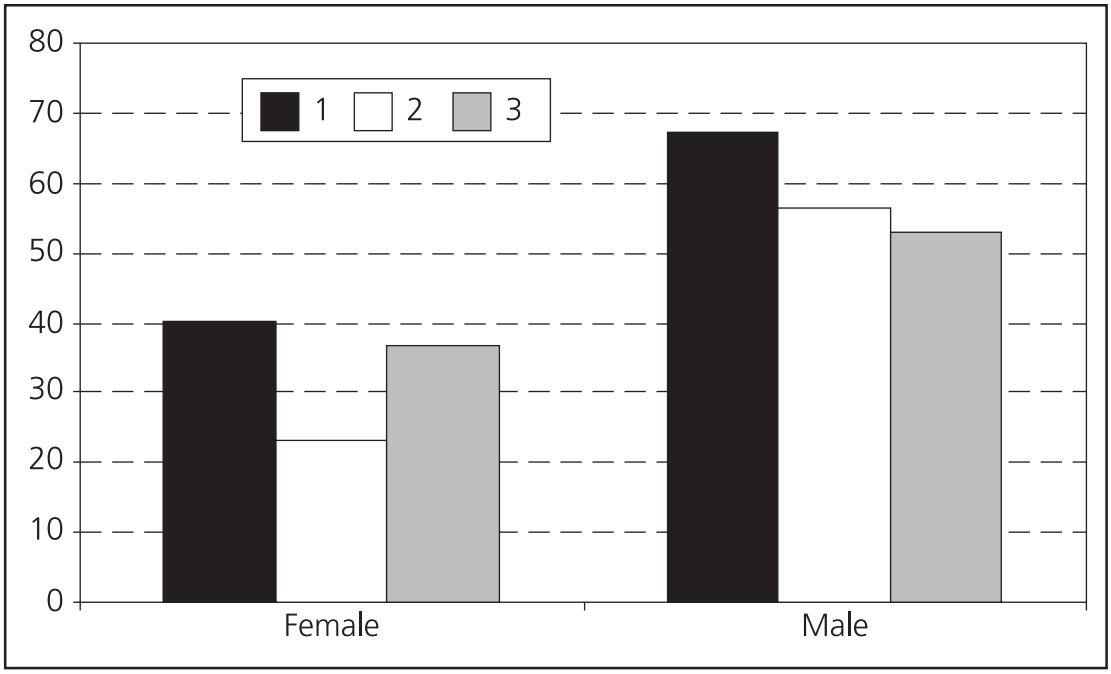
Table B.9 Health reported by partners in workless couples in 2000

Column percentages

	Clusters in 2000			All
Health status	**1**	**2**	**3**	
Female				
Good	38	45	39	41
Fairly good	32	40	34	36
Not good	29	15	28	23
Male				
Good	24	35	33	31
Fairly good	22	23	33	25
Not good	54	42	34	44
Unweighted base	*133*	*173*	*102*	*408*

Base: Cross-section. All workless couples with information on the health status of each partner.

Figure B.12 Partners in workless couples with an LSI in 2000



Turning to the couples' **human capital**, the third cluster couples are least likely to have any qualifications (Figure B.13). Women in this cluster, additionally, are least likely to have some work experience and they are most likely to have left education before they reach the age of 17 (Figure B.14). This lack of educational attainment is less evident in the first and the second cluster. Couples in the first cluster are most likely to stay in education until at least 17 years of age and couples in the second cluster are most likely to have some qualifications. Females in the first cluster are also most likely to have a job of 1-15 hours a week (Figure B.15). However, the second cluster couples are least likely to have a driving licence, while couples in the first cluster are most likely to have a driving licence and access to a vehicle (Figure B.16).

Figure B.13 Partners in workless couples with qualifications and work experience in 2000

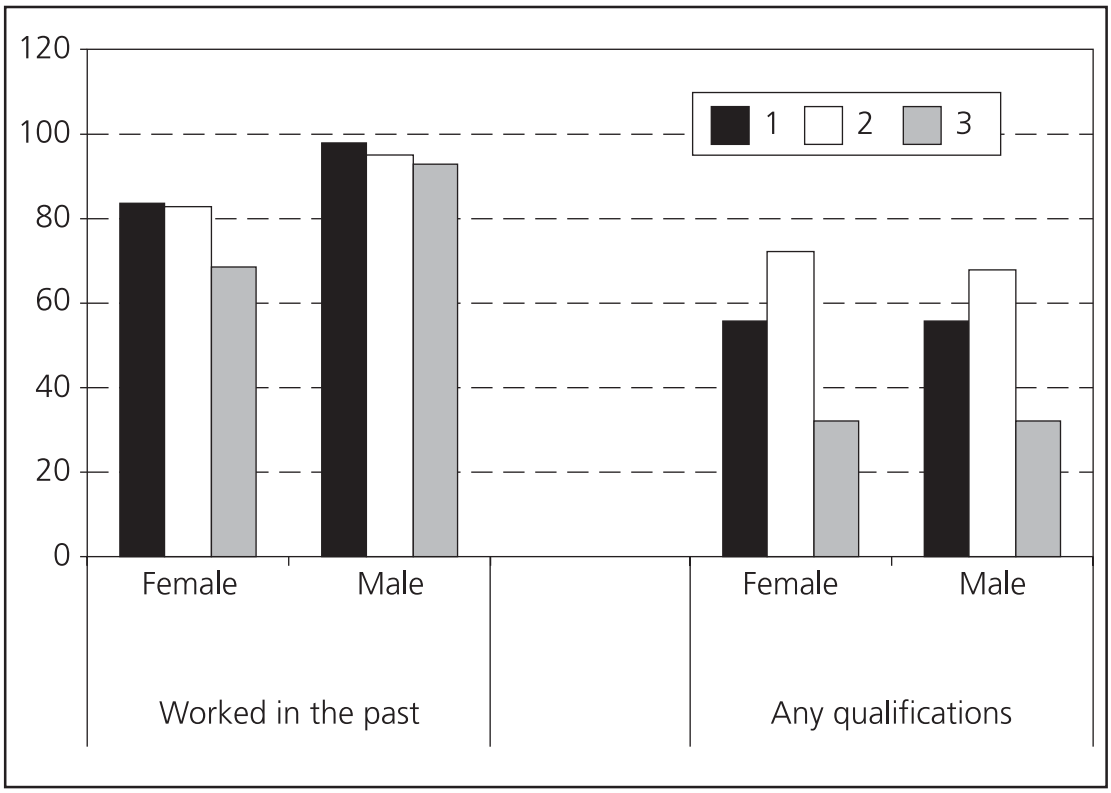


Figure B.14 Partners in workless couples in 2000, by age they left education

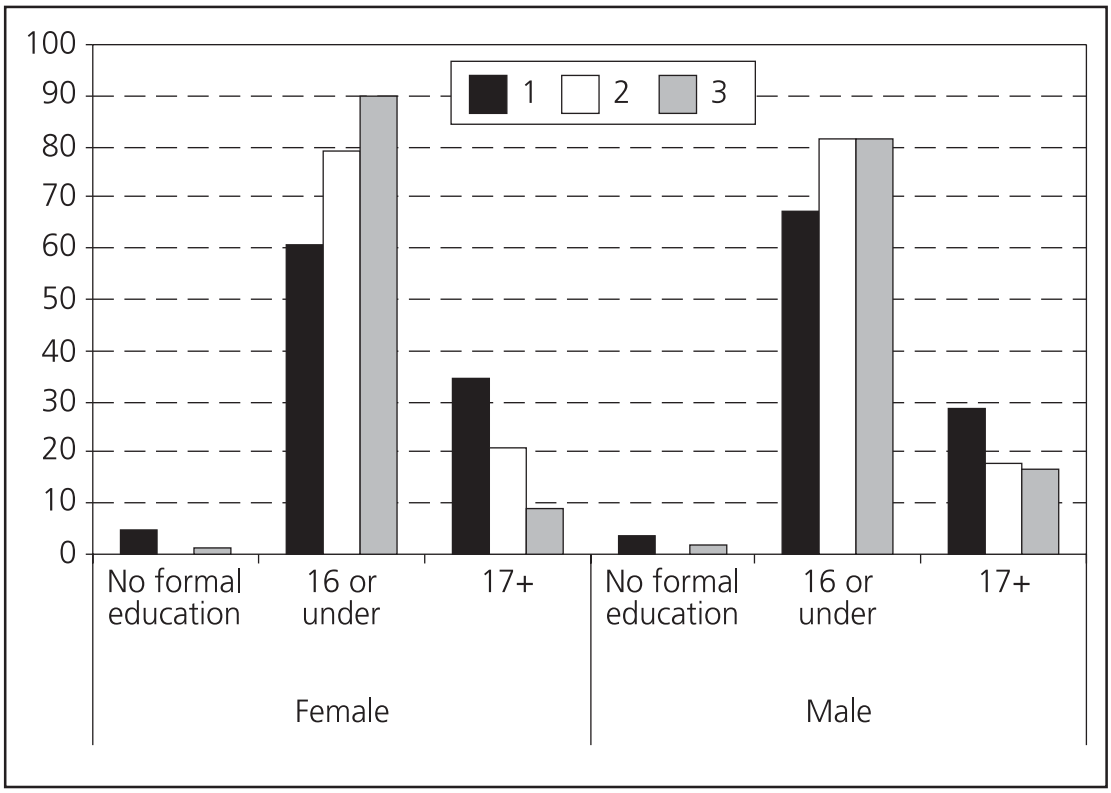


Figure B.15 Partners in workless couples working 1-15 hours a week in 2000

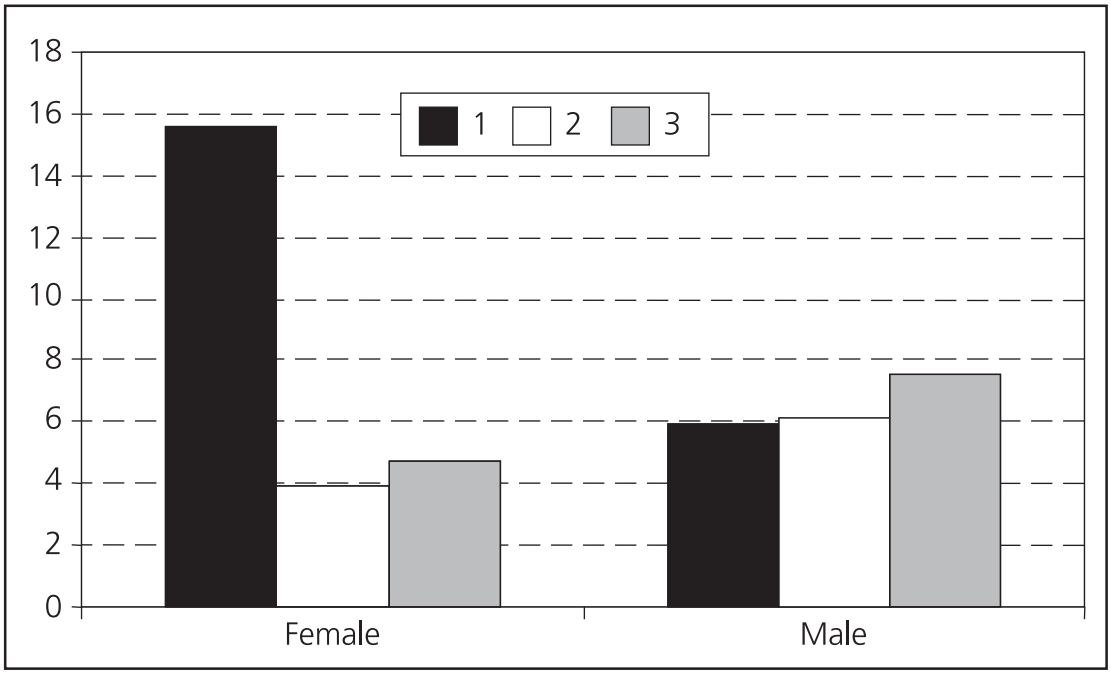
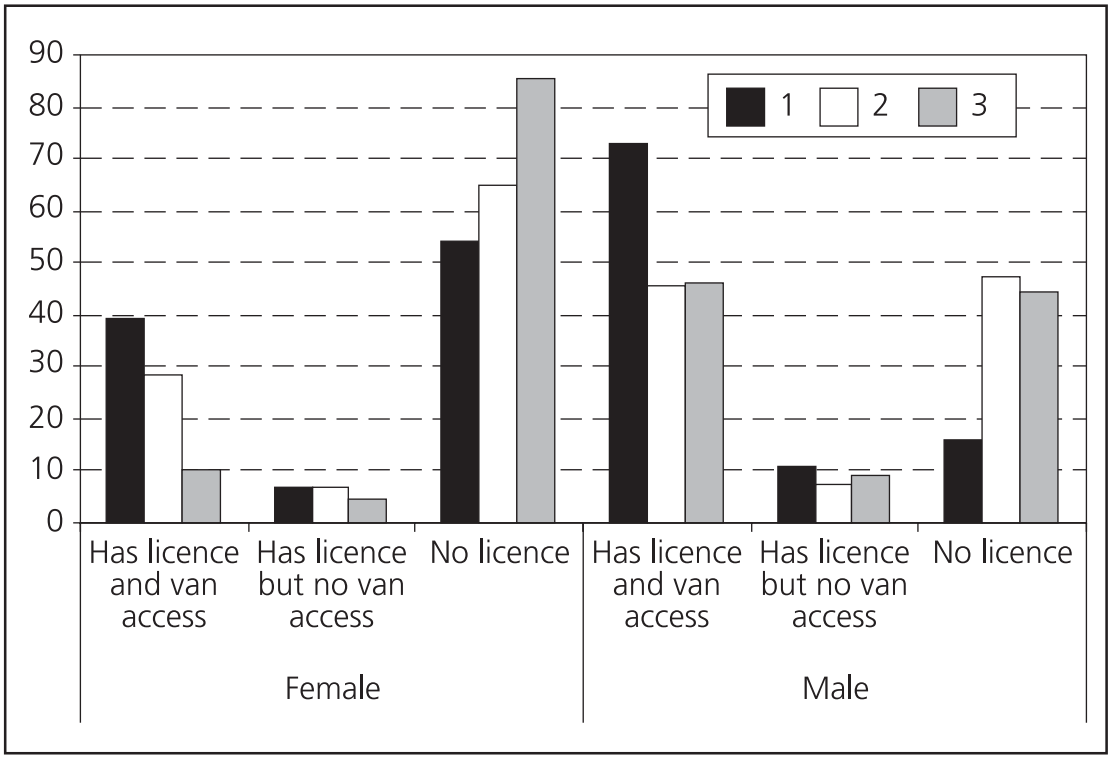


Figure B.16 Licence and vehicle access by partners in workless couples in 2000



Couples where only men say they are **looking for a job** tend to be found in the third cluster (Table B.10). The second cluster couples are most likely to postpone job search and couples in the first cluster are least likely to even plan to look for work. Focusing on the **factors preventing their job search** couples in the second cluster are most likely to mention problems with childcare and unwillingness to spend time

away from their children (Table B.11). Unlike couples in the other two clusters, they are least likely to say that they do not need to work. The first cluster couples are most likely to point to their own or a household member's illness or disability, bad transport and entering retirement as reasons for not looking for work.

