findings

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Multiple disadvantage in employment

Some working-age families in Britain experience combinations of disadvantage which mean that they are almost certain to have no work. But their poor prospects can be explained largely in terms of the cumulative effects of each of their specific disadvantages – the number of their problems does not seem to be an issue in its own right. Richard Berthoud of Essex University's Institute for Social and Economic Research (ISER) has undertaken a detailed analysis of the job-chances of more than half a million men and women. The study found:

- One-sixth of British adults aged 17 to 59 do not have either a job or a working partner. Those at high risk of non-employment are: men and women without partners (especially lone parents); disabled people; those with low qualifications and skills; those in their 50s; those living in areas of weak labour demand; and members of certain minority ethnic groups.

- Only 4 per cent of individuals with *none* of these disadvantages are non-employed. The more disadvantages, the greater the risk: more than 90 per cent of people with *all six* disadvantages are non-employed.

- Some specific combinations of two or three disadvantages carry a higher risk of non-employment than might have been expected; other combinations showed an unexpectedly low risk.

- Nearly one-tenth of adults have characteristics which increase their risk of non-employment to more than 50 per cent.

- The pattern of non-employment risks is not as complicated as some have argued. This analysis largely justifies the common assumption that variations in the risk of non-employment can on the whole be explained just by adding the effects of each disadvantage together. The study does not endorse the idea that disadvantages are exponential – with the risk of non-employment rising faster and faster as the number of disadvantages increases.

- This 'additive' pattern suggests that addressing the hindrances to employment associated with one kind of disadvantage will yield dividends without having to worry too much about its links with all possible other disadvantages.

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Background

More than five million British men and women of working age are in non-working families – double the number observed in the 1970s. Most of them live on social security benefits, and many of them are in poverty.

This study is based on detailed analysis of 550,000 adults, collected from a nine-year sequence of Labour Force Surveys. The research focused on the characteristics associated with 'non-employment', defined as men and women who:

- are not working at least 16 hours per week, nor in full-time education; **and**
- do not have a working partner.

'Non-employment' is a broader term than 'unemployment', because it includes people (especially lone parents and disabled people) who are not seeking work and are therefore 'economically inactive'. Because the definition takes account of partners' working status, most non-employed families depend mainly on social security benefits, and a high proportion are poor.

17 per cent (around one-sixth) of British adults are without earnings, according to this definition. Only 4 per cent of those with none of the disadvantages described in Table 1 are non-employed.

Six sources of disadvantage

An initial analysis was designed to develop precise measures of the characteristics associated with non-employment. This identified six types of disadvantage (see Table 1).

Adding these detailed measures together provides

Table 1: **Summary of six characteristics associated with non-employment**

Characteristics listed in order of their importance in helping to explain variations in job prospects (from most to least important)

Characteristic	*Detailed measure*	*Simple measure*
Family structure	Taking a couple with no children as the base case, the risk is higher for individuals without a partner; and higher for people with children, depending on the age of the children and the marital status of the parent.	1. No partner, no children 2. Lone parent
Skill level	Taking an individual with O-level/GCSEs and in a skilled manual job as the base case, the risk is consistently lower for people with better qualifications and skills, and vice versa.	Low qualifications and skills
Disability	Disabled people have a high level of non-employment; the greater the number of conditions reported, the higher the level.	Any impairment
Age	The risk declines between 17 and 20; remains more or less steady between 20 and 49; and increases from 49 to 59.	Over 50
Demand for labour	The higher the regional unemployment rate in the survey year, the greater the risk of non-employment.	high unemployment rate (> 9.5 per cent)
Ethnic group	Caribbeans, Africans, Indians and other minorities have an increased risk compared with white people. Pakistanis and Bangladeshis have a seriously increased risk. Chinese people have the same levels of risk as white people.	1. Black 2. Indian 3. Pakistani/ Bangladeshi 4. Other minorities

quite an accurate analysis of the probability that any particular individual is non-employed.

Six hypotheses about multiple disadvantage

The main aim of the research was to find out the best way of assessing risk. What happens when people face two or more disadvantages? Six possible answers to the question were considered:

- **additive**: the effects of each disadvantage can just be added together;
- **combinations**: specific combinations of disadvantage have effects which increase or decrease risk, compared with the additive hypothesis;
- **independent**: every combination of characteristics has its own pattern of risks, without regard for any other combination;
- **exponential**: the risk of non-employment rises faster and faster as the number of disadvantages increases;
- **logarithmic**: the risk of non-employment rises less and less rapidly as the number of disadvantages increases;
- **class**: having any of these disadvantages imposes a high risk of non-employment; extra disadvantages make no further difference.

