In and out of employment: Effects in panel and life-history data

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ABSTRACT

Longitudinal data collected through panel studies or life-history surveys represent a rich source for analysing movements in the labour market over the life-course. However, concerns arise over the proper design to collect these data reliably. This paper addresses the substantive issue related to the determinants of movements in the labour market tackling the methodological concerns referring the reliability of different survey designs (prospective versus retrospective) for that purpose. The focus, in particular, is on the extent to which the survey design can affect the results of the analysis of mechanisms underlying labour markets dynamics. Using discrete-time event history models, the effects of factors possibly affecting labour market transitions using prospective and retrospective surveys are estimated and compared (the German Socio-Economic Panel and the German Life-History Study). Overall, few differences are found across surveys. Such differences are mainly in effect sizes and rarely in their directions. The most significant differences are found in the effects of human capital investments. In some cases, familial responsibilities connected with marriage and children also show different effects. However, results confirm that career investments and disinvestments protect from exiting and hinder re-entry, respectively. Familial responsibilities hamper employment participation for women, while increasing it for men. No clear evidence of temporal connections in recalling between work and family spheres are found. The paper contributes to raising the awareness of the pros and cons of different types of surveys collecting longitudinal data.

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1. Introduction

Already in the 1980s, in sociology, as well as in economics, there was a growing interest in individual career patterns, which are determined both by individual characteristics (agency) and the labour market structure (Akerlof & Yellen, 1985; Blossfeld, 1986; Horvath, 1982). Possible shifts in career patterns have encouraged a vast literature on labour market dynamics, while the increasing availability of longitudinal data (long-running panel surveys as well as retrospective surveys) contributed to improving the knowledge of the underlying mechanisms. While the labour economics tradition relies particularly on panel data, the sociological tradition, and the growing life-course literature in particular, has largely relied on retrospective data. Furthermore, panel and retrospective data are sometimes combined within a survey,¹ which increases the relevance of research into the relative reliability of the two types of data.

This paper aims at analysing the determinants of labour market transitions, unravelling differences across two different longitudinal survey designs: prospective panels and retrospective life histories.² In this sense, the methodological concerns related to data reliability are...

¹ This strategy has been used in national as well as comparative panel surveys, to collect information on the life histories of the respondents entering the panel, usually in the first wave, but sometimes at later waves, to collect specific information on previous biographies (work, marital, etc).
² In the course of the paper these two types of designs are referred to using the terms prospective data/prospective surveys or panel data/panel surveys and used retrospective data/survey or life-history data/surveys, respectively.
taken into account in the substantive investigation of the mechanisms underlying labour market dynamics.

This paper is strongly concerned with data reliability. A note is necessary in this context. Reliability refers to the accuracy of the actual measuring instrument or procedure. Such concept differs from validity, which instead refers to whether what is being measured corresponds to some external reference, thought to be largely error free. Ideally, one would be able to validate both surveys against an authoritative additional source. Other authors (e.g., Biewen & Wilke, 2005) have used administrative records to study bias in survey data. However, the use of such data would not necessarily solve the problem of validity. In fact, it should not be taken for granted that such records are always error free. A range of conceptual problems can lead to mismatches between recall and independent records: such data are often gathered with different purposes and through different procedures, which can also affect data quality and reliability and make the comparison with survey data even trickier. It is much easier to measure reliability than validity. Some methods of measuring reliability make a closer approximation to measuring validity than others, but, strictly speaking, measures of reliability do not provide measures of validity.

While previous research (Manzoni, Luijkh, & Muffels, 2011) showed lower transition probabilities in retrospective data, here the focus is on whether differences exist in the direction and the size of the effects, which refers to whether prospective and retrospective data lead to the same or different conclusions concerning the determinants of labour market movements, focusing specifically on exit and re-entry.

Both retrospective and panel data have been widely employed to study labour market issues. However, no comparative work has been done, to the best of my knowledge, with the exception of Solga (2001) for East Germany and Manzoni et al. (2011) for West-Germany, though they did not focus on disentangling possible differences in the determinants of employment dynamics. Yet, this is a relevant question since the interest in social science research is not only in the levels of change and in trends in overall (in)stability in the labour market (Bergemann & Mertens, 2004; Winkelmann & Zimmermann, 1998), but also in the mechanisms underlying these changes.

Germany offers an ideal country case for this study, since two carefully designed socio-economic datasets are available: the German Socio-Economic Panel (GSOEP) and the German Life-History Study (GLHS).

The paper first (Section 2) introduces the main features of retrospective and panel surveys. In Section 3, the datasets, the methodology and the variables are explained, outlining the implications of differences in their effects across surveys. Results and conclusions follow in Sections 4 and 5, respectively.

2. Retrospective and panel surveys

Retrospective life histories and panel surveys largely differ in their design. In retrospective surveys, respondents are asked to recall their behaviour over a specified prior period, stretching over a very long time. In panel surveys, instead, individuals are repeatedly asked about their current situation, using the same questionnaire at each interview.

For an extensive account of the advantages and disadvantages of both the types of surveys, the reader should refer to the previous literature (Blossfield & Rohwer, 1995; Manzoni et al., 2011; Scott & Alwin, 1998; Taris, 2000). One of the most important features to remember in this context is the reliability of the data. In particular, retrospective life-history data provide an extremely valuable source of information to study long-term changes, allowing the observation of the entire life-course of different cohorts; however, there is an ongoing debate about their reliability, due to either selective survival or, of greatest concern, recall bias. Panel surveys, instead, do not usually permit a very long time perspective, either due to attrition or to their short(er) life; on the other hand, they are not (or are less) accused of poor reliability.

Although the general belief is that life-course data are less reliable than panel data, due to memory bias, some concerns might also be raised for panel surveys. First, they rely on some sort of short-term (i.e. referring to the previous year) retrospective information to provide monthly data, and they might be affected by recall bias as well. Second, one of the most well-known problems when dealing with panel data is attrition, which occurs when some sample units participating in the survey at the first wave are lost or refuse to participate in later waves, leading to right-censored spells, which might also occur because of the end of the follow-up time. Attrition may affect sample size and create problems with population representativeness over time when drop out does not occur at random (Hagenaars, 1990; Pyy-Martikainen & Rendtel, 2003). This last issue has been studied extensive-ly, especially by economists in the context of labour market data. Most research suggests that attrition is selective on unobservables, but the substantive impact on estimates is very small. Previous studies could not reject the assumption that right censoring is independent of spell duration: attrition is neither related to the elapsed time of the spell nor the remaining spell length (Pyy-Martikainen & Rendtel, 2003). Furthermore, attrition is thought not to constitute a problem for multivariate analyses if factors which explain it are included in the regression models.6

6 Selective survival might be problematic in retrospective surveys given the strong correlation between mortality and labour market outcomes (Klein & Unger, 2002), which makes it more likely to miss a large proportion of people with precarious employment histories. This should not be a big problem given the sample selection, which excludes respondents interviewed at old ages.