Table B.10 Job search by partners in workless couples in 2000

Column percentages

	Clusters in 2000			All
Job search status	**1**	**2**	**3**	
Female looks for job, male does not	9	8	3	7
Male looks for job, female does not	12	26	31	23
Both look for job	3	8	4	5
At least one expects to look for job	35	54	39	44
Neither looks for work or expects to look for job	43	5	22	21
Unweighted base	*133*	*173*	*102*	*408*

Base: Cross-section. All workless couples with information on their job search.

Table B.11 Reasons for not looking for work given by partners in 2000

Cell percentages

	Clusters in 2000			All
Reasons for not looking for work	**1**	**2**	**3**	
Cannot afford childcare	6	12	9	9
Childcare not available	6	18	11	12
Own illness/disability	56	42	46	47
Child's illness/disability	10	11	13	11
Other household member disability	38	23	29	29
No work available	2	2	1	2
No skills/qualifications	3	5	6	5
Studying/on training scheme	3	4	1	3
Better off not working	3	7	3	5
Don't want to spend time apart from children	17	40	39	33
Would not be able to pay rent/mortgage	1	3	3	2
Bad transport	8	1	3	4
Don't need to work	12	6	13	10
No reason	1	3	1	2
Retired	6	0	1	2
Other	11	7	3	7
Unweighted base	*127*	*166*	*99*	*392*

Base: Cross-section. All workless couples where at least one partner does not look for work and gives reasons for being inactive. Since couples may report more than one reason for not looking for a job, the percentages do not add up to 100.

Regarding their **attitudes**, Table B.12 suggests that the first cluster couples are more likely than couples in the other two clusters to think that women should be able to go to work even if they have children aged under five. The second cluster couples are unlikely to think that one must work to feel a member of society; they are likely to say that everyone should be entitled to benefits. By contrast, the third cluster couples are likely to say that having a job is very important for them to feel a full member of society. However, they tend to think that the woman should stay at home with the children if they are ill or young. These couples are more likely than couples in other clusters to say that only the poorest families should be allowed social security benefits.

Table B.12 Attitudes of couples in 2000

Column percentages

	Female				Male			
	1	**2**	**3**	**All**	**1**	**2**	**3**	**All**
A person must have a job to feel a full member of society								
Agree	31	12	47	27	45	23	64	41
Uncertain	17	10	19	14	14	14	12	14
Disagree	52	78	34	59	41	62	24	46
Women have the right to choose to be supported by the state at home with their children								
Agree	50	57	77	60	33	53	64	50
Uncertain	27	32	16	26	32	32	28	31
Disagree	23	11	7	14	35	15	8	19
It is wrong for a woman with children under five years old to go out to work								
Agree	24	23	53	31	33	18	56	32
Uncertain	23	22	17	21	18	18	20	19
Disagree	53	55	30	48	49	64	25	49
Having almost any job is better than being unemployed								
Agree	59	28	68	48	59	28	70	48
Uncertain	20	25	19	22	9	17	14	14
Disagree	21	46	14	30	32	55	16	38
Only the poorest families should be allowed social security benefits								
Agree	17	12	30	18	31	7	29	20
Uncertain	22	11	19	16	14	10	18	13
Disagree	61	77	51	66	56	83	52	67
Unweighted base	*115*	*162*	*95*	*372*	*81*	*127*	*80*	*288*

Base: Cross-section. All partners in workless couples with information on their attitudes.

B.3 Clusters of workless couples in 2001

Table B.13 and Figure B.17 to Figure B.19 describe the **demographic profile** of the clusters. They suggest that the first cluster is likely to consist of couples who are 40 years of age or older; they are likely to have one child over the age of ten. These couples tend to be married and live in their own housing. In contrast, the second cluster couples are most likely to be in their early 30s and have two or three children with the youngest child aged under 11. Women in these couples are likely to be white, partners are likely to cohabit and live in the private rented sector. Couples in the third cluster tend to be in their mid- to late-30s and they are most likely to have four or more children, their youngest aged under five. Women in the third cluster are most likely to come from ethnic minorities and these families are most likely to rent from social landlords.

Table B.13 Summary of demographic characteristics of clusters in 2001

Column percentages

	Clusters in 2001			All
	1	**2**	**3**	
Median age of female	43	31	34.5	36
Median age of male	50	34	39	39
Median age of youngest child	12	3	3.5	5
Median number of children	1	2	2	2
Married	92	53	77	71
White (female)	82	86	68	81
Housing tenure				
Owner-occupation	47	21	10	27
Social rented sector	47	58	79	59
Private rented sector	7	21	11	14
Unweighted base	*108*	*165*	*76*	*349*

Base: Cross-section. All workless couples with information on their demographic characteristics.

Figure B.17 The age of partners in clusters in 2001

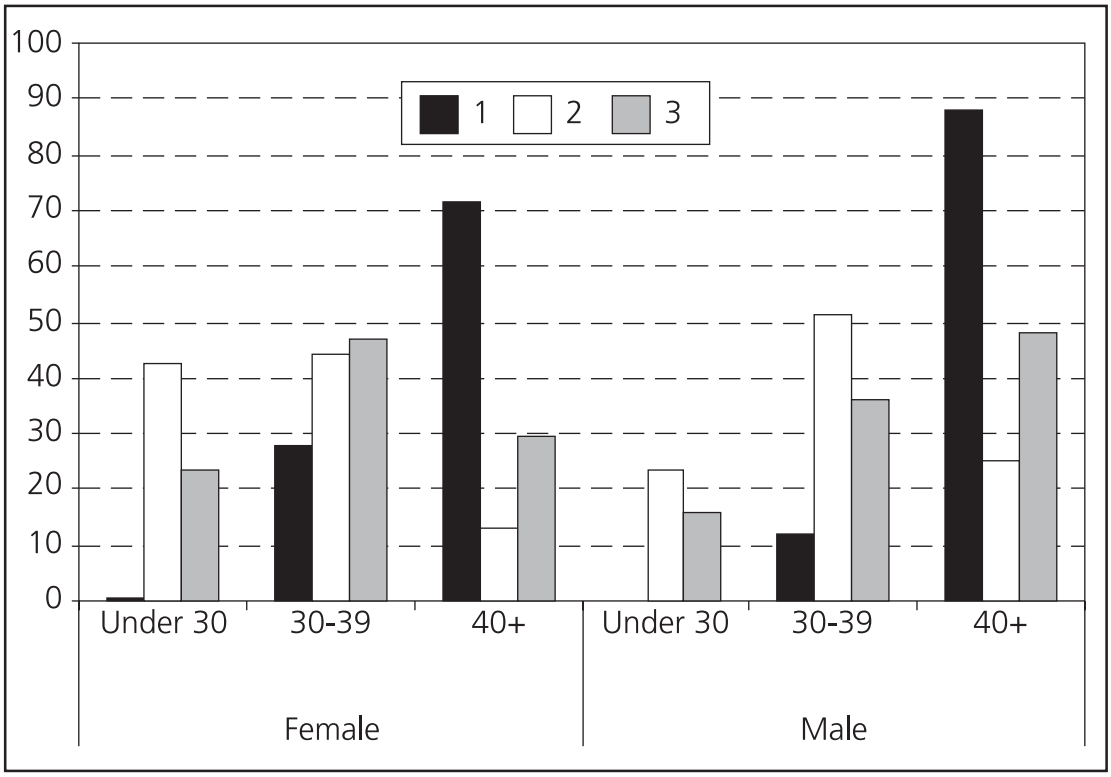


Figure B.18 The age of youngest child in clusters in 2001

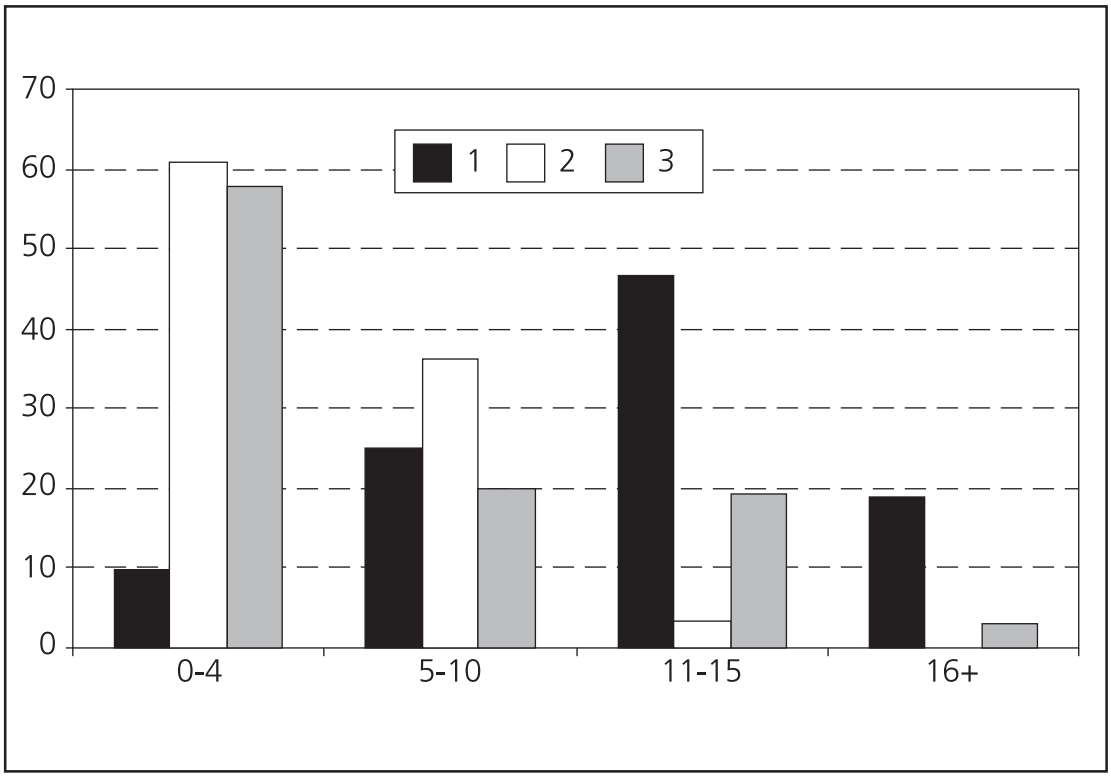
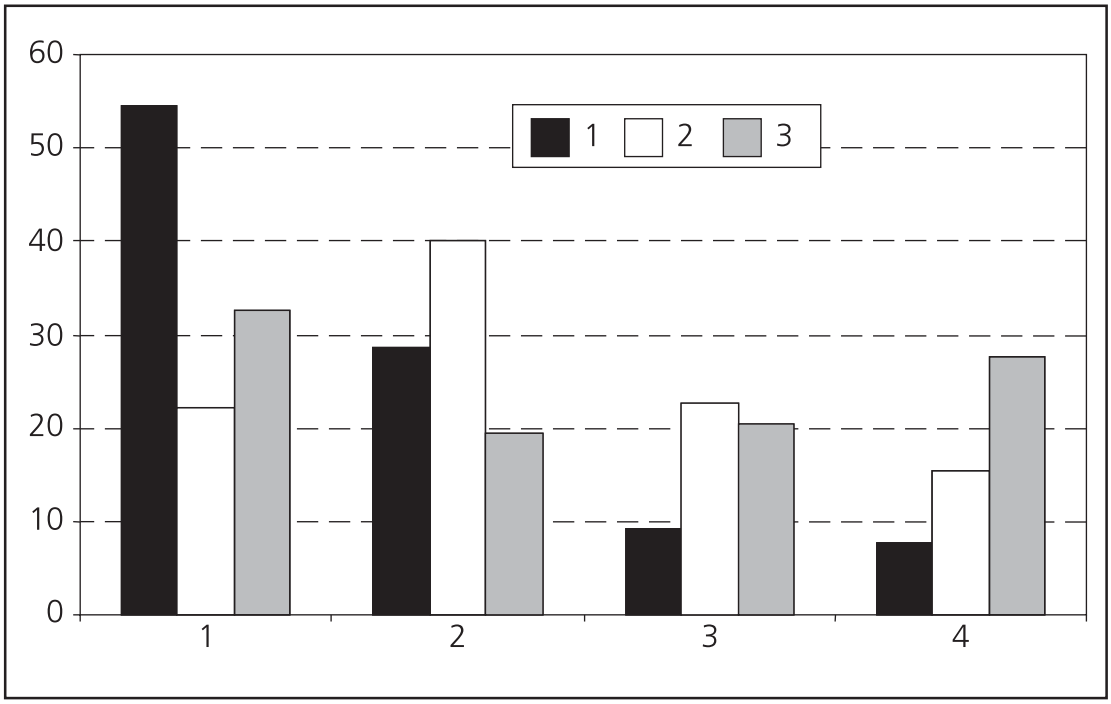


Figure B.19 Number of children in workless couples in 2001



Couples in the second cluster seem to face fewer **barriers to work** than couples in other clusters. They are least likely to be on any health-related benefit or on IS and judging by the likelihood of receiving JSA, they are most likely to look for work (Table B.14). By contrast, couples in the first cluster are most likely to be on a health-related benefit and least likely to claim JSA. Both women and men in this cluster are more likely than partners in the other clusters to report an LSI and say that their health is not good (Table B.15 and Figure B.20). Couples in the third cluster are most likely to receive benefits and tax credits and this is particularly true regarding the receipt of IS.

