

Career development after unemployment

Does the regional labor market matter?

Anet B.R. Weterings, Marten M. Middeldorp & Arjen J.E. Edzes

PBL Netherlands Environmental Assessment Agency
P.O. Box 30.314, 2500 GH, The Hague, The Netherlands
Email: Anet.Weterings@pbl.nl

University of Groningen
Faculty of Spatial Sciences, Department of Economic Geography
Landleven 1, 9747 AD Groningen
Email: m.m.middeldorp@rug.nl/a.j.e.edzes@rug.nl

Background

Since the start of the crisis in 2008 the unemployment level has doubled in the Netherlands with the share of long-term unemployed becoming even three times as large (Statistics Netherlands 2016). Within Europe, this situation is not unique for the Netherlands and policymakers everywhere are looking for ways to reduce unemployment levels and prevent long-lasting negative effects. Consequently, there is a clear need for improved understanding of which factors shape labor market outcomes of unemployed jobseekers.

Most studies on the labor market outcomes of unemployed focus on what affects the probability of returning to employment within a reasonable amount of time. However, by focusing on short-term periods and single transitions (unemployed-work), these studies disregard the major impact unemployment can have on further career development (Korpi & Levin 2001). While some persons may continue their career again without any further implications, others may struggle to find stable employment, finally becoming discouraged and leaving the labor market altogether. Again others may end up in a “precarious jobs carroussel” (Barbieri & Scherer 2009); a cycle of short-term jobs interrupted by new periods of unemployment. Therefore, understanding who is able to find a *long-term* escape route out of unemployment asks for studying the careers of unemployed over a longer period of time.

Regional labor markets affect career development after unemployment. The literature on agglomeration economies argues that more dense regions are more beneficial due to increased levels of specialization, lower costs of labor market adjustments for both firms and workers, and better matching of worker skills and employer needs (Ciccone & Hall 1996). Furthermore, sectorally diverse regional economies are less sensitive to sector-specific shocks, because industries unaffected by the shock provide alternative jobs resulting in lower levels of regional unemployment (Frenken et al. 2007).

But, what is considered to be a dense or diversified labor market for one unemployed individual may offer very limited opportunities for another. During their career, employees develop skills and knowledge which have important implications for their attractiveness to alternative employers (Gathmann & Schönberg 2010). An unemployed jobseeker is more likely to be hired by an employer from an industry that requires, at least to some extent, the same skills as the industry in which the

person used to work. Thus, not only the density and diversity of the regional labor market affect the number of job opportunities within the region, but also to what extent those jobs match with the prior working experience of the unemployed jobseeker.

This paper aims to make a first step in overcoming both limitations. Using micro-level data on all persons in the Netherlands who received unemployment benefits between 2005 and 2009, we study how the interplay between an individuals' actions and regional characteristics affect career development over a period of five years after each person became unemployed. We identify ideal-typical career trajectories that take into account the interdependence and timing of transitions (changes in labor market status, sector and region). Next, we estimate how both generic and person-specific characteristics of the regional labor market affect the probability of following a certain career trajectory. Individuals faced with a tight regional labor market for their skillset may be able to successfully escape unemployment through migration. Labor market conditions that favor finding a local job may have opposing effects on finding a non-local job through migration (Arntz and Wilke 2009), therefore, regional mobility is taken into account in the career trajectories.

Data and method

Data on unemployed and their career

The main source for the individual level data is the Social Statistics Register managed by Statistics Netherlands. This register consists of multiple files with detailed individual-level data on demographic and social-economic characteristics of all persons in the Netherlands, including work status. We selected all persons that received unemployment benefits between January 2005 and December 2009. To identify career trajectories, we follow each unemployed up to five years after the day they received the benefits and thus use register data for the period 2005-2014. As we want to take into account the prior working experience of the unemployed, we further refined the selection by conditioning that the individual worked continuously worked for at least 20 hours per week in the year before becoming unemployed.