Many studies have researched the reliability of short-term retrospective information in panel data and in the GSOEP in particular (Biewen & Wilke, 2005; Jurges, 2005; Kraus & Steiner, 1998; Paull, 2002).

See Haisken-DeNew and Frick (2005) and Kroh and Spiess (2008) for a specific discussion about attrition in the GSOEP.

A popular strategy for coping with panel attrition is weighing. Yet, it is not clear how effective it is in reducing attrition bias (Vandecasteele & Debels, 2007). Some authors argue that relying on weighed estimates may be dangerous in regression problems (Dumouchel & Duncan, 1983), may lead to estimates of regression outside the set of logically possible values (Horowitz & Manski, 1998), or it can be superfluous (Hoem, 1989).
Third, problems in a repeated-interviews survey might arise from the multi-measurement occasions, which give no guarantee that the meaning of a measure as well as the quality of the answers will remain unchanged over time (Solga, 2001). Respondents might interpret situations differently when interviewed at different time points, which might lead to abrupt differences in responses given at different time, even though no changes occurred. This might lead to the risk of artificial mobility between adjacent months reported at different time periods. Spurious transitions arise between calendars collected in subsequent years, which generate heaping in the transition probabilities between subsequent years (calendars). These biases are usually referred to as ‘seam effects’, since heaps tend to occur at the joint points between waves (Callegaro, 2007).

Furthermore, while the length of the recall and the amount of information asked raise more concerns for the retrospective study, it is at least questionable which way of asking a question is better. While a greater amount of information or longer recall time might lead to under-report events retrospectively, the effect of the question format is more difficult to interpret with respect to leading into a specific direction, although some studies (Freedman, Thornton, Camburn, Alwin, & Young-DeMarco, 1988) have proved that the use of life-history calendars, which are mostly used in panel surveys, improves the ability to recall.

3. Data and method

3.1. Data: the German Life History Study and the German Socio-Economic Panel

Data from the German Life History Study (GLHS) and the German Socio-Economic Panel (GSOEP) are used. They are both large-scale multipurpose surveys collecting, in different ways, data on a wide variety of subjects.

The GLHS, carried out since 1983 at the Max Planck Institute in Berlin (Germany) under the direction of Professor Karl Ulrich Mayer, is a retrospective study on individual life courses of people belonging to specific birth cohorts (retrospective cohort study) in which respondents were asked, at a specific moment, questions about their past. It reconstructs the life histories of about 8500 men and women from 20 selected birth cohorts in West Germany and more than 2900 men and women from 13 selected birth cohorts in East Germany, covering a comparatively long time frame allowing for analyses that go back a period of time in history (Buchholz & Gronow, 2003). It consists of a set of singular retrospective standardized interviews (face to face or telephone) in which respondents belonging to specific birth cohorts were asked, among other information, the monthly beginning and ending dates of each job or self-employment episode they had ever experienced. They were also asked to identify the occupation, the branch of industry, the size of the firm, and the wages at the start and the end of each job. An aggregate dataset (Gesamtdatenbank) contains harmonized data from four different surveys. Specifically, a first survey, conducted between 1981 and 1983 (LV-West I), reconstructed the life histories of a first sample of 2172 respondents representative for the Federal Republic and West Berlin from the cohorts born 1929–1931, 1939–1941 and 1949–1951. In the years 1985–1987, another 1412 men and women belonging to the cohort 1919–1921 were interviewed (LV-West II). 2008 respondents from the birth cohorts 1954–1956 and 1959–1961 took part in the 1988/1989 GLHS survey (LV-West III). Furthermore, a follow-up survey (LV-West 64/71), in which 2909 West German respondents belonging to the birth cohorts 1964 and 1971 were interviewed, was conducted in 1998–1999.

The GSOEP, instead, is a longitudinal panel survey of private households and persons in the Federal Republic of Germany that started in 1984, in which the same set of respondents is interviewed annually (mostly face-to-face), using the same questionnaires (Frick, 2005). At each interview, respondents are asked whether they are currently engaged in paid employment and, if so, in which occupation. The information on current activity status makes it possible to reconstruct career sequences based on annual information, therefore lacking detail on what happens within the year. Using monthly information gathered through a one year’s retrospective calendar, instead, it is possible to reconstruct career sequences on a monthly basis: a specific question asking the employment status in each month in the previous calendar year allows the reconstruction of all job spells, also those that only last a few months and do not coincide with any interview date. Respondents are shown a grid with columns representing all the months in the previous year, and rows representing a large number of states. They are then asked to check, for every month, whether they were in each of the following states: full-time employment; part-time job; first-time company training/apprenticeship; further training/retraining or further professional education; unemployed (‘Vorruehestand’ or early), retirement; maternity leave/child rearing leave/’Elternzeit’; in school/at university or ‘Fachschule’; military service/reserve duty training exercise/community service; housewife/houseman; other. Although the labour market status information is available for all the months, job specific information (like occupation, sector, etc.) is only available if the respondent was actually in the job at the time of the interview. Additionally, information is available about changes in working time as far as the distinction between part-time

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7 An example should make this clearer. In the GSOEP, monthly information on the labour market status is gathered asking the respondents to report their employment status in each month (from January to December) in the previous calendar year. Consequently, the month of December and the following month of January are reported at two different interviews, occurring at about a year distance. This might lead to the risk that respondents report their situation in December and the following January differently even when no changes occurred, simply because their interpretation one year apart might be different. This would lead to heaps between December and January, which cannot be explained by cyclical factors alone (Kraus & Steiner, 1998).

8 Prof. Karl Ulrich Mayer and his collaborators kindly made this last version of the data available for the analysis.

9 These are the states mentioned in the 2000 questionnaire.
and full-time work is concerned and questions are asked yearly about labour market and occupational changes.

In the following analyses, only respondents born in West Germany and residing in West Germany before the unification are selected, in both surveys. In order to make the two data as comparable as possible, further selection on the sample is performed. In particular, a conservative approach is taken, and data which are commonly supported by both the sources in terms of period, cohorts and ages observed are selected. Specifically, the period under observation is restricted to the years 1983–1999 are analysed, and respondents born between 1950 and 1971, who are between 18 and 36 years of age.\textsuperscript{10} The implicit assumption throughout the selection and the comparison of estimates from the two sources is that the inclusion of suitable explanatory variables will make the comparison more reasonable.

