

**The Restorative Effect of Work after Unemployment: An Intra-individual Analysis
of Subjective Well-being Recovery through Reemployment**

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Abstract

Previous research shows that unemployment has lasting detrimental effects on individuals' subjective well-being. However, the issue of how well-being evolves after individuals switch back into the labour force has received little theoretical and empirical attention. This study examines the extent to which reemployment restores individuals' subjective well-being following a period of unemployment. Applying fixed effect models to the large-scale longitudinal data from the British Household Panel Survey, we find that recovery of subjective well-being upon reemployment is fast, complete and enduring, even when individuals take less favourable employment options to return to work. By contrast, transitions into economic inactivity following unemployment are accompanied by persistent scars on subsequent well-being trajectories. The study advances our understanding of well-being development over the entire employment-unemployment-reemployment cycle.

Keywords: Recovery, unemployment; reemployment; well-being; longitudinal data analysis

The Restorative Effect of Work after Unemployment: An Intra-individual Analysis of Subjective Well-being Recovery through Reemployment

A substantial body of research shows that unemployment has enduring negative effects on individuals' subjective well-being (Clark, Diener, Georgellis, & Lucas, 2008; Clark & Georgellis, 2013; Lucas, Clark, Georgellis, & Diener, 2004; Luhmann, Hofmann, Eid, & Lucas, 2012; Young, 2012). These effects have been widely attributed to the deprivation of latent functions of work such as a clear time structure to the day, social contact outside the family, goals and purposes, personal status and identity, and enforced activity (Jahoda, 1982). This myriad of benefits underpins a general thrust of latent functions theory; that possessing a job provides unique manifest and psychological benefits that may not be easily obtained from non-work related activities.

Logically, reemployment should be the most effective way to repair the damage to well-being caused by unemployment. Yet studies on reemployment have provided indirect or inconsistent findings. Although research generally shows that reemployment improves subjective well-being (Lucas et al., 2004; Luhmann, et al., 2012; McKee-Ryan, Song, Wanberg, & Kinicki, 2005), the extent of improvement remains ambiguous, as several large-scale longitudinal studies have revealed evidence of long-term scarring effects of unemployment. For instance, Clark, Georgellis and Sanfey's (2001) analysis of the German Socio-Economic Panel shows that life satisfaction is not only lower among the currently unemployed, but also among those who have experienced unemployment in the past. Similar findings were reported by Lucas, Clark, Georgellis and Diener (2004), Knabe and Ratzel (2011) and Young (2012) based on comparable large-scale longitudinal datasets and well-being measures. The extant evidence implies that unemployment inflicts permanent and irreversible damage on individuals' subjective well-being regardless of their subsequent labour market experiences, a conclusion not only deeply pessimistic but also perplexing. An

unresolved theoretical paradox is that although latent functions theory has been widely supported by studies of job loss, its validity in explaining the effect of reemployment remains questionable.

By addressing this theoretical gap, the present study makes three contributions to the literature. First, unlike most previous research which treats unemployment as a discrete life event, this study examines well-being dynamics in an employment-unemployment-reemployment cycle through the lens of latent functions theory. Second, this study extends the literature by analysing how individuals' pathways out of unemployment influence their subsequent well-being development. In particular, we contrast the well-being trajectories of those who are reemployed in different types of jobs and those who transition into economic inactivity. Finally, we conceptualize and test the effect of employment status change on subjective well-being at the individual level. By taking into account the confounding effect of unobserved individual heterogeneity, this study uncovers hitherto masked restorative effects of reemployment and dispels a long-standing and widely accepted myth of the permanent scarring effect of unemployment.

Unemployment and subjective well-being

The dominant perspective underlying different theories of the psychological effects of unemployment is that work provides multiple psychological health-enhancing benefits, the loss of which negatively affects subjective well-being. Latent functions theory, developed by Jahoda (1981), argues that employment provides individuals with a time structure to the day, opportunities to interact with others outside the family, goals and purposes, personal status and identity, and enforced activity. The deprivation of these latent functions of work play a major role in explaining the destructive psychological impact of unemployment. For example, unemployed people often find it difficult to maintain a regular pattern of activity, with a consequent feeling of wasted or unproductive time. They may also lose regular contact with

others outside the household, which increases their risks to social exclusion and marginalization. Lack of social participation may prevent people from getting information about job opportunities which can result in prolonged unemployment (Gallie & Paugam, 2004). Although taking a lead role in other activities such as homemaking following unemployment may confer some of the features of work (e.g., personal identity), many others (e.g., social status and enforced activity) are not replaced as readily.

While research in the 1980s and 1990s focused primarily on the contemporaneous effect of unemployment on subjective well-being, more recent studies have utilized longitudinal data to examine well-being dynamics *during* unemployment. The majority of these studies find that individuals cannot adapt to unemployment simply through prolonged exposure to the situation (Clark et al., 2008; Clark & Georgellis, 2013; Lucas, 2007; Lucas et al., 2004). These findings contradict set point theory (Headey & Wearing, 1989; Larsen, 2000) which suggests that individuals have genetically predetermined ‘set points’ of subjective well-being to which they always return after disruptive life events. The evidence, however, is consistent with the prediction of latent functions theory. Emphasizing the importance of *employment* for protecting individuals’ subjective well-being, latent functions theory suggests that absence of valued features of working life has devastating psychological consequences as long as unemployment continues. It naturally follows that reemployment is the most effective way to restore individuals’ subjective well-being.

Reemployment and subjective well-being

Drawing on latent functions theory, we elaborate how and why reemployment should help individuals return to their baseline well-being. First, landing a job after unemployment increases one’s household income, which helps to relieve the financial strain experienced during unemployment. Besides replacing the manifest benefit of work, reemployment can also contribute to subjective well-being via different mechanisms such as re-establishing

work role identity, bringing structured time use and enlarging one's social network and access to social support. Reemployment restores an individual's work role identity, which is important for one to define who he or she is and build a sense of self-worth (e.g., Conroy & O'Leary-Kelly, 2014), evoking a self-achievement mechanism to boost subjective well-being. Reemployment also introduces a time structure to the day that helps create a boundary between different role identities, such as family role identity and work role identity (Ashforth, Kreiner, & Fugate, 2000) and enhance a sense of purpose in time use in one's daily life (Bond & Feather, 1988; Evans & Hawroth, 1991; Rowley & Feather, 1987), evoking a perceived meaningfulness mechanism to contribute to subjective well-being (Ryan & Deci, 2001). Moreover, reemployment helps individuals build new social relationships with colleagues, enlarging their access to the emotional and instrumental support from their social network (Warr, 2011), contributing to higher levels of subjective well-being through increased social resources (Gardell, 1971; Haworth & Ducker, 1991). From a perspective of conservation of resources theory (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014; Hobfoll, 1998), these latent benefits provide essential resources for individuals to both establish and achieve meaningful life goals. Based on the discussion we hypothesize:

Hypothesis 1: Individuals return to their baseline levels of subjective well-being after they become reemployed.

Differential routes out of unemployment

Although reemployment is generally expected to restore individuals' subjective well-being, it is possible that different routes of reemployment replace latent benefits to different extent, leading to varying degrees of recovery across individuals. We accordingly argue for an extended latent functions framework that distinguishes individuals based on their pre- and post-unemployment experiences. With a few exceptions (e.g., Strandh, 2000; Young, 2012), most previous studies have treated individuals leaving unemployment as a homogenous

group, overlooking the fact that exiting unemployment can lead to two distinct outcomes: finding a job or quitting the labour market. Individuals are likely to experience different emotional journeys depending on the type of transition they make out of unemployment. For example, those who re-enter employment are likely to have latent functions of work restored whereas quitting job search to take up alternative social roles (e.g., retirement or family care) may provide less access to the manifest and latent benefits required to sustain subjective well-being.