Table B.14 Benefits and tax credits received by workless couples in 2001

Cell percentages

	Clusters in 2001			All
	1	**2**	**3**	
IS	55	52	68	56
JSA	1	27	14	16
Health-related benefit	69	42	64	56
Any benefit at all	80	85	94	86
Unweighted base	*108*	*165*	*76*	*349*

Base: Cross-section. All workless couples with information on benefits and tax credits received. Each partner or a family may receive more than one benefit and thus appear in more than one row.

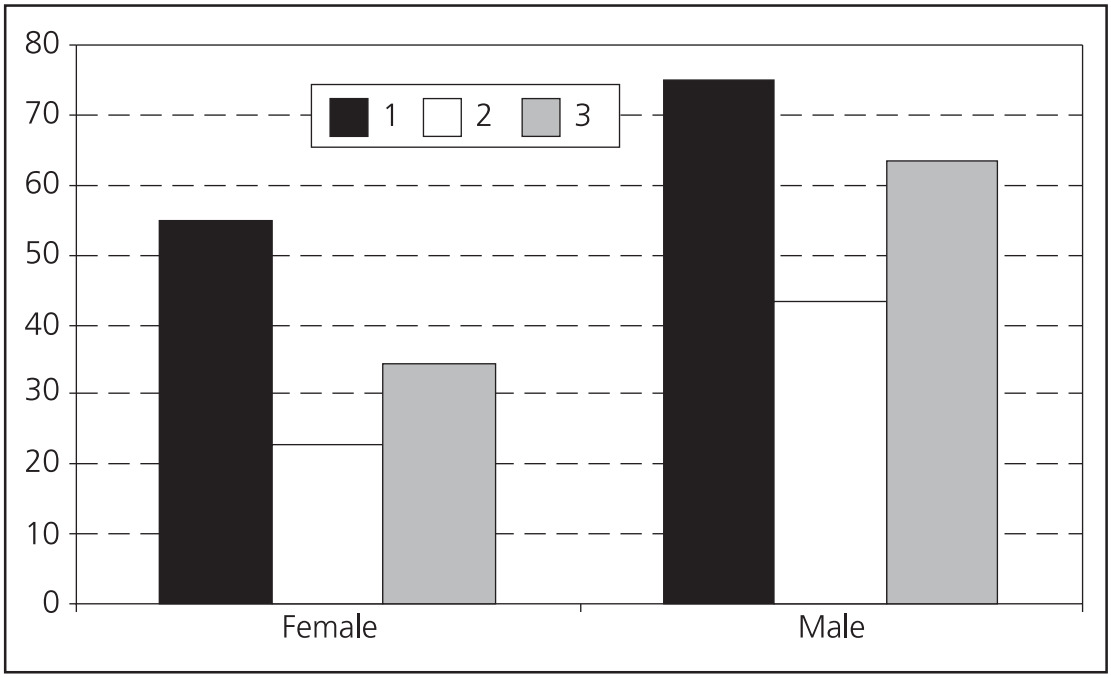
Table B.15 Health reported by partners in workless couples in 2001

Column percentages

	Clusters in 2001			All
	1	2	3	
Female				
Good	30	50	38	41
Fairly good	46	37	40	41
Not good	24	13	22	18
Male				
Good	22	41	25	31
Fairly good	21	33	22	27
Not good	58	26	53	42
Unweighted base	*108*	*165*	*76*	*349*

Base: Cross-section. All workless couples with information on the health status of each partner.

Figure B.20 Partners in workless couples with an LSI in 2001



When focusing on couples' **educational attainment and work experience**, couples in the second cluster seem to be better placed to secure a job than couples in the other clusters. They are most likely to have some qualifications and women in this cluster are most likely to have stayed in education until at least 17 years of age (Figure B.21 and Figure B.22). There seems to be little difference between couples in the first and the second clusters in their likelihood of having work experience, the length of time they stay in education, or in their current work of 1-15 hours a week (Figure B.23). However, the first cluster differs from the other two clusters where

couples' qualifications and driving skills are concerned. Compared with men in the other clusters, men in the first cluster are less likely to have any qualifications; however, men and women in the first cluster are most likely to have a driving licence and vehicle access (Figure B.24). Couples in the third cluster are least likely to have worked in the past or to work 1-15 hours a week in 2001. Compared to women in other clusters, women in the third cluster are less likely to have any qualifications and are most likely to have left education at 16 years of age or earlier. Both partners in the third cluster are least likely to have a driving licence.

Figure B.21 Partners in workless couples with qualifications and work experience in 2001

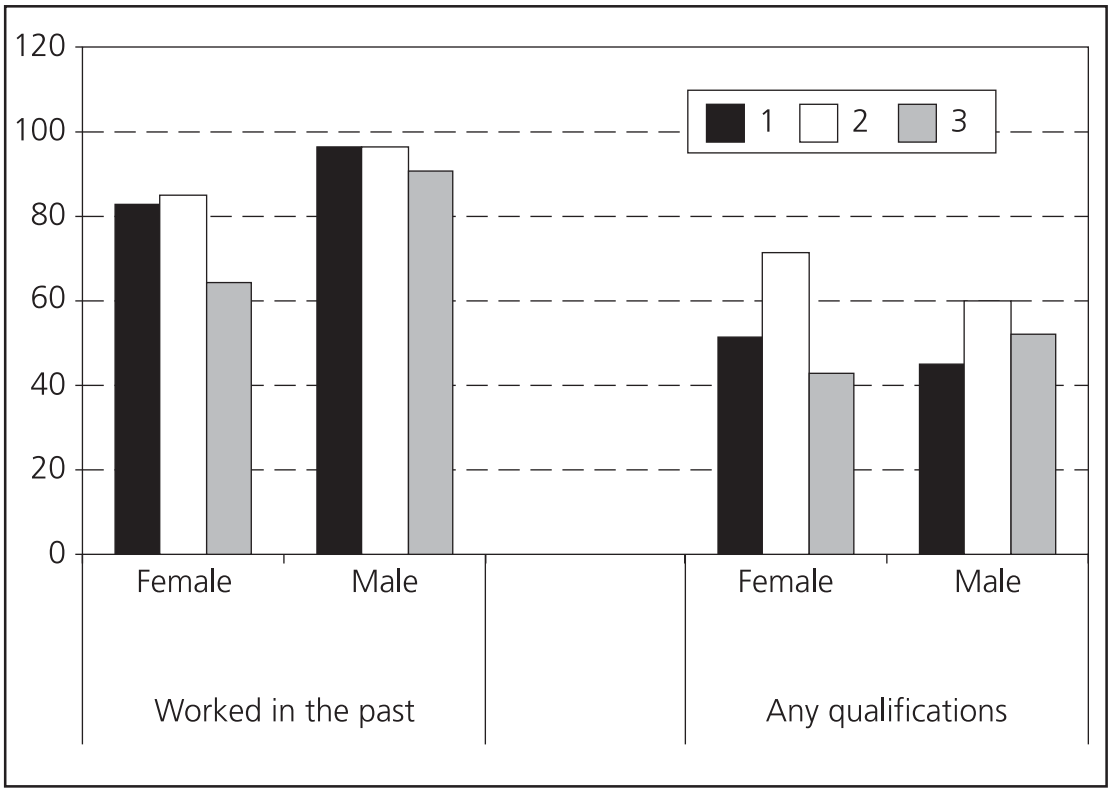


Figure B.22 Partners in workless couples in 2001, by age they left education

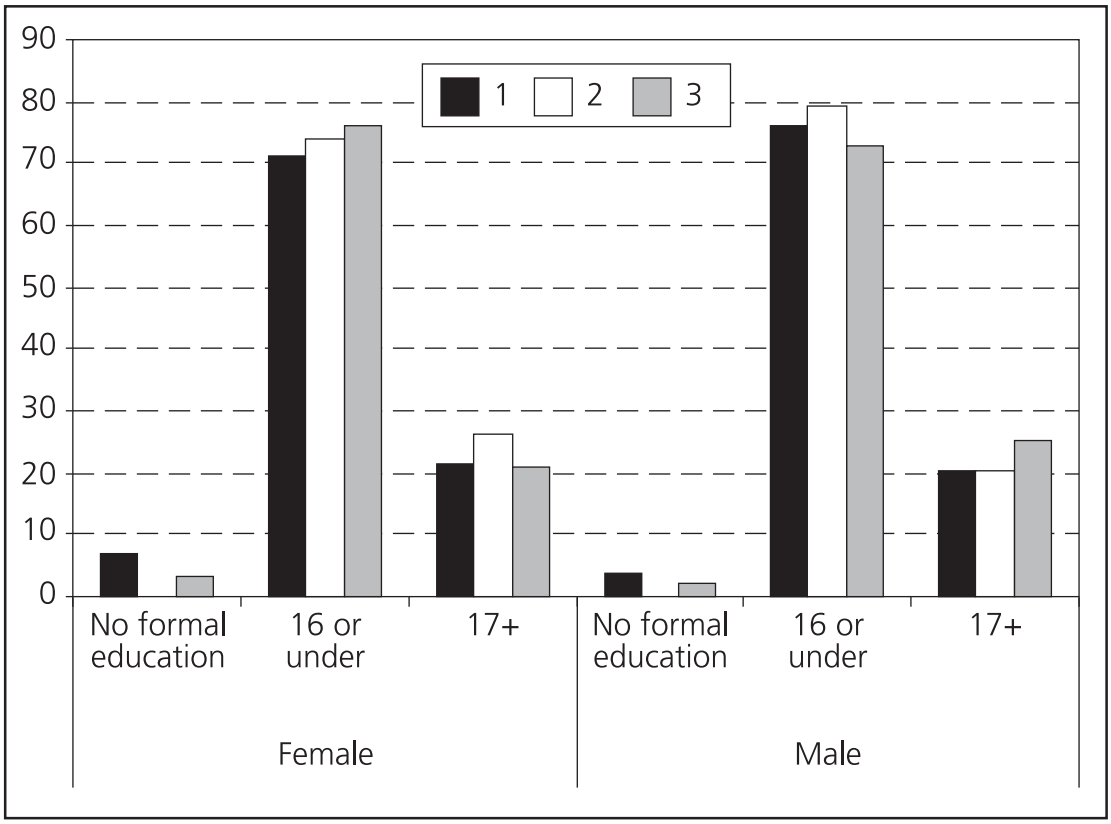


Figure B.23 Partners in workless couples working 1-15 hours a week in 2001

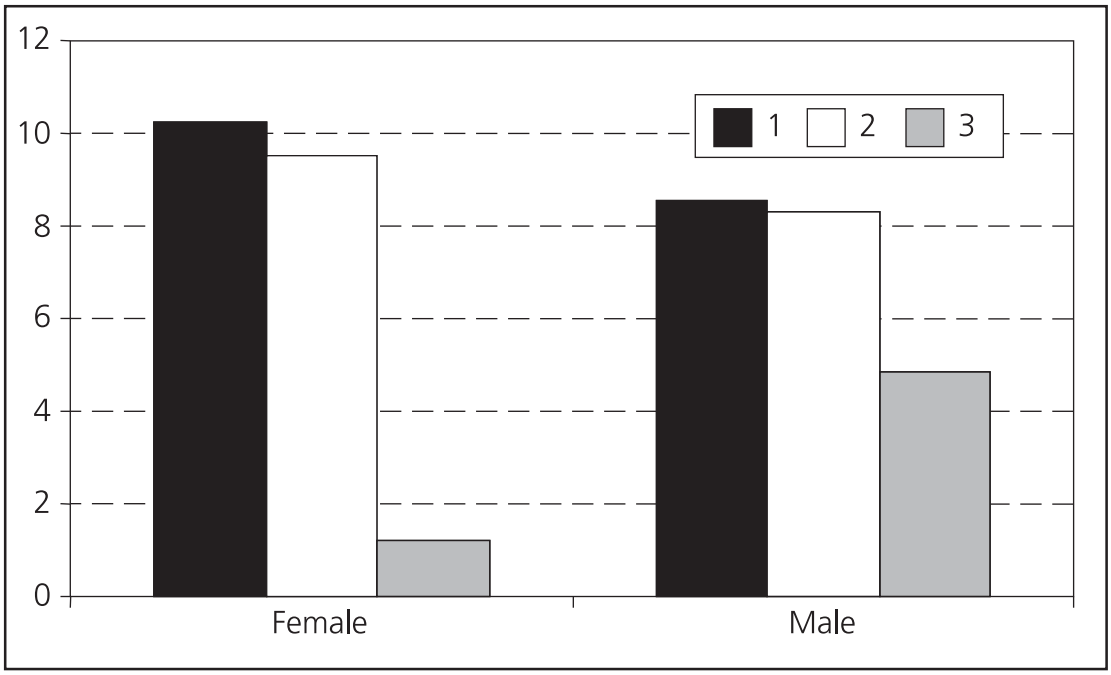
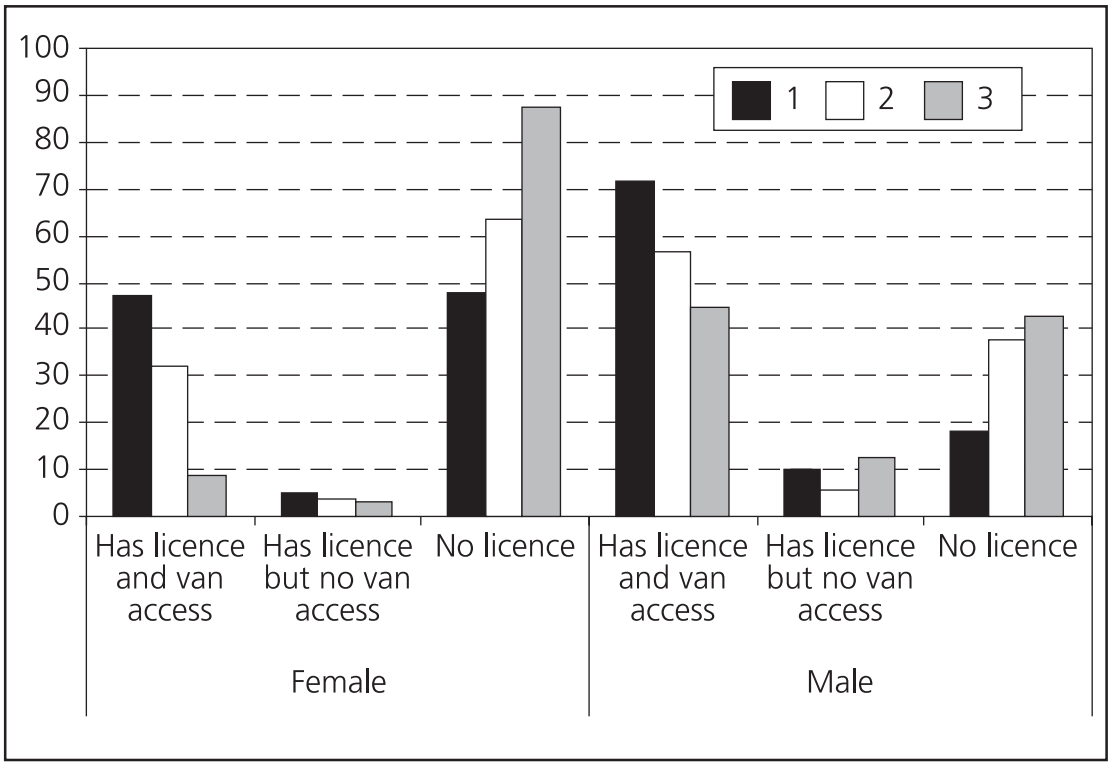