3.2. The empirical model

The career history of each respondent is reconstructed, identifying all the employment episodes, which are defined as periods in which a person is employed and are separated by periods in which the respondent was not employed. The two datasets are pooled and a person-month data file is generated, keeping track of the source of information.

Given the possibility for individuals to experience multiple transitions on the labour market, a multilevel model which allows for the hierarchical structure arising from repeated episodes nested within individuals is estimated. When an event may occur more than once over an individual’s lifetime, one cannot assume that the durations of episodes from the same individual are independent. In fact, there may be unobserved individual-specific factors (constant across episodes) which affect the hazard of an event for all episodes of one person. The presence of such unobservables and the failure to account for them in the models would lead to correlation between the duration of episodes from the same individual. Repeated events are usually handled by including individual-level random effects in an event history model.

Individuals move in and out of employment over time: the interest of this paper is in transitions out of employment (exit) and back into employment (re-entry). Such transitions are modelled jointly by means of a random effects logit model which estimates the odds of leaving employment, given that a respondent is employed, and the odds of re-entering employment, given that a respondent is not employed but has already experienced an employment episode earlier in his/her life.\textsuperscript{11} The model is defined as a generalized multilevel multiple state model (Steele, Goldstein, & Browne, 2004), in which exit and re-entry\textsuperscript{12} are the dependent variables indicating transitions during each month in the entire career. The discrete-time hazard function $h_{ij}(t)$ is used, which is the conditional probability of having an event $i$ for person $j$ during interval $t$ (month), given that the respondent is at risk (Singer & Willett, 2003).

$$h_{ij}(t) = Pr(y_{ij}(t) = 1 | y_{ij}(t - 1) = 0).$$ (1)

The model\textsuperscript{13} can be written as:

$$\log \left( \frac{H_{ij}^{ER}(t)}{1 - H_{ij}^{ER}(t)} \right) = \alpha^{ER}(t) + \beta_1^{ER} X_1^{ER}(t) + u_{ij}^{ER},$$ (2)

where the subscripts $E$ and $R$ refer, respectively, to the equation for exit (when employed) and for re-entry (when not employed) in time interval (month) $t$ during episode $i$ of individual $j$; $X_{ij}^{ER}(t)$ are the substantive covariates which are assumed to affect labour market behaviour and are included in the exit ($E$) and re-entry ($R$) model.\textsuperscript{14} These covariates might be time-varying or constant for each respondent. $u_{ij}^{ER}$ are random effects representing unobserved characteristics of individual $j$ (common to all episodes). Since there may be time-invariant, individual-specific, unobserved factors that affect each type of transition (e.g. individuals with a strong attachment to the labour market might have a low hazard of exit and a high hazard of re-entry, i.e. a tendency towards long employment episodes and short periods out of employment), correlation between random effects across states is allowed. In fact, the assumption is that $u_{ij}^{E}$ and $u_{ij}^{R} \sim N(0, \sigma_j^2)$; $u_{ij}^{E}$ and $u_{ij}^{R}$ are allowed to be correlated.

The interest in this paper is in investigating the factors affecting labour market transitions and the differences therein across types of surveys differing in their recall format. While the panel study also relies on retrospective accounts to fill in gaps between interviews,\textsuperscript{15} the life history survey reconstructs events occurred several years back. Memory decay over time might particularly affect recall in life history surveys, given that increasing length of the recall period presumably increases recall problems (Bradburn, Rips, & Shevell, 1987; De Graaf, Wegener, & Liebig, 1989; Hauser & Featherman, 1977; Mathiowetz & Duncan, 1988; Mayer, 2007; Paull, 2002; Powers, Goudy, & Keith, 1978; Reimer, 2005; Rubin & Baddeley, 1989; Sudman & Bradburn, 1974).

\textsuperscript{10} Furthermore, while respondents in the retrospective study reconstruct their entire history up until the moment of interview, in the panel respondents are observed for a much shorter period, depending on the number of waves for which they are followed. To harmonize the samples, respondents in the German Life History are observed for the same average length of observation as in the panel, around their mean.

\textsuperscript{11} Entry into first job is excluded, based on the assumption that it follows partly different dynamics.

\textsuperscript{12} Exit from employment is defined in the last month of employment before a non-employment state, while re-entry is defined in the last month of employment before re-entering it.

\textsuperscript{13} This model can be estimated specifying a single equation model with dummy variables for each state and interacting dummies with duration and covariates to obtain state-specific duration and covariate effects, allowing coefficients to vary and co-vary randomly across individuals.

\textsuperscript{14} For the reasons explained in note 6, data are not weighted.

\textsuperscript{15} Work histories reconstructed through the panel survey are therefore based on retrospective information which could go back a maximum of 23 months; this would occur in case the interview takes place in November – the latest possible month of the year in which an interview was conducted – and the respondent has to recall the entire previous year, from January to December.
In order to capture different effects in the prospective and the retrospective study, I estimate the model in each survey separately. Furthermore, I test for the statistical significance of the differences in the effects across surveys estimating the model on the combined datasets and including a dummy variable indicating the survey data source (GLHS = 1) as well as the interaction between such dummy and the covariates $X^E_{ij}(t)$. The interaction model reads:

$$
\log \left( \frac{\pi^E_{ij}(t)}{1 - \pi^E_{ij}(t)} \right) = \alpha^E(t) + \beta^E_1 X^E_{ij}(t) + \beta^E_2 SURVEY_{ij}(t) + \beta^E_3 X^E_{ij} \ast SURVEY_{ij}(t) + u^E_{ij} \nonumber
$$

(3)

In this way, the null hypothesis that the effects of the covariates on transitions in and out of employment are equal in the two surveys and there is no additional difference in the effect of each relevant covariate in the retrospective study compared to the panel survey is tested. If the interactions turn out to be not statistically significant, i.e. if $p > 0.05$, the null hypothesis that the effect of the relevant covariate is the same in the two surveys has to be rejected.

To test the hypothesis about the anchoring of labour market transitions to marriage or childbirth (see Section 3.3), I include a time dummy indicating the 6 months period around the familial event (i.e. the three months before and the three months after either marriage or childbirth) and interact it with the survey dummy. In this way, I test whether, as I contend, anchoring occurs more often in the life history study, because people have to recall events over a longer time horizon.

The models testing for anchoring effects are easily obtained adding the term $\beta^E_4 ANCHOR_{mar.chb}$ to [2] and the terms $\beta^E_5 ANCHOR_{har.chb}$ and $\beta^E_6 SURVEY_{ij} \ast ANCHOR_{mar.chb}$ to [3]. The $SURVEY \ast ANCHOR$ term represents the two-way interaction between the survey dummy and the possible anchor, i.e. marriage (mar) or childbirth (chb).