This, however, assumes that the quality of the jobs they re-enter is consistent with that of the jobs from which they became unemployed. Financial constraints and dependency factors may pressure individuals to take lower quality jobs following a spell of unemployment. For instance, the scarring effects of unemployment on wages (lower earnings from post-unemployment jobs compared to pre-unemployment jobs) have been extensively documented by labour economists (e.g., Arulampalam, 2001; Gangl, 2006). More recent research shows similar scarring effects with respect to non-pecuniary job characteristics (Brand, 2006; Dieckhoff, 2011). The extent to which reemployment repairs subjective well-being may therefore depend on the change in job quality after unemployment.

In this study, we consider three types of change in job quality following unemployment: 1) change from full-time to part-time jobs; 2) change from permanent to temporary jobs and 3) change from higher paid to lower paid jobs. These choices were made based on previous research which shows that non-standard jobs such as temporary and part-time jobs on average offer less favourable working conditions than permanent full-time jobs (e.g., Gallie & Zhou, 2011; ILO, 2016; Kalleberg, 2011; Zou, 2015). Transitions into non-standard jobs may therefore negatively affect individuals' subsequent well-being recovery. On the other hand, those who transition from unemployment into economic inactivity are

likely to fare least well because of continued deprivation of the latent benefits provided by working life. Based on the discussion we hypothesize:

Hypothesis 2: Restoration of subjective well-being following unemployment is greatest among those who are reemployed in jobs of similar quality to their previous jobs, followed by those who are reemployed in lower quality jobs and finally those who move into economic inactivity.

Intra-individual analysis

To properly test latent functions theory, we examine the effect of employment status change on subjective well-being at the individual level. Previous research often draws on group means to estimate baseline well-being. In multilevel models, for instance, baseline well-being is defined as the mean value of subjective well-being of all individuals before they enter unemployment (e.g., Lucas et al., 2004). This approach does not take account of between-individual variations in factors which affect both one's baseline well-being and propensity to unemployment. In this study we argue that the effect of past unemployment on current subjective well-being should be established based on comparisons of the same individual's pre- and post-unemployment experiences. The importance of using individual set points has been emphasized by Diener, Lucas and Scollon (2006) in their revision of set point theory, but empirical studies have yet to follow this suggestion by testing recovery effects at the individual level.

To overcome the methodological limitations of previous research, we apply fixed effects models to large-scale longitudinal data to control for unobserved individual heterogeneity. The sample size and time span of the data allow us to follow individuals' well-being trajectories as they enter and exit unemployment while distinguishing those who are reemployed in different types of jobs and those who move into economic inactivity. This

analytic approach enables us to provide a more rigorous empirical assessment of the restorative effects of work following a spell of unemployment in a within-individual context.

Method

Data and participants

The analysis is based on the British Household Panel Survey (BHPS)¹, an annually repeated household-based longitudinal survey carried out by the UK Longitudinal Studies Centre to provide information on social and economic changes in Britain. The first survey consists of a nationally representative sample of 5500 households in England, Wales and Scotland. Data was collected through face-to-face interviews with each adult member of the household. A total of 10300 completed individual questionnaires were returned in 1991, with a response rate of 74%. These individuals were then designated as panel members and followed up annually until 2008, yielding eighteen waves of data in total. The current analysis is focused on individuals aged 16-60 who have experienced at least one spell of unemployment during the survey period.

Measures

The dependent variable is life satisfaction, one of the most commonly used measures of subjective well-being in the literature. Since the sixth wave of BHPS, respondents were asked a single question in each year: ‘How dissatisfied or satisfied are you with your life overall?’ Responses were made on a seven-point scale running from ‘not satisfied at all’ to ‘completely satisfied’. This measure has been validated (Cheung & Lucas, 2014) and widely adopted in well-being research (e.g., Clark et al., 2008; Knabe, Rätzl, Schöb, & Weimann, 2010; Lucas et al., 2004). The key independent variables are the lead and lag dummies which measure life satisfaction trajectory before, during and after unemployment. Following Clark et al. (2008), we created time dummies around each key transition in employment status (see Table 1).

Insert Table 1 about here

In Table 1, the first set of dummies measure life satisfaction trajectory before unemployment. ‘Pre-unemployment_1yr’ measures the year before job loss, and ‘pre-unemployment_2yrs’ measures two years before job loss. The second set of dummies measure life satisfaction trajectory during unemployment. ‘In-unemployment_1yr’ measures the year in which one enters unemployment and the remaining dummies measure the second, third and fourth year in unemployment. The last dummy for this stage ‘In-unemployment_5+yrs’ is a catch-all category which includes those who remain unemployed for five years or longer before they exit unemployment. The final set of dummies measure life satisfaction trajectory after exiting unemployment. In order to distinguish those who follow different routes out of unemployment, we created several sets of lag dummies for this stage. The first set measure the well-being trajectories of those who return to work. Within the reemployed group, we further distinguish those who transition from full-time to part-time jobs, from permanent to temporary jobs and from higher paid to lower paid jobs. Similarly, we created a set of lag dummies to track the well-being trajectory of those who switch from unemployment to economic inactivity, which includes retiring from paid work, going on maternity leave, looking after family, participating in full-time education or training, going on government training schemes, and being classified as long-term sick or disabled. After excluding the cases where information on the start or end date of the current spell of unemployment is missing, the final analytical sample consists of 4221 observed unemployment spells, of which 2241 are followed by transitions into reemployment and 1980 are followed by transitions into economic inactivity (Table 2).

Insert Table 2 about here

Analytical methods

This study applies fixed effects models to estimate the temporal effects of unemployment on subjective well-being. The key advantage of fixed effects modelling lies in its ability to filter out the confounding effects of time-invariant individual characteristics which may affect both dependent and independent variables. In fixed effects models, baseline well-being is measured as the average level of life satisfaction reported by an individual over the entire survey period. Due to its advantage in controlling for omitted variable bias, fixed effects models have been widely used in previous well-being research (e.g., Georgellis, Lange & Tabvuma, 2012; Young, 2012; Zhou, Zou, Williams & Tabvuma, 2017). In addition to time-invariant individual fixed effects we also control for a range of time-varying covariates that include age, education, marital status, household income, number of children, physical health and survey year in all fixed effects models.²

Growth curve modelling is another commonly used statistical method for analysing individuals' developmental trajectories. Similar to multilevel models, growth curve models allow individuals to have both random initial status (intercept) and growth rate (slope), thereby presenting each individual's unique developmental trajectory over time. It differs, however, from fixed effects models in how baseline well-being is calculated. In growth curve models, baseline well-being is measured as the initial status of the change trajectory (life satisfaction score reported in the year before job loss) whereas in fixed models baseline is measured as one's life satisfaction score averaged across all survey years. Another difference between the two methods is that fixed effects models produce point estimates of subjective well-being in each year through the use of time dummies, whereas growth curve models provide a broad shape of well-being curve through the fitting of linear and polynomial functions of the time variable. In this study, we fit both fixed effects and growth curve models to ensure the robustness of our findings.

Results

Table 3 shows fixed effects analysis of life satisfaction trajectory as one experiences employment, unemployment and reemployment.³ A non-significant coefficient for a year dummy indicates that one's life satisfaction is at his or her baseline level in that year, whereas a significant coefficient suggests that life satisfaction is above or below the baseline depending on the sign of the coefficient. We plotted the coefficients of the lead and lag dummies in Figure 1 to facilitate interpretation. Table 3 shows that life satisfaction declines significantly in the year prior to job loss ($\beta = -.071, p = .002$), which is usually interpreted as anticipation effects (Clark et al., 2008). It further declines when unemployment occurs ($\beta = -.296, p = .000$) and then stays below the baseline level in the following years, suggesting that individuals fail to adapt to unemployment regardless of its duration.

