

Chapter 1

The Debate About the Consequences of Job Displacement

Since the 1970s scholars have shown an increasing interest in the study of the social and economic consequences of plant closure. One strand of research addresses the topic from an economic perspective, investigating the impact of plant closure on workers' occupational trajectory and financial situation. The main interests of these studies are reemployment rates, unemployment durations and wage differences between the pre- and post-displacement job. Another strand of research strives at understanding the nonpecuniary costs of unemployment, addressing the consequences of job displacement in terms of workers' well-being and social life. We try to bridge these different research interests and will propose a model to investigate the impact of plant closure on workers' lives in a more encompassing way.

In this chapter we discuss the literature on the consequences of job displacement on displaced workers' occupational situation, their sociability and well-being. The first section focuses on reemployment, unemployment and labor force exit. A second section discusses the type and quality of the post-displacement jobs. Third, we address how workers' sociability and subjective well-being are affected by job loss. We conclude by suggesting a theoretical model of occupational transitions after plant closure and present our hypotheses.

1.1 Career Prospects After Job Loss

1.1.1 *A Growing Body of Plant Closure Literature*

The growing academic interest in job displacement may stem from the increasing number of workers affected by plant closures, relocations, restructurings and down-sizings. In the United States, the displacement rate has risen significantly since the early 1970s (Hamermesh 1989: 52–3; Brand 2006: 275–6). The increase in the

number of plant closure studies thus possibly reflects the growing public attention to this phenomenon. However, there may be another reason for this expansion.

The study of the consequences of job displacement requires appropriate data. In the United States, the launch of the Displaced Worker Survey (DWS) in 1984, conducted biannually as a complement to the Current Population Survey (CPS), made it possible to study the relevant population in more detail. The availability of this data source triggered many publications on job displacement. Where register data is accessible, as in Sweden (see Eliason and Storrie 2003) or in the state of Pennsylvania (see Jacobsen et al. 1993), this type of data provides an even more valuable source of information, being more reliable and exhaustive than survey data. Finally, for the study of the long-term consequences of plant closure longitudinal data is indispensable. However, the availability of this type of data is relatively novel since the two longest running panel surveys based on representative national samples such as the Panel Study of Income Dynamics in the US (PSID) or the Socio-Economic Panel Study in Germany (GSOEP) were established in 1968 and 1984 respectively. The increasing accessibility of appropriate data thus may be an alternative explanation for the growing interest in studying the impact of job displacement on workers' ensuing life trajectories.

To date, most plant closure studies have been based on US data. "Earning Losses of Displaced Workers" by Jacobson et al. (1993) is one of the most influential early studies. The innovation of this study was the use of a longitudinal *administrative* dataset from Pennsylvania. Earlier studies usually used survey data from the Displaced Workers Survey (Podgursky and Swaim 1987; Kletzer 1989; Addison and Portugal 1989; Gibbons and Katz 1991; Carrington 1993; Fallick 1993), or the Michigan Panel Study of Income Dynamics (Ruhm 1991). Another novelty in job displacement studies of the early 1990s was the inclusion of a control group of non-displaced workers (Ruhm 1991; Jacobson et al. 1993). Offering a counterfactual for workers who continued to be employed, this approach made it possible to more precisely measure the causal effect of displacement on wages.

In the late 1990s and early 2000s European job displacement studies emerged. Based on administrative data, Margolis (1999) discusses wage losses of French displaced workers as compared to non-displaced workers. Couch (2001) and Burda and Mertens (2001) use longitudinal data from the German Socio-Economic Panel. Kriechel and Pfann (e.g. 2002, 2005, 2011) use data from a large firm closure in the Netherlands and discuss different problems such as the role of specific and general human capital in the reemployment prospects of displaced workers. Plant closure in Northern Europe was investigated by Eliason and Storrie (2006) who rely on a unique Swedish administrative dataset, linking employer with employee data. Appelqvist (2007) uses a similar dataset from Finland, analyzing the effect of the business cycle on job displacement outcomes. Jolkonnen et al. (2012) conduct their own survey on manufacturing workers in Finland and analyze the workers' reemployment prospects about a year after displacement. For Switzerland a study has been conducted based on a survey among three large industrial plants that closed down between 2001 and 2006, a phase of economic boom (e.g. Wyss 2009; Wyss 2010; Weder and Wyss 2010).

To our knowledge, only one piece of research has chosen a comparative approach: the book *Losing Work, Moving On*, edited by Peter J. Kuhn (2002), which offers not only an in-depth description of the labor market of ten countries under study, but also detailed data on a standardized set of indicators and measures. This approach significantly improves the comparability of the results within a broad series of industrialized countries in Europe, Northern America, Australia and Japan. Finally, there are four literature reviews, all of them focusing on US studies (Hamermesh 1989; Fallick 1996; Couch and Placzek 2010; Brand 2015). Couch and Placzek's article additionally replicates the methodology applied by Jacobson et al. (1993), using a different dataset.

1.1.2 Reemployment

There is a broad consensus that job seekers experience decreasing reemployment chances over the course of unemployment. The adverse effect of long periods of unemployment is called “negative duration dependence” (Gebel 2009: 663). On the one hand, this phenomenon may come about because of self-selection into longer unemployment durations: better employable workers flow out of unemployment early, and over time only the less employable workers stay in the group of the unemployed. In this view, individual employability remains constant over time.

On the other hand, “true duration dependence” may be at stake, a situation where the duration of unemployment itself reduces workers' employability (Machin and Manning 1999: 12). If this mechanism is at work, all individuals who are unlucky enough to stay unemployed for a while will experience a decreasing probability of finding a job. How could “true duration dependence” be explained? A first approach is the signaling theory, which goes back to Spence (1973) and suggests that employers interpret the unemployment duration as an indicator for unobservable characteristics such as productivity or motivation (Blanchard and Diamond 1994). In this view a long spell of unemployment stigmatizes workers as being unproductive or having low motivation. Second, proponents of the human capital theory argue that if workers do not use their occupational skills for a long period they lose their routine and thus are less productive when returning to work (Pissarides 1992: 1371). A third explanation is that long spells of unemployment have negative effects on job seekers' self-confidence and motivation (Newman 1999). This in turn reduces the intensity of their job search, which reduces their chances of finding a new job (Young 2012b: 19; Flückiger 2002: 15–6).

It is, however, difficult to determine which mechanisms are at work since an analysis requires information about (usually) unobserved factors such as motivation, productivity, self-confidence and skills. Machin and Manning (1999: 17) claim based on an international comparison of OECD data that there is little evidence for true duration dependence but that instead unobserved heterogeneity explains the outcome of negative duration dependence. In contrast, two studies based on longitudinal data from the UK, the US and Germany find no support for pure heterogeneity

for any of these countries (Jackman and Layard 1991: 97; Gangl 2004: 178). Other studies using experimental data equally reject the unobserved heterogeneity argument: Oberholzer-Gee (2008), Kroft et al. (2013) and Eriksson and Rooth (2014) show, based on data from Switzerland, the US and Sweden respectively, that if fictive job applications with identical profiles but varying unemployment spells are sent to companies, employers consider a long unemployment duration as a signal of workers' low productivity. Eriksson and Rooth (2014: 1029) find that for low and mid-skilled jobs unemployment spells of over 9 months lead to a stigma effect while Kroft et al. (2013: 1128) find the strongest stigma occurring during the first 8 months. Although not consistent with respect to the effect of varying durations, these findings provide evidence that true duration dependence is at work. Additionally, the studies suggest that – at least in part – the signaling theory explains the phenomenon.

We now turn to the socio-demographic factors that drive workers' reemployment prospects. Previous findings suggest that education plays an important role, higher educational levels being assumed to generate better reemployment chances (Fallick 1993: 317). One explanation is that employers may be interested in the educational attainments of individuals not only as certifying specific competences, but further as an indicator for attributes that employers consider desirable but that cannot be known with any certainty before a candidate is actually taken on (Jackson et al. 2005: 11). In other words, education serves as a signal to the employer for characteristics that are not apparent in a job seeker's application such as productivity, motivation, self-discipline or the ability to learn quickly (Sauer et al. 2010: 1110; Rider and Roberts 2011: 30).