Since mobility patterns and employment histories are very different for men and women, and the effects of the covariates may differ by gender, models are estimated separately for men and women. Furthermore, gender differences are tested (Section 4.2; Table 3).

3.3. Independent variables: what affects labour market dynamics?

A large body of studies point at several factors which might affect labour market mobility (Bergemann & Mertens, 2004; Blossfeld, 1986; Buchholz & Gronow, 2003; Carroll & Mayer, 1986; Drobnic, Blossfeld, & Rohwer, 1999; Trappe & Rosenfeld, 1998; Winkelmann & Zimmermann, 1998). To correctly study differences in substantive estimates of labour market dynamics across the two studies, it is important to control for compositional differences across them. Differences across the two samples in characteristics which also influence the likelihood to experience the observed events on the labour market might lead to incorrect conclusions due to attributing differences in sample composition to the survey mode. Given the interest in studying differences in substantive estimates of labour market dynamics across the two survey designs, it is important to understand, on the one hand, how such factors may affect labour market outcomes and, on the other hand, how report may differ, according to such factors, across surveys. Furthermore, survey design differences should be analysed in the extent to which they might affect data reliability.

3.4. Gender

As mentioned at the end of Section 3.2 when describing the empirical model, labour market behaviour is assumed to clearly differ by gender. Profound differences by gender are observed with respect to the occupational structure, for example. Women are more likely than men to be out of the labour force. Women in employment are more likely than men to change employers or to exit the labour force, while employed men have a greater probability of entering into unemployment (Paull, 2002).

If gender affects report accuracy to a different extent in different types of surveys, the survey method may influence the measured behaviour, depending on the extent to which it is affected by recall bias. Women have been found to have more problems than men in defining themselves as unemployed, and to be more likely to understate their unemployment (Mathiowetz & Duncan, 1988; Morgenstern & Barrett, 1974). An explanation could refer to their presumably lower attachment to work (lower ‘work ethic’) and with the social sanctity of caring for the children or cleaning the house. The problems that exist in collecting data on women’s current experiences of unemployment appear to be compounded when retrospective accounts are collected. Jacobs (2002) found that women aged 35–44 suffer particularly from unemployment amnesia and many women do not distinguish clearly between unemployment and family care.

While separate models for men and women are estimated, the interest is also in gender differences across surveys. According to commonly held stereotypes, females are more attentive to dates and have a more well-developed temporal reference schema than males: this should allow them to reconstruct past events with more accuracy than males. Previous studies in psychology have confirmed the higher accuracy of females’ recall compared
3.5. Age, period and cohort

People of different ages, as well as of different cohorts, behave differently on the labour market. As it appears from Section 3.1, the time frame of the two surveys largely differs. The GLHS reconstructs, at a single point in time, events occurring over the respondent’s entire career, until the interview date. It is only representative for specific birth cohorts and, depending on the age at which respondents are interviewed, it reconstructs a longer or shorter period of their life and could date back to episodes which occurred many years ahead. The panel survey, instead, monitors social changes wave by wave, starting from the first interview,17 and only dating back to the previous calendar year to gather monthly information. These design differences result in partly different time periods, cohorts, and ages analysed by the two surveys. For this reason, the samples are selected as explained in Section 3.1. Age and cohort effects are explicitly dealt with. A three class categorical variable captures cohort effects, while age is included with a linear and quadratic term. Age is assumed to impact the timing of life course decisions associated with the occurrence of life events, such as marriage and childbirth, which in turn affect labour market decisions. Young people are more likely to move from one labour market state to another, while older people are more stable in their behaviour. Furthermore, age might be seen as an indicator for the built-up level of career investments, in terms of both human capital and employment history: the assumption is that higher career investments protect from exit and facilitate re-entry. An inverse U-shaped relationship of labour market participation with age is expected: worker’s human capital is expected to increase with age up to a certain threshold after which it declines due to obsolescence, therewith raising exit (reinforced by generous early-retirement options) and reducing re-entry. For this reason, a squared term for age is included. It is important to control for age also because if respondents’ report accuracy is affected by age to a different extent depending on the survey design, the method used to reconstruct labour market histories may influence the measured behaviour, depending on the extent to which it is affected by recall bias. Findings from both experimental and survey studies suggest that response error increases with age (Cannell, Fisher, & Bakker, 1965; Kaess & Witryol, 1955). However, other studies (Mathiowetz & Duncan, 1988) found that increasing age did not have any effect on recall errors. Elias (1997), instead, showed strong similarities in aggregate monthly unemployment patterns by age over the two-year period.

Furthermore, labour market conditions might influence the career opportunities of people at a given time. In order to obtain consistent estimates of individual career determinants in the two designs, it is important to use reasonable controls for the impact of the economic cycle and structural shifts in demand (Rosenfeld, 1992). A time-varying variable controls for business cycle effects indicated by the annual GDP growth rate.18

3.6. Education

According to the human capital theory (Becker, 1993), investments in education should positively affect labour market outcome. Previous studies document better recall for higher educated respondents (Dex & Laurie, 1995; Peters, 1988). If the degree of accuracy differs by education in the two surveys, the estimated effect of education might vary according to the nature of the data.

Education level is measured by the CASMIN classification (Müller, Lüttinger, König, & Karle, 1989) recoded into 4 categories.19 The resulting categorical variable is included as a time varying covariate, indicating the highest level of education at each point in time (Manzoni et al., 2011).

3.7. Previous career: investments and complexity

Career investments/disinvestments refer to the amount of human capital built through on-the-job learning and its depreciation due to being out of employment.

The effect of time spent in a status (i.e. the time to occurrence of an event) has perhaps been considered more than any other timing variable. The general expectation and common finding is that duration dependence is negative: the longer a person is in a given job, the better the job match and the greater the non transferable skills and, consequently, the less likely one is to depart from it. On the other hand, following the so-called ‘scarring’ thesis (Gangl, 2004), according to which unemployment experience inhibits re-entry into employment, the longer one stays out of employment, the lower are the chances to re-enter the labour market, also due to human capital depreciation. This notion recalls the well-known insider-outsider distinction, which is quite a typical feature of the German labour market.

Differences in the likelihood of episodes of different length to be reported in the two datasets might have consequences on the estimated effect of state dependence. Higher likelihood of short episodes to be underreported in a life-course study, would lead to an overestimation of spell length, and to an underestimation of variance in spell duration. This would translate into weaker duration effects in retrospective data. Assuming that even in the panel study length is, to some extent, overestimated, ‘true’ state dependence is even stronger.