Using sequence analysis we identify different career paths the unemployed may develop during the five year observation period. Besides general career statuses such as employment, self-employment, unemployment and inactivity, we also take into account sectoral and geographical mobility. To determine sectoral mobility, we merged the job datafiles from Social Statistics with the Business Register of Statistics Netherlands which contains information on the NACE code of every firm in the Netherlands. Someone is considered to find a job in another industry when the new employer is active in an industry with another 2-digit NACE code than the prior employer. Geographical mobility is defined as moving to a residential municipality that is at least 50 kilometers by road from the municipality where the individual lived at the time he or she became unemployed. The range of 50 kilometers was chosen because that is for most employees too long for a daily commute and, consequently, such a move can be considered as entering a new labor market region.

Data on regional labor market

Differences between regional labor markets were measured using the national employment database LISA managed by the LISA association. This database contains information regarding the address, amount of jobs, and NACE code for all business establishments in the Netherlands. Regional labor markets are defined as all jobs within each municipality in the Netherlands plus the jobs within commuting distance from that municipality.

Job density, that is the number of jobs per square kilometer in 2004 until 2008, is included to test the general assumption that regions with a higher density of jobs provide more job opportunities and

more efficient matching between the workers' skills and the employers' needs. The general diversity of the regional economic structure is measured using a Hirschmann-Herfindahl index (HHI) for employment in all 2-digit industries and in each region between 2004 and 2008. HHI is the sum of squares of each 2-digit NACE code industry shares of the overall employment. Lower values of HHI indicate that employment is more distributed across the economic sectors of a region. Therefore, a negative sign of this variable would confirm the assumption that diversity has a positive impact on escaping unemployment, in particular, by finding a new job in another industry.

Besides general characteristics of the regional labor market, we also composed two region and industry-specific indicators. The first variable is the number of jobs available in the same industry as the prior job of the unemployed person (measured on a 2-digit NACE code level) in every year between 2004 and 2008. When there are many jobs available in the region in the same industry, it is more likely that an unemployed jobseeker will continue the career in the same industry and there is no need to search for a job in another industry or labor market. Hence, we expect that the number of jobs in the same industry will positively affect the probability that an unemployed worker will continue work in the same industry and region, while it lowers the probability of moving to another industry or labor market.

The fourth regional level variable is an indicator for the resilience of the region. This indicator has been developed by Diodato and Weterings (2014) and measures the presence of skill-related industries within the regional labor market. It is a relative measure that indicates for each municipality in the Netherlands how quickly unemployed workers are expected to find a new job after a decrease of employment by 10%. The speed of recovery of an industry in a certain region depends on the presence of skill-related industries, that is industries that require to some extent comparable skills (see Neffke & Henning 2013), within commuting distance from each municipality. The presence of skill-related industries within commuting distance would increase the opportunities for intersectoral job mobility. Consequently, a higher level of regional resilience would increase the probability that someone finds a new job in another industry, while it lowers the need to move to another labor market for a new job.

Method

The empirical analysis combines the benefits of sequence analysis and competing risks survival models. Sequence analysis is used to uncover a typology of career trajectories following transition out of unemployment. Subsequently the effect of individuals' characteristics and actions and the regional economic structure on the probability of entering particular career development trajectories is modelled through survival analysis. Sequence analysis is a combination of methods (i.e. optimal matching and cluster analysis) that allows to study trajectories as wholes instead of focusing on durations, risks and transitions. As such they allow us to deepen our understanding of processes, in this case escaping unemployment (Aisenbrey & Fasang, 2010). Competing risks models are used to model time-to-event data when more than one destination event is possible (Jenkins, 2005). These duration models allow estimating within the same framework effects on the hazard rate, when these effects can differ between types of events. Thus, combining sequence analysis and competing risks allows us to identify factors that lead to transitions into a lasting escape out of unemployment vis-à-vis exits from unemployment that lead to precarious careers or retractions from the labour force.

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