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Employment effects of extended geographic scope in job search

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ABSTRACT

This paper uses a unique possibility to link unemployed individuals' stated willingness to move for work with administrative data, giving us the possibility to analyse the effects of individual willingness-to-move on labour market outcome. Those with extended geographic job search area have a higher probability of finding a job. However, the greatest effect is found on the local labour market, indicating that it is not the extended geographic scope per se that increases the likelihood of escaping unemployment, but differences in unobservable characteristics between those who use an extended search area and those who do not.

1. Introduction

Geographic labour mobility has long been considered an important factor for an efficient job market, and has consequently been extensively studied. A recognised problem in such studies is selection; if more mobile and less mobile individuals are also different in other characteristics post-migration outcomes will differ for reasons other than mobility per se. It will then be difficult to determine what outcome differences, for instance in terms of employment or earnings, are actually a result of mobility and differences in characteristics, respectively. The difference in outcomes between observed movers and observed stayers will consequently not correspond to the effect of a stayer becoming a mover. As long as these differences in characteristics are observable to the researcher they can be controlled for, reducing the problem, but some of these differences are not observable. Estimated effects of mobility will then be biased, and the direction of the bias will depend on the nature of these differences.

If more mobile individuals are on average more able or skilled than non-movers, their earnings will be greater than those of non-movers for this reason, irrespective of the actual effects of migration. If, on the other hand, movers are less able or skilled, the opposite will be true.

A related but different problem is that observed migration can reasonably be considered a consequence of perceived employment opportunities in the new location. If that is the case, then the observed effects of migration are not actual effects. Instead, these effects are what cause migration, rather than the other way around, and a range of methods have been tried to reduce this bias. Furthermore, the advent and increasing use of the Internet as a channel for information has decreased the need for actual "migration as spatial job-search" (Herzog et al., 1993), and it is likely that individuals now instead migrate *as a result* of finding work. Migration would ultimately then only occur if the individual knows with certainty that he or she will benefit from migration. A consequence of this is that the effects of observed migration on employment could be more and more biased the more recent the data used in a study, as the use of Internet based job search has increased over time.

A person's *willingness* to move, on the other hand, is likely to be determined before any offers arrive and should hence be less sensitive to such bias. Analysing the effects of stated *willingness* to move rather than observed migration is therefore one important contribution of this paper.

In previous studies, the main problem has been the absence of a counterfactual case; i.e. what would have happened to movers had they not moved? In this study we will look at the effects of a stated willingness to migrate, not only for actual movers, but also for those who were willing to move but for some reason did not, which brings us very close to an actual counter-factual of movers.

There is no reason why being willing to move per se should give you any labour market benefits in the *current* location. Therefore, any effects found on employment probability in the local market will indicate that there is selection into mobility. Thus, this paper will help shed some light on the age-old question of whether migrants are better off due to unobserved characteristics or to the actual move.

This is done by utilising data from the Swedish Employment Agency on all individuals who entered unemployment during 2000–2004. The

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information of particular interest is whether an individual is willing to move, which is identified by the answer to a question asked to all unemployed when registering for unemployment benefits; i.e. whether they are willing to look for jobs outside their local labour market. Such jobs are defined as being so distant that they would require moving or weekend commuting. A 'yes' classifies them as being willing to move and this information is merged with a richer dataset containing detailed information on individual, family and regional characteristics.

This paper studies whether this willingness to move has any effect on the probability of finding work and finds that individuals stating that they are willing to move do have better chances. However, the effect is not only present in the distant labour markets, as should be the case if there were no selection into mobility. Rather, the effect is also present, and is greater, in the *local* labour market.

This could have two different explanations: there may be differences in characteristics, i.e. that individuals who are more willing to move also tend to be more able or dedicated to finding a job and therefore, or for other reasons, are more willing to make sacrifices to find work.[1] A second reason could be that the willingness to move is a signal to the employment agency that the individual is more dedicated to finding work and is willing to make sacrifices (i.e. moving costs, both monetary and social/emotional). However, potential *employers* do not observe this exact variable, but will of course be aware of the origins of their job applicants and if they currently live far from the workplace they are applying to. Consequently, local employers will not observe the stated willingness to move, whilst distant employers will. Our results consequently lend firm support to previous indications of positive selection into mobility.

The paper is structured in the following way: Section 2 briefly summarises the previous literature. Section 3 describes the data sources, variable definitions and descriptive statistics. In Section 4 the models to be estimated are presented, whereas Section 5 presents the results and Section 6 concludes.