Duration dependence is measured through the effect of time in a particular state (episode duration), coded as a

17 Consequently, left-censoring can easily occur. Matching cross-sectional information on the time spent in the current spell, left-censored spells become left truncated and can be used in the duration analysis.

18 A dummy variable is introduced for the period before 1950, since no data is available, and for year 1970, due to discontinuity in the time series.

19 Categories 1a, 1b and 1c are merged into primary education, 2a and 2b into lower secondary, 2c is upper secondary, 3a and 3b into tertiary.
categorical variable with four categories (<13 months, 13–24 months, 25–48 months, >48 months). This variable indicates another aspect of career investment or disinvestment, i.e., the amount of human capital built up through on-the-job learning and the depreciation of human capital when out of employment.

Previous career complexity signals mobility on the labour market and the likelihood of future transitions. The literature has shown that recall errors affect mostly those respondents who have complex careers, especially at longer recall distances (Manzoni, Vermunt, Luijkkx, & Muffels, 2010); memory bias is supposed to be positively associated with career complexity as indicated by the number of transitions and short episodes (Reimer & Küntzer, 2004). Being career complexity endogenously defined, forgetting some episodes and transitions retrospectively would underestimate career complexity itself and consequently overestimate the effect of previous movements on following career. The extent of bias may vary according to the nature of the recall task, affecting prospective and retrospective data differently.

Career complexity is measured as the (time-varying) number of job spells that a respondent had in his/her career (up until the last time of observation), standardized for age by calculating the degree to which it deviates from the average in his/her five year age group, to correct for the high correlation with age (Luijkkx, Kalmijn, & Muffels, 2006).

While the number of previous employment spells captures state dependence in the form of occurrence dependence (Heckman & Borjas, 1980), previous experience of employment or unemployment is accounted for in the form of duration dependence by the duration in the current employment or non-employment spell.

3.8. Job characteristics and attachment to the labour market

Certain types of jobs are better protected than others, and people in such jobs are less likely to experience a departure from the labour market and have fewer difficulties in re-entering. Moreover, jobs in the public and private sector are expected to differ in the likelihood of a departure as well as are jobs with different working-hours arrangements (Luijkkx et al., 2006). People in different types of jobs, as far as occupation, tenure, and working hours are concerned, for example, might also be attached to the labour market to different extents, which in turn is supposed to affect the importance attributed to labour market events and should consequently affect report accuracy.

Occupational status is measured by the ISEI score of the current (exit) or the most recent (re-entry) occupation, and a distinction is made between public and private sector as well as part-time and full-time employment.

3.9. Life-course stage

Participation in the labour market is deeply affected by the familial situation. Familial responsibilities are expected to be positively associated with job exit and negatively with re-entry for women, while for men the opposite presumably occurs. Previous studies looking at employment exit found, for women, strong positive effects of marriage (Luijkkx et al., 2006; Stier & Yaish, 2008; Tienda & Stier, 1996), which has been seen as a possible triggering factor for women more oriented towards more traditional roles (Drobnic et al., 1999). Children are also expected to play an important role, due to increasing difficulties in combining family and work, especially for women, but also due to increasing economic needs (Fouarge, Manzoni, Muffels, & Luijkkx, 2010).

Besides having a strong substantive effect, it is also expected that events occurring in an individual’s family life, such as marriage or childbirth might be used as reference points, given their relevance. As studies in psychology have shown, one of the ways in which people estimate the occurrence of an event is by reference to other events, the occurrence of which is more precisely known (Loftus & Marburger, 1983). The assumption in this case is that people may use major events in one domain of life as reference points to recall events in other life domains. Specifically, given that for women exit from the labour market often occurs simultaneously with marriage and childbirth, it is hypothesized that they may use such events as implicit anchors when reporting exit from the labour market, establishing a temporal connection between work and family life. As women do not usually re-enter employment at the time of marriage or childbirth, anchoring effects are not expected to occur in that case. Previous literature has shown that marriage and childbirth, instead, increase men’s odds of re-entry. It is hypothesized that men may use such familial events to recall re-entry in the labour market retrospectively. However, based on the high importance that women often place on familial events, as well as previous findings in the literature, which have found that women remember emotionally ‘charged’ events (such as union commencement and termination, marriage, and childbirth) more consistently than men (Klijzing & Cairns, 2000; Poulain,

---

20 Such categorization of the time variable defines a piece-wise constant specification of the baseline hazard function. Such choice seems appropriate both based on previous literature (Luijkkx et al., 2006) and on the model fit.

21 If episodes are forgotten, careers would actually be more complex than reported. This would mean that the estimated effects are the effects for higher levels of complexity, which would mean that reported effects are overestimates of real effects.

22 In the GSOEP, the ISEI code is only available if a job was held at the time of interview. Therefore, there is no information for (relatively short) jobs held in between two interviews. For jobs for which no ISEI information was available, the ISEI of the most recent occupation was attributed.

23 In the GLHS, the number of working hours was used to define part-time employment (using 35 h as cut-off point); in the GSOEP the respondent’s self reported status is used.

24 The term ‘implicit’ anchors refers to the fact that such events are not explicitly mentioned in the questionnaire as landmark events to help people recall their work history, but respondents might use them as such in their mind.
Riandey, & Firdion, 1992), the anchoring mechanism is supposed to be at play for women in particular.

Information on life course stage is measured by the marital status and the number and age of children. These measures are time varying. A distinction is made between single, married or cohabiting and divorced or widowed people. A continuous variable specifies the number of children and two dummies indicate the presence of young children (aged 0–5) and older children (aged 6–16) in the household.

3.10. Event salience

The salience of an event, which refers to the importance that the respondent attributes to it, has been proven to greatly affect the ability to recall and to neutralize the effect of the length of the recall period (Mathiowetz & Duncan, 1988). If important events are easier to be recalled, and the duration of a spell is an indicator of its importance, it is likely that short spells are more often omitted. On the other hand, the emotional connotation associated to an episode might also be relevant and interact with duration if, for example, short experiences are particularly significant to the respondent. Negative experiences might be reported more easily when more time has passed, and might instead be modified at the moment of their occurrence (i.e. in panel data), due to social desirability, for example. However, it might be more difficult not to report the effective situation about the current situation. Other reasons, like the extent to which an event affects one’s subsequent career, for example, might also lead an actor to attribute more or less importance to specific spells.

3.11. Report accuracy

Report accuracy depends on the respondents’ memory for their past life events and experiences, that is, on autobiographical memory.