Figure B.24 Licence and vehicle access by partners in workless couples in 2001



The highest **job readiness** is seen among couples in the second cluster (Table B.16). They are most likely to say that they are looking for work or that they intend to do so in the future. Only seven per cent of couples in this cluster do not have such intentions compared with 57 per cent of couples in the first cluster. Couples in the third cluster are likely to postpone their job search and such plans may be related to the composition of their families.

Table B.16 Job search by partners in workless couples in 2001

Column percentages

	Clusters in 2001			All
Job search status	**1**	**2**	**3**	
Female looks for job, male does not	8	7	3	6
Male looks for job, female does not	6	22	18	16
Both look for job	5	8	5	7
At least one expects to look for job	24	56	55	46
Neither looks for work or expects to look for job	57	7	19	26
Unweighted base	*108*	*165*	*76*	*349*

Base: Cross-section. All workless couples with information on their job search.

Table B.17 shows that compared with couples in the other clusters, couples in the third cluster are most likely to mention problems relating to childcare as those **preventing them from looking for work**. However, there are other barriers to work among couples in this cluster. They are as likely to point to their own illness or disability as are couples in the first cluster that are shown to most likely suffer from ill-health. This finding is likely to reflect health problems experienced by men in the third cluster because Table B.17 accounts for factors mentioned by at least one partner in the couple.

Table B.17 Reasons for not looking for work given by partners in 2001

Cell percentages

	Clusters in 2001			All
Reasons for not looking for work	**1**	**2**	**3**	
Cannot afford childcare	1	8	13	7
Childcare not available	3	9	12	8
Own illness/disability	60	38	56	50
Child's illness/disability	9	14	13	12
Other household member disability	40	21	28	29
No work available	2	3	3	3
No skills/qualification	10	11	10	10
Studying/on training scheme	1	7	3	4
Better off not working	1	8	6	5
Don't want to spend time apart from children	17	52	44	39
Would not be able to pay rent/mortgage	0	1	2	1
Don't need to work	7	4	3	5
No reason	11	9	8	10
Pregnant	0	3	4	2
Retired	4	0	0	1
Bad transport links	0	1	2	1
Other reason	10	6	5	7
Unweighted Base	*107*	*155*	*76*	*338*

Base: Cross-section. All workless couples where at least one partner does not look for work and gives reasons for being inactive. Since couples may report more than one reason for not looking for a job, the percentages do not add up to 100.

Compared to couples in the other clusters, the second cluster couples are less likely to mention health problems of their own or family members but they are most likely to point to their unwillingness to spend time away from their children. These couples are also more likely than couples in the other two clusters to say that they are better off not working and that they are studying or participating in a training scheme. As might be expected, the first cluster couples are least likely to mention children-related problems as reasons for their job search inactivity. More often than couples

in the other two clusters they point to health problems or disability of their own or a household member.

The first cluster couples tend to have a positive **attitude** towards work. However, their men are less likely than men in other clusters to think that having almost any job is better than being unemployed (Table B.18). The second cluster couples are unlikely to think that one must have a job to feel a member of society; they are also least likely to say that entitlement to benefits should be restricted to the poorest families. The third cluster couples tend to say that having a job is very important for them to feel a full member of society. However, they are more likely than couples in the other two clusters to think that the woman should stay at home with the children if they are ill or young. They are likely to say that only the poorest families should be allowed social security benefits.

Table B.18 Attitudes of couples in 2001

	Female				Male			
	1	2	3	All	1	2	3	All
A person must have a job to feel a full member of society								
Agree	23	12	58	26	40	29	60	40
Uncertain	14	17	18	16	15	12	8	11
Disagree	63	71	25	58	45	59	32	48
Women have the right to choose to be supported by the state at home with their children								
Agree	49	62	77	62	39	64	65	58
Uncertain	26	27	20	25	26	16	24	21
Disagree	25	11	4	13	35	20	11	21
It is wrong for a woman with children under five years old to go out to work								
Agree	22	17	59	29	27	23	37	28
Uncertain	26	27	18	25	25	17	28	22
Disagree	52	56	23	47	48	59	34	50
Having almost any job is better than being unemployed								
Agree	42	31	83	47	33	69	47	42
Uncertain	21	25	10	21	14	14	15	21
disagree	37	44	7	32	53	17	38	37
Only the poorest families should be allowed social security benefits								
agree	13	9	34	16	20	5	26	14
uncertain	12	13	19	14	14	14	15	14
disagree	75	78	48	70	66	82	58	71
Unweighted base	87	157	74	318	56	108	61	225

B.4 Clusters of workless couples in 2002

Examination of couples' **demographic profile** shows that the first cluster mainly consists of couples in their 40s, the oldest among the population of workless couples in 2002 (Table B.19 and Figure B.25) They are likely to have one or two children with their youngest being older than ten years of age (Figure B.26 and Figure B.27). These couples are more likely to be married and live in owner-occupation than couples in the other clusters. The second cluster tends to group together the youngest couples with many children (four or more) and their youngest child is most likely to be aged under five. Women in these couples are most likely to be white, they tend to cohabit with their partners and rent from private landlords. Men and women in the third cluster are likely to be slightly older than men and women in the second cluster, they are most likely to have three children and their youngest child is likely to be aged under 11. These couples tend to live in social housing and women in this cluster are more likely to come from ethnic minorities than women in any of the other clusters.

Table B.19 Summary of demographic characteristics of clusters in 2002

Column percentages

	Clusters in 2002			All
	1	2	3	
Median age of female	39.5	27	37.5	35
Median age of male	45	31	40	39
Median age of youngest child	9	1	5	5
Median number of children	2	2	2	2
Married	91	36	77	70
White (female)	86	90	76	85
Housing tenure				
Owner-occupation	58	11	18	33
Social rented sector	33	70	73	54
Private rented sector	9	19	9	12
Unweighted base	*142*	*121*	*78*	*341*

Base: Cross-section. All workless couples with information on their demographic characteristics.

Figure B.25 The age of partners in clusters in 2002

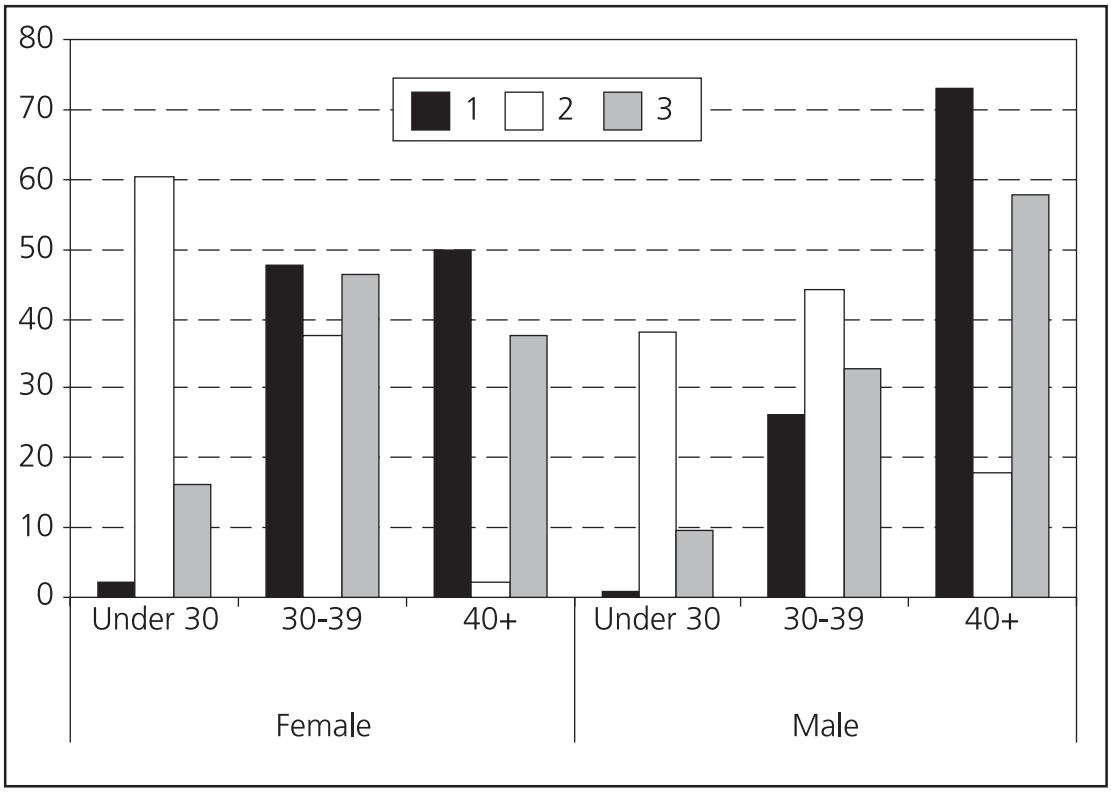


Figure B.26 The age of youngest child in clusters in 2002

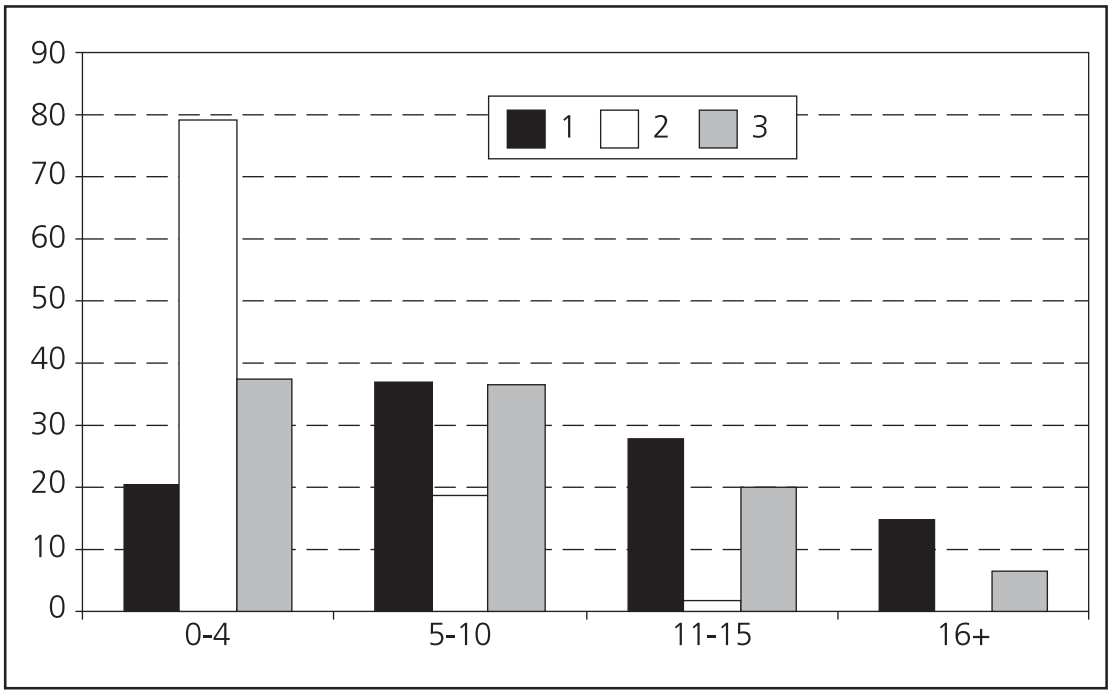
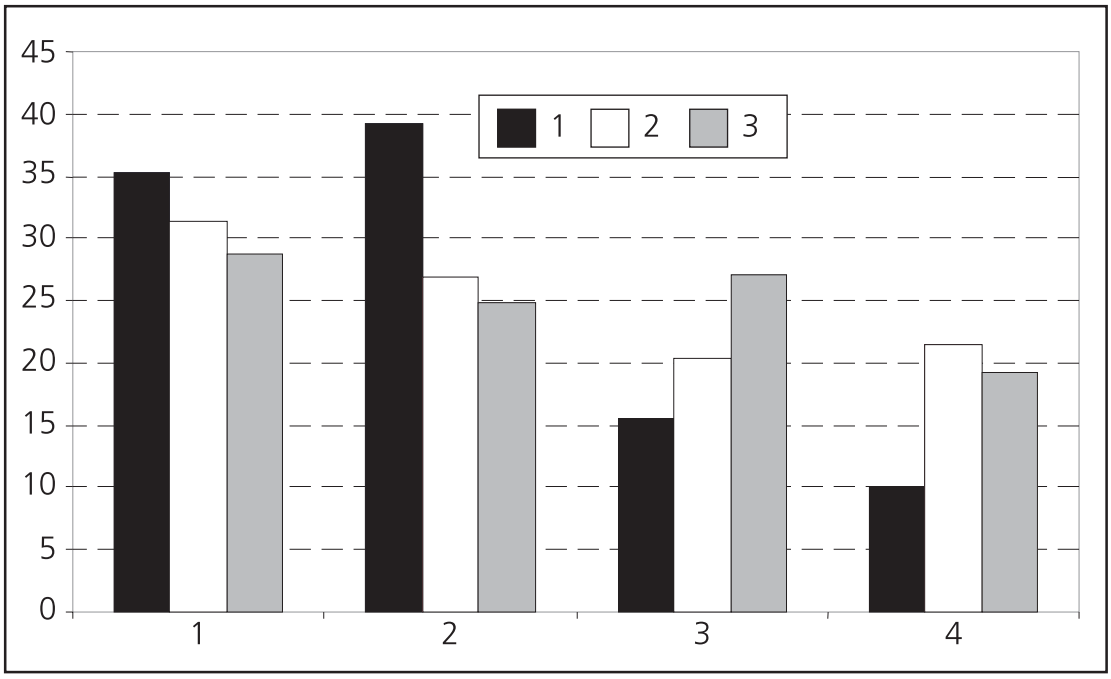