Insert Table 3 and Figure 1 about here

Upon reemployment, however, individuals return to their baseline levels of life satisfaction. The coefficient of the first post-unemployment dummy is significant and positive ($\beta = .066, p = .017$), which suggests that individuals experience not only a recovery, but a boost to subjective well-being when they first re-enter the world of paid work. This effect gradually dissipates, as the coefficient of the second post-unemployment year dummy is statistically non-significant ($\beta = -.006, p = .862$), indicating a return to the baseline. This pattern mirrors previous research that shows that individuals typically experience a 'honeymoon-hangover' effect when they change jobs (Boswell, Boudreau, & Tichy, 2005; Zhou et al., 2017). The pattern reflects the process of psychological adaptation following turnover – as individuals gain increased exposure to their new work environments the initial novelty and excitement wear off and well-being returns to the baseline. The coefficient of the remaining year dummies are non-significant, which suggests that well-being consistently stays at the baseline level for those who re-enter the labour force and remain employed in the subsequent years.⁴

To check the robustness of our results from fixed effects models, we fit growth curve models to examine individual's well-being recovery through reemployment. We analyzed the three stages in a single model by fitting linear, quadratic and cubic functions of a continuous time variable to capture the S shape of life satisfaction trajectory. Both random intercept and random slope were fitted for the linear function of time.⁵ Reassuringly, the results from growth curve model (Table 4 and Figure 2) are fully consistent with those produced by fixed effects models. These results support *Hypothesis 1*.

Insert Table 4 and Figure 2 about here

To examine how well-being recovery is affected by individuals' pathways out of unemployment, Table 5 shows the well-being trajectories of three groups of individuals: those who are reemployed in jobs of similar quality to their previous jobs; those who are reemployed in lower quality jobs and those who transition into economic inactivity. Consistent with *Hypothesis 2*, the pattern of life satisfaction for those who move into economic inactivity differs from those who become reemployed. First, individuals do not experience a honeymoon effect when they transition into economic inactivity ($\beta = -.103, p = .000$). Although life satisfaction increases compared to the previous year, the extent of the recovery is insufficient for moving them back to their baseline well-being. The pattern remains stable in the subsequent years, as the coefficients of post-unemployment dummies generally take on negative signs and reach statistical significance in the first, second and fifth years ($\beta = -.103, p = .000$; $\beta = -.102, p = .007$; $\beta = -.124, p = .030$). While economic inactivity is a highly heterogeneous category, the sample sizes for most subgroups are too small to allow for meaningful separate analysis. However, we carried out post-hoc separate analysis for one subgroup – transition into family care roles, which was the most common choice among those who exit the labour market. The results (Figure A1) show that individuals who

transition into family care roles initially return to their baseline well-being but experience a decline of well-being in the following years. These results are consistent with *Hypothesis 2*.

Insert Table 5 and Figure 3 about here

In contrast to economic inactivity, the effect of job quality change through reemployment is not fully consistent with *Hypothesis 2*. First, transitions from full-time jobs into part-time jobs do not result in less well-being recovery. In fact, post-unemployment well-being trajectories appear even more positive for those who move into part-time jobs, although the differences are statistically non-significant in most years ($p > .100$) (Figure 3). Transitions from permanent jobs into temporary jobs are accompanied by less favourable patterns of recovery, although the effect fails to reach statistical significance in any post-unemployment year ($p > .100$). Finally, individuals who are reemployed in lower paid jobs fare as well as those who are reemployed in same or higher paid jobs as both groups return to their baseline upon exiting unemployment. On the whole, these results indicate that landing a job *per se* plays a major role in restoring individuals' subjective well-being. It seems that despite the loss of some valued job features in the reemployment process, individuals manage to return to their baseline well-being as soon as they re-enter the labour force. Taken together, *Hypothesis 2* is partially supported.

To examine the potential mechanisms underlying the effect of reemployment on subjective well-being, we have carried out exploratory mediation analysis for each type of transition out of unemployment. While the variables in the BHPS do not cover all the theoretical mechanisms suggested by latent functions theory, respondents were asked to rate their degree of satisfaction with their household income and social life in each survey year.⁶ Using these measures we carried out mediation analysis using Preacher and Hayes' (2004) nonparametric bootstrapping approach. We estimated the confidence intervals of indirect effects for those who transition from unemployment into different types of jobs and

economic inactivity. The results (Table A2) show that most of the mediation effects are significant for transitions into reemployment and economic inactivity and non-significant for the sub samples of job quality change analysis, which is expected since job quality changes do not have significant main effects on well-being recovery. The evidence shows that reemployment restores individuals' subjective well-being partially by improving the financial and social aspects of their lives.

Discussion

Drawing on latent functions theory, this study has examined whether reemployment can repair the deleterious effects on well-being caused by unemployment. Our intra-individual analysis covering the entire employment-unemployment-reemployment cycle shows that unemployment has large negative effects on individuals' subjective well-being. However, these effects can be fully reversed by reemployment, as recovery of well-being upon reemployment is fast, complete and enduring. To further check the robustness of our conclusion, we have conducted post-hoc analysis on a sample of individuals who have exited unemployment by first moving into economic inactivity and then re-entering the labour force. We carried out three sets of fixed effects analysis on individuals who spend up to one year, two years and three years in economic inactivity before returning to the labour force. In all three cases individuals return to their baseline well-being as soon as they transition back into paid work.

A second key finding of this study is that post-unemployment well-being trajectories are somewhat influenced by how individuals exit unemployment. Consistent with latent functions theory, we find that individuals who transition from unemployment into economic inactivity experience less recovery compared to those who transition into employment. Although well-being improves upon quitting job search, it remains significantly below baseline in the subsequent years. The evidence suggests that unemployment can indeed leave

permanent scars on subjective well-being if it propels individuals into permanent joblessness. Our analysis of the effect of job quality change on subsequent well-being trajectory, however, is not fully consistent with our initial expectation. Neither change in the type of job contract nor the level of pay seems to affect individuals' capacity to bounce back to their baseline well-being. These findings, however, need to be treated with some caution as the relatively small sample sizes for certain types of transitions (e.g., transitions from permanent jobs into temporary jobs) can limit the power to detect significant scarring effects.⁷ It is also possible that the severe deprivation of financial and social resources during unemployment has reduced individuals' expectations of their new jobs and lowered their happiness thresholds, as past longitudinal research shows that individuals often adapt their aspirations and social reference groups based on their current circumstances (Burchardt, 2005).

In summary, our study contradicts previous research which suggests unemployment causes permanent damage to individuals' subjective well-being. A potential reason for this discrepancy is that we have not only distinguished individuals who followed different routes out of unemployment but also examined these individuals under the condition that they did not experience further changes in employment status in the follow-up years. Some studies have treated all post-unemployment years as a single stage, overlooking the possibility that individuals who initially find new jobs may experience further unemployment or transitions into economic activity. It is possible that the scarring effect uncovered by previous studies reflects longer durations of joblessness among these workers rather than their failure to adjust to their new jobs. Our study thus does not necessarily contradict the large body of empirical evidence that shows persistent negative effect of unemployment on subjective well-being; instead, it contributes to understanding the mechanism underlying this well-documented scarring effect.