Scholars in psychology (Rubin & Baeddeley, 1989; Rubin, 1996; Skowronski & Walker, 2004) as well as in survey methodology (Belli, 1998) have investigated the accuracy of autobiographical memory. The ability and willingness to recall might differ in a short-term and in a long-term perspective, which differentiate recall in panel and retrospective surveys. In the course of the respondents’ autobiographical remembering, a variety of reasons might lead to information being voluntarily or involuntarily distorted (Manzoni et al., 2010). Studies of measurement error and data reliability (Biemer, Groves, Mathiowetz, & Sudman, 1991) have shown that respondents may report their employment biographies differently according to the amount of information which has to be recalled, the time distance between the events and the interview, and the way (phrasing, question order) and the moment in their life when the information is asked (Babbie, 1973; Sudman & Bradburn, 1974). All these factors differ between the two study designs.

Different report accuracy in the two surveys might lead to differences in the substantive results obtained from them. In particular, if respondents differing in some characteristics affecting labour market outcomes have different abilities to recall, the estimated effects of such characteristics on labour market transitions might be biased according to the data they are based on, resulting in weaker negative/stronger positive effects in case of better recall and stronger negative/weaker positive effects in case of worse recall. On the other hand, if recall accuracy doesn’t differ across surveys according to the relevant factors affecting labour market dynamics, the underlying mechanisms might not be affected by the survey mode, despite differences in the levels of the estimated transitions.

3.12. Report format: episode versus calendar

The difficulty of the reporting task might be affected by the specific way in which the information is retrieved. In the life history study, respondents have to reconstruct the full sequence of subsequent episodes in their life course in chronological order, labelling episodes, describing their main activity, and defining transitions between episodes by providing the month and year in which each episode ends.

Based on the calendar, instead, respondents in the GSOEP have to recall their monthly status, while episodes and their timing are reconstructed by the researcher by comparing the respondent’s employment status in consecutive months. Even though in principle this doesn’t necessarily need to be the case, retrospective surveys are usually episode-based, while the ‘calendar’ format is more common for shorter recall periods, as it is the case in panel surveys to fill in gaps between interviews.

Last but not least, issues related to data quality, both in the collection and in the editing and coding process (due, for example, to interviewing method, interviewers’ training, wording and ordering of questions as well as to time and money constraints) as well as unspecified background variables and processes of selectivity, cannot be completely ruled out and might account for differences affecting the comparison.25

4. Results

4.1. Descriptive findings: sample characteristics

Table 1 gives an overall picture of the distribution of the observed characteristics in the sample for each survey, separately for men and women.

In the panel about half the respondents as in the retrospective study are observed, but the composition of the samples is quite homogeneous across datasets. Transition rates appear much smaller in the retrospective study and most differing in case of re-entry for women. The larger differences in the composition of the two samples concern the marital status and the birth cohort. More men

25 Additionally, one may suspect that attenuation bias plays a role as well: in particular, more measurement error on the dependent variable in retrospective data might attenuate coefficients, even if measurement error is unrelated to the independent variables (Cameron & Trivedi, 2005; Wooldridge, 2002).
Table 1
Sample composition: descriptive characteristics.

<table>
<thead>
<tr>
<th></th>
<th>GSOEP Men</th>
<th>GSOEP Women</th>
<th>GLHS Men</th>
<th>GLHS Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time varying</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of observation (months)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>45.22</td>
<td>39.96</td>
<td>42.72</td>
<td>43.23</td>
</tr>
<tr>
<td>Employment</td>
<td>39.78</td>
<td>31.83</td>
<td>37.20</td>
<td>33.92</td>
</tr>
<tr>
<td>Non-employment</td>
<td>19.20</td>
<td>26.20</td>
<td>19.28</td>
<td>25.73</td>
</tr>
<tr>
<td>Employed (%)</td>
<td>1.12</td>
<td>1.20</td>
<td>0.57</td>
<td>0.88</td>
</tr>
<tr>
<td>Exit rate</td>
<td>1.19</td>
<td>1.28</td>
<td>0.70</td>
<td>0.58</td>
</tr>
<tr>
<td>Education (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>47.70</td>
<td>39.06</td>
<td>39.15</td>
<td>30.63</td>
</tr>
<tr>
<td>Lower secondary</td>
<td>23.14</td>
<td>37.55</td>
<td>27.86</td>
<td>39.90</td>
</tr>
<tr>
<td>Upper secondary</td>
<td>15.67</td>
<td>13.72</td>
<td>18.33</td>
<td>19.90</td>
</tr>
<tr>
<td>Tertiary</td>
<td>11.76</td>
<td>8.50</td>
<td>14.66</td>
<td>9.52</td>
</tr>
<tr>
<td>Marital Status (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>37.61</td>
<td>28.25</td>
<td>53.86</td>
<td>36.95</td>
</tr>
<tr>
<td>Married</td>
<td>60.32</td>
<td>69.29</td>
<td>41.29</td>
<td>56.43</td>
</tr>
<tr>
<td>Divorced/widow</td>
<td>1.45</td>
<td>1.64</td>
<td>4.86</td>
<td>6.62</td>
</tr>
<tr>
<td>Nr. Children</td>
<td>0.43</td>
<td>0.57</td>
<td>0.35</td>
<td>0.54</td>
</tr>
<tr>
<td>Having small children (%)</td>
<td>24.21</td>
<td>29.24</td>
<td>21.88</td>
<td>30.89</td>
</tr>
<tr>
<td>Having only children (%)</td>
<td>5.95</td>
<td>8.00</td>
<td>2.19</td>
<td>6.51</td>
</tr>
<tr>
<td>Age (in years)</td>
<td>27.80</td>
<td>27.37</td>
<td>27.00</td>
<td>26.95</td>
</tr>
<tr>
<td>Occupational status (ISEI)</td>
<td>40.76</td>
<td>42.54</td>
<td>44.68</td>
<td>50.43</td>
</tr>
<tr>
<td>Public sector (%)</td>
<td>18.54</td>
<td>33.19</td>
<td>18.19</td>
<td>26.54</td>
</tr>
<tr>
<td>Part-time (%)</td>
<td>2.91</td>
<td>18.81</td>
<td>2.46</td>
<td>16.25</td>
</tr>
<tr>
<td>Time constant</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Birth Cohort (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;1960</td>
<td>39.25</td>
<td>38.48</td>
<td>56.15</td>
<td>56.25</td>
</tr>
<tr>
<td>≤1960</td>
<td>17.03</td>
<td>18.46</td>
<td>21.40</td>
<td>22.24</td>
</tr>
<tr>
<td>~1950</td>
<td>43.73</td>
<td>43.07</td>
<td>22.45</td>
<td>21.51</td>
</tr>
<tr>
<td>N (person-months)</td>
<td>50,465</td>
<td>38,321</td>
<td>93,431</td>
<td>87,842</td>
</tr>
<tr>
<td>N (respondents)</td>
<td>1116</td>
<td>959</td>
<td>2187</td>
<td>2032</td>
</tr>
</tbody>
</table>

and women are single in the GLHS and more belong to the youngest cohort.