Figure B.27 Number of children in workless couples in 2002



Regarding **barriers to work**, couples in the first cluster are least likely to be on any benefit, particularly on IS (Table B.20). Couples in the second cluster are most likely to claim JSA and least likely to be on a health-related benefit. The third cluster tends to bring together couples that are most likely to claim benefits, particularly IS and health-related benefits. Table B.21 and Figure B.28 support this grouping by showing that men and women in the third cluster are most likely to report poor health and an LSI.

Table B.20 Benefits and tax credits received by workless couples in 2002

Cell percentages

	Clusters in 2002			All
At least one spouse receives	**1**	**2**	**3**	
IS	42	60	71	55
JSA	12	22	16	16
Health-related benefit	50	40	63	49
Any benefit at all	71	93	96	84
Unweighted base	*142*	*121*	*78*	*341*

Base: Cross-section. All workless couples with information on benefits and tax credits received. Each partner or a family may receive more than one benefit and thus appear in more than one row.

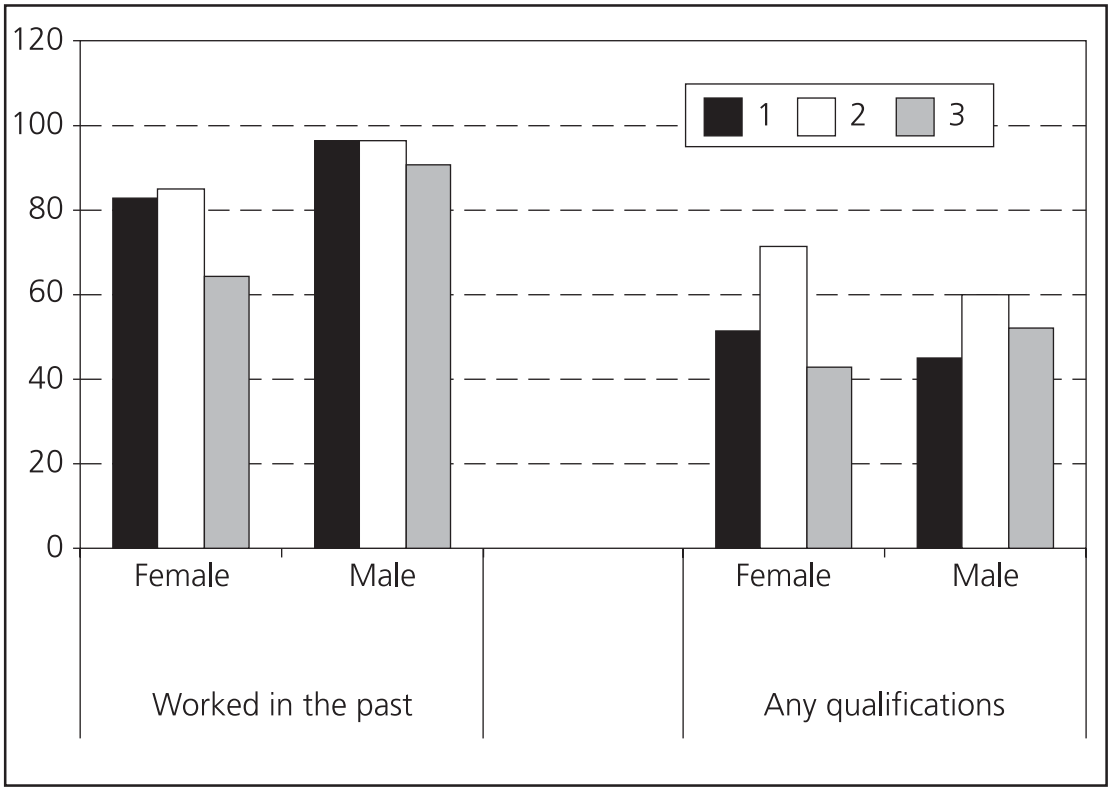
Table B.21 Health reported by partners in workless couples in 2002

Column percentages

	Clusters in 2002			All
	1	2	3	
Female				
Good	47	44	37	44
Fairly good	26	41	28	32
Not good	27	15	35	25
Male				
Good	38	40	38	39
Fairly good	26	32	12	24
Not good	36	28	50	37
Unweighted base	*142*	*121*	*78*	*341*

Base: Cross-section. All workless couples with information on the health status of each partner.

Figure B.28 Partners in workless couples with an LSI in 2002



Couples in the first cluster are more likely to have some **qualifications and work experience** than couples in the other two clusters (Figure B.29). They are also most likely to be in work of 1-15 hours a week, stay in education until they are at least 17 years old and to have a driving licence and access to a vehicle (Figure B.30 to Figure

B.32). Men and women in the third cluster are least likely to have any qualification and work experience. They are as likely to have left education at 16 years of age or earlier as are men and women in the second cluster but men in the second cluster are less likely to have a driving licence than men in other clusters.

Figure B.29 Partners in workless couples with qualifications and work experience in 2002