Practical implications

This study has significant implications for individuals, human resource practitioners and policy makers. From an individual perspective, our findings confirm previous research that unemployment is a particularly unpleasant life event, where dejection related emotions such as disappointment and frustration are likely to be the rule rather than exception. However, the fact that these detrimental effects are neither permanent nor irreversible can help individuals make informed choices on their exiting strategies, which they may discuss with, for example, vocational counsellors. For employers and human resource practitioners, knowledge of the well-being journey of those who return to workforce from unemployment can lead to improved recruitment and selection practices. There is a potential risk of bias in hiring decisions, on the basis of assumed long-term psychological effects of unemployment (Young, 2012), yet our findings indicate the need to actively avoid such assumptions in personnel decision making. Finally, our findings also have significant implications for policy makers. Following the 2008 global economic crisis, the general weakening of the labour market has made jobs more precarious in many developed economies (Gallie, 2013). Policy initiatives designed to remove the barriers that prevent people from re-entering employment are likely to play a key role in improving the welfare of the unemployed. For example, the last decade witnessed a marked growth in many developed countries in labour market activation policies aimed at reintegrating the unemployed into the labour force through reorientation training, career counselling and job placements (Gallie, 2004). In the light of our findings, effective activation programmes that facilitate swift re-integration can potentially mitigate the negative impact of unemployment, underscoring the social responsibility characterizing such intervention activities.

Limitations and Future Research

Our study has a few limitations. The first is our sole focus on life satisfaction. Research on subjective well-being has revealed the multi-dimensional nature of the concept

(Lucas, Diener, & Suh, 1996; Ryan & Deci, 2001). A key distinction has been made between hedonic well-being which reflects the experience of physical and emotional pleasures (Kahneman, 1999) and eudaimonic well-being which captures a sense of meaning, purpose and self-actualisation (Waterman, 1993). Some studies find that although the unemployed report lower levels of life satisfaction, they are not necessarily worse off in terms of hedonic well-being as they tend to spend more time on activities that they enjoy compared to their working counterparts (Knabe et al., 2010). How unemployment affects subjective well-being as cognitive evaluations versus affective reactions can be further investigated. Second, this study has only been able to examine three types of job quality change following unemployment, which does not exhaust all the possibilities of job quality changes. Job quality encompasses a wide array of benefits that individuals can obtain from their work such as skill variety, job autonomy, developmental opportunities, work intensity and social support. Our study showed that change in contract type or pay level following unemployment did not affect individuals' well-being recovery, which is not entirely surprising as previous research often shows relatively weak correlations between extrinsic job rewards and subjective well-being (DeNeve & Cooper, 1999; Easterlin, 1995). Although part-time and temporary jobs are also associated with generally lower levels of intrinsic job rewards with respect to skill development opportunities, organizational participation and promotion prospects, they are not inferior in terms of other facets of job quality such as work intensity (Inanc, 2015; Warren & Lyonette, 2018). A thorough assessment of the impact of job quality change on well-being trajectories requires future research to directly test the effect of changes in multiple dimensions of job quality. Finally, we have treated economic inactivity as a relative homogenous category due to the constraint of sample size. Unlike many other life events such as marriage and childbirth that affect most people, only a relatively small percentage of respondents have experienced unemployment, which limits our ability to carry out separate

analysis for each subcategory of those who transition into economic inactivity. In reality, this category is likely to be highly heterogeneous and life satisfaction can differ among those who engage in different activities outside the labour market. While this study was focused on the restorative effect of reemployment, the issue of how well-being evolves after individuals leave the labour market to pursue other life interests is an interesting question that awaits future research.

Conclusions

The main finding of this study is a positive one for the psychological benefits of work and employment; that is, contrary to past theories on the long-term or permanent negative effects of unemployment on well-being, our study shows that reemployment does not only improve, but effectively *restores* subjective well-being. Our study underscores the value that work and employment bring to psychological health, and offers an optimistic, and motivating conclusion to those who experience the distress of unemployment. In spite of the difficulty of the experience, and the struggle that many people face in seeking work following unemployment, there is reassurance in knowing that finding a new job is a key to restoring well-being, and to becoming happy, or at least *as happy as one used to be*, in life once more.

Notes

1. The British Household Panel Survey (BHPS) is a secondary longitudinal dataset available at the UK Data Archive:

<https://discover.ukdataservice.ac.uk/catalogue/?sn=5151&type=Data%20catalogue>. A

bibliography of journal articles, working papers, conference presentations, and dissertations using the BHPS is available at: <https://www.iser.essex.ac.uk/bhps/publications>. To our knowledge our work is not redundant to existing publications based on the BHPS. The authors have published four articles based on the BHPS (Zhou, Zou, Williams, & Tabvuma, 2017; Zhou, Wu, Zou, & Williams, 2017; Zhou, Zou, Woods, & Wu, 2018; Wu & Griffin, 2012).

2. These control variables were chosen based on prior research which shows subjective well-being is higher among females (Alesina, Di Tella, & MacCulloch, 2004), the married (Helliwell, 2003), the higher educated (Blanchflower & Oswald, 2004), those with higher income (Clark, Frijters, & Shields, 2008), better physical health (Shields & Wheatley Price, 2005) and fewer care responsibilities (Hirst, 2003, 2005; Marks, Lambert, & Choi, 2002). Age has been found to influence subjective well-being in a non-linear manner, as younger and older people appear to enjoy higher levels of well-being than those in the middle age (Blanchflower & Oswald, 2004; Easterlin, 2006). In addition to individuals' demographic characteristics, we also control for survey year to tease out period effects (e.g., an economic recession that can affect the life satisfaction of all respondents in a particular year).

3. We checked the robustness of our results by repeating the fixed effects models with and without the control variables. The results from both sets of analyses are consistent (Table A1).

4. We carried out analysis for three age groups (16–29, 30–49 and 50+) and the results show that reemployment restores well-being to baseline levels for all age groups.

5. We also fitted random intercept and random slope to the quadratic and cubic functions but these models did not converge.

6. Respondents were asked: ‘Here are some questions about how you feel about your life. Please tick the number which you feel best describes how dissatisfied or satisfied you are with the following aspects of your current situation’: The income of your household; Your social life. The response scale ranges from 1 (not satisfied at all) to 7 (completely satisfied).

7. We have conducted power analyses on different types of transitions into reemployment and found strong power (1.00) for change from full-time jobs to full-time jobs, from permanent jobs to permanent jobs and from unemployment to economic inactivity. However, lower power was observed for the other types of transitions, including changes from full-time jobs to part-time jobs (.23), from permanent jobs to temporary jobs (.16) and from higher paid to either higher (.18) or lower paid jobs (.13). These results suggest the effect of these transitions should be treated with some caution as the relatively small sample sizes may limit the power to detect significant scarring effects.

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Table 1

Number of Observations of Time Dummies

| | Men | Women | All |
|--------------------------------------|------|-------|------|
| Stage 1 (before unemployment) | | | |
| Pre-unemployment_2yrs | 1286 | 1283 | 2573 |
| Pre-unemployment_1yr | 2095 | 1818 | 3927 |
| Stage 2 (during unemployment) | | | |
| In-unemployment_1yr | 2085 | 1812 | 3927 |
| In-unemployment_2yrs | 530 | 316 | 850 |
| In-unemployment_3yrs | 218 | 86 | 304 |
| In-unemployment_4yrs | 105 | 23 | 128 |
| In-unemployment_5+yrs | 138 | 15 | 153 |
| Stage 3 (transition into employment) | | | |
| Post-unemployment_1yr | 1335 | 892 | 2241 |
| Post-unemployment_2yrs | 874 | 619 | 1501 |
| Post-unemployment_3yrs | 655 | 447 | 1111 |
| Post-unemployment_4yrs | 505 | 328 | 836 |
| Post-unemployment_5yrs | 400 | 248 | 653 |

Table 2

Number of Unemployment Spells and Transitions Out of Unemployment

| | <i>N</i> |
|---|----------|
| Total unemployment spells | 4221 |
| Transition into employment | 2241 |
| Transition into economic inactivity | 1980 |
| Transition from full-time to full-time jobs | 689 |
| Transition from full-time to part-time jobs | 132 |
| Transition from permanent to permanent jobs | 678 |
| Transition from permanent to temporary jobs | 111 |
| Transition into same or higher paid jobs | 192 |
| Transition into lower paid jobs | 145 |