2. Related literature

There is a large literature on what affects individual mobility (see for instance Ahn et al. (1999), Drinkwater (2003), or Zaiceva and Zimmermann (2009), or Greenwood (1997) for a survey) such as unemployment, earnings differences and so on. However, hardly any empirical research has been done on the effects of the willingness to move. This is largely due to the gap in data availability; willingness to move is typically found in survey responses, where data on future employment will typically be missing.

In early studies of migration, explanations of the negative effect of distance on the willingness to move ranged from lack of information on the new locality to greater psychic costs from longer moves (Schwartz, 1976). Today, with the use of the Internet being a common and important part of most job searches, it is likely that focus should be placed more on the latter of these two explanations.[2] As a matter of fact, previous research has shown that moving to *search* for a job was a rather unsuccessful strategy in Sweden during the 1990s, as only about 25% of those who were unemployed prior to migration actually got a job after migration. The most common form of migration is "from work to work migration", and migration to work accounts for about 36–59% of all in-migration to a region (Johansson and Persson, 2000).

When looking for a new job an individual sets a reservation wage correlated to his or her human capital. Naturally, the higher the reservation wage, the fewer the jobs that are likely to be available to the individual. However, it is not certain that this reservation wage is constant over time; it may well be affected by developments in competition in the labour market, by the number of jobs offered or by loss of unemployment benefits (Shumway, 1993). Schwartz (1976) argues that search time can be shortened by increasing the search radius, if the unemployed individual accepts the first offer that meets his reservation wage, as the number of potential jobs increases with search radius. Search radius, in turn, depends on the individual's age and education.[3] At first, it may seem obvious that a person extending his or her search area would expect a higher probability of finding a job that matches or exceeds the reservation wage. However, it may also be that the individual will require a higher wage to offset migration costs, effectively raising the reservation wage as distance increases (Shumway, 1993). Therefore, it is not obvious that an extended search area will have a positive effect.[4] Seater (1979) finds that increasing the geographic scope of job search increases the search duration more than it does the probability of finding a job.

The reservation wage also depends on current income, and as unemployment reduces income (compared to employment) we would expect personal unemployment to increase the probability of migration.[5] This has also been found, first by Saben (1964), using tabular data. Goss and Schoening (1984) show that the *duration* of unemployment has a negative effect on the probability of migration; i.e. whilst there is a push effect of unemployment, it is reduced over time spent unemployed.

A lot of research has studied the effects of actual migration on earnings or employment, for instance in Pekkala and Tervo (2002) and Lehmer and Ludsteck (2008). However, it is likely that these estimations will be biased if people behave rationally and move only when they think they will benefit from it. Hence, there could be problems with selection into mobility. Moving to a new area in order to start looking for work there may have been an option twenty years ago, but it is less common today as information about distant job openings are as readily available in the home municipality, thanks to the development of Internet based job search.[6]

There can be both positive and negative selection into migration, but it has in general been argued to be positive.[7] That is, individuals who choose to migrate have characteristics, observable and/or unobservable, that will give them a better labour market outcome than stayers. This better outcome is consequently not a result of the migration per se, but rather of these characteristics. The empirical evidence is ambivalent; Rooth and Saarela (2007) study cross-border migrants from Finland to Sweden (as well as return migrants) and find that migrants are negatively selected on observables but much less so on unobservables. Zaiceva (2006) studies East–West migration in Germany and finds no self-selection on unobservables for migrants.

[1] For instance Jaeger et al. (2010) find that individuals who are more mobile are also more willing to take risks in general.

[2] Lack of information may still be relevant for international migration, but hardly when it comes to internal migration. Information on vacancies is equally accessible from any part of the country, benefit rules are the same throughout the country, and so on.

[3] However, in that study, migration is used as a proxy for search radius, which may not be entirely true. It may just mean that one area of search is replaced by another, rather than that the total search area is expanded. Again, there is a problem in studying observed migration, as it may depend on offers received.

[4] Shumway (1993) argues that this could even increase search time, as a consequence of an increase in reservation wages due to migration costs. It is perhaps more likely that the unemployed individual sets different reservation wages for job offers that do and do not require migration. However, it is still possible that the higher reservation wage for distant jobs affects the reservation wage for local jobs upwards, thereby increasing search time, although to a lesser extent than argued by Shumway (1993).

[5] For a survey, see Herzog et al. (1993).

[6] This is less true in the case of international migration, where job search migration is still a viable option. However, there are large problems of selection and many studies have tried to find ways to avoid it. However, this has proven difficult. See for instance McKenzie et al. (2006) who used lottery based migration to avoid selection. However, as even lottery winners were required to show evidence of a job offer to be allowed to immigrate, migration would turn out to be selective in spite of this.

[7] See for instance Gabriel and Schmitz (1995), Borjas et al. (1992) or Borjas (1987), or Chiswick (1999) for a good survey on this.