Dynamic Outcomes: Effects of Job Mobility in Germany and the UK

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Summary of Contents

The concept of job mobility is useful to sociologists who see inequality as stemming from positions in a social structure, instead of the characteristics of those holding the positions. Yet, authors more often explore the causes of job mobility than its consequences. An important but rarely tested assumption in the labour market literature is that job mobility leads to better positions.

This research explores the assumption, asking "what do workers get from mobility?" It considers three aims. First, it explores the relationship between mobility types and subjective and objective outcomes. Second, it explores differences between labour market insiders and outsiders in the relationship between mobility and outcomes. Third, it compares institutional differences between liberal and coordinated economies in the mobility-outcomes relationship. The thesis uses two longitudinal panels to analyse the outcomes of different forms of job mobility in the UK and Germany during the pre-crisis years of 2000-2008.

The three aims act as configurations of the mobility-outcomes relationship, shedding light on how it shapes worker action. Regarding mobility types, inter-firm mobility leads to subjective gains, but does not result in objective ones. Intra-firm mobility leads to objective gains, but has minor effects on subjective outcomes.

Differences between workers rely strongly on the institutional context. British women appear to gain more from mobility than men; yet the gains are subjective or tied to hours. German women are unaffected by mobility, whereas men make subjective bargains using changes. Education differences suggest non-tertiary groups gain the most from mobility when outcomes are subjective but the least when outcomes are objective.

Institutional comparison shows separate opportunity structures and separate meanings to mobility in both countries. German institutions internalise workers with high promotion premiums, which are smaller in the UK. The UK has a wide variance in working conditions which may explain large subjective premiums tied to inter-firm change. In Germany, quits may be fuelled by a want for more interesting or satisfactory work, at the compromise of other outcomes. In the UK, quits may be fuelled by a need to improve one's immediate environment or responsibilities. The thesis concludes that the promises of mobile markets should be treated with scepticism.

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1. Introduction

Writing for Bloomberg Kitroeff (2016) asks "Have Millennials Made Quitting More Common?" The number of quits reached a 7-year high in December 2015 with 3 million Americans leaving their job for a new employer, a figure which has continued to rise. Kitroeff (2016) suggests younger workers, who have embraced mobile-lives, are behind the increase. Although the Bureau of Labour Statistics does not separate the quit rate or the layoff rate by age group, younger workers make up the largest segment of the labour market and are the most likely to want to "leave their job in the near future". Kitroeff (2016) also cites polls, showing younger cohorts hope "to have a different job in the next 5 years" or plan a "quit in the next 2 years". This is interpreted as "a sign of a bustling economy", a wider indicator of a competitive market. Further, movers themselves are expected to benefit- they want something more from work than "spending their lives at one desk".

Guo (2014) writing a column for The Washington Post suggests the opposite, workers are not mobile enough. Young cohorts are immobile, "sticking with their jobs longer than their counterparts did a decade ago". He cites longer tenures among younger cohorts, arguing that this is bad for "Millennial careers". Job hopping is cited as an integral part of earnings growth, and mobility is "a process of trading up" in the labour market. Casselman (2015) agrees, pleading in the data blog FiveThirtyEight[1] "Enough Already about the Job-Hopping Millennials". Considering similar data to Guo (2014), he compares cohorts, claiming mobility is an important strategy for US workers, not just the young, "changing jobs is a key way for workers to make more money"; by moving less, workers limit their potential earnings growth.

[1] FiveThirtyEight is a data-driven news blog, covering politics, economics, and society.

Earnings growth is not the only benefit promised by journalists. Writing in Forbes McGrady (2016) lists three reasons why young workers change employers, none of which are tied to earnings. Respondents want "meaning from work", "training and the opportunity for development", and "approachable managers" who are open to considering working conditions and their workload. In fact, House (2014) writing for The Wall Street Journal cites that movement for wages is just one aspect of mobility bargaining; work environment, retention programmes, and bonuses also play a part in shaping the decision to change employers.

The articles above agree; job mobility is "good" for the economy and workers. Some describe it as "crucial", or the main mechanism used to improve pay and conditions. However, three points of contention can be singled out. First, each author cites the US, implying workers in less mobile countries, by proxy, are worse-off than those in America. Second, authors use a limited definition of job mobility, focusing on quits but ignoring promotions. The authors write about inter-firm mobility, but the workers themselves could be referring to internal promotions when answering the polls. Many of these do not imply a break with the firm and could be interpreted as the natural progression of an internal career; the first author claims Millennials want "a different job in the next 5 years", which could mean either a quit or a promotion. As a result, none of the authors discuss the effects of moving internally when considering mobile markets. Third, the columns above are split on outcomes. Mobility has a positive effect on earnings, but elsewhere authors promise improved softer outcomes like "better work environment" and "meaningful work", outcomes other than wages. While some claim job mobility is a good strategy for improving earnings, others promise improved subjective feelings and a sense of fulfilment.

This thesis considers the promises above, focusing on one research question "what do workers get out of job mobility?" Employers may be frustrated by workers' "lack of commitment" to firms (Cappelli, 1999), and the economy may depend on large rates of turnover between firms, but asking what workers get from mobility sheds light not only on the complexities of micro-level bargaining, but also on differences between workers, and differences between institutions. Throughout, the thesis argues mobility is less often a strategy for increasing utility and advancing careers (as proposed by theory), and more often a strategy for dealing with poor working conditions. Countries with high mobility rates seem less like spaces facilitating attainment, and more like systems which maintain a wide spectrum of working conditions, where mobility is a release valve. Countries with low mobility rates seem focused on protecting the core workforce, the goal of ensuring predictable pay and conditions for the economic core results in a lower rate of mobility.

The rationale for the thesis stems from a widely held (but rarely tested) assumption in the theoretical literature, which has spurred mixed results in empirical articles. Sociologists exploring mobility focus on the patterns and causes of job mobility, typically citing Sørensen's (1979, 1975, 1977, 1978) *attainment theory* (or in earlier years the *theory of occupational achievement*) for the perspective of the worker, or *efficiency wage theory* (Akerlof and Yellen, 1986) for the perspective of the firm (on the topic, some use *internal labour market theory* (Althauser, 1989, Doeringer and Piore, 1971, Royal, 2000) although the theoretical discussion is similar). Less often, authors explore the causes or the consequence of mobility itself. Each of the theories above holds a central assumption that voluntary mobility leads to better jobs with better outcomes, bringing workers closer to attainment. Some consider voluntary movement alone as important (*attainment theory*), some consider movements within the firm as

important (*efficiency wage theory*), but in both cases, movement is assumed to entail "gains".

Mobility's positive impact on outcomes is treated as a given. Throughout this focus, the rationale for mobility is simplified. In attainment theory, mobility is driven by the utility of the worker, who aims to maximise his or her reward (or attainment) as much as possible. For this reason, he or she takes promotions and fills vacancies where available; no mobility takes place without utility gain. For efficiency wage theory, employers aim to shape mobility action, limiting the amount of quits and increasing promotions. Higher wages (and higher utility) are offered in the form of promotion opportunities, in an effort to deter workers from quitting. In internal labour market theory too, mobility through a metaphorical ladder explains the correlation between worker tenure and chance of promotion, both of which increase the chance of attainment better than a career outside the firm.

This assumption has two complexities, routinely captured by empirical papers which show nuance in the relationship between mobility and outcomes. The work presented here focuses extensively on these complexities. First, outcomes are multi-faceted. The columns listed at the start of the chapter switch between pay, working conditions, training, or the general feeling of understanding and empathy. Each of these is predicted to improve following mobility. Yet workers will likely make trade-offs, sacrificing longer hours for higher pay, or giving up tenure and job security with an old employer, for a well-paid position with a new one. Depending on the mobility type, the worker's resources, and the structure of inequality they find themselves in, workers will make trades in outcomes by bargaining with employers. Second, there is a specific difference between subjective and objective outcomes, and although these are correlated, mobility will impact each differently as workers move to new positions with new responsibilities.

Workers who take promotions with an existing employer will see a rise in pay, but this comes with the added responsibility of a new role. Thus the idea that satisfaction will increase both pay and satisfaction is unrealistic. Both of the complexities above stem from the assumption that workers who move for voluntary reasons move to better jobs, where subjective and objective outcomes will improve and hence, are the same. Thus, the theories (especially attainment theory, where this is central) assume each voluntary move is driven by a better vacancy, which will bring better pay and higher status. Job mismatch, poor conditions, and movement for other, long-term opportunities are not considered. Thinking of the sharp rise in labour market mobility since the 1980's (Osterman, 1999, Osterman, 1987), attainment theory would see these changes as pursuits of better vacancies.

This thesis considers three configurations of the mobility-outcomes relationship. First, mobility and outcomes will differ by mobility type. The theories above consider voluntary mobility most often, giving only minor attention to involuntary mobility, yet involuntary mobility will also shape outcomes. Beyond this, inter-firm and intra-firm mobility are treated as one and the same by attainment theory, although efficiency wage theory and internal labour market theory tackle the distinction. Both mobility types differ in the effects they have on outcomes, if only due to differences in poaching (inter-firm) and promotion (intra-firm). Second, worker characteristics will shape the mobility-outcomes relationship. Although attainment theory considers education or racial differences in attainment, these are explained as differences at the point of skill acquisition, not at the point of mobility. Several authors see this definition as a shortcoming, and have developed theoretical inequality regimes, and job queue discrimination theories which occur in the wider labour market, past the point of skill acquisition. These theories predict differences not only in the likelihood of experiencing mobility, but in the consequence of mobility. Third, countries differ in mobility rates,

and in capitalisms encouraging and discouraging collective or individualised bargaining. These country differences will shape the mobility-outcomes relationship further. Although Sørensen (1975) discusses this, considering separate *structures of inequality*, sociologists note the distinction less often, and most sample on single country cases, despite clear differences in welfare states, modes of skill creation, and labour market types (O Riain, 2011, Mills et al., 2006b, Ebbinghaus and Manow, 2004).

These three configurations of mobility and outcomes inform the aims of this thesis. Without the complexities above, configurations would be simple. First, voluntary mobility would have a positive effect on outcomes, regardless of the location of the change, while involuntary mobility would have a negative effect. Second, differences between workers would favour labour market insiders, men would benefit over women, third level educated workers would benefit over other education groups. Third, country differences would also be basic; countries with high rates of mobility would also have the highest rewards tied to mobility. Once the complexities are considered, each configuration reveals its own advantages and disadvantages for workers; the thesis explores these.

The aims of the thesis are stated below, alongside a list of objectives; these later inform a set of hypotheses. Each aim stems from a gap in the literature, but overall the thesis tests a key assumption that voluntary mobility leads to improved outcomes, and involuntary mobility worsens outcomes.

To explore the relationship between different types of mobility and outcomes

Estimate the effects of (in)voluntary mobility on subjective/objective outcomes

Consider the nuance of (in)voluntary mobility between and within firms

To explore the differences between insiders and outsiders in the mobility-outcomes relationship

Consider a gender effect in the relationship between (in)voluntary mobility and outcomes

Consider an education effect in the relationship between (in) voluntary mobility and outcomes.

To explore institutional differences between liberal and coordinated economies in the mobility-outcomes relationship

Consider the strength of mobility as a predictor in the UK, a liberal market economy

Consider the strength of mobility as a predictor in Germany, a coordinated market economy

The thesis offers a comparative analysis of Germany and the UK, using longitudinal data. Specifically, it considers employee history files over an eight year period to test mobility's impact on three subjective and three objective outcomes. Mobility is defined using two dimensions. First, whether respondents leave work for voluntary or involuntary reasons; and second, whether respondents leave an employer, or whether they remain with the same employer following the change (changing jobs without changing employer). Other dimensions could be considered, such as movement between occupations or industries, these are omitted due to limitations of space. Due to the design considered, the sample covers the core workforce in each country, those who remain employed from 2000 to 2008 without interruption. Models do not consider those in the economy's periphery, who fall in and out of employment or inactivity during that time. A summary of the chapters follows.

Chapter 2 considers job mobility as it appears in the literature, pointing to three configurations of the mobility-outcomes relationship which inform the aims of this work. First, I summarise the theories and empirical findings linking voluntary and involuntary mobility with outcomes. Second, I review the authors who consider the theoretical and empirical reasons for differences between workers in the mobility-outcomes relationship. Third, I summarise authors who find country differences in how job mobility is organised and how mobility impacts outcomes. Before summarising the findings tied to each aim, I review the theories cited. Four limitations emerge from the literature that motivates this thesis. First, each of the three theories assumes voluntary mobility is "good", movement leads workers to better jobs. However, the empirical literature routinely shows strong effects when outcomes are subjective, but weak effects when outcomes are objective. Further, authors reveal that not all outcomes are affected by mobility, and not all change in unison, resulting in a type of bargaining that occurs when workers change jobs. These are the complexities noted earlier. Second, several empirical papers focus extensively on quits but rarely on promotions, a separate mechanism for movement. Despite their decline in recent years promotions remain an important mechanism for improving outcomes. Where authors do consider promotions, they rarely compare and contrast the effect of promotion against the effect of a quit; instead conflating results as two types of voluntary mobility. Third, authors assume all workers benefit roughly equally, without considering the gender, and class advantages tied to mobility. A small number of papers correct for this, where some authors return to worker differences having covered the basic principles of mobility-outcomes. These papers are few and often contain mixed results depending on the country sampled. Finally, linked to the previous point, most studies consider the effects of mobility on outcomes using single country samples. The last point is particularly important as it explains the many conflicting reports of mobility's effects. Authors report conflicting

results, with mobility being either effective or ineffective depending on the institutional context of the labour market. A sample of papers in the comparative political economy literature find country differences in how voluntary mobility rewards workers, but most often researchers use single country samples. This chapter also presents the hypotheses.

Chapter 3 outlines the methodology, listing the approach, summarising the design and presenting the data in both longitudinal panels. It considers the British Household Panel Survey as representative of workers in the UK, and the German Socio-Economic Panel as representative of workers in Germany. It briefly lists the subjective and objective outcomes used throughout the work, and explains how measures are made comparable. It also presents the main method of estimation, linear fixed-effects, outlining why this method is suited to the predictions of *attainment theory*, and its superiority to ordinary least squares regression. Lastly, the chapter outlines the weighting strategy, and states the limitations of the design. Despite these, two comparable case studies are possible after some basic checks.

Chapter 4 considers country differences in mobility, outcomes, and institutions. Here the first argument emerges through the data, and sets up the main analysis for country-specific chapters. It first considers the country differences in mobility types. Surprisingly, both countries do not differ in their rates of involuntary mobility. The main difference between Germany and the UK is in their rate of voluntary mobility. This story develops further when considering the longitudinal data, which shows that British "movers" move more often. Germany has fewer "movers" moving less often. The chapter also lists how outcomes vary more in the UK than they do in Germany. Generally there are wider differences in outcomes throughout an average British worker's time in the panel, when compared to an average German worker's time in the panel, suggesting working life in Germany is more predictable than in the UK. Lastly,

the chapter considers the institutional differences in both countries, summarising the institutional measures which shape mobility, and the institutional measures which shape outcomes. Both Germany and the UK present different social structures which reflect their previous patterns of movement and outcomes.

Chapters 5 and 6, push the argument further by considering each country specific panel, separately. I estimate the effects of mobility types on outcomes, consider differences between workers, and discuss the results. Large differences emerge not only in voluntary and involuntary mobility, but also in the nuance of each. As above, the chapter argues that the mobile markets found in the UK, are mechanisms for dealing with varied outcomes where occupational achievement or attainment is not guaranteed through mobility. Instead workers use mobility to improve subjective outcomes, suggesting job mismatch, or a poor working environment. In Germany mobility has only minor effects on outcomes, hardly improving the working conditions and pay of workers. The effect comes down to Germany's collectivised form of bargaining, which limits the importance of personal characteristics. Here, the argument also stands. A key reason behind Germany's low mobility is down to the minor returns on mobility, since conditions vary little between firms. Once wages and conditions are set at the industry level, workers do not require mobility to exit job mismatch and poor conditions. Instead they leave firms for more interesting work, or other subjective reasons. Differences between workers are minor but highlight important bargains in working time and pay, which have country specific differences also.

Chapter 7 compares both countries. Here the thesis considers the final aim and discusses the results further. The chapter also considers the main contributions of the work, and its place in the wider literature. In the British market, voluntary mobility produces significant positive effects for subjective outcomes, but these rarely reflect objective

improvements (like increased wages). In the German market, voluntary mobility has almost no impact on subjective outcomes, yet is crucial for increasing pay. The chapter follows with a wider discussion of country differences in the meaning of "quits" and "promotions". The predictions of *internal labour market theory* and *efficiency wage theory* emerge in both countries, suggesting internal promotions carry the largest premiums for workers.

The thesis casts doubt over the claim that workers gain from mobile and dynamic labour markets. Instead mobile markets may be an institutional consequence for wide ranging working conditions and individualised bargaining, one which does not emerge in countries where bargaining occurs at the industry level, and where good pay and working conditions come as standard. It calls for further research into the claim that mobile markets are good for workers. The next chapter considers mobility, as it appears in the literature.

2. Literature Review

This chapter considers the literature exploring job mobility and justifies the main aims of the thesis. It also lists the hypotheses as they emerge from the literature. Four gaps appear in the review, three inform the aims. First, in the theoretical literature voluntary mobility is driven by utilitarian gain, but empirically, voluntary (and involuntary) mobility has varied effects on subjective and objective outcomes. These often reveal bargains and compromises, depending on the type of mobility considered (inter or intra-firm). Second, the theoretical literature often treats voluntary (henceforth VM) and involuntary mobility (henceforth IVM) as homogenous events. It rarely distinguishes between inter- and intra-firm mobility, yet these are separate structures with separate vacancies or opportunities. Third, articles exploring differences between workers are uncommon, authors often assume VM and IVM affect all workers equally. At the very least, they see inequality as stemming from skill acquisition before labour market entry. Last, articles providing an institutional context are also rare. As a result, authors assume mobility affects workers in different countries equally despite differences in labour markets and capitalisms.

Overall, theories of income attainment contain an implicit assumption; job mobility, if voluntary, leads to better jobs. This is often stated but rarely tested; authors focus more on the determinants of job mobility than on their consequences (Le Grand and Tåhlin, 2002). The assumption is particularly important to sociological perspectives of labour markets, since these see inequality as tied to positions in a structure, rather the characteristics of those occupying the position (Sørensen and Kalleberg, 1981). Mobility between positions is therefore the best strategy to achieve attainment or satisfaction, because workers slot into vacancies which contain their own rewards and premiums, independent of the characteristics of the worker. By contrast, economists see inequality as tied to the characteristics of individuals, where all premiums tied to

mobility can be explained by human capital; workers gain tenure and experience and then seek additional rewards to compensate for this. The literature review presented here justifies the aims in chapter 1. These aims inform the hypotheses developed below.

2.1.Mobility and Outcomes

The first aim of the thesis considers the relationship between basic mobility types and outcomes. In this section, the key theories appearing in empirical articles are summarised and critiqued. The complexities discussed in chapter 1 emerge from this summary. Utilitarian gain is predicted to driven job mobility, thus VM is assumed as mobility to a better job. This prediction is somewhat supported by empirical articles. Most authors are in agreement, overall VM correlates positively with a number of outcomes like satisfaction and earnings. Although authors differ in definitions of mobility, and the types of mobility considered, a general agreement emerges.

Empirical nuance appears when authors consider separate structures of VM. Theoretically, attainment theory makes no distinction between mobility within and between firms, by the same token, human capital theory, expects no difference in voluntary mobility between and within firms in its effects on outcomes. Yet, some argue intra-firm mobility is more important, citing internal labour market theory, career ladders, and efficiency wage theory (Osterman, 1999, Althauser, 1989, Akerlof and Yellen, 1986). In these structures, workers wait for vacancies in order of tenure and seniority; thus promotions increase a respondent's pay and working conditions. Other authors use results to argue the wider market is more important, citing attainment theory and the benefits of networks and occupational structures (Sørensen, 1975, Sørensen, 1977, Sørensen and Tuma, 1978). In these accounts, workers use their skills and productivity to match with a level of reward they believe they are most capable of earning. Thus quitting increases a respondent's pay and conditions, improving outcomes

better than promotions. From the empirical literature it is clear that VM is not so homogenous to benefit both workers who quit and workers who find promotion equally, but it is also unclear whether one systematically rewards workers less than the other.

Authors do not reach a consensus on the effects of IVM on outcomes. Here, papers are split by those finding negative relationships (Keith and McWilliams, 1999) and those finding no relationship (Kalleberg and Mastekaasa, 2001) between IVM and outcomes. Some cite the importance of direct moves (Schmelzer, 2010), while others cite the importance of labour market institutions (Fasang et al., 2012, Kalleberg and Mastekaasa, 2001). Generally, the effect of job loss and demotion on outcomes is unclear.

2.1.1. Theoretical Considerations

Several authors call for greater research into the link between job mobility and outcomes (Kalleberg and Mastekaasa, 2001, Kronberg, 2013, Kronberg, 2014). While sociologists have focused extensively on the causes of mobility, they have focused less on its consequences. One reason for the limited research in this area is that the theoretical link between job mobility and outcomes is basic, and has lead to contradicting empirical results. Commenting on the literature overall Le Grand and Tåhlin (2002) suggest *"the interrelations between tenure, mobility, and earnings* [outcomes] *are not well established empirically, which may be one reason why they continue to be subject to theoretical controversy".* With this in mind, the section below summarises and critiques three key theoretical perspectives; *attainment theory, internal labour market theory,* and *efficiency wage theory*. Each of these shares the assumption that job mobility contains an inherent premium for workers, although internal labour market theory and efficiency wage theory expect a premium for intra-firm mobility alone.

Attainment theory described by Sørensen (1975) states VM stems from a worker's pursuit for the highest level of reward and satisfaction. The process of attainment is summarised as one where *"change is brought about by utilising opportunities for change of position in a predetermined structure of inequality"* (Sørensen 1977: p967). A "structure of inequality", may be a firm, a market, an occupation, no distinction is made in the literature, only that it is a social structure where positions are organised from most to least favourable. "Positions" are jobs with specific rewards; only a change in job can produce a change in rewards, which take many forms. "*Jobs may be characterized by the economic, social and psychological rewards they provide incumbents. It is assumed that only a change in jobs can provide a change in the level of rewards*" (Sørensen 1977:p967). Workers seek to maximise rewards, and VM is the best way of achieving this. The process is motivated by utilitarianism where utility is increased through VM and decreased through IVM (Sørensen, 1975), independent of a worker's characteristics.

Worker resources are assumed fixed from labour market entry (a controversial assumption, admitted by Sørensen (1977 p972) *"No claim for the universal validity of the assumption of no change in resources over time can be made, but neither can such a universal claim be made for the validity of the assumption that all changes in attainment are due to changes in resources."*. Attainment theory expects workers to use mobility to navigate vacancies in a given structure of inequality (either a firm or a wider market). These vacancies carry premiums which workers compete or queue for, having gained most of their experience and human capital before entering the labour market. By contrast, *human capital theory* (Becker, 1994) expects no premium tied to mobility once tenure, age, experience and other human capital factors are considered. Mobility is simply the mechanism that matches a worker's human capital to their reward. Since sociologists see inequality as stemming from positions, rather than the characteristics of

the people holding these positions, the positive effect of job change is attributed to obtaining the rewards of new positions (Sørensen and Kalleberg, 1981). Hence the assumption that job mobility rewards workers is particularly important to sociologists.

Kalleberg and Mastekaasa (2001) offer the *values-rewards hypothesis,* which strongly resembles the theory of attainment, in that worker characteristics are expected to remain unchanged and rewards are tied to vacancies found in the market. Job satisfaction is shaped but *"personal unchanging values"* on one hand, and *"changing or dynamic job rewards"* on the other. Since job mobility gives workers the chance to renegotiate their pay and working conditions, VM leads to increased rewards, while IVM leads to decreased rewards. Empirically, the positive link between VM and "reward" is evident, but the negative link between IVM and "reward" or outcomes, is not, even in Kalleberg and Mastekaasa's (2001) own results. They rationalise this by claiming Norway's welfare state protects workers from the negative effects of involuntary job mobility. It is likely that Sørensen (1975) is right to consider that theoretical rationale for IVM as more complicated than that of VM. Both of the theories above share a prediction, voluntary mobility will lead to a positive change in outcomes, beyond a worker's fixed resources. They also apply this assumption to mobility between and within firms equally, without distinction.

The theoretical relationship between intra-firm mobility and outcomes has received less attention by authors citing *attainment theory*. Many cite *efficiency wage theory* instead (Akerlof and Yellen, 1986), which predicts employers create vacancies with above-market wages and "better" working conditions, in an effort to internalise labour. Since wage cuts are said to increase costs through a negative effect on productivity, and poaching comes with replacement and retraining costs, employers will create vacancies with above market-wages and internal career ladders, in an effort to internalise staff.

Thus respondents who leave a firm (even voluntarily) will see no gain from the change and a possible loss, since wages are set above their efficiency within the firm. Further, promotions will raise wages higher than quits, since vacancies within the firm will contain rewards higher than a worker's efficiency.

The theory strongly resembles *internal labour market theory* (Althauser, 1989, Doeringer and Piore, 1971, Royal, 2000) and *dual labour market theory* (Averitt, 1987, Piore, 1970) which claim that internal career ladders are the best mechanisms for attainment. Internal labour markets are "anchored in the administrative rules governing hiring, promotions, layoffs, and the pricing of labour". In this way firms or occupations (for occupational labour markets) contain career ladders, entry points, and progress through training. Desirable jobs and higher pay are placed higher on the "career ladder". Internal promotions reward workers beyond their fixed resources as employers try to incentivise workers to pursue promotions, instead of quits. Here too, intra-firm movement is predicted to have the strongest effect on wages (at times authors cite working conditions and subjective feelings about work, but wages are the most prominent outcome) (Doeringer and Piore, 1971, Burawoy, 1982). Le Grand and Tåhlin (2002) claim one of the least studied aspects of internal labour markets is this link between mobility and earnings.

Two issues stand out above. The first lies with the utilitarian view of mobility and outcomes, the second lies with the broader definition of mobility. Both critiques apply more to *attainment theory* and the *values-rewards model,* than to *efficiency wage theory,* or *internal labour market theory.* Regarding the first, authors take a utilitarian view of attainment. Although Sørensen (1977) routinely operationalizes attainment using pay or status (objective outcomes), the concept is theoretical and "gains" may also be subjective, like satisfaction. In this way, mobility is assumed to move workers to all-

round better jobs. Workers and employers likely bargain over gains and working conditions in order to achieve a match between effort and reward, a utilitarian view misses this. Empirical articles routinely show workers making trades through mobility, earning more after a voluntary change, but not becoming more satisfied with pay due to the increased responsibility of movement (Gesthuizen and Dagevos, 2008).

Second, the authors' view of mobility is also limited. Throughout examples, Sørensen (1977) considers the impact of promotions in closed vacancy-chain systems. However mobility to a new employer also features, without acknowledgment that these changes rely on separate structures. Hachen (1990) raises the point, arguing that intra-firm mobility is more complex than the theory of attainment allows, since the employer (and the politics of the firm) determines if workers receive promotions or new opportunities even when vacancies emerge. The wider market (inter-firm) may be more worker-driven, workers themselves are able to explore wider opportunities and contrast vacancies against one another (with reference to their current job). Importantly, he later developed this idea further; showing that industry specific mobility rates are shaped by the wage practices and employment opportunities afforded by a firm's "production regime" (Hachen, 1992). Thus both inter-firm and intra-firm mobility rates are set by the wider strategy of the firm and the economy, and crucially, they are separate processes. However, in both cases Hachen is more interested in predicting the likelihood of movement, asking if firms encourage or discourage inter and intra-firm mobility. In neither work are the consequences of mobility explored. In neither work is the assumption tested: what do workers get out of mobility?"

Hachen (1990) further argues that attainment theory is unable to predict the effects of IVM, since the model calls for individuals to be self-reflective. Sørensen (1975) admits that the main focus of attainment theory is VM but addresses the point briefly,

"*Involuntary job shifts are important for the occupational achievement* [attainment] *process because they are likely to produce a loss in status and/or income. Any gain a person may obtain should be obtained through a voluntary shift, before the firing takes place..."* (Sørensen 1975: p469).

As a summary, much of the literature above focuses on the patterns and causes of mobility, predicting who moves where and for what reason. Each contains an implicit assumption, that VM is inherently "good" (and IVM is inherently "bad") as it moves workers to better (or worse) positions. When predicting the consequences of mobility, authors typically describe worker utility, which can apply to several empirical measures, either subjective or objective. This is an oversimplification, as evident in several empirical papers. The complexities above emerge routinely; with mobility increasing certain outcomes over others and producing different effects on the same outcomes measured objectively and subjectively. Further, although few authors make the connection, there are obvious differences in the effect of mobility between and within firms. Overall, the relationship between mobility and outcomes is "a theoretically important but empirically neglected issue" (Le Grand and Tåhlin, 2002).

2.1.2. Empirical Findings

Authors routinely comment that despite its theoretical importance, empirical work testing the relationship between mobility and outcomes is scarce. Despite this, a core group of papers are summarised here. Most of the literature is in agreement; VM *on average* has a positive effect on several outcomes. Although important distinctions should be made between papers, several results from a broad range of countries point to a similar relationship. In the US, Keith and McWilliams (1999, 1995, 1997) , and Cha (2014) report a positive link between "employee-initiated" mobility and wages. In the Netherlands, Gesthuizen (2009, 2008) finds a positive link between VM and both

objective and subjective outcomes. In Germany Latzke et al. (2016), Pavlopoulos et al. (2014), Reichelt and Abraham (2017), and Schmelzer (2010) find similar links between VM and wages or satisfaction, although some suggest its emphasis in Germany is over-stated. In the UK too, Pavlopoulos et al. (2014) report significant wage gains for low paid workers who move for voluntary reasons. Lastly, Fasang et al. (2012) consider a European-wide sample, reporting similar results. Most of these cite at least one of the theories discussed above, and most find voluntary mobility carries a premium, beyond the characteristics and skills of the worker.

The definition and operationalisation of VM differs across articles, but most capture a similar phenomenon. The majority define the concept subjectively using survey data, although not all authors use valid categories for definitions. Gesthuizen (2009), Gesthuizen and Dagevos (2008) use a Dutch panel to separate voluntary inter and intra-firm movements based on questions of "recent change" and the "reason for the change". Latzke et al. (2016) and Schmelzer (2010) define VM as a recent change (direct to a new employer) after an "own resignation", only inter-firm VM is considered. Keith and McWilliams (1999, 1995, 1997) do not use subjective categories in the National Longitudinal Survey of Youth. Instead they operationalise VM (which they call employee-initiated quits) as respondents who *"quit for pregnancy or other family-related reason"* or *"a quit for other reasons"*. This likely underestimates the effect of VM on outcomes, as respondents who leave for every other reason fall into the "other" category. This definition too considers only inter-firm movement. Kalleberg and Mastekaasa (2001) define half of their categories subjectively, and the other half objectively. Using Norwegian panel data, "quits" are defined using survey categories, as clear inter-firm changes for voluntary reasons. "Promotions" are operationalised as large changes in pay between survey rounds, *without a change of employer*. In this way, respondents who simply ask for a raise, also fall into the "promotion" category. The

design still considers both inter or intra-firm mobility even if the validity of intra-firm changes is questionable. Pavlopoulos et al. (2014) define the categories objectively, unlike most of the authors above. Voluntary mobility is taken to mean any change that does not result in a period of unemployment. Hence respondents who manage to move directly to a new employer after a dismissal are defined "voluntary". Reichelt and Abraham (2017) consider only regional and occupational mobility, thus they focus specifically on inter-firm mobility which results in changing regions or professions. Overall, definitions of "voluntary mobility" differ across authors based on the available data. Few authors compare and contrast inter and intra-firm mobility against one another, most focus on inter-firm mobility alone.

Papers also differ by analytical strategy, although most consider unbiased estimates. Some authors do not control for individual heterogeneity, the person unchanging characteristics which make workers more likely to pursue promotions and quits. Instead researchers assume that job mobility is a random event, where respondents have a roughly equal chance of experiencing job mobility. Keith and McWilliams (1999, 1995, 1997) are the most prominent example, although their estimates do not differ radically from other authors. At times, their results may over-estimate the effect but generally resemble the estimates of others. They consider the effect of VM on wage growth using OLS, and so cannot distinguish if the effect of mobility is the product of *moving*, or the product of respondents who are most likely *to move*. This criticism does not nullify their findings; the goal of the papers is to estimate gender differences in mobility and outcomes (discussed later). The remaining authors consider unbiased estimates using some variation of panel techniques. Several use linear fixed-effects (within-estimator models or difference in difference models) (Kalleberg and Mastekaasa, 2001, Gesthuizen, 2009, Gesthuizen and Dagevos, 2008, Schmelzer, 2010, Pavlopoulos et al., 2014, Reichelt and Abraham, 2017, Cha, 2014). Latzke et al. (2016) combine panel

techniques (propensity score matching) with OLS regression to gain unbiased estimates of the effect of mobility. These methods are particularly suited to *attainment theory,* which assumes that worker characteristics remain unchanged while workers are in the labour market. Thus, the coefficient estimating the impact of mobility captures the premium tied to a position, instead of a worker's characteristics. One limitation of the method is *omitted variable bias*, which may increase the importance of mobility, if other theoretically important measures are left out. This limitation is particularly important for *human capital theory,* which often seeks different measures of education and skill acquisition to "explain away" the effect of mobility. One important paper stands out from the works above but contains significant findings. Sallaz (2017) carries out a ethnography of a call centre, categorising various "exit strategies" which move workers from bad jobs to improved ones (or into unemployment). Here, in depth interviews and participant observation provide deep insight into the logic of quitting a bad job, something statistical modelling cannot capture.

There are also clear differences in the outcomes used by authors. While some focus on objective measures alone, like wages (Keith and McWilliams, 1999, Keith and McWilliams, 1995, Keith and McWilliams, 1997, Pavlopoulos et al., 2014, Cha, 2014, Reichelt and Abraham, 2017), others consider subjective satisfaction or "soft outcomes" alone (Kalleberg and Mastekaasa, 2001, Gesthuizen, 2009, Fasang et al., 2012). A smaller group of authors consider both (Latzke et al., 2016, Gesthuizen and Dagevos, 2008). The findings of these three groups are summarised below. VM (overall) appears to impact each group of outcomes slightly differently, it is important to note that both inter- and intra-firm mobility are considered together in the summary below.

First, the link between objective outcomes and VM is clear, workers who move increase wages and improve earnings growth. Keith and McWilliams (1999, 1995, 1997)

confirm this for "employee initiated mobility" in the US. Pavlopoulos et al. (2014) report the same in Germany and the UK (although the relationship only applies to low-paid workers, discussed later). Hence when models estimate the effect of mobility on pay or status, mobility tends to increase the outcome (in Pavlopoulos et al. (2014) this effect goes beyond the characteristics of the worker).

Second, the link between VM and subjective outcomes is less clear. Results begin to differ somewhat depending on the outcome considered. These are typically satisfaction scores measuring the job, security, wages, or time. Kalleberg and Mastekaasa (2001) find mixed results between VM and satisfaction with pay, interest in work, how pleasant work is, and security. Mobility has a positive effect on the first three outcomes but a negative effect on security, suggesting workers make trade-offs through VM. Gesthuizen (2009) finds that out of four subjective outcomes, only two are improved by mobility. When considering satisfaction with pay, the work itself, hours, and the job match. VM improves the first two outcomes, but not the second two. This too suggests VM prompts workers make trades for outcomes using mobility, gaining in one outcome but compromising in others.

Lastly, some authors use both subjective and objective outcomes which reveal important differences (Gesthuizen and Dagevos, 2008, Latzke et al., 2016). As Gesthuizen and Dagevos (2008) show, VM has a minor positive effect on socio-economic status and wages (objective), but a far greater effect on subjective measures of similar outcomes. Thus, subjective satisfaction is more influenced by VM, than objective reality. In this sense, the biggest gains tied to mobility are likely a renegotiation of responsibilities, or a better match between responsibility and a worker's reward, rather than the actual pay received. Latzke et al. (2016) also find VM has a strong positive effect on subjective outcomes, but a weaker effect on objective pay, one

that has been declining over time as mobility becomes more common. In both papers, there is strong evidence that subjective and objective measures of the same outcome are differently affected by mobility. In each of the papers above, *human capital theory* explains a portion of the variance in outcomes (older, more experienced workers earn more and are more satisfied than younger, less experienced ones). However, a premium *tied to the job,* still remains, although it is largely subjective.

In the summary above several types of voluntary mobility are considered together. Yet, authors consistently find nuance in the effect; different types of VM have different effects on the outcome. Some authors compare and contrast inter- and intra-firm mobility against remaining in the same job with the same employer (Kalleberg and Mastekaasa, 2001, Pavlopoulos et al., 2014, Gesthuizen, 2009, Gesthuizen and Dagevos, 2008, Fasang et al., 2012). Others consider inter-firm movements for economic reasons on one hand, and family reasons on the other, against years where respondents stay in the same job with the same employer (Keith and McWilliams, 1999, Keith and McWilliams, 1995, Keith and McWilliams, 1997). Others still estimate the effect of inter-firm mobility as a direct change (job-to-job) and indirect change (job change via unemployment) (Schmelzer, 2010). Unpacking the importance of inter-firm mobility further, Reichelt and Abraham (2017) divide the difference between regional and occupational mobility among inter-firm changes. They find the effect differs between workers who change regions, and workers who change occupations. Each of these differences reveals important aspects of wage inequality, it is argued. As with several authors above however, internal mobility and promotion are not controlled for.

Each of the papers suggests VM is nuanced, and theories that consider VM as a whole, do not account for these differences. This criticism can be applied to both *attainment theory,* and *human capital theory.* Neither of these expects a difference in terms of

inter-firm or intra-firm mobility, with *attainment theory* predicting a similar premium for both, and *human capital theory* predicting a premium for neither. Results are further complicated by the use of subjective and objective outcomes; which the cited authors consider less often.

Gesthuizen (2009) reports a positive effect between VM and 4 subjective outcomes (satisfaction with hours, wages, match, and the job itself). He considers the effect of inter-firm and intra-firm mobility separately, citing attainment theory (Sørensen, 1977). Results show a clear difference between inter-firm and intra-firm mobility, where the former improves subjective outcomes far better than the latter. This suggests internal structures and career ladders are not able to improve subjective outcomes as well as wider networks or structures. As proposed by Hachen (1990) and Hachen (1992) *attainment theory* works best for predicting the effect of inter-firm mobility, but is less effective for intra-firm mobility, since both rely on separate social mechanisms. This finding is almost the opposite of that predicted by *efficiency wage theory,* and *internal labour market theory.* However, it confirms that positions or vacancies hold a premium independent of the characteristics of those filling the position; this premium however appears higher between firms than it is within firms.

Elsewhere Gesthuizen and Dagevos (2008) find further nuance to VM. Again, the authors cite *attainment theory*. They find that inter-firm VM increases subjective outcomes best, but has a limited effect on objective outcomes. Further, intra-firm VM increases objective outcomes best but has a limited impact on subjective outcomes. Here, *attainment theory* would expect a roughly similar result for both mobility types, yet a clear divide exists between the type of VM and the type of outcome. According to these results, *efficiency wage theory* is in effect for objective outcomes. Workers who take promotions see higher premiums attached to the job; these are above what can be

explained using their personal characteristics and resources. However, movement between firms contains higher premiums in terms of subjective satisfaction, than staying in the same firm *and pursuing promotion.*

Kalleberg and Mastekaasa (2001) show that promotions and quits (both VM) yield improved subjective outcomes. However, while promotions improve near every subjective outcome in their models, quits improve only "interest in work" and subjectively "pleasant work" at the expense of job security (which declines). Here it seems that workers who change firms make trade-offs, giving up job security for more interesting work. Kalleberg and Mastekaasa (2001) do not comment on this, despite the fact that internal labour markets or *efficiency wage theory* may be at play where employers try to internalise staff.

Fasang et al. (2012) compare the effects of internal and external upward mobility on three subjective outcomes; satisfaction with the contract, satisfaction with work life balance, and satisfaction with career prospects. Overall, upward mobility improves outcomes. But splitting the effects by inter-firm and intra-firm changes reveals nuance; external mobility has a significant impact on contract satisfaction and work-life balance, but internal mobility has a positive impact on satisfaction with careers. Here, two separate processes are happening, respondents who want to correct for poor working conditions may be moving externally, respondents who are focused on improving their careers may be moving internally, yet both types of mobility are considered voluntary and both types of mobility "make people happy". Thus the nuance of VM is an important distinction, and intra-firm mobility contains a premium in career prospects (or perceived prospects) while inter-firm mobility contains a premium in job satisfaction, suggesting it may be fuelled by dissatisfaction at work.

Pavlopoulos et al. (2014) are one of the few listed authors who acknowledge any nuance in mobility between or within firms; considering *attainment theory* for inter-firm changes alongside *efficiency wage theory* for intra-firm changes. Although other authors test for these differences, they hardly comment on the clear difference between inter-firm and intra-firm change. Both inter-firm and intra-firm mobility results in increased wages for low paid workers. However, the UK is more likely to reward intra-firm mobility with higher wages, while Germany does not reward intra-firm mobility. Pavlopoulos et al. (2014) cite institutional differences for the result. In both countries inter-firm mobility holds a stronger pay premium than intra-firm mobility. This finding is also the near opposite of *efficiency wage theory* for obvious reasons, but importantly, in both countries a premium tied to change exists even when controlling for time-invariant characteristics of workers, like education or skill.

Lastly, in an ethnographic study of exit strategies, Sallaz (2017) captures a nuanced and important relationship between inter-firm mobility and outcomes. Here, mobility is expressed as a process of bargaining and compromise. Workers leave well paid jobs, with poor conditions and no chance of progression, for "better" jobs, with less pay but better working conditions and opportunities. The process is nuanced, where bargaining and strategy does not resemble the attainment presented by but instead a patchwork of loss, gain, and compromise. In fact, this is especially true of workers who *strategies* their mobility, in that they plan ahead and by all accounts appear to behave somewhat "rationally". Other workers merely quit, unable to deal with the conditions of their position. Here, the full conflict of bargaining, which happens at the point of mobility, is fleshed out.

The papers summarised above differ from the previous summary because they consider the importance of career ladders and promotions. Ignoring the impact of intra-firm

mobility offers an incomplete picture of mobility. A number of authors do not consider the change (Keith and McWilliams, 1999, Keith and McWilliams, 1995, Keith and McWilliams, 1997, Latzke et al., 2016, Schmelzer, 2010), making it difficult to assess whether the reference category (non-movers) contains workers moving through internal career ladders, or not. This is especially true for Schmelzer (2010) since the work underscores the importance of labour market tenure and experience, as a proxy for *human capital*. Both of these measures are also important predictors for internal changes like promotions as explained by *internal labour market theory* (Althauser, 1989, Althauser and Kalleberg, 1981), yet these mobility types are ignored.