Table 3

Effect of Transition into Employment on Life Satisfaction: Fixed Effects Model

| | Estimate | Std. Error |
|------------------------|-----------|------------|
| Pre-unemployment _2yrs | -0.026 | (0.027) |
| Pre-unemployment _1yr | -0.071** | (0.023) |
| In-unemployment_1yr | -0.296*** | (0.022) |
| In-unemployment_2yrs | -0.378*** | (0.044) |
| In-unemployment_3yrs | -0.281*** | (0.067) |
| In-unemployment_4yrs | -0.260** | (0.099) |
| In-unemployment_5+yrs | -0.386*** | (0.109) |
| Post-unemployment_1yr | 0.066* | (0.028) |
| Post-unemployment_2yrs | -0.006 | (0.032) |
| Post-unemployment_3yrs | 0.061† | (0.035) |
| Post-unemployment_4yrs | 0.059 | (0.038) |
| Post-unemployment_5yrs | 0.042 | (0.042) |
| Controls | | |
| Age | -0.067*** | (0.012) |
| Age squared | 0.001*** | (0.000) |
| First degree | -0.090 | (0.055) |
| Teaching or equivalent | -0.059 | (0.068) |
| A Level | -0.058 | (0.057) |
| O Level | -0.081 | (0.060) |
| CSE | -0.149 | (0.092) |

| | | |
|--------------------|----------|---------|
| No qualifications | -0.176* | (0.074) |
| No. of children 1 | 0.014 | (0.013) |
| No. of children 2 | 0.004 | (0.015) |
| No. of children 3+ | 0.016 | (0.022) |
| Household income | 0.000*** | (0.000) |
| Married/Cohabited | 0.227*** | (0.013) |
| Health | Yes | |
| Survey year | Yes | |

Notes: Reference categories for controls are: higher degree, no children, not married or living with partner. Health and survey year dummies are also controlled.

*** $p < .001$. ** $p < .01$. * $p < .05$. † $p < .1$.

Table 4

Effect of Transition into Employment on Life Satisfaction: Growth Curve Model

| | Estimate | Std. Error |
|------------------------|-----------|------------|
| (Intercept) | 5.440*** | 0.238 |
| Time | -0.338*** | 0.037 |
| Time squared | 0.059*** | 0.006 |
| Time cubed | -0.003*** | 0.000 |
| Age | -0.091*** | 0.010 |
| Age squared | 0.001*** | 0.000 |
| Male | -0.030 | 0.038 |
| First degree | -0.077 | 0.133 |
| Teaching or equivalent | 0.072 | 0.147 |
| A Level | 0.126 | 0.131 |
| O Level | 0.158 | 0.130 |
| CSE | 0.252 | 0.140 |
| No qualifications | 0.147 | 0.133 |
| No. of children 1 | -0.114** | 0.044 |
| No. of children 2 | -0.112* | 0.052 |
| No. of children 3+ | 0.046 | 0.070 |
| Household income | 0.009** | 0.000 |
| Married/Cohabited | 0.352*** | 0.035 |
| Health | Yes | |
| Survey year | Yes | |

Notes: Reference categories for controls are: higher degree, no children, not married or living with partner. Health and survey year dummies are also controlled.

*** $p < .001$. ** $p < .01$. * $p < .05$. † $p < .1$.

Table 5

Effects of Change in Job Quality after Unemployment on Life Satisfaction: Fixed Effects Models

| | FT-FT | FT-PT | Perm- Perm | Perm- Temp | To same / higher paid | To lower paid | To economic inactivity |
|------------------------|--------------------------------|----------------------|--------------------------------|--------------------------------|-----------------------------|----------------------|---------------------------------|
| Pre-unemployment_2yrs | -0.059 (0.044) | -0.047 (0.044) | -0.072 [†] (0.042) | -0.067 (0.041) | -0.028 (0.027) | -0.031 (0.027) | -0.044 [†] (-0.027) |
| Pre-unemployment_1yr | -0.117** (0.039) | -0.107** (0.038) | -0.114** (0.037) | -0.109** (0.037) | -0.073** (0.023) | -0.076*** (0.023) | -0.085*** (-0.023) |
| In-unemployment_1yr | -0.402*** (0.039) | -0.384*** (0.037) | -0.406*** (0.037) | -0.399*** (0.036) | -0.297*** (0.022) | -0.301*** (0.022) | -0.330*** (-0.022) |
| In-unemployment_2yrs | -0.466*** (0.077) | -0.449*** (0.077) | -0.487*** (0.082) | -0.480*** (0.081) | -0.380*** (0.043) | -0.384*** (0.043) | -0.419*** (-0.044) |
| In-unemployment_3yrs | -0.312** (0.120) | -0.296* (0.120) | -0.278* (0.132) | -0.271* (0.132) | -0.281*** (0.067) | -0.285*** (0.067) | -0.323*** (-0.067) |
| In-unemployment_4yrs | -0.250 (0.184) | -0.236 (0.184) | -0.389 [†] (0.205) | -0.382 [†] (0.205) | -0.261** (0.099) | -0.264** (0.099) | -0.304** (-0.099) |
| In-unemployment_5+yrs | -0.566** (0.196) | -0.554** (0.196) | -0.616** (0.214) | -0.610** (0.214) | -0.387*** (0.109) | -0.390*** (0.109) | -0.430*** (-0.109) |
| Post-unemployment_1yr | -0.042 (0.051) | -0.060 (0.108) | -0.030 (0.049) | 0.088 (0.124) | 0.061 (0.049) | -0.011 (0.054) | -0.103*** (-0.029) |
| Post-unemployment_2yrs | -0.092 [†] (0.055) | -0.053 (0.134) | -0.055 (0.054) | -0.071 (0.166) | -0.030 (0.057) | -0.053 (0.060) | -0.102** (-0.038) |
| Post-unemployment_3yrs | -0.055 (0.062) | 0.408** (0.151) | -0.001 (0.059) | -0.229 (0.228) | 0.102 (0.063) | 0.010 (0.067) | -0.063 (-0.043) |
| Post-unemployment_4yrs | -0.051 (0.066) | 0.054 (0.200) | 0.000 (0.064) | -0.329 (0.282) | -0.031 (0.067) | 0.045 (0.077) | -0.059 (-0.049) |

| | | | | | | | |
|-------------------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------------|
| Post-unemployment_5+yrs | 0.031 (0.076) | 0.179 (0.239) | 0.009 (0.074) | 0.136 (0.419) | 0.018 (0.076) | 0.038 (0.089) | -0.124* (-0.057) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: 1. FT-FT indicates transition from a full-time job (before unemployment) to a full-time job (after unemployment); FT-PT indicates transition from a full-time job (before unemployment) to a part-time job (after unemployment); Perm-Perm indicates transition from a permanent job (before unemployment) to a permanent job (after unemployment); Perm-Temp indicates transition from a permanent job (before unemployment) to a temporary job (after unemployment).

2. Control variables include: age, age squared, qualifications, number of children, household income, marital status, health, survey year and transitions following other unemployment spells within the same individual.

3. *** $p < .001$. ** $p < .01$. * $p < .05$. † $p < .1$.