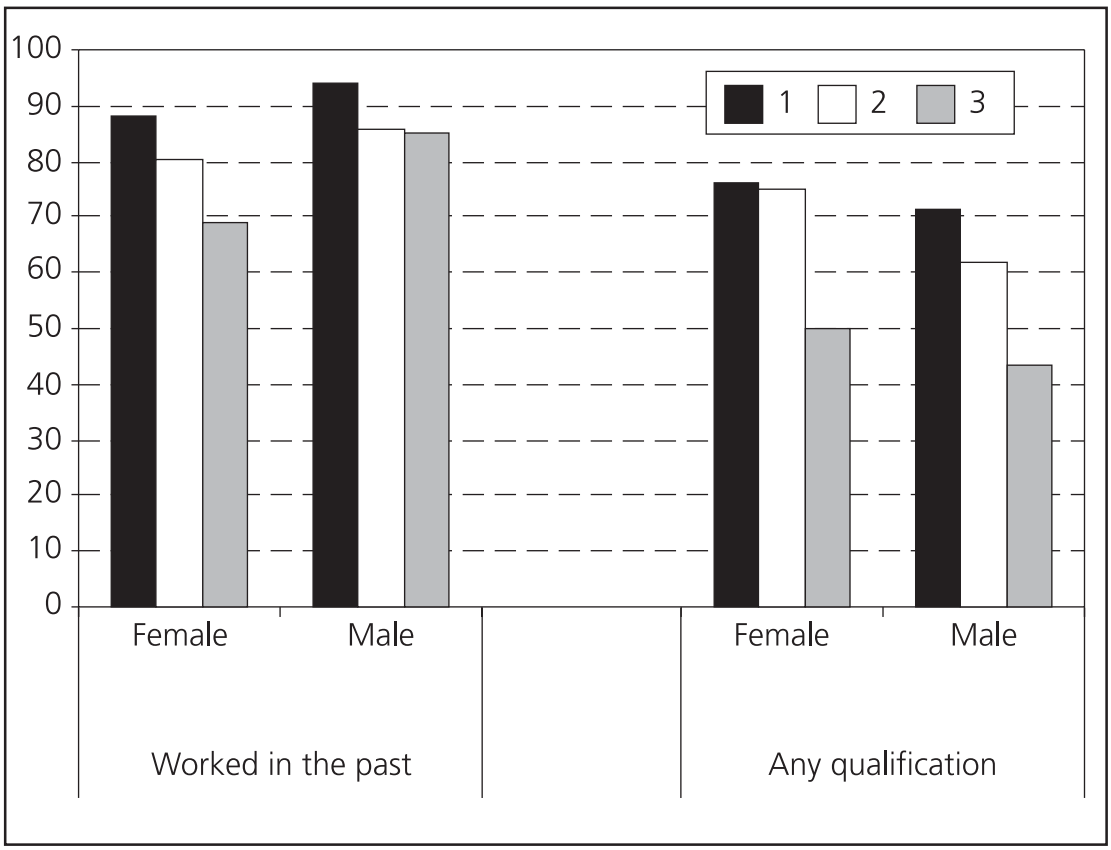


Figure B.30 Partners in workless couples working 1-15 hours a week in 2002

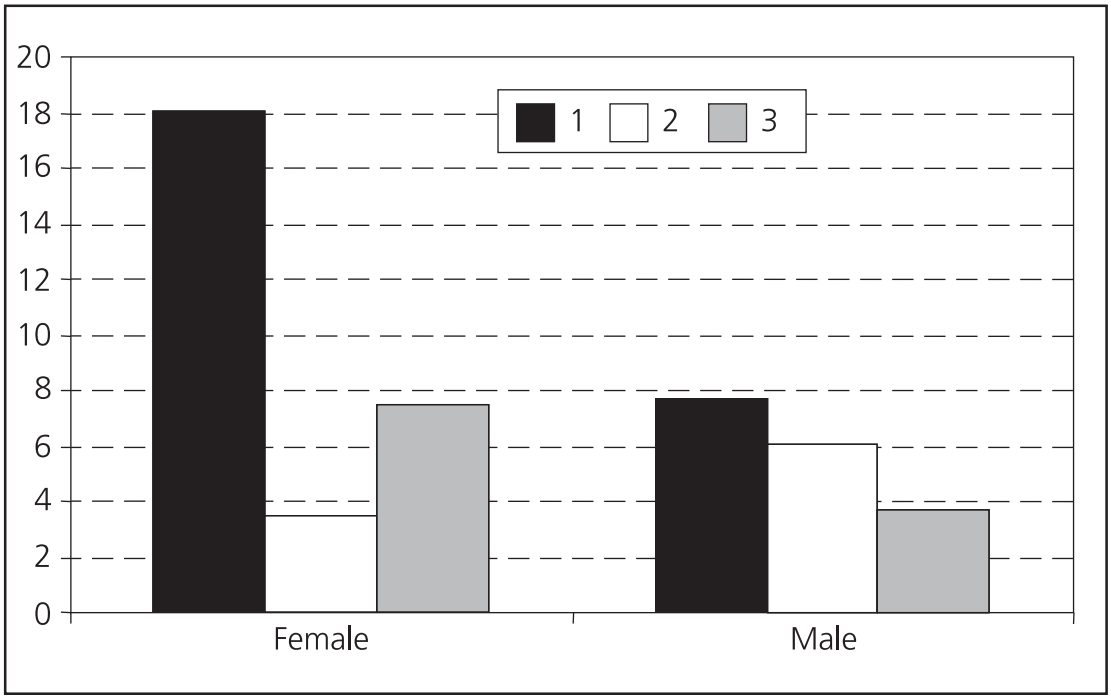


Figure B.31 Partners in workless couples in 2002, by age they left education

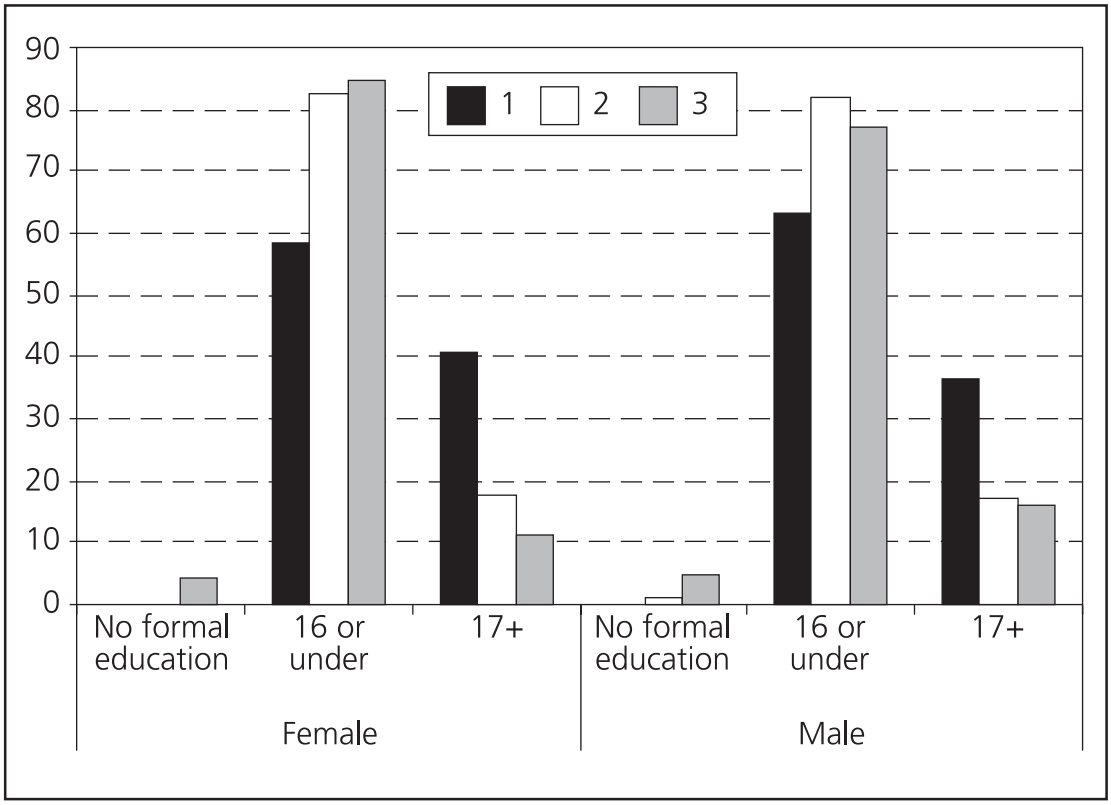
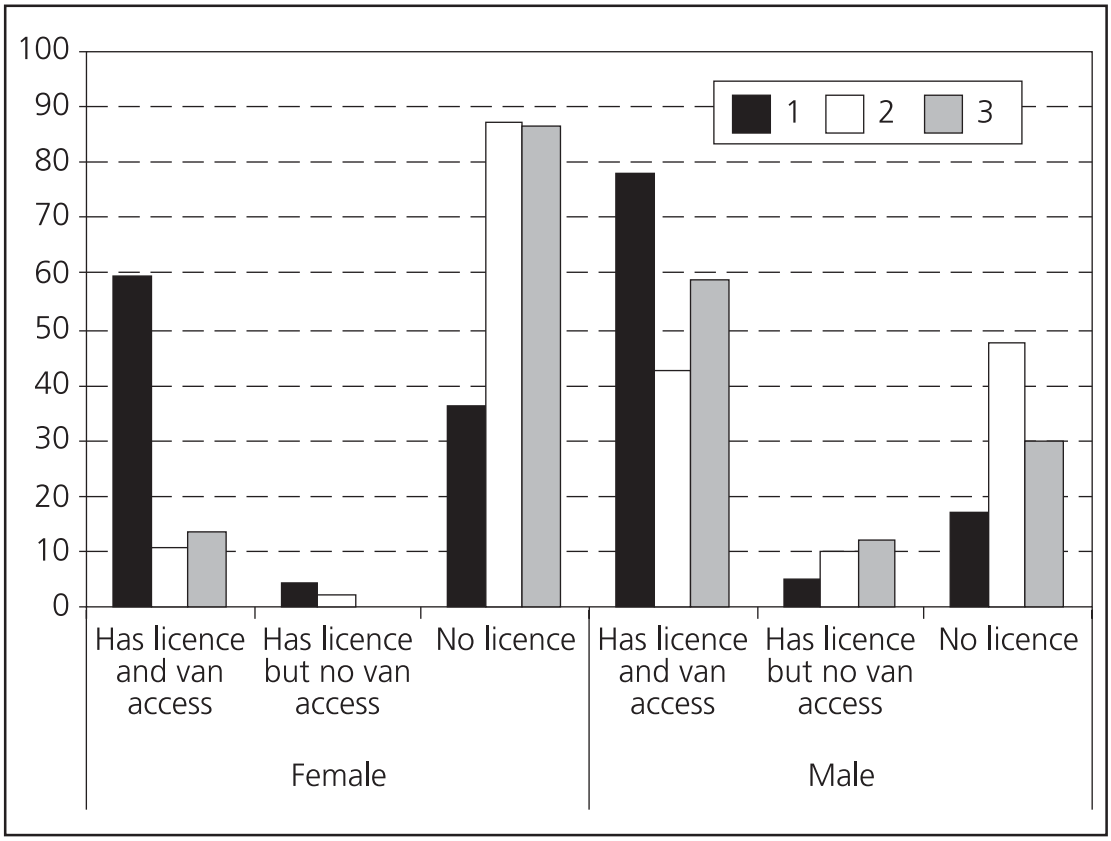


Figure B.32 Licence and vehicle access by partners in workless couples in 2002



Compared with the other clusters, the third cluster is most likely to consist of couples where only one partner, usually the man, is **looking for work** (Table B.22). Couples in the second cluster are most likely to postpone their job search. Couples in the first cluster are least likely to say they are looking for a job, although the proportion of couples that say they have no intention to look for work is similar in the first and the third clusters.

Table B.22 Job search by partners in workless couples in 2002

Column percentages

	Clusters in 2002			All
Job search status	**1**	**2**	**3**	
Female looks for job, male does not	7	8	9	8
Male looks for job, female does not	19	18	26	20
Both look for job	4	7	0	4
At least one expects to look for job	29	61	26	39
Neither looks for work or expects to look for job	41	6	39	29
Unweighted base	*142*	*121*	*78*	*341*

Base: Cross-section. All workless couples with information on their job search.

When asked about the **reasons for not looking for work**, couples in the second cluster are more likely to point to problems with childcare and their unwillingness to spend time away from the children than couples in the other two clusters (Table B.23). Couples in the third cluster are most likely to point to health problems – their own or a household member's. The first cluster couples are most likely to say that they do not look for work because they do not need to work.

Table B.23 Reasons for not looking for work

Cell percentages

	Clusters in 2002			All
Reasons for not looking for work	**1**	**2**	**3**	
Cannot afford childcare	4	12	11	8
Childcare not available	2	8	4	4
Own illness/disability	41	41	56	45
Child's illness/disability	7	13	8	9
Other household member disability	26	14	32	24
No work available	2	0	2	1
No skills/qualification	2	4	6	3
Studying/on training scheme	4	6	2	4
Better off not working	7	8	5	7
Don't want to spend time apart from children	31	51	34	38
Would not be able to pay rent/mortgage	1	2	2	1
Bad transport	1	1	1	1
Don't need to work	16	1	2	8
No reason	13	11	11	12
Pregnant	0	3	0	1
Retired	2	0	1	1
Other	9	7	9	8
Unweighted Base	*136*	*115*	*78*	*329*

Base: Cross-section. All workless couples where at least one partner does not look for work and gives reasons for being inactive. Since couples may report more than one reason for not looking for a job, the percentages do not add up to 100.

Regarding their **attitudes**, the first cluster women are less likely than women in other clusters to think that one must have a job to feel a member of society (Table B.24). However, they do not tend to think that they should stay at home with the children if they are ill or young. Men in the second cluster are more likely than men in the other two clusters to think that having almost any job is better than being unemployed. Additionally, couples in the second cluster are least likely to think that only the poorest families should be entitled to social security benefits. The third cluster couples tend to attach a great value to having a job. However, they are more likely than couples in the other two clusters to think that the woman should stay at home with the children if they are ill or young. They are likely to say that only the poorest families should be allowed social security benefits.

Table B.24 Attitudes of couples in 2002

	Female				Male			
	1	2	3	All	1	2	3	All
A person must have a job to feel a full member of society								
Agree	14	16	61	26	36	32	49	38
Uncertain	13	16	11	14	9	21	8	13
Disagree	73	68	28	60	55	47	43	49
Women have the right to choose to be supported by the state at home with their children								
Agree	51	73	76	64	44	53	69	54
Uncertain	32	24	19	26	33	37	23	31
Disagree	18	4	5	10	23	10	8	15
It is wrong for a woman with children under five years old to go out to work								
Agree	12	17	66	27	26	11	50	28
Uncertain	18	11	13	14	19	13	27	19
Disagree	70	72	22	59	56	76	23	54
Having almost any job is better than being unemployed								
Agree	22	32	72	37	49	33	52	45
Uncertain	25	19	13	20	20	19	22	20
Disagree	53	49	15	43	31	47	27	35
Only the poorest families should be allowed social security benefits								
Agree	9	3	39	14	12	5	37	16
Uncertain	16	11	20	15	9	8	25	13
Disagree	75	86	41	71	79	86	38	70
Unweighted base	*132*	*118*	*76*	*326*	*79*	*74*	*58*	*211*

Base: Cross-section. All partners in workless couples with information on their attitudes.

B.5 Clusters of workless couples in 2003

According to Table B.25 and Figure B.33 that describe the **demographic profile** of the 2003 cohort, couples in the first cluster are more likely than couples in the other clusters to be in their mid-40s (women) and early 50s (men). They are most likely to be married and have one child over the age of ten (Figure B.34 and Figure B.35). Couples in the second cluster are most likely to be in their 30s and have three or more children, the youngest child aged not more than ten. Women in the second cluster are most likely to be white, they tend to cohabit with their partners and live in the social rented sector. Women in the third cluster, by contrast, are most likely to come from ethnic minorities, have two children and live in owner-occupation. They are twice as likely to be married as are women in the second cluster but otherwise, the two clusters do not differ greatly in their demographic characteristics.

Table B.25 Summary of demographic characteristics of clusters in 2003

Column percentages

	Clusters in 2003			All
	1	2	3	
Median age of female	44	30	33	35
Median age of male	52	35	36.5	38.5
Median age of youngest child	13	3	3	5
Median number of children	1	2	2	2
Married	92	43	87	70
White (female)	89	91	62	83
Housing tenure				
Owner-occupation	36	4	57	27
Social rented sector	53	84	27	60
Private rented sector	12	12	16	13
Unweighted base	*92*	*148*	*78*	*318*

Base: Cross-section. All workless couples with information on their demographic characteristics.