4.2. Multivariate analyses: testing differences across designs

Table 2 shows the results from the models looking at differences in the effects of the relevant covariates across surveys.

The main focus is on the effect of human capital investments and employment history as well as familial responsibilities. Controls for sample compositional differences are added, as well as controls for acknowledged data errors (seam effects) and for external economic situation (GDP change).

While transition probabilities appear on average lower in the life history study, looking at the determinants of such transitions, the hypothesis that the effects in the two surveys are equal has to be rejected both for men and women for both exit and re-entry.

Few significant differences are found in the effects considered. There appear almost no differences in the sign and only few in the strength of the effects.

Overall, strong evidence for negative duration dependence is found in both surveys: the longer the time in employment or out of employment, the lower the exit and the re-entry chances respectively. This points to positive effects of career investments. However, as far as education, another form of human capital investment, is concerned, the picture appears quite complex. Men and women with upper secondary education seem the most likely to exit the labour market. Men with such educational level also appear to be less likely to re-enter (with significantly stronger effects retrospectively, as explained below).

Focussing on differences across surveys, as far as transitions out of employment are concerned, for men, the greatest difference seems, in fact, the effect of education: higher education appears to have a stronger positive effect retrospectively, increasing exits to a much greater extent. Time into employment strongly decreases the risk of exit, to a slightly lower extent retrospectively; however, the difference across surveys is significant only for more than two years in employment. Weaker effects retrospectively could be partly explained by the overestimation of the spell duration as a consequence of the underreporting of short spells out of employment (Manzoni et al., 2011).

Higher occupations protect men from exit to a significantly higher extent retrospectively, while being in public employment, as well as in part time, seems to increase the odds of exit in the panel only, however effects do not appear significant retrospectively. For women, differences across surveys are found in particular in the effect of being married, which increases exit to a much stronger extent in the retrospective data, and having an increasing number of children, which has negative effects on exit (but also on re-entry) only retrospectively. Having
small children seems to significantly increase exit in the retrospective study only.

Also, in case of transitions back into employment, the most striking difference between surveys is the effect of higher educational levels, which appears more strongly negative in the retrospective study, for both men and women. While the panel clearly shows that for tertiary educated women the odds of re-entry are much higher, this is not shown by the retrospective data. The opposite is the case for men, with higher odds of re-entry for tertiary educated men only according to the life-history survey. Another difference is the stronger positive effect of higher occupational status of the previous job on re-entry in the retrospective study. These differences hold for both men and women. Additionally, for men, while in the panel increasing time out of employment has a strong negative effect on re-entry, it is not found to have a significant effect in the retrospective study. For women, the increasing number of children has a negative effect in the retrospective study, while the effect is positive in the panel. The effect of having older children also seems reversed in the two studies, affecting re-entry negatively in the panel and positively in the retrospective study.

All the other effects go in the same direction and are not significantly different across surveys. They confirm known effects of familial responsibilities, pointing to higher re-entry rates for married men and lower re-entry rates for married women. Public employment does not clearly seem to protect more than private employment, having negative but not significant effects on exit for women, and no significant effect on exit retrospectively and even increasing the odds of exit according to the panel for men. This result, which might seem counterintuitive at first sight, could be related to the fact that, while the risk of losing a job in the public sector might be lower, people are allowed to retire very early, which might increase exit. On the other
hand, public employees who leave or lose their job seem to be much less likely to get a new job. Men employed part-time seem to have higher odds of exit, which is in line with their allegedly lower attachment to the labour market. Results from the retrospective study also suggest that women employed in part-time jobs return to their jobs more often after exiting, which could be explained with more easiness in combining work and family.

The models control for age and birth cohort, while period is taken into account through a variable indicating change in GDP. Although no significant direct effects of birth cohort are found, such variable is kept in the model to correct for differences in the sample composition in the two surveys.

Strong seam effects are found in the prospective data in all the models. Controlling for that corrects for specific (upward) bias in the panel.

An important aspect that might explain the additional uncontrolled dissimilarities across the two designs might relate to the way spells are reconstructed across the two designs. In the panel, this occurs through a reconstruction by the researcher starting from the respondents’ declaration of their monthly employment status. Retrospectively, instead, the respondents themselves report their entire the sequence of spells, with their starting and end date.

To test for gender differences across surveys, a model on the full sample of men and women is estimated. Results in Table 3 show that the odds of exit are higher for women while the odds of re-entry are higher for men, but more so according to the retrospective data, in both cases. Results are highly significant in case of exit. This suggests that retrospectively exits are reported more often by women while re-entries by men. Two main explanations are advanced. A first one relates to the likelihood of events: when events are more common (exit for women, re-entry for men), the retrospective report is easier, and given that exit is more common for women than men, women report exits better than men retrospectively, while for re-entry the opposite is the case. A second explanation refers to the connotation of the transition and the attachment to the labour market: assuming that exit has a negative connotation while re-entry a positive one, it seems reasonable that negative events (exits) are reported with more difficulties by respondents more attached to or participating more in the labour market (men). This is more the case retrospectively, which might be due both to the tendency to forget negative events and to the fact that it is more difficult to not report the effective situation about events concurrent with the interview. Positive events (re-entry), on the other hand, are reported better by more attached respondents, who also forget less retrospectively.

4.3. Anchoring of transitions around major life events

In Section 3.3, it was hypothesized that differences between the two surveys could be related to the different extent to which respondents anchor employment transitions to marriage and childbirth when asked retrospectively. Anchoring effects are presented in Table 4. The coefficients point to anchoring when the effects of the time dummies for marriage or birth are significantly more positive retrospectively. This indicates that, in the period

---

Table 3  
Gender effect (being a woman) coefficients.

<table>
<thead>
<tr>
<th></th>
<th>GSOEP</th>
<th>GLHS</th>
<th>Interaction*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exit</td>
<td>0.200**</td>
<td>[0.049; 0.350]</td>
<td></td>
</tr>
<tr>
<td>Re-entry</td>
<td>−0.557**</td>
<td>[−0.722; −0.392]</td>
<td>[0.214; 0.609]</td>
</tr>
</tbody>
</table>

Coefficients come from models as in he sample of men and women, controlling for gender. Confidence intervals are reporting brackets.

* p < 0.05.