Figures

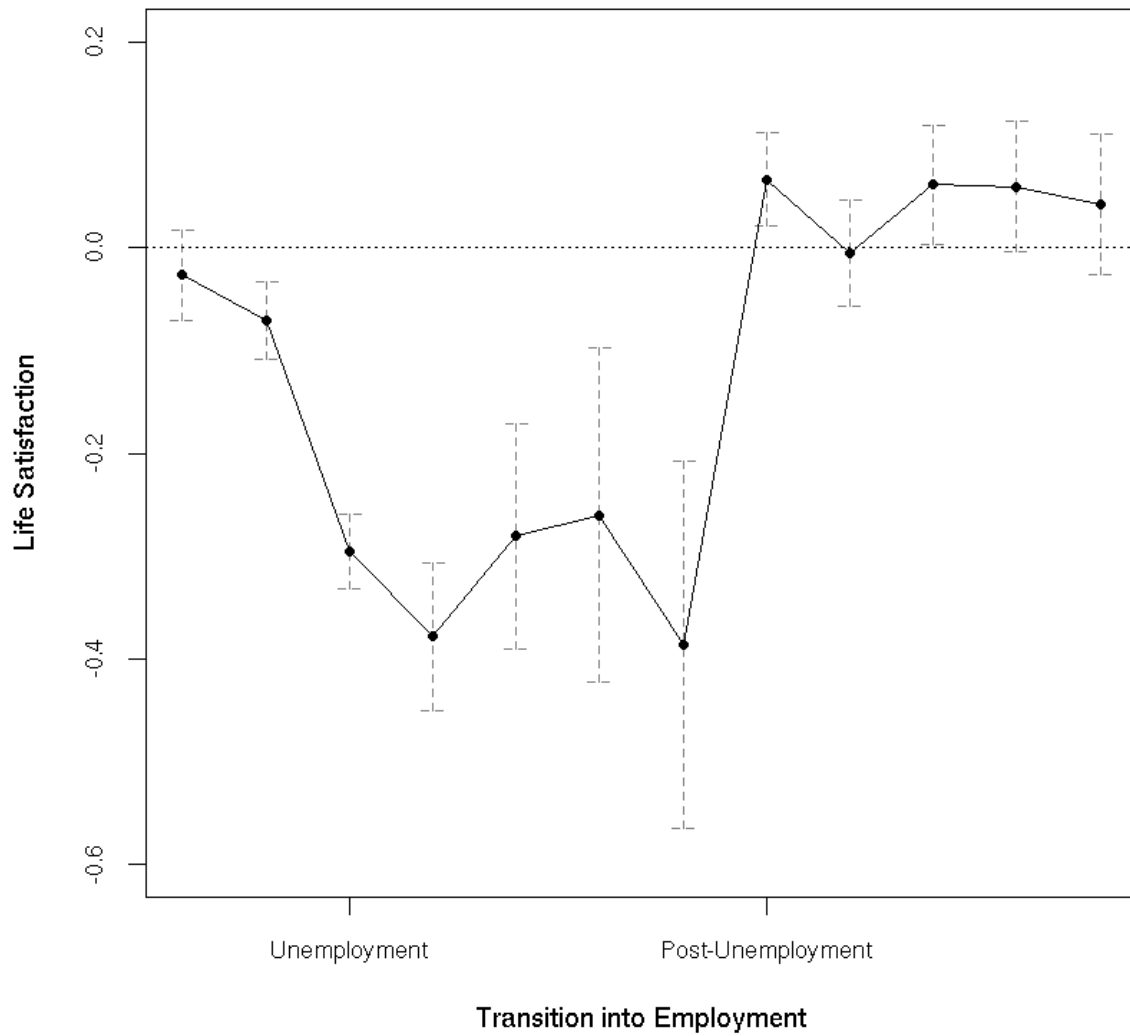


Figure 1. Effect of Transition into employment on Life Satisfaction: Fixed Effects Model

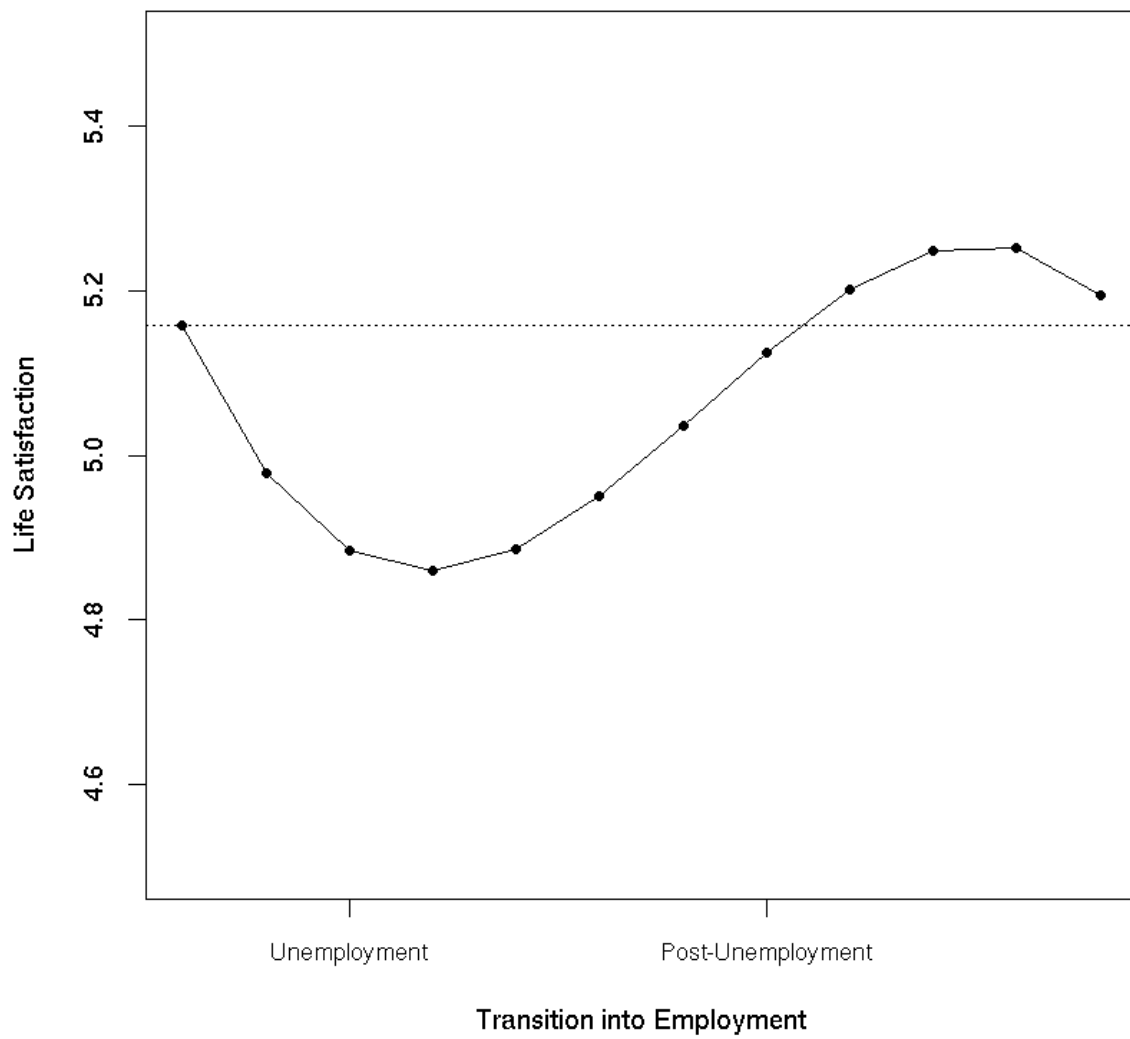


Figure 2. Effect of Transition into Employment on Life Satisfaction: Growth Curve Model