Intra-firm mobility is a crucial event, and is at the heart of the "traditional career model" (Tilly, 1998, Althauser, 1989, Althauser and Kalleberg, 1981). Considering the effect of internal promotion, and how it weighs against external quits shows a more complete picture of job mobility. It presents a dichotomy between *voluntary exits* versus *internal commitments*. Based on the readings above I propose the first set of hypotheses, linking voluntary mobility and outcomes.

> *Hypothesis 1a: Voluntary mobility will have a positive effect on outcomes (attainment theory, efficiency wage theory).*
>
> *Hypothesis 1b: Voluntary mobility will differ based on movement between and within firms. Intra-firm voluntary mobility will have a positive effect on objective outcomes (efficiency wage theory, internal labour market theory).*
>
> *Hypothesis 1c: Inter-firm voluntary mobility will have a positive effect on subjective outcomes (attainment theory).*

Many of the authors above also consider the effect of IVM, to mixed results. Kalleberg and Mastekaasa (2001) find no effect between IVM and subjective outcomes in

Norway. Keith and McWilliams (1999, 1995, 1997) find significant negative effects for IVM and wage growth, using US data. Results differ somewhat by gender, but generally apply to both and men and women. Schmelzer (2010) finds no effect between indirect mobility and both subjective and objective outcomes in Germany, although the sample of indirect movers may contain a mix of those dismissed and those who resign. Fasang et al. (2012) find a negative relationship between IVM and subjective outcomes using data from the Eurobarometer for a broad sample of welfare states.

Authors differ in terms of how IVM is defined. Keith and McWilliams (1999, 1995, 1997) consider respondents who change employers due to dismissal or layoff, grouping these together as involuntary or "employer initiated" mobility. Kalleberg and Mastekaasa (2001) consider both inter and intra-firm involuntary changes. They use survey data to compare respondents who move to a new employer between years for involuntary reasons (dismissal) and those who remain with the same employer, but see a sharp fall in pay between rounds (demotions). Schmelzer (2010) defines involuntary changes as those who move indirectly to a new employer after a period of unemployment, or without setting up employment directly after the change. Lastly, Fasang et al. (2012) consider downward mobility as involuntary, operationalised as a downward change in the scaled question "skills necessary to complete the job". Author differences in defining IVM may explain differences in estimates, since a number of different strategies are considered. However, samples generally contain respondents who remain employed between survey rounds (round t, and round t-1) but report an involuntary change somewhere between the current and previous round.

Regarding estimation, papers differ in statistical techniques which also could explain differences in results. As before, not all authors consider *individual heterogeneity*, which is to say, they do not consider the person specific reasons why a respondent may

lose their job or be demoted. Keith and McWilliams (1999, 1995, 1997) for example, estimate wage growth models using OLS, in this way the strong negative effect they find, may be the product of person-specific errors, which correlate with movement for involuntary reasons. Fasang et al. (2012) estimate the effect using pooled ordinal logistic regression, and find a negative relationship between IVM and subjective outcomes, although they too fail to consider person-specific errors which likely correlate with IVM. Kalleberg and Mastekaasa (2001) consider the importance of person-specific errors, estimating the effect of IVM using linear fixed-effects models. They find no significant result between outcomes and IVM. Thus person-specific errors may explain the estimates proposed by Keith and McWilliams' results (1999, 1995, 1997). The lack of negative effect is problematic for Kalleberg and Mastekaasa (2001) as their findings run counter to the *values-rewards* model which they present in the same paper. The authors (and elsewhere Fasang et al. (2012)) propose the effect is the result of Norway's generous welfare state, which offers unemployment benefits that allow workers to remain in the labour market, and recreate their conditions and pay with a new employer. Schmelzer (2010) estimate the effect of "indirect" mobility to a new employer (with a minor period of unemployment), also finding no relationship between IVM and wages in Germany. Both findings challenge *attainment theory* in a way. If premiums are attached to jobs, less so than individuals, then dismissals and demotions should lead to lower pay and status. Although Sørensen (1975) comments on the relationship between IVM and outcomes, he generally states the process is more complicated than VM.

The most interesting results stem from the varied types of IVM, although admittedly these are few. Keith and McWilliams (1999, 1995, 1997) do not consider intra-firm demotions; as a result they offer an incomplete picture of mobility. However they show different estimates for respondents who are laid off and those who are dismissed, both

seen as involuntary inter-firm changes. Considering these separately, dismissals produce large negative effects on wages, suggesting respondents who report a recent dismissal earn less than those who remain in the same job with the same employer. Layoffs however, produce minor negative effects. Both changes are examples of involuntary inter-firm mobility, but one is tied to demand, while the other is tied to performance. It could be that workers who experience dismissals fall into lower quality jobs, while those who experience layoffs are able to recreate their pay somehow through labour queues.

Kalleberg and Mastekaasa (2001) test IVM separately, intra-firm IVM (demotions) has no significant impact on four subjective outcomes but inter-firm IVM (layoffs) has a negative impact on job security alone. This suggests workers are able to recreate their working conditions after a demotion, and after a dismissal (save for a fall in job security). These findings stand opposite Keith and McWilliams (1995), whose results may be unique to a US sample, where the labour market is dynamic and competitive. A dismissal has consequences in the US, since labour markets are individualised. These consequences are less common in Norway, where a collectivist labour market exists. Alternatively, the negative effect in Keith and McWilliams (1995) could be the result of not correcting for person-specific errors, which Kalleberg and Mastekaasa (2001) consider in their work.

Fasang et al. (2012) too find nuance in the effect of IVM. Downward (involuntary) changes have a negative effect on each measure of satisfaction. However, looking further, Fasang find that downward mobility contains different effects based on the location of the move, similar to previous authors. Internal downward mobility (demotion) has a negative effect on work-life balance, and satisfaction with career. It does not have an effect on contract satisfaction. This is likely because workers must

spend time investing in new positions after a demotion. Inter-firm downward changes have only one negative effect on workers. Workers who move to a new employer and take a job of lower skill are less satisfied with their contract, possibly because of lower working conditions. Otherwise downward inter-firm mobility has no effect on workers. Again, IVM produces a small negative effect on outcomes overall, but when explored further, differences in internal and external IVM emerge. Further, Fasang et al. (2007) find welfare state differences in how unemployment affects satisfaction, which I discuss later.

In an analysis of US panel data Cha (2014) finds significant negative effects of IVM on earnings, but these are specific to women. More importantly, the penalty does not differ between women with children and those without. She further argues that the 2008 economic recession exacerbated the negative effect.

The papers above are mixed; IVM seems to have either an insignificant or a negative effect on outcomes. In a review essay, Kalleberg (2009) notices a similar puzzle. He proposes that terminations of the past *fluctuated with the business cycle*. Workers lost their jobs en masse during downturns, where unemployment grew and growth declined. In the modern labour market, workers are equally likely to lose positions during periods of stability and downturn, reflecting a *"way of increasing short-term profits by reducing labour costs, even in good economic times"*. Workers who lose their position are now able to search for new positions quickly, and both blue and white collar workers are equally likely to see an involuntary change (Osterman, 1999). IVM is thus "normalized". The wage penalty associated with the past may be tied to declines in demand, where workers entered the labour market in the down turn, not person-specific wage penalties or scarring effects. On the other hand, the results found by Keith and McWilliams (1995) show this is unlikely, as dismissals and layoffs produced different

outcomes for workers during the same time period. Based on these readings, I propose the next set of hypotheses.

Hypothesis 2a: Involuntary mobility will have a negative effect on outcomes (attainment theory).

Hypothesis 2b: Involuntary mobility will differ based on movement between and within firms. Intra-firm involuntary mobility will have a negative effect on objective outcomes (efficiency wage theory, internal labour market theory).

Hypothesis 2c: Inter-firm involuntary mobility will have a negative effect on subjective outcomes (attainment theory).

The next section considers the second aim of the thesis; worker differences in the mobility-outcomes relationship.

2.2.Worker Differences

The second aim in the thesis explores the *differences between workers* in the mobility-outcomes relationship. Previous authors, (Kalleberg and Mastekaasa, 2001, Gesthuizen and Dagevos, 2008) treat the effects of mobility as roughly equal for all respondents, which is a limitation. Although the topic has largely been ignored, a number of authors find subtle worker-differences in the relationship between mobility and outcomes. Gender, race, and education may shape the effect of changing employers or taking a promotion, not just the chances of changing employers or taking a promotion. These differences are enhanced by the *complexities* described earlier. It is not simply enough to say that men hold an advantage over women, or that third level educated workers benefit at the expense of other groups. Instead it seems that workers see advantages and disadvantages depending on the type of outcome considered and the way mobility is defined. In short, the theoretical predictions do not always match the empirical works.

Below, I summarise the theoretical papers predicting worker differences in the mobility-outcomes relationship. I also consider eight empirical papers which explore worker differences in the premiums tied to VM. Authors sample the US, Germany, the Netherlands and the UK, offering several institutional contexts. They consider gender, education, and race as important. Throughout, I list the next set of hypotheses, linked to the second aim. Overall, I argue that gender and education are distinct dimensions of worker-differences. Between-worker hypotheses should use these dimensions.

2.2.1. Theoretical Considerations

The theory of attainment and efficiency wage theory assume the effects of movement apply to all workers roughly evenly, given their resources. Differences in "worker resources" (Sørensen and Tuma, 1978) explain differences in outcomes gained through mobility. Thus any difference between genders, education groups, races, or classes is assumed to be a difference at the point of obtaining resources, not at the point of mobility. This view is surprisingly similar to human capital theory (Becker, 2010, Becker, 1994) which assumes that differences in skill acquisition and education are responsible for differences between workers in terms of mobility. Hachen (1990) takes issue with this, as this implies there are no restrictions on the ability of individuals to "reach their expected attainment level" through mobility. It's well documented that gender, race, and education will play a part in determining chances of VM and IVM (beyond resources). A further issue with both Sørensen (1975) and Hachen (1990) is that both maintain VM leads to improved outcomes or increased utility. Neither considers the possibility that different groups of workers see different consequences from mobility.

In a summary of gender and racial based discrimination (at the point of hiring and promotion), Hachen (1990) proposes the *limited-opportunity model,* to be considered

alongside attainment theory and efficiency wage theory. The key distinction is that the limited-opportunity model considers the effects of discrimination after the point of resource acquisition. It encompasses a number of predictions of between-worker differences, I focus on two specifically. First, *overt discrimination* (Becker, 2010) refers to employers singling out gender and education groups as a matter of taste, holding a preference for tertiary-educated men. Thus employer preferences get in the way of rationale choice, and a competitive market is the "easiest" solution to the problem. Second, is *statistical discrimination*, where beliefs about specific groups (like the overall productivity of minorities) limit opportunities for hiring and firing of workers "*[they] are not hired because of the objective characteristics of the group to which they belong, although they themselves, are satisfactory*" (Thurow, 1976: p172). Both factors predict discriminated groups will see lower rates of mobility and fewer chances for bargaining. Pushing these theories further, discrimination will likely impact the rewards tied to VM itself.

Citing Hachen (1990), Rosenfeld (1992) proposes that "*easily observed markers such as education, race, or sex*" are important for inter-firm mobility, since employers have limited information about potential employees and must make snap judgements. In this way the tastes and prejudices of employers (discussed above) will play a key role in giving advantage to men over women, and highly educated over less educated workers (*signalling theory*). The mechanism is similar to *statistical discrimination* but focuses specifically on inter-firm movement, since employers have more knowledge on their staff when intra-firm mobility is considered.

Acker (2006) develops the mechanism behind the theories, referencing to gender, class, and race, arguing that structures of inequality within the firm deter women from progressing (to the advantage of men). She summarises *inequality regimes* within firms,

which are defined as *"interrelated practices, processes, actions, and meanings that result in and maintain class, gender, and racial inequalities within particular organizations."* (Acker, 2006: p443). Her definition of inequality considers the organisation of work, the work process, as well as promotion, hiring and firing. Again, she does not consider the point of resource acquisition, like the previous authors. The mechanisms most relevant to the discussion here is recruitment, and training. Firms tend to display preferences for "unencumbered" white males when designing work, both men and women are expected to fit this role. Elsewhere firms rely on social networks for the process of hiring staff, a process which generates gender and racial inequalities (see also Petersen et al. (2000)). Further, Acker (2006) contrasts the support men and women receive at work. Men regularly receive training and *"...were groomed for managerial jobs... The women... were not groomed for managerial jobs"* (Acker, 2006: p447). In this way, men may be less dependent on the rewards that come with mobility, gaining new skill from training and productivity. Women on the other hand would see far larger returns from mobility to a new position, which would have greater rewards than their resources could explain.

Considering these, gender plays a mitigating role in the mobility-outcomes relationship, which goes beyond the life-chances of mobility itself. Mobility will yield gender specific consequences (in terms of outcomes), according to the predictions laid out above.

Education also plays a significant role in how mobility affects outcomes. Thurow (1976) predicts opportunities for less educated workers are fewer than opportunities for educated workers, due to assumptions made by employers (*statistical discrimination*). Since workers gain most of the skills necessary to complete jobs after they obtain the job, he proposes that the labour market as not a place for buying and selling existing

skills, but rather a "*training market where training slots must be allocated to different workers. The distribution of training slots and the allocation of individuals among these slots depend upon two sets of factors. One set of factors determines an individual's relative position in the labor queue; another set of factors, not mutually exclusive of the first, determines the actual distribution of job opportunities in the economy. Wages are paid based on the characteristics of the job in question, and workers are distributed across job (training) opportunities based on their relative position in the labor queue."* (Thurow, 1976: p76). This definition is a founding concept of the sociological perspective on labour markets, where positions contain rewards, and the individual characteristics of the worker come secondary (Sørensen and Kalleberg, 1981). Natural ability is not solely responsible for the differences between educational groups. Thus when employers reward higher educated workers they "*reward the higher expected productivity of the higher educated*" (Gesthuizen, 2009). Considering the theories above; significant differences in the consequences of mobility are also expected between education groups.

Several authors have applied the theories above to gender and education, producing mixed results. The section below summarises a number of findings, mostly focusing on authors who consider either overt discrimination or statistical discrimination alongside attainment theory.

2.2.2. Empirical Findings:

Some work finds gender, race, and education differences in the mobility-outcomes relationship. Considering gender first, Kronberg (2013) takes note of the theories above, and estimates gender differences in the effect of VM using a US sample. Keith and McWilliams (1999, 1995, 1997) estimate similar models in the US with different definitions of VM, limited by the survey. Cha (2014) too considers the effect,

comparing men and women before and after the US recession. Gesthuizen (2009) considers gender differences in VM's effect on subjective outcomes in the Netherlands. Latzke et al. (2016) explore the same effect in Germany.

These papers differ by statistical approach and outcomes, although less so than previous papers. Kronberg (2013) and Keith and McWilliams (1999, 1995, 1997) both consider objective wage growth. Cha (2014) estimates the fixed-effect of mobility on wages. Gesthuizen (2009) uses 4 subjective outcomes, satisfaction with hours, job match, wage, and the job itself. Latzke et al. (2016) use both objective income gains and subjective changes in job satisfaction. Regarding estimation, Kronberg (2013) and Keith and McWilliams (1999, 1995, 1997) use an Ordinary Least Squares approach and do not consider individual heterogeneity. As a result, they likely overstate the premium tied to VM; however, the goal of these papers is to consider gender differences, rather than a causal impact of mobility itself, which their work achieves. Gesthuizen (2009) estimates the effect using a difference in difference approach, and so accounts for the fact that certain workers are more likely to move than others. Latzke et al. (2016) use propensity score matching followed by OLS regression in an effort to find statistical "twins" for movers and non movers. Thus, they control for the non-random nature of VM. Only Gesthuizen (2009) estimates both voluntary inter-firm and voluntary intra-firm mobility, the remaining authors consider only inter-firm changes, limiting their view of mobility and making it difficult to fully consider theories like *overt discrimination* as proposed by Becker (2010). Nonetheless, I consider each below.

In an extensive paper, Kronberg (2013) explores the effects of VM on wage growth in the US, and how the effect differs by gender. Results reveal that the effects of movement differ by gender and job quality (good jobs versus bad). In the past (late 1970's), respondents in "bad" jobs (occupations without health insurance or pensions,

where earning are not 120% of the federal poverty threshold) gained nothing after a voluntary change. Over time, a penalty developed where workers in bad jobs saw a decline in earnings after VM. Those in "good" jobs benefited, seeing greater earnings after a voluntary change, this premium has grown over time. A gender effect also exists. Men gain more from VM than women. This effect was larger in the past, but has declined over time. Despite this, VM has a higher yield in wages for men than for women even in the modern labour market. Regarding "bad" jobs, the effect of VM also differs by gender, with men seeing a greater return than women after the change. As a strategy, men earn more from VM than women, in both good and bad jobs. The results show (beyond the distribution of life-chances) that the effects of life-chances are gendered. Importantly, the models used control for *human capital variables,* suggesting that the vacancies filled by men contain a higher premium (unrelated to their characteristics) than the vacancies filled by women.

Remaining with the US, Keith and McWilliams (1995) estimate the effect mobility has on wage growth using the National Longitudinal Survey of Youth (1979-1988). They find no gender difference in the effects of VM, with both genders increasing earnings following VM. However, when VM is split for family and economic reasons, nuance emerges. Both men and women benefit from "economic mobility" to a new employer. Yet, women see a fall in pay following a quit for "family or related" reasons, while men are not affected. Expanding their study to include more data, Keith and McWilliams (1997) find that men see a 35% greater return on VM when compared to women. But again, splitting VM into economic and family related quits reveals that both genders benefit equally from economic mobility, but women see penalties following a family related quit (defined as a voluntary change). The male advantage is mostly the product of moving for economic reasons *more often*. Finally, they find men and women are able to increase returns on mobility through prior job search (Keith and McWilliams, 1997),

but no gender difference exists in *the premium* tied to mobility. Here, the difference in the mobility-outcomes relationship does not emerge, despite emerging in a previous US sample, although interesting differences between genders are evident. Again, despite controlling for a number of human capital measures, like age and tenure, a distinct premium tied to the vacancies persists, although this premium is not gendered.

Using a US panel, Cha (2014) considers the immediate return on VM for men and women separately. She also compares two periods, pre and post-recession US. The findings suggest that women see the highest premiums from VM than men, a finding that goes completely against the theory of discrimination. Digging deeper, Cha (2014) finds that the positive effect is attributed to women without children alone, and that women who have children typically see a fall in earnings after VM. Thus the female penalty tied to change is presented as a motherhood penalty, one that *"reflects mothers' negative selection into job related quitting"* (page 167 (Cha, 2014)). The author goes on to suggest that mothers who quit jobs for economic reasons may be making compromises in working time. Thus, women with and without children may be split in the working time of their new jobs. I note this difference in the analysis.

Gesthuizen (2009) runs similar, fixed effects models using Dutch data, predicting gender differences in worker "returns on mobility". He finds no significant difference between men and women in the premium tied to mobility (changes in subjective outcomes following the move). However, a gender effect emerges in factors *influencing* VM (push-factors). Dissatisfaction with the job match and dissatisfaction with hours pushes women to voluntary intra-firm mobility, but does not affect men, contrary to the author's hypothesis. Further, dissatisfaction with wages pushes women to inter-firm mobility, but not men. In discussing the result Gesthuizen (2009) suggests mobility may be "less costly" for women. Male jobs are typically "breadwinner" roles, with less room

for risk-taking. Women's labour market positions are closer tied to "supplementary income strategies". Overall, men and women benefit roughly equally from voluntary inter-firm and intra-firm mobility, improving every subjective outcome, in the Dutch sample.

Lastly, Latzke et al. (2016) consider gender differences in VM's effect on objective wages, and subjective satisfaction with work. VM contains financial gain, with movers earning 6% more after the move. The difference between genders is significant. Of this 6%, women see a 5% lower income gain compared to men, even when controlling for tenure. Although the difference is statistically significant, it is minor, suggesting women hold only a small disadvantage to men following a change. No gender differences exist in subjective satisfaction following a change; both men and women see equal increased satisfaction after changing employers.

The papers above appear split, with the US offering significant (Kronberg, 2013) and insignificant (Keith and McWilliams, 1995) estimates. Cha (2014) is an exception, in that she finds a positive effect for women who quit, but not men. No relationship emerges in the Netherlands, although a gender differences in factors influencing workers emerges. Lastly, a gender difference appears in Germany (Latzke et al., 2016) although the estimate is minor and may not be socially (but statistically) significant. In almost every paper, the authors consider inter-firm mobility alone, suggesting *statistical* discrimination is not at play in rewarding mobility. However, it is harder to pinpoint if overt discrimination is at play, since authors do not consider intra-firm mobility. Do employers limit the rewards of workers based on taste alone instead of efficiency? Intra-firm mobility is the best movement for determining this since employers get to know the workers within firms, instead of having to rely on resume information alone. A legitimate criticism of the approaches above is the focus on discrimination within

occupations and industries. Authors suggest *overt* or *statistical discriminations* are stronger in filtering genders into specific occupations, rather than the open gender difference of paying men and women different wages for the same job (Cooke, 2016, Cooke, 2014).

Regarding IVM, three authors test for gender differences. The samples and methods remain the same, I list the results alone. Kronberg (2013) considers the impact of IVM on wage growth in the US. She estimates the effect of movement in good jobs and bad jobs separately, as above. Respondents in good jobs who move for involuntary reasons manage *to increase their pay*, a finding that runs completely counter to several theories discussed previously. It is possible experience transfers to new firms after job loss. Whatever the reason, she claims *"...whether employees left voluntarily or involuntarily, leavers earn increasingly more than non-movers in good jobs..."* ((Kronberg, 2013):p1130). IVM in bad jobs is associated with a fall in earnings growth, a disadvantage which has grown over time. The effect is also gendered. Men in good jobs gain more from IVM than women, an advantage which has widened significantly since the 1980's. Men in bad jobs see no premium after an involuntary change, thus no gender difference occurs. Thus in the US, wherever mobility is advantageous, even IVM, men hold an advantage over women in terms of improving pay.

Keith and McWilliams (1999, 1995, 1997) consider the gender differences stemming from IVM and earnings growth, (the authors refer to these as employer-initiated). IVM has a negative effect on earnings growth, with dismissals having a greater effect than layoffs. However, no gender difference emerges in the *effect* of IVM on earnings growth. Men and women are equally affected by dismissal. However, in terms of *life-chances* or the mobility event itself, men are more likely to experience IVM than women, according to the authors.

Cha (2014) too finds no effect of IVM on wages for men and women in the pre-recession period. However, she too finds that women are less likely to experience the event, and so the lack of a significant effect may be the product of few observations in the panel. There are some negative effects in the post-recession period but men and women experience both equally.

With reference to the papers above, I list the hypotheses tied to gender;

> *Hypothesis 3a: Gender differences will exist between workers. Men will benefit from voluntary mobility more than women (statistical/overt discrimination).*
>
> *Hypothesis 3b: Men will be hindered by involuntary mobility less than women (statistical/overt discrimination).*

Others explore worker differences in terms of class and education. Gesthuizen (2009) interacts years of education with voluntary inter-firm and intra-firm mobility in the Netherlands. Latzke et al. (2016) consider loose class categories (blue-collar, white-collar, and professional groups) and the effects of VM in Germany. Pavlopoulos et al. (2014) estimate the effect of VM using quintile income groups to separate low-paid, medium, and high-paid workers in both Germany and the UK. I summarise their findings below, having discussed the data and estimation techniques previously.

Gesthuizen (2009) measures the impact of education by estimating an interaction between mobility types and years of education. This conceptualisation fits with Sørensen's (1975, 1977, 1978) theoretical model, which predicts higher reward with higher education. Yet, the interaction is not a significant predictor of subjective outcomes, implying more educated workers benefit equally from VM compared to less educated respondents. There is an education effect in terms of push-factors affecting mobility, but it runs counter to the hypothesis. Dissatisfaction with hours pushes

respondents to take a promotion (voluntary intra-firm), but the effect is *weakest* for respondents with more years of education, a counter intuitive finding. Here, lower educated workers, who are dissatisfied with hours, are more likely to change jobs within the firm, than higher educated workers who are dissatisfied with hours. It is possible that these workers are moving "laterally" with the same employer, rather than pursuing promotions within a career ladder. Since lower educated workers are less committed to an occupation and more reliant on the firm, they may move through categories more often than third level educated workers, who would lose significant resources by switching occupation.

Latzke et al. (2016) find a significant difference in the wage premium earned by class groups through VM. Professionals earn the most from the change, followed by white-collar workers, and lastly, blue collared workers. Importantly, each class group sees a significant increase in pay after the change, but professionals see a 16% greater return than blue collar workers, and white collar workers see a 5% better return than blue collared workers. This suggests that upper class groups have the most to gain from job mobility, at least in Germany. This finding fits with *attainment theory,* and *statistical discrimination* as described by Thurow. It runs counter to *human capital theory,* since the premiums should not exist after controlling for human capital measures, especially education.

Pavlopoulos et al. (2014) makes a near opposite argument considering both Germany and the UK. Dividing workers into low paid, medium paid, and high paid quintiles, the authors find that low-paid workers see the highest returns from VM. These results emerge in both countries, with the UK showing a positive effect for inter- and intra-firm changes, and Germany showing a positive effect for inter-firm mobility alone. Beyond this, British high-earners see a fall in pay after an inter-firm VM, compared to movers

who remain with the same employer. Pavlopoulos et al. (2014) suppose that high earners may reach a ceiling in both countries, where transitions carry fewer premiums in pay; this ceiling is further for low-paid workers. The models estimating pay do not catch other premiums that are open to high-earners, such as bonuses, shares, or changes in working conditions. All of these bonuses are particularly important for upper quintile groups.

Again, a number of conflicting results emerge in the papers above. Germany is presented as a country which rewards both the lower class best (Pavlopoulos et al., 2014) and the upper class best (Latzke et al., 2016). While Gesthuizen (2009) finds no difference between education groups, save for a lower tolerance for poor conditions among less skilled workers. Based on the findings presented above, I list the next set of hypotheses.

Hypothesis 3c: Education differences will exist between workers. Those with a third level education will benefit from voluntary mobility more than those without (statistical discrimination).

Hypothesis 3d: Those with a third level education will be hindered by involuntary mobility less than those without (statistical discrimination).

The next section turns to country differences and how institutions configure or affect the mobility-outcomes relationship.

2.3.Institutional Context

If countries organise labour markets in ways that can't be explained by micro and macro economic variables alone, they contain institutional differences. These factors point to different patterns of job movement, which then affect the mobility-outcomes relationship. Here I review the theoretical literature on country labour market

differences and explore some of the empirical work on the topic. Authors have mostly focused on country differences in *mobility types*. Research exploring country differences in the consequences of mobility appears less often. Not only do countries differ by mobility rates, they also differ in how mobility affects outcomes, this is the final *configuration* of mobility and outcomes mentioned above.

2.3.1. Theoretical Considerations

The empirical papers is previous section give few theoretical reasons for why mobility would differ by country (the work by Pavlopoulos et al. (2014) is an exception). However a number of citations exist. Fasang et al. (2012) and Pavlopoulos et al. (2014) cite Hall and Soskice (2001) when justifying country differences the relationship between mobility and outcomes. Both claim liberal and coordinated economies will produce separate pathways to quitting and promotion, which will in turn affect the consequences of quits and promotions. Others cite the Worlds of Welfare Capital presented by Esping-Andersen (2013). For this reason, the theoretical suggestions in these works are summarised below with specific focus on labour markets and mobility.

The Varieties of Capitalism literature is presented by Hall and Soskice (2001). Technically, the authors consider the perspective of firms not workers which are embedded in two distinct forms of capitalism; liberal and coordinated. Germany is an example of a coordinated market economy, while the UK is a liberal market economy. When considering the importance of industrial relations in maintaining coordinated market economies in Germany, Hall and Soskice (2001) cite wage setting at the industry level. Coordinated market economies rely on skilled production which leaves employers vulnerable to poaching. Institutional agreements like standardised wages and working conditions foster firm-commitment and employer loyalty, hence the lower rate of VM in Germany (Thelen, 2014). This theoretical sketch is rarely tested but “fits”

with Germany's low rate of inter-firm mobility. VM between firms does not reward workers significantly; hence workers commit to pursuing movement within the firm. Hall and Soskice (2001) propose that scientific and skilled workers foster inter-company relations to make up for the lack of mobility between firms, however several authors have noted significant movement between firms in Germany, suggesting Hall and Soskice (2001) likely overstate Germany's immobility. Germany's strong wage coordination will likely affect intra-firm mobility's impact on wages, and limit the negative effect of IVM's effect on wages. On one hand, it seems that German institutions reward German workers best through commitment and tenure, on the other Pavlopoulos et al. (2014) argue that Germany has no need for an efficiency wage, since poaching and competition is limited, as a result the job queue will not reward workers above their tenure and experience.

When turning to Liberal Market Economies, Hall and Soskice (2001) first cite the importance of individualised bargaining between the worker and employer, leading to a wide variance in pay and a freedom in firing and hiring employees. The freedom to hire and fire will likely play a part in shaping the rate of mobility, but crucially Hall and Soskice (2001) cite market competition which keeps wages and inflation low, hence there is an outcome component to mobile labour markets. Liberal Market Economies offer a "general" skill-set to young workers which is better transferable between firms, "*Educational arrangements that privilege general, rather than firm-specific skills, are complementary to highly fluid labour markets; and the latter render forms of technology transfer that rely on labour mobility more feasible*" ((Hall and Soskice, 2001):p32). The UK is presented as a mobile market where movement is encouraged by firms and employers, whether this movement is beneficial for workers is not explored. In fact, mobile markets in Liberal Market Economies may be mobile purely because of increased deregulation rather than a desire to improve the lives of workers (Thelen,

2014). Looking back on *attainment theory* Sørensen (1983) suggests "*One may see the considerable amount of inequality in personal attainments found in labor markets... to be created in large organization as deliberate devices to move employee performance from perfunctory to consummate*." Whether mobile labour markets in the UK exist to give workers the best chance for attainment, or a consequence of short term efficiency, is worth exploring. Again, the importance of intra-firm mobility is rarely considered for UK data, however Pavlopoulos et al. (2014) make the case that efficiency wage premiums will be more likely in the UK as an answer to poaching.

For further country differences, authors cite Esping-Andersen (2013), who created the typologies of welfare capitalism. Liberal market economies are characterised by strong support for the open market and low decommodification. The system overlaps with the "open labour market" typology as shown by Mills et al. (2006b). Alongside low decommodification, economic and employment security is low. Labour is expected to be flexible for employers not workers, meaning "flexicurity[2]" is not supported by institutions. Precarious and insecure work is common, and human and social capital is important for explaining inequalities. Re-entry after unemployment is easy, since labour markets are mobile. The rate of job mobility is high and Employment Protection Legislation is low.

Conservative welfare states are their near opposite (similar to the Varieties of Capitalism distinction). These systems have lower support for market driven competition and an intermediate level of decommodification (Esping-Andersen, 2013). Decommodification applies to a specific group of workers, mainly those with industry tenure or a history of employment. Conservative welfare states tend to overlap with closed markets as described by (Mills et al., 2006b). Closed labour markets foster high

[2] Flexicurity is a welfare state strategy which encourages predictably mobile working-lives paired with a strong commitment to decommodification (Thelen 2014)

levels of economic and employment security, providing workers with stable and predictable forms of work. Precarious and flexible employment still exists, but is concentrated to specific worker groups, mainly young workers and those without a basic level of human capital. However, the importance of human capital in closed labour markets is low, as is the rate of job mobility between and within firms.

Social democratic welfare states are defined by a pursuit for equality and citizenship-based rights. Decommodification is high and available to all (Esping-Andersen, 2013). Here labour markets are a mixture of open and closed systems as outlined by Mills et al. (2006b), with an emphasis on flexicurity. Thelen (2014) presents the system as one of embedded flexibility, where strong active labour market policy is tied to large levels of labour market mobility. Economic security is high, as is employment security. The guarantees of economic security are not tied to a single employer but rather the state. Precarious and insecure work in uncommon and a strong pursuit of full employment expects large numbers of participation in the public and the private sectors.

The Worlds of Welfare Capitalism contains three categories for grouping countries; Liberal, Conservative, and Socially Democratic, with corresponding mobility rates, shaped not only by time-varying economic measures but also by institutional variables. The two most relevant categories to this thesis are Liberal and Coordinated capitalisms. Both are shaped by institutions, each makes corresponding predictions about the labour market which are likely to affect the mobility-outcomes relationship also. A number of authors have explored both the rates of mobility in these institutions, and the consequences of mobility.

2.3.2. Empirical Findings

This section is concerned with two groups of articles. The first outlines country differences in mobility rates, offering comparative analysis of institutions. The second

outline country differences in the mobility-outcomes relationship, providing an institutional context to the markets which reward or punish change. I summarise both groups below.

As with the previous summaries, the works differ by samples and methods, but are in agreement; country differences in mobility rates and country differences in the mobility-outcomes relationship cannot be explained by micro and macroeconomic variables alone, institutional differences persist. The section below summarises the first group, papers outlining institutional differences in rates of mobility alone.

The OECD (2010) explore the rate of job mobility across OECD countries. DiPrete et al. (1997) offer a typology of "mobility regimes" for Germany, the US, the Netherlands, and Sweden, which go beyond the Worlds of Welfare Capitalism and the Varieties of Capitalism typologies. Mühlau (2007) describes country differences in inter and intra-firm mobility in the Netherlands and Japan, comparing an occupational labour market with an internal labour market. Finally, Eyraud et al. (1990) contrasts UK firm tenure against French firm tenure using a sample of manufacturing-sector workers.

Most of the authors consider job mobility using univariate, simple descriptive tables (Mühlau, 2007, OECD, 2010, Eyraud et al., 1990), although advanced, exploratory analysis estimating the likelihood of mobility also exists (DiPrete et al., 1997). Both methods make the same argument, institutions shape the rate of mobility beyond firm and worker differences (size of firms, sector, age of population etc.) or business cycles. Generally, labour markets can be split into "open" or liberal systems and "closed" or coordinated systems, much like the theoretical categories described above (although DiPrete et al. (1997) develop a middle ground also).

DiPrete et al. (1997) split countries into "collectivist" and "individualist" mobility regimes which capture country-specific patterns of adjusting to technological changes,

global market fluctuations, and short-term demands for labour. The US is presented as the "individualist" example, where macro adjustments are felt at the micro-level and worker resources are a strong predictor of mobility. The Netherlands is presented as the "collectivist" example, where workers are largely isolated from macro-changes and person-specific resources are poor predictors of mobility. Between the two extremes sit Germany and Sweden who both share features of each "regime". Sweden sits closest to the US, due to its strong commitment to full employment, and Germany sits closest to the Netherlands, because of its strong level of protection for the core labour market. DiPrete et al. (1997) show welfare state typologies (like those presented by Esping-Andersen (2013)) explain only a portion of the variance in mobility country-differences. For example, Sweden and the US are diametrically opposed in welfare state literature (Esping-Andersen, 2013), but both have high rates of job mobility, with an emphasis on person-specific resources (like education). Both Germany and the Netherlands, by contrast, have low rates of both inter-firm and intra-firm mobility, while education has a weak or inconsistent impact on firm mobility or employment exit.

The OECD (2010) also considers large cross-country variation in mobility rates, which cannot be explained by economic measures alone. It claims country mobility rates differ beyond economic measures alone, citing employment protection legislation, unemployment benefit legislation, and product market regulation as significant predictors on country level mobility rates. Countries with "stringent" Employment Protection Legislation have lower rates of job mobility (Germany and France). Those with higher unemployment benefit also have higher rates of job mobility (The Nordic States). Countries with higher product market regulations appear to have lower rates of mobility, although the effect is moderate (Mediterranean states). Lastly, countries with a statutory minimum wage do not see a statistically significant difference in job mobility rates, compared to countries without the policy. The report concludes by recommending

reforms to Employment Protection Legislation, relaxing these while boosting unemployment benefit would increase job mobility within less mobile markets. The report suggests more mobility is badly needed in the EU market.

Although the examples above consider institutional design, the do not consider the individualisation of bargaining. Mühlau (2007) explores the rates of inter and intra-firm mobility in Japan and the Netherlands, finding a mobile market in the Netherlands and a closed internal labour market in Japan, especially for men. While the Japanese labour market favours internal mobility, with little movement between firms (for men, women see significant mobility between firms), the Dutch labour market has higher rates of movement between firms but less internal mobility. Part of the difference is due to the reasons mentioned in the OECD report, Employment Protection Legislation etcetera, but part is firm organisation; Dutch firms have flat organisation structures, as a result fewer opportunities for "upward" career ladder mobility. DiPrete et al. (1997) make a similar argument for both Germany and the Netherlands. Another reason, is Japan's commitment to internal labour markets, where skill internalisation and lifelong career commitment is a keystone to Japanese production. For workers, movement between firms means leaving behind tenure and firm specific skills (also outlined by (Althauser, 1989)) which means giving up their most important bargaining resource, tenure. Therefore, internal structures are seen as the best mechanisms for rewarding workers, since *internal labour markets,* and *efficiency wages* reward workers best. The Netherlands on the other hand relies on wider structures to "make up" a respondent's career.

An example of Britain's mobility regime is offered by Eyraud et al. (1990) who compare the firm tenures of British and French workers in manufacturing. They suggest inter-firm mobility in the UK is higher than France, where workers commit to internal

careers with the same employer (a finding similar to DiPrete et al. (1997) who notice low rates of inter-firm and intra-firm mobility in Germany). Eyraud et al. (1990) conclude that the UK operates an occupational labour market, where workers are encouraged to spread careers between firms thanks to occupational licensing; and France operates an internal labour market, where employers are keen to internalise careers as much as possible, while drawing on the external labour market for entry-level jobs. For this reason, employer tenure is shorter among British workers than among French workers. Further British workers typically have a higher number of "former employers" which they rely on than French workers. Since the article's release Marsden (2007) has update the view, suggesting the UK is a mobile market of "entry tournaments", where workers move precariously before finding an internal career structure that they commit to. The implication is that inter-firm mobility is frequent and without reward, before workers find a career ladder which leads to intra-firm change and *efficiency wages.*

Overall authors find institutional reasons for rates of job mobility, which go beyond the business cycle and the wider economy. However, countries also differ in the mobility-outcomes relationship. Two papers discuss the topic, The OECD (2010) using a sample of countries and Pavlopoulos et al. (2014) using panel data from Germany and the UK. Here too, authors find comparative differences in how labour markets shape the consequences of mobility.

The OECD report notes that countries differ in "wage premiums" tied to job transitions, but "wage penalties" for IVM also exist, even when changes are direct to a new employer. Countries with lower Employment Protection Legislation typically have a stronger relationship between VM and outcomes (wages). If employment protection is loosened, the negative effects tied to job loss are "unlikely to worsen", but likely to see

increased IVM, according to authors. Estimating the effect of VM on wages, Ireland is said to have the strongest effect, with a 12% increase in wages following a change, and the Netherlands are expected to have the weakest effect, a 2% increase in wages, followed by Denmark (2%). A noticeable difference is the effect in Mediterranean countries, where VM contains high positive effects for Greece (5%), Spain (7%), and Italy (7%), countries with large rewards but little mobility. Germany and the UK feature for models estimating the effect on basic mobility (either voluntary or involuntary).The UK (5%) has a stronger effect than Germany (2%), despite being more mobile. Here, country differences in the rewards tied to quitting emerge. The most obvious finding is that countries with the highest rates of mobility do not have the highest rewards tied to mobility. In fact the most immobile countries appear to have the largest premiums tied to change.

Pavlopoulos et al. (2014) too consider the effects of VM on outcomes in Germany and the UK. They present the UK as a mobile "highly volatile, unregulated and meritocratic labour market". Here firms are reliant on a dynamic and flexible pool of labour with quick hiring and firing. A fear of poaching prevents employers from investing in firm specific skills and so workers are forced to seek general skills as a means of adapting to mobility. They present the German labour market as highly coordinated, with a collectively organised system of wage bargaining. Sector-level wage bargaining ensures predictable wages for workers at almost every level. Poaching is less common because of this low variance in wages. The system lets workers invest in firm specific skills which yield "gains" from intra-firm mobility but losses from inter-firm mobility. Throughout the theoretical framework, the authors cite Hall and Soskice (2001).

Results show that the low paid in both countries are the only group of workers that benefit from mobility. High paid workers in the UK actually see losses following an

inter-firm change, suggesting they make trades following a change to a new employer. These most likely include compromising pay for bonuses, better working conditions, or shorter hours. Regarding country differences in mobility's effects on outcomes, Pavlopoulos et al. (2014) find that both inter- and intra-firm mobility provides wages gains for British low-paid workers, but only inter-firm mobility provide wage gains for German low-paid workers. In short, no *efficiency wages* are found in Germany, but these exist in the UK, a completely counter-intuitive finding. The argument outlined in the paper suggests that employers must provide efficiency wages in the UK to prevent poaching and maintain skills within the firm. However, coordinated labour markets are said to achieve exactly this through the use of efficiency wages, while liberal market economies are driven precisely by low costs and short term planning. Further, the wage gains of inter-firm mobility are higher in Germany than the UK. This too is a counter-intuitive finding since "opportunities" for wage growth are supposedly more common in the UK than Germany.

Pavlopoulos et al. (2014) propose institutional differences between countries are at play. British workers will often invest in firm-specific skills by covering the cost of training themselves; employers will then offer higher wages as a means of avoiding poaching. Thus the effect is not so much the product of *efficiency wages,* as much as a repayment for the costs of additional skills, according to the article. Since wages in Germany are set at a higher level *efficiency wage theory* does not apply, as employers choose to train workers in firm-specific skills without worrying about poaching.

Thus institutional factors shape the premium tied to inter and intra-firm mobility in both countries. I propose the reason behind the different effects may also be the product of how VM is defined in both countries (mentioned previously). The authors chose to define mobility objectively meaning that changes which are "voluntary" are typically

defined as “direct” elsewhere. Transitions moving into unemployment are deemed involuntary, even when respondents choose to resign themselves. Thus intra-firm mobility in both countries contains a mix of promotions, demotions, and lateral moves, which could explain the lack of relationship between intra-firm mobility and wage-growth in Germany. However, the key findings, especially the lack of efficiency wages in Germany, are noted. With this is mind I propose the last set of hypotheses:

Hypothesis 4a: Voluntary mobility will have a positive effect on outcomes in the UK.

Hypothesis 4b: Involuntary mobility will have a negative effect on outcomes in the UK.

Hypothesis 5a: Voluntary mobility will have a positive effect on outcomes in Germany only if it is intra-firm.

Hypothesis 5b: Involuntary mobility will have no effect on outcomes in Germany.

Thus, I expect the mobility-outcomes relationship to differ by country. A summary of the three aims is listed below.

2.4.Summary

This section outlined the hypotheses used throughout this work, which can be split by its aims and objectives. The theoretical literature on job mobility focuses on the patterns and causes of mobility. Mobility’s effect on outcomes is an afterthought, made simple by assuming a change in worker utility drives mobility.

This assumption presents two complexities. First the relationship between mobility and outcomes is more complex than a change in utility (this is evident from the empirical literature), workers often make trades in outcomes following a change; like a compromise in job security, for an increase in job satisfaction, or an increase in working hours for an increase in gross pay. Second, the relationship between subjective and objective outcomes is more complex than the assumption above allows (this is also clear

from the empirical literature). This appears most clearly in Gesthuizen and Dagevos (2008) who note a mismatch in the effect on mobility on objective and subjective pay.