Figure B.33 The age of partners in clusters in 2003

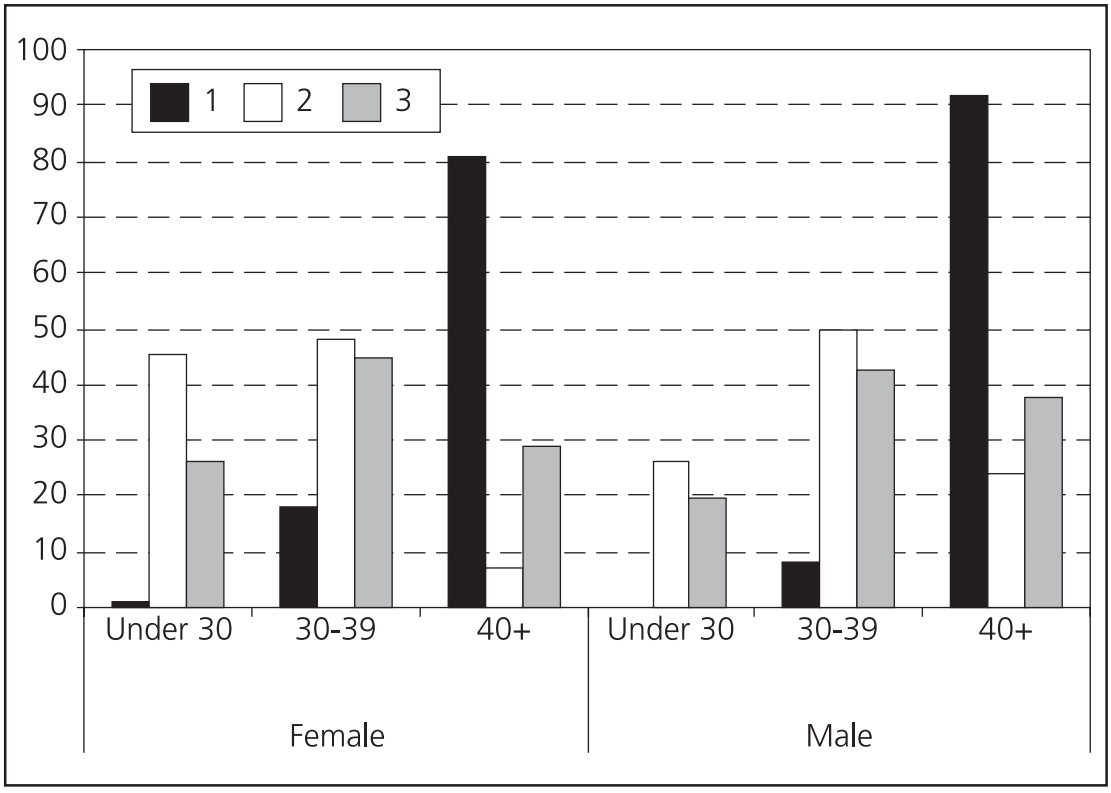


Figure B.34 The age of youngest child in clusters in 2003

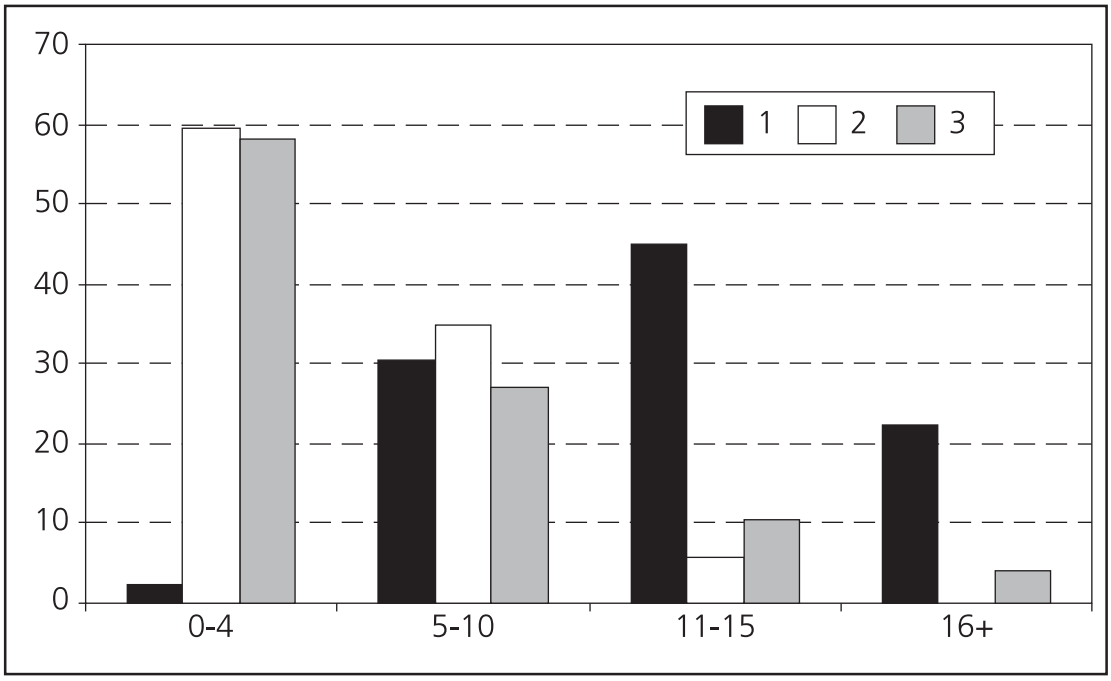
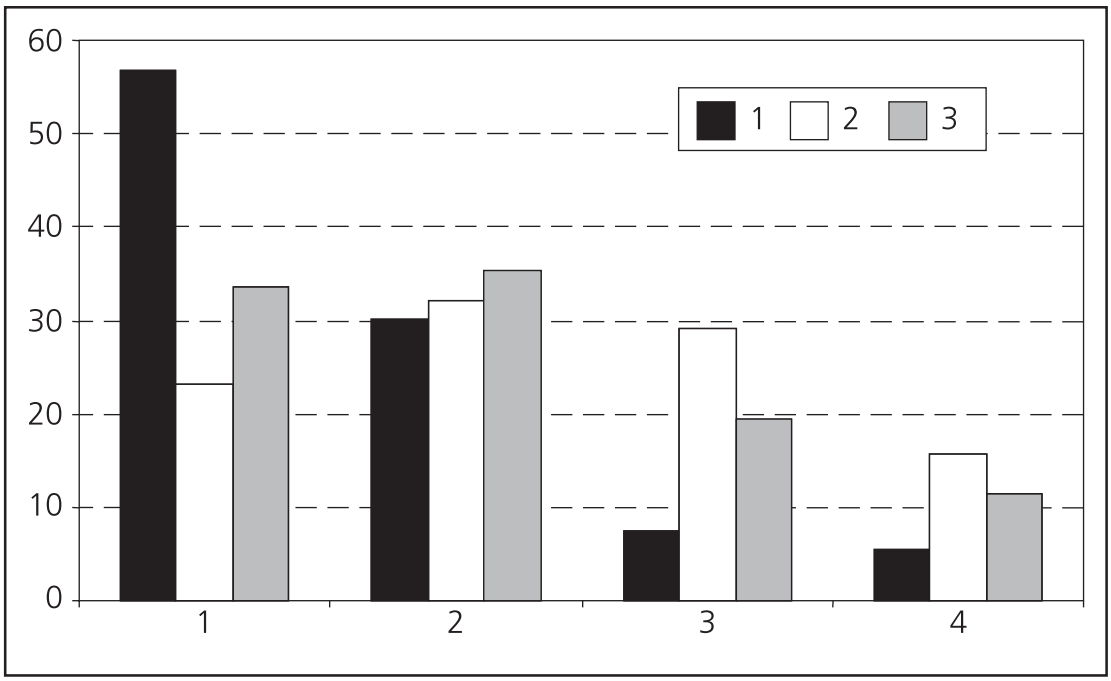


Figure B.35 Number of children in workless couples in 2003



The greatest difference between the two clusters is observed with regard to their benefit and tax credit receipts status (Table B.26). While couples in the second cluster are most likely to receive benefits, particularly IS, couples in the third cluster are least likely to be on benefits, including IS and any health-related benefit. Moreover, couples in the third cluster are most likely to have at least one JSA claimant. These are also the healthiest couples (Table B.27). Compared with couples in the other two clusters, couples in the first cluster are most likely to be on a health-

related benefit and this finding is supported by statistics on couples' health status. Ill-health seems to be a **barrier to work** among the first cluster couples. Women in the first cluster are most likely to say their health is not good and men in this cluster are less likely to say their health is good than men in the other clusters. Both men and women in the first cluster are most likely to report an LSI (Figure B.36).

Table B.26 Benefits and tax credits received by workless couples in 2003

Cell percentages

	Clusters in 2003			All
At least one spouse receives	**1**	**2**	**3**	
IS	59	70	19	54
JSA	6	22	25	18
Health-related benefit	72	52	19	50
Any benefit at all	90	99	78	91
Unweighted base	*92*	*148*	*78*	*318*

Base: Cross-section. All workless couples with information on benefits and tax credits received. Each partner or a family may receive more than one benefit and thus appear in more than one row.

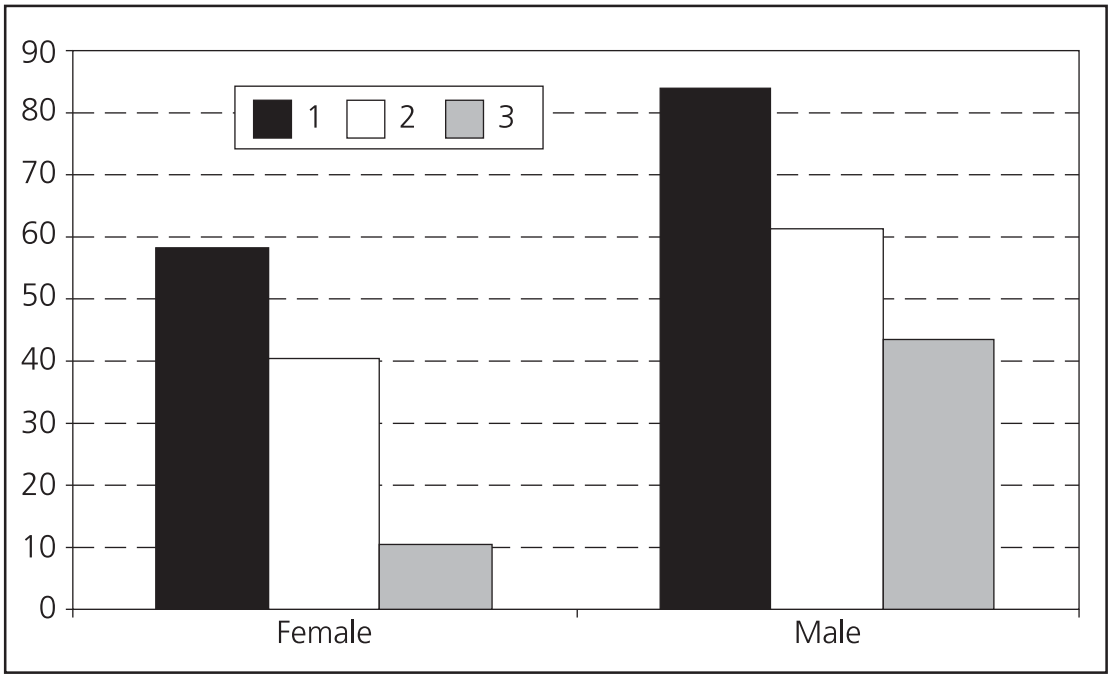
Table B.27 Health reported by partners in workless couples in 2003

Column percentages

	Clusters in 2003			All
At least one spouse receives	**1**	**2**	**3**	
Female				
Good	35	51	73	51
Fairly good	26	32	24	28
Not good	39	17	3	21
Male				
Good	23	35	47	34
Fairly good	41	27	29	32
Not good	36	37	23	34
Unweighted base	*92*	*148*	*78*	*318*

Base: Cross-section. All workless couples with information on the health status of each partner.

Figure B.36 Partners in workless couples with an LSI in 2003



The first cluster couples are more likely to have some **work experience** than couples in the other clusters (Figure B.37). Moreover, even though women in the first cluster are less likely to have any **qualification** than women in the other clusters, they are most likely to work 1-15 hours a week (Figure B.38). The third cluster couples are least likely to have worked in the past but their men are more likely to work 1-15 hours a week than men in other clusters, and compared with women in other clusters, their women are more likely to have some qualifications and also a driving licence and vehicle access. Additionally, men and women in the third cluster are most likely to stay in education until they reach at least 17 years of age (Figure B.39 and Figure B.40). Compared with couples in the other clusters, both men and women in the second cluster are least likely to be in work of 1-15 hours a week. Men in the second cluster appear to be less qualified than men in other clusters and Figure B.39 shows that couples in this cluster tend to leave education relatively early. They are also least likely to have a driving licence.

Figure B.37 Partners in workless couples with qualifications and work experience in 2003