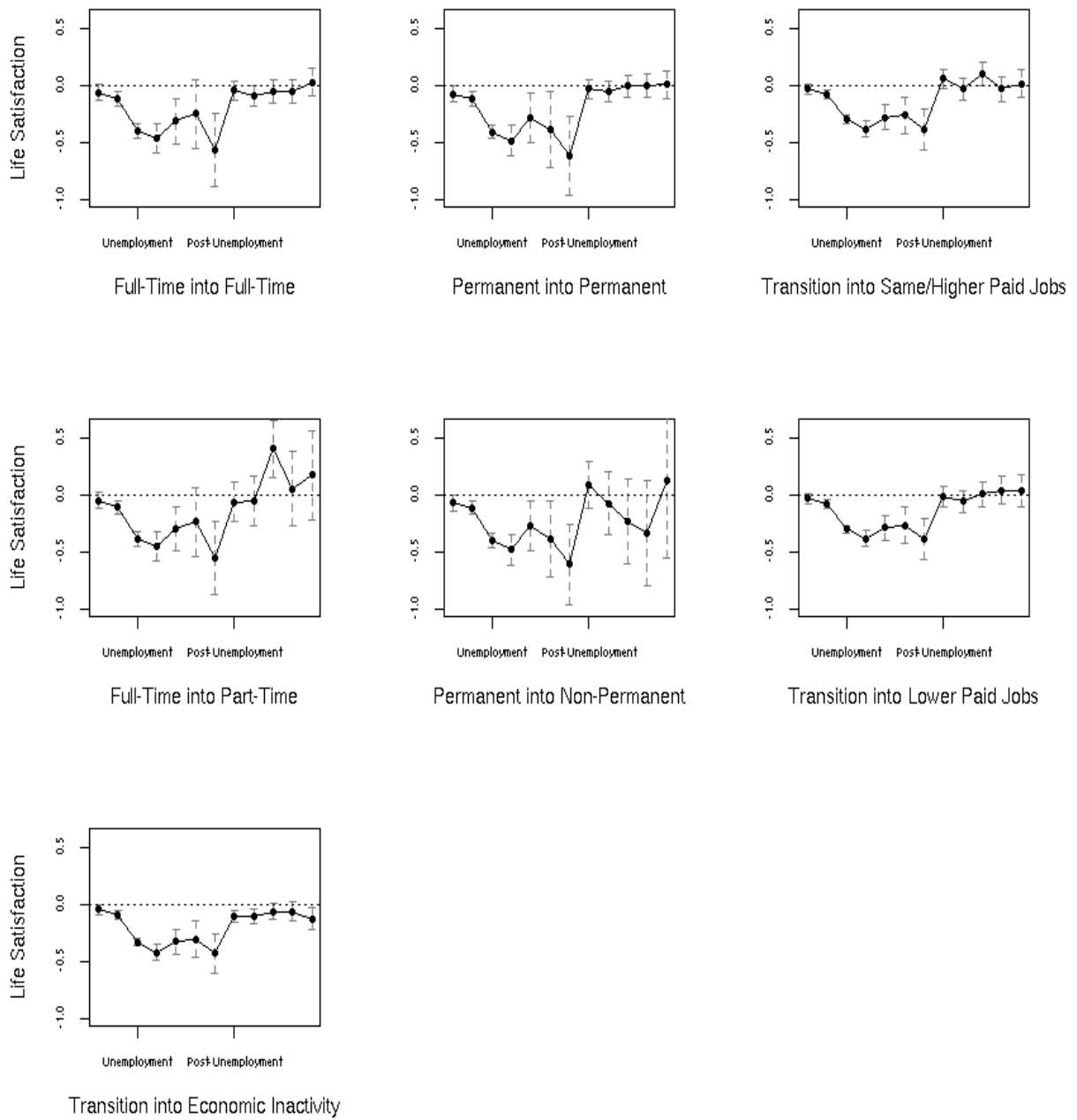


Figure 3. Effects of Change in Job Quality after Unemployment on Life Satisfaction: Fixed Effects Models

Appendix

Table A1

Effect of Transition into Employment on Life Satisfaction: Fixed Effects Model

| | Coefficient (with controls) | Coefficient (without controls) |
|------------------------|--------------------------------|-----------------------------------|
| Pre-unemployment _2yrs | -0.026 | -0.011 |
| Pre-unemployment _1yr | -0.071** | -0.069** |
| In-unemployment_1yr | -0.296*** | -0.299*** |
| In-unemployment_2yrs | -0.378*** | -0.366*** |
| In-unemployment_3yrs | -0.281*** | -0.305*** |
| In-unemployment_4yrs | -0.260** | -0.237* |
| In-unemployment_5+yrs | -0.386*** | -0.472*** |
| Post-unemployment_1yr | 0.066* | 0.080** |
| Post-unemployment_2yrs | -0.006 | 0.016 |
| Post-unemployment_3yrs | 0.061 [†] | 0.075* |
| Post-unemployment_4yrs | 0.059 | 0.061 [†] |
| Post-unemployment_5yrs | 0.042 | 0.059 |
| Controls | | |
| Age | -0.067*** | |
| Age squared | 0.001*** | |
| First degree | -0.090 | |
| Teaching or equivalent | -0.059 | |
| A Level | -0.058 | |
| O Level | -0.081 | |
| CSE | -0.149 | |

| | |
|--------------------|----------|
| No qualifications | -0.176* |
| No. of children 1 | 0.014 |
| No. of children 2 | 0.004 |
| No. of children 3+ | 0.016 |
| Household income | 0.000*** |
| Married/Cohabited | 0.227*** |
| Health | Yes |
| Survey year | Yes |

Notes: Reference categories for controls are: higher degree, no children, not married or living with partner. Health and survey year dummies are also controlled.

*** $p < .001$. ** $p < .01$. * $p < .05$. † $p < .1$.

Table A2

Mediation Analysis: Indirect Effects by Transition Types and Job Quality Groups

| | | | 90% CI | | 95% CI | | |
|-------------------------------|---------------------|--------------------------------------|-------------|--------------|--------------|--------------|--------------|
| | | | <i>Mean</i> | <i>Lower</i> | <i>Upper</i> | <i>Lower</i> | <i>Upper</i> |
| Transition to Reemployment | Household Income | Post-unemployment_1yr | 0.011 | -0.003 | 0.023 | -0.004 | 0.026 |
| | | Post-unemployment_2yrs | 0.011 | -0.002 | 0.025 | -0.004 | 0.028 |
| | | Post-unemployment_3yrs ^{†*} | 0.032 | 0.019 | 0.047 | 0.016 | 0.049 |
| | | Post-unemployment_4yrs ^{†*} | 0.027 | 0.011 | 0.042 | 0.008 | 0.045 |
| | | Post-unemployment_5yrs ^{†*} | 0.031 | 0.016 | 0.046 | 0.013 | 0.048 |
| | Social Life | Post-unemployment_1yr ^{†*} | 0.020 | 0.004 | 0.036 | 0.001 | 0.039 |
| | | Post-unemployment_2yrs | -0.013 | -0.032 | 0.007 | -0.035 | 0.010 |
| | | Post-unemployment_3yrs | 0.014 | -0.006 | 0.035 | -0.011 | 0.039 |
| | | Post-unemployment_4yrs | -0.011 | -0.031 | 0.010 | -0.035 | 0.014 |
| | | Post-unemployment_5yrs ^{†*} | 0.028 | 0.007 | 0.049 | 0.003 | 0.053 |
| Transition to Inactivity | Household Income | Post-unemployment_1yr ^{†*} | -0.064 | -0.078 | -0.050 | -0.080 | -0.047 |
| | | Post-unemployment_2yrs ^{†*} | -0.050 | -0.066 | -0.032 | -0.070 | -0.029 |
| | | Post-unemployment_3yrs ^{†*} | -0.056 | -0.074 | -0.037 | -0.077 | -0.035 |
| | | Post-unemployment_4yrs ^{†*} | -0.035 | -0.055 | -0.015 | -0.058 | -0.011 |
| | | Post-unemployment_5yrs ^{†*} | -0.040 | -0.062 | -0.019 | -0.067 | -0.016 |
| | Social Life | Post-unemployment_1yr ^{†*} | -0.035 | -0.055 | -0.015 | -0.059 | -0.010 |
| | | Post-unemployment_2yrs ^{†*} | -0.051 | -0.074 | -0.025 | -0.079 | -0.022 |
| | | Post-unemployment_3yrs ^{†*} | -0.056 | -0.083 | -0.028 | -0.089 | -0.020 |
| | | Post-unemployment_4yrs ^{†*} | -0.054 | -0.083 | -0.022 | -0.089 | -0.016 |
| | | Post-unemployment_5yrs ^{†*} | -0.074 | -0.106 | -0.042 | -0.112 | -0.035 |
| Full-time to | Household | Post-unemployment_1yr ^{†*} | -0.053 | -0.077 | -0.026 | -0.084 | -0.021 |
| Full-time | Income | Post-unemployment_2yrs | 0.001 | -0.027 | 0.026 | -0.032 | 0.030 |