The complexities above are enhanced by three *configurations* of the mobility-outcomes relationship (summarised by the three aims). First, there are different types of VM with different effects on outcomes depending on the change. Inter-firm movement appears to have a strong effect on subjective outcomes, while intra-firm movement works best for objective outcomes, although the empirical literature rarely highlights the distinction. Second, worker characteristics shape the results of the mobility-outcomes relationship, at the point of movement. Much has been said about the life chance of promotion for men and women, but little has been explored in terms of the effect promotion has on the outcomes of both (the same can be said for education groups). Third, countries shape the mobility-outcomes relationships by either individualising forms of bargaining, forcing respondents to individually bargain for pay and conditions, or collectivising bargaining, setting wages and conditions at the occupational or industry level, ensuring less variance between firms. Having outlined the hypotheses, the next chapter present the data and methodology used to answer the research question.

3. Methodology

This chapter presents the data and methods used to answer the research question. I consider respondents from the British Household Panel Survey and the German Socio-Economic Panel as representative samples of British and German workers. I also summarise the decisions for producing the estimates. The chapter has four main parts. First, I present the methodology or the overall approach to answering the research questions. Second, I present the samples and introduce both longitudinal micro-level panels (the BHPS and SOEP). I show the data structure, discuss balance and attrition and present some basic checks. Third, I outline the available variables. Since job mobility is a key measure in this work, I consider its strengths and limitations in detail. I show how the variable is coded and list basic checks which address concerns in the literature. I also consider the outcomes used, and their comparability between panels, the same is done to the independent variables, although their comparability is less concerning due to the Cross National Equivalence File[3]. The final section deals with the analytical strategy on the project. Here I justify the use of linear fixed-effects regression models, discuss the limitations of the method and outline the weighting strategy for the estimates.

3.1.The Basic Approach

Firstly, it is important to define what is meant by job mobility, a central measure in the thesis. I consider four types of job mobility throughout this work. Each of these is held against a reference category, the year where an individual remains in the same job, with the same employer (non-movement);

1. Same job, same employer (Non-movers)

[3] The Cross National Equivalent File contains equivalently defined variables for the British Household Panel Study (BHPS), and the German Socio-Economic Panel, among others. It is designed to provide suitable measures for cross-country comparisons.

2. Inter-firm voluntary (Movers)
3. Inter-firm involuntary (Movers)
4. Intra-firm voluntary (Movers)
5. Intra-firm involuntary (Movers)

In the most basic sense, I define job mobility as a change in job-spell in a respondent's work history for a given year. Both the British Household Panel Survey and the German Socioeconomic Panel contain a simple mobility measure, asking "have you experienced a job change in the last twelve months?" Respondents who answer "yes" in a given year are categorised as "movers", respondents who answer "no" are categorised as "non-movers". This group makes up the "same job, same employer" reference category. This is the most basic definition of job mobility. Among the set of movers, it is possible to define inter-firm and intra-firm mobility (changes that take place with the same employer or a new employer). Lastly, I define voluntary and involuntary changes subjectively, as suggested by Kalleberg and Mastekaasa (2001), Gesthuizen (2009) and Gesthuizen and Dagevos (2008). I define promotions and quits as voluntary changes, since worker initiative drives the change. Before a quit, respondents pursue new opportunities in the external market. Before a promotion, they pursue new positions by speaking to higher management or seeking new opportunities within the firm. In contrast, involuntary changes are those where workers cannot influence the change. A worker's job change is seen as an alternative to her plans of staying in the same job with the same employer. I define demotions, redundancies, dismissals and plant closures as involuntary moves. It is reasonable to assume that workers who experience demotions do so involuntarily, even if the definition itself is subjective (Keith and McWilliams, 1995, Kronberg, 2013). Table 3.1 lists the definition of 4 key mobility events. The UK data captures each of these. The German data contains limitations, which I discuss later. For now, the table below captures mobility events as defined in this project.

Table 3.1: Job mobility defined by 2 key variables listed, voluntary or involuntary and inter- or intra-firm change

Same job same employer (reference category) Non-movers	Movers	Voluntary	Involuntary
	Inter-firm	Quit, mutual agreement	Redundancy, dismissal, plant closure, end of a temporary contract.
	Intra-firm	Promotion, mutual agreement	Demotion, lateral move

In order to estimate the relationship between mobility and outcomes, like time and pay, I turn to two longitudinal micro-panels. The German Socio Economic Panel (SOEP-Long file), 2012 release (Wagner et al., 2007), and the British Household Panel Survey (Taylor et al., 1993). Both are longitudinal datasets which follow respondents over time, tracking their economic and social progress through annual interviews. I use a "person-year" design to track person-specific responses from 2000-2008. I focus on respondents from all regions of each panel. In the GSOEP sample, I include respondents from both East and West Germany. In the BHPS sample, I include respondents from Britain, Wales, Scotland, and Northern Ireland. Both are made of employed respondents, who have no missing job mobility information for the years 2000-2008. I expand on this design later. Crucially, this design is made up of a core workforce, who remains in employment for a minimum of eight years, with interruptions lasting no longer than a year. Thus mobility is strictly job-to-job mobility. Respondents with intermittent spells of unemployment or inactivity are dropped from the sample.

Each panel uses three sets of variables. These are the person-specific job mobility variables, a set of outcome variables, and a set of controls. I have already discussed the mobility variables; I discuss the other two sets. Each panel considers outcomes similar to those used by previous researchers. These are grouped by subjective and objective variables which try to capture three main measures; time, pay, and conditions. Subjective outcomes focus on satisfaction scores (with security, pay, hours, and work itself). Objective outcomes focus on more specific measures (gross monthly pay, weekly hours worked, and subjective health). Although health is a subjective variable, I

use it as a proxy measure for working conditions of the job itself, an approach used earlier by Gash et al. (2007).

Both country panels contain controls or predictors, similar to those used by other researchers estimating the mobility-outcomes relationship. I use these variables in two ways. First, to control for variance in pay and conditions that is **not** attributed to mobility, such as age, number of children in the home, and industry. These are time variant variables that may impact outcomes. Second, both panels contain gender and education variables, which are important as I expect them to work **with** the mechanisms tied to job mobility, to better explain differences in pay and satisfaction. In short, men and women are expected to experience mobility differently; just as higher educated workers are expected to experience mobility differently than those with a secondary level qualification.

Once the sample and variables are defined, I estimate the effects of mobility using linear fixed-effects regression. This method is useful as it deals with *individual unobserved heterogeneity*, an important concept in job mobility research. Since job mobility is not a random event, it's likely that person-specific, unmeasured characteristics (like motivation, determination etcetera) will play a part in determining who changes jobs. This violates a major assumption in random-effects modelling, leaving fixed-effects estimation techniques. Fixed-effects estimation controls for unobserved heterogeneity by transforming a typical Ordinary Least Squares regression model to a "within-transformation" linear model (Longhi and Nandi, 2014):

$$(y_{it} - y_{i*}) = \beta(x_{it} - x_{i*}) + (u_{it} - u_{i*})$$

Where;

- Where, y_{i*}, x_{i*}, u_{i*} are the person-specific means of y_{it}, x_{it}, and u_{it}.
- Y_{it} is the dependent variable value for individual *i* at time *t.*

- X_{it} represents a time variant independent variable (like a job quit)
- $\beta_1$is the estimated effect for the independent variable (like a job quit)
- u_{it} is the error term specific to *i*= the person and *t*= the time of the prediction
- A person-specific error term is cancelled out since the individual acts as his or her own control.

This transformation produces person-specific estimates of job mobility, which are unbiased by person-specific errors (Longhi and Nandi, 2014). Wooldridge (2015) (page 485) refers to this process as "time demeaning", claiming *"...any explanatory variable that is constant over time for all i gets swept away by the fixed effects transformation"*. In this approach, all time invariant measures, both observed and unobserved, are dropped from the model. This method is particularly suited to Sørensen (1977) who argues that worker resources are fixed from the moment workers enter the labour market. Thus the change in outcomes resulting from mobility is the effect of respondents "closing the gap" between resources and attainment. A similar argument appears in Akerlof and Yellen (1986).

All of the outcome variables are linear, hence I use linear models with fixed-effects as proposed by Allison (2009), Longhi and Nandi (2014), and Rabe-Hesketh and Skrondal (2008). I run the models using Stata's `xtreg,fe` function. The wider assumptions and limitations of this method are outlined in the estimation section below. This method is used by Kalleberg and Mastekaasa (2001) and others to estimate the relationship between mobility and outcomes.

The above is the basic approach to answering the research question. Within models, I compare different mobility types in terms of subjective and objective outcomes (the first aim). Once the overall effects are discussed I consider worker-specific differences, checking for gender and education differences (the second aim). Here I test whether groups of workers differ in how mobility affects outcomes. Since fixed-effects transformations cannot estimate an effect for gender or education (both of these

variables are time constant), I run separate models for men and women, comparing the effects of mobility by orders of magnitude. I do the same for groups of workers with secondary level and third level education. Lastly, I discuss the institutional context, by comparing the orders of magnitude in the German models to those in the UK models, a method similar to the one used by Gash et al. (2007), Pavlopoulos et al. (2014), and Biegert (2014) (the third aim). One obvious obstacle exists, proving both panels are comparable. I lay out the case for the research design below.

3.1.1. Comparability

It's true that BHPS and SOEP panels are not *directly comparable*; pooling the datasets into a single file is not possible due to differences in size and design. However, the data contains similar job history variables, similar dependent variables, and similar controls. Further, both panels capture the same underlying phenomenon of mobility. However, the measures in each panel are not identical. Since certain measures are comparable, but the data is designed differently, I run parallel case studies; a strategy used by previous researchers to consider country differences. Each chapter focuses on a single country panel and lays out the relationship between mobility and outcomes. In the final chapter, I compare models in parallel for Germany and the UK. This method is similar to previous researchers, Pavlopoulos et al. (2014) compare mobility's effect on wages in Germany and the US, using the same design. Gash et al. (2007) too compare parallel models for Spain (using data from the European community household panel) and Germany (using the German Socio Economic Panel). Here authors use "*near similar*" measures of health (the outcome) and transition into fixed term and permanent work (treatment variable). In both cases, authors focus on the orders of magnitude and the significance of estimates, rather than on tests measuring the difference between panels.

Before committing to a parallel case study design, I show both panels capture the same underlying rate of job mobility. I test this using data from a source where both countries feature, the European Survey of Income and Living Conditions (EU-SILC)[4], which considers both Germany and the UK. I use it to compare the rate of mobility in both countries alongside the rates of mobility in each panel, these are listed below.

Table 3.2: Basic Job Mobility in Germany and the UK (1990-2013). Cross-sectional data using cross-sectional weights

	Basic Job Mobility		**Basic Job Mobility**	
	EU-SILC DE (1)	EU-SILC UK (2)	SOEP (3)	BHPS (UndSoc) (4)
1991				18.1%
1992				18.1%
1993				20.0%
1994			8.5%	21.2%
1995			9.5%	24%
1996			9.6%	21.7%
1997			9.0%	24.6%
1998			8.8%	25.3%
1999			8.7%	23.3%
2000			9.9%	25.3%
2001			9.7%	24.%
2002			8.4%	22.7%
2003			7.6%	22.6%
2004			6.7%	21.1%
2005	6%	23%	6.3%	21.6%
2006		24%	6.0%	13.2%
2007	7%	17%	7.6%	16.5%
2008	8%		8.0%	14.1%
2009	7%	13%	8.5%	
2010	9%	13%	7.4%	
2011	9%	12%	6.3%	6.1%
2012	10%	7%	6.7%	6.0%
2013	9%	8%		6.6%

The EU-SILC data asks respondents if they changed jobs in the last 12 months (pl160: change of job since last year?). PL160 only considers those in employment, meaning it captures only direct movements into new jobs (mobility where respondents move from one job to another within the 12 month period of being sampled). This design fits with the definition of mobility used in the thesis, as I ignore respondents with long periods of unemployment and inactivity. PL160 does not distinguish between inter-firm and intra-firm changes, and specifically considers *"a change of job means a change of employer,*

[4] The EU-SILC is the European Survey of Incomes and Living Conditions. I sample years 2005-2013, where Germany and the UK both feature. The data is weighted. I do not use the data for the main analysis, it is only featured here as a reference for individual panels.

not moving from one set of duties to another with the same employer. Nevertheless, a change of contract with the same employer is considered as a change of job". A quit and a promotion (or a dismissal and a demotion) are viewed as the same by PL160. The EU-SILC data is not ideal to answer the research questions presented above. However, it offers a basic measure to compare job mobility in the SOEP and BHPS, to a third, standardised sample.

I supplement the gap in the BHPS data by drawing job mobility data from the Understanding Society panel[5]. I only use this data to "complete the picture" for the UK, in an effort to prove both panels are comparable. Table 3.2 shows both panels capture the same underlying distribution of "job mobility", as they match the EU-SILC measure of mobility. In Table 3.2 above, the first column and second column list the rate of mobility for Germany and the UK respectively, as found in the EU-SILC data. Germany has a smaller rate of job mobility than the UK in each year except 2012 and 2013, where rates converge. Generally the mobility rate in Germany is stable, between 7% and 9%. In the UK, the rate of mobility is higher, but declines over time from 24% (in 2006) to 7% (in 2012). Looking at the SOEP and BHPS rates, which are listed in columns 3 and 4 respectively, the pattern is the same. Germany has a smaller mobility rate when compared with the UK in each year. The German series remains stable, between 6% and 9%. The UK has more job mobility, where the series gradually declines over time, from 2006 to the post crisis years. I now turn to a detailed discussion of the samples, how the frames are constructed, and their limitations. Again, the discussion above lists the basic approach. I now consider the design and limitations of this approach.

[5] Understanding Society is a longitudinal study of British society, which has absorbed the British Household Panel Survey.

3.2. Data and Sample

The SOEP is a longitudinal study of German households. The panel collects data annually from 1984. It also collects annual data from East German households since 1990. It measures household composition, employment status, occupations, earnings, health status, and several satisfaction measures. Researchers have used this panel extensively. Gash et al. (2007) use SOEP respondents from 1994-2004 when estimating the negative consequences of fixed-term work. Kattenbach et al. (2014) use the German SOEP to predict the likelihood of inter-firm and intra-firm mobility over time and throughout the life course. Latzke et al. (2016) and Schmelzer (2010) use respondents from the SOEP to estimate the effects of voluntary change on pay and satisfaction. Pavlopoulos et al. (2014) use the SOEP alongside the BHPS to answer the question "who benefits from a job change?" Generally the data is well established and considered representative of the workforce. The researchers above use a person-year design, ignoring households. I use the same data-matrix.

The German sample used in this project is defined as follows; observations from respondents who are missing no more than one observation from 2000-2008; observations where the respondent is in employment at the time of the interview; observations where the respondent is not in self employment, unemployment, or inactivity; observations who have no missing values for questions related to job mobility. I do not limit the sample to West Germany alone, instead I consider respondents from East and West Germany. I consider the period 2000-2008 as this was one of the most populated periods in the panel, with a high number of observations. Although the SOEP contains data for years up to and including 2014, the BHPS is absorbed in 2008 by the Understanding Society panel. In an effort to make estimates in both the BHPS and SOEP as comparable as possible, I limit the period studied for Germany to 2008. I consider a semi-balanced panel design for both datasets, where

respondents who miss a single wave are included in the sample. I discuss this further is a separate section below.

The final sample takes the shape of a person-year design, which ignores households. The German data comes from two files, the original individual file (PL), and the cross national equivalence file (CNEF), both of which come from the SOEP-Long dataset. The majority of the data comes from the "original individual file- PL", where the unit of analysis are individuals who are "keyed on PID (Person ID) and SYEAR (Survey Year)". A number of controls come from the Cross National Equivalence File (CNEF) in the SOEP-Long panel. The CNEF file contains "individual-level and household-level data to ensure a harmonized cross-country comparison. It is keyed on PID (Person ID) and SYEAR (Survey Year)". Both of these datasets are merged one to one using the personal identification variable and the survey year. Control variables from the CNEF are preferred, since these are designed specifically for between-country comparisons. The British Household Panel Survey has corresponding Cross National Equivalence File, containing standardised control variables similar to those in the German CNEF. The full list of CNEF variables and PL variables is discussed in the variables section, below. I show an example of the SOEP data-frame in Table 3.3. Here, all observations for one respondent (person number 370802) are listed over the 8 year period, 2000-2008. I also list the respondent's mobility events over the previous year and their gross monthly wage.

Table 3.3: Data frame example for SOEP respondent #370802. One respondent's answers over 9 waves.

pid	Syear	M_event	grossmonthlywage
370802	2000	Same job, same employer	1023
370802	2001	Changed employer- involuntary	486
370802	2002	Same job, same employer	325
370802	2003	Same job, same employer	295
370802	2004	Changed job, kept employer	1500
370802	2006	Same job, same employer	1500
370802	2007	Same job, same employer	1500
370802	2008	Same job, same employer	1500

I now turn to the British Household Panel Survey. The BHPS is also a longitudinal panel. It is made up of UK respondents. Data was collected at the household level between 1991 and 2008. The sample is also representative of the UK's workforce, and contains socio-economic variables, as well as detailed job history files, household composition, employment, and a number of satisfaction variables. Booth et al. (1999) use the panel to discuss job mobility and job tenure lengths of British workers. Battu et al. (2008) look at the relationship between housing tenure and unemployment using the sample. Also, Booth and Francesconi (2000) use the BHPS to analyse gender differences in job mobility and tenure. Pavlopoulos et al. (2014) measures the impact inter and intra-firm mobility in Germany and the UK, with the BHPS serving as the latter's sample. Again, the panel is commonly used to represent the British workforce, making it ideal for this study.

I define the British sample used in this work as follows; observations from respondents who are missing no more than 1 wave between the survey years 2000 and 2008; observations where the respondent is employed at each of the interviews of data collection; observations where the respondent is not in self employment, unemployment or inactivity; observations where the respondent has no missing job spell information for the survey year; observations where the respondent has no missing values for questions related to job mobility. The sample contains respondents from England,

Scotland, Wales, and Northern Ireland. The final data shape takes the form of a person-year file which ignores households and focuses instead on individual responses. The sample draws mainly from the year-specific individual-response files "INDRESP", where observations are grouped by a person-specific identifier (PID) that remains constant over survey years (WAVES). This design is similar to the SOEP. The sample also draws from the individual job history files "JOBHIST", which contain person-specific job-spell information for the given year. This dataset is used to construct the mobility variables proposed below. I discuss this further in the "variables" section of this chapter. Lastly, a number of controls come from the Cross National Equivalence File, listed within the BHPS. As mentioned in the SOEP section, the CNEF is a standardised file of variables created especially for panel comparisons. All 3 sets of files are merged using the person-specific unique panel ID (PID) and the survey year (WAVE). In order to illustrate the person-year design, I show a snapshot of the data structure for one respondent in Table 3.4, which contains the 8 observations for respondent number 10087486. I also include the respondent's job mobility information (M_event) and gross monthly pay (paygu), as in Table 3.4.

Table 3.4: Data frame example for BHPS respondent #10087486. One respondent's answers over 9 waves.

pid	year	M_event	paygu
10087486	2000	Changed employer- voluntary	1756.16
10087486	2001	Same job, same employed	2001.54
10087486	2002	Changed employer- voluntary	2301.77
10087486	2003	Same job, same employed	2759.21
10087486	2004	Changed employer- voluntary	2882.25
10087486	2005	Same job, same employed	3202.46
10087486	2006	Changed employer- voluntary	3502.69
10087486	2007	Same job, same employed	3302.54
10087486	2008	Changed employer- voluntary	3692.20

The resulting UK sample is made up of 3,782 respondents and 32,560 person-year observations; the German sample is made up of 4,444 individuals, and 38,687 person-year observations. Both samples are summarised in Table 3.5.

Table 3.5: Sample size: Number of person-year combinations and number of respondents in each panel

	BHPS	SOEP
Number of person-year observations	32,000+	36,000+
Number of respondents	3,700+ (2000-2008)	4,000+ (2000-2008)

3.2.1. Balance and Attrition

Both the BHPS and SOEP sample use a semi-balanced panel design. This isolates the core of the economy, only those who avoid unemployment or inactivity are considered. I allow respondents to miss a single observation during the period under study, as this increases the number of observations in the mobility categories. On one hand, considering a fully balanced panel greatly limits the number of "mobility" observations. On the other, an unbalanced panel contains a mix of respondents who fall into and out of unemployment or inactivity, and are not representative of the "core" workforce. Stata is able to handle semi-balanced or unbalanced fixed-effects models (Longhi and Nandi, 2014), but cannot produce accurate estimates for variables with few observations. The median number of observations per respondent in both panels is 9 waves. The minimum is 8 waves per respondent.

Attrition occurs naturally within panel data. Respondents and households drop out of surveys by refusing to answer subsequent questionnaires, dying, or moving to a new address without passing on the information to researchers. Respondents who experience job mobility may be particularly prone to attrition, since they may move to other parts of the country to take jobs, falling away from the panel. The BHPS documentation advises using longitudinal weights to correct for attrition and the changing sample size. However, these weights only apply to respondents who are a part of the original 1990

sample and greatly limit the number of observations. The SOEP also contains significant attrition. The guidebook for the SOEP data claims longitudinal weights correct for this difference, without limiting the sample size (Wagner et al., 2007). I discuss weighting later in the chapter.

This is a significant limitation, since respondents who experience mobility could leave the country as a result of a job change, or simply move to a new part of the country without telling the researchers,. Attrition may have two separate effects on the estimates proposed in the fixed-effects models. On one hand, attrition may cause models to under-estimate the effects of job mobility. Job-movers, who move to new positions in new countries, or new parts of the country, may see a large increase in pay that is not available to those who remain employed locally. On the other hand, attrition may cause models to over-estimate the effects of job mobility. Job-movers, who take positions in new countries or new parts of the country, may see only marginal gains from job mobility as they find few opportunities in their immediate labour market, while competing with "exceptional" workers who earn large premiums from job mobility. Some of the issues presented above can be addressed using panel weights, or corrected standard errors. However, it should be kept in mind that most of the respondents move at a local level and are representative of a local labour market. I now consider the variables available in each panel.

3.3.Variables

In an effort to make models as comparable as possible, I make a number of coding decisions. First, panels differ in the type of mobility considered. Specifically intra-firm mobility in the UK is nuanced, but not in Germany. I lay out the categories in each panel and the limitations of comparability in each panel. I also run checks on the time period covered by the mobility variable, the validity of intra-firm moves (a problematic

measure in Germany according to Kattenbach et al. (2014)), and the validity of the reference category for both panels. I confirm that the available measures are valid, despite suggestions from previous authors. Second, subjective outcomes are recorded on different scales. After presenting these, I discuss strategies of making the measures comparable. Ultimately I change the scale measuring subjective satisfaction into z-scores in both panels. Last, I outline the control variables that do not come from the CNEF and how these can be summarised into somewhat comparable categories.

3.3.1. Job Mobility

This section develops the coding of the mobility variable, which was sketched out in the section above. Given its centrality as a concept, I discuss it in detail. I list the variables used to define mobility in datasets, their distribution, and the limitations each measure has in both panels. As before, the main categories used in this work are:

1. Same job, same employer (non-movers, the reference category)
2. Inter-firm voluntary
3. Inter-firm involuntary
4. Intra-firm voluntary
5. Intra-firm involuntary

While the measure is not directly comparable for UK and German data, it captures important dynamics of mobility in both institutional contexts. On one hand, Latzke et al. (2016) and Kattenbach et al. (2014) highlight that intra-organisational changes in the German panel may be under-reported, and cannot be split into voluntary and involuntary changes. For this reason, they drop these observations. On the other, Pavlopoulos et al. (2014) consider intra-firm mobility in their work without splitting these into promotion or demotion categories. I too include these observations into the panel in an effort to capture some effect for intra-firm mobility, even if underreported,

as these are a crucial element of *attainment theory* and *efficiency wage theory*. I run some basic checks on intra-firm change and the reference category below. I define job mobility as job spell changes that occur between and within firms, and changes which are voluntary or involuntary. The main variables used to create the mobility categories are listed in Table 3.6.

Table 3.6: Variables used to define Job Mobility. (BHPS & SOEP)

Column 1	Column 2 BHPS	Column 3 Coded result	Column 4 SOEP	Column 5 Coded Result
Employed respondents only	Jbstat: • Self employed • Employed • Unemployed • Retired • Maternity leave • Family care • Student • Sick • Government training	Employed Dummy • Employed • All other categories (Unemployed, inactive, self-employed, training)	Empstat: • Full time employment • Regular part time • Vocational training • Marginally employed • Near retirement • Military • Civil service • Workshop for disabled • No employed • Full time short work • Part time short work	Employed dummy: • Full time employed, regular part-time • All other categories (Unemployed or inactive, including short work)
Change of job	Jspno: employment spell number(0 no change. 1-9 change)	Spell change dummy • 0-no change • 1- spell change	Changed jobs in the last 12 months? • Yes • No • Yes, after checking dates	Spell change dummy: • No change • Spell change
Inter/intra firm change	Jhstat: • Different job, same employer • Working for a different employer/ working for myself • Unemployed • Retired • On maternity leave • Looking after family • In full time education • Sick leave • Government training • Something else	Inter/intra firm change: • Same job same employer, • Inter firm change • Intra firm change Which categories are used? • Inter firm change: (Working for a different employer) • Intra firm change- (Different job, same employer) • Remaining categories are dropped	Destination: • First job • Job after a break • Job with a new employer • Company taken over • Changed jobs, same firm • New job, self employed	Inter/intra firm change: • Same job, same employer • Inter firm change • Intra firm change Which categories are used? • Inter-firm change: (Job with a new employer) • Intra-firm change: (Changed job, same firm) • Remaining categories are dropped
Voluntary/involuntary change	Jhstpy: • Promoted • Left for better job • Made redundant • Dismissed • Temp contract ended • Retirement • Children/homecare • Care of other • Moved area • Started college • other	Voluntary/involuntary: • same job, same firm • voluntary • involuntary • other Which categories are used? • Voluntary: (promoted, left for better job,) • Involuntary: (redundant, dismissed, temp contract ended) • Other: (retirement, childcare, care of other,	Termination: • company closed • resigned • dismissal • mutual agreement • contract expired • retired • leave of absence • business closed • training • other	Voluntary/involuntary: • same job same firm • voluntary • involuntary • other Which categories are used? • Voluntary: (resigned, mutual agreement) • Involuntary: (company closed, dismissal, contract expired) • Other: (other, training,

	moved area, other)			retirement)

Column 1 in Table 3.6 lists the concept being measured; columns 2 and 4 show the concept as it appears in the original data files of the BHPS and the SOEP. Columns 3 and 5 show how the original variables are operationalised in the study.

Starting from the first row, workers must be "employed" for the year in observation. Using the categories in the BHPS and SOEP I isolate employed respondents in both panels. In the second row, each panel asks respondents if they changed job recently (in the last 12 months). I use this variable as a dummy for a basic job change. In the next row, both countries distinguish changes to a new employer and changes with an existing employer. These variables are used to determine inter-firm and intra-firm mobility. Last, both countries distinguish between voluntary and involuntary changes, by listing the reason for the previous change. Only the BHPS contains data on promotions and demotions, or voluntary and involuntary intra-firm changes. The SOEP does not elaborate on intra-firm changes. I list the mobility variables, and their frequencies below. The sample in Table 3.7 considers the years 2000-2008 and contains the semi-balanced panel described throughout.

Table 3.7: Job mobility frequencies, semi-balanced panel. (German & the UK, 2000-2008)

	BHPS variable	**BHPS frequencies**	**SOEP variable**	**SOEP frequencies**
Reference category, employed without a recent change	Same job, same employer	27,091 (83.20%)	Same job, same employer	33,318 (95.96%)
Inter-firm mobility	Voluntary change, new employer	1,872 (5.75%)	Voluntary change, new employer	826 (2.38%)
	Involuntary change, new employer	468 (1.44%)	Involuntary change, new employer	334 (0.96%)
	Other, new employer	873 (2.68%)	Other, new employer	7 (0.02%)
Intra-firm mobility	Voluntary change, same employer	1,630 (5.01%)	Intra-firm change	235 (0.68%)
	Involuntary change, same employer	96 (0.29%)		
	Other change, same employer	530 (1.63%)		
	Total	32,560 (100%)	Total	34,720 (100%)

Looking at Table 3.7, both panels have the same reference category, where workers remain in the same job with the same employer. The UK panel is more mobile than the German panel, 83% of the observations in the BHPS panel are made up of years where respondents do not change jobs at all. In the German case, 96% of observations capture employed workers with no move. Overall, the "job-hopping" narrative appears to be overstated, at least for the core workforce.

Moves between firms are more common in the UK than Germany, 5.7% of observations in BHPS capture voluntary moves to a new employer. In Germany, 2.4% of observations catch voluntary inter-firm moves. In the UK 1.4% of observations catch workers who move involuntarily to a new employer. These changes are 1% of observations in Germany. Lastly, in the UK 3% of cases change employers for other reasons but only 0.02% of workers make the claim in Germany. It is likely that moves for "other" reasons fall out of the panel-design eventually.

Considering intra-firm mobility, in the BHPS 5% of observations make up promotions within the firm and only 0.3% of observations are involuntary changes with the same employer (demotions and downsizing). 1.6% of the sample reports an intra-firm change for "other reasons". These changes are even less common in the German sample, only 0.7% of observations capture internal changes. This category holds all changes including promotions, demotions, and downsizing of workers. I list three basic checks which ensure that mobility and the reference category in both countries is valid.

3.3.1.1. Checks and Issues

In this section I consider three issues. First, does mobility capture the same time period between waves in both panels? The lower rate of mobility in Germany could be the result of survey rounds covering fewer months. I find both mobility variables cover a 12

month period. Second, intra-firm changes in Germany have been questioned; authors suggest the measure is not capturing intra-firm movement with the same employer. I find that the average firm tenure of an intra-firm move is 6 years, although the distribution reveals many respondents move in their first year at a given firm. This measure should be interpreted with caution but appears to catch intra-firm mobility. Third, linked to the previous point, issues with intra-firm mobility have affected the reference category. Authors question if those reporting "no change", move through a career ladder *within the firm gradually* based on tenure without listing promotions. This would be a significant issue. However I find that the reference category has a high level of occupational fidelity[6], and captures a distinct group of non-movers.

The first issue considers the length of time between waves, ensuring respondents who answer the survey consider the same time period when measuring "mobility". The most basic measure of job mobility asks respondents if they experienced a change in spell *between interviews*. Here, I ask whether this measure covers the same *time period between waves*. Respondents are asked about moves which took place in the "previous year" during a given interview. Therefore mobility events outlined for a given year (*t*) take place in the previous year (*t-1*). There are subtle differences to the time referenced in both panels. In the German dataset, respondents are asked about job changes "after December 31st" of the previous year. Thus, in the 2008 questionnaire, respondents are asked "Did you change your job or start a new one after December 31, 2006?" The reference period covered is all of 2007, and the period in 2008 taken to collect the data. In the BHPS, respondents are asked if they experienced a change since the "1st of September". Thus, in 2008 respondents are asked the following question *"I'd like to ask*

[6] By occupational fidelity, I mean the first difference in occupation following a mobility event. The measure checks for how often respondents remain in the same occupation. A "high" rate of occupational fidelity, means a high percentage of observations remaining in the same occupation following a recent change.

you a few questions now about what you might have been doing since September 1st 2007 in the way of paid work, unemployment, or things like time spent retired or looking after your family". Is the length of period between data rounds the same in both panels?

In Table 3.8, I list the average number of months between interviews for respondents. In each panel, I consider the interview month and year. I then calculate the *first difference* of the variable, giving me the average duration, in months, between interviews. Germany's "low rate of mobility" could be the product of a shorter period between interviews, 8 months, for example, when the UK covers 12**.** *I find that both panels gather data annually, with an average of 12 months between interviews for each panel.* The standard deviation suggests that both countries differ roughly by 3.2 month in each direction (1.6*2). The minimum and maximum values suggest that a number of outliers also exist, where respondents are re-sampled after a short, or a long period of time. Most of the observations occur between 9 months and 15 months, in both panels. The differences between panels are similar**,** meaning both are comparable**.**

Table 3.8: Average duration between interview waves in months. BHPS & SOEP

	BHPS	**SOEP**
Average number of months between waves	11.89 months (st dev 1.61 months)	11.86 months (st dev 1.66 months)
Minimum and maximum	4 months (0.02%), 20 months(0.05%)	1 month (0.03), 23 months (0.01)

Considering the second issue, I explore the validity of intra-firm mobility in Germany. As outlined, it's not possible to discern between voluntary and involuntary changes that take place within the firm in Germany. Questions about voluntary and IVM only apply to inter-firm mobility. However, it is possible to isolate internal changes, which contain promotions, demotions and lateral changes that occur in the same firm. This is clear from Table 3.6, where no promotion or demotion category appear in the variable "termination". As a result of this issue, Latzke et al. (2016) and Kattenbach et al. (2014)

suggest focusing on external mobility alone, claiming the category for intra-firm mobility may be flawed and not capturing intra-firm changes at all. Both also allude to issues with the reference category, which may contain promotions, since workers move through ladders without acknowledging a change, I discuss this later. Latzke et al. (2016) claim *"...the operationalisation excludes intra-organizational job changes due to concerns about accurate measurement within the GSOEP*" (p142). However, Pavlopoulos et al. (2014) use the same data to consider inter and intra-firm VM, although they define VM as any direct change without periods of unemployment, bypassing the need for a "promotion" category as described by Kattenbach et al. (2014).

I use a basic check in the SOEP data to test the length of firm-tenure of those who list an intra-firm change. A variable in the SOEP asks respondents the year they started working with their employer (plb0036). I subtract the survey year from the year the respondent started at their current job. This measure is a rough estimate of firm tenure. I separate this measure by mobility types using the German data.

Table 3.9: Average number of years with an employer, by mobility. SOEP panel alone. Intra-firm movers hold and average of 6 years of firm tenure.

	SOEP **Average number of years with current employer**
Same job, same firm	12.76
Intra-firm change (changed job, same firm)	6.82
Inter-firm change (changed job, changed firms)	0.71

Table 3.9 suggests that, on average, those who experience intra-firm mobility hold 6.8 years of firm tenure. However, looking at the distribution of tenure years for those with intra-firm changes show that almost 50% of responses record 1 year with their employer. The remaining 50% list their tenure between 2 and 43 years long. It may be that workers either receive or fail to receive a promotion in their first year, or a movement from a trial period occurs within their first year. Internal movement category for the SOEP may need to be interpreted with caution.

Finally, I consider the issue with the reference category "same job, same employer", which must remain the category of non-movement or non-change throughout the analysis. Commenting on the issue with German intra-firm mobility data Kattenbach et al. (2014) questions if internal movements and promotions are slipping into the reference category "*respondents may interpret an internal job change as a clear move into a different position with a different job title, even if a promotion is not implied*" (p 56). Thus authors allude to respondents taking promotions without acknowledging these as promotions. I run a basic check on whether workers in this category remain in the same occupation instead of slowly moving upwards through a career ladder. This is particularly important in Germany, where workers do not have a category for "promotions" or "demotions" with their employer. If workers are receiving promotions but not listing them, this compromises the reference category.

I show that the reference category contains an unchanged group of non-movers using Table 3.10, where I list a measure of occupational fidelity (the rate of observations without an occupational change between waves) for each type of firm mobility, including the reference category, for both panels.

Table 3.10: Occupational fidelity by mobility type. (BHPS & SOEP 2000-2008). Reference category (same job, same employer) has the highest rate of occupational fidelity.

	% of observations without occupational change BHPS (1 digit ISCO 1st difference)	% of observations without occupational change SOEP (1 digit ISCO 1st difference)
Same job, same employer	85%	93%
Changed job, kept employer	63%	71%
Changed job, changed employer	58%	67%

The BHPS has no issues with intra-firm mobility. The panel distinguishes between voluntary and involuntary changes between and within firms. The issue lies with Germany, whether movements within the firm are fully captured by the category "changed job kept employer", or is that category only capturing demotions, or types of other reassignment, letting "promotions" slip into the reference category. This is not the

case, as 93% of all observations in the reference category remain in the same ISCO category to the previous year.

To summarise, both job mobility rates are calculated between 12 months, both contain valid measures of intra-firm mobility. Both contain uncompromising groups of non-movers as the reference category. Although issues with the mobility measure exist, these have been discussed above. The variable still contains comparative power in both panels. I now consider the outcome variables used throughout the thesis.

3.3.2. Outcomes

I use three objective and four subjective outcomes throughout this work, which are saved in the individual response files, PL in SOEP-Long and INDRESP in the BHPS. I consider one dependent variable from the CNEF for both panels, subjective health, which is designed specifically for comparing German and British workers. The measure for weekly working hours is taken from the CNEF for German data; and the individual response file in the British data.

Subjective or "soft" outcomes are satisfaction scores for pay, security, work, and hours. The objective measures or "hard" outcomes are (near) direct measures, gross monthly pay, weekly working hours, and health. I list these in the first three columns of Table 3.11. Although the CNEF also contains a measure of household income, I use the subject-specific, gross monthly income measure (PAYGU for the BHPS, and PLC0013 for the SOEP) from each panel's individual response files. Since the project does not sample workers at the household level, focusing on household income may skew the relationship. Since Germany and the UK differ in tax rates, I consider gross monthly income, instead of net monthly income. A summary of each variable is listed below in Table 3.11. Since the SOEP does not contain a measure for satisfaction with pay, I consider satisfaction with household income, the nearest possible subjective measure of

earnings. Each subjective measure is an interval scale. Although a categorical satisfaction measure was originally considered, for the German data, it was dropped from analysis due to lack of (within-respondent) variance.

Table 3.11: Subjective and Objective outcomes used throughout the thesis (standardised and non-standardised).

	BHPS	SOEP	Standardised BHPS variables	Standardised SOEP variables
Subjective:				
Satisfaction with pay	Jbsat2 (job satisfaction: pay) Range 1-7	Plh0175 (satisfaction with HH income) Range 0-10	Z_paysat (job satisfaction: pay) Range -2.49- 1.35 Mean 0	Z_paysat (satisfaction with HH income) Range -3.14-1.65 Mean 0
Satisfaction with security	Jbsat4 (job satisfaction: security) Range 1-7	-	Z_securitysat (job satisfaction: security) Range -2.44-1.24 Mean 0	-
Satisfaction with work itself	Jbsat6 (job satisfaction: work itself) Range: 1-7	Plh0173 (satisfaction with work) Range 0-10	Z_worksat (job satisfaction: work itself) Range -3.37-1.15 Mean 0	Z_worksat (satisfaction with work) Range -3.56-1.46 Mean 0
Satisfaction with hours	Jbsat7 (job satisfaction: hours) Range 1-7	Plh:0178 (satisfaction with leisure time) Range 0-10	Z_timesat (job satisfaction: hours) Range -2.96-1.21 Mean 0	Z_timesat (satisfaction with leisure time) Range -2.86- 1.58 Mean 0
Objective:				
Income	Paygu: gross monthly income	plc0013: gross monthly income	Comparable, log transformed	Comparable, log transformed
Weekly working hours	Jbhrs: number of hours normally worked per week	e11101: Annual work hours of individual	Comparable	Weeklyhours: e11101 divided by 52.
Health	m11126: health status Range 1-5	m11126: health status range 1-5	Comparable	Comparable

Columns 2 and 3 list the variables as they feature in the panels. Columns 3 and 4 present the variables after transformation. The outcomes listed above are similar to those used by previous authors discussing mobility. Focusing on "soft" and "hard" outcomes has been suggested by several authors (Fasang et al., 2012). Measures of satisfaction catch obvious objectives; people want to be happy with working conditions. "Soft" outcomes are also "*increasingly accepted as valid measures of subjective utility that are distinct from objective rewards*" and should therefore be studied separately (p 371 (Fasang et al., 2012)). Most of all, the reason for using both outcomes stems from the *complexity* found by previous authors; there is a clear mismatch in the mobility relationship to subjective and objective outcomes. Gesthuizen and Dagevos (2008) provide the clearest example of this, while estimating VM's effect on both subjective

and objective outcomes. In their analysis of the Netherlands, they find that voluntary inter-firm and intra-firm mobility impact subjective and objective outcomes differently. This is discussed in the literature review. In their analysis Gesthuizen and Dagevos (2008) consider if job quits stem from job mismatch, while promotions are the result of career progress.

3.3.2.1. Checks and Issues

Considering Table 3.11, the objective outcomes are comparable. The health variable comes from the cross national equivalence files, for both panels. The income variable is similar in that it's capturing gross monthly pay. Hours are also comparable, although the German outcome lists the annual hours worked, while British outcome lists the weekly hours worked. Subjective measures are less comparable. Similar concepts contain different measures. The measure of satisfaction with pay ranges from 1-7 and is a continuous variable in the BHPS. In the SOEP, satisfaction with pay is phrased as a satisfaction with "Household income" and ranges from 0-10. This is a similar variable, but contains a different range. Job security ranges from 1-7 in the BHPS, but is a categorical variable in the SOEP therefore I only consider the measure for British data. Satisfaction with work or "the job" features in both panels, in the BHPS it ranges from 1 to 7; in the SOEP it ranges from 0 to 10. Lastly, satisfaction with hours is a continuous variable that ranges from 1 to 7 in the BHPS, for the SOEP I use satisfaction with "leisure time" which range from 0 to 10. This is the closest measuring of subjectively capturing the underlying measure of "satisfaction with hours".

I turn subjective continuous outcomes into z-scores. Z-scores are standardised measures with a mean of 0 and a standard deviation of 1. This method transforms continuous measures in both panels onto a similar scale, distance from the mean in standard deviations (Field, 2009). I list the results in column 4 and column 5 of Table 3.11.

3.3.3. Controls

Measuring the impact of mobility alone would not give a "true" effect of job changes on outcomes. I consider a number of control variables, similar to those used by previous researchers looking at the differences between "movers" and "non-movers" (Kattenbach et al., 2014, Latzke et al., 2016, Gesthuizen, 2009, Gesthuizen and Dagevos, 2008, Kalleberg and Mastekaasa, 2001). Most of the variables appear in the CNEF for each panel, only three do not feature in the file; education, contract type, and firm size. I summarise the controls in the table below. I also include two macro variables, as control, the country level of unemployment for the interview year (unemployment) and the country economic growth for a given year (growth) both are taken from the Eurostat database[7]. The first column lists the variable type, the second column shows the variable used in the BHPS; the last column lists the SOEP variable.

Table 3.12: Control variables used throughout the thesis (BHPS and SOEP).