Combinations of disadvantages

Specifying every possible combination of disadvantages – from single items, through pairs and triplets up to the combination of all six – as a distinct option revealed that the risk of non-employment associated with specific combinations of four, five or six disadvantages is not significantly different from what would be expected on the basis of their component parts. But eight of a possible 68 triplets, and 20 out of a possible 38 pairs, do have significant effects. To take two of the most important examples:

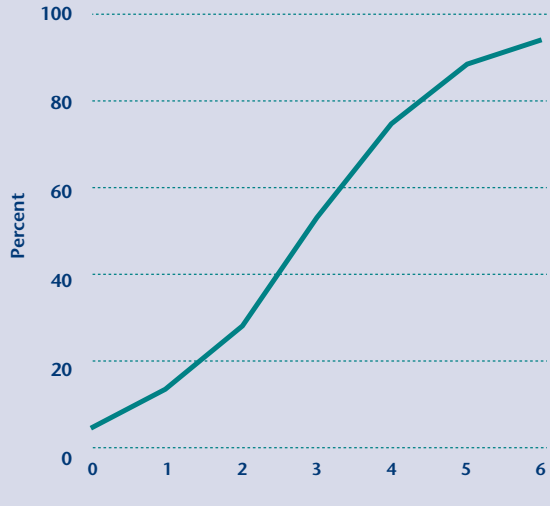
- Lone parents of Caribbean or African descent face a lower risk of non-employment (55 per cent) than would have been predicted on the basis of their family structure and ethnic group (68 per cent).
- Older Pakistanis and Bangladeshis with low qualifications and skills have an even higher risk of non-employment (82 per cent) than might have been expected from adding up the influences of those three characteristics (71 per cent).

In general, though, pairs and triplets have relatively little influence on the distribution of non-employment, compared with the separate influences of the six primary characteristics. Thus there is some support for the combinations hypothesis, but it is not as strong as the additive assumption.

Number of disadvantages

Two-thirds of adults in the age-range under analysis have at least one of the characteristics associated with disadvantage. Nearly a tenth have at least three. But only 1 in 5,000 (106 members of the sample) has a full set of six disadvantages. As might be expected, the more disadvantages facing any individual, the more likely s/he is to be non-employed. The range of divergent risks is surprisingly wide, though – from a risk of just 4 per cent among those with no disadvantages, to 91 per cent among those with six (see Figure 1). The simple **additive** model comes close to predicting these variations accurately, but there are some signs that the level of risk may be slightly *lower* than expected for people with multiple disadvantages. This latter finding provides weak support for the **logarithmic** hypothesis.

Figure 1: **Proportion non-employed, by number of disadvantages**



Cumulative disadvantage

Once the effects of combinations have been taken into account, the analysis is extremely effective at estimating the probability that any individual will be non-employed – at very high levels of risk as well as at the lower end of the distribution. Of course, most

Box 1: Lone parents – a policy illustration

It is useful to show how these results can contribute to the analysis of policy. Lone parents have been chosen for this illustration, partly because they have a very high risk of non-employment, and partly because the government has set itself the target of reducing the non-employment rate for lone parents to just 30 per cent. The study reminds us that the risk is not the same for every member of the group – it varies *between* lone parents, depending in part on their family characteristics (the age of their children) but also on the other disadvantages (such as disability or lack of skills) which they might also face. Lone parents are widely spread across the range of risk between 20 per cent and 90 per cent. There was a fairly steady fall in the level of non-employment among lone parents between 1992 and 2000 (partly because of increased demand for labour). The analysis shows that this improvement in lone parents' prospects affected the most disadvantaged, as well as the least disadvantaged members of the group – the biggest improvement was in the middle of the distribution of risk.

individuals have a low risk. But the study strikingly identified individuals with very high levels of risk – nearly one-tenth of the population have characteristics which give them a risk in excess of 50 per cent, including a small number with risks well into the 90s. These people's chances of having either a job or a working partner are close to zero.

Conclusions

The research has shown that variations in the risk of non-employment can largely be explained just by adding together the independent effects of each contributory factor, rather than by any of the more complex formulae that were considered. The **additive** model is effective on its own. Our ability to describe the pattern of non-employment is slightly improved by taking account of pairs of disadvantage, and of triplets, so there is some evidence in support of the **combinations** model, in which specific sets of disadvantages have unexpected outcomes. There is also some evidence for a weak **logarithmic** effect, in which multiple disadvantages are not quite as serious as might have been expected on the basis of simple addition.

This is a fairly straightforward conclusion. The pattern of non-employment risks is not as complicated as some have argued. This is convenient for analysts, whose common assumption of a straight additive model has been largely justified. It is also helpful to policy analysts, who can be reassured that addressing the hindrances to employment associated with one kind of disadvantage will yield dividends without having to worry too much about its links with all possible other disadvantages. Some specific combinations do require special attention though.

Perhaps the most striking finding of the research is the huge disparity in risks – between the 'typical' figure for non-disadvantaged individuals of about 4 per cent, through the 'average' figure for the population as a whole of 17 per cent, and on to the high levels of 50 or even 90 per cent. People with very high risks of non-employment probably spend long periods without earnings, and their difficulties cry out for policy initiatives. The positive news, though, is that high levels of risk are sensitive to changes in the economy, and this may imply that they are susceptible to changes of policy.

About the project

This study is based on detailed analysis of a sample of 550,000 individuals (aged 17 to 59), collected from a nine-year sequence of Labour Force Surveys (1992 to 2000).

How to get further information

The full report, **Multiple disadvantage in employment: A quantitative analysis** by Richard Berthoud, is published for the Foundation by YPS (ISBN 1 84263 052 0, price £13.95).

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