Another explanation of why higher levels of education are likely to enhance workers' reemployment prospects is that in OECD countries demand for highly educated workers has risen over the last decades (OECD 2008: 166). A study that analyzes the occupational structure of the US manufacturing sector observes that the proportion of high-skilled labor grew substantially between the late 1950s and the late 1980s as compared to low-skilled labor (Berman et al. 1994: 372–3, 369). This shift went along with a relative increase in high-skilled workers' wages in the same period. This phenomenon – named skill-biased technological change – has been attributed to technological advance as a growing number of routine tasks, traditionally carried out by low-skilled workers, are replaced by machines (Liu and Grusky 2013: 1335). At the same time, the finding that industries with particularly high levels of investment in automation also experience a strong demand for skilled labor suggests that the skills of highly educated workers are complementary to these new technologies (Berman et al. 1994: 372, 387).

The finding, based on US and UK data, of growth in both low-end and high-end occupations challenged this view (Autor and Dorn 2009: 27, Goos and Manning 2007: 122). This phenomenon of job polarization may be explained by the inability of machines to replace low-skilled but still nonroutine tasks involving hand-eye coordination such as caring, serving or cleaning (Autor and Dorn 2009: 31). Routine tasks, however, which are typically carried out by mid-skilled workers such as clerks or machine operators, can more easily be automated.

For Switzerland, evidence suggests that the occupational change in the last two decades is best described as a combination of both phenomena: jobs in the middle of the occupational hierarchy decreased most strongly, pointing to a process of polarization (Oesch and Rodriguez Menes 2011: 514). At the same time, low-skilled jobs decreased too – though to a weaker extent than mid-skilled jobs – while jobs with high skill requirements experienced strong growth, a pattern that implies occupational upgrading (Oesch and Rodriguez Menes 2011: 517; Oesch 2013: 76). This result makes the prediction of low-educated workers' reemployment prospects difficult but suggests that the highly educated are likely to have the most promising reemployment prospects after job loss.

Research on displaced workers' reemployment prospects suggests that age plays a paramount role, older displaced workers consistently experiencing more difficulties in finding a new job than younger workers. A study based on the US Health and Retirement Survey, focusing on workers aged over 50, finds that prospects of returning to work decline from about the age of 56 and are very low after the age of 60 (Chan and Stevens 2001: 496). As compared to workers aged 50, workers aged 56 have a 5 percentage points lower reemployment rate and at the age of 62 it is about 30 percentage points lower. A study based on US Displaced Worker Survey data from 1984 to 1996 finds that as compared to the 25–34 year olds, the 45–54 year old cohort have about a 5 percentage points lower and the 55–64 year old cohort about a 19 percentage points lower reemployment rate (Farber 1997: 93, see also Farber 2005: 19).

For Europe the results point in the same direction. A Finnish study shows that older workers from the age of 40 have much lower reemployment prospects than younger workers: the reemployment prospects of workers over the age of 50 are only a third of those under the age of 35 (Jolkkonen et al. 2012: 88–9). Likewise, in Switzerland older displaced workers have a hard time in finding new jobs. In their study on workers of three large industrial plants in Switzerland that closed, Wyss (2009: 40–1) shows that age is the factor with the most adverse effect on the workers' reemployment prospects.

In addition, older workers face generally longer unemployment durations than younger workers. Flückiger (2002: 20) documents this phenomenon for Switzerland based on data from the Swiss Labour Force Survey (SLFS). Similarly, in their study on reemployment patterns of older workers who experienced job loss, Chan and Stevens (2001: 491–2) report that workers over the age of 60 are more likely to experience longer spells of unemployment than workers in their 50s: 2 years after displacement, about 60 % of workers aged 50–55 and about 45 % of those aged 55–60 are reemployed, but only 20 % of those aged 60–64. The large body of empirical evidence for older workers' bleak labor market prospects in different countries thus points to the fact that we are confronted with a widespread phenomenon. However, the mechanism underlying this phenomenon is still a puzzle.

A first potential explanation refers to internal labor markets and suggests that firms want to promote careers *within* their organization (Daniel and Heywood 2007: 37). Generally speaking, employers prefer to hire young workers who will stay in the firm throughout their career. For the companies this has the advantage that the

returns to the workers' on-the-job training are higher. To incite employees to stay in their organization firms apply steep wage profiles where firm tenure is strongly rewarded (so-called "deferred compensation").

A second explanation for older workers' reduced labor market prospects is the cohort effect of education. As a result of educational expansion, younger workers are on average better-educated than the older and therefore have better chances on the labor market. The older workers who completed their education a long time ago may also be less flexible since it is more difficult to adjust to new job requirements and technologies (Cha and Morgan 2010: 1137). This places them in a disadvantaged position in comparison with younger workers.

Third, older workers may have difficulties in finding a job because of high firm tenure. High tenure implies high specialization for one firm and high-tenured workers may not have many skills transferable to other companies (Couch and Placzek 2010: 574). The negative effect of tenure on reemployment prospects has, however, been contested: it has been argued that high firm tenure may be a positive signal to the future employer in terms of a good job match (Greenaway et al. 2000: 66; Arulampalam 2001: F590). Other authors have argued that the association between tenure and reemployment prospects is U-shaped. Evidence for this third option is provided by a Finnish study which found that an intermediate tenure offers workers the best reemployment perspective after plant closure (Jolkkonen et al. 2012: 89). Hence, the impact of tenure for workers' reemployment chances seems to be ambiguous.

Fourth, there is a widespread belief that older workers are less productive than younger workers because of reduced mental and physical capacities and because of being more frequently affected by injuries or sickness. In addition, older workers are assumed to experience declining abilities to learn, as a study from the US emphasizes (Wrenn and Maurer 2004: 234). Older workers are therefore likely to be disadvantaged in labor markets where rapidly developing technologies require constant adaptation to new tasks. However, studies that thoroughly examine this question highlight that the link between age and performance is not clear-cut: while some studies find a negative relation between age and performance, others find a positive relation or none at all (Hansson et al. 1997: 206; Ng and Feldman 2008: 392). A possible explanation for these inconclusive results is that while workers' mental and physical capacities indeed decrease with age, older workers are able to compensate for this loss with their experience and knowledge and consequently maintain a similar performance to in previous years (Park 1994: 195). Regarding the risk of accidents, two studies from the US have revealed that older workers experience injuries that are more serious. However, the study also shows that older workers are injured less frequently and – in terms of reduced working hours – less consequentially than younger workers (Silverstein 2008: 273; Pransky et al. 2005: 108). The assumption that older workers exhibit a lower performance at work than younger workers thus does not seem to be justified.

Another factor likely to influence labor market success in Switzerland is workers' nationality, national origin or ethnic background. The Swiss study by Weder and Wyss (2010: 43) observes that foreigners had a four times higher risk of

remaining unemployed than the Swiss after controlling for socio-demographic factors such as age and education. In addition, a field experiment conducted in Switzerland in which employers received two applications that were similar regarding all job-related factors with the exception of the applicant's name (Fibbi et al. 2003). The results reveal that applicants with a typical Kosovar name were about 60 percentage points less likely and applicants with a typical Turkish name about 30 percentage points less likely to be invited to a job interview than applicants with a typical Swiss name. For applications where a Portuguese name was used there was no significant difference in the frequency of invitations. A study with a similar design from Sweden finds that job applicants with local names are about 50 percentage points more often invited to interviews (Carlsson and Rooth 2007).