Variable:	BHPS	SOEP
Gender	d11102LL- male/female	d11102ll; cnef- gender of respondent
Education	Qfedhi- highest educational qualification	PGCASMIN- qualification position
Age	d11101- age (cross national equivalence)	D11101; equivalence file- age of individual
Children	d11107- equivalence file	D11107; CNEF- number of kids
Contract	Permanent- type of contract	Permanent- type of contract
Firm size	Jbsize- number of employed	PGBETR**- size of company PGALLBET**- size of company
Industry	Equivalence file; e11106, 1 digit industry Equivalence file; e11107, 2 digit industry.	e11106; cnef- 1 digit industry codes e11107; cnef- 2 digit industry code
Occupation	e11105 two digit occupation CNEF	E11105; CNEF- occupation of individual
Unemployment	Own calculations- level of unemployment during survey year	Own calculations- level of unemployment during survey year
Economic growth	Own calculations- level of GDP growth during survey year	Own calculations- level of GDP growth during survey year

Since I use linear fixed-effects regression to estimate the models, only time variant measures may be included into a specific model. Each model controls for age and contract type, which are standard controls. I also include worker industry and

[7] Eurostat is the institution responsible for the storage and harmonisation of European statistics.

occupation, although several authors choose to use industry alone (Gesthuizen, 2009, Gesthuizen and Dagevos, 2008, Kalleberg and Mastekaasa, 2001). Gesthuizen (2009) and others control for the number of children living in the house and claim that firm size is important is explaining differences of working conditions in both panels. Lastly, I consider country level unemployment and growth in GDP within a given year. The macro variables fit into the UK models but are dropped from German models due to issues of collinearity with the year specific dummies. Neither unemployment nor growth varies strongly by survey year in Germany; wider differences emerge in the UK.

3.3.3.1. Checks and Issues

Only two variables in Table 3.12 are not directly comparable. These are education, and firm size. I list each of these in Table 3.13. The education variable in the BHPS makes simple distinctions between qualifications. The SOEP has a more nuanced divide. I transform education in both panels into a categorical variable containing three categories: basic, secondary and vocational, and third level education. The result is listed in Table 3.13.

Firm size is another measure that is not directly comparable in its listed form. However, the categories can be shaped to accommodate differences between the two panels. While the BHPS lists a nuanced set of values for firm size, the SOEP has a more restrictive list of options. I limit these to three categories that are not wholly compatible. However, their impact on pay and satisfaction is expected to be minor. Both reference categories consider large firms.

Table 3.13: Non comparable controls, recoded into common values (BHPS & SOEP).

	BHPS	SOEP	BHPS recoded	SOEP recoded
Education	QFACHI • Higher degree • 1st degree • HND, HNC, teaching • A levels • levels • CSE • None of these	CASMIN • In school • Inadequately completed • General elementary • Basic vocational qualification • Intermediate general education • Intermediate vocational • General maturity cert • Vocational maturity cert • Lower tertiary • Higher tertiary	Educ: • Basic (CSE, no education) • Secondary or vocational (o level, a level, HND, NHC, teaching) • Third level (1st degree, higher degree)	Educ: • Basic (Inadeuately completed, general elementary, basic vocational) • Secondary (intermediate general/vocational, general cert, vocational cert) • Tertiary (lower tertiary, higher tertiary)
Firm size	Jbsize • 1-2 • 3-9 • 10-24 • 25-49 • 50-99 • 100-199 • 200-499 • 500-999 • 1000+ • Dk less than 25 • Dk 25+	PGBETR • Less than 20 • 20-200 • 200-2000 • 2000+ • Self employed without employees	Jbsize1: • 1-99 • 100-499 • 500+	Jbsize1: • 1-200 • 201-2000 • 2000+

This section adds to the previous discussion of sample size and data by considering the mobility variable, the outcomes, and the controls used. Lastly, I lay out the estimation process used in this work. As already mentioned, I use fixed-effects estimation techniques to answer the research question. Below is a discussion of the method, its strengths, its limitations, and its assumptions.

3.4.Analytical Strategy

Several authors simply use ordinary least squares regression to consider the relationship between mobility and outcomes, outlined in the literature review. This does not consider unobserved individual heterogeneity, an important aspect in the theory listed, and the empirical results shown. Job mobility is not a random event. Estimating a relationship between job mobility and outcomes without accounting for person-specific characteristics that may influence those who quit or pursue promotions (as well as those

who could lose their job or face demotion) would bias the estimates. The first group is likely determined, influential, or confident. The latter group may be less likely to hold these qualities. None of these measures can be included in the model, since they are unmeasured. A natural question is whether the positive relationship between a quit and the earnings *the product of the quit or the product of the time-invariant variables (like motivation) that make respondents more likely to quit***.** This issue is known as unobserved heterogeneity. It has implications for the research question, which I summarise below. Starting with a basic model, the data above could be estimated in a simple ordinary least squares regression, or pooled estimation (Longhi and Nandi, 2014). The equation would follow:

$$\text{Log wage}_{it} = \beta_0 + \beta_x(\text{Job mobility event}_{it}) + \beta z(\text{Matrix of Controls}_{it}) + \beta q(\text{Year Dummies}_{it}) + \text{error term}_{it}$$

Considering each term, the subscript *i* identifies individuals, and the subscript *t* identifies periods of time or waves. The β coefficients are the estimated effects of each control variable. Wages tend to be skewed, and so require a log transformation. β_0 is the intercept or the estimated quantity of log wages when all other values are 0. The job mobility factor variable contains 4 possible job mobility events, each of which has its own estimated β. The matrix of controls contains the other measures with their own β estimates (q). In the model above I would have to assume that the error term in the equation is a random variable with a mean of 0 and a variance of 1. I also assume that there are no between worker differences, in that, the equation above would give all respondents the same intercept. The error term above would therefore be particularly large (Allison, 2009).

The main appeal of panel data is that repeated observations allow the error term to be split into a "person-specific time-invariant" error term (α_i) and a time variant error term

(ε_{it}). The person-specific time-invariant error term is a crucial concept and allows me to rewrite the equation above in a way that isolates unchanging unknown person-specific measures (like IQ, motivation, genetic make-up, upbringing etcetera). The equation would follow:

$$\text{Log wage}_{it} = \beta_0 + \beta_x(\text{Job mobility event}_{it}) + \beta z(\text{Matrix of Controls}_{it}) + \beta q(\text{Year Dummies}_{it}) + \alpha_i + \varepsilon_{it}$$

Here, the "error term" is now two separate unknown values α_i which does not change over *t* (time invariant) and ε_{it} which changes over time and individual (Wooldridge, 2015). I assume that ε_{it} is normally distributed in the equation above with a mean of 0 and a constant variance. I assume that α_i does not change over time, in that it captures individual time-invariant factors that can't be caught by the measured variables in the model. At this point I must make a significant assumption about the relationship between the individual specific error term and job mobility. This is the choice between fixed and random-effects models.

3.4.1. Random VS Fixed-effects models

Is α_i uncorrelated with the other explanatory variables and is it normally distributed with a mean of zero and constant variance? In fixed-effects models, unobserved differences between respondents are "cancelled out" of the models, as individuals act as their own control (Allison, 2009). In random-effects models unobserved differences are regarded as random and uncorrelated with the explanatory variables. Thus the difference between the two equations comes down to the structure of association between the observed variables (like job mobility) and the unobserved variables (like motivation, genetic makeup, intelligence, or drive). Theoretically, it is highly likely that person-specific characteristics play a part in someone's ability to quit or be promoted (as well as those most likely to see demotion or dismissal). However, I test this using the Hausman,

which compares the estimates produced by fixed and random effects regression. The Hausman compares an inefficient estimate, in this case a set of fixed effects mobility dummies, against a potentially biased but more efficient estimate, in this case a set of random effects mobility dummies (Rabe-Hesketh and Skrondal, 2008). A significant test, suggests there is a difference in the estimates, and that the inefficient but unbiased set should be used, since this set is "correctly specified" (page 157 (Rabe-Hesketh and Skrondal, 2008)).

Instead of running the model for each outcome, in each panel, I limit the output to two outcomes per panel, general satisfaction with work, and log gross monthly pay. In Germany, neither satisfaction with work (*Hausman = 17.96, p=0.0013*), nor gross weekly pay *(Hausman = 57.96, p=0.000)* pass the benchmark for a random effects model. In both cases the specification for the model is off, and the person specific errors correlate with job mobility types. Considering the UK, neither satisfaction with work (*Hausman = 24.00, p=0.0005*), nor gross monthly wages (*Hausman = -492.14, p= does not meet asymptotic properties*) pass the test for random effects models. Here too, the person specific errors correlate with the mobility types. As a result, fixed effects estimates should be considered. Luckily this is the standard approach in the literature (Gesthuizen, 2009, Gesthuizen and Dagevos, 2008, Kalleberg and Mastekaasa, 2001), and there is a strong theoretical reason for pursuing fixed effects (Kalleberg and Sorensen, 1979, Sørensen and Kalleberg, 1981).

Fixed-effects estimation guarantees unbiased estimates (Allison, 2009, Rabe-Hesketh and Skrondal, 2008, Longhi and Nandi, 2014, Wooldridge, 2015). Since motivated individuals are far more likely to quit or receive a promotion, this assumption cannot hold for random-effects models. Estimating these models using random-effects would

inflate the estimates for job quits on outcomes, as the person-specific error would fall into the estimates for job mobility.

There are two data requirements for fixed-effects models. The first is a dependent variable, wages or satisfaction, which is measured for each individual at least two occasions. These must be comparable and hold the same meaning or metric. The second is a set of predictor variables which change in value across multiple occasions for a substantial portion of the sample. Both panels above contain clusters of individuals ($i = 1, \dots, n$), each of whom is measured at several points in time (at least 8) ($t = 1, \dots, T$). Job mobility (Job Mobility$_{it}$) varies within individuals over time, as do the independent variables (Matrix of controls$_{it}$). The method is used by Kalleberg and Mastekaasa (2001) in their analysis of job mobility's impact on firm commitment and reward. The country specific chapters (5 & 6) estimate the return on mobility for the labour force as a whole (the first aim), and separately by gender (male and female) and education groups (those with a basic, secondary or post secondary, and third level education) (the second aim). I consider linear fixed-effects models below, and lay out their limitations. Although these are less efficient than random-effects models they contain no cluster-level bias.

3.4.2. Linear Fixed-effects

Linear fixed-effects models are used throughout this thesis, since the proposed dependent variables are measured on interval (satisfaction) or ratio (wages) scales. These outcomes are dependent on a set of predictors that are time variant for the reasons mentioned above. The equation for fixed-effects regression relies on a within-transformation where the time-invariant error term (discussed above) is dropped from the model. It follows that:

$$(y_{it} - y_{i*}) = \beta(x_{it} - x_{i*}) + (\varepsilon_{it} - \varepsilon_{i*})$$

Where;

- Where, y_{i*}, x_{i*}, ε_{i*} are the person-specific means of y_{it}, x_{it}, and ε_{it}.
- Y_{it} is a dependent variable value for individual *i* at time *t.*
- X_{it} represents a time variant independent variable (like a job quit)
- $\beta_1$is the estimated effect for that variable
- ε_{it} is the error term specific to *i*= the person and *t*= the time of the prediction
- α_i, the person-specific error term is cancelled out of the model, as each person acts as "their own control" (Allison, 2009, Longhi and Nandi, 2014)

Since fixed-effects estimation produces within respondent estimates, and *unobserved person-specific* characteristics (like IQ or motivation) don't change over time, changes in the dependent variable capture influences that are the result of time variant measures. The model above can be estimated using Stata's [xtreg] command with the option [fe]. While this method can estimate the effect of job changes, it cannot estimate the effect of gender or education themselves, two variables relevant to the second aim of the thesis. Overall, I am not interested in gender and education regarding their impact on the dependent variables, but rather how gender and education work through mobility in shaping outcomes.

Allison (2009) suggests that the relationship, between time variant (job change) and time invariant (gender) variables, may be included in fixed-effects models using interaction terms. These coefficients capture the extent to which a time variant estimate (job change) is over or under estimated for a particular group (male or female). This method is relevant to the research question. However, I do not include interaction terms for fixed variables with time varying variables. Instead, I run separate models for males and females, since individual models produce the same results but do not rely on interpreting interaction terms, which are complex. Further, this method produces separate intercepts for each group, which show insight into baseline differences. At this point, a number of limitations must be noted.

3.4.3. Limitations

The first aim of the thesis is to estimate the relationship between mobility and reward. Fixed-effects modelling techniques are able to achieve this, especially when non-random events like job mobility are considered. However, fixed-effects estimation is an inefficient method of estimation. Estimation relies on variance within clusters alone, discarding between cluster differences, which are "contaminated" by unobserved subject-specific characteristics (Longhi and Nandi, 2014, Allison, 2009). By focusing on fixed-effects estimates, I trade variation between workers for unbiased estimates of the effects of mobility. In this way, fixed-effects will sacrifice efficiency in an effort to reduce bias (Allison, 2009). Thus, fixed-effects estimates produce larger standard errors, than random-effects models. Therefore fixed-effects estimates have wider confidence intervals, and ultimately larger p-values. For this reason, I treat estimates with p-values of less than 0.1 as significant, raising the threshold from 0.05.

The second goal of the models is to estimate the difference between workers, focusing on how mobility is impacted by gender or education in rewarding workers. Do men and women benefit from mobility equally? Do third level and secondary educated workers benefit from mobility equally? There is a significant limitation in meeting this goal. Fixed-effects models will not produce estimates of the effects of variables that don't change over time. There are ways of producing estimates for time invariant variables, but these estimates do not control f or "unobservables", and so are inaccurate. This limitation does not fully apply to the second goal, since I test for gender or education differences in the relationship between mobility and outcomes, not the gender or education differences in outcomes, as mentioned.

Lastly, a point that is relevant to both goals, predictor variables that change little within clusters, can produce imprecise estimates in fixed-effects models (Allison, 2009). This

is particularly important for the mobility variables proposed here. In some cases models rely on no more than 100 observations of job change. However, most of the mobility "events" contain hundreds of observations. This is only likely to affect involuntary changes in Germany, as seen from Table 3.7. Although limitations exist, fixed-effects estimation is capable of dealing with the proposed goals.

3.4.4. Weighting

Each panel contains longitudinal weights, which correct for attrition. However, the UK's longitudinal weights greatly reduce the sample size, as they only consider respondents who are a part of the original 1991 BHPS sample. This problem does not exist in Germany, where weights do not reduce sample size. Ultimately, I use longitudinal panel weights in Germany and clustered standard error in the UK, this approach is taken by previous researchers who are limited by BHPS weights.

In chapter 4 I look at the cross sectional distribution of job mobility over time. These tables are purely descriptive, but use cross-sectional weights for both panels. These weights are provided in the data files and summarised in Table 3.14 and Table 3.15. Cross sectional weights are important because they adjust for unequal probability of selection, non-response, and the inclusion of large samples from Scotland, Wales and Northern Ireland. As an example, I list the impact of weights on monthly wages using cross sectional and longitudinal weights using the tables below.

Table 3.14: Summary of weights for the BHPS. Mean pay weighted. Mean pay, cross sectional weight. Mean pay, panel weights. (1991-2008)

year	Mean gross monthly pay, unweighted BHPS	N	Mean gross monthly pay, cross sectional weights BHPS	N	Mean gross monthly pay, longitudinal weights BHPS	N
1991	£922.72	5,164	£933.79	5,043		
1992	£976.16	4,843	£990.60	4,670	£979.85	4,310
1993	£992.91	4,665	£994.79	4,440	£986.91	3,918
1994	£1,029.72	4,743	£1,049.85	4,487	£1,026.97	3,764
1995	£1,079.93	4,680	£1,094.98	4,403	£1,070.34	3,610
1996	£1,121.43	4,885	£1,138.93	4,544	£1,111.77	3,523
1997	£1,140.82	5,727	£1,200.57	4,668	£1,157.10	3,525
1998	£1,192.52	5,696	£1,248.25	4,662	£1,197.82	3,535
1999	£1,218.53	7,942	£1,293.39	4,598	£1,257.84	3,449
2000	£1,290.51	7,924	£1,352.79	4,521	£1,323.80	3,330
2001	£1,335.32	9,423	£1,430.96	4,469	£1,409.87	3,194
2002	£1,420.06	8,367	£1,469.29	4,364	£1,451.69	3,081
2003	£1,453.68	8,172	£1,518.71	4,273	£1,494.95	2,979
2004	£1,507.82	7,990	£1,581.36	4,148	£1,556.83	2,880
2005	£1,556.68	7,798	£1,632.63	4,100	£1,593.15	2,768
2006	£1,622.65	7,603	£1,700.00	4,040	£1,660.88	2,663
2007	£1,678.98	7,425	£1,767.62	3,917	£1,721.15	2,585
2008	£1,745.93	7,068	£1,827.87	4,427	£1,806.00	2,440

Table 3.14 shows the impact of the cross sectional and longitudinal weights for the UK. The un-weighted average wages rise slowly. Average wages rely on a varying number of observations, from 5,000+ to 9,000+. This is because the BHPS is topped up by larger samples from Wales, Scotland, and Northern Ireland. These samples are included to provide a generalisable number of cases for each country. However, wages are lower in these countries, particularly in Northern Ireland when compared to London. Therefore, average monthly wages appear to rise faster in the weighted version (column 4), which takes explanatory power away from other countries (like Wales and Scotland). This also impacts the number of participants in the study, limiting the number to roughly 4,000+ observations. However, this estimate is closer to the "true" value.

The last columns show the impact of longitudinal weights on the same variable. The difference between weighted averages is minor. However, the longitudinal weights reduce the number of observations. These quickly decline while using panel weights, but correct for drop out bias and other forms of attrition. The reason the number of participants declines gradually, is because the weights apply only to those who took part in the study since 1991.

The SOEP also contains a cross sectional and a longitudinal weight. I list their effects on the same outcome used in Table 3.14, average monthly pay. Each weight is "individual" or person-specific (households and enumerated weights are ignored).

Table 3.15: Summary of weights for the SOEP. Mean pay weighted. Mean pay, cross sectional weight. Mean pay, panel weights. (1991-2008)

year	Mean gross monthly pay, unweighted	N	Mean gross monthly pay, cross sectional weights	N	Mean gross monthly wages, longitudinal weights	N
1991	€1,347.08	6,007	€1,461.17	2.65E+07	€1,337.26	6,381.42
1992	€1,545.95	5,578	€1,643.67	2.59E+07	€1,534.66	5,962.19
1993	€1,719.27	5,524	€1,834.09	2.60E+07	€1,716.67	5,893.85
1994	€1,818.12	6,217	€1,929.12	2.88E+07	€1,815.18	6,257.08
1995	€1,880.62	6,251	€1,988.49	2.78E+07	€1,888.06	6,067.63
1996	€1,928.59	6,286	€2,048.11	2.84E+07	€1,922.72	6,481.82
1997	€1,977.23	5,911	€2,111.04	2.74E+07	€1,974.13	6,025.95
1998	€1,966.78	6,399	€2,048.89	2.73E+07	€1,998.27	5,826.76
1999	€2,037.79	6,267	€2,131.19	2.78E+07	€2,027.55	6,607.96
2000	€2,039.19	10,800	€2,061.17	2.86E+07	€2,118.32	6,413.57
2001	€2,101.96	9,762	€2,109.95	2.86E+07	€2,086.82	10,938.37
2002	€2,560.99	10,780	€2,137.52	2.80E+07	€2,184.27	9,984.70
2003	€2,524.72	9,948	€2,191.16	2.78E+07	€2,523.27	10,776.57
2004	€2,565.86	9,557	€2,226.84	2.73E+07	€2,561.43	10,136.32
2005	€2,548.10	9,102	€2,241.49	2.74E+07	€2,548.20	9,781.40
2006	€2,527.58	9,519	€2,284.05	2.75E+07	€2,588.64	9,302.06
2007	€2,575.96	8,986	€2,314.94	2.78E+07	€2,571.96	9,859.12
2008	€2,586.58	8,560	€2,344.59	2.87E+07	€2,572.15	9,485.14

The cross national equivalence file for the SOEP contains a simplified cross sectional weight for individuals (w11105). This weight is used in cross sectional models looking at differences between waves. It adjusts for selection bias, and over-representation from smaller German regions. The first column lists the average household income per research wave, without the weight. There is a large shift in income from 2001 to 2002. Adding the cross sectional weight corrects this, where respondents' income rises gradually over time. The large shift in 2002 is corrected and a general pattern of steadily increasing pay emerges in the weighted results, each wave is a valid representation of average pay, which is not influenced by new samples brought into the data. Two large samples, the East German sample and a "Refreshment sample" are included in 1990 and 2000. The impact of these, has been smoothed out using the cross sectional weights.

The weight has a large impact on the number of observations, which is not mentioned in the literature, however, the estimates are more representative.

Longitudinal weights are also provided in the file. These weights consider the fact that individuals are re-measured at each stage and require "inverse staying probabilities" or a weight to consider the likelihood of attrition from the sample. These are needed for longitudinal analyses of the SOEP. I illustrate the impact weights in the last two columns. Their impact is minor and steady growth in pay remains, although it is reduced slightly.

3.4.4.1. Weighting Issues

Here I consider the decisions other researchers have made regarding BHPS panel weights. Cross sectional weights are not appropriate for fixed-effects models, because observations are clustered by individuals. Longitudinal weights would be appropriate, but they disregard respondents who come into the study after wave one. A number of researchers have discussed weights and weighting in the BHPS;

Snelgrove (2009) use control variables which "would have been used for sample weights". These are region and migrant status. They argue that un-weighted data with these controls provides similar estimates without compromising sample size. Since their models use an unbalanced design, the weights provided in the dataset are not appropriate. In Chandola (2003) longitudinal weights are used in a balanced panel estimating subjective health. However since weights limit the number of individuals available to researchers by almost half, with 6000+ individuals in the un-weighted model and 3400+ in the weighted model. The authors run both models separately and present the findings simultaneously. Due to limitations of space, I cannot list two versions of each model. Differences between estimates in Chandola et al. (2003) are minor. In a separate study of class differences in health, Ki et al. (2013) use weights in

the descriptive statistics but drop weights for the main analysis; differences between the weighted and non-weighted samples are also minor.

One consensus is that weighted and non-weighted models should be compared and contrasted, if minor differences exist then research seem to favour non-weighted output because of the larger sample size that it provides. I opt to control for the survey year and add clustered standard errors for British models, which correct for repeated observations as used by Gesthuizen (2009). Having compared the models in the BHPS to weighted and non-weighted versions, I conclude that these are roughly similar. I present non-weighted models throughout the British chapter.

3.5.Summary

This section presented the methodology used to answer the research questions. I list the approach, discuss the sample, discuss the variables and consider analytical strategy. Obvious limitations exist in the proposal outlined here, but I address each in turn. Five key decisions should be summarised at this point. First, regarding the sample, I opt to use a semi-balanced panel allowing workers to miss a single observation. This is an effort to increase the number of mobility observations, which are rare events. A strongly balanced panel limits the number of observations in the mobility categories. An unbalanced panel increases the chances of long term unemployed workers moving into the panel periodically. Second, job mobility categories do not cross over perfectly in both panels. However, I consider German intra-firm movements as a valid mobility type after some basic checks. The respondents who experience the move have on average several years of tenure with the firm. Further the reference category same job same employer, has a high rate of occupational fidelity (Table 3.10), meaning intra-firm promotions are not "slipping into" the reference category. Third, regarding outcomes, I transform linear subjective outcomes into z-scores. In this way, each measures becomes

more comparable, as satisfaction scores run on a similar range of 1 to 2 standard deviations from the mean (in z-scores this is 0). Regarding controls, I take the majority of the control variables from the Cross National Equivalence Files contained in each panel. Firm size and education qualification are not directly comparable. I collapse these variables into simpler measures. Fourth, I estimate the impact of job mobility using fixed-effects linear regression instead of ordinary least squares regression. This method removes the problem of unobserved heterogeneity. Since job mobility is a non-random event, person-specific characteristics are likely correlated with the job mobility variables. Lastly, I use longitudinal weights in the SOEP data, and clustered standard errors in the BHPS data. The longitudinal weights in the BHPS limit the sample size greatly and consider only the original sample from 1991.

Before turning to the main analysis, I summarise the rate of mobility, the shape of outcomes, and the main institutional differences in Germany and the UK. This analysis sets up the main empirical chapters with a background discussion of mobility, outcomes, and institutions.

4. Mobility, Outcomes, and Institutions

The literature review (p 12) outlined a number of gaps in the job mobility discussion, both stem from the complexity of treating job mobility as driven by utility. Taking this line assumes that countries with lower mobility rates are countries with fewer opportunities. This chapter offers a preliminary look at mobility types, outcomes, and institutions. It also presents the first argument; the UK's high rate of mobility, especially VM, is a consequence of varied outcomes and rewards. Germany's low rate of mobility is instead the consequence of a predictable labour market in terms of outcomes. British workers may be using mobility to improve outcomes in an unpredictable (or at least, a varied) market, or to correct for job mismatch. German workers may be moving less because conditions are standardised and the "premium" (OECD, 2010) tied to change is lower. This is not to say that the rewards tied to mobility are better in the UK than Germany, the argument is that outcomes are less predictable in the UK.

Authors often cite Employment Protection Legislation (henceforth EPL) as the key to understanding country differences in mobility rates (OECD, 2010). However, the main source of country differences is the rate of VM in Germany and the UK, where respondents choose to leave themselves, or to take a promotion offered by an employer. Both countries have surprisingly similar rates of IVM, but different measures of EPL. It may be that structured wage bargains and coordinated working conditions shape mobility as much as, if not more than, EPL.

The chapter is structured as follows; it first considers mobility types, listing the frequency, type, and commonality of job changes using cross-sectional and longitudinal data. Second, it discusses the outcomes used in this work, thinking of the longitudinal sample alone. Outcomes are considered for both panels, measuring their variance

between and within respondents. Last, it explores the macro-indicators that shape British and German labour markets. Authors exploring country differences in job mobility often cite "institutional differences". Less often they separate the factors shaping mobility, and the factors shaping outcomes. Here, Germany's role as the coordinated market, and the UK's role as the liberal market are illustrated for clarity.

The chapter presents four findings that support the argument and present the key puzzles for subsequent chapters. First, mobility types differ. In both countries, most movement is the product of workers moving "voluntarily" between employers, a smaller portion move voluntarily within employers. Second, there are few differences between workers in chances of mobility. Men and women are equally likely to experience basic mobility (defined simply as moving jobs), and are equally likely to experience VM and IVM (in both countries). There is an education effect, but this applies to the UK alone, not Germany. Third, there is an institutional context to mobility, the UK is more mobile than Germany, but this difference is the product of voluntary mobility alone. Fourth, outcomes in the UK are less predictable than outcomes in Germany. Pay and working conditions vary less between-worker in Germany than in the UK. More importantly, outcomes vary less throughout an average German worker's time in the labour market, when compared to an average British worker's time in the labour market. The section below begins the discussion, summarising the frequency of mobility in both panels.

4.1.Mobility Types

This section uses cross-sectional and longitudinal data to illustrate job mobility in both panels. The sections consider cross-sectional data, listing the observations which capture mobility, and panel data, exploring respondents who move and how often they move.

4.1.1. Cross-sectional data

The EU-SILC[8] (Survey of Income and Living Conditions), the BHPS, and the SOEP all contain measures of mobility, which are further split into voluntary and involuntary types. This section compares mobility in the EU-SILC with mobility in the country specific chapters. The survey is only used in a minor portion of this chapter to illustrate the rate of change in Germany and the UK. Both panels capture the same patterns of mobility as that caught by the EU-SILC, and both countries have distinct patterns.

The EU-SILC asks respondents if they experienced a job change in the last 12 months (PL160), for a given year. Only those in employment answer the question, meaning the sample considered is similar to that of each panel. The data for Germany and the UK runs from 2005-2013. However, both datasets are incomplete and contain missing years. 2006 data is missing for Germany, and 2008 data is missing for the UK. The basic rate of mobility is listed below for Germany and the UK (EU-SILC), along with the same rate for the individual panels (The BHPS and the SOEP).

[8] The EU-SILC is the European Survey of Incomes and Living Conditions, a European wide survey covering, earnings, labour market situation, and demographics.

Table 4.1: Basic Job Mobility in Germany and the UK (1990-2013). Cross-sectional data using cross-sectional weights.

	Basic Job Mobility		Basic Job Mobility	
	EU-SILC DE (1)	EU-SILC UK (2)	SOEP (3)	BHPS (UndSoc) (4)
1991				18.1%
1992				18.1%
1993				20.0%
1994			8.5%	21.2%
1995			9.5%	24%
1996			9.6%	21.7%
1997			9.0%	24.6%
1998			8.8%	25.3%
1999			8.7%	23.3%
2000			9.9%	25.3%
2001			9.7%	24.%
2002			8.4%	22.7%
2003			7.6%	22.6%
2004			6.7%	21.1%
2005	6%	23%	6.3%	21.6%
2006		24%	6.0%	13.2%
2007	7%	17%	7.6%	16.5%
2008	8%		8.0%	14.1%
2009	7%	13%	8.5%	
2010	9%	13%	7.4%	
2011	9%	12%	6.3%	6.1%
2012	10%	7%	6.7%	6.0%
2013	9%	8%		6.6%

Columns 1 and 2 in Table 4.1 list the rate of mobility in the EU-SILC. Germany's rate (column 1) remains stable, showing a consistent series with little variance. Mobility is predictable and affects between 6% and 10% of the population. In the UK (column 2) the rate is less predictable, peaking in 2006, before falling from 2009. Overall, the UK rate fluctuates, but the German one remains stable. For Germany, even the European debt crisis[9] does not seem to affect mobility. Market uncertainty may affect the UK's pattern of mobility, since the country experienced a longer economic recession than Germany. The rates in the EU-SILC (columns 1 and 2) reflect those in country specific individual panels (column 3 and 4).

The German SOEP[10] data runs 1994-2012 (column 3), mobility remains stable throughout. It peaks in 2000 at 9.9%, but declines slightly in 2011 to 6%; a similar

[9] The European debt crisis is defined as the period from 2008 where several European states struggled to repay and refinance government debt due to complications in global financial markets.

[10] The data is cross-sectional and considers all employed respondents who experienced a change of job since they were last interviewed. The rate is weighted using cross-sectional weights.

pattern emerges for the UK. The BHPS[11] runs from 1991-2008 (column 4), the missing years are filled using the BHPS cohort of the Understanding Society panel, which absorbed the BHPS in 2009. The British rate is less stable, peaking at 25% in 1998 before declining to 6% in 2011. A change occurs after the European debt crisis of 2008, suggesting mobility relies on market confidence. The BHPS rate (column 4) matches the EU-SILC data for the UK (column 2); even the decline in mobility after the mid 2000's emerges in both datasets. This suggests both panels are capturing a similar underlying trend.

Table 4.1 lists only the basic rate of job mobility, yet the concept is more nuanced. Table 4.2 unpacks the rate further, splitting mobility into voluntary and involuntary types. Since the German panel (SOEP) cannot distinguish between voluntary and involuntary mobility within the firm (as explained in Chapter 3: Methodology), the rate is likely underestimated. The SOEP thus captures only "voluntary" changes between employers. However, the EU-SILC contains a representative sample of voluntary and involuntary change for both countries.

[11] The data is cross-sectional and considers all employed respondents who experienced a change of job since they were last interviewed. The rate is weighted using cross-sectional weights. The purpose of the Understanding Society sample is to "complete the picture" of mobility trends in the UK, I do not use the data in any subsequent analysis.

Table 4.2: Voluntary and Involuntary Mobility rates- split by EU-SILC, BHPS, and SOEP (1990-2013).

	Voluntary change		Involuntary change		Voluntary (quits and promotions)		Involuntary (demotions and redundancies)	
	EU-SILC DE (1)	EU-SILC UK (2)	EU-SILC DE (3)	EU-SILC UK (4)	SOEP (5)	BHPS (UndSoc) (6)	SOEP (7)	BHPS (UndSoc) (8)
1990								
1991						10.5%		2.8%
1992						11.8%		2.1%
1993						13.6%		2.7%
1994					3.6%	14.8%	3.3%	2.6%
1995					4.1%	16.3%	3.5%	2.9%
1996					4.1%	14.8%	3.7%	2.6%
1997					3.5%	17.1%	3.5%	2.8%
1998					3.6%	17.0%	3.4%	3.4%
1999					6.7%	14.3%	2.8%	2.9%
2000					7.6%	15.7%	2.1%	3.0%
2001					5.8%	15.0%	3.7%	2.5%
2002					4.8%	14.3%	3.4%	2.6%
2003					4.1%	14.3%	3.4%	2.5%
2004					3.0%	13.2%	3.6%	2.2%
2005	2.0%		3.2%		2.6%	13.8%	3.6%	2.3%
2006					2.5%	8.3%	3.4%	1.7%
2007	2.5%		2.9%		3.7%	9.7%	3.9%	1.9%
2008	3.1%		3%		4.4%	8.9%	3.6%	1.6%
2009	2.9%	4.4%	2.7%	3.4%	4.6%		3.8%	
2010	2.6%	4.2%	2.8%	3.3%	3.5%		3.7%	
2011	3.3%	4.2%	3.0%	3.0%	3.3%	3.1%	2.8%	1.1%
2012	3.9%	3.0%	2.9%	1.5%	4.0%	3.3%	2.6%	1.1%
2013	3.4%	3.9%	2.7%	1.5%		3.9%		1.1%

In the UK, VM (column 2) is more common than IVM (column 4), although differences within the EU-SILC are small. 4% of employed respondents change jobs voluntarily in a given year, and between 1.5% and 3% of respondents change jobs involuntary. Looking at Germany, VM (column 1) and IVM (column 3) are equally common. 3% of respondents move for voluntary reasons, and 3% of respondents move for involuntary reasons according to the EU-SILC.

The country-specific panels show a similar pattern, although VM is more pronounced in the SOEP panel. In the UK VM (column 6) is more common than IVM (column 7). The former is declining over time and converging with the German rate (column 5). In Germany VM (column 5) is more common than IVM (column 8), although the difference is minor. Persistent differences exist between countries. Voluntary changes outnumber involuntary changes at a rate of approximately 7:1 in the UK's individual panel. In Germany's panel, the ratio of VM to IVM is almost 1:1.

Comparing mobility types in both countries, VM is the mode with IVM being less common. There are similarities in the rate of German IVM (column 7) and British IVM (column 8), but the difference between countries lies in their rates of voluntary mobility. As a final point, Table 4.3 investigates mobility between and within firms in both countries. The EU-SILC is no longer used, as it does not distinguish between inter and intra-firm change.

Table 4.3: Mobility rate: inter-firm and intra-firm (BHPS & SOEP 1990-2012).

	Inter-firm (new employer)		Intra-firm (existing employer)	
	SOEP (1)	BHPS (2)	SOEP (3)	BHPS (4)
1990				
1991		10.5%		8.6%
1992		8.3%		10.2%
1993		9.5%		10.6%
1994	5.5%	12.0%	0.7%	9.4%
1995	6.3%	12.5%	0.8%	11.7%
1996	6.1%	12.5%	0.8%	9.6%
1997	5.3%	14.7%	0.8%	10.3%
1998	5.3%	14.8%	0.8%	10.7%
1999	7.4%	14.0%	0.7%	9.6%
2000	7.6%	14.9%	0.8%	10.4%
2001	7.5%	14.0%	0.7%	10.1%
2002	6.1%	13.1%	0.8%	9.8%
2003	4.9%	12.7%	0.6%	9.8%
2004	4.09%	12.28%	0.80%	9.0%
2005	3.9%	12.4%	1.6%	9.3%
2006	3.6%	12.2%	1.5%	1.0%
2007	5.2%	15.5%	1.7%	0.7%
2008	5.5%	13.4%	1.9%	0.7%
2009	6.0%		1.9%	
2010	6.1%		1.7%	
2011	5.1%		1.5%	
2012	5.4%		1.5%	
2013				

Voluntary mobility may be more common, but it is worth asking where the change takes place. Starting with Germany, the rate of inter-firm mobility (column 1) is far greater than the rate on intra-firm change (column 3). Most of the movement in the German labour market occurs between firms (4%-7%); workers are less likely to move with the same employer. This rate remains low until increasing in 2005 to 2%.

In the UK, inter-firm mobility (column 2) is larger than intra-firm change (column 4). Inter-firm mobility stands at roughly 12% each year. Intra-firm mobility remains steady before dropping suddenly in 2006 to a low rate of 1%. This sharp fall is not noted in the

BHPS literature. It does not appear to be a data issue, as the EU-SILC also catches a gradual decline in voluntary movement seen in the previous table. This is likely reflecting a real decline in intra-firm changes.

Considering the three charts above, the mobility regimes described by DiPrete et al. (1997) and explored by the OECD (2010) begin to emerge. VM is more common than IVM in both countries, and movement between employers is also more common than movement within a firm. Most importantly, a country difference exists not in the rate of mobility, but in the rate of voluntary mobility alone. This is a key point, relevant to the argument of the thesis. As noted by DiPrete et al. (1997), individualised markets (like the UK), contain larger hierarchies within the firm, leading to more intra-firm movement. They are also more turbulent, leading to more inter-firm mobility. By contrast, collectivist markets (like Germany); contain flatter organisations with fewer middle level managers and supervisors. Hence, these regimes contain less intra-firm mobility. They also contain less turbulence, and as a result, less inter-firm mobility.

One issue with the tables above is that they track observations, not workers. This raises a number of questions. The UK "is more mobile", does this mean more respondents are moving? Or does a core group move frequently? In Germany, do fewer respondents move? Or does the same core group simply move less often? The next section uses the panel data discussed above to consider these questions. I consider the commonality of mobility within workers.

4.1.2. Panel data

The tables above consider mobility as a cross-sectional sample, but this cannot capture repeated moves by the same respondents. Subsequent chapters use semi-balanced panels, which follow respondents over time. Both panels cover the same period, 2000-2008. Table 4.4 lists the rate of basic mobility in each panel, unpacking the rate between

and within respondents. The table shows which respondents are moving, and how often the average respondent moves.

Table 4.4 lists both panels, Column 1 lists the number of respondents (not observations) who experienced job mobility at least once over the 9 year period. Column 2 lists the percentage of respondents with at least a single job move. The last column summarises the frequency of mobility, for an average respondent. This column captures how many periods contained a job change for an average respondent over 9 years. The output is divided this way because it shows the number of respondents (rather than just observations) who move at least once during the 9 year period, and importantly, shows the average number of changes for an average respondent.

Table 4.4: Basic rate of mobility in each panel, listed between respondents, within respondents, and observations overall. (BHPS & SOEP 2000-2008).

German Socio-Economic Panel Survey	**Between (1)**	**(2)**	**Within (3)**
	Freq.	Percent	Percent
No Change	4444	100	95.94
Basic Job Change	1006	22.64	17.95
Total		N=4444	
Great British Household Survey	Between		Within
	Freq.	Percent	Percent
No Change	3781	99.97	83.17
Basic Job Change	2503	66.18	25.47
Total		N=3782	

Columns 1 & 2 consider mobility differences between workers. In Germany, 23% of respondents changed jobs at least once. In the UK 66% of the panel changed jobs at least once. Taking movers and non-movers into account, in Germany "the majority" of the panel contains non-movers, at least for the period under observation. In the UK, the majority is that of movers. Lastly, column 3 gives insight into how often moves occur

within an average respondent. In Germany, an average respondent will have moved in 18% of the periods under study (9 waves). This means throughout the 9 waves a respondent will move 1.6 times. In the UK, an average respondent will have moved in 25% of the periods under study i.e. 2.25 times over 9 waves. Thus, in the UK *more people move more often* than in Germany. Germany contains *fewer movers moving less often*.

A weakness in comparing basic rates of mobility is that they provide an incomplete picture of movement. While the mobility rates in Table 4.4 are greater in the UK than Germany, they offer little regarding the nuance behind mobility. As discussed previously, country differences are mostly differences in the rate of VM, with little difference in rate of IVM. A similar pattern emerges in the semi-balanced panel, captured in Table 4.5.

Table 4.5: Voluntary and involuntary mobility in each panel; split between respondents, within respondents, and overall (BHPS & SOEP 2000-2008).

German Socio-Economic Panel	Between (1)	(2)	Within (3)
	Freq.	Percent	Percent
Same job	4444	100	95.93
Changed employer, voluntary	638	14.36	16.44
Changed employer, involuntary	311	7.00	13.92
Changed employer, other	6	0.14	15.97
Changed job, kept employer.	221	4.97	14.27
Total	N=4444		
British Household Panel Survey	Between		Within
	Freq.	Percent	Percent
Same job	3781	99.97	83.17
Changed employer, voluntary	1238	32.73	17.68
Changed employer, involuntary	418	11.05	13.11
Changed employer, other	726	19.2	14.05
Changed job kept employer, voluntary	1120	29.61	16.89
Changed job kept employer, involuntary	84	2.22	13.29
Changed job kept employer, other	436	11.53	14.11
Total	N=3782		

I develop the analysis presented in Table 4.4 by unpacking mobility beyond "basic change" to include voluntary and involuntary change, between and within firms. This is presented in Table 4.5 and contains a lot of detail.

In Germany, 14% of all respondents moved to a new employer for voluntary reasons on at least one occasion (column 2). Only 5% of all respondents changed jobs within the firm, this is most likely a voluntary internal change since the majority of mobility events are voluntary. In comparison, 32% of all UK respondents changed firms for voluntary reasons at least once, a far higher rate. A further 30% of respondents changed jobs voluntarily with the same firm at least once. Thus a greater portion of respondents experience voluntary change in the UK when compared to Germany. The difference

between countries is narrower in measures of IVM. In Germany, 7% of respondents changed employers involuntarily at least once. The UK rate is 11%. I ignore the other mobility types, as they are less relevant at the moment.

Column 5 summarises the frequency of each mobility event for the average person. Workers in Germany typically see one voluntary change during the period under observation. Within respondents, voluntary inter-firm change and intra-firm change are most likely. In the UK voluntary changes within, and between firms are most common within respondents (most likely to occur multiple times to a respondent in the years covered.) Table 4.5 confirms a previous finding. VM is more common in the UK than Germany. Respondents in the UK are more likely to experience VM than those in Germany. Lastly, British respondents are more likely to see multiple voluntary changes than German respondents, although the difference is minor. In sum, more British workers move voluntarily more often, than German ones. Differences in involuntarily mobility are slight. More importantly, British workers do not move involuntarily any more often than German workers.

This section confirms that the major difference between the two countries is the product of different rates of VM. Thus the mechanisms behind involuntary changes are similar in Germany than they are in the UK. Employment Protection Legislation dictates the rates of hiring by employers, but more often protects workers from unfair dismissal. The charts above show that rates of dismissal are comparable. Worker "choice", to move or remain, is far more prevalent in country differences. In order to illustrate the importance of "serial changers" further, I calculate the number of respondents with two or more mobility "events" during the nine-year panel. I list this rate in Table 4.6.

Table 4.6: Portion of respondents with none, one, or two or more changes (BHPS & SOEP 2000-2008).

Serial mobility	BHPS Freq.	BHPS %	SOEP Freq	SOEP %
0	1,279	33.8	3,438	77.4
1	991	26.2	628	14.1
2+	1,512	40.0	378	8.5
Respondents	N=3,782		N=4,444	
Observations	n=32,560	100	n=38,687	100

In the UK 33% of all respondents do not experience movement even once. This rate is 77% for Germany, where the majority do not change jobs during the 9 year period. 26% of UK respondents change jobs once between 2000 and 2008, while only 14% of German respondents do. Lastly, 40% of British respondents change jobs on 2 or more occasions, while only 8% of German respondents experience 2 or more changes. The mode in the UK is the group of respondents who move at least twice. The mode in Germany is made up of people who do not move at all. Not only does the UK (a liberal market economy) have higher rates of mobility than Germany (a coordinated or collectivist country), but the number of respondents who experience mobility is also higher, and the likelihood that respondents will move more than once is higher.

