# An analysis of the relationship between job finding and IRT estimated deprivation

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EXTENDED ABSTRACT

There are several factors that determine the success of the job search process of unemployed individuals. Some of these factors are related to the macroeconomic situation while others are more directly related to the individual characteristics of the unemployed workers or to the effects that labour market institutions have on the specific worker. From a theoretical point of view, job search show that the availability of job vacancies and the search effort determine the offers arrival rate while the reservation wage determines the number of acceptable job offers. As it easy to understand, lower search effort and higher reservation wages reduce employment probability and increase unemployment duration.

Within this line of reasoning search effort and reservation wages depend on the degree of need and of financial stress of individuals and, consequentially, personal and household economic situation play an important role in the determination of job finding probability and unemployment duration. Roughly speaking, unemployed workers living in richer households should experience better financial conditions and should feel less pressure to search actively for a job or to accept the very first offer they receive: therefore, all things being equal, wealthier unemployed should experience longer duration. This reasoning highlights some possible interactions between financial conditions and unemployment benefits. First, the latter directly improve unemployed workers financial conditions reducing incentives to search and increasing, at least theoretically, unemployment duration. Second, benefits may be less relevant in mitigating financial stress if individuals, or their households, can count on a solid economic background: therefore the detrimental effect that benefits have on unemployment duration may be smaller for individuals from better-off families.

In our current contribution we try to directly estimate the deprivation (and financial stress) of households and use it to directly analyse if it has a role in the success of the job search process. In particular, we assume that the degree of deprivation and financial stress is a latent trait that is correlated to several other variables: we use data from the EU-SILC survey to obtain these latter variables and use them to estimate the latent trait representing deprivation and financial stress with an Item Response Theory model. Once we have obtained an estimation for this latent trait we perform an econometric analysis on the individuals probability of finding a job and determine the

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direct effect of this trait and its interaction with unemployment benefits. We perform this analysis for five European countries: France, Hungary, Italy, Poland and Spain

Basically, we start from the concept of deprivation, something that describes a state of disadvantage relative to rest of the community (see Townsend 1987), and we use a statistical method to identify situations where need, financial pressure and liquidity constraints appear to be present: in this contents we are not directly referring to the observable monetary situation but to the real situation where several non-observable and non-measurable components have a role. Relative aspects, accessibility to some goods and services and even subjective and psychological perceptions are all relevant in determining a situation of need and deprivation. In this sense, the IRT methodology is particularly suitable as it is often used to assess variables that have a psychological component. This methodology exploits qualitative information gathered in “items” (usually drawn from survey or tests) to estimate a latent variable that is related to the observed items: in our case we will use qualitative data on the household living conditions to estimate the degree of need and financial pressure. In practice we are assuming that the degree of need is a latent traits that affect some aspects of living conditions.

Our analysis has relevant policy implications. First of all it is quite straightforward that welfare policies should be conceived to help individuals in need but, if they succeed in mitigating their need, they also have an impact on the economic behaviour and incentives of the recipients. Therefore, when designing welfare policies, it is important to understand what is the effect of deprivation on individuals economic behaviour and, with this respect, we provide a piece of evidence on the effect of the former on job search success. We also focus more in details on unemployment insurance trying to see if the potential detrimental effect of benefits on employment probabilities is indeed present and to what extent it is particularly relevant on worse-off household. This is a key issue when designing unemployment insurance system and identifying those individuals that are particularly prone to the perverse effect of benefits can help in designing proper requirements and tools to offset the perverse effect.