These differences may be explained by discrimination, employers having a general aversion to individuals with particular backgrounds (Sheldon 2007: 40). Another explanation is that employers use workers' nationality or surname as a signal for unobserved skills and knowledge. This hypothesis is plausible since in hiring procedures there is an information asymmetry about workers' abilities. All other characteristics being constant, employers prefer applicants with a national origin that correlates (or is believed to correlate) with higher performance (Bonoli and Hinrichs 2012: 340). Since the quality of the same type of education differs between countries, job seekers with a foreign national origin may indeed perform better or worse than natives even if they have the same formal qualifications (Sheldon 2007: 41). Moreover, natives are likely to have a better command of the local language and may – but of course may not – be better informed about the local context (e.g. political situation, customers of a company) than immigrants. Evidence for this assumption is provided by a study conducted in Switzerland that finds that the wage returns on education and work experience are lower if they were acquired abroad (De Coulon et al. 2003).

Research shows that workers' unemployment durations and reemployment prospects are not only mediated by individual characteristics but also by contextual factors. The prevailing unemployment rate at the moment of displacement is clearly relevant: the higher the unemployment rate, the lower the demand for labor. This leads to higher competition among job seekers and results in longer spells of unemployment. This effect seems to be consistent across different countries. For the US it has been shown that mid-age displaced manufacturing workers had a 20 percentage points higher reemployment chance in the boom period between 1993 and 1996 as compared to the recession of 1981–1983 (Kletzer 2001: 49). A Finnish study observes that reemployment is much more difficult for workers displaced during the recession in the early 1990s than those who lost their job in the more prosperous late 1990s: in the 3 years after plant closure, workers displaced in 1992 were employed, on average, only about 8 months a year while those displaced in 1997 were employed about 11 months a year (Appelqvist 2007: 18). Likewise, Swedish workers experienced a stronger negative effect of displacement if they lost their job during the recession of the early 1990s than under better cyclical conditions in the late 1980s and late 1990s (Eliason and Storrie 2003: 13).

1.1.3 Job Search

An extensive literature has explored how individuals search for jobs. One strand of the literature examines the strategies job seekers adopt, suggesting that they possess the capacity to exert control over their career by anticipating future scenarios and adjusting actions accordingly (Sweet and Moen 2011: 3). Obviously, job seekers may face constraints on the demand side of labor, be it because of employers' preferences and hiring procedures or because of adverse macroeconomic conditions. Using a particular job search strategy thus does not automatically lead to more and better job opportunities, but is assumed to have a positive impact on reemployment as compared to not using the strategy.

One strategy that is expected to have an effect is the intensity of the job search, measured as the number of applications someone writes within a defined time. The higher workers' search intensity, the more employers learn that they are looking for a job, which in turn likely increases the number of job opportunities (Burgess and Low 1998: 242). A second strategy is to apply unsolicited. Unsolicited applications are a signal to potential employers that the job seeker is highly interested in the job and in general strongly motivated. A qualitative study on the low-skilled sectors in six European countries suggests that employers appreciate unsolicited applications most of all recruitment channels (Bonoli and Hinrichs 2012: 352).

Third, job seekers may inform their friends and acquaintances that they are looking for a job. The activation of the social network is a strategy that seems to help finding better jobs and to reduce the duration of the job search (Franzen and Hangartner 2006: 364). Two arguments are brought forward to explain the mechanisms behind this strategy: First, the information asymmetry involved in hiring processes leads employers to look for information about future employees – such as motivation or social skills – that is not apparent in a formal application. A third party who knows the candidate personally may provide this lacking information to the employer (Marsden and Gorman 2001: 470). Second, contacts have been described as channels of information through which news about a vacancy reaches the job seeker or employers learn about possible candidates.

According to Granovetter (1995), the most valuable information about jobs and candidates flows through networks of acquaintances, so-called “weak ties”. In contrast to “strong ties” – such as family and friends – “weak ties” function as bridges to socially more distant groups of closely related individuals and thus allow information to circulate in a wide network. However, Granovetter's research focuses only on employed workers. A Swedish study based on longitudinal data focusing on unemployed workers reports that only strong ties had a positive effect on displaced workers' reemployment prospects (Korpi 2001: 166–7). At the same time the study shows that the size of the network is in fact more relevant than the types of the contacts: every additional contact increases the workers' reemployment probability more than any other job search strategy.

In a Swiss study on the use of informal contacts among unemployed workers, Oesch and von Ow (2015: 14–6) distinguish between work-related and communal

social contacts; the latter refers to non-work related contacts such as family, friends, neighbors or acquaintances from a sports club or a volunteering activity. The authors show that both types of contacts are important for the job search of unemployed workers, but while work-related contacts are mainly used by highly educated male job seekers, communal ties seem to be important for job seekers with weaker employability such as working-class Southern European immigrants with low levels of education and workers over 55.

When job seekers remain unemployed for a longer time, work-related contacts tend to gradually fade away. Evidence for this phenomenon is provided by a Danish study which observed that 1 year after losing their job, two-thirds of the workers no longer had contact with their former colleagues (Larsen 2008: 11). Long-term unemployed workers who may already be disadvantaged due to particular characteristics or labor market conditions are additionally marginalized by this mechanism.

The claim that the use of social contacts *per se* improves workers' reemployment prospects has been challenged by Mouw (2003: 890–891). He maintains that the previous analyses of this topic face an endogeneity problem and instead of showing a causal effect of individuals' social contacts, the existing literature merely shows that those individuals who have a large and helpful network also have good labor market prospects. Because of homophily, higher-ranked individuals tend to have higher-ranked friends and therefore have better chances of finding their job through their contacts. In other words, the same individual characteristics that lead to – in terms of job search – a useful social network also lead to better reemployment chances. To underline his argument, he provides evidence from fixed-effect analysis of longitudinal data showing that controlling for other characteristics, workers who do use contacts do not have better job prospects than those who do not use contacts. His analysis furthermore reveals that jobs found through the social network do not differ in terms of wages, occupational prestige or unemployment duration for jobs found through other channels.

A fourth strategy that workers may adopt in order to find a job is to enlarge the geographical scope of job search (Kaufmann et al. 2004). However, accepting a job that involves long commuting distances seems to constitute a burden to the workers. A study based on women in Texas shows that commuting is one of the daily activities that individuals dislike most (Kahneman et al. 2004: 431–2). Economists have assumed that workers' acceptance of commuting increases if they are compensated in terms of wages or other benefits. However, a study based on German longitudinal data suggests that even if commuters are compensated, they are less satisfied than those who do not commute (Stutzer and Frey 2008: 349). This result seems paradoxical and raises the question why individuals accept long distance commuting – sometimes even without compensation. To explain this puzzle, the authors test whether job seekers with less opportunities and more financial pressure accept commuting more readily, which neither seems to be the case.

1.1.4 Retirement, Exit from the Labor Force and Repeated Job Loss

There is a debate in the literature whether older workers who retire early or quit the labor force are “pushed” or “pulled” out of the labor market. Proponents of the “push-out” argument have claimed that older displaced workers are forced into early retirement because they do not find a new job and thus have no better alternative than retiring (Desmet et al. 2005). This argument has been empirically supported by studies from the US and Europe that show that older workers who have difficulties in finding a job after plant closure are likely to choose this pathway (Chan and Stevens 2001; Ichino et al. 2007). In line with these results, a study that compares the transition into early retirement in OECD countries finds a positive link between the overall unemployment rate and the proportion of workers who retire early (Dorn and Sousa-Poza 2010: 434).

Second, “pull mechanisms” such as generous early retirement plans may incite older workers to leave the labor force before the official retirement age. A comparative study across 19 industrialized countries reports that the proportion of workers retiring rises with an increasing pension benefit replacement rate (Dorn and Sousa-Poza 2010: 343).¹ However, since Swiss institutions – in contrast to other continental European countries (for the case of Austria see Lalive 2008: 805) – do not promote early retirement, workers in Switzerland are generally less likely to enter early retirement.