4.1.3. Differences between workers

Mobility differs by institutional structure, but surprisingly contains few differences between workers. This section considers the difference between genders and educational groups. As mentioned throughout the methodology, the design of the sample means that only the core workforce is considered. Since women are disproportionately likely to balance both professional and caring roles, the sample likely underestimates their mobility, since it captures only those women who remain a part of the core workforce. Since lower educated workers will find it hard to compete in the market, they are also likely to be underrepresented in the sample. For brevity, I do not

explore if these patterns change over time, but rather list the gender and education differences in both countries. The UK is the more "competitive" labour market, Germany is the more "egalitarian" labour market, although certain inequalities exist (particularly tied to gender and the male breadwinner model) (Esping-Andersen, 2013). If VM is a tool for improving working conditions in an unpredictable labour market, the most advantaged groups will use this tool more (as laid out in *attainment theory* Sørensen (1977)). This is explored in Table 4.7. I consider data from EU-SILC as well as the country panels.

Table 4.7: Basic Rates of Mobility by Gender and by Education (EU-SILC, SOEP, and BHPS)

	EU-SILC DE	EU-SILC UK	SOEP	BHPS
Male mobility rate	7%	14%	9%	21%
Female mobility rate	8%	15%	10%	21%
Basic	8%	11%	9%	17%
Secondary	8%	15%	10%	23%
Third level	7%	15%	10%	27%

The gender rates of mobility are listed in the first two rows. The education rates are listed in the last three rows. Neither country contains a gender difference in the basic rate of mobility; men and women are equally likely to change jobs. As mentioned, the UK has a higher rate of job changes in both the EU-SILC and the national panels. Regarding education groups, Germany shows no educational differences, both in the EU-SILC and the SOEP panel. However, the UK rate varies by education; respondents with a basic education are least likely to change jobs compared to those with a secondary or third level education. This effect emerges in the EU-SILC and BHPS, suggesting British workers with a third level or secondary level education are more mobile than those with a basic level qualification. Germany's labour market, with a smaller emphasis on individual resources, contains similar chances of moving for each education group (Mills et al., 2006b). Again, Table 4.7 considers mobility without nuance. The section below considers the rate of VM and IVM in each country by gender

and education (Table 4.8). I separate the rate by gender first, and by education second. Gender differences are minor in each dataset, with men and women equally likely to change jobs for voluntary and involuntary reasons. Women are neither more nor less prone to voluntary or involuntary changes than men. However, a difference in education emerges again.

Table 4.8: Voluntary and involuntary mobility by Gender, and Education (EU-SILC, SOEP, and BHPS)

	EU-SILC DE (Voluntary) (1)	EU-SILC DE (Involuntary) (2)	EU-SILC UK (Voluntary) (3)	EU-SILC UK (Involuntary) (4)	SOEP (Voluntary) (5)	SOEP (Involuntary) (6)	BHPS (voluntary) (7)	BHPS (involuntary) (8)
Male mobility rate	3.2%	2.9%	4%	2.7%	4.1%	3.5%	13.85%	2.71%
Female mobility rate	3.2%	2.8%	3.7%	1.9%	4.7%	3.3%	13.22%	2.33%
Basic Ed	3.30%	3.12%	1.68%	1.87%	3.47%	3.3%	9%	2.3%
Secondary Ed	3.19%	3.32%	3.77%	2.41%	4.78%	3.6%	14.8%	2.7%
Tertiary Ed	3.22%	2.31%	4.7%	2.35%	4.88%	3.0%	18.6%	2.9%

Table 4.8 suggests education does not affect mobility in Germany. Looking at the EU-SILC data, each category of education is equally likely to move for voluntary reasons (column 1). Roughly 3% of all observation captures a voluntary move. There is a small education effect regarding involuntary moves (column 2), those with a third level education are the least likely to change jobs involuntarily, but this difference is likely insignificant. The remaining categories (basic and secondary) remain similar at 3% of all observations. Looking at the German SOEP panel, the results are similar. There is a minor difference in the column for voluntary moves (column 5). Respondents with a third level education are the most likely to change for voluntary reasons, but this is minor and likely insignificant.

There is an educational difference in chances of voluntary change in the UK. Looking at the EU-SILC sample, third level educated workers are the most likely to experience a voluntary change (column 3), followed by workers with a secondary level education, and lastly those with a basic level education. Regarding involuntary changes (column 4), respondents with a third level education are also most likely to experience the event, possibly because they are most mobile. However, the differences between education groups for IVM are small and likely insignificant.

In the country specific panel (BHPS), voluntary changes (column 7) are most common among those with a third level education, followed by secondary educated workers, and lastly by primary educated or workers with a basic education. The rate of mobility change among third level educated workers is twice that of those with a basic education. Regarding involuntary changes (column 8), no education effect emerges, and each education group has a roughly equal chance of seeing an involuntary change. This suggests that education is an important variable in the UK, but not in Germany. The education difference exists in a highly mobile labour market, but does not in a steady, coordinated one.

This chapter argues that mobility is a strategy for bargaining in the UK; third level educated workers may be better able to navigate the market compared to other groups. In Germany, mobility may bring fewer rewards, and therefore bargaining is unnecessary because working conditions are standardised. In order to show this, I now compare pay and working conditions in the UK and Germany, paying particular attention to the way in which outcomes differ between and within workers.

4.2.Outcomes

The UK is a mobile labour market where respondents move voluntarily. Germany is a less mobile labour market where workers move voluntarily less often. Mobility rates

may be shaped by their relationship to outcomes, if this is the case, outcomes should differ somewhat by mobile and immobile labour market (Ebbinghaus and Manow, 2004, Hall and Soskice, 2001). The coordinated nature of the German market sets standards for working conditions and pay at an industry level (Streeck, 2009a, Streeck, 2009b, Hall and Soskice, 2001). In the UK working conditions and pay are bargained between firms and individuals (Hall and Soskice, 2001, Pavlopoulos et al., 2014). This section outlines what this means for outcomes.

Table 4.9 lists the outcomes used in later chapters. The data was introduced in the methodology, but is discussed in more detail here. The observations are clustered by individuals in the panel. As a result they vary both between and within respondents. The table lists the average, standard deviation (between and within), minimum, and maximum values of each outcome for each panel. The Standard Deviation column is of most importance since it measures the variance of an outcome, between respondents and throughout a respondent's time in the panel. The smaller the measure, the more predictable an outcome is between and within respondents.

Table 4.9: Panel summary of outcomes (BHPS & SOEP 2000-2008); listing average and deviation between and within respondents.

German Socio-Economic Panel		Mean	Std. Dev.	Min	Max	Observations
gross monthly pay	overall	2,772.46	1,584.57	0.00	50,000.00	N = 34720
	between		1,463.56	0.00	18,479.56	n = 4339
	within		655.62	-10,477.54	39,022.46	Tbar = 8.00
Log of gross monthly pay	overall	7.80	0.52	5.03	10.82	N = 34686
	between		0.50	5.68	9.67	n = 4334
	within		0.17	5.77	10.59	Tbar = 8.00
z_worksatisfaction	overall	-0.01	0.95	-3.56	1.46	N = 38288
	between		0.68	-3.23	1.46	n = 4444
	within		0.66	-4.31	3.29	Tbar = 8.61
z_paysatisfaction	overall	0.00	0.95	-3.14	1.65	N = 38434
	between		0.75	-3.04	1.65	n = 4444
	within		0.59	-3.57	3.57	Tbar = 8.64
z_timesatisfaction	overall	0.02	0.94	-2.86	1.58	N = 38585
	between		0.72	-2.86	1.58	n = 4444
	within		0.61	-3.78	3.34	Tbar = 8.68
Weekly (hours)	overall	41.65	10.93	0	143.17	N = 38687
	between		9.22	8.75	88.26	n = 4444
	within		5.88	-20.52	119.87	Tbar=8.70

British Household Panel Survey		Mean	Std. Dev.	Min	Max	Observations
gross monthly pay	overall	1,808.98	1,322.11	27.32	72,055.43	N = 31147
	between		1,124.23	75.83	15,382.87	n = 3748
	within		683.84	-11,990.55	60,755.33	Tbar = 8.3103
Log of gross monthly pay	overall	7.30	0.67	3.31	11.19	N = 31147
	between		0.62	4.32	9.44	n = 3748
	within		0.26	4.15	9.69	Tbar = 8.3103
z_worksatisfaction	overall	0.00	1.00	-3.66	1.26	N = 31773
	between		0.67	-3.56	1.26	n = 3760
	within		0.74	-4.28	3.74	Tbar = 8.45027
z_paysatisfaction	overall	0.00	1.00	-2.92	1.38	N = 31765
	between		0.69	-2.92	1.38	n = 3760
	within		0.72	-3.67	2.95	Tbar = 8.44814
z_timesatisfaction	overall	0.00	1.00	-3.15	1.31	N = 31781
	between		0.70	-3.06	1.31	n = 3760
	within		0.72	-3.88	3.88	Tbar = 8.45239

Jbhrs (hours)	overall	35.02	9.73	0	99	N= 32396
	between		8.24	0	87.33	n= 3781
	within		5.25	-30.30	90.80	Tbar= 8.57

Table 4.9 contains three outcomes related to pay- gross monthly pay, the natural log of gross monthly pay, and pay satisfaction for both panels. The gross monthly pay of workers in Germany and the UK is listed in two separate currencies. I instead focus on the log-transformed measure of pay. The German average (7.8) is higher than the UK average (7.3), but more importantly the standard deviation of the measure is different in both panels. The deviation between workers in Germany is lower (0.5) than the UK's (0.62). This means that differences in pay *between workers* are more predictable in Germany than the UK. Another way of thinking about the measure above goes as follows; the differences between workers in Germany are smaller than the differences between workers in the UK. Thinking of the variance within-workers (in other words throughout an average respondent's time in the panel), the German measure of deviation is also lower (0.17) than the UK's (0.26). This too means that there are smaller differences in pay throughout an average German's time in the panel, compared to an average Briton's time in the panel. Thus, German pay is more predictable than the UK's, in measures of worker-differences, and in terms of differences for the average worker during a panel.

A subjective measure of pay provides further insight. The measure is a standardized z-score of satisfaction for both panels (the logic behind standardising the score is explained in section 3.3.2 on p 81). The differences between workers are wider in Germany (0.75) than they are in the UK (0.69). This is surprising since gross monthly pay in Germany is more predictable than it is in the UK. Thinking of how satisfaction varies for an average worker throughout the panel; satisfaction varies less in Germany

(0.59) than the UK (0.72). Throughout a respondent's career, their chance of seeing a change in satisfaction with pay is lower in Germany than in the UK. Thus, there are wider differences in satisfaction with pay between German workers. These differences also persist throughout an average worker's time in the panel more so for German workers than British workers. In a way, German satisfaction with pay is more persistent throughout the panel, than British satisfaction with pay.

Other outcomes contain similar patterns. Both Germany (0.68) and the UK (0.67) have similar differences between workers in terms of satisfaction with work. These measures are equal suggesting roughly equal differences between workers. Within workers, or throughout an average person's career, Germany (0.66) has a smaller deviation than the UK (0.74), suggesting an average German worker will see less variance in satisfaction with work over the nine year period than a British worker.

Satisfaction with working time is similar. Between workers, both Germany (0.72) and the UK (0.70) share a similar level of worker differences. However, within respondents, the average German worker will see less variance (0.61) over the nine years, when compared to the average British worker (0.71). In the UK, a worker's satisfaction with time will differ more, than in Germany.

Lastly, the table lists the actual weekly working hours for workers in both countries. Average weekly working hours are higher in Germany (40+) than the UK (35+). Between respondents, there are greater differences in Germany (9.22) than the UK (8.24) suggesting that working time is less predictable in Germany than the UK. For the average German respondent (5.88) working time is roughly as predictable as for the average British respondent (5.25). This suggests that working time is roughly equally predictable for the average worker in both countries.

In several measures Germany emerges as the more predictable labour market when compared to the UK. Pay, working conditions, and satisfaction with working time vary less between workers in Germany. More importantly, pay, working conditions, and working time vary less throughout an average German's time in the panel, compared to a British respondent working through a similar period. Workers in the UK may be mobile in an effort to improve their working conditions. In Germany, since working conditions vary less between firms or industries, VM may be less necessary, or at least may carry fewer returns. The varied pay and working conditions of the UK run parallel to higher rates of VM. The predictable pay and working conditions in Germany run parallel to a small rate of VM. I now turn to the institutional indicators which shape mobility and outcomes in both countries.

Authors often cite labour market differences in Germany and the UK, without listing the empirical differences in institutions (Pavlopoulos et al., 2014, Latzke et al., 2016, Schmelzer, 2010). After a review, Germany is labelled as coordinated, the UK is labelled as liberal (Hall and Soskice, 2001). The next section illustrates these differences using macro-indicators which shape mobility, and macro-indicators which shape outcomes. Both labour markets differ in the varieties of capitalism literature (Hall and Soskice, 2001, Thelen, 2014), below, these differences are observed and illustrated.

4.3.Institutional context

The findings above illustrate specific differences between Germany and the UK in terms of mobility and outcomes. Germany is a labour market with little mobility, although the most common change is voluntary inter-firm and intra-firm mobility. Parallel to this, outcomes vary less in Germany than in the UK, leading to pay and conditions that are more predictable, especially throughout an average worker's time in the panel. The UK is a labour market with higher rates of mobility, most of which is voluntary movement.

The UK also contains more varied outcomes, with less predictable measures of pay and satisfaction than Germany. This is especially for within respondent variance, throughout an average respondent's time in the labour market.

The aim of this section is to examine the institutional underpinnings of these two differences. Institutional factors shaping mobility are unemployment protection spending, subsidised work spending, Employment Protection Legislation, and barriers to entry and conduct for professions. Each of these measures differs for Germany and the UK. Further, this section considers demand-side factors which differ due to mobility rates but actually appear similar. These are the number of firms, the number of firm births, and the vacancy rates in each labour market. Because the countries differ by population, these are expressed as a rate per 1,000 workers. Institutional factors shaping outcomes are wage coordination, collective bargaining coverage, and union density. These too differ by country.

Measures like Employment Protection Legislation and occupational autonomy are linked to rates of mobility (Blossfeld and Hofmeister, 2006, Mills et al., 2006a). Levels of union density and wage coordination play a part in the individualised nature of outcomes, like pay and conditions (Streeck, 2009b, Streeck, 1997). Both countries resemble their typologies; Germany is a coordinated labour market with higher union power, strong employment protection where wages are set collectively. The UK is its near opposite, with low union power, low employment protection, and a system of individualised bargaining, where wages are primarily set at the individual level between a firm and its worker (Hall and Soskice, 2001, Ebbinghaus and Manow, 2004, Thelen, 2014). Both countries contain interesting similarities in supply-side indicators. One could expect rates of mobility to differ simply because there are more employers which workers can turn to in the UK, compared to Germany. Results show that the number of

firms in both countries is similar per 1,000 workers. Further the vacancy rate in both countries is also higher in Germany than the UK, despite a lower rate of inter-firm mobility. I discuss each set of indicators, starting with macro-indicators that shape mobility, before turning to macro-indicators that shape outcomes.

4.3.1. Institutional Measures Shaping Mobility

Using the theoretical framework of Mills et al. (2006b) this section considers three measures of labour market openness- spending on labour market benefits, spending on subsidised work, and the strength of EPL. It also considers a measure separate to the sketch, the strength of labour market entry into professions. This indicator is used as a measure of EPL specific to professions alone. The latter half of this section lists a number of demand-side indicators like vacancy rates and number of employers.

4.3.1.1. Unemployment Benefit

A country's spending on unemployment benefit will dictate the amount of time workers can spend looking for work.[12]. The series is listed in Figure 4.1. Countries that spend little will see large rates of labour market re-entry after unemployment. Countries with generous unemployment benefits see longer periods of unemployment duration (Fasang et al., 2007, Fasang et al., 2012, OECD, 2010). With this in mind, countries with low rates of unemployment benefit will see larger rates of (direct) IVM, simply because workers must gain employment quickly. Countries with low unemployment spending may also see larger rates of VM as workers try to pre-emptively leave precarious positions to avoid unemployment.

[12] Comparisons of unemployment benefit come from the OECD-STAN database. Data location: https://data.oecd.org/socialexp/public-unemployment-spending.htm. The series is labelled "PUBUNEMPEXP" and is expressed as a percentage of a country's GDP.

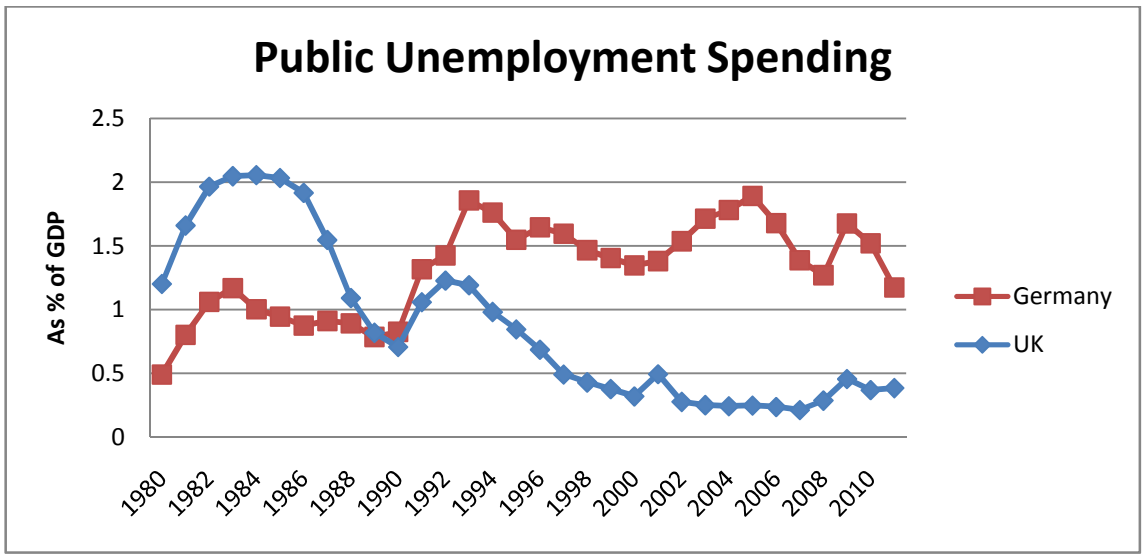

Figure 4.1: Public unemployment spending as % of GDP. Germany and the UK (1980-2015).

Germany spends a great part of its GDP on unemployment benefits compared to the UK. Germany's unemployment spending increased three times, in the early 80's, 90's, and 2000's. The rate remains at roughly 1.5% from the mid 1990's. Subsequent chapters focus on the pre-crisis period 2000-2008 during which, Germany saw an increase in spending, followed by a fall. Most importantly, Germany consistently spends more than the UK.

In the UK, public unemployment spending falls gradually. The rate peaks in the 1980's but declines throughout the 1990's and 2000's. By the early 2000's, the rate of spending on unemployment steadies to roughly 0.33%. In the early 1980s, the UK spends more on unemployment than Germany. Yet, both countries switch positions by the early 1990s. The UK avoids large spending on unemployment, instead encouraging workers to seek work in the market as quickly as possible. In Germany, generous spending supports workers until they can find similar work elsewhere. Since unemployment benefits are generous in Germany (Esping-Andersen, 2013) the state takes efforts to prevent employers from "dumping" workers into unemployment unless necessary.

The pattern of spending listed above is consistent with the political patterns in both countries. The rise of the conservatives in the UK in the 1980's brought about a long period of deregulation and a roll-back of the welfare state, which was not reversed under new labour in the late 1990's. By comparison, the German pattern of supporting the welfare state was set back marginally during the period of Hartz[13] reforms in the early 2000's.

4.3.1.2. Subsidised Work and Labour Market Investment

Large public sectors require large investment in subsidised forms of work[14]. The state as an employer needs labour market investment into public programmes and forms of employment. Typically the amount spent by the state on labour market programmes is indicative of how much the state is willing to subsidise work to prevent redundancy and layoff. Large spending correlates with larger public sectors, and lower mobility, especially IVM. Figure 4.2 compares the UK and Germany in terms of employment subsidies, which try to limit unemployment.

[13] The Hartz reforms were 4 sets of policy changes started in 2002, which were designed to modernize the German labour market. Changes ranged from the creation of "mini jobs" to the strengthening of vocational credentials.

[14] The data measuring labour market investment also comes from the OECD-STAN database. Data location https://stats.oecd.org/Index.aspx?DataSetCode=STAN08BIS. The series is labelled "PUBLMPEXP" and is expressed as a percentage of a country's GDP.

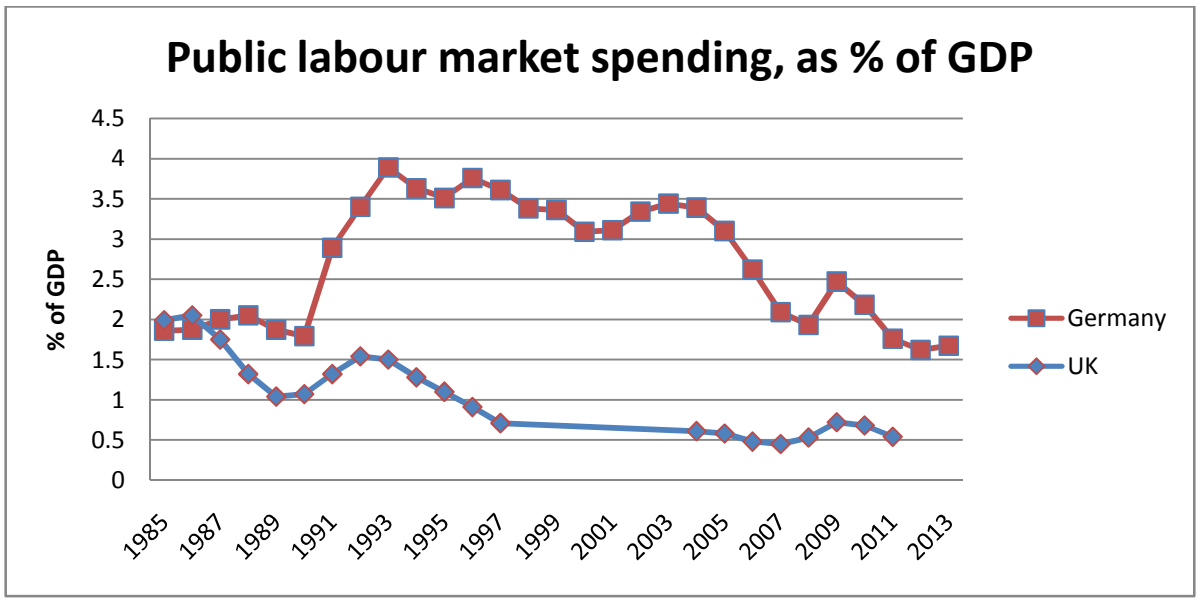

Figure 4.2: Public labour market spending as % of GDP. Germany and the UK (1985-2015)

Germany's rate of spending on subsidised work is roughly 2% of GDP during the 1980's. This increases during the 90's before falling to roughly 2% during the early 2000's. The rate's decline throughout the 1990's is gradual, but the fall seen in the early 2000's is likely the product of the Hartz reforms mentioned earlier.

The UK's rate of spending on subsidised labour also falls over time. From 1985 to 1990 the rate falls from 2% to 1%; falling further to half of one percent in 2013. The UK rate is consistently lower than the German rate. Thus, in Germany, the state will inhibit IVM by subsidising forms of work. This support is uncommon in the UK leading to larger rates of mobility, especially IVM.

4.3.1.3. Employment Protection Legislation

Countries differ in the freedom employer's have to hire and fire workers[15]. Countries with few limitations see more mobility (OECD, 2010). There are likely two reasons for

[15] I consider differences in employment protection using a comparable measure from the OECD database, which quantifies protections offered to permanent and temporary staff. Data location http://www.oecd.org/employment/emp/oecdindicatorsofemploymentprotection.htm The measures consider individual and collective dismissal (EPRC_v1), and workers on a temporary or agency contract (EPT_v1).

this. First, workers will move involuntarily due to redundancies and temporary contracts. Second, they will move for voluntary reasons, as workers try to find secure employment within and between firms. The measure is often presented as a key factor in explaining country differences in mobility rates (Mills et al., 2006b, Mills et al., 2008). It is illustrated in Figure 4.3 for the UK and Figure 4.4 for Germany.

The measure "EPRC_v1" considers the strength of protection for individual and group dismissals in a permanent contract. The measure "EPT_v1" considers the level of protection for temporary workers. Both range from strong (6) to weak (1).

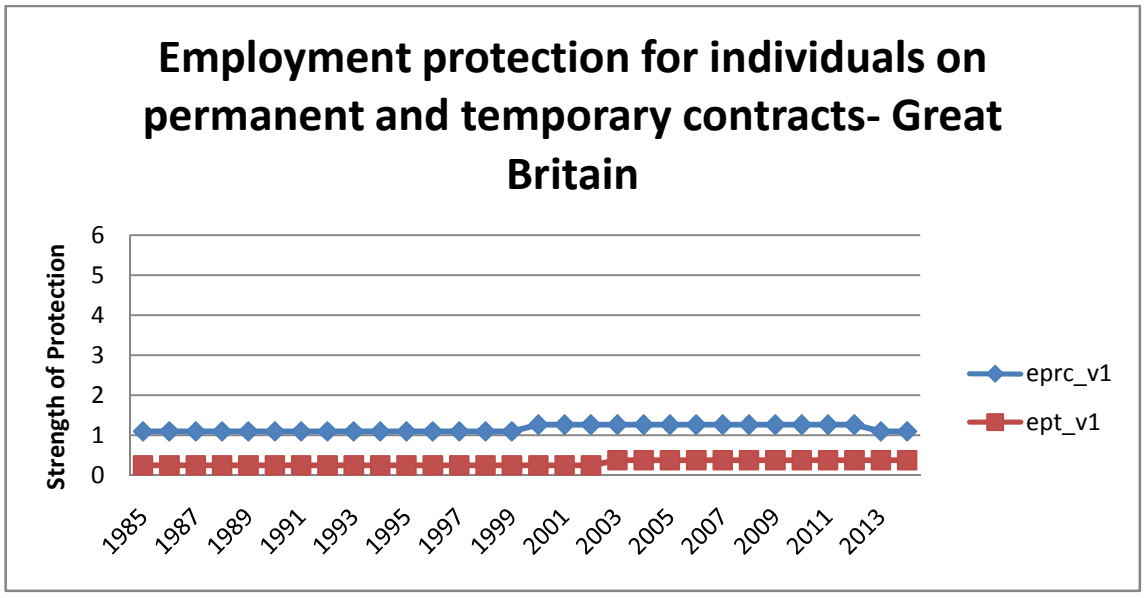

Figure 4.3: Strength of Employment Protection Legislation. (UK 1985-2015)

In the UK, employment protection is weak for all workers. Only a baseline form of protection is offered for permanent staff. This is consistent with the individualistic mobility regime prediction made by DiPrete et al. (1997), and the findings suggested by the OECD (2010). Temporary workers have no protection. Both rates do not evolve over time and remain limited from the mid 1980's onward, pointing to a deregulated labour market that underpins the high rate of mobility in the UK to a degree. Most importantly, the rate of protection does not change over the years, yet the rate of job

mobility in the UK has varied significantly as shown in previous tables. The relationship between protection and mobility may be over stated. Further, the rate of protection does not change, despite significant changes in British politics, moving from a strong conservative majority, to a (somewhat) liberal one and back again. The rate remains flat, seeing only a minor increase corresponding to Tony Blair's Labour government. This is reversed in 2012.

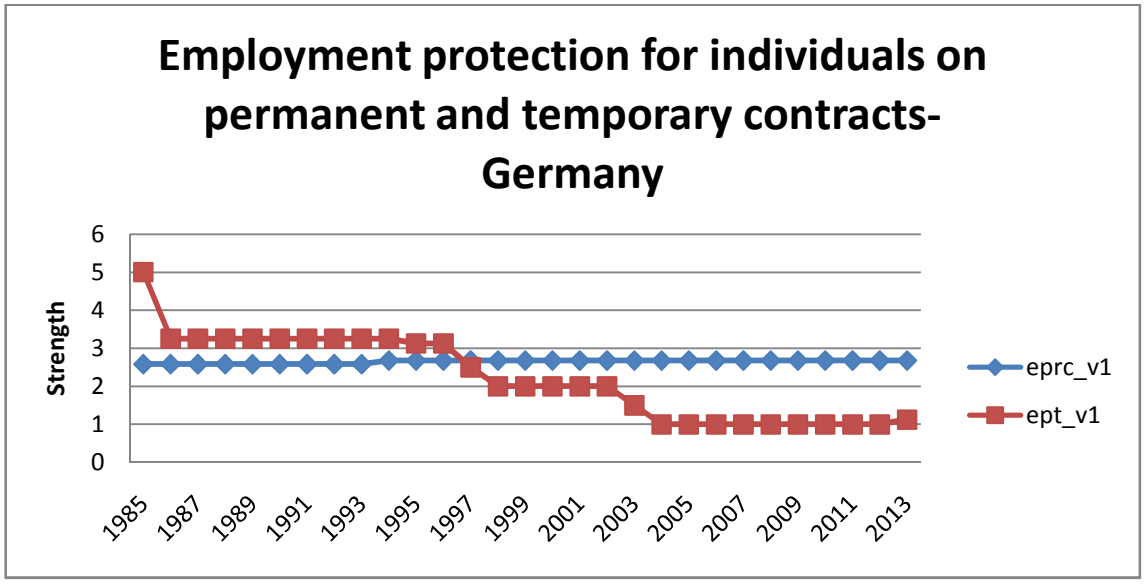

Figure 4.4: Strength of Employment Protection Legislation. (Germany 1985-2015)

In Germany, protection for individuals and groups in permanent work (eprc_v1) is reasonable. At the very least, it is higher than the UK's level of protection. For permanent workers, Germany maintains an average rate of protection. This rate does not change over time. For temporary staff, strong protection exists throughout the 80's and 90's. However, protection has gradually declined in order to make the market more "flexible". This is also likely the result of the Hartz reforms which pushed for greater flexibility in the labour market, especially through the use of mini-jobs (Lehndorff et al., 2009).

Comparing the two countries, the UK provides weak coverage consistently without change. Germany provides average protection consistently without change for

permanent workers. Germany protects permanent workers from individual and group dismissals more so than the UK. The OECD cites a negative correlation between mobility and Employment Protection Legislation. This is evident in the data above. The UK, a country with low protection for groups and individuals, has high rates of voluntary and involuntary mobility. Germany, a country with medium rates of Employment Protection Legislation, has minimal rates of job mobility between and within firms.

The persistence of each series is surprising. Employment Protection Legislation is cited as a key factor in understanding country differences in mobility, yet mobility rates differ while the strength of protection remains the same. Further, the differences presented here remain resilient over periods of great political change. The UK model of employment supposedly stood at important cross roads in the 1980's, 1990's, and 2000's (Rubery et al., 2009), yet the level of employment protection has not changed. Similarly, Germany's entire employment model is described as being in "upheaval" by Lehndorff et al. (2009), however, the level of protection remains unchanged for permanent core workers (although the chances of accessing permanent work may have changed over time).

4.3.1.4. Barriers to Entry and Barriers to Conduct

Lastly, I consider how the labour laws and policies that regulate the rate of entry and conduct of the classic professions, shape rates of mobility. This measure is a kind of EPL for professions. It considers those in law, engineering, finance, and architecture. The policies and the institutions which shape these professions will also regulate the rates of mobility for workers between and within firms. Professions, which have control over their occupation, are able to standardise their working conditions, making rewards predictable (Freidson, 1994). In this way, mobility is less necessary as conditions and

pay are typically standardised. Further, by controlling numbers within the profession, the group is able to limit the number of involuntary mobility and temporary forms of work. The OECD hosts the data[16] and considers 4 key professions; architecture, law, engineering, and finance. Further, the OECD-STAN database collects data on the regulation of professions, rating the barriers to entry, and the conduct regulations of lawyers, architects, engineers and accountants. To compare the employment protection "landscape" in Germany and the UK, I show the occupation-average regulation score for each country. Higher scores mean more regulation of entering a profession, or professional conduct. Lower scores mean less regulation of occupational entrance and conduct. Figure 4.5 lists the data, only the available years are listed.

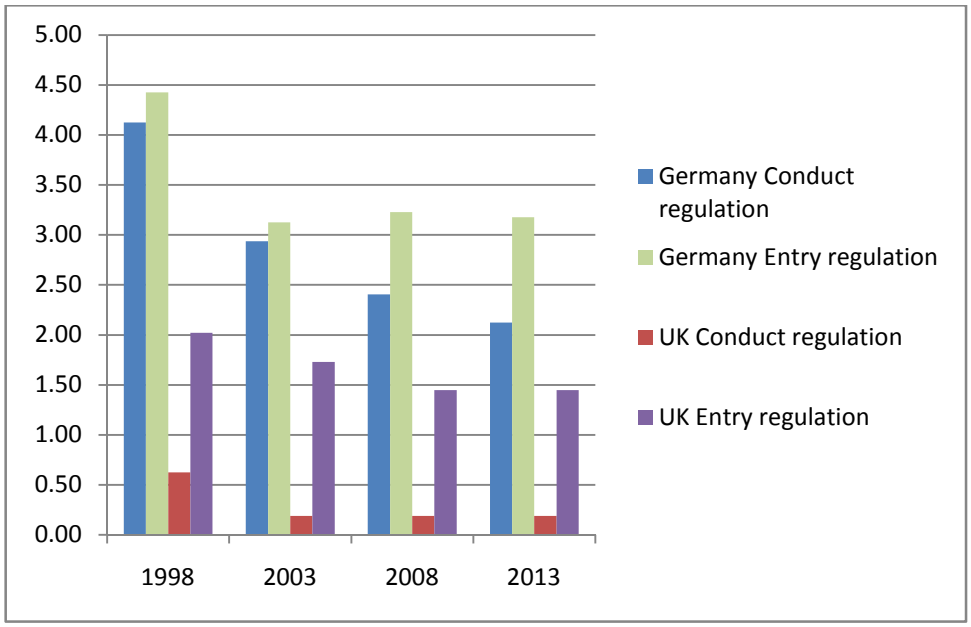

Figure 4.5: Entry regulation and conduct regulation of professionals (Germany and the UK 1998-2013)

Figure 4.5 shows clear differences between both countries. In the UK, entry into a profession has little regulation, which declines further over time. The UK contains almost no conduct regulation for professions. The index is low in each year, suggesting

[16] Data location http://stats.oecd.org/Index.aspx?DataSetCode=PROFSVC. I consider Conduct regulation and regulation of entry in the tables above. I consider the overall barriers for accounting, architecture, law, and engineering. The data is sampled at 4 points in time 1998, 2003, 2008, and 2013. It is cross-sectional

the state keeps a distance from professions operating in engineering, finance, law, and architecture. German entry regulation is high and remains steady after 2003. Germany's conduct regulation is also high, but declines gradually over time. Overall, the UK resembles a less regulated market for professions. Germany's market for professions appears more regulated, suggesting more protections for professional workers, and therefore a less mobile market. These rates reflect the rates of mobility found in both countries.

4.3.1.5. Vacancies and potential employers

This section considers the importance of demand-side factors. It could be that there are simply more firms for the average worker to choose from in the UK, hence its higher rate of mobility. British workers may be able to "shop around" before committing to a given employer. In Germany, fewer firms for the average worker could explain the lower rates of change, because workers simply have less choice. Eurostat's Business Demographic Statistics[17] offer insight into the demand for labour by gathering statistics on the number of employers in both countries. The table below lists the number of active firms in both countries for the earliest available years. Since the active population in both countries also differs, the table lists the raw number of firms, and the rate of firms per 1,000 active workers. Earlier data is not available, but the rate of firms in both countries appears roughly stable.

[17] The data can be accessed at http://ec.europa.eu/eurostat/statistics-explained/index.php/Business_demography_statistics. I focus on the rate of active firms, dividing these by the number of active workers in the labour market expressed in their 1000's.

Table 4.10: Number of active firms in Germany and the UK. Expressed as a number and as a rate per 1,000 active workers (2008-2014).

Active firms	2008	2009	2010	2011	2012	2013	2014
Germany	2,972,219	2,937,202	2,958,720	2,985,718	2,997,832	2,972,456	2,818,836
United Kingdom	2,157,830	2,109,620	2,013,225	2,027,600	2,054,940	2,126,775	2,218,955
Number of firms per 1,000 workers							
Germany	72.44	71.59	73.64	73.84	73.95	72.83	68.77
United Kingdom	70.59	68.79	65.52	65.53	65.95	67.87	70.37

Table 4.10 shows that there are more firms in Germany than in the UK by a significant margin, both in number and rate. Despite having a larger number of potential employers, there is still less VM in Germany than in the UK. Again, a more valid comparison may be to look at the rate of enterprises per 1,000 workers. Here too, Germany has a larger number of potential business sector employers per 1,000 workers than the UK (until 2014).

Although there may be more employers, these may be a part of the old, established, and closed labour markets, made up of senior companies with an established core. The UK may have a higher rate of firm births. More firm births means younger, more dynamic organisations which are more likely to hire staff quickly. This rate is also available in the Eurostat database. The rate is listed for both countries[18] below.

[18] The data can be accessed here http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Enterprise_birth_rate. I focus on the raw number of firm births, and the rate of firm births per 1,000 workers.

Table 4.11: Firm births in Germany and the UK (2004-2013). Expressed in raw number and in rate per 1,000 active workers

Firm births	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Germany	303,338	283,105	272,140	260,108	274,803	244,199	258,076	258,661	238,205	219,603
United Kingdom	271,250	265,545	256,600	299,170	280,380	212,835	210,950	234,495	242,400	311,845
Firm birth per 1,000 workers										
Germany	7.65	7.01	6.66	6.35	6.70	5.95	6.42	6.40	5.88	5.38
United Kingdom	9.27	8.98	8.54	9.89	9.17	6.94	6.87	7.58	7.78	9.95

Data source: Eurostat series "Business demography by size class (from 2004 onwards, NACE Rev. 2) [bd_9bd_sz_cl_r2]". Rate is calculated by dividing the number of firm deaths by the active population aged 16-64 expressed in thousands.

The data in Table 4.11 shows between 2004 and 2008 both Germany and the UK have a similar number of firm births, between 270,000 and 300,000. The UK overtakes Germany in firm births only in 2007 but both countries also differ in workforce size. In order to make the figures more comparable, they are converted firm births per 1,000 active workers. The UK rate is higher, but shows a difference of roughly 2-3 firm openings per 1,000 workers. This is despite a drastic difference in mobility rates, which does not fully explain the difference.

Both Table 4.10 and Table 4.11 challenge the assumption that differences in employee opportunities exist in both countries. It is true that there is a greater share of firm births in the UK than Germany, but the rate constitutes a difference of about 2 births per 1,000 workers. Further the number of enterprises per 1,000 workers is still higher in Germany than the UK. This suggests that workers have significant options in both countries, and the idea that workers are prevented from moving voluntarily in Germany is not convincing.

Third, the German labour market may be less mobile simply because there are fewer vacancies between firms, unlike in the UK where job vacancies may be more common. German employers may be averse to hiring new workers; hence the rate of quits is limited by the fact that there are few opportunities for workers to consider. In this way,

German workers who move voluntarily must compromise their expectations in terms of working conditions, whereas British workers are able to improve these, as they chose from more vacancies. This data is also collected by Eurostat's database, listing the vacancy rates in both countries[19].

Table 4.12: Vacancy rates in Germany and the UK (2000-2008)

GEO/TIME	2000	2001	2002	2003	2004	2005	2006	2007	2008
Germany (until 1990 former territory of the FRG)	3.8	3.1	2.9	2.5	2.2	3.2	3.8	3.5	3.1
United Kingdom		2.4	2.3	2.2	2.3	2.3	2.2	2.4	2.2

Both countries have comparable vacancy rates, and in several years the German rate of vacancies is higher than the UK rate. This suggests that vacancies for jobs tend to be higher in Germany than the UK throughout the 8-year period studied. Since job mobility between and within firms is higher in the UK, this suggests German workers have more vacancies to choose from but move less often than British workers. Thus the argument that British workers have more choice in the labour market is invalid. Germany contains higher vacancy rates and more employers to choose from per worker (roughly).

Although several measures above illustrate two separate "mobility regimes", mobility is said to be fuelled by its impact on outcomes. A key assumption is that mobility is driven by movement to better jobs with better outcomes. It is worth asking how countries differ in terms of institutions which shape outcomes.

4.3.2. Institutional Measures Shaping Bargaining

Beyond the high rates of mobility in the earlier tables, Table 4.9 shows the varied nature of outcomes in the UK, and the more predictable nature of outcomes in Germany. The

[19] The data can be accessed here http://ec.europa.eu/eurostat/statistics-explained/index.php/Job_vacancy_statistics. The vacancy rate is expressed as a percentage of all positions empty and occupied in a given year.

institutional measures above impact mobility, but many of the measures are designed to target involuntary mobility, like unemployment benefit levels. Although EPL may affect rates of voluntary movement, in that it will push workers to move voluntarily until they find secure work, this measure is designed with IVM in mind. However, institutional structures, which make rewards either more or less predictable, also affect rates of mobility. This is a key point, if workers are not rewarded for mobility, then rates of mobility should not occur according to *attainment theory*. Rewards stemming from VM are more likely in individualised markets.

The empirical measures used to show country differences are wage bargaining, union rates, and employee representation (Visser, 2011, Streeck, 1997, Hall and Soskice, 2001). This section considers each in turn. First, wage coordination measures the extent to which wage setting is individualised. Second, union coverage measures the inclusion rate of union agreements. Last, the rate of union density captures the rate of union members as a percentage of all wage earners.

4.3.2.1. Wage Coordination

The UK individualises wage bargaining, while Germany promotes group-based bargaining. This is illustrated best using ICTWSS (Visser, 2011) dataset which contains several measures of labour power for countries around the world. Wage coordination is also measured[20]. The measure is listed for both countries in Figure 4.6. The UK follows an "individualized" approach to wages and job protection. Germany is coordinated, balancing protection for permanent workers with central bargaining for wages.

[20] Data taken from the ICTWSS dataset as arranged by Visser et al (2011). The series is labelled "coord". It contains a scale ranging from "maximum and minimum wage rates set through centralised bargains" (5) to "fragmented forms of wage bargaining, confined to individual firms or plants" (1). Middle values capture nuance.