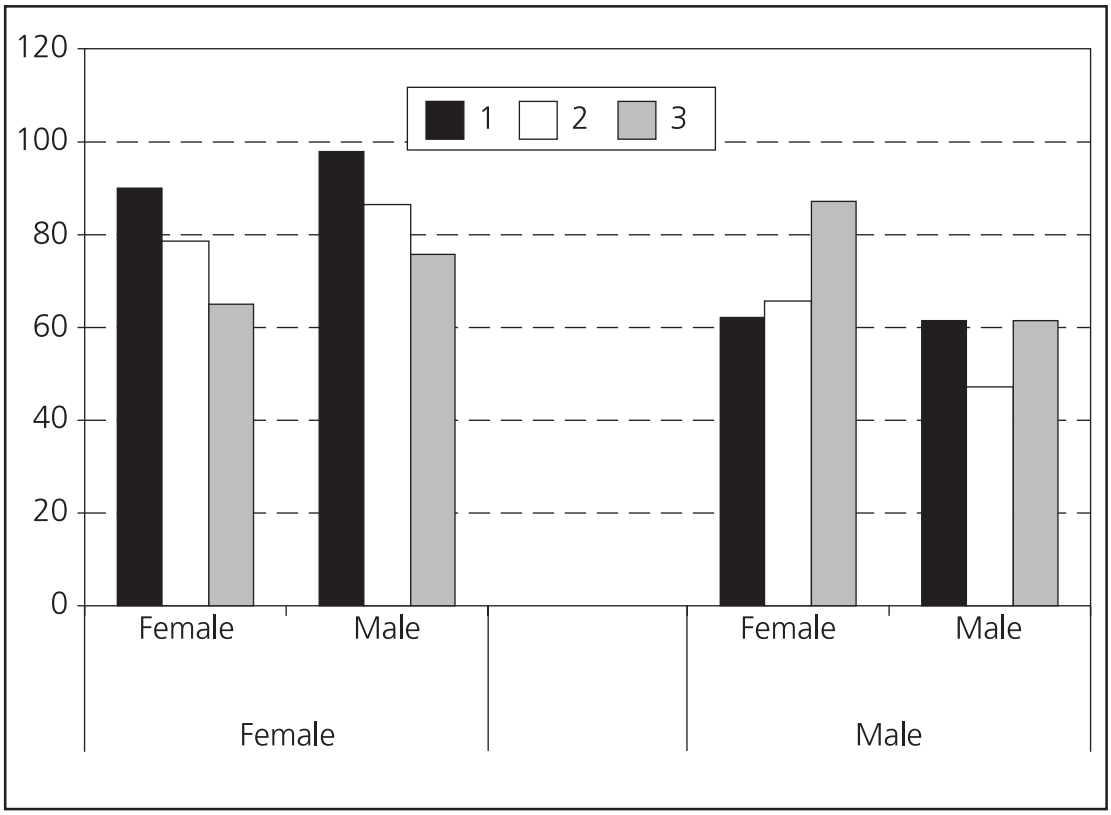


Figure B.38 Partners in workless couples working 1-15 hours a week in 2003

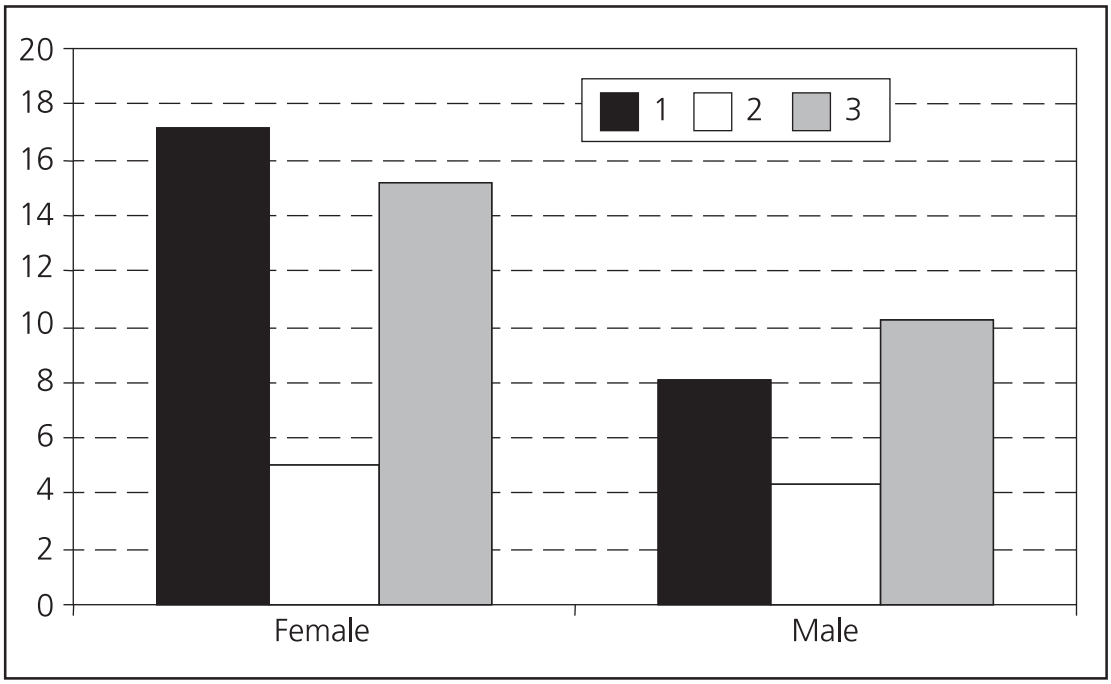


Figure B.39 Partners in workless couples in 2003, by age they left education

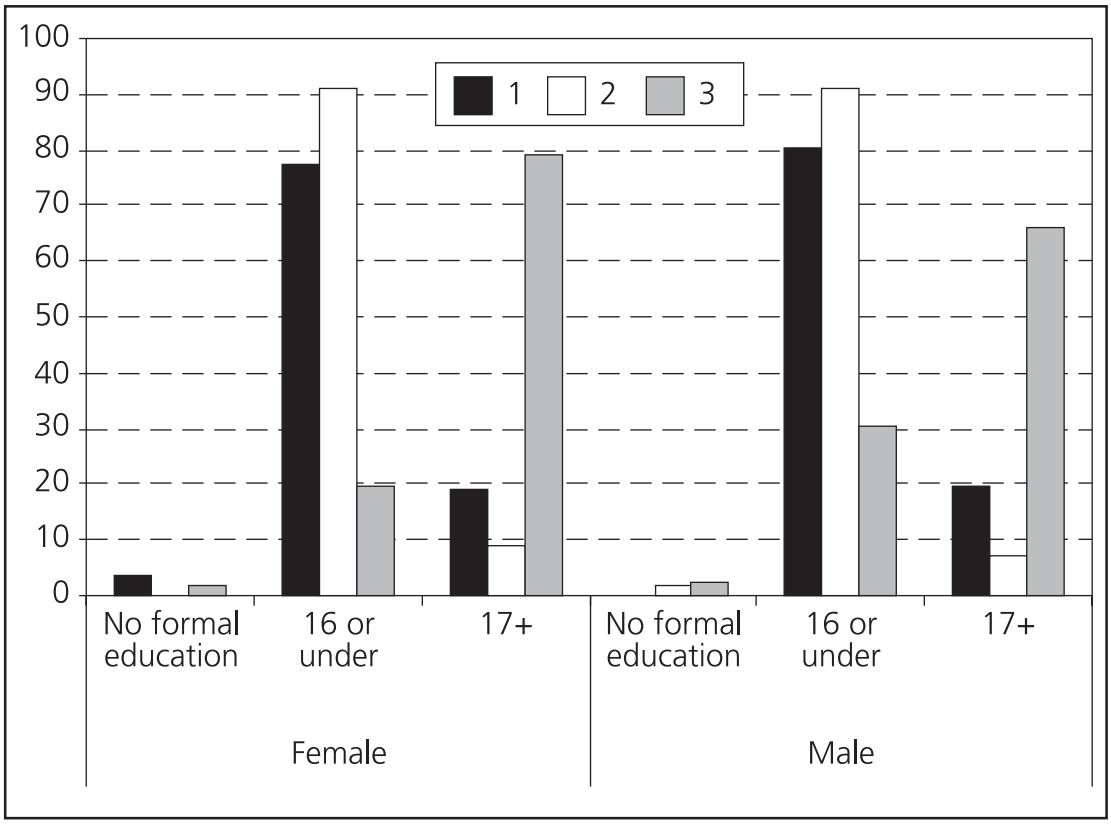
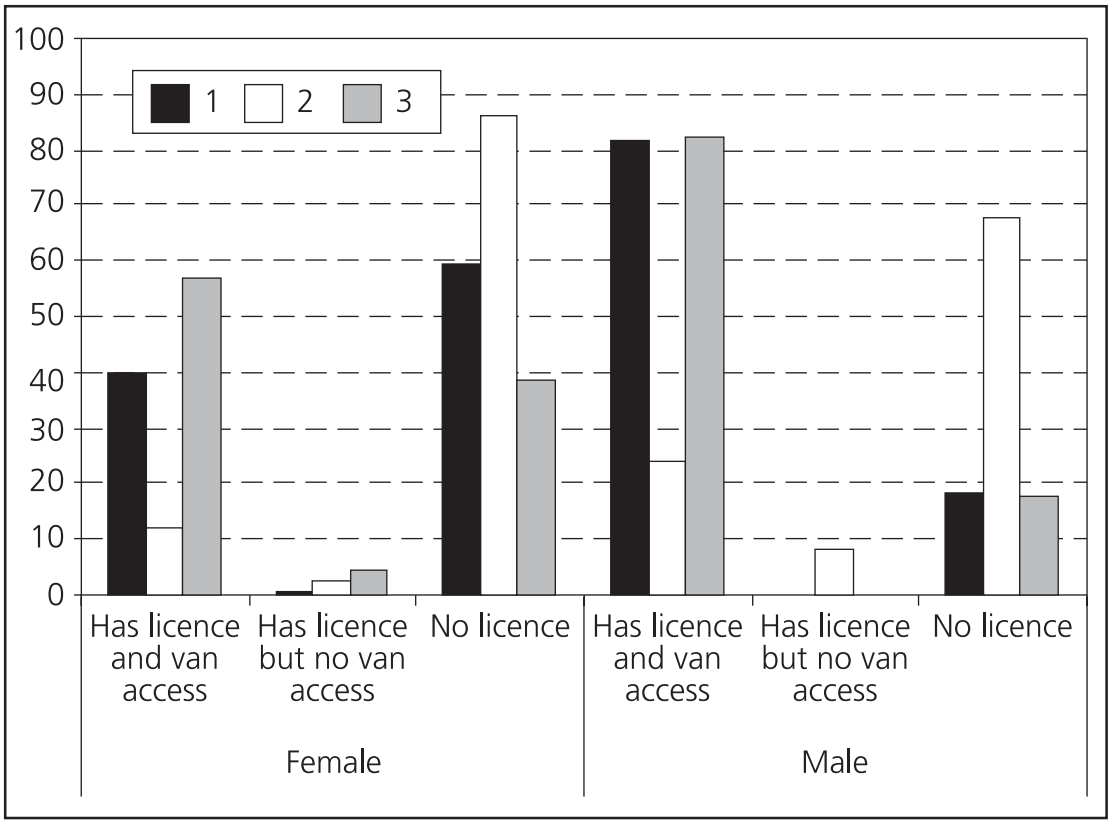


Figure B.40 Licence and vehicle access by partners in workless couples in 2003



Couples where at least one partner is **looking for work** are most likely to be found in the third cluster (Table B.28). Couples in the second cluster are most likely to postpone their job search as the majority of them expect to look for work in the future. The least active in their job search are couples in the first cluster where in the majority of couples neither partner intends to look for work.

Table B.28 Job search by partners in workless couples in 2003

Column percentages

	Clusters in 2003			All
Job search status	**1**	**2**	**3**	
Female looks for job, male does not	4	4	8	5
Male looks for job, female does not	11	24	25	20
Both look for job	4	5	7	5
At least one expects to look for job	14	58	35	38
Neither looks for work or expects to look for job	68	10	24	32
Unweighted base	*92*	*148*	*78*	*318*

Base: Cross-section. All workless couples with information on their job search.

Table B.29 provides some insight into the **reasons for such job search behaviour**. Compared with the other clusters, the first cluster couples are most likely to point to ill-health of their own and/or a family member as reasons for not looking for work. They are also most likely to say they do not need to work. Couples in the second cluster are more likely than couples in the other two clusters to say they are not looking for work because of their child's illness or disability and their unwillingness to spend time away from the children. Couples in the third cluster more often than couples in the first and second cluster complain about the lack of skills and qualifications and say they are studying or are on a training scheme when giving reasons for not looking for work.

Table B.29 Reasons for not looking for work given by partners in 2003

Cell percentages

	Clusters in 2003			All
Reasons for not looking for work	**1**	**2**	**3**	
Cannot afford childcare	1	7	9	5
Childcare not available	1	4	4	3
Own illness/disability	65	51	19	47
Child's illness/disability	5	13	5	8
Other household member disability	38	24	9	24
No work available	0	3	2	2
No skills/qualification	2	1	6	3
Studying/on training scheme	1	4	17	6
Better off not working	5	3	1	3
Don't want to spend time apart from children	18	49	44	38
Would not be able to pay rent/mortgage	0	1	0	0
Bad transport	0	1	1	1
Don't need to work	15	1	2	6
No reason	14	6	18	11
Retired	0	2	2	2
Other	6	0	0	2
Unweighted base	*89*	*144*	*74*	*307*

Base: Cross-section. All workless couples where at least one partner does not look for work and gives reasons for being inactive. Since couples may report more than one reason for not looking for a job, the percentages do not add up to 100.

Appendix C
Robustness of clusters

The overall score of stability of each cluster is calculated as a sum of its annual robustness scores. In turn, the annual robustness score of the cluster is calculated as the sum of scores attached to each of the factors that determine the composition of the cluster. Each factor receives the score according to the frequency of its appearance between 1999 and 2003. A factor appearing five times receives a stability score of 1, a factor appearing four times receives a stability score of 0.8, and so on. Attitudes receive a score of 1, rather than 0.8, because these data are not collected in 2003. The assumption is made therefore that attitudes do not change between 2002 and 2003 if they are stable between 1999 and 2002.

Therefore, the higher the sum of scores in a year, the greater the number of factors in that year that are common to the cluster across all years and the higher the annual robustness score of the cluster. The sum of annual robustness scores over the years is calculated to derive the overall score of stability of the cluster. Consequently, the more stable the composition of the cluster across the years, the higher its overall score of stability. The equation below presents these calculations in a more formal way:

$$OSS = \sum_{i=1}^{5} ARS_i = \sum_{i=1}^{5} \sum_{j=1}^{15} F_{ij}$$

where OSS stands for the overall score of stability of each cluster, ARS stands for annual robustness score of each cluster, i is the number of years between 1999 and 2003 and j is the number of factors that characterise each cluster.

This measure of robustness is crude because a cluster may receive similar annual robustness scores in a number of years if in these years it contains different but similarly scored factors. In Table 4.2 to Table 4.4 these characteristics are shaded in blue and grey. In Table 4.4, for example, in 2000 and 2002 the youngest child of couples in the third cluster tends to be aged under 11. Since this characteristic is

present in two out of five years, it receives a score of 0.4 in both 2000 and 2002. However, in 2001 and 2003, i.e. also in two years, the median age of the youngest child in the third cluster is likely to be less than five. Therefore in these two years, this characteristic also has a score of 0.4. Consequently, the score attached to the characteristic age of the youngest child is 0.4 in 2000, 2001, 2002 and 2003, although in some years the third cluster couples are likely to have a youngest child aged under 11 and in other years – a youngest child aged under five. In the extreme case, had all other characteristics in these four years received the same score, the annual robustness scores in these years would also have been identical despite the differences in the cluster's composition.

References

Arrowsmith, J. (2004) *A review of 'what we know about partners of benefit claimants'* Department for Work and Pensions Research Report.

Beatty, C. and Fothergill, S. (2003), 'The over 50s', in Alcock, P., Beatty, C., Fothergill, S., Macmillan, R. and Yeandle, S. *Work to Welfare: How Men Become Detached from the Labour Market,* Cambridge University Press, Cambridge, pp140-61.

Berthoud, R. (2003), *Multiple Disadvantage in Employment: A Quantitative Analysis*, Joseph Rowntree Foundation, York.

Bonjour, D. and Dorsett, R. (2002) New Deal for Partners: characteristics and labour market transitions of eligible couples Working Age Evaluation Report 134.

Clatworthy, J., Buick, D., Hankins, M., Weinman, J., & Horne, R. (2005). The use and reporting of cluster analysis in health psychology: A review. *British Journal of Health Psychology* 10: 329-358.

Dorsett, R. and Kasparova, D. (2004), *Families and Children Strategic Analysis Programme (FACSAP): Low-moderate income couples and the labour market* Department for Work and Pensions Working Paper 15.

Everitt, Brian, Sabine Landau, and Morven Leese (2001). *Cluster analysis, 4th Edition*. London: Edward Arnold Publishers Ltd.

Hasluck, C. and Green, A. E. (2005), *Workless couples and partners of benefit claimants: A review of the evidence* Department for Work and Pensions Research Report No. 262.

Kaiser, H. F. (1960) 'The Application of Electronic Computers to Factor Analysis.' *Educational and Psychological Measurement*, 20: 141-151.

Kasparova, D., Marsh, A., Vegeris, S. and Perry, J. (2003) *Families and Children Study: Work and Childcare* DWP Research Report. DWP Research Report No.191.

Marsh, A. and Rowlingson, K. (2002) *Low/Moderate-income families in Britain: Changes in 1999 and 2000*, Department for Work and Pensions Research Report No. 165.

Phillips, M., Miers, A. and Scholes, S. (2003) *Families and Children Study (FACS) 2002, Wave 4: Technical Report*, London: National Centre for Social Research.

Rafferty, A. (2003) The characteristics of lone and couples mothers working fewer than 16 hours per week DWP in-house report 125.

Strategy Unit (2003) Ethnic Minorities and the Labour Market. Final report, Cabinet Office, March.

Vegeris, S. and McKay, S. (2002) Low/moderate-income families in Britain: changes in living standards 1999-2000, DWP Research Report no. 164. CDS: Leeds.

Vegeris, S. and Perry, J. (2003) Families and Children Study 2001: Report on Living Standards and the Children DWP Research Report no 190.