Other factors that may incite workers to retire early are institutionalized retirement savings. Men are probably more likely to retire early than women because they accumulate larger savings, less often experiencing career interruptions due to child-rearing and being less often part-time employed (Bonoli 2003: 407–410). Moreover, workers who earned high wages during their active life are more likely to retire early than those with low wages. Early-retired workers may even be forced to use their savings in order to make ends meet – a situation that is easier to cope with for workers who had higher wages when still working, since higher wages translate into higher occupational pensions. Finally, having an economically inactive partner may promote workers’ transition into early retirement. Evidence from Switzerland and Germany suggests that men with a non-active partner and with higher wages are more likely to transit into early retirement (Dorn and Sousa-Poza 2005: 269; Knuth and Kalina 2002: 412). The reason for this phenomenon may be that partners often have a preference for being in the same occupational situation. Thus having a retired (or for other reasons non-working) partner may incite workers to retire early.

As an alternative to reemployment, unemployment or retirement, job displacement may lead workers of all ages to persistently exit the labor force, for instance for training, child care, disability or leisure (Knuth and Kalina 2002). On the one hand, workers with significant difficulties in finding a job may exit the labor market

¹The replacement rate is the proportion of the former wage that is provided by the old-age pension.

as an alternative to long-term unemployment. This “push-out” hypothesis suggests that workers were forced to leave because of a lack of opportunities in the labor market. On the other hand, the “pull-out” hypothesis assumes that specific incentives – such as early retirement, disability insurance or taxation rules – constitute a gateway for workers out of the labor force.

Exit from the labor force after job displacement seems to be determined by an interaction mechanism between sex and civil status: based on data from the US Health and Retirement Survey it has been shown that among unemployed workers married women have a 15 percentage points lower probability of going back to work than unmarried women, while for men marital status makes no difference (Chan and Stevens 2001: 496). This seems to point to a pull mechanism being at work, where displaced married women who probably have a husband with a stable income choose not to take on a new job.

Displaced workers face an increased risk of multiple job losses. A study using US data from the Panel Study of Income Dynamics for the period 1968–1988 observes that multiple job loss was frequent in the US in the 1970s and 1980s: about 40% of the workers who had lost their job once were displaced or laid off a second or a third time (Stevens 1997: 172). Most of the multiple displacements happened within 5 years of the first displacement. Another US study based on a labor market simulation confirms these results, showing that recently (re-)employed workers face a higher propensity to lose their job than longer tenured workers (Pries 2004: 214). This suggests that a first job loss makes workers vulnerable to experiencing subsequent involuntary job separations or that some workers are generally more vulnerable to job loss than others.

Two explanations account for these findings. First, as Farber emphasizes in a literature review (1998) and in his own analysis of US longitudinal data (1994), a large proportion of all new job matches are destroyed within a short time. Displaced workers thus have a higher risk of repeated job loss than average workers, simply because they have recently entered a new employment. New employment relationships are unstable as they often turn out to be bad matches and thus are more likely to be terminated prematurely. Second, the above-cited studies by Stevens (1997) and Pries (2004) rely on data containing workers displaced both because of plant closure and because of layoff, without distinguishing between the two reasons for job loss. This may be misleading since it is less surprising that workers dismissed for just cause lose their job repeatedly. Indeed, these workers may have individual characteristics that are generally unpopular among employers.

1.2 Type and Quality of the Post-displacement Job

1.2.1 *Reemployment Sectors and Occupations*

Structural change in the economy leads to labor reallocation across industries. In recent decades a shift of employment from the goods-production industry to the services has taken place throughout the OECD. In the UK for instance, large labor reallocations take place from declining to expanding industries and they are often intermitted by a spell of unemployment (Greenaway et al. 2000: 58, 60). It is possible that plant closures in the manufacturing sector constitute a mechanism that mediates this adjustment process. In this logic, manufacturing workers who lose their job would then be absorbed mainly by expanding sectors such as services. Alternatively, an adjustment process may come about through cohort renewal if young workers enter sectors and occupations that are different from those that older workers were active in.

The view that displaced workers have to change sector in order to find a new job has been challenged by the finding that even larger labor reallocation processes take place *within* the same industries (OECD 2009: 121). While the net change of employment *across* industries in OECD countries between 1997 and 2004 was 4%, it was on average 18% *within* industries. This suggests that within OECD countries job destruction in a sector is paralleled by job creation in the same sector. For displaced manufacturing workers this would imply that they may find a new job in their pre-displacement sectors.

Human capital theory suggests that workers prefer to stay in their pre-displacement sector because it is there where they receive the highest returns on their skills (Fallick 1993; Neal 1995: 657; Haynes et al. 2002: 251). Yet, if the prospects in the pre-displacement sector are bleak, workers are pushed into other sectors (Fallick 1993: 314). A study based on longitudinal micro-data shows for the US and Germany that sectoral mobility increases with the duration of the spell of unemployment (Gangl 2003: 206). Similar results are found for the US and the UK, showing that the spells of unemployment are shortest for workers who find their jobs in their pre-displacement sector (Greenaway et al. 2000: 68).

The transition from one sector to another may be difficult. However, for some groups of workers sectoral change is easier than for others. Much depends on the transferability of the workers' skills to their reemployment sectors. If the workers' skills are very specific to their former sector of employment – as it is the case for workers with high sectoral tenure – they are likely to experience difficulties, for instance in form of wage losses (Neal 1995: 664; Cha and Morgan 2010: 1144). Moreover, the workers' education seems to influence their propensity to switch sector. Credentials, diplomas or certifications are considered objective attestations of skills. They help employers in other sectors to evaluate the portability of the workers' skills to another sector and are a signal for the workers' ability to learn the skills required in the new sector (Estevez-Abe 2005: 188). This explanation is supported by a study based on data from the US Current Population Survey that finds that

higher levels of education only improve workers' reemployment prospects in another industry, but not in their former industry (Fallick 1993: 317).

In addition, women seem to experience better employment prospects in the expanding private service sectors and the public sector than men. A study comparing OECD countries shows that the occupational structure in the public service sector is strongly biased towards women (Estevez-Abe 2005: 197). This horizontal segregation seems to hold not only for the public sector: evidence from Germany suggests that in recent decades most of the jobs created in services – whether in the private or the public sector – were filled by women (Spitz-Oener 2006: 266; Black and Spitz-Oener 2010: 190). An explanation for women's overrepresentation in service jobs is the increasing demand for skills such as dealing with people, training and teaching or counseling and advising in Western economies, which have been shown to be used at work more often by women than by men (Nickell 2001: 621). Moreover, women's tendency to be employed in the public sector may be due to the fact that a large proportion of women prefer jobs that are compatible with care work, such as part-time employment and jobs with flexible working hours (Hakim 2006: 289). Jobs of this type are more abundant in the public sector.

Besides changing sector, workers may change occupation in order to find a new job. Different factors seem to promote workers' occupational change after plant closure. First, long spells of unemployment lead job seekers to consider accepting jobs in other occupations. This has been demonstrated in a study on West Germany: every additional month of unemployment increases the likelihood of changing occupation by 6% (Velling and Bender 1994: 224). Second, in the US younger workers change occupation more often than older ones (Parrado et al. 2007: 446). The effect of age may be explained by tenure. Older workers have acquired a large amount of occupation-specific skills over their career and thus receive lower financial returns if they switch to other occupations. However, a study based on British and German data only partially confirms the tenure hypothesis: while the authors find supportive evidence for the UK, workers with longer experience being less likely to switch occupation, the opposite is the case in Germany (Longhi and Brynin 2010: 660).

With respect to the question of which occupations workers who switch adopt, considering the evolution of the demand for labor may provide a possible answer. In Switzerland and the Scandinavian countries, an increase in employment at the top end of the occupational hierarchy has been documented for the recent decades. More precisely, jobs in management and the professions were expanding, whereas routine jobs held by production workers and clerks were decreasing (Oesch and Rodríguez Menes 2011: 514; Fernández-Macías 2012: 15). Accordingly, it is likely that the displaced workers are more often employed in managerial or professional occupations after displacement than they were before displacement. Moreover, as a consequence of service sector growth we may expect many manufacturing workers, above all women, to transit to service occupations (Oesch and Rodríguez Menes 2011: 512).