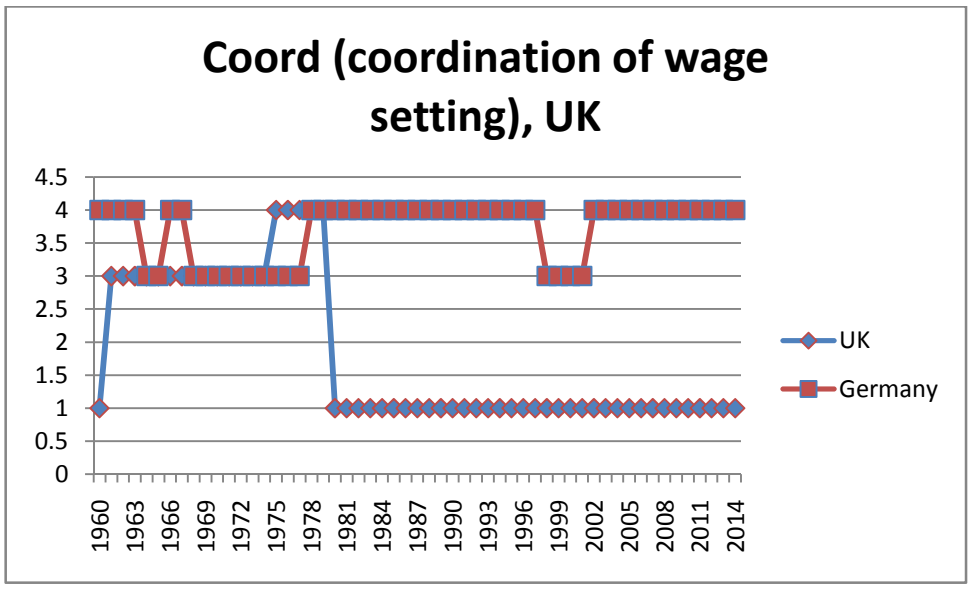

Figure 4.6: Visser (2011) measure, Coordination of wage setting (coord) Germany and the UK (1960-2015)

The variable measuring the strength of wage coordination (coord) ranges from 1 to 5. The smallest value (1) meaning "fragmented wage bargaining, confined to individual firms or plants". The highest values (5) meaning "highest or lowest wage rates based on centralised bargaining".

Germany maintains marginal wage coordination. The rate "dips" on three occasions, in the early 60's, late 60's, and early 2000's. This last decline coincided around the time of the Hartz reforms[21]. Authors argue that labour bargaining power was damaged by the changes (Lehndorff et al., 2009), although these appear resilient as Germany promotes centralised wage bargaining at the industry level.

In the UK, wage coordination falls in the early 80's to its lowest levels. Here, wage bargaining and negotiation happens at the baseline, individuals in firms. This is likely due to deregulation which took place throughout the period (Rubery et al., 2009). What is noteworthy is the fact that the UK has moderate levels of wage coordination in the 60's and 70's. After the 1980's coordination falls to basic bargains between individuals

[21] The Hartz reforms were 4 sets of policy changes started in 2002, which were designed to modernize the German labour market. Changes ranged from the creation of "mini jobs" to the strengthening of vocational credentials.

and their employers. Much of the nuance used to describe the New Labour government's approach to employment systems by Rubery et al. (2009) does not emerge in the chart above.

4.3.2.2. Collective Bargaining Coverage

Union coverage is the rate of workers covered by collective bargain agreements, expressed as a percentage of all salaried workers. This section compares union coverage in both countries, in an effort to show the impact of collective bargaining. Germany has greater coverage than the UK, although both rates are falling over time. The measure is an important variable in explaining the varied nature of wages and wage bargaining described above (Streeck, 2009b).

Union negotiators prioritise working conditions and stability for the workers. In certain countries, this coverage is bargained for union members alone, in others, the bargains cover wider groups, like an occupation or industry (Visser, 2011). In this way, when union coverage is high, workers can use "voice" to improve pay or conditions. Conversely, when coverage is low, workers use "exit" (changing employers) to improve pay or conditions. Figure 4.7 shows the two series for "union coverage".

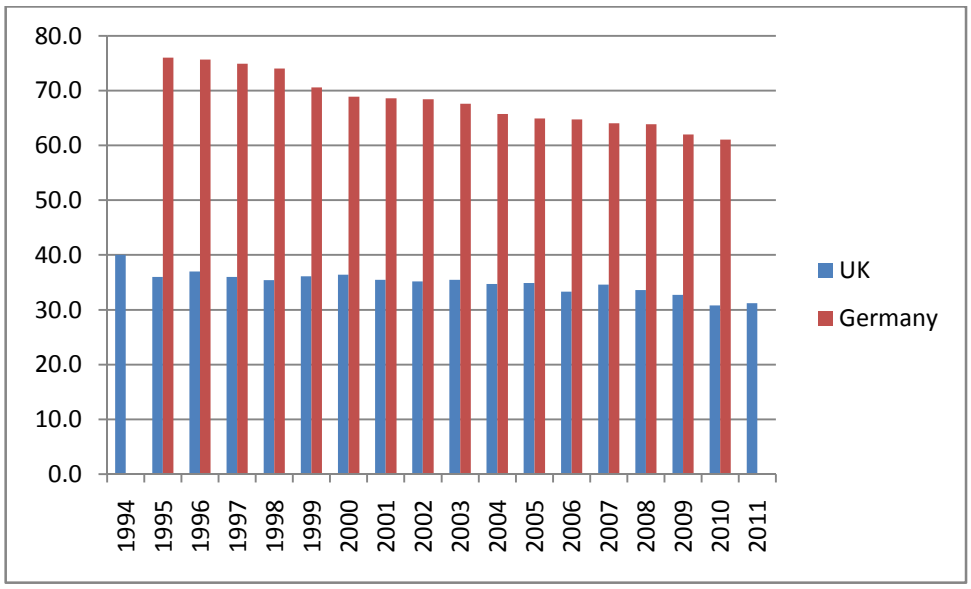

Figure 4.7: Union Coverage. Germany and the UK (1960-2015).

Although coverage declines over time, two features stand out. First, the UK contains less union coverage than Germany. Second, this difference is maintained for each year under observation. From the 1990's, collective agreements cover roughly 30% of the all salaried workers. Before this, there is a slow decline in coverage. Bargain coverage in Germany stays at 70% of all salaried workers throughout the 1990's. The rate continues to fall to 60% of all salaried workers. Overall, bargains cover more workers in Germany than in the UK. These bargains and collective agreements reduce individualisation of wage-setting, making outcomes predictable between workers. Hence, the smaller variance of pay and working conditions in Germany may be the product of wider union coverage in contrast to the UK's lower coverage rate.

4.3.2.3. Union Density

The rate of union density is the percentage of all salaried workers who belong to a trade union; it is a measure of union power. The measure also appears in the ICTWSS dataset (Visser, 2011). Figure 4.8 shows the figures for both countries over time. Union density in the UK is just above 30%, suggesting that union coverage, described in Figure 4.7, extends to those who are unionised. By contrast, density in Germany falls below the

UK's rate, just under 20%. Yet bargains made by unions cover about 50% of all salaried workers. Thinking of the two figures, UK union bargains cover union members, while German unions extend coverage to larger portions of the labour market.

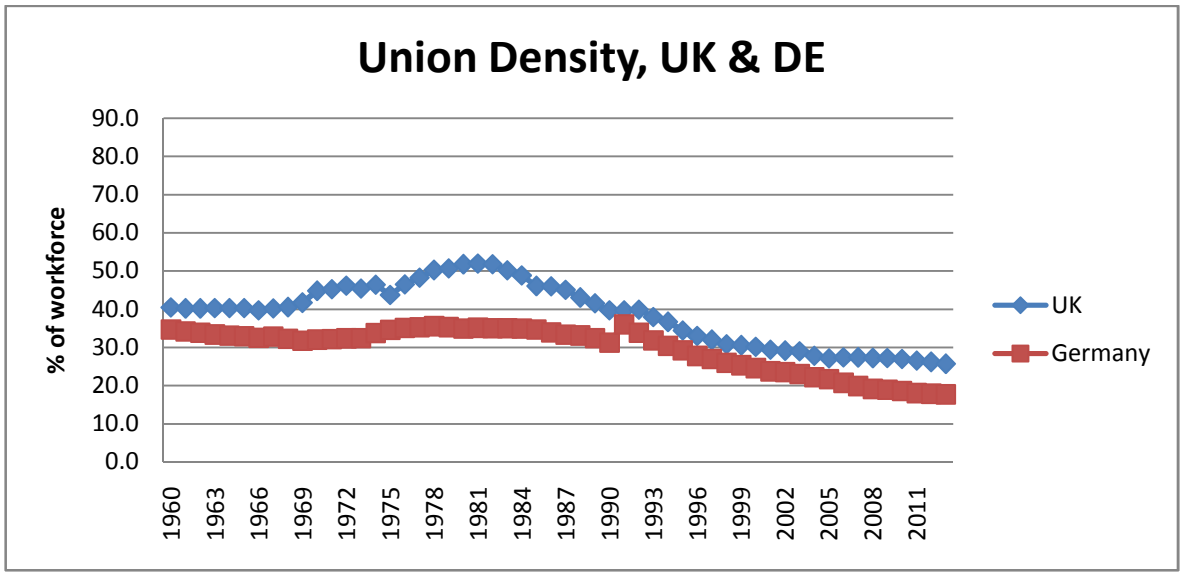

Figure 4.8: Union Density. Germany and the UK (1960-2015).

Union density in the UK peaks in the 1980's at 50%. Shortly afterwards, the rate declines. The fall continues through the 1980's and 1990's and stabilises in the early 2000's. The rate in recent years stands at 30%. In Germany, union density remains stable from the 60's to the 90's. It then falls in the early 90's and declines further during the 2000's. Union density stood at 15% in 2012. Comparing both countries, union density is lower in Germany than in the UK. This difference maintains over time. As explained above, the low union density in Germany goes hand in hand with a large rate of union coverage, thus workers may not feel obligated to join a trade union, knowing that unions bargain on their behalf within the industry. The UK's union coverage is similar to its rate of union density.

Germany, the coordinated market, shows a pattern of group bargaining. The system emphasises group action on wage setting, and generally limits the level of individual bargains to include wider agreements at the industry level. The country also shows

larger rates of union coverage. Although this rate is in decline, it exists despite a lower union density than in the UK. In other words, Germany contains fewer unionised workers as a percent of all waged workers, but the coverage won by union bargains envelopes a greater portion of workers.

4.4.Summary

This chapter offers a preliminary look at mobility, outcomes, and the institutions which shape both in Germany and the UK countries. A number of key puzzles emerge. First, why is it that both countries differ only in rates of voluntary mobility? Germany and the UK have different EPL, designed to protect workers from layoff and dismissal. However the rate of IVM is equal in both countries. The major difference between the UK and Germany stems from workers quitting jobs and taking promotions. Second, outcomes in the UK are highly varied, as is the rate of mobility. Is this the product of workers moving to improve outcomes, or moving to maintain outcomes? Mobility in the UK may indeed be fuelled by opportunity, in that workers are moving to better jobs each time. However, mobility may also be fuelled by the need to maintain conditions in a rapidly changing market. Workers may be moving to leave failing firms or to escape downsizing. This mobility is voluntary, but may stems from a need to get out ahead of dismissals or redundancies. Lastly, how is it that the rate of vacancies can be near equal, but mobility is still high for British workers, and what does this mean for outcomes?

Four findings from this chapter should be carried into the empirical chapters ahead. First, VM is the mode; IVM is unpopular in both countries. Second, there is a lack of worker-differences in mobility rates. The exception is the educational difference in rates of VM in the UK, where bargains are individualised. Workers with third-level qualifications are more mobile. Workers with a basic education are the least mobile. No differences between workers exist in rates of involuntary change. Third, there is an

institutional context to mobility. German mobility is low, and British mobility is high. The difference between countries lies mostly in the rate of VM (or more specifically, voluntary change between firms). Both countries have comparable rates of IVM. Thus there is a larger rate of quits and promotions in the UK, where fewer exist in Germany. Lastly, and perhaps most importantly, outcomes in Germany are more predictable than they are in the UK. This is especially true when variance is considered for the *average worker* over the 9-year period (within-subject variation). Pay and working conditions vary less between and within workers in Germany. The UK's high rate of VM corresponds to an individualised institutional context, with low rates of employment protection and low union coverage, affecting union member alone. Germany's lower rate of VM corresponds to a collective institutional context, with higher rates of protection, industry level bargaining, and higher union coverage which extends beyond union members.

The next chapter presents the British case. It uses the longitudinal British Household Panel Survey to estimate mobility's effect on outcomes. Since outcomes vary more between and within British workers, and VM is especially high, it may be that mobility is fuelled by workers moving to "better" jobs. The chapter tackles the first two goals of the thesis. It estimates the effects of VM and IVM on outcomes (first aim), and considers gender and education differences (second aim) in the mobility-outcomes relationship.

5. United Kingdom

This chapter develops the argument for the UK, laid out above. Chapter 4 shows how the country's high rate of mobility may be the product of individualised bargaining and varied (unequal) outcomes. The present chapter develops this further, tackling the first two research aims. A key argument runs through this chapter. The UK's high rate of mobility stems from individualised bargaining where workers must move to improve their conditions. However, the premiums attached to mobility itself are almost exclusively subjective. Workers see changes only to subjective outcomes following a voluntary change, suggesting mobility may be driven by mismatch and dissatisfaction rather than *attainment* as it appears in the literature (Sørensen, 1977). Material rewards are few, only intra-firm mobility brings objective premiums independent of worker characteristics.

The chapter considers two configurations mentioned in chapter two. First, it considers the nuance of mobility types and outcomes. Second, it estimates the nuance between workers and the mobility-outcomes relationship. In each of these configurations, the two complexities found in the literature emerge. First, not all outcomes are affected by mobility itself. Second, there is a difference between mobility's effect on subjective and objective measures of the same outcome.

Sociologists see mobility as a process where workers gain attainment or utility in a structure of inequality. Economists instead see attainment and utility as rewards tied to experience, human capital, and time spent in the labour market, where mobility itself is irrelevant. The results in this chapter find wider nuance in terms of mobility type, and the characteristics of the mover. Instead of the above, mobility is a process of bargaining; where workers compromise certain outcomes for improvements in others. A number of findings support this view.

First, in the UK VM rewards subjective outcomes, while having little effect on objective ones. Much of the rewards tied to mobility are purely subjective, where people's evaluation of their work, pay, security and hours are increased, but the objective measures of the same concepts remain unaffected by mobility. Second, the location of the change is important, where inter-firm mobility improves subjective outcomes, but intra-firm mobility increases wages beyond what can be explained by worker characteristics. Third, different groups use mobility strategically; while men see almost no effect from mobility, women see large subjective premiums tied to mobility that do not materialise into objective outcomes. In the same vein, secondary level educated workers see large subjective gains from mobility, but third level educated workers are the only group who gain objective pay from VM. The UK's lean production regime (O Riain, 2011), its individualised form of bargaining (Hall and Soskice, 2001), and its limited capacity to match skills to jobs (Rubery et al., 2009) mean mobility less often signals career progression, and more often signals basic bargains over subjective conditions in a varied market. Thus the *theory of attainment* (or *efficiency wages*) may apply somewhat to promotions, but not to inter-firm changes like quits. The sections below revisit the hypotheses, present the data, list the results, and discuss the British case overall (starting with mobility types and moving to worker differences).

5.1.Hypotheses and Aims:

The aims and hypotheses of this chapter are discussed in depth in the literature review (chapter 2). Each set of hypotheses is tied to a research aim; they are listed below for reference.

1) To estimate the relationship between job mobility and outcomes.
    a) *Hypothesis 1a: Voluntary mobility will have a positive effect on outcomes (Attainment theory).*

b) *Hypothesis 1b: Voluntary mobility will differ based on movement between and within firms. Intra-firm mobility will have a positive effect on objective outcomes (Efficiency Wage theory/Internal Labour Market theory)*

c) *Hypothesis 1c: Voluntary inter-firm mobility will have a positive effect on subjective outcomes (Job mismatch).*

d) Hypothesis 2a: Involuntary mobility will have a negative effect on outcomes (Attainment theory/Values-Rewards theory).

e) Hypothesis 2c: Inter-firm involuntary mobility will have a negative effect on subjective outcomes (Job mismatch).

2) To test between-worker differences in this relationship:

a) Hypothesis 3a: Gender differences will exist between workers. Men will benefit from voluntary mobility more than women.

b) Hypothesis 3b: Men will be hindered by involuntary mobility less than women.

c) Hypothesis 3c: Education differences will exist between workers. Those with a third level education will benefit from voluntary mobility more than those without.

d) *Hypothesis 3d: Those with a third level education will be hindered by involuntary mobility less than those without.*

Overall, the argument above is supported by 4 key findings. First, VM improves subjective outcomes, but has minor effects on objective outcomes. This is especially true for pay. Voluntary mobility contains a strong and positive effect (independent of worker characteristics) when pay is measured subjectively, but a weak and minor effect when pay is measured objectively. This minor effect even disappears after controlling for weekly working hours. Second, IVM has no impact on subjective outcomes, a finding which casts doubt on *attainment theory*, but has a significant negative impact on objective outcomes, as suggested by *attainment theory* suggested by *values-rewards*

theory. Third, there is nuance to VM; counter to attainment theory leaving an employer has a stronger effect on subjective outcomes, than taking a promotion with the same employer. However, taking a promotion with the same employer has a better effect on objective pay, than leaving an employer for a more satisfying job elsewhere. This is supported by significance tests (F-tests) at post-estimation. Last, differences between workers emerge but run counter to hypotheses as suggested by attainment theory. Women's pay increases from a voluntary change. However, the effect stems from women increasing their hours using mobility, not increasing their rate of pay. Differences in education groups show that workers with a secondary level education see a subjective premium tied to VM. However, only those with a third level education see a pay premium tied to VM, earning more from the change independent of worker characteristics as laid out by Sørensen (1977). Thus the theory may apply to a *specific group of workers,* possibly insiders who hold a "service relationship" in the UK (Goldthorpe, 2000).

5.2.Data and Variables:

The full analytical strategy and the limitations of the data are presented in chapter 3 (p 58). Descriptive statistics for each outcome can be found in chapter 4 (Table 4.9 on p 118). Table 5.1 lists the variables considered throughout the chapter. The sample draws from nine rounds from the BHPS data (2000-2008); respondents must appear in a minimum of eight rounds to be considered.

Table 5.1 Summary statistics of variables used for the UK. (BHPS 2000-2008)

Variable	Obs	Mean	Std. Dev.	Min	Max
Ref: Same job, same employer					
Changed employer-voluntary	32,560	0.057	0.233	0	1
Changed employer-involuntary	32,560	0.014	0.119	0	1
Changed employer-other	32,560	0.027	0.162	0	1
Changed job, kept employer-Voluntary	32,560	0.050	0.218	0	1
Changed job kept employer- involuntary	32,560	0.003	0.054	0	1
Changed job kept employer-other	32,560	0.016	0.127	0	1
z_pay satisfaction	31,765	0.000	1.000	-2.9162	1.384748
z_security satisfaction	31,719	0.000	1.000	-3.37958	1.091396
z_work satisfaction	31,773	0.000	1.000	-3.66383	1.257712
z_time satisfaction	31,781	0.000	1.000	-3.15082	1.310318
Weekly number of hours worked	32,396	35.025	9.730	0.000	99.000
Gross monthly pay	31,147	1808.980	1322.109	27.324	72055.430
Log gross monthly pay	31,147	7.298	0.665	3.308	11.185
(Ref: male)					
female	32,046	0.484	0.500	0	1
education (Ref:third level)					
second level	31,021	0.599	0.490	0	1
basic level	31,021	0.209	0.407	0	1
agecat: ref (16-30)					
(31-45)	32,556	0.475	0.499	0	1
(46-65)	32,556	0.376	0.484	0	1
(66-80)	32,556	0.007	0.085	0	1
children (Ref: No children)					
1 child	32,560	0.186	0.389	0	1
2 children	32,560	0.178	0.382	0	1
3+ children	32,560	0.048	0.213	0	1
contract: (ref: temporary)					
Permanent	31,205	0.984	0.127	0	1
jbsize1: ref(1-99)					
100-499	32,066	0.240	0.427	0	1
500-1000+	32,066	0.185	0.388	0	1
industry					
Agriculture	29,946	0.008	0.090	0	1
Energy	29,946	0.017	0.128	0	1

Mining	29,946	0.002	0.047	0	1
Manufacturing	29,946	0.169	0.374	0	1
Construction	29,946	0.048	0.214	0	1
Trade	29,946	0.134	0.340	0	1
Transport	29,946	0.062	0.242	0	1
Bank/Insurance	29,946	0.059	0.236	0	1
Services	29,946	0.460	0.498	0	1
isco10					
Professionals	29,728	0.139	0.346	0	1
Technicians	29,728	0.145	0.352	0	1
Clerical staff	29,728	0.165	0.371	0	1
Service workers	29,728	0.137	0.344	0	1
skilled agricultural	29,728	0.006	0.079	0	1
Craft	29,728	0.102	0.302	0	1
Plant and machinery	29,728	0.078	0.268	0	1
Elementary	29,728	0.067	0.250	0	1
Wave (ref: 10)					
11	32,560	0.113	0.317	0	1
12	32,560	0.113	0.317	0	1
13	32,560	0.113	0.317	0	1
14	32,560	0.114	0.317	0	1
15	32,560	0.114	0.318	0	1
16	32,560	0.115	0.319	0	1
17	32,560	0.114	0.318	0	1
18	32,560	0.109	0.311	0	1
Growth	32,560	2.575	1.284	-4.31	4.3
unemployment	32,560	5.088	0.296	4.7	6.7

The baseline number of observations stands at 31,000+. The observations decline for measures of occupation and industry. Four subjective outcomes are used throughout the chapter. These are satisfaction scores considering work, pay, hours, and security. They are converted z-scores in an effort to make them comparable with the German outcomes, which are considered later. The models also consider three objective outcomes, gross monthly pay, health, and weekly working hours. Although health is a subjective variable, here it is used as a proxy for working conditions. A similar strategy is used by Gash et al. (2007). VM is determined subjectively, and considers workers

who quit their previous job, or who gain a promotion. IVM is also subjectively defined, and considers workers who lose positions to demotion, redundancy, dismissal, or plant closure among other reasons. The strategy is summarised in Table 3.6 on p 74 and follows that of Kalleberg and Mastekaasa (2001). Respondents who move for "family" or "other" reasons are listed in the "other" category.

All models are estimated using linear fixed-effects and are split into two sets, subjective outcomes and objective outcomes. These are discussed separately. Since linear fixed-effects models cannot consider *between-respondent variance,* the models are unbiased but inefficient (Allison, 2009, Longhi and Nandi, 2014). As a result estimates with p-values less than 0.1 are considered statistically significant.

5.3.Types of Mobility and Outcomes:

This section considers the first aim, and hence the first configuration of mobility and outcomes; mobility types. It presents the effects of VM and IVM on outcomes between and within firms. It does not consider differences between workers, which are listed later.

5.3.1. Fixed-effects Estimates and Subjective Outcomes

The subjective outcomes used here are satisfaction with work, pay, security, and time. The mobility estimates are listed in Table 5.2. Models consider 26,000+ observations from 3,600+ individuals. The R-squared values, or the portion of the variance explained by the independent variables, differ from 2% (satisfaction with work) to 14% (satisfaction with time), suggesting that controls (including mobility) do not explain satisfaction with working conditions particularly well, although the relationship between mobility and outcomes is significant and theoretically relevant.

Table 5.2: Results, UK 2000-2008: Linear estimated fixed-effect of moving on subjective outcomes.

	(1)	(2)	(3)	(4)
VARIABLES	Satisfaction with work, linear z-scores	Satisfaction with pay, linear z-scores	Satisfaction with security, linear z-scores	Satisfaction with time, linear z-scores
2.Inter-firm voluntary	0.36***	0.24***	0.10***	0.14***
	(0.03)	(0.02)	(0.02)	(0.02)
3. Inter-firm involuntary	0.06	0.05	0.04	0.05
	(0.06)	(0.05)	(0.05)	(0.05)
5.Intra-firm voluntary	0.18***	0.10***	0.11***	0.04*
	(0.03)	(0.02)	(0.02)	(0.02)
6.intra-firm involuntary	-0.09	0.02	-0.07	-0.00
	(0.12)	(0.11)	(0.12)	(0.12)
Constant	0.38	-0.19	-0.17	0.01
	(0.25)	(0.27)	(0.26)	(0.24)
Observations	26,036	26,016	25,984	26,032
R-squared	0.02	0.07	0.09	0.14
Number of pid	3,698	3,698	3,698	3,698
Wave	10-18	10-18	10-18	10-18
Weights	Clustered SE	Clustered SE	Clustered SE	Clustered SE

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
The models above control for age, contract type, firm size, whether the respondent has children, the size of the firm, the industry, the occupation, and the survey wave. I also control for general job satisfaction in each model (except for the model estimating satisfaction with work), and two macro variables; the unemployment rate and the rate of economic growth. I list these estimates in the appendix Table 1.1, which contains the full model.

A clear distinction can be made between VM and IVM throughout each model. VM produces positive estimates, while IVM has no significant effect in each model. Thus, the key distinction in the models above is whether the change is voluntary or involuntary. At first glance it appears that VM itself has a positive effect on all outcomes, independent of worker characteristics as laid out in *attainment theory.* In each model mobility to a new position contains significant reward beyond what can be explained by worker characteristics.

Starting with satisfaction with work (model 1) both VM estimates have a positive effect on satisfaction. Those who quit or take promotions move to vacancies with higher satisfaction with work. However, the effect of VM between firms is stronger than the effect within firms *(F (1, 3723) = 25.54, p >F = 0.000).* This finding runs against *attainment theory,* which does not make the distinction between mobility between and within a given employer's firm. IVM has no effect, suggesting respondents move to jobs which do not affect their satisfaction with work. Changing employers after a

dismissal or a firm closure has no significant effect on subsequent work; neither does a demotion or a lateral change with the same employer.

A similar relationship emerges in models predicting satisfaction with pay (model 2). VM has a positive and significant effect on the outcome, regardless of whether the change occurs between or within firms. Thus respondents who quit for a new employer improve their satisfaction with pay, as do those who take promotions with a given employer. Further, VM between firms has a bigger effect on the outcome than VM within a firm, suggesting quits have a stronger effect on satisfaction with pay than promotions *(F(1, 3723) = 18.21, p > F = 0.000)*. Here too, mobility to a new role has a positive effect beyond worker characteristics. As before IVM has no effect on subsequent satisfaction with pay, hence workers may be able to recreate their *subjective feelings* about pay with a new employer or a given employer.

Satisfaction with job security is affected in a similar way by mobility (model 3). VM has a positive effect, suggesting quits and promotions reward subjective satisfaction with security. There is no difference between inter and intra-firm mobility in terms of this premium *(F (1, 3723) = 0, p >F = 0.972)*. Thus, mobility in itself will improve the satisfaction workers have with security beyond their ability or other fixed resources. This finding is curious as job security is typically tied to firm tenure, yet respondents who quit, report a similar bonus in security compared to those who take a promotion. It could be that insecure workers are pushed to quit, while workers who expect a promotion see only a smaller change. It is also possible that a larger portion of the effect of promotion is explained by worker characteristics themselves, and not the promotion. IVM has no significant effect on workers, suggesting they are able to recreate their job security after the change.

Lastly, satisfaction with time (model 4) is positively affected by VM, and unaffected by IVM. Respondents who quit report higher satisfaction with time, suggesting they move to more flexible jobs. However, respondents who take a promotion see a positive but far smaller change than those who quit *(F (1, 3723) = 10.32, p > F= 0.001)*. IVM has no effect on the outcome, suggesting workers are unaffected by the change itself.

Each model provides support for the hypotheses tied to VM, but not IVM. This is curious because it suggests that VM moves workers to jobs with better conditions than their resources, but IVM moves them to jobs where their conditions match their resources. I accept *hypothesis 1a,* results show VM improves each outcome considered above, as laid out by attainment theory. Mobility itself contains premiums beyond the characteristics of workers. Further, I accept *hypothesis 1c,* inter-firm VM improves outcome better than intra-firm VM (satisfaction with security is an exception where both inter-firm and intra-firm VM improves the outcome equally). Thus the premium tied to changing firms is higher than the premium tied to taking promotions. I reject *hypothesis 2a*. From the output, it's clear that IVM has no effect on subjective outcomes, suggesting workers are unaffected by involuntary changes. Tied to this, I reject *hypothesis 2c*; there is no nuance tied to IVM. It is important to note that the sample contains workers who move directly to a new job after the change, and thus is representative of the core workforce alone. It is possible that workers reveal they are under qualified during their time in a given firm, and so job loss corrects for their resources or lack of experience. However, this is not the argument proposed by *attainment theory,* and *internal labour markets.*

As mentioned, *attainment theory* (Sørensen, 1977) is a process where workers move between positions in a structure. It sees VM as a strategy for improving wages and status, but predicts that subjective outcomes should see "gains" from VM (discussed in

section 2.1.1 on p 14). This is confirmed in the results above. Mobility itself yields improved outcomes, beyond what is explained by worker characteristics alone. In this way, workers are moving from one vacancy to a better vacancy, improving outcomes. However, an issue emerges when IVM is considered. If VM leads to positions with higher rewards in a fixed structure, why then does IVM not lead workers "down" this structure? Instead IVM, in itself, does not move workers to positions with lower rewards.

Overall the predictions made by *attainment theory* appear in the output. The first *complication* mentioned in the introduction and literature review does not emerge in subjective models, suggesting mobility is driven by utility. Respondents are able to gain in terms of several outcomes. Further the suggestions made by *efficiency wage theory* (and at times *internal labour market theory*), that better working conditions await those who take promotions internally, does not emerge. Instead, quits appear to work best, possibly because working conditions vary more between firms than they do within them.

Overall results suggest there are few downsides to mobile markets. Workers are able to improve their conditions through VM, and see few consequences to IVM. The results are similar to previous authors. Gesthuizen and Dagevos (2008) find similar effects in The Netherlands, where some subjective outcomes are improved through VM. They too find that inter-firm mobility improves subjective outcomes best when compared to intra-firm change. Fasang et al. (2012) also report a positive link between VM and subjective outcomes, noting subtle differences between inter and intra-firm changes. Lastly, Kalleberg and Mastekaasa (2001) report a positive relationship between VM and several subjective outcomes, finding no significant relationship between IVM and the same outcomes (counter to the *values-rewards* theory they propose). When considering the

effect, Kalleberg and Mastekaasa (2001) suggest Norway's generous welfare benefits are responsible for the lack of effect. This does not appear to be the case in this chapter's results which suggest workers in a liberal market economy are equally unaffected by IVM.

For the moment, the UK resembles a mobile market where workers gain from VM without a penalty tied to IVM. *Values-rewards theory* and *attainment theory* are both useful for UK data, provided outcomes are subjective. The next section substitutes the same outcomes for objective measures, in an effort to understand the effects in greater detail. The theories listed throughout expect no difference between subjective and objective outcomes and their relationship to VM and IVM. In the next section I pay particular attention to pay and time, two outcomes which are important in the subjective models above, and appear objectively below.

5.3.2. Fixed-effects Estimates and Objective Outcomes:

This section considers gross monthly wages, subjective health, and the weekly hours normally worked by respondents. The models draw on 26,000+ observations from 3,600+ individuals. Satisfaction with health contains fewer observations (22,800+) due to missing values. The R-squared value, or the portion of the variance explained by the controls ranges from 2% (satisfaction with health and number of hours worked) to 25% (gross monthly wages). The variables used in the model explain the variance in gross pay well, but do not explain satisfaction with health or number of hours worked well. The relationship between mobility and outcomes remains theoretically important and statistically significant, but much of the variance is unexplained. Table 5.3 lists the estimates.

Table 5.3: Results, UK 2000-2008: Linear estimated fixed-effect of moving on objective outcomes.

	(1)	(2)	(3)
VARIABLES	Log Gross monthly pay	Subjective health	Number of hours worked weekly
2.Inter-firm voluntary	0.01*	0.15***	0.47***
	(0.01)	(0.03)	(0.18)
3. Inter-firm involuntary	-0.07***	0.12**	-0.68
	(0.02)	(0.06)	(0.42)
5.Intra-firm voluntary	0.01*	0.05	-0.14
	(0.01)	(0.03)	(0.19)
6.intra-firm involuntary	-0.09*	0.05	-0.48
	(0.05)	(0.12)	(0.95)
Constant	7.47***	5.54***	34.93***
	(0.08)	(0.33)	(1.94)
Observations	26,057	22,806	26,020
R-squared	0.25	0.02	0.02
Number of pid	3,698	3,672	3,698
Wave	10-18	10-18	10-18
Weights	Clustered SE	Clustered SE	Clustered SE

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
The models control for age, contract, firm size, whether the respondent has children, the size of the firm, the industry, and survey wave. I also control for two macro variables- the unemployment rate, and the rate of economic growth. I list these estimates in the appendix, Table 1.2.

The simple breakdown between VM and IVM now appears more complex, with important differences between inter- and intra-firm mobility. Further while IVM appeared inconsequential in subjective models it carries significant penalties in models estimating pay. Generally, the output for objective models does not resemble the output for subjective models, suggesting mobility does not always come with objective premiums.

Starting with pay (model 1) VM has a minor effect, with new positions holding a 1% premium in pay. The effect is similar for both inter-firm and intra-firm mobility. Thus, moving to a new position increases pay by 1%, holding worker characteristics constant. This is surprising, since the subjective models contain large significant premiums tied to mobility. I return to this point later. IVM carries significant negative effects on gross pay. Those who move between firms for involuntary reasons see a 7% fall in pay, while those who experience a demotion see a 9% fall in pay. The difference between the two mobility types is insignificant ($F\ (1, 3723) = 0,\ p > F = 0.993$). This too is surprising, because subjective models suggested no link between IVM and subjective pay.

Involuntary mobility leads workers to positions with lower pay, beyond the characteristics of the workers who move.

Satisfaction with health (model 2) reveals interesting dimensions to working conditions following mobility. Here, the main distinction is one between inter-firm and intra-firm mobility. Respondents who leave for a new employer (either through VM or IVM) see positive changes to working conditions or at least to health outcomes at work. Those who remain with the same employer following a change, see no difference in subjective health. It is possible that workers see a reduction or a change in their responsibilities at work following an inter-firm change, while no such reduction follows an intra-firm change. Poor conditions or poor health may be a push factor, encouraging inter-firm mobility. Moving to a new employer yields improved health outcomes, beyond the characteristics of the movers themselves.

Lastly, mobility has almost no effect on the weekly hours worked by respondents (model 3). VM increases weekly hours, but only for those who quit their job and change employers. Respondents who take promotions see no increase in weekly hours despite previously seeing an increase in satisfaction with time. Further, respondents who see an involuntary change are able to recreate their working hours with a new or an existing employer. Noticeably, VM leads to increased hours (model 3) and increased pay (model 1). Thus it could be that workers increase their pay, by using mobility to find longer hours. Re-estimating the model for pay (model 1) while controlling for weekly hours *eliminates the positive effect for inter-firm VM, but not intra-firm VM*. However, even the positive effect of promotions although significant, is minor. Respondents who take a promotion see a 1% increase in pay, compared to years where they remain in the same job with the same employer. Respondents who quit see a 1% increase in pay, but this is the product of searching for longer hours for a similar rate.

The estimates for objective models do not reflect the estimates for subjective models. Firstly, I reject *hypothesis 1a*, VM alone does not have a positive effect on outcomes. In fact, there are differences between inter-firm and intra-firm mobility, which go beyond those described in the subjective models. Inter-firm mobility in itself does not increase the wages of workers. Instead it may be a strategy for increasing pay *through* increased hours, while intra-firm VM increases pay without increasing hours. Respondents who quit their job for a new employer appear to be negotiating conditions and time, for a similar rate of pay. Respondents who take promotions experience the attainment described by Sørensen (1977) and the higher pay described by Akerlof's (1986) *efficiency wage theory*. By moving within the firm, workers earn a bonus beyond what can be explained by their characteristics alone. For this reason, I cautiously accept *hypothesis 1b*. Intra-firm VM rewards objective outcomes better than inter-firm VM. However, the effect is weak and minor. I also accept *hypothesis 2a*. IVM has a strong negative effect on pay, without a corresponding effect on hours, suggesting workers fall into less valued jobs. The effect of IVM does not differ by location, inter and intra-firm IVM has a similar effect on respondents (this is confirmed at post-estimation using an F-test). Hence, I reject *hypothesis 2b*.

As mentioned, *attainment theory* claims VM should not occur without a change in outcomes or "gains" in "income and status". This effect is dependent on the firm and does not emerge in the wider market. Between firms, workers who move, increase their weekly working hours. Within firms, workers see only a 1% increase for each change, suggesting they need to experience several changes before substantial returns are seen. Thus the assumption that voluntary mobility (itself) leads workers to better jobs is not supported by objective outcomes. The complexities discussed in chapter 1 and 2, emerge throughout the results. First, there is a difference in terms of how mobility affects outcomes. While pay and health improve after VM, these changes come with an

increase in weekly working hours, suggesting a compromise. Second, while subjective outcomes see strong positive effects after VM, objective outcomes see minor weak effects after VM. Pay is a perfect example. When models predict the effect of mobility on subjective pay, the estimates report a significant link between satisfaction and mobility. When models estimate objective pay, the effect disappears. Yet Sørensen (1975) places this mobility as a key mechanism to improving all or several outcomes, beyond the characteristics of those making the changes.

The utilitarian view of *attainment theory* is missing conflict and bargaining between the employer and the worker. Results suggest the satisfaction that comes after VM is not the product of increased pay or reduced hours, but rather a renegotiation of responsibilities. The increase in satisfaction with pay that follows a quit may be a renegotiation of responsibility, which better align with the respondent's level of pay. The same is true for IVM. Involuntary changes between firms leave workers feeling no different about pay, but actual pay declines significantly following the change, as they move to less valued positions, independent of their characteristics alone.

Attainment theory considered by Sørensen (1975, 1977, 1978) fails to predict three specific findings, although some are noted by *efficiency wage theory* (Akerlof and Yellen, 1986) and *internal labour market theory* (Althauser, 1989, Althauser and Kalleberg, 1981). First, it makes no distinction between inter and intra-firm mobility, yet there is a clear divide. Inter-firm changes improve subjective outcomes best, while intra-firm changes improve actual pay (this is predicted by *efficiency wage theory,* but the theory expects a similar relationship between conditions and intra-firm mobility, which doesn't emerge). Second, tied to the first point, there is a clear difference between mobility's effect on subjective and objective outcomes. Although attainment theory focuses mostly on status and pay, it expects "psychological" rewards to work in

the same way. The bonuses tied to moving are largely subjective, there may be an argument that satisfaction scores better capture the concept of utility (Fasang et al., 2012). However, attainment as a concept deals with clear objective categories, high pay and high status. Third, the relationship between IVM and subjective outcomes does not emerge, a relationship proposed by both attainment theory (Sørensen, 1977) and values-rewards theory (Kalleberg and Mastekaasa, 2001). The negative relationship between involuntary change and pay, as proposed by Sørensen (1975), does emerge, suggesting that workers who lose their job move downward to lower valued vacancies, independent of their characteristics as workers.

The theory that comes closest to predicting the results above is *efficiency wage theory*, where workers earn above market rates of pay by pursuing promotion within the firm. However *efficiency wage theory* would also expect a high rate of working conditions to be maintained in an effort to hold on to core workers. This emerges somewhat in the results above, but the effect is weaker than that of quits. Instead, I propose a type of job mismatch is at play in the UK, where mobility is the product of searching for better conditions, or an internal structure to commit to. This mismatch closer aligns to the bargains outlined by Sallaz (2017) than those argued by Sørensen (1975). Worker wages are strongly defined by market forces in the UK, as a result, they make bargains based on responsibilities and conditions to better fit wages.

5.3.3. Mobility Types and the UK Model:

The output above tells two conflicting stories about mobility and outcomes in the UK. When models estimate subjective or soft outcomes, the estimates paint a picture of individualised and "boundaryless markets". Respondents who move voluntarily improve their conditions, with intra-firm movements offering minor improvements, and inter-firm movements boosting working conditions and feelings about work. Here, both

inter- and intra-firm changes reward workers who take risks by pursuing new jobs or promotions. *IVM has no effect*, as workers are able to recreate their worth elsewhere. Job loss is just a part of the "modern career", and demotions are part of being "flexible" for an employer.

When estimating objective outcomes however, a different UK emerges. VM only slightly increases wages, despite producing high "satisfaction with pay" in previous models. Controlling for hours further reveals that the relationship between mobility and pay is complicated. The positive effects of quitting (inter-firm VM) disappears, suggesting the effect is the product of worker bargains for longer hours at a similar rate of pay. The positive effect of promotion remains, carrying a premium which cannot be explained by worker characteristics alone. IVM too, looks different from the perspective of objective outcomes. Previous models which predict no changes in subjective feelings about pay are replaced by strong negative effects for gross monthly pay.

Considering both sets of models together, VM may be used to improve conditions and feelings about work rather than reach *attainment* as described by Sørensen (1975). Mobility may instead be a strategy for improving working conditions and feelings about work, by leaving poor conditions behind. This argument is supported by the differences between inter-firm and intra-firm mobility. Inter-firm VM improves outcomes for workers more than intra-firm VM, but only when outcomes are subjective. Thus mobility is likely driven by subjective dissatisfaction with one's employer rather than the opening of a vacancy that rewards workers better than their resources. VM within the firm contains objective premiums, although the effect is weak. It could be that workers use mobility between firms to place themselves into structures with rewards tied to internal change (a central concept for Brown et al. (2008)). However, even these rewards are minor, according to the output above. And more importantly, the argument

does not suggest that mobile markets are the best mechanisms for workers. Having outlined the effect mobility has on outcomes, the section below considers the second aim of the thesis, asking if workers experience the mobility-outcomes equally.

5.4.Differences between Workers:

The second aim of the thesis, asks whether workers differ in the mobility-outcomes relationship. Since mobility and outcomes are socially organised, they provide advantages and disadvantages to groups of workers, which cannot be explained by differences in skill acquisition alone. These predictions are summarised by the *limited-opportunity model* (Hachen, 1990). The above sections assume all workers are affected by change equally. This important assumption is useful in capturing distinct differences between *mobility types and outcomes.* However, it is unrealistic, given the literature describing differences between workers and their relationship to the market. These often go beyond human capital, labour supply, or job characteristics alone (Cooke, 2014, Blau and Kahn, 2003, Goldthorpe, 2000, Goldthorpe, 2002) . For this reason, this section tests if worker differences in the mobility-outcomes relationship exist, first considering gender (Cooke, 2014, Mills et al., 2008, Acker, 2006), followed by education (Mills et al., 2008, Goldthorpe, 2000, Goldthorpe, 2002, Rosenfeld, 1992). The relevant hypotheses are listed on p 143.

The discussion below considers the models in Table 5.2 and Table 5.3 separated by gender, before splitting the models by education in a separate section. Due to limitations of space, the nuance of mobility types are not considered, this configuration has already been covered. Instead the discussion focuses on worker-differences by VM and IVM alone. Differences in inter and intra-firm mobility emerge, but these are considered together when discussing group hypotheses.