** p < 0.01.

Table 4  
Anchor effects.

<table>
<thead>
<tr>
<th></th>
<th>Women Exit</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GSOEP</td>
<td>GLHS</td>
<td>Interaction*</td>
<td></td>
</tr>
<tr>
<td>Marriage</td>
<td>0.405</td>
<td>[0.006; 0.804]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Childbirth</td>
<td>3.524*</td>
<td>[3.209; 3.831]</td>
<td>[0.437; 1.465]</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Men Re-entry</th>
<th>GSOEP</th>
<th>GLHS</th>
<th>Interaction*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marriage</td>
<td>0.063</td>
<td>−[0.401; 0.528]</td>
<td>[−0.081; 0.923]</td>
<td>[−0.383; 1.027]</td>
</tr>
<tr>
<td>Childbirth</td>
<td>−0.084</td>
<td>[−0.704; 0.536]</td>
<td>0.203</td>
<td>[−0.407; 0.813]</td>
</tr>
</tbody>
</table>

Coefficients come from models as in table 2 on the sample of men and women, controlling for gender. Confidence intervals are reporting brackets.

* The interaction column reports p-values as well as confidence intervals for the difference of the coefficients across surveys (see footnote 26).

** p < 0.05.

*** p < 0.01.

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This is obtained interacting survey and gender. The results shown in Table 3 come from a model including all the other covariates as in the previous models. Results point in the same direction also in a model including gender only.
around the occurrence of major life events, differences in transition rates across surveys are reduced or cancelled out, which could be attributed to the fact that respondents recall labour market transitions anchoring them to events in their family sphere.

In Table 4, the effects of marriage and childbirth on transitions out of the labour market are shown for women in each survey. The statistical significance levels, and the confidence intervals of the differences in each effect across surveys are reported as well. The results show limited and mixed evidence for anchor effects. Marriage increases women's odds of exiting the labour market, but retrospectively the effect does not seem significantly stronger, although positive, confuting the anchoring hypothesis. Around childbirth, women's odds of exiting the labour market are higher. Such effect seems stronger in the retrospective study, which offers some support for the anchoring hypothesis according to which such difference results from the fact that retrospectively women use childbirth as a cue to recall their labour market behaviour.\(^27\) Such finding seems in line with the hypothesis that those individuals who have better reference events to use in event recalling, who have a more well-developed temporal reference schema, should be more accurate in reporting the occurrence of events (Skowronska & Thompson, 2006). However, lacking information on true transitions, it is hard to say whether the limited anchor effects found result from an overestimation or a more accurate report around anchors (and consequently underestimation when no anchors) retrospectively. Analyses on men show no support for anchoring. Both marriage and childbirth increase men's odds of re-entry, as hypothesized, but, even though effects seem stronger retrospectively, no statistically significant difference is found across surveys.

As explained in Section 3.3, the focus is on women and exit and men and re-entry. No significant anchor effects are found on the missing cases.

Overall, the effects of the implicit anchors are shown to be mostly insignificant, providing little evidence for the impact of anchoring. This is quite reassuring, in the sense that it provides little evidence that labour market mobility patterns over time are strongly affected by the use of retrospective data of allegedly lower quality. A possible explanation for the relative unimportance of anchoring to explain design differences might be that salient events in a person's life improve the respondent's ability to date transitions but do not influence the estimation of their occurrence.

5. Discussion and conclusions

This paper analysed the determinants of transitions in and out of the labour market in Germany using two different survey designs. The German Life History Study and the German Socio-Economic Panel were used to exemplify retrospective and panel design respectively, both of which are used to collect longitudinal data.

Considering the specific characteristics of each type of survey, and based on previous literature on the advantages and disadvantages of each of them, the extent to which the survey design might affect the results of analyses on the determinants of employment transitions is investigated. Accounting for specific sources of recall bias in examining the differences in findings across the two designs allows a better understanding of how specific characteristics might make some data more suitable than others to properly answer specific substantive questions.

Findings presented in section 4 showed that the substantive effects are quite similar across the two surveys. Overall, different types of data seem to complement each other and the results seem to justify combining the datasets for examining the career patterns of several birth cohorts over their entire life course. However, the strength of the effects is sometimes rather different, which might be attributed to the different design.

The accuracy of recall is very likely to be specific to the type of information retrieved, which should guide researchers in the choice of the appropriate data according to the specific research questions and also warn them against the possible limitations of the data at their disposal. Furthermore, errors might be generated by the insertion or omission of episodes but also by misdating the start or end date. In the following analyses, no distinction is made between these two different types of error. While errors of the first type should mainly affect reports, the second type of errors might also have consequences on the relation of a transition with time-varying factors.

While retrospective data seem to underestimate the levels of employment transitions, making them not very suitable when the interest is in the levels of mobility, the estimated effects of specific factors on such transitions seem to be much less affected, making retrospective data not as bad when the focus is on the determinants of labour market events. The two surveys lead to similar effects, although differences are found in effect sizes for some factors. In particular, results point at differences in the effects of investments in human capital, both in the form of educational credentials and time into/out of employment, and in some cases of familial responsibilities connected to marriage and children.

A possible explanation for stronger effects which are often obtained using retrospective data might derive from the above mentioned lower complexity of retrospective reports, leading to lower deviation and higher contrasts retrospectively.

The role of implicit anchors, such as marriage or childbirth, in explaining the differences between the surveys, is also investigated. However, no clear evidence for that is found. Effects turn out to be mostly insignificant, providing little evidence for the impact of implicit anchors. This is quite reassuring, in the sense that it seems that labour market mobility patterns over time are not strongly affected by the use of retrospective data of allegedly lower quality.

Researchers should worry about data reliability depending on the specific research question. It should be

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\(^{27}\) Confidence intervals confirm this, including negative and positive values for the difference of the effect across survey in case of marriage, while ranging between positive values in case of childbirth.
noted that, while concerns are often raised about the reliability of retrospective data, panel data are not without problems either: besides the fact that they often rely on some sort of retrospective data as well to provide monthly information, problems might arise from the multi-measurement occasions, which might lead to artificial changes when the researchers merge the information from different means, and might as well be interpreted in a different manner by the respondents themselves at the different interview points. This paper contributes to making researchers using longitudinal survey data more aware of their possible shortcomings. It provides a great added value to any substantive research using such data. Oftentimes researchers overlook the suitability of the data to their specific research purposes and use data without any awareness of that, making strong assumptions about their reliability and not accounting for the bias possibly originating from the data. More awareness of the data features and shortcomings could direct researchers in the choice of the best data for their research purposes and to take possible bias into account. I believe that this paper raises such awareness.

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