1.2.2 *Determinants of Post-displacement Wages*

A large body of research has shown that displaced workers, once reemployed, suffer from wage losses (Couch and Placzek 2010). Underlying to this phenomenon, two different mechanisms may be at work. According to the human capital theory, introduced by Becker (1962: 9), wage losses are caused by the loss of job-relevant knowledge and resources. In the context of plant closure, this approach interprets workers' change in wages as an expression of the different level of valuation of their skills by pre- and post-displacement employers.

A decrease in valuation may be the result of several mechanisms. First, such a situation may come about if the displaced workers' skill profiles and the requirements of their new jobs are not compatible. In this case of skill mismatch, workers' post-displacement wages are likely to be lower than in their pre-displacement job (Allen and Van der Velden 2001: 444–5, Payne and Payne 1993). A British study shows that, for workers with the same level of education, those who are overqualified in their jobs earn 18 % less than individuals who work in jobs for which they are appropriately qualified. At the same time, underqualified workers earn 18 % more than workers with appropriate qualification for their job – holding the level of education constant (Green and McIntosh 2007: 436). Thus, workers who end up in a job requiring skills below their own level will earn less than those working exactly at their skill level, regardless of their actual level of skills (Allen and Van der Velden 2001: 450).

Second, long spells of unemployment may lead to the depreciation of workers' skills (Pissarides 1992: 1386). This in turn results in wage losses upon reemployment. Based on data from the US Displaced Worker Survey and correcting for selection effects, it has been shown that a 10 % longer unemployment duration is associated with a 1 % wage decrease upon reemployment (Addison and Portugal 1989: 295).

Third, several studies have demonstrated a negative relationship between workers' education and wage losses. A study from the US finds that every additional year of education attenuates displaced workers' wage losses by a third (Chan and Stevens 2001: 568). A Dutch study reports that workers with more than intermediate vocational training experience lower wage losses than workers with lower levels of education (Kriechel and Pfann 2005: 231–2). Similarly, a Finnish study provides evidence for a linear relationship between education and wage losses – with the lowest losses for workers with a tertiary degree (Appelqvist 2007: 38). These findings suggest that pre- and post-displacement employers value higher levels of education more similarly than they do lower levels of education. While less educated workers may receive considerable returns in their pre-displacement firm because of the firm-specific knowledge they acquired, a new employer does not equally value their skills. Changing their job thus leads to substantial wage losses.

Fourth, research based on the US Displaced Worker Survey suggests that *sectoral* tenure leads to wage losses upon unemployment. A study based on the US Displaced Worker Survey has reported that tenure negatively affects wages twice as

much if workers change sector as compared to staying (Neal 1995: 657). Moreover, high *firm* tenure leads to large wage losses upon reemployment (Carrington 1993; Greenaway et al. 2000: 66; Kletzer 2001: 59; Cha and Morgan 2010: 1145; Couch and Placzek 2010). These findings have been explained with the argument that workers with high tenure received returns on firm-specific knowledge in their pre-displacement job but not from a new employer. In contrast, workers with short tenure received no compensation for firm-specific skills before displacement and thus do not experience substantial wage losses when reemployed. Finally, a study based on UK panel data finds that *occupational* tenure has the most negative effects on wage changes: while the wage returns for *occupational* tenure of 10 years are 13 %, they are only 3 % for *sector* tenure (Haynes et al. 2002: 249). Changing occupation thus is likely to induce higher wage losses than changing sector while staying in the pre-displacement occupation. For instance, a mechanic who worked in manufacturing before job loss hired as a mechanic in a company in the services is likely to experience almost no wage changes. In contrast, a mechanic who worked in manufacturing and remains in the sector but is reemployed as a stocks clerk is likely to experience wage losses. This suggests that skills are better transferable between sectors than between occupations (Lee and Wolpin 2006: 28).

A second theory to explain displaced workers' wage losses focuses on deferred compensation. Deferred compensation is a practice where younger workers are underpaid and older workers overpaid with respect to their productivity. Accordingly, over their career, workers' wages rise more strongly than their productivity. Deferred compensation is a strategy used by companies to motivate young employees to stay in the company and reward those who stay for their loyalty (Lazear 1990: 275). If workers instead change their job, for instance because of plant closure, this loyalty bonus is lost. Evidence for this theory is provided by a British study that shows that those firms which defer compensation – for example in the form of pensions – hire fewer older workers (Daniel and Heywood 2007: 43). In firms that offer pensions, only 3 % of all the hirings are older workers as compared with 14 % in average firms. Similarly, firms with steeper wage profiles hire fewer older workers than firms with flatter wage profiles. In addition, the findings about the negative effect of high firm tenure may corroborate the deferred compensation theory.

Finally, wage levels differ substantially between sectors or firms. As a consequence, if workers change sector or firm they may experience a wage change. Since in Switzerland collective wage bargaining is mostly organized on a sectoral level, workers may experience wage losses (gains) simply by changing into a sector with generally lower (higher) wages (Mach and Oesch 2003: 166). Based on data from the US, Jacobson et al. (1993: 703) maintain that the loss of firm rents such as union premiums increase the workers' wage losses.

For those workers who experience wage losses, these often turn out to be long-lasting. An analysis of the Panel Study of Income Dynamics shows that 4 years after involuntary job loss, workers in the US still earn about 14 % less than non-displaced workers (Ruhm 1991: 322). Another study using the same dataset but for another time period finds that 4 years after displacement workers earn 10 % less than the non-displaced (Stevens 1997: 174). A study based on administrative data from

Pennsylvania found even wage losses of 20% compared to non-displaced workers 6 years after job loss. Moreover, wage losses in the US seem to be most severe for workers with the lowest incomes before displacement (Feather 1997: 37).

1.2.3 *Changes in Job Quality*

Displaced workers are vulnerable to reemployment in precarious jobs. A study based on UK Labor Force Survey data reveals that workers who have recently been unemployed end up much more frequently in non-standard employment than workers who were continuously employed (Payne and Payne 1993: 526–8). Similarly, evidence from the analysis of the European Community Household Panel (ECHP) shows that workers who go through a spell of unemployment are negatively affected in their job quality, even 2 years after returning to the active labor force (Dieckhoff 2011).

One reason for this outcome may be a general change of employment relations (Hipp et al. 2015: 355). Some authors have suggested that labor markets in Western societies are segmented and consist of secure “core” jobs on the one hand and insecure “peripheral” jobs on the other (Berger and Piore 1980). From this perspective, displaced workers may end up in peripheral jobs if they lack alternative opportunities, for instance because of high aggregate unemployment (Kalleberg 2009: 2). Workers are then likely to accept low-end jobs in order to avoid long-term unemployment or exclusion from the labor market (Payne and Payne 1993: 530–1). However, Kalleberg (2009: 5–6) claims that precarious work – such as temporary jobs – is becoming more generalized and even concerns managers and professionals. It may thus be due to the current evolution of the labor market that the new jobs of displaced workers are less secure and of lower quality than their former ones. In the long run, non-displaced workers would then also be exposed to a similar risk of precarious work.

What do we understand by precarious jobs and which aspects does the concept of job quality encompass? Precarious work has been defined as employment that is uncertain and unpredictable from the workers’ point of view and that does not permit workers to obtain or maintain occupational skills (Kalleberg 2009: 2). Job quality reflects the variety in the tasks, the level of personal initiative in carrying out the job, the opportunities for learning and self-development, the ability to participate in decision-making, and job security (Gallie 2003: 62,65). Indicators for job quality are for example contract type, job security, skill match or job authority.

Contract type is an indicator for job quality since it reflects workers’ job security and career prospects (Green 2008: 151). Permanent contracts are usually more advantageous than fixed-term or temporary contracts and imply better job security (Green 2008: 151). Data from the OECD countries shows that temporarily employed workers receive on average lower wages, less fringe benefits and are less satisfied with their jobs than the permanently employed (OECD 2002: 141, 145, 150). Workers who have experienced a phase of unemployment – such as displaced

workers – seem to end up more often in temporary jobs than workers changing from employment to a new job. A study based on the UK Labour Force Survey shows that unemployed workers are five to ten times more likely to be reemployed in temporary jobs than the employed (Payne and Payne 1993: 528). Nevertheless, temporary employment is probably more advantageous than long-term unemployment and may in some cases serve as a stepping stone into permanent employment (Gerfin et al. 2005: 824; De Graaf-Zijl et al. 2011: 126).

Job security is central to the concept of job quality. Job insecurity represents the anticipation of an involuntary and stressful event (Sverke et al. 2002: 243). This anticipation is often as important a source of anxiety as the event of job loss itself (Sverke et al. 2002: 244). Job insecurity is widely understood as a subjective measure assessing an individual experience. However, a Finnish study has shown a close relation between the subjective perception of job insecurity and the unemployment level at a given time (Nätti et al. 2005). Job insecurity is thus not “just in your head” (De Witte 2005). Worker categories that are particularly affected by job insecurity in four European countries are blue-collar workers, manufacturing, low-skilled and older workers (Näswall and De Witte 2003: 199–202).

Job quality can furthermore be assessed in terms of skill mismatch. A mismatch between individuals’ skills and the requirements of the job usually results in unsatisfactory employment relations. A small-scale study from the US finds that displaced workers suffer more often from skill mismatch than non-displaced workers (Leana and Feldman 1995: 1385). Particularly prevalent among displaced workers is overqualification. Being overqualified for a job usually comes along with lower job authority, lower earnings and may result in a lower social status (Green and McIntosh 2007: 436). Overqualification would be of minor importance if it were only a temporary phenomenon. But empirical evidence shows that among workers who are overqualified in their first job, two-thirds are still working in a job for which they are overqualified 6 years later (Green and McIntosh 2007: 428).

A final aspect of job quality that we discuss is job authority. Job authority reflects whether workers supervise the work of others. It expresses the hierarchical position of the workers and represents the autonomy they have in their job. A study based on longitudinal data from Wisconsin shows that as compared to non-displaced workers, displaced workers experience a reduction in job authority as a consequence of dismissal (Brand 2006: 290). In line with these results, a longitudinal study based on data from ECHP for Denmark, Austria, Spain and the UK finds that formerly unemployed workers were more likely to experience lower job authority in all countries except Austria (Dieckhoff 2011: 242).

1.3 Sociability and Well-Being

1.3.1 *Coping Strategies on the Household Level*

Life-course sociologists have emphasized that individuals' lives are interdependent (Elder 1994: 5). Accordingly, with respect to plant closure the question arises of how the significant others of the displaced worker respond to this critical event. For instance, workers' spouses or families may be involved in coping strategies adopted at the household level.

Earlier research has shown that job displacement often causes financial strains for the household members concerned. A Danish study on workers who become unemployed finds that nearly twice as many unemployed workers face difficulties in meeting their current expenses as compared to the employed (Andersen 2002: 186). Workers with low wages, few savings or experiencing long-term unemployment may adopt strategies to cope with income losses.

A first possible coping strategy that may be considered by couple households is to increase the employment activity of the non-displaced partner. However, most research does not find evidence for this strategy being used. A study based on data from the UK observes that the wives of unemployed workers become even more likely to leave the workforce when their husbands become unemployed (Davies et al. 1994). Similarly, based on Swedish longitudinal data on workers displaced in 1987, it has been shown that the wives of these workers experience a decrease in wages which suggests that they quit their jobs following their husband's job displacement (Eliason 2011: 609). A third study reveals compatible results for the UK but opposite outcomes for the Czech Republic and Slovakia (Gallie et al. 2001: 46–7). The findings from the two Eastern European countries are thus the only ones that support the assumption that spouses enter or increase employment when their partners lose their jobs. More generally, the studies cited above seem to provide evidence for a polarization of dual-earner versus no-earner families (Gallie et al. 2001: 46). Possible explanations are either a selection effect where individuals with a similar likelihood of losing their job become spouses, or that both partners experience the same constraints to being in employment because of adverse labor market conditions such as an economic crisis (Eliason 2011: 612).

Another possible response to the experience of financial strains is adjusting expenditures – a strategy that can also be adopted by single-person households. A longitudinal study based on the Panel Study of Income Dynamics addresses spending on food. The author observes a drop of 22 percentage points in food consumption for workers who do not receive unemployment benefits (Gruber 1997: 195). In contrast, at an unemployment benefit replacement rate of 84% workers were able to keep their food consumption at their pre-job loss level.

We cannot infer from food consumption to overall household spending since food – with the exception of buying high-end products and dining out – is a basic need and its consumption thus relatively inelastic to income changes. In addition, food consumption only represents about 20% of a household's overall consumption

bundle and the related results thus cannot be extrapolated to workers' overall spending adjustment after job loss (Gruber 1997: 195). This assumption has been confirmed by a Canadian study showing that workers who experience an income loss reduce their spending on clothes much more than on food (Browning and Crossley 2009: 1190). It seems therefore likely that households reduce spending on goods that are not indispensable while they continue to spend as much on necessities as they did before job loss.

1.3.2 Sociability

Job loss has been shown to affect workers' social relationships. We may expect that workers who lose their job face the risk of being socially isolated, for example because individuals bow out as a consequence of stigmatization or a lack of money that renders maintaining a social life difficult. Social isolation tends to have negative impacts on individuals' well-being and may cut off workers' from information networks that are particularly important for job seekers (Gallie et al. 2003: 3, 12). However, studies on unemployed workers' sociability are inconclusive with respect to the risk of social isolation in the aftermath of job loss.

Based on data from the ECHP, Gallie et al. (2003: 16) find that sociability patterns do not change when workers become unemployed. But they find that patterns of sociability for workers becoming unemployed and workers being continuously employed differed already before the unemployed lose their job. Workers becoming unemployed have on average larger social networks than those who are continuously employed but they are less active in associations. Another European study based on data from the UK, the Czech Republic, Slovakia and Bulgaria observes similar results: the unemployed see friends and relatives more frequently than the employed (Gallie et al. 2001: 47). However, the unemployed receive less practical and psychological support than the employed (Gallie et al. 2001: 48). By contrast, a small-scale longitudinal study from the US finds contrasting results: employed workers have larger networks than the unemployed, but there is no difference in support received between unemployed and employed workers (Atkinson et al. 1986: 321). In sum, this leaves us with a puzzle about how individuals' sociability is affected when they experience job displacement.

With respect to contacts with colleagues, it has been shown that these contacts decline shortly after individuals' have quit their job. A study from Denmark comparing the social relations of unemployed and employed workers finds that contacts with former colleagues drastically decrease after job loss. One year after job loss, 62% of the unemployed no longer have contact with their former co-workers (Larsen 2008: 11). This development is problematic with regard to displaced workers' job search since the rupture from occupational networks may marginalize them in the labor market and reduce their chance of finding a new job.

With respect to relationships with spouses and the family, job loss seems to negatively affect these social ties. In a small-scale longitudinal study from the US

studying the change in marital relationship after the husband became unemployed, Atkinson et al. (1986: 320) find that job loss decreases the quality of the marital relationship. However, they maintain that more cohesive family structures have a stress-buffering effect. The reasons for the adverse effect of job loss on marital relationships is however less clear. Tensions may stem from families' financial (Gallie et al. 2003: 3). A study based on longitudinal administrative data from Norway supports this argument, showing that families receiving social security benefits – and thus being at the lower income end – before one of the spouses becomes unemployed are more likely to experience marital dissolution than families without such benefits (Hansen 2005: 142).

Another argument that was brought forward is that workers may be blamed for the job loss by their spouse. A study from the US reveals that the incidence of divorce rises only for workers subject to individual layoffs but not for those experiencing plant closure (Charles and Stephens 2004: 516–9). They explain this finding by indicating that spouses of individually laid off workers may blame their partner while spouses of workers who experienced plant closure understand that it was not their fault. However, there may be an alternative explanation for their finding: reverse causality or unobserved heterogeneity, whereas workers who experience strong tensions in their marital relationship become depressed or distracted and therefore more likely to lose their job.

Finally, there seem to be different expectations of spouses towards their partner depending on their sex. Evidence from Norway based on longitudinal administrative data reveals that divorce is significantly more likely in couples where the *husband* experiences plant closure than where the husband is continuously employed, even if they control for selection effects and potential effects of income losses (Rege et al. 2007: 13, 18). Accordingly, marital dissolution results from the decline in husbands' indispensability because their spouses (or perhaps they themselves) consider them to be failing to fulfill the traditional breadwinner role. Support for this thesis is provided by a study from Sweden which finds large risks of divorce after displacement in couples where men lost their jobs but no significant effects if women were displaced (Eliason 2012: 1392). Accordingly, if unemployment stigmatizes men more strongly than women in Scandinavian countries where mothers are highly involved in the labor market and often work full-time, we may assume that the effect is even stronger in Switzerland where mothers are less strongly attached to the labor market.

Independently of workers' sex, displaced workers experience more pressure to find a new job if they have family obligations (Leana and Feldman 1995: 1383). The life-cycle stage of a family may thus determine how much hardship job loss causes (Moen 1980: 183). Families with lower household incomes are likely to be more distressed by job loss than those with higher incomes. Evidence for this has been provided by a panel study from the US that finds that children of single mothers are particularly vulnerable when their mothers lose their job (Brand and Simon Thomas 2014: 982). The authors find that young adults were negatively affected in their educational attainment and subjective well-being when their mothers were displaced while they were adolescent.

1.3.3 *Subjective Well-Being*

It is widely understood that losing a job leads to a substantial decrease in subjective well-being.² A meta-study reassessing the results of about a hundred studies mainly from the US shows that there is a broad consensus and substantial evidence for the reduction of mental health after job displacement (McKee-Ryan et al. 2005: 63). For instance, a study based on German panel data shows that workers who are displaced by plant closures suffer from reductions in life satisfaction (Winkelmann and Winkelmann 1998: 7). Likewise, a more recent study based on German and Swiss panel data finds that workers becoming unemployment experience a substantial decrease in well-being (Oesch and Lipps 2013: 963).

While there exists agreement on job loss leading to a drop in workers' well-being, there is a controversy going on about the mechanisms underlying this phenomenon. An influential explanation, called "latent deprivation model", goes back to Jahoda (1982). She argues that becoming unemployed is harmful for workers' well-being since work not only provides individuals' with an income but also fulfills some of their latent needs such as providing them with an identity, a social status, a daily structure and allowing them to engage in activities meant for collective purposes. This approach has been challenged by findings from Denmark that show that unemployed workers do not worry much about "having no purpose to get up in the morning" or that they lose their social status (Andersen 2002: 185). In contrast, their largest concern was economic insecurity. Psychologists in turn claim that economic insecurity induced by job loss generates stress and uncertainty (McKee-Ryan et al. 2005: 68). In line with these findings, displaced workers are more likely to experience anxiety, depression and loss of self-esteem (Brand 2015: 15).

Which individuals are particularly affected in their well-being by job displacement? Evidence from German and Swiss longitudinal data indicates that men experience stronger decreases in well-being than women when losing their job (Oesch and Lipps 2013: 963). Similar results are found for Germany (Clark et al. 2008: F238) and for Catalonia (Artazcoz et al. 2004: 83). A possible explanation is that the main responsibility to provide household income is still assigned to men and losing the ability to comply with this role makes them suffer more strongly (Ernst Stähli et al. 2009: 334).

It has been suggested that unemployed workers become used to their situation, as the duration of their unemployment spell increases – the so-called "habituation effect" hypothesis. Yet there is little evidence in support of that claim. The analysis of German and Swiss longitudinal data reveals no evidence for such an effect to be acting (Clark et al. 2008: F231; Oesch and Lipps 2013: 963). In contrast, these studies rather showed that unemployed workers' well-being slightly but continuously

²The notion of subjective well-being expresses the degree to which individuals judge the quality of their lives favorable (Veenhoven et al. 1993: 19). Theoretically the concept goes back to Bentham and aims at capturing individuals' pleasure and pain (Dolan et al. 2011: 6).

decreases over time, possibly as a consequence of their increasing frustration over rejected job applications (Strandh 2000: 469; Flückiger 2002: 15).

When unemployed workers are reemployed, their well-being seems to recover. A study on recent waves of the US Panel Study of Income Dynamics finds that unemployed people who return to employment experience a significant increase in well-being (Young 2012a: 16). However, they do not achieve their pre-displacement level of well-being. The author assumes that reemployed workers either experience a lingering sense of labor market insecurity or that they suffer from occupational downward mobility.

Hence, the characteristics of the new job may explain workers' well-being when reemployed. There may be a link between wage losses and well-being. Traditionally, economists have assumed that the financial return on work substantially affects workers' level of job satisfaction. A quasi-experimental study on lottery winners in Great Britain simulating wage increases observes strongly positive effects of winning on workers' well-being – even in the long-term (Gardner and Oswald 2007: 53). Yet a recent meta-analysis reports that the majority of studies find only a weak correlation between workers' well-being and their wage (Judge et al. 2010). As an example, two studies based on German longitudinal data find only extremely small effects of wage losses on well-being (Winkelmann and Winkelmann 1998: 12; Ferrer-i-Carbonell and Frijters 2004: 656). In fact, it has been shown that relative wage – the worker's wage as compared to the average wage in similar jobs – is a much better determinant of individuals' job satisfaction (Clark and Oswald 1996: 361).

From these findings we may infer that wage losses per se do not threaten workers' well-being as long as they permit them to keep up a similar standard of living. Only if the wage reduction is large enough to restrict the fulfillment of individuals' daily needs, do negative repercussions on their life satisfaction become apparent. This argument is supported by results from two US studies, one based on data from Tennessee and the other from Utah, which find that perceived economic well-being is a much better determinant of individuals' well-being than measured household income (Mills et al. 1992: 61; Fox and Chancey 1998: 74).

Displaced workers' well-being may also be affected by changes in job quality that are frequent after job loss (Dieckhoff 2011: 242; Brand 2006: 290). For instance, workers may be unable to find a job in which they are hired at an activity level that corresponds to their working hour preferences, or in other words, they may be “under-” or “overemployed” in their new position. A meta-analysis reports that underemployment has harmful effects on individuals' well-being, perhaps because it involves a lower income or a lower social status than full-time employment (Winefield 2002: 142). At the same time, working overtime may have similarly negative consequences on workers' well-being as shown by a study based on the British Household Panel Survey (Rose 2003: 520).

Additional burdens that displaced workers may endure in order to become reemployed are longer commuting distances. Kahneman et al. (2004: 431–2) show for female workers in Texas that commuting is the most out-of-favor of all daily activities. A study based on German data controlling for selection effects suggests that

even if commuters are financially compensated for the inconvenience of traveling, they are less satisfied with their lives than those who do not commute (Stutzer and Frey 2008: 349). This finding points to a strongly negative effect of commuting on individuals' subjective well-being.

An alternative to the argument that reemployed displaced workers do not regain their pre-displacement level of well-being because they are reemployed in low-quality jobs, is that job displacement negatively affects other domains of workers' lives, such as their social status or social relationships. For instance, reemployment in jobs of lower quality or in lower hierarchical positions goes along with loss of occupational prestige (Kalleberg 2009: 9), social status being a central determinant of individuals' well-being (Clark and D'Angelo 2013: 14). Another longitudinal British study examining the well-being of managers who – voluntarily or involuntarily – changed jobs has revealed that downward mobility led to substantial decreases in their life satisfaction (West et al. 1990: 127).

But most prominently, the literature has pointed out that social relationships matter for individuals' well-being. A British study comparing the effect of a large number of life domains on individuals' well-being finds the strongest correlations between life satisfaction and satisfaction with social life (Dolan et al. 2011: 7). Accordingly, it seems plausible that if social relationships suffer as a consequence of job loss, workers' life satisfaction is negatively affected.

The study by Dolan et al. (2011) highlights that among different types of social ties the relationship with their spouse matters most for their well-being. If workers' marital relationship suffers – for example as a consequence of a degradation of the financial household situation – they are likely to be negatively affected in their general life satisfaction, in particular if they are the main breadwinner (Hansen 2005: 142). A small-scale longitudinal study from the US shows that job loss leads to a decrease in the quality of the marital relationship, but that it recovers after reemployment (Atkinson et al. 1986: 320–7). Moreover, the study shows that cohesive family structures may be stress-buffering and displaced workers experiencing solidarity and receiving emotional assistance may see their family and spousal relationships improving.

Other studies claim that friendship is a better determinant of individuals' well-being than family and spousal relationships. A study based on data from Canada and the US shows that relationships with friends are associated more than twice as strongly with workers' well-being as the relationships with their family (Helliwell and Putnam 2004: 1439). A similar result has been found in a meta-analysis on this issue. The authors argue that the encounter with friends is associated with enjoyment and sharing of good times (Pinquart and Sörensen 2000: 194).

Finally, it has been argued that for some workers seeing their plant closing down may be a relief. This may be the case if the job security in the pre-displacement plant was very low and the workers experienced great uncertainty regarding their future career. A qualitative longitudinal study conducted in the State of New York reports positive effects of job displacement on workers' well-being (Sweet and Moen 2011: 24–5). More displaced workers reported health improvements than health declines following their job loss. Even for individuals where the financial

situation worsened, other aspects of their lives – such as emotional well-being and physical health – improved subsequently. Quitting their working environments implied for them a way out of job insecurity and an atmosphere of low morale.

1.4 Our Model of Occupational Transition After Plant Closure and Hypotheses

How plant closure affects workers’ lives is subject to complex processes. To reduce the complexity we suggest a model that focuses on the main causal mechanisms. The model consists in an illustration of how some main determinants are linked to a limited number of outcomes and how different aspects of the outcome are related among them. The model is presented in Fig. 1.1.

On the side of the determinants – or moderator variables – we have three main drivers: (i) individuals’ characteristics, (ii) individuals’ actions, and (iii) labor market context. The individuals’ characteristics that we expect to be linked with post-displacement outcomes are the workers’ education, sex, age, tenure, nationality, civil status, occupation, and their social network. The individuals’ actions that may affect the transition are job search strategy, training, geographic mobility, accepting temporary employment, and household coping strategies. The regional rate of unemployment is probably the best indicator for overall labor market context but also labor market institutions and the skill regime importantly affect occupational transitions. Together with other factors such as employers’ preferences or labor market policies – which are not examined in detail in this study – these factors shape the displaced workers’ job opportunities.

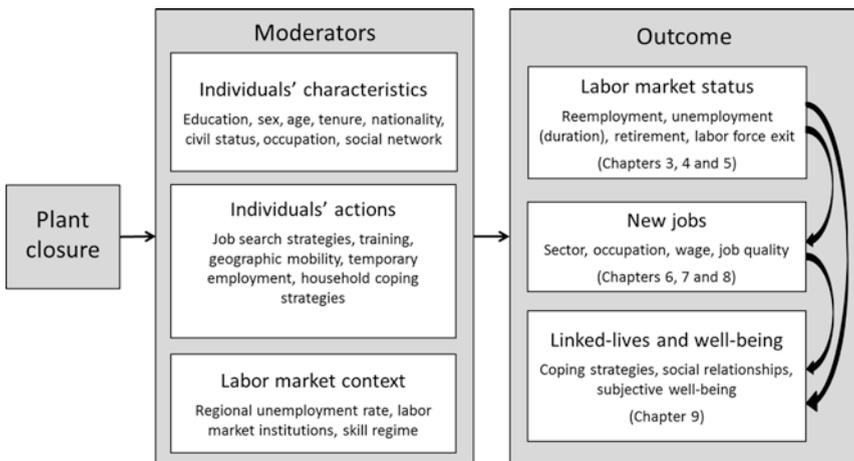


Fig. 1.1 Model of occupational transition after plant closure

Schematically, we can distinguish four different labor market statuses: reemployed, unemployed, retired, and labor force exit. Unemployment duration is at the same time an outcome and a determinant: we analyze the factors that determine unemployment duration and discuss how it affects other outcomes. For the category of the reemployed, we assess the sectors, occupations, wages and quality of their new jobs. In order to understand the impact of plant closure on workers' sociability and well-being we examine workers' household coping strategies, changes in their social relationships and changes in life satisfaction.

We assume that there is not only a causal relationship between plant closure and the outcome measures but that some of the outcome measures of interest are also causally linked. More precisely, we expect that labor market status 2 years after displacement is linked to the characteristics of the new jobs displaced workers have or will take on, to their sociability and well-being. The characteristics of the new job in turn are also assumed to affect workers' sociability and well-being. To give a concrete example, workers who experienced long unemployment spells are likely to experience an occupational downgrading once they returned to a job. To give another example, workers reemployed in insecure jobs risk seeing their well-being drop because of a latent feeling of uncertainty.

Based on the discussion of the literature presented above our main hypotheses are as follows:

- H1. Our first hypothesis refers to workers' reemployment prospects. We expect that the rising demand for high-skilled workers and the importance of education as a signal for unobserved characteristics lead low- and mid-educated workers to encounter more difficulties in finding a job than highly educated workers. Furthermore, we predict that older workers have more difficulty in returning to the active labor force than younger workers. Referring to the theory of the transferability of specific skills, we assume that reemployment is more difficult for older workers because they typically have higher tenure and thus more firm- and sector-specific skills.
- H2. Our second hypothesis addresses early retirement. In line with our hypothesis that older workers encounter difficulties in finding a new job, we expect older workers to retire early in order to avoid long-term unemployment. We thus assume that older workers are rather pushed than pulled into early retirement and that they tend to take this pathway involuntarily.
- H3. Our third hypothesis examines job search strategies. The labor market literature suggests that a large number of jobs are found through informal contacts. Moreover, authors have argued that jobs encountered through the social network are found within a shorter time, are better paid and of better quality. We therefore predict that displaced workers who find their new jobs through social contacts experience advantages in terms of job quality as compared to those who find their jobs through other channels.
- H4. Our fourth and fifth hypotheses highlight workers' reemployment sector. Switzerland's vocational training system is highly standardized at the industry level with common training protocols and skill certification procedures. With

respect to workers' reemployment sectors we expect that workers with vocational education – which in Switzerland most often means apprenticeships – disproportionately find new jobs in the same sector they were employed in before job loss.

- H5. If workers nevertheless change sector, we hypothesize that push rather than pull mechanisms are at work. More specifically, we expect sectoral changes to be triggered by the experience of long-term unemployment. Furthermore, we predict that workers who change sector in order to avoid long-term unemployment particularly often accept low-end jobs in the service sector.
- H6. Our sixth hypothesis analyzes wages. We predict that workers with a large amount of firm-specific skills, – in particular high-tenured, low-qualified and sector or occupation changing workers – are most negatively affected by wage losses. Once these workers lose their job, they are unlikely to receive financial returns from a new employer to the skills that are specific to their pre-displacement firm and thus experience wage losses upon reemployment.
- H7. Our seventh hypothesis explores job quality. Research has shown that long-term unemployed workers have the highest risk of occupational and social downgrading. The longer workers search for a job, the less likely they are to return to a job and the lower tends to be its quality. We therefore expect that those workers who experience long unemployment spells are most prone to see their job quality drop upon reemployment. Such a scenario is particularly likely for older workers since they tend to face strong barriers to reemployment after job loss.
- H8. Our eight and final hypothesis scrutinizes workers' subjective well-being. We assume that changes in workers' social relationships drive changes in their well-being most strongly, more strongly than changes in their financial situation. We particularly highlight the effect of plant on marital relationships. Previous literature has shown that job loss is likely to lead to persistent tensions between spouses. Plant closure thus may leave long-lasting scars in workers' social lives even after returning to employment.

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