| | | | | | | | |
|--------------|-----------|--------------------------------------|--------|--------|--------|--------|--------|
| | | Post-unemployment_3yrs | 0.015 | -0.012 | 0.041 | -0.016 | 0.045 |
| | | Post-unemployment_4yrs | 0.004 | -0.026 | 0.034 | -0.033 | 0.042 |
| | | Post-unemployment_5yrs | 0.017 | -0.010 | 0.046 | -0.015 | 0.052 |
| | | Post-unemployment_1yr | 0.006 | -0.026 | 0.037 | -0.033 | 0.042 |
| | Social | Post-unemployment_2yrs | -0.029 | -0.066 | 0.008 | -0.074 | 0.016 |
| | Life | Post-unemployment_3yrs | 0.017 | -0.024 | 0.057 | -0.029 | 0.065 |
| | | Post-unemployment_4yrs | -0.024 | -0.065 | 0.015 | -0.076 | 0.021 |
| | | Post-unemployment_5yrs | 0.002 | -0.039 | 0.050 | -0.047 | 0.058 |
| | | Post-unemployment_1yr ^{†*} | -0.092 | -0.157 | -0.023 | -0.169 | -0.006 |
| | Household | Post-unemployment_2yrs | -0.061 | -0.143 | 0.011 | -0.159 | 0.019 |
| | Income | Post-unemployment_3yrs | -0.057 | -0.147 | 0.032 | -0.163 | 0.053 |
| | | Post-unemployment_4yrs | -0.081 | -0.158 | 0.037 | -0.172 | 0.101 |
| Full-time to | | Post-unemployment_5yrs | -0.064 | -0.153 | 0.196 | -0.178 | 0.243 |
| Part-time | | Post-unemployment_1yr | -0.055 | -0.127 | 0.034 | -0.155 | 0.087 |
| | Social | Post-unemployment_2yrs | -0.077 | -0.177 | 0.138 | -0.201 | 0.158 |
| | Life | Post-unemployment_3yrs | 0.069 | -0.230 | 0.197 | -0.306 | 0.218 |
| | | Post-unemployment_4yrs | -0.137 | -0.400 | 0.126 | -0.460 | 0.173 |
| | | Post-unemployment_5yrs | -0.007 | -0.238 | 0.213 | -0.273 | 0.289 |
| | | Post-unemployment_1yr | -0.045 | -0.134 | 0.044 | -0.158 | 0.059 |
| | Household | Post-unemployment_2yrs ^{†*} | -0.122 | -0.187 | -0.061 | -0.203 | -0.051 |
| | Income | Post-unemployment_3yrs ^{†*} | -0.177 | -0.236 | -0.120 | -0.250 | -0.107 |
| | | Post-unemployment_4yrs ^{†*} | -0.244 | -0.352 | -0.139 | -0.374 | -0.121 |
| Full-time to | | Post-unemployment_5yrs | -0.049 | -0.193 | 0.092 | -0.218 | 0.122 |
| Inactivity | | Post-unemployment_1yr | -0.003 | -0.130 | 0.142 | -0.150 | 0.171 |
| | Social | Post-unemployment_2yrs | -0.077 | -0.152 | 0.006 | -0.166 | 0.019 |
| | Life | Post-unemployment_3yrs | -0.037 | -0.117 | 0.048 | -0.135 | 0.061 |
| | | Post-unemployment_4yrs ^{†*} | -0.253 | -0.375 | -0.120 | -0.398 | -0.095 |

| | | | | | | | |
|--------------|-----------|-------------------------------------|--------|--------|--------|--------|--------|
| | | Post-unemployment_5yrs | -0.048 | -0.141 | 0.047 | -0.163 | 0.063 |
| | | Post-unemployment_1yr ^{†*} | -0.030 | -0.054 | -0.009 | -0.058 | -0.005 |
| | Household | Post-unemployment_2yrs | 0.012 | -0.011 | 0.036 | -0.016 | 0.039 |
| | | Post-unemployment_3yrs | 0.032 | 0.009 | 0.056 | 0.004 | 0.061 |
| | Income | Post-unemployment_4yrs | 0.008 | -0.016 | 0.035 | -0.020 | 0.040 |
| Permanent to | | Post-unemployment_5yrs [†] | 0.023 | 0.001 | 0.050 | -0.002 | 0.053 |
| Permanent | | Post-unemployment_1yr | -0.010 | -0.037 | 0.018 | -0.042 | 0.022 |
| | Social | Post-unemployment_2yrs | -0.012 | -0.043 | 0.020 | -0.049 | 0.027 |
| | | Post-unemployment_3yrs | -0.022 | -0.056 | 0.013 | -0.063 | 0.018 |
| | Life | Post-unemployment_4yrs | -0.015 | -0.051 | 0.020 | -0.057 | 0.026 |
| | | Post-unemployment_5yrs | 0.015 | -0.021 | 0.055 | -0.028 | 0.062 |
| | | Post-unemployment_1yr | -0.052 | -0.123 | 0.018 | -0.141 | 0.034 |
| | Household | Post-unemployment_2yrs | -0.065 | -0.137 | 0.008 | -0.153 | 0.024 |
| | | Post-unemployment_3yrs | -0.024 | -0.118 | 0.070 | -0.133 | 0.095 |
| | Income | Post-unemployment_4yrs [†] | -0.195 | -0.381 | -0.011 | -0.439 | 0.030 |
| Permanent to | | Post-unemployment_5yrs | 0.100 | -0.080 | 0.244 | -0.106 | 0.327 |
| Temporary | | Post-unemployment_1yr | 0.045 | -0.037 | 0.131 | -0.049 | 0.142 |
| | Social | Post-unemployment_2yrs | -0.066 | -0.175 | 0.054 | -0.199 | 0.078 |
| | | Post-unemployment_3yrs | 0.034 | -0.098 | 0.171 | -0.126 | 0.202 |
| | Life | Post-unemployment_4yrs | -0.143 | -0.327 | 0.070 | -0.360 | 0.098 |
| | | Post-unemployment_5yrs | 0.161 | -0.063 | 0.397 | -0.101 | 0.425 |

*** $p < .001$. ** $p < .01$. * $p < .05$. † $p < .1$.

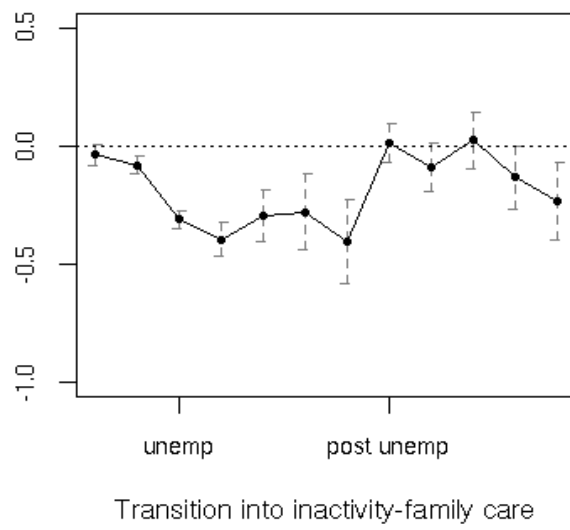


Figure A1. Effects of Transition into Family Care Roles on Life Satisfaction: Fixed Effects Models