Although worker differences are minor, gender groups differ when the outcome is related to time, and education groups differ when the outcome is pay. Most importantly, results show the complexities of the mobility-outcomes relationship apply to the different groups. Here, it does not appear that men gain from mobility at the expense of women, while third level educated workers gain at the expense of other groups. Instead, women rely on mobility to improve outcomes, while men are unaffected, suggesting they rely on other mechanisms to advance outcomes. In particular, women rely on the firm when outcomes are subjective, but on the wider market when outcomes are objective. Further, secondary level educated workers rely on mobility to improve subjective outcomes, but third level educated workers rely on mobility to improve objective outcomes. Results suggest nuance in terms of who "benefits" from mobility depending on the outcome used. The section below opens the discussion of gender differences.

5.4.1. Gender Differences in Subjective Outcomes:

This section splits the models in Table 5.2 by gender. Overall, few gender differences emerge in the models estimating subjective outcomes. Since these consider only respondents who move directly to a new job, they focus on a specific group of women, who over the 9-year period do not take career breaks, and remain employed for each survey, at the time of the survey. The sample is the economic core, which may not take maternity leave, or drop out of the labour market to look after young children. As a result, the core does not represent the average British woman's experience in the labour market, since women are more likely to take career breaks and balance the responsibility of family life along with employer demands (Atkinson, 2015, Acker, 2006, Cooke, 2016, Cooke, 2014).

Citing *overt discrimination* Becker (2010) predicts that casualised or non-bureaucratic labour markets, like those in liberal market economies, will produce few differences between genders, compared to closed labour markets. Since efficient markets mean a greater choice for workers, there is more mobility between firms and less reliance on a single employer. Because of this, employers find discrimination costly, and will reward both genders for efficiency alone. Workers can "correct" their worth with a new firm, if they feel their productivity is undervalued. Opponents of Becker (2010), and overt discrimination, claim he over-emphasises human capital, which ignores structural discriminations based on gender (Mills et al., 2008, Cooke, 2014, Acker, 2006). Kalleberg and Marsden (2005) instead propose that casualised labour markets produce more gender inequality than coordinated markets since they amplify existing systems of inequality, like occupational and industry filters for genders. A key issue with Becker's proposal, and overt discrimination more widely, is that it sees employer decision making as an issue of "taste", ignoring wider structures which dictate differences in life-chances and job types (see Acker (2006)), these also stem from overt discrimination, but go beyond issues of taste.

The results presented below suggest the relationship between genders is more complicated than overt discrimination proposes. In fact, the inequality regimes laid out by Acker (2006) best explain gender differences. Women rely on mobility to improve outcomes, while men appear reliant on other mechanisms. "*Young women aspiranters had different tasks than young men. Men's tasks were varied and brought them into contact with different aspects of the business. Men were groomed for managerial jobs.*" (Acker 2006: p447) As a result, while men improve outcomes from occupations, experience, and training, women are reliant on the premiums that come with mobility to improve outcomes.

The models for men draw on 13,000+ observations from 1,895 respondents. The models for women contain fewer respondents, and fewer observations. The R-squared estimates explain between 2% variance (satisfaction with work) and 15% variance (satisfaction with time) in outcomes. Genders do not differ in terms of model fit. The constant term in each model provides some insight into the basic difference between genders, although these differences are not statistically significant. In each model women are more satisfied than men with each measure. In satisfaction with work, women (0.80) score higher than men (0.01). In terms of satisfaction with pay, women (0.37) score higher than men (-0.75). In satisfaction with security too, women (0.19) are more satisfied than men (-0.44). Lastly satisfaction with working time too suggests women (0.24) are more satisfied than men (-0.23). The first set of models estimates satisfaction with work and pay, listed in Table 5.4. Table 5.5 lists the estimates predicting satisfaction with security and satisfaction with time. For clarity, estimate which warrant attention are underlined.

Table 5.4: Results, UK 2000-2008: Linear estimated fixed-effects of mobility on satisfaction with work and satisfaction with pay. Models estimated separately for each gender.

VARIABLES	(1) Male: z-score work sat	(2) Female: z-score work sat	(3) Male: z-score pay sat	(4) Female: z-score pay sat
2.Inter-firm, voluntary	0.37***	0.34***	0.23***	0.25***
	(0.03)	(0.04)	(0.03)	(0.04)
3.Inter-firm, involuntary	0.04	0.09	***0.12****	-0.06
	(0.08)	(0.10)	***(0.06)***	(0.10)
5.Intra-firm voluntary	0.17***	0.19***	0.08**	0.12***
	(0.04)	(0.04)	(0.03)	(0.04)
6.Intra-firm, involuntary	0.13	***-0.31****	-0.05	0.08
	(0.17)	***(0.16)***	(0.17)	(0.15)
Constant	0.01	0.80**	-0.75**	0.37
	(0.35)	(0.37)	(0.35)	(0.39)
Observations	13,234	12,802	13,224	12,792
R-squared	0.02	0.02	0.08	0.07
Number of pid	1,895	1,803	1,895	1,803
Waves	10-18	10-18	10-18	10-18
Weight	Clustered SE	Clustered SE	Clustered SE	Clustered SE

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
The models above control for age, contract type, firm size, whether the respondent has children, the size of the firm, the industry, the occupation, and the survey wave. I also control for general job satisfaction in each model (except for the model estimating satisfaction with work), and two macro variables; the unemployment rate and the rate of economic growth. I do not list the estimates in the appendix sue to limitations of space.

Table 5.5: Results, UK 2000-2008: Linear estimated fixed-effects of moving on satisfaction with security and satisfaction with time. Models estimated separately for each gender.

VARIABLES	(1) Male: z-score secure sat	(2) Female: z-score secure sat	(3) Male: z-score time sat	(4) Female: z-score time sat
2.Inter-firm, voluntary	0.10***	0.10***	0.15***	0.14***
	(0.03)	(0.04)	(0.03)	(0.04)
3.Inter-firm, involuntary	0.00	0.09	-0.00	0.13
	(0.07)	(0.08)	(0.06)	(0.08)
5.Intra-firm voluntary	0.13***	0.08**	0.01	***0.07***
	(0.03)	(0.03)	(0.03)	***(0.04)***
6.Intra-firm, involuntary	-0.02	-0.11	-0.10	0.09
	(0.20)	(0.12)	(0.14)	(0.18)
Constant	-0.44	0.19	-0.23	0.24
	(0.37)	(0.35)	(0.34)	(0.34)
Observations	13,210	12,774	13,232	12,800
R-squared	0.09	0.10	0.14	0.15
Number of pid	1,895	1,803	1,895	1,803
Waves	10-18	10-18	10-18	10-18
Weights	Clustered SE	Clustered SE	Clustered SE	Clustered SE

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
The models above control for age, contract type, firm size, whether the respondent has children, the size of the firm, the industry, the occupation, and the survey wave. I also control for general job satisfaction in each model (except for the model estimating satisfaction with work), and two macro variables; the unemployment rate and the rate of economic growth. I do not list the estimates in the appendix sue to limitations of space.

As before, the clearest dimension in the tables is one between VM and IVM, with VM improving outcomes and IVM having no effect on outcomes. This appears to be the case for men and women in each model. However three key differences emerge between genders. First, women see a fall in satisfaction with work after a demotion (intra-firm

IVM), while men do not. Second, men see increased satisfaction with pay after a redundancy (inter-firm IVM), while women do not. Last, women see increased satisfaction with time after a promotion (intra-firm VM), while men do not. Women appear more dependent on the firm, gaining more from promotion but seeing penalties for demotion, men appear to be less affected by intra-firm movement and reliant on other mechanisms to improve outcomes.

Models 1 and 2 consider "satisfaction with work overall" for men and women. Men benefit from VM and are unaffected by IVM. Those who quit or take a promotion are able to improve their satisfaction with work, while those who lose their jobs or take demotions are able to recreate their subjective satisfaction. The results for women are the same, bar one estimate. Women are negatively affected by demotion, which is predicted by *attainment theory* and *values-rewards theory*. However, it suggests there is a gender element to the effect. Women move to subjectively worse positions after demotion, despite their fixed resources.

Models 3 and 4 in Table 5.4 consider "satisfaction with pay" for men and women separately. Again, men see improved satisfaction following VM and are unaffected by intra-firm IVM. However men see a positive change in satisfaction with pay after inter-firm IVM, while women do not. Overall, both men and women who quit or take promotions, improve their feelings about pay. Men who lose their jobs but move to a new employer also improve their feelings about pay, while women do not.

Regarding satisfaction with security (models 1 and 2, Table 5.5), no gender differences exist. VM increases satisfaction with security for men and women, IVM has no effect on satisfaction with security. Men and women who quit their job or take a promotion see equal premiums in satisfaction after the change, and see no penalties after IVM.

Lastly, satisfaction with time (models 3 and 4, Table 5.5) is positively affected by VM and unaffected by IVM for both genders. Only one difference exists, women who take a promotion with their employer (intra-firm VM) see increased satisfaction with time, while men are unaffected. Otherwise, respondents who quit their job and move to a new employer benefit from the change, regardless of gender.

Women appear more reliant on intra-firm mobility than men. Negative effects emerge for IVM (satisfaction with work) and positive effects emerge for VM (satisfaction with time) when considering women. However, these differences are minor, and could suggest that women are more reliant on mobility than men, who may be more likely to receive training, "grooming", and other changes in perks that do not require mobility. I reject *hypothesis 3a.* While few gender differences exist, the difference tied to VM runs counter to the hypothesis. I further reject *hypothesis 3b.* Although men are not hindered by IVM, neither are women. Men benefit from IVM in terms of satisfaction with pay, and women are penalised in terms of satisfaction with work, but otherwise few differences exist.

The findings do not offer support for overt discrimination, as women rely on mobility more than men, at least for the outcomes listed. However, neither does the output suggest that casualised labour markets leave women at a disadvantage at the point of inter-firm VM as proposed by the counter argument. Specifically, the results above suggest women who work in the *inequality regimes* proposed by Acker (2006) may gain more than men when promotions are offered and lose more than men when demotions are imposed. Thus, women may be particularly reliant on gaining satisfaction from positions in a structure rather than their fixed resources, like education and human capital. I move on to models with objective outcomes, paying special attention to time and pay; two outcomes which appear important in the output above.

5.4.2. Gender Differences in Objective Outcomes:

This section lists the results for gross monthly wages, subjective health, and the weekly hours normally worked by respondents, divided by gender. The models for men draw on 13,000+ observations for pay and hours, and 11,000+ observations for health, the observations come from 1,800+ respondents. The models for women are similar in size. Models estimating the number of hours worked for women explain a greater portion of variance (7%) than the same models for men (1%), as before time appears to be a major point of contention for women. Variance explained is similar for men and women in the remaining models. Again, due to the inefficient nature of fixed-effects models, estimates with p-values of less than 0.1 are considered significant.

The constant term in each model provides insight into the basic difference between genders, all things considered. Looking at gross monthly pay, women (7.3) and men (7.36) earn a similar amount; no gender pay gap emerges. Again, this is largely the product of the sample design. Further, it is also likely that controlling for industry and occupation has closed some of the gap in earnings between genders. In subjective health, women (5.59) are similar to men (5.18). In terms of weekly working hours, women (34.12) work a similar number of hours compared to men (34.8). The estimates below still provide important insight into mobility and gender. Table 5.6 lists these.

Table 5.6: Results, UK 2000-2008: Linear estimated fixed-effects of moving on gross monthly pay, subjective health, and weekly hours worked. Models estimated separately for each gender.

VARIABLES	(1) Male: Log gross monthly wage	(2) Female: Log gross monthly wage	(3) Male: Subjective health	(4) Female: Subjective health	(5) Male: weekly work hours	(6) Female: weekly work hours
2.Inter-firm, voluntary	0.01	***0.02****	0.09**	0.16***	0.15	***0.86****
	(0.01)	***(0.01)***	(0.04)	(0.05)	(0.26)	***(0.26)***
3.Inter-firm, involuntary	-0.06***	-0.08**	0.10	0.13	-0.73	-0.68
	(0.02)	(0.04)	(0.07)	(0.10)	(0.56)	(0.61)
5.Intra-firm voluntary	0.01	0.02	-0.00	0.07	***-0.57****	0.28
	(0.01)	(0.01)	(0.05)	(0.05)	***(0.27)***	(0.28)
6.Intra-firm, involuntary	-0.08	***-0.11****	***0.26****	-0.09	0.99	-1.90
	(0.08)	***(0.06)***	***(0.13)***	(0.19)	(1.11)	(1.44)
Constant	7.36***	7.30***	5.18***	5.59***	34.80***	34.12***
	(0.09)	(0.12)	(0.43)	(0.45)	(2.69)	(2.34)
Observations	13,309	12,922	11,662	11,294	13,294	12,901
R-squared	0.28	0.26	0.02	0.03	0.01	0.07
Number of pid	1,905	1,819	1,890	1,808	1,905	1,819
Waves	10-18	10-18	10-18	10-18	10-18	10-18
Weights	Clustered SE	Clustered SE	Clustered SE	Clustered SE	Clustered SE	Clustered SE

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
The models control for age, contract, firm size, whether the respondent has children, the size of the firm, the industry, and survey wave. I also control for two macro variables- the unemployment rate, and the rate of economic growth. I do not list these estimates in the appendix due to limitations of space. However, a baseline model is listed in the appendix.

Five gender differences emerge above. These are as follows; first, women see increased pay after a quit (inter-firm VM), while men do not. Second, women see a cut in pay after a demotion (intra-firm IVM), men do not. Third, men who experience a demotion (intra-firm IVM) report increased health, while women do not. Fourth, women work longer hours after a quit (inter-firm VM), while men do not. Last, men work fewer hours after a promotion, while women see no change. At first, it seems that women have the most to gain from inter-firm VM, but the most to lose from intra-firm IVM, at least in terms of pay. Men appear more protected from the effects of mobility overall, at times even benefitting from IVM, which runs completely counter to several theories.

Starting with gross monthly pay (models 1 and 2), VM leads to higher wages for women but not men, independent of their resources as workers, a finding that runs completely counter to both *discrimination theory* and *attainment theory*. Women who quit see an average 2% increase in wages, beyond what can be explained by their

resources. Men do not experience the premium. However, the positive effect of intra-firm VM is no longer present (Table 5.3 on p 154), possibly due to the smaller sample size in the models above. Regarding IVM, both men and women see a decrease in wages after the change. Respondents who are redundant or laid-off move to positions with 6%-8% lower wages with a new employer. However, only women are significantly affected by demotion. Women who are demoted move to objectively worse paid jobs than men. They see an 11% fall in wages, which cannot be explained by their resources, suggesting they move to low paid positions despite their ability. Men are unaffected.

Regarding subjective health (models 3 and 4), VM improves outcomes for both men and women, roughly equally. Those who quit their job and move to a new employer may be taking better working conditions which increase their subjective health. The estimates for intra-firm VM are insignificant, most likely because the conditions of vacancies vary more between firms than they do within firms.

Finally, weekly hours are affected by mobility (models 5 and 6), but the effect relies on gender. VM increases the weekly hours of women, but not men, who see a fall in hours after VM (intra-firm). Women who quit their job take up longer weekly working hours with a new employer, while men do not. Women who take a promotion with the same employer see no change in working hours, while men see a fall in weekly working hours. Importantly, the weekly working hours worked by both men and women at the baseline do not differ significantly. IVM has a significant effect on neither men nor women. Here, women use mobility as a means of finding better hours with a new employer, rather than reducing hours or taking more flexible forms of work.

Previously the change in pay was explained by a change in hours, suggesting inter-firm VM was closer tied to renegotiating hours than *attainment.* This appears to be the case for women in the models above. Estimating the models for pay a second time while

controlling for hours eliminates the positive effect of VM for women. This further confirms that VM in the UK is closer tied to improving working conditions and hours, than attainment Sørensen (1977), (Sørensen, 1975). From the output, it cannot be said that men benefit from mobility more than women. Rather, women appear to be using VM to improve working time, but are subject to penalties for IVM in terms of pay. The results strongly resemble the findings of Cha (2014), who finds that *certain* women benefit from mobility. The output above appears to be closely tied to hours, and although children are controlled for, I argue that the bargain over working time largely determines how women benefit from mobility. I reject *hypothesis 3a.* Instead women may be more reliant on mobility, where as men use other mechanisms to reach attainment.

Regarding IVM, men are affected by job loss and redundancy (inter-firm) but not demotion and lateral changes (intra-firm), women are affected by both. Further, men see "gains" in health after a demotion, where women are unaffected by the change. For these reasons I cautiously accept *hypothesis 3b.* Women are more affected by involuntary change than men, as men are able to avoid penalties in pay, and improve health after the move.

5.4.3. Gender and Mobility in the UK:

A number of gender differences emerge in the models above, but most run counter to the hypotheses. Gender is an important *configuration* of the mobility-outcomes relationship, but results show there are *complexities* to this relationship. Women appear to make trades in terms of outcomes using mobility, while men do not. The idea that women are at an obvious disadvantage is unlikely, instead women appear reliant on intra-firm mobility when outcomes are subjective, and inter-firm mobility when outcomes are objective; with a number of penalties added to IVM. Men are unaffected

by mobility, recreating their conditions after each change. This suggests they reach attainment using some other mechanism, possibly firm or occupational tenure. This may be the product of inequality regimes as outlined by Acker (2006). While men see resources and supports at work, grooming them for higher positions, women must rely on the rewards tied to positions themselves, improving and worsening rewards depending on voluntary and involuntary movement.

The findings above support those of previous authors, but add further nuance. Firstly, the output closely matches that of Cha (2014), women benefit over men when outcomes are objective. Regarding subjective outcomes, Gesthuizen (2009) finds no difference between men and women in VM's effect on subjective outcomes, but expects women to see smaller returns on mobility. The tables above find only a few differences, but they run counter to the hypotheses presented here and in Gesthuizen (2009). Latzke et al. (2016) find that women are rewarded less pay for mobility when compared to men. They find that both women and men benefit subjectively from mobility equally. Although the difference in pay is significant, it is minor. The results above find the opposite, and when hours are considered neither men nor women benefit from mobility directly, although minor differences exist in subjective outcomes. Keith and McWilliams (1999) also find no gender differences in the "wage" premium tied to VM, their results for gender are identical but do not control for hours. In the results above, weekly working hours emerge as a significant point of contention. Thus models which consider hours may offer insight that models estimating pay cannot.

How do these findings reflect the theories of Becker (2010) and Kalleberg and Marsden (2005)? It cannot be said that women use mobility to correct for overt or statistical discrimination for each outcome. Quitting (a voluntary inter-firm change) does not increase a woman's pay without increasing her weekly hours. However, neither does

promotion reward men best, forcing women to look beyond their current firm to correct a mismatch. If attainment and career progress are "a person's attempts to maximise their status and income" through mobility (Sørensen, 1975, Gesthuizen, 2009, Gesthuizen and Dagevos, 2008), it seems that women benefit slightly more from mobility than men. Both gain minor improvements in satisfaction and condition where they can. Acker's (2006) inequality regime may come the closest to explaining the inter-firm results above. Women improve outcomes somewhat by changing employers, but intra-firm mobility within the *inequality regime* also affects women significantly; improving subjective measures through promotion, but carrying significant penalties with demotion. Men on the other hand, rely on separate mechanisms to reach attainment in the UK. I turn now to the impact of education on the relationship between mobility and outcomes.

5.4.4. Education Differences in Subjective Outcomes:

This section splits the models in Table 5.2 by education, running separate models for those with basic, secondary, and third level qualifications. Thurow (1976) proposes that educational credentials are not symbols of "ability" as suggested by *marginal-productivity theory*, but rather symbols of training potential. Workers with lower qualifications are perceived as less deserving of training, through *statistical discrimination.* Further, Sørensen (1975, 1977, 1978) claims education groups differ in terms of "resources" attained before labour market entry. Those with lower education qualifications will see a disadvantage in the attainment they can reach though job mobility. The relevant hypotheses are listed at the start of this chapter. Results reveal complicated differences which go beyond what is expected by *attainment theory* and *statistical discrimination*. Again, education differences are configurations of mobility and outcomes. Although the theories above suggest those with higher qualifications should see the largest premiums, results are more complex. As before, complex bargains

emerge through mobility. Instead secondary educated workers rely on VM for subjective outcomes, while tertiary educated groups rely on VM for objective outcomes.

The models below differ heavily in the number observations respondents. Models for those with a basic level of education rely on 5,500+ observations. Models for those with a secondary level of education draw on 15,700+ observations. Lastly, models for those with a third level education draw on 4,700+ observations. The R-squared figures do not differ significantly between educational groups, except for satisfaction with hours, where those with a basic education see 20% of the variance explained using the controls and those with a third level education see only 11% of the variance explained using the controls. The models are split in Table 5.7 and Table 5.8. The constant terms in each model provide insight into differences between groups. Workers with a basic education consistently list the highest levels of satisfaction, although the difference is insignificant. Table 5.7 and Table 5.8 list the estimates.

Table 5.7: Results, UK 2000-2008: Linear estimated fixed-effects of satisfaction with work, and satisfaction with pay. Models estimated separately for each educational group.

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Basic lvl education: satisfaction with work	Secondary lvl education: satisfaction with work	Third lvl education: satisfaction with work	Basic lvl education: satisfaction with pay	Secondary lvl education: satisfaction with pay	Third lvl education: satisfaction with pay
2.inter-firm voluntary	0.27***	0.38***	0.36***	0.24***	0.29***	0.13**
	(0.06)	(0.03)	(0.05)	(0.07)	(0.03)	(0.05)
3.inter-firm involuntary	0.02	0.14	-0.16	-0.01	0.04	***0.18******
	(0.13)	(0.08)	(0.14)	(0.14)	(0.07)	***(0.09)***
5.intra-firm voluntary	0.32***	0.18***	0.10*	0.11	***0.12*****	0.02
	(0.07)	(0.03)	(0.05)	(0.08)	***(0.03)***	(0.05)
6.intra-firm involuntary	***-0.63****	-0.06	-0.05	-0.07	0.17	-0.24
	(0.31)	(0.17)	(0.15)	(0.22)	(0.16)	(0.16)
Constant	1.37**	0.07	0.49	-0.54	-0.32	0.03
	(0.55)	(0.32)	(0.55)	(0.71)	(0.31)	(0.48)
Observations	5,525	15,712	4,799	5,519	15,701	4,796
R-squared	0.02	0.02	0.02	0.10	0.07	0.06
Number of pid	798	2,252	733	798	2,252	733
Waves	10-18	10-18	10-18	10-18	10-18	10-18
Weights	Clustered SE	Clustered SE	Clustered SE	Clustered SE	Clustered SE	Clustered SE

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
The models control for age, contract, firm size, whether the respondent has children, the size of the firm, the industry, and survey wave. The models also control for general satisfaction with work (except for models predicting satisfaction with work). I also control for two macro variables- the unemployment rate, and the rate of economic growth. I do not list these estimates in the appendix due to limitations of space. However, a baseline model is listed in the appendix.

Table 5.8: Results, UK 2000-2008: Linear estimated fixed-effects of satisfaction with security, and satisfaction with time. Models estimated separately for each educational group.

VARIABLES	(1) Basic lvl education: satisfaction with security	(2) Secondary lvl education: satisfaction with security	(3) Third lvl education: satisfaction with security	(4) Basic lvl education: satisfaction with time	(5) Secondary lvl education: satisfaction with time	(6) Third lvl education: satisfaction with time
2.inter-firm voluntary	0.13**	0.11***	***0.07***	0.16***	0.16***	0.08*
	(0.06)	(0.03)	***(0.05)***	(0.06)	(0.03)	(0.05)
3.inter-firm involuntary	0.10	0.03	0.06	-0.03	0.08	0.02
	(0.11)	(0.07)	(0.12)	(0.12)	(0.06)	(0.11)
5.intra-firm voluntary	0.10	***0.13******	0.03	0.09*	0.06**	***-0.04***
	(0.07)	***(0.03)***	(0.05)	(0.05)	(0.03)	***(0.05)***
6.intra-firm involuntary	***0.93******	-0.11	-0.19	-0.26	0.06	-0.08
	(0.17)	(0.15)	(0.19)	(0.47)	(0.17)	(0.15)
Constant	0.47	-0.41	0.43	0.77	-0.19	-0.07
	(0.56)	(0.31)	(0.56)	(0.51)	(0.30)	(0.54)
Observations	5,499	15,693	4,792	5,524	15,709	4,799
R-squared	0.11	0.09	0.09	0.20	0.14	0.11
Number of pid	798	2,252	733	798	2,252	733
Wave	10-18	10-18	10-18	10-18	10-18	10-18
Weights	Clustered SE	Clustered SE	Clustered SE	Clustered SE	Clustered SE	Clustered SE

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
The models control for age, contract, firm size, whether the respondent has children, the size of the firm, the industry, and survey wave. The models also control for general satisfaction with work (except for models predicting satisfaction with work). I also control for two macro variables- the unemployment rate, and the rate of economic growth. I do not list these estimates in the appendix due to limitations of space. However, a baseline model is listed in the appendix.

As before, workers see improved outcomes after VM and see no effect after IVM. Overall, third level educated workers appear to gain the least from VM, while those with a basic or secondary level of education gain the most; this is especially true for promotions (intra-firm VM). Three distinct education differences appear in the tables above. First, those with a basic level of education see a fall in satisfaction with work after demotion (intra-firm IVM), the other groups are unaffected. Second, those with a secondary level of education see improved satisfaction with pay, security, and time after a promotion (intra-firm VM); those with a third level education are not affected. Lastly, those with a basic education see increased satisfaction with security after a demotion (intra-firm IVM); the other groups are not affected.

Starting with satisfaction with work, each group gains from VM roughly equally, improving their satisfaction with work by either quitting or taking a promotion. Thus each education group moves on to subjectively "better" work after the change.

Regarding IVM, workers are not affected, except for those with a basic level of education. After, a demotion, these workers move to subjectively worse jobs, independent of their fixed resources. The findings above (models 1, 2, and 3) go against attainment theory, where education groups are expected to benefit differently from mobility.

Satisfaction with pay (models 4, 5, and 6) appears split by inter-firm and intra-firm mobility. Each education group benefits from inter-firm VM, but only those with a secondary level education see improved satisfaction after a promotion (intra-firm VM). The remaining groups are unaffected. Regarding IVM, each educational group is unaffected by IVM, although those with a third level education appear to benefit from involuntary change. Thus, secondary educated workers may be reliant on the firm when the outcome is related to pay, since they see satisfaction in pay beyond what can be explained by their (limited) resources.

Satisfaction with security contains several differences. VM appears to benefit only those with a secondary or a basic education. Third level educated workers do not see increased security after VM. Those with a third level qualification may feel less attached to an employer, or more committed to an occupation, hence mobility in itself does not change feelings of security. Regarding IVM, education groups are not affected by the change, and those with a basic education even see increased satisfaction with security, which is most likely the product of avoided unemployment.

Finally, regarding satisfaction with working time, VM increases satisfaction for all education groups. However, those with a third level education do not benefit from intra-firm VM. IVM does not affect worker satisfaction with time.

Overall, respondents with a third level education see few subjective benefits from mobility, especially promotions. Other education groups are more dependent on the

firm, gaining subjective satisfaction from both VM and IVM. Thus, I reject *hypothesis 3c*. Education differences between workers exist, but they run counter to the hypothesis, suggesting workers without third level degrees gain more from mobility in terms of subjective outcomes. Further, I reject *hypothesis 3d*. Respondents with secondary or basic levels of education are unaffected by IVM, at times even benefitting from demotion. This suggests mobility for involuntary reasons sometimes moves workers to more satisfactory positions, given their fixed resources. Where attainment theory predicts high qualified workers will have the most to gain from mobility, the results above suggest these workers rely on mechanisms other than mobility to improve outcomes. It may be that other education groups, with less access to training and investment rely on the rewards tied to positions, whereas third level educated groups use other means to reach attainment.

The next section considers objective outcomes, testing for differences between educational groups in models estimating gross pay, subjective health, and weekly hours worked. Here, significant differences offer insight, different to those above.

5.4.5. Education Differences in Objective Outcomes:

While the models above show third-level educated workers do not rely on firms, and are marginally affected by mobility, a different set of results emerge below. For those with a basic education, the estimates draw from 5,000+ observations from 790+ respondents. Models for secondary level educated workers are the largest, with 15,000+ observations from 2,200+ respondents. The smallest group is that of third level educated workers, with 4,000+ observations from 700+ respondents. The constant terms reveal *a significant wage difference* between education groups; those with a basic level of education earn the least, and those with a third level education earn the most. The same can be seen in the models estimating weekly hours worked. Those with a basic level or

secondary level education work 31 hours, those with a third level education work 43 hours. These differences are significant, as the constants' standard errors do not overlap. The estimates are listed below.

Table 5.9: Results, UK 2000-2008: Linear estimated fixed-effects of gross monthly pay, and subjective health. Models estimated separately for each educational group.

VARIABLES	(1) basic education lvl: log gross monthly wage	(2) secondary education lvl: log gross monthly wage	(3) third lvl education: log gross monthly wage	(4) basic lvl education: health	(5) secondary lvl education: health	(6) third lvl education: health
2.inter-firm voluntary	0.00	0.01	***0.03****	0.17**	0.09**	0.11*
	(0.02)	(0.01)	***(0.02)***	(0.07)	(0.04)	(0.06)
3.inter-firm involuntary	-0.08*	-0.06**	-0.11***	0.04	***0.12****	0.13
	(0.04)	(0.02)	(0.04)	(0.14)	***(0.07)***	(0.15)
5.intra-firm voluntary	0.03	0.01	0.02	0.07	0.06	-0.07
	(0.02)	(0.01)	(0.02)	(0.10)	(0.04)	(0.07)
6.intra-firm involuntary	-0.10**	***-0.07***	-0.12*	0.10	0.12	0.02
	(0.04)	***(0.07)***	(0.07)	(0.30)	(0.18)	(0.18)
Constant	7.06***	7.31***	7.71***	5.67***	5.05***	6.03***
	(0.19)	(0.10)	(0.12)	(0.72)	(0.40)	(0.70)
Observations	5,525	15,712	4,799	4,815	13,765	4,208
R-squared	0.20	0.25	0.32	0.02	0.03	0.04
Number of pid	798	2,252	733	795	2,235	725
Waves	10-18	10-18	10-18	10-18	10-18	10-18
Weights	Clustered SE	Clustered SE	Clustered SE	Clustered SE	Clustered SE	Clustered SE

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
The models control for age, contract, firm size, whether the respondent has children, the size of the firm, the industry, and survey wave. I also control for two macro variables- the unemployment rate, and the rate of economic growth. I do not list these estimates in the appendix due to limitations of space. However, a baseline model is listed in the appendix.

Table 5.10: Results, UK 2000-2008: Linear estimated fixed-effects of gross weekly hours worked. Models estimated separately for each educational group.

VARIABLES	(1) basic lvl education: weekly working hours	(2) secondary lvl education: weekly working hours	(3) third lvl education: weekly working hours
2.inter-firm voluntary	***0.75****	0.38	0.41
	(0.39)	(0.24)	(0.42)
3.inter-firm involuntary	-1.10	-0.41	-0.98
	(0.87)	(0.52)	(1.06)
5.intra-firm voluntary	-0.43	0.03	-0.38
	(0.47)	(0.23)	(0.49)
6.intra-firm involuntary	***-1.34****	-0.18	-0.86
	(0.73)	(0.88)	(2.14)
Constant	31.98***	31.90***	43.23***
	(3.63)	(2.51)	(3.09)
Observations	5,520	15,694	4,786
R-squared	0.05	0.03	0.03
Number of pid	798	2,252	733
Wave	10-18	10-18	10-18
Weights	Clustered SE	Clustered SE	Clustered SE

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
The models control for age, contract, firm size, whether the respondent has children, the size of the firm, the industry, and survey wave. I also control for two macro variables- the unemployment rate, and the rate of economic growth. I do not list these estimates in the appendix due to limitations of space. However, a baseline model is listed in the appendix.

The output above resembles the objective models discussed in the first section, where VM contains minor premiums but IVM has significant penalties for respondents. Regarding education, 5 differences stand out, although few are in line with predictions made by *attainment theory*. First, third level educated workers increase gross monthly pay through VM, unlike the other groups. Second, the gross monthly pay of those with a secondary level degree is *unaffected* by intra-firm IVM, the other education groups are negatively affected by the change. Third, respondents with a secondary level education *improve* subjective health through inter firm IVM, the other groups are unaffected. Lastly, respondents with a basic education see significant changes in weekly working hours, with an increase following VM, and a decrease following IVM. The other educational groups are unaffected by the change.

The first set of models estimates objective gross monthly pay (Models 1, 2, and 3

Table 5.9). Regarding VM, only those with a third level education see positive changes in gross monthly pay, the other education groups are unaffected, as predicted by *attainment theory.* Those with a basic level of education or a secondary level of education see no change in gross monthly wages following VM. This suggests respondents with the most "resources" are better able to navigate vacancies to make "gains". These vacancies contain premiums which cannot be explained by worker characteristics themselves. Regarding IVM, all education groups see a wage penalty, losing gross monthly wages by roughly 7%. This too is not predicted by attainment theory which assumes a fall in wages, but expects a fall that affects non-tertiary educated groups the most. Strangely, secondary level educated workers see no wage penalty tied to demotion (intra-firm IVM), while other education groups fall into lower paid vacancies that do not match their resources.

The next set of estimates considers subjective health as an outcome (models 4, 5, and 6 in Table 5.9). Few differences exist in terms of VM, education groups all benefit in terms of subjective health, moving to jobs with better working conditions following the change. As mentioned, this runs counter to attainment theory, which expects higher educated respondents to gain more from VM than those with less education (or resources). Regarding IVM, few differences emerge between education groups except that secondary educated workers see *improved* health outcomes following the change, suggesting dismissal, firm closure, and redundancy leads workers with poor health into better working conditions following the change; as mentioned, firms which are about to close may contain poorer conditions than the average firm. Further, respondents who are about to be laid-off may work in poorer conditions than the average worker.

Lastly, the final set of estimates (models 1, 2, and 3 Table 5.10) considers weekly hours worked. Only those with a basic education are affected by mobility, the remaining

educational types are able to recreate their working hours in a new job. Respondents with a basic education gain hours after VM but lose hours after IVM. These results should be considered alongside the results for pay; those with a basic education see no change in pay despite an increase in weekly hours after a change. Those with third level education see an increase in pay, without an increase in hours.

The output suggests those with a tertiary education gain the most from VM, while those with a basic or tertiary education see fewer effects on outcomes. Regarding IVM, all groups see a fall in pay, although secondary educated groups are protected when the change occurs with the same employer (demotion). Crucially, IVM does not reduce working hours, despite reductions in pay for each group. This suggests workers move to vacancies with lower pay, which cannot be explained by their fixed resources (like education). Education differences among groups are more apparent in objective models, and more in line with previous hypotheses. Workers with a third level degree gain the most from VM, and indeed see an increase in wages, without an increase in weekly working hours. Those with a basic education gain little from VM, and maintain the same pay while seeing increased weekly working hours. Those with a secondary level of education are somewhat protected from IVM, seeing no change in pay and no change in weekly hours. I accept *hypothesis 3c.* Those with a third level degree have an advantage over educational groups, at least for inter-firm mobility. I reject *hypothesis 3d.* IVM has an effect on workers, but this effect applies uniformly across education groups, regardless of resources. The findings above capture the predictions made by *attainment theory,* and somewhat resemble the *statistical discrimination* described by Thurow (1976), although promotions are a crucial part of his theory, a type of mobility which yields no significant change in pay.

5.4.6. Education and Mobility in the UK:

Several differences emerge in the output above. First, results illustrate the complexity of mobility-outcomes discussed previously. There is a mismatch between the group which improve subjective outcomes (secondary level education groups) and the group improving objective outcomes (tertiary level educated groups), yet theory predicts that workers should gain in both. Second, linked to the first point, attainment theory expects tertiary educated workers to gain the most when compared to secondary educated workers, yet results suggest both groups see advantages and disadvantages in the mobility-outcomes relationship.

It could be that workers with non-tertiary degrees are particularly reliant on mobility to attain satisfactory jobs, while those with a third level degree see satisfactory jobs as standard. As with women in the previous section, non-tertiary groups may be less inclined to receive training and as a result rely on mobility within the firm to move to satisfactory positions. When outcomes are objective, this group's wages are subject to market competition and efficiency, and so do not contain added premium beyond the worker's "fixed worth".

Similar findings do not emerge in the wider literature. Gesthuizen (2009) finds no difference in the "premium" tied to VM depending on worker "years of education", using data from the Netherlands. His results suggest that workers with few years of education gain roughly as much utility as better educated workers, between and within firms (also using subjective outcomes). Latzke et al. (2016) consider class differences in mobility's impact on satisfaction with work and gross pay. The sample is taken from Germany. Professional, white collar and blue collar categories are compared. The authors find no class differences in VM's impact on satisfaction with work, but find significant class differences in the *pay-premium* attached to mobility. Here professionals

earn the most after a change, followed by white collar workers, and lastly blue collar workers. Importantly, all groups benefit but their "premiums" are significantly different from one another. Pavlopoulos et al. (2014) report the opposite, considering the return on VM in Germany and the UK. In both countries the authors claim low-paid workers see the highest returns on inter-firm VM. Results for the UK also show that intra-firm mobility benefits low-paid workers the most. The results presented in this chapter are closer aligned to Latzke et al. (2016) and their analysis of Germany than Pavlopoulos et al. (2014) and their analysis of Germany and the UK, although this thesis' definition of job mobility is also closer tied to Latzke et al. (2016) than Pavlopoulos et al. (2014).

Regarding the theories cited, the subjective models (and several of the articles above) cast doubt over the *theory of attainment* proposed by Sørensen (1975, 1977, 1978). Specifically regarding educational differences, those with tertiary education should benefit the most from VM, while those with a basic education should see the smallest returns. Education and skills are important resources which capture *"...the extent to which they are able to take advantage of the opportunities [in a given labour market]*"((Sørensen, 1977) p 971). He further suggests *"...one should expect that the effect of a major determinant of resources such as education should have an observed effect on status that increases with time in the labor force"* (p 975). Instead, results reveal that secondary educated workers appear to make the largest gains in subjective outcomes from VM. They are also able to improve their conditions within the firm, while the tertiary educated workers only "gain" through VM between firms, if at all.

The results for objective models offer some support to *attainment theory,* and further support the theories laid out by Thurow (1976) in terms of *statistical discrimination*. Workers with a third level of education are able to increase their pay (possibly through

longer hours), while other groups are seen as less productive and therefore less deserving.

The results between education groups further highlight the core argument in this thesis, *attainment theory* may apply to some worker types, but the majority of mobility in the UK is used to correct job mismatch and bargain over conditions and responsibilities. Non-tertiary level education groups use mobility to make gains in subjective feelings about time, pay, work, and security, possibly because they rely on mobility events to move into vacancies with better conditions. Few of these improvements take the form of objectively higher pay, lower hours, and better conditions (although subjective health indicates inter-firm changes improve the outcome). Thus movement in the UK, mobility is a process of finding subjectively better working conditions or more interesting work, not attainment as proposed by utility driven models.

5.5.Summary

The previous chapter outlined the key features of the UK system, which were further developed in this chapter. The market is highly mobile, and most of this mobility is voluntary, a finding similar to previous authors researching mobility in liberal market economies. Further, worker outcomes in the UK are less equal than they are in coordinated Germany, suggesting that the labour market is individualised and less predictable overall. Lastly, the institutions in the UK push for individual bargaining which likely shapes not only outcomes, but also the rate of mobility. The argument at the end of that chapter proposed that the UK's rate of mobility is shaped by the varied nature of outcomes, and mobility is driven by a desire to improve outcomes, using individualized bargaining. This chapter tackles the main research question "what do workers get from job mobility in the UK?"

The theory of attainment would see the UK's mobile labour market as a structure with more vacancies, and more utility tied to the process of moving. At its heart, voluntary mobility is high because it leads to better jobs. However, results suggest a more nuanced answer. There are two complexities with the assumption that mobility leads workers to better jobs (noted in the literature review). First, results show that VM affects some outcomes over others, suggesting workers make trades in outcomes using mobility. For example, VM has a strong positive effect on worker satisfaction with work. However, it also has a strong positive effect on the weekly hours respondents must work. Here, workers make trades, increasing some outcomes but sacrificing in other outcomes. Second, results show that subjective and objective measures of the same outcome react differently to VM. Results show VM produces several positive and significant effects on subjective outcomes, but few significant effects on objective measures of the same outcome. This is most evident in the relationship between subjective pay and objective pay. VM has a strong positive effect on the subjective outcome, while barely affecting the objective measure of the same outcome. The two complexities are not addressed in the theoretical literature and are not considered by previous authors who use the theory, despite the fact that they emerge in empirical works (Gesthuizen and Dagevos, 2008, Latzke et al., 2016).

Instead, British workers use mobility to bargain with employers, compromising with certain outcomes for gains in others. This is confirmed by the first configuration discussed above, the effect of mobility types on outcomes. Since the British labour market is largely governed by market forces, respondents cannot gain premiums in pay (beyond the efficiency wages found in intra-firm mobility). As a result, they turn to bargains tied to responsibility and working conditions overall, ensuring their pay better matches their responsibility in new vacancies. Because of this, the "rewards" tied to VM appear largely subjective, with few objective improvements after VM. Further IVM is

not without penalties, with significant falls in wages tied to IVM. This is further supported by the nuance of inter-firm and intra-firm mobility. The act of quitting has a stronger effect than the act of promotion because working conditions vary more between firms that they do within them. Workers who take promotions in the same firm report better working conditions, but not better than those who quit. Overall the results suggest internal structures improve objective outcomes best (as argued by *efficiency wage theory*), while external structures improve subjective outcomes best. Similar results are reported by Gesthuizen and Dagevos (2008) and Kalleberg and Mastekaasa (2001), although neither comments on the distinction. The crux of the UK market is one where mobile workers make bargains for better working conditions and longer hours, but not attainment as it appears in the literature, at least in the immediate sense.

This is further confirmed when looking at differences between workers. The second *configuration* looked at the importance of worker-characteristics. Although Sørensen (1975) accepts worker inequality in the distribution of attainment, he presents gender or class differences as differences at the point of skill acquisition, not at the point of mobility itself. Instead Hachen (1990) and Acker (2006) consider the inequalities past the point of skill acquisition, within the wider market citing overt and statistical discrimination. Yet, women appear to gain more from mobility than men, counter to predictions. Women see larger returns from voluntary mobility and larger penalties from involuntary mobility, while men are hardly affected. Expanding the models further women improve hours through mobility, thereby earning more. To say that men hold an advantage over women in the premiums tied to VM would be inaccurate. It could be that the structure of inequality as presented by Acker (2006) make women more dependent on mobility, and men more dependent on training and "grooming", where mobility is less able to improve outcomes.

Differences between education groups reveal a similar relationship. Education differences emerge in the mobility-outcomes relationship, but these are affected by the *complexities* mentioned earlier. Although *attainment theory* and *statistical discrimination* expect higher premiums to go to those with a third level education, results reveal that different groups benefit from VM depending on the outcome. Secondary level educated workers gain subjective improvements from mobility, while third level educated workers are hardly affected by VM when outcomes are subjective. This makes sense; secondary educated workers may rely on the firm more than third level educated workers who rely on occupational protections, or better opportunities elsewhere. Further, the variance of working conditions for secondary level educated workers is likely wider than third level educated workers, who may be operating in more predictable markets, in the same argument as that which applied to the men above, third level educated workers may be improving outcomes using mechanisms other than mobility, like training or training.

This picture changes when outcomes are objective, third level educated workers gain objectively from inter-firm mobility, without increasing their working hours; but secondary level educated workers see no objective financial gain in VM, suggesting their wages are closely tied to their personal characteristics. This finding too supports the argument of the chapter, non-tertiary level educated groups (and to lesser extent, women) make gains in subjective outcomes through mobility, while third level educated groups (and men) are able to make gains in objective outcomes, above their worth. As mentioned, different groups use mobility to improve outcomes, but attainment in the sense of higher earnings through mobility, is specific to those with a third level education. The next chapter considers the German case, using the German Socio-Economic Panel to estimate worker return on mobility, answering the research questions considered throughout the British chapter.

6. Germany

This chapter develops the argument from chapter 4 with the German case in mind. Chapter 5 explored the dynamics of mobility and outcomes in the UK, arguing that mobility lead to improved subjective outcomes, which did not materialise in terms of objective outcomes. The current chapter explores the German case, where mobility is uncommon and outcomes are more equal, it contains a similar argument. Germany's low rate of mobility stems from its minor returns from mobility since working conditions and pay are set at the industry level (Streeck, 2009b). Both pay and working conditions rely on collective bargains and are not individually bargained for. As a result voluntary movement has a minor effect on outcomes and workers remain in the same job with the same employer for longer, pursuing promotions with a given structure.

As before, the chapter considers two configurations of the mobility-outcomes relationship. First, it explores the relationship between mobility types and outcomes, which go beyond the typical voluntary-involuntary dimension. Second, it outlines the gender and education differences in the relationship between mobility and outcomes. In each configuration, a central assumption in attainment theory is tackled. This is that voluntary (and involuntary) mobility leads to good (and bad) jobs. In this view, no bargains or conflict exist between workers and employers, and all vacancies lead workers to better jobs. The two complexities with this assumption have been discussed throughout this work. First, VM is not utilitarian and differs in effectiveness on outcomes; this point is especially evident in the German output. Second, there is a mismatch between subjective outcomes and objective measures of the same outcome. Curiously, the effect in Germany runs counter to the effect in the UK, yet again, pay is a good example. VM has no effect on subjective satisfaction with pay, the measure is completely unaffected by mobility. However, when the measures consider gross weekly wages, VM has a strong positive effect.

The key argument of the chapter goes as follows; in Germany, workers gain little from mobility since outcomes are roughly standardised. VM has positive and negative effects on subjective outcomes, suggesting workers who leave the firm must make compromises in new positions while finding overall satisfying work. Meanwhile intra-firm mobility has strong positive effect on earnings. Hence, Germany's low rate of mobility stems from the mixed effects of inter-firm mobility coupled with the strong effect of intra-firm mobility on objective outcomes. This argument is slightly different to the one presented for the UK, where mobility affects almost all subjective outcomes, but rarely affects objective outcomes.

The chapter reports strong support for efficiency wage theory and internal labour market theory (Althauser and Kalleberg, 1981, Akerlof and Yellen, 1986) where intra-firm mobility correlates with a positive change in wages, beyond what can be explained by worker characteristics. However these theories fail in predicting the impact of IVM, which has no effect on any of the outcomes used, suggesting workers are able to fully recreate their pay and conditions after an involuntary change (assuming they avoid long term unemployment). One distinct characteristic of the German output is the mixed effect mobility has on subjective outcomes.

The argument is further supported by models considering differences between workers. Comparing genders, women and men see identical objective premiums for intra-firm mobility, while women are largely unaffected by mobility in terms of subjective outcomes. Although the labour market is less open than the UK's, collective bargaining ensures both genders see the same premiums for intra-firm change. However, IVM disproportionately affects the working hours of women. Comparing education groups, secondary level educated workers see the highest returns from VM, suggesting these workers move between clearly defined pay brackets. Third level educated workers are

unaffected by mobility itself, suggesting they improve outcomes through some other mechanism, possibly tenure or training. The crux of the German model is its emphasis on intra-firm mobility, with strong rewards for promotions, and mixed results for quits.

Germany's "learning" production regime (O Riain, 2011), its collectivist form of bargaining (Hall and Soskice, 2001) and its Christian Democratic welfare state emphasise protection for labour market insiders (usually male breadwinners). These protections foster long term careers with minimal interruption, and limit the amount of mobility in Germany as working conditions differ little between firms. The results throughout this chapter best resemble efficiency wage theory, where employers internalise the workforce as much as possible. Attainment theory and value-rewards theory do not emerge, as workers make compromises after every move. The section below lists the hypotheses, presents the data, discusses the results, and the German market overall. Mobility types are explored first, differences between workers are considered later.

6.1.Hypotheses and Aims:

The aims and hypotheses of this chapter are discussed in depth in the literature review (chapter 2). Each set of hypotheses is tied to a research aim; these are listed below for reference.

1) To estimate the relationship between job mobility and outcomes.
    a) *Hypothesis 1a: Voluntary mobility will have a positive effect on outcomes (Attainment theory).*
    b) *Hypothesis 1b: Voluntary mobility will differ based on movement between and within firms. Intra-firm mobility will have a positive effect on objective outcomes (Efficiency Wage theory/Internal Labour Market theory)*

c) *Hypothesis 1c: Voluntary inter-firm mobility will have a positive effect on subjective outcomes (Job mismatch).*

d) Hypothesis 2a: Involuntary mobility will have a negative effect on outcomes (Attainment theory/Values-Rewards theory).

e) Hypothesis 2c: Inter-firm involuntary mobility will have a negative effect on subjective outcomes (Job mismatch).

2) To test between-worker differences in this relationship:

a) Hypothesis 3a: Gender differences will exist between workers. Men will benefit from voluntary mobility more than women.

b) Hypothesis 3b: Men will be hindered by involuntary mobility less than women.

c) Hypothesis 3c: Education differences will exist between workers. Those with a third level education will benefit from voluntary mobility more than those without.

d) *Hypothesis 3d: Those with a third level education will be hindered by involuntary mobility less than those without.*

Overall, the proposed argument is supported by 4 findings, which emerge from the hypotheses. First, VM contains a mix of positive and negative effects on outcomes (this is the first complexity mentioned earlier). Workers who move voluntarily gain in subjective feelings about work, but lose in subjective feelings about time. Regarding objective outcomes, VM has mixed effects on gross monthly pay, and weekly hours depending on whether workers leave their employer. Second, involuntary movement has no negative impact on outcomes whatsoever. Third, there is nuance to VM which suggests workers make bargains based on the type of mobility they experience. Intra-firm mobility (promotion) has no effect on subjective outcomes, but affects objective outcomes positively. Inter-firm mobility has significant positive effects for (some) subjective outcomes, but contains negative effects for objective outcomes, suggesting

those who leave an employer must compromise elsewhere. Here workers make "gains" by moving to "interesting" jobs, but lose weekly working hours and, as a result, gross monthly pay. Fourth, differences between workers are minor, but can be summarised in terms of time (for gender) and pay (for education).

6.2.Data and Variables:

The full discussion of the analytical strategy and research design is presented in chapter 3 (p 58). Descriptive statistics for each outcome can be found in chapter 4 (Table 4.9 on p 118). Table 6.1 lists the variables considered in each of the models below. The sample is drawn from nine rounds from the SOEP (2000-2008). Respondents must appear in a minimum of eight rounds to be considered in the sample.

Table 6.1 Summary statistics of variables used for Germany. (SOEP 2000-2008)

Variable	Obs	Mean	Std. Dev.	Min	Max
Ref: Same job, same employer					
Changed employer, voluntary	38,683	0.023	0.15	0	1
Changed employer, involuntary	38,683	0.01	0.097	0	1
Changed job, kept employer	38,683	0.007	0.084	0	1
z_work satisfaction	38,288	-0.010	0.947	-3.562	1.460
z_pay satisfaction	38,434	0.000	0.952	-3.144	1.654
z_time satisfaction	38.585	0.0156	0.945	-2.861	1.577
Weekly number of hours worked	38,687	41.683	10.931	0	143.173
Gross monthly pay	34,720	2772.464	1584.566	0	50,000
Log gross monthly wage	34,686	7.796	0.519	5.030	10.819
w11103 (weights)	38,669	1.071	0.351	0	9
Educ: (ref: basic)					
secondary-vocational	38,369	0.438	0.496	0	1
tertiary	38,369	0.239	0.427	0	1
Agecat ref: (16-30)					
31-45	38,683	0.496	0.5	0	1
46-65	38,683	0.438	0.496	0	1
66-84	38,683	0.004	0.06	0	1
Children (ref: no children)					

1	38,683	0.208	0.406	0	1
2	38,683	0.167	0.373	0	1
3+	38,683	0.047	0.212	0	1
Ref: permanent					
temporary	34,982	0.024	0.153	0	1
Firmsize (Ref: 1-20)					
20-200	38,210	0.293	0.455	0	1
200-2000	38,210	0.246	0.431	0	1
2000+	38,210	0.238	0.426	0	1
isco10					
professionals	38,295	0.176	0.381	0	1
technicians	38,295	0.242	0.428	0	1
clerical workers	38,295	0.117	0.321	0	1
services and sales	38,295	0.081	0.273	0	1
skilled agriculture	38,295	0.008	0.09	0	1
craft and related work	38,295	0.167	0.373	0	1
plant and machinery workers	38,295	0.088	0.284	0	1
elementary workers	38,295	0.054	0.225	0	1
Syear (ref: 2000)					
2001	38,683	0.112	0.315	0	1
2002	38,683	0.113	0.316	0	1
2003	38,683	0.112	0.316	0	1
2004	38,683	0.113	0.316	0	1
2005	38,683	0.113	0.317	0	1
2006	38,683	0.113	0.317	0	1
2007	38,683	0.113	0.317	0	1
2008	38,683	0.104	0.305	0	1
industry					
[2] Energy	37,817	0.013	0.114	0	1
[3] Mining	37,817	0.004	0.061	0	1
[4] Manufacturing	37,817	0.218	0.413	0	1
[5] Construction	37,817	0.133	0.34	0	1
[6] Trade	37,817	0.132	0.338	0	1
[7] Transport	37,817	0.052	0.223	0	1
[8] Banking	37,817	0.044	0.205	0	1
[9] Services	37,817	0.391	0.488	0	1

The baseline number of observations stands at 38,000+. Three subjective outcomes are used throughout the chapter, satisfaction with work, pay, and hours, which are

converted to z-scores. Three objective outcomes measuring gross monthly pay, subjective health, and the number of hours worked per week are also used. Health is a subjective outcome, which acts as a proxy for working conditions. The SOEP-long file does not consider the weekly number of hours worked, but considers annual hours worked. As noted in the methodology, this value is divided by 52 in order to make the measure more comparable with the British case. This is a compromise. VM and IVM are determined subjectively. The strategy is similar to Kalleberg and Mastekaasa (2001) and is summarised in Table 3.6 on p 74. Respondents who move for family or other reasons are listed in the "other" category. The SOEP does not distinguish between voluntary and involuntary changes within the firm (Kattenbach et al., 2014). Therefore, promotions, demotions, and lateral movements are considered together in one category, labelled "changed job, kept employer".

The models are estimated using linear fixed-effects and are split into two sets, subjective outcomes and objective outcomes which are considered separately. Since linear fixed-effects models cannot use between-respondent variance, the models are unbiased but inefficient (Allison, 2009). As a result estimates with p-values less than 0.1 are considered statistically significant, instead of the traditional 0.05 threshold.

6.3.Types of Mobility and Outcomes:

This section considers the first aim and the first configuration between mobility and outcomes. It presents the effects of VM and IVM on outcomes between and within firms.

6.3.1. Fixed-effects Estimates and Subjective Outcomes:

Results are summarised in Table 6.2, the estimates draw on 32,500+ observations, clustered by 4,000+ respondents. When estimating the effect of intra-firm mobility, the standard errors are higher, since this category contains far fewer observations than the

other mobility types. Further, intra-firm mobility is especially sensitive since it contains a mix of mobility types. All estimates are weighted using the panel weight w11103, which corrects for attrition. The R-squared values are low with only 2% and 3% of variance explained for satisfaction with work and satisfaction with personal time, respectively. Satisfaction with pay is an exception with 10% of variance explained using the measures. With this in mind, significant relationships exist in the models but they do not predict outcomes well, and may have limited usefulness, at least in the case for Germany. This supports the argument of the chapter; mobility is not a strong predictor of subjective outcomes.

Table 6.2 Results, Germany 2000-2008: Estimated fixed-effects of moving on subjective outcomes

	(1)	(2)	(3)
VARIABLES	z-score satisfaction with work	z-score satisfaction with pay	z-score satisfaction with time
Inter-firm voluntary	0.27***	0.02	-0.08***
	(0.03)	(0.04)	(0.03)
Inter-firm involuntary	0.12**	-0.02	0.02
	(0.05)	(0.04)	(0.05)
Intra-firm change	0.02	0.01	-0.12**
	(0.07)	(0.06)	(0.06)
Constant	0.09	0.25	0.16
	(0.18)	(0.25)	(0.20)
Observations	32,908	32,749	32,871
R-squared	0.02	0.10	0.03
Number of pid	4,181	4,180	4,181
Weight	w11103	w11103	w11103

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Models control for age, contract type, the number of children in the house, the size of the firm, the year of the survey, the industry worked, and the occupation of the individual. All models controls for general worker satisfaction with work (except models predicting satisfaction with work). Models originally controlled for economic growth and unemployment rates. However, since these vary little throughout the panel both measures were dropped due to collinearity with the survey year dummies. A full model is listed in Table 1.3 of the appendix.

Overall, mobility has a minor effect on outcomes and depends on whether the change occurs in the same employer, or a new employer. This dimension appears more important than whether the change is voluntary or not. The most obvious result is the mixed effect of VM, which highlights the first complexity mentioned throughout this work; mobility does not have a uniform effect across outcomes.

Starting with satisfaction with work (model 1) VM between firms has a positive effect, but so does IVM (intra-firm mobility has no impact on satisfaction with work). Moving to a new employer, either voluntarily or involuntarily improves satisfaction with work, beyond what can be explained by worker characteristics alone. Taking a new job with the same employer has no effect on satisfaction with work. Inter-firm mobility may be driven by job mismatch, or dissatisfaction with an employer instead of attainment as it's described in the literature.

Satisfaction with pay (model 2) is completely unaffected by mobility. Respondents, who quit or resign, move to equally satisfactory jobs with a new employer. This suggests pay is not affected by mobility. It could also be that whatever rewards the new vacancy offers are explained by personal characteristics of the worker, like experience, education, or class, instead of mobility itself. Lastly, the result could be due to the standardised working conditions and responsibilities in Germany, which align perfectly with pay after a change. Thus satisfaction does not change as workers expect changes in pay with corresponding changes in responsibility. IVM too has no effect on outcomes. Respondents who lose their job to redundancy, firm closure, or dismissal see no change to their satisfaction with pay, suggesting they are able to recreate their conditions roughly equally. Overall it could be that German workers spend less effort thinking about pay, or that they move through carefully defined pay categories, making pay roughly predictable, which would explain the lack of effect for quits, promotions, and dismissals.

Satisfaction with time (model 3) is negatively affected by mobility, suggesting workers may have to work longer or shorter hours than desired (the next section considers the effect of mobility on hours). VM to a new employer lowers satisfaction with time. This suggests quitting a job means compromising on satisfaction with time. It could be,

moving to a new employer means workers must invest more time in the new position, leaving less personal time. The reverse could also be true; workers may need to build up tenure before getting longer hours, entering a new firm would mean workers are not getting enough hours. In any case VM leads workers to more satisfying work (model 1) at the expense of satisfaction with time (model 3). Taking a new position with the same employer (intra-firm) also negatively affects satisfaction with time, which may be the result of greater responsibility and longer working hours tied to a promotion. Gross weekly working hours are considered later, for the moment VM's effect on time runs counter to the hypothesis. IVM appears to have no impact on satisfaction with time, suggesting workers are able to recreate their conditions after an involuntary change to a new employer.

As a summary, the models provide mixed results. I reject *hypothesis 1a,* results show that VM is nuanced, changes between firms yield different results to changes within firms. However, I also reject *hypothesis 1c.* Although inter-firm VM has a stronger effect on satisfaction with work, it reveals bargains, where workers trade satisfaction with time for satisfaction with work. Beyond this intra-firm mobility has no effect on subjective outcomes, except for a negative effect on satisfaction with time, which could stem from increased responsibility. I also reject *hypothesis 2a*. From the output, it's clear that IVM has no effect on subjective outcomes; workers are able to recreate their conditions after an involuntary change to a new employer. Crucially, this group contains workers who move directly to a new form of employment, and so is not representative of the wider unemployment experience in Germany.

The findings above support the argument of the chapter. German workers are moving less than British workers, partly because of EPL, but also because there are few consequences to mobility. VM is not an adequate strategy for improving working

conditions, partially because working conditions vary less than the UK, and partially because they are set at an industry level. Although authors have criticised the German model for its creeping liberalisation (Streeck, 2009b), the output shows that industrial relations still support predictable working conditions and tenured forms of work, at least in the models above (especially when compared to the UK (Streeck, 2009b, Bosch et al., 2009, Lehndorff et al., 2009)). Further, results clearly illustrate the first complexity in assuming VM leads to "better jobs". The theoretical literature sees mobility as fuelled by utility, where mobility takes place if positive changes occur for workers. However, the empirical literature shows that mobility does not affect all outcomes equally, and often workers make trades through mobility. In the models above, they trade satisfaction with time (which decreases) for satisfaction with work (which increases).

IVM has no effect on outcomes, a finding which runs counter to several hypotheses, including attainment theory by Sørensen (1975) and values-rewards theory presented by Kalleberg and Mastekaasa (2001). Both argue involuntary mobility should have negative effects on "rewards". This is also a central claim in the sociological perspective of labour markets; if inequality is tied to vacancies instead of workers, then moving down the structure of vacancies should punish workers beyond their fixed characteristics. This emerges in the British models when predicting pay, but not in the British models predicting subjective outcomes, nor the German models predicting subjective outcomes. A number of factors could be causing the effect.

First, workers may be moving from poor quality jobs to overall better conditions, organisations which are approaching firm closure or mass layoffs may also be ones with poor working conditions, hence workers see themselves as "breaking even" after a move. Second, German working conditions vary little between firms; workers use occupational licenses (citing an example Marsden (1999) considers German welders) to

move through carefully defined occupations which differ little. Third, the effect could be the result of workers comparing themselves against the prospect of moving into long term unemployment, as argued (but ultimately dropped) by Kalleberg and Mastekaasa (2001).

Germany does not resemble the UK, this is especially true for models predicting satisfaction with pay (model 2), and satisfaction with time (model 3). Values-rewards theory and attainment theory are both of limited use in Germany, but both have predictive power in the UK. The next section substitutes the subjective outcomes above for objective measures of the same outcome, in an effort to understand the effects in greater detail. Time emerges as an important outcome in the models above, the next section pays considerable attention to its objective measure.

6.3.2. Fixed-effects Estimates and Objective Outcomes:

This section considers gross monthly wages, subjective health, and the weekly hours normally worked by respondents. Models draw on 30,000+ observations from 4,000+ respondents. The R-squared value, or the portion of the variance explained by the independent measures differs from 1% (hours) to 18% (log hourly wages). This suggests the variables used explain variance in pay well, but not weekly hours worked, or health. The results are summarised in Table 6.3.

Table 6.3 Results, Germany 2000-2008: Estimated fixed-effect of moving on objective outcomes.

	(1)	(2)	(3)
VARIABLES	Log gross monthly pay	Satisfaction with health	Annual hours worked, e11101 (divided by 52 for weekly hours)
2.Inter-firm voluntary	-0.02*	-0.13**	-1.06**
	(0.01)	(0.06)	(0.34)
3.Inter-firm involuntary	-0.01	0.04	-4.09***
	(0.01)	(0.08)	(0.56)
5.Intra-firm change	0.07***	0.11	1.67*
	(0.02)	(0.10)	(0.91)
Constant	7.71***	7.51***	43.03***
	(0.04)	(0.37)	(0.54)
Observations	30,013	32,898	33,522
R-squared	0.18	0.11	0.01
Number of pid	4,066	4,181	4,223
Weight	w11103	w11103	w11103

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Models control for age, contract type, the number of children in the house, the size of the firm, the year of the survey, the industry worked, and the occupation of the individual. Models originally controlled for economic growth and unemployment rate. However, since these vary little throughout the panel, both measures were dropped due collinearity with the survey year dummies. Full model is listed in Table 1.4 of the appendix.

The previous dimension of inter and intra-firm mobility emerges again. It seems that the dimension is more important than the voluntary-involuntary dimension. Inter-firm changes lower the pay, health, and hours of workers. Intra-firm mobility increases the pay and hours of workers. Both of the complexities with treating seeing mobility as driven by utility emerge. The first is the negative effect mobility has on certain outcomes. The second is the mismatch between subjective and objective measures of the same outcome. Results show intra-firm mobility itself rewards objective outcomes, while inter-firm mobility contains significant penalties which cannot be explained by worker characteristics. Strangest of all, is the fact that IVM has no effect on pay or health.

Starting with gross monthly pay (model 1) respondents who change firms for voluntary reasons see a 2% fall in gross monthly wages. The finding runs counter to attainment theory, human capital theory, and the theory of values-rewards. Respondents who change employer for involuntary reasons, firm closure, dismissal and redundancy do not see a fall in earnings and are able to recreate their pay with a new employer. Lastly, those who move with the same employer earn a 7% increase in gross monthly wages, a

finding that supports efficiency wage theory, where employers pay above market price in an effort to internalise worker skill and knowledge.

Regarding subjective health (model 2); respondents who quit their job move to firms with poorer working conditions. This finding supports the argument that VM contains trade-offs, where workers gain more satisfying work (previous models), for poorer conditions. Those who lose their job and move to a new firm see no change in health, suggesting they recreate their conditions with new employers. Those who take a job with the same employer see no significant change in health, suggesting the see similar working conditions. This too makes sense, since working conditions within the firm likely vary less than they do between firms. However, this finding goes against the predictions made by attainment theory.

In terms of weekly hours worked (model 3), inter-firm mobility lowers hours significantly, while intra-firm mobility increases hours significantly. Respondents who quit and move to a new employer, see a fall in weekly hours, which could explain the fall in gross monthly wages (running the model for gross pay while controlling for hours confirms this, the effect disappears). However, the effect is far larger for workers who change firms for involuntary reasons. When respondents lose their job to dismissal or redundancy, they lose approximately 4 hours of weekly working time in subsequent jobs. Strangely they do not see a change in pay after the redundancy, which could be the product of worker-specific characteristics. Respondents who take a job with the same firm (most likely a promotion) see a boost in hours. Further this increase in hours does not eliminate the positive effect on pay (running the model for gross pay while controlling for hours does not eliminate the positive effect of intra-firm change). Both types of voluntary mobility have different effects on weekly hours, yet both have a negative effect on satisfaction with time.

The results suggest workers who move between firms make compromises, while internal career ladders improve pay and time alone. I reject *hypothesis 1a,* VM is highly nuanced and contains compromises for workers. However, I accept *hypothesis 1b*, intra-firm mobility increases pay significantly as laid out by attainment theory and efficiency wage theory. Further, change in working time does not remove the effect. Lastly, I reject *hypothesis 2a,* IVM has no negative effect on pay and conditions, although the change decreases working hours. The results above resemble a classic *internal labour market,* where workers rely on firm tenure to gain favourable outcomes. By switching employers, workers give up firm tenure and begin at a lower position in a new firm. Thus, they may gain more "interesting" forms of work by resigning, but objectively, their pay, time, and working conditions do not match whatever resources and experience they accumulated with the previous employer.

The evidence in Table 6.3 supports the argument of the chapter and further supports efficiency wage theory. The rate of quits in Germany is low because they carry few objective benefits. Instead quitting results in compromises where workers trade objective outcomes for "satisfying work". This is a key reason behind Germany's lack of inter-firm mobility, which may be fuelled by an overall dissatisfaction with work and a need for more interesting forms of work, although this cannot deducted from the output. EPL has its place in regulating the hiring and firing of workers, but ultimately working conditions vary less between firms, and the best mechanism for improving outcomes and reaching attainment is intra-firm change. As a result, workers gather tenure in a given firm, pursuing promotion. Workers who leave the firm move to vacancies with more satisfying forms of work, that contain less pay and hours. They do not improve satisfaction with pay (most likely due to the decline in pay) satisfaction with hours (most likely due to a decline in weekly working hours). Meanwhile respondents who pursue new jobs with the same employer see increased pay and

increased hours, although satisfaction with hours after the change declines (possibly due to increased responsibility). It seems that efficiency wages may be at play in Germany. Although the theory applies the same prediction to working conditions as it does to wages, results suggest working conditions are not improved after intra-firm mobility.

6.3.3. Mobility Types and the German Model:

The output above falls in line with the "German model" as it appears in the literature. Lehndorff et al. (2009) lament the labour market institutions of the "old Germany" as one which ran internal and occupational labour markets, protected workers, and bargained collectively. There is evidence that these structures are still in place, at least when compared to the UK. The main distinction in Germany is not between VM and IVM, but inter or intra-firm mobility. Regarding intra-firm mobility, the change has almost no impact on subjective outcomes, beyond a fall in satisfaction with time, but brings significant changes in gross weekly wages. Inter-firm mobility entails gaining satisfaction with work, but losing satisfaction with hours, where workers make tradeoffs in certain conditions for more interesting work with a new employer.

The results presented here do not resemble Pavlopoulos et al. (2014) nor Latzke et al. (2016) in terms of mobility's effect on pay. For Pavlopoulos et al. (2014) Germany is a country which rewards inter-firm VM by improving gross monthly pay. Respondents who take promotions within the firm see no positive change in pay. The results above are the near opposite of Pavlopoulos et al. (2014), inter-firm VM has no positive effect on pay and even decreases it when working time is not considered, while intra-firm mobility increases gross pay substantially. This difference may stem from the different definitions of VM, since Pavlopoulos et al. (2014) consider all direct changes as "voluntary" (this is discussed in the literature review). However, the category of intra-firm mobility should be roughly similar in both samples. Latzke et al. (2016) too, argue

that inter-firm VM increases pay and satisfaction with work among German respondents. The results above agree that changing employers has a positive effect on worker's satisfaction with work, but the relationship between inter-firm mobility and pay is not replicated. This difference may stem from the period covered in both works. Here, a semi-balanced panel considers all waves 2000-2008. In Latzke et al. (2016) all waves 1985-2013 are considered. Further their findings suggest the premium tied to inter-firm mobility is in steady decline. Lastly, Reichelt and Abraham (2017) make the distinction that inter-firm mobility must be split by regional and occupational mobility, in order to understand wage inequality. The results above may reflect this, inter-firm changes have no effect. However, the strongest effect seems to come from commitment to a given employer, something unmeasured by Reichelt and Abraham (2017).

Overall, the German model is one which rewards firm tenure and commitment. Inter-firm mobility leads workers to make compromises for satisfactory work. Intra-firm mobility improves pay alone, having almost no effect on every other measure of reward. No utilitarian view of labour markets emerges from the output above. Having outlined the effects of mobility types on outcomes, the next section explores worker differences in the mobility-outcomes relationship.

6.4.Differences Between Workers:

As in the previous chapter, this section considers the second aim of the thesis, asking whether workers differ in the mobility-outcomes relationship. Mobility and outcomes are socially organised, as a result they may provide advantages and disadvantages to certain groups of workers. These differences are summarised by the limited-opportunity model (Hachen, 1990), which predicts group differences in job mobility (promotion, resignation, demotion etc). This section pushes these predictions further, testing if the consequences of mobility differ by groups. The models in the section above assume all

workers are affected equally by mobility. This assumption is made in an effort to capture the distinct differences in mobility types and outcomes. The following section considers if groups differ in the premiums tied to VM and the penalties tied to IVM. These often go beyond human capital, labour supply, or job characteristics (Cooke, 2014, Blau and Kahn, 2003, Goldthorpe, 2000, Goldthorpe, 2002) . As before, the models split previous output by gender (Cooke, 2014, Mills et al., 2008, Acker, 2006), and education (Mills et al., 2008, Goldthorpe, 2000, Goldthorpe, 2002, Rosenfeld, 1992). The relevant hypotheses are listed above.

The models in Table 6.2 and Table 6.3 are first split by gender and later education. The discussion does not consider the nuance of mobility types, since this configuration has been covered. Instead it focuses on worker-differences by VM and IVM alone. Differences in inter and intra-firm mobility are apparent but largely ignored in terms of the hypotheses. Worker differences are minor in each model, but time emerges as a point of contention for gender groups, as pay does for education groups, similar to the UK. Most importantly, results show that the complexity of treating mobility as driven by utility. Here, it does not appear that men gain from mobility at the expense of women, while third level educated workers gain at the expense of other groups. Instead, women are hardly affected by mobility, while men make more complex bargains through mobility. Further, secondary level educated workers improve several subjective outcomes through mobility, more than third level educated workers. Secondary educated workers also rely on the firm to improve objective pay, while third level educated workers see no change in pay after VM. Results suggest nuance in terms of who “benefits” from mobility depending on the outcome used.

6.4.1. Gender Differences in Subjective Outcomes

The discussion opens with gender. In the UK, results run against the hypothesis, women are more dependent on mobility than men, particularly mobility within the firm. Men see few premiums from VM and no penalties from IVM (except for wages). It was suggested that the inequality regimes, presented by Acker (2006), may apply. Here men may be more reliant on training and grooming, while women are more reliant on the premiums which come with specific jobs themselves. This relationship is now considered for German data. This section splits the models in Table 6.2 by gender. The results show that women are completely unaffected by mobility when outcomes are subjective, men make trades in satisfaction with time for satisfaction with work. As before, the women considered in the models below are part of the core economy and are unlikely to represent the experience of the average German woman. This is especially true in Germany since the country's welfare state holds a strong commitment to the male breadwinner model (Esping-Andersen, 2013, Mau and Verwiebe, 2010).

Becker (2010) proposes that coordinated or closed labour markets lead to significant discrimination between genders, when compared to liberal or open labour markets. He cites *overt discrimination* for the result. In coordinated models, men should see higher premiums tied to change when compared to women, due to employers having a "preference" for certain workers over others. Since there is less mobility between and within firms, there is more reliance on a single employer as implied by *internal labour market theory* (Arthur and Rousseau, 2001, Tolbert, 2001). Thus, employers find discrimination easy, and so choose the employees they wish to promote and hold on to as a matter of "taste". Given this prediction, women should see smaller returns from mobility when compared to men. Opponents of the theory claim it has an over emphasis on "human capital", which ignores structural discrimination based on gender (Mills et al., 2008, Cooke, 2014, Acker, 2006). Kalleberg and Marsden (2005) propose that

coordinated labour markets produce less gender inequality than liberal markets, since they tackle existing systems of inequality which stem from casualised labour market agreements. The main issue with Becker's proposal, is that he views employer decision-making as an issue of "taste", ignoring wider social structures which dictate life chances and skill acquisition patterns, like those outlined by Acker (2006).

As before, it is important to note the criticism from Cooke (2016) (page 46) *"gender inequalities are seldom produced by firms paying gender wage differentials for the same job; instead the disparities result from the sorting women and men into different jobs."* However, the process of "sorting" relies on promotions from the part of the employer, and quits from the part of wider social structures, the differences in how these mechanisms reward workers still inform researchers of gender divides, although the criticism above is also noted. The subjective models are listed below.

The models for men draw on 19,000+ observations from 2,500+ respondents. The models for women contain fewer respondents and therefore fewer observations. There are approximately 1,000 fewer women in each model. The R-squared estimates in the models explain between 2% variance (satisfaction with work) and 13% variance (satisfaction with pay). Genders do not differ in terms of model fit, except for models estimating satisfaction with pay. The constant term in each model shows the baseline difference between genders, all things considered, although there is no significant difference between genders. Looking at satisfaction with work, women (0.24) are more satisfied than men (0.06). In terms of satisfaction with pay, men (0.30) are more satisfied than women (-0.19). Lastly, satisfaction with time suggests men (0.30) are more satisfied than women (-0.02). Table 6.4 lists the results.

Table 6.4: Results, Germany 2000-2008: Linear estimated fixed-effects of moving on satisfaction with work, pay, and time. Models estimated separately for each gender.

VARIABLES	(1) Male: z-score satisfaction with work	(2) Female: z-score satisfaction with work	(3) Male: z-score satisfaction with pay	(4) Female: z-score satisfaction with pay	(5) Male: z-score satisfaction with time	(6) Female: z-score satisfaction with time
2.Inter-firm voluntary	0.29***	0.24***	0.01	0.03	-0.10***	-0.06
	(0.04)	(0.06)	(0.03)	(0.08)	(0.04)	(0.05)
3.Inter-firm involuntary	0.19***	0.03	0.01	-0.08	-0.05	0.12
	(0.06)	(0.09)	(0.05)	(0.09)	(0.06)	(0.08)
5.Intra-firm change	-0.04	0.10	-0.01	0.04	-0.14*	-0.10
	(0.09)	(0.11)	(0.08)	(0.09)	(0.08)	(0.09)
Constant	0.06	0.24*	0.30	0.19*	0.30	-0.02
	(0.26)	(0.13)	(0.39)	(0.10)	(0.27)	(0.16)
Observations	19,720	13,188	19,622	13,127	19,703	13,168
R-squared	0.02	0.03	0.13	0.08	0.04	0.03
Number of pid	2,536	1,645	2,535	1,645	2,536	1,645
Weight	w11103	w11103	w11103	w11103	w11103	w11103

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Models control for age, contract type, number of children in the house, the size of the firm, the year of the survey, the industry worked, and the occupation of the individual. All models controls for general worker satisfaction with work (except models predicting satisfaction with work). Models originally controlled for economic growth and unemployment rates. However, since these vary little throughout the panel both measures were dropped due collinearity with the survey year dummies. The estimates are not featured in the appendix although a baseline model appears.

The most obvious result is that women are almost completely unaffected by mobility. Women see just one significant effect (model 2, inter-firm VM on satisfaction with work), while several are evident for men. Three gender differences emerge in the models above. First, German men benefit from IVM between firms when it comes to satisfaction with work, women are unaffected. Second, German men become significantly less satisfied with time after VM between firm, women are unaffected. Lastly, German men become significantly less satisfied with time after an intra-firm move, women are unaffected. Overall, women are affected by one type of mobility for one outcome, while men gain satisfaction with work but lose satisfaction with time from VM. Overall women are unaffected by both VM and IVM. Men, make compromises through VM.

Starting with satisfaction with work (models 1 and 2); men who leave the firm for voluntary or involuntary reasons improve their satisfaction with work. Suggesting leaving an employer in itself, leads workers to more satisfying vacancies elsewhere.

Women, who move for involuntary reasons between firms, are not penalised, but do not see the improvement in the outcome that men do. At the same time, both men and women who take a new job with the same employer, see no change in job satisfaction after the move, suggesting promotions do not specifically guarantee better quality positions in terms of satisfaction with work.

Regarding satisfaction with pay (models 3 and 4); mobility of any kind has no effect on the outcome. Men and women who move to a new employer (for voluntary and involuntary reasons) are able to recreate their subjective satisfaction roughly equally. Men and women who take a job with the same firm are also unaffected in terms of subjective pay. This could be the product wage-setting at an industry or occupational level. Workers know what their earnings will be relative to their responsibilities, and so their satisfaction does not change.

Finally, two of the gender differences above are tied to satisfaction with time (models 5 and 6). As stated, women are unaffected by both VM and IVM, but men see negative effects in satisfaction with time following mobility. VM between firms leads men to jobs with lower satisfaction with time. Thus quitting for a new employer moves men to positions with less favourable time demands. This could be the product of changed working hours, which emerged in the previous section. Again, this suggests men make compromises through mobility, gaining "interesting work" in exchange for dissatisfying hours. Further men who take jobs with the same firm report lower satisfaction with hours, whereas women are unaffected. It's possible that men must work longer hours after a promotion and after a quit, while women move to jobs with the same time requirements. It's also possible that women remain satisfied despite seeing increased or decreased hours, whether as men are more sensitive to changes in weekly working hours or responsibilities.

Overall, women are not disadvantage in the coordinated German market. Instead they appear unaffected by mobility and although they do not make subjective gains from VM, they do not make the compromises made by men. I reject *hypothesis 3a.* While few gender differences exist, they run counter to the hypothesis and reveal that men must trade subjective satisfaction with time, for subjective satisfaction with work. I further reject *hypothesis 3b.* Although men are not hindered by IVM, neither are women. It's true that men who change employers (due to VM and IVM) improve their satisfaction with work, while women are unaffected, but overall both genders are not penalised by mobility.

What do the findings mean for discrimination theory as presented by Becker (2010) and critiqued by Kalleberg and Marsden (2005)? The results above do not find that men benefit over women in terms of mobility to "better" vacancies. However, neither do the models reveal that women are better able to improve their conditions through mobility. It seems that the German labour market protects women's working conditions, but men's mobility is motivated by factors other than working conditions, since they trade some of these through mobility. This is considered further in the section below using objective outcomes. Overall, it appears that gender differs in terms of the advantages and disadvantages they gain from movement. Men are able to use mobility to find more satisfying jobs in exchange for more demanding jobs, women are able to locate more satisfying jobs without being able to improve the other outcomes. The section below trades the subjective outcomes for objective measures of the same concepts.

6.4.2. Gender Differences in Objective Outcomes

This section splits the models in Table 6.3 by gender. As before the usual limitations of fixed-effects estimation apply, and models with few observations will likely have wider standard errors. Theoretically, discrimination theory expects women to benefit from

mobility less than men, especially after an intra-firm change in a closed or coordinated labour market. Further, inequality regimes (Acker, 2006) within a firm will shape the impact of mobility on outcomes by giving certain groups preference and training over others, before mobility takes place.

The models for men draw on 19,000+ observations from 2,500+ respondents. The models for women contain fewer respondents and therefore fewer observations. Models estimating gross monthly pay contain fewer respondents, drawing on 2,400+ men and 1,600+ women. The R-squared values suggest the listed controls explain between 1% variance (weekly hours) and 21% variance (Log of gross monthly pay). Genders do not differ in terms of model fit, except for models estimating pay. The constant term in each model provides insight into the basic difference between genders, all things considered. These are also statistically significant. Looking at logged gross monthly pay, men (7.91) earn more than women (7.38). In terms of health, a proxy for working conditions, men (0.30) are more satisfied than women (-0.19). Lastly, weekly hours worked differ by gender, with men (45.97) working longer hours than women (39.25). Men earn more, work longer hours, and have a higher level of satisfaction with health. The results are presented in Table 6.5.

Table 6.5: Results, Germany 2000-2008: Linear estimated fixed-effects of moving on gross monthly wages, health, and weekly hours. Models estimated separately for each gender.

VARIABLES	(1) Male: Log gross wages	(2) Female: Log gross wages	(3) Male: satisfaction with health	(4) Female: satisfaction with health	(5) Male: Weekly hours	(6) Female: Weekly hours
2.Inter-firm voluntary	-0.01	-0.03	-0.18***	-0.04	-1.271**	-0.520
	(0.01)	(0.02)	(0.07)	(0.10)	(0.407)	(0.621)
3.Inter-firm involuntary	0.00	-0.02	0.06	-0.02	-3.35***	-5.338***
	(0.01)	(0.02)	(0.10)	(0.14)	(0.616)	(1.122)
5.intra-firm change	0.07**	0.07**	0.13	0.07	1.615	1.765
	(0.03)	(0.03)	(0.13)	(0.15)	(1.263)	(1.277)
Constant	7.91***	7.38***	8.00***	6.88***	45.973***	39.248***
	(0.05)	(0.04)	(0.45)	(0.20)	(0.663)	(1.024)
Observations	17,979	12,034	19,712	13,186	19.858	13,319
R-squared	0.21	0.16	0.13	0.10	0.01	0.02
Number of pid	2,466	1,600	2,536	1,645	2,555	1,664
Weight	w11103	w11103	w11103	w11103	w11103	w11103

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Models control for age, contract type, number of children in the house, the size of the firm, the year of the survey, the industry worked, and the occupation of the individual. All models controls for general worker satisfaction with work (except models predicting satisfaction with work). Models originally controlled for economic growth and unemployment rates. However, since these vary little throughout the panel both measures were dropped due collinearity with the survey year dummies. The estimates are not listed in the appendix, although a baseline model appears.

As before, the most obvious result from the output is how little women are affected by mobility. Women who experience mobility see just two significant effects. VM increases pay, and IVM lowers working hours. However two key gender distinctions can be made from the output. First, men who experience VM between employers see a fall in subjective health, while women are unaffected. Second, men who experience VM between employers see a fall in weekly hours, but women are unaffected. Although it appears that a third, relevant distinction can be made about women's weekly working hours after an involuntary change, the effect is not statistically different from men's negative effect.

Regarding gross weekly wages (models 1 and 2); both men and women see no significant change in monthly wage after VM between firms. Men and women are also equally unaffected by involuntary change to a new employer. This is likely the product of Germany's strong welfare state and collectively bargained wages. Workers who lose their job are not penalised for the change and do not move to lower paid vacancies with

a new employer (unlike British respondents). Finally both men and women experience the exact same premium after an intra-firm change (most likely a promotion). No gender difference exists in the estimates, or even the standard errors of the estimates. Becker's (2010) theory of discrimination predicts that closed labour markets would limit the premium that women could gain from promotions, yet the results suggest both men and women see equal premiums from the change. This suggests both genders move to higher paid vacancies, whose premiums cannot be explained by worker characteristics.

The first gender difference emerges in models estimating subjective health (models 3 and 4), which try to capture working conditions. Men who move to a new employer report lower subjective health after the change, women are unaffected. This suggests men move to vacancies with poorer working conditions when leaving an employer, while women are able to recreate their conditions. However the constant term in both models suggest that men report significantly higher satisfaction with health than women. In this way, those who leave a firm may see a "regression to the mean" in working conditions. Inter-firm IVM has no effect on either gender, suggesting those who lose their job are able to recreate their conditions with a new employer. Lastly, mobility within the firm has no effect on either gender's working conditions. This makes sense, since working conditions likely vary less within the firm than they do between firms.

Finally, a gender difference emerges in terms of weekly working hours. Men, who quit, move to vacancies with lower working hours. However, as with subjective health it is possible the experience is a regression to the mean. The constant term reveals men work far longer hours than women, yet women are not affected by the change. Thus men who move to a new employer may simply see a "normalisation" of working time, whereas women's working time is far lower to begin with. IVM affects both men and women's

working hours negatively, yet the effect appears far larger for women than men. The standard errors suggest the difference between men and women is insignificant, but this could be the result of few observations in the women's model, due to the large standard error. Finally respondents who move with the same firm report no change in hours, with no gender difference. Here too, the estimate for women is large, as is the standard error. The estimate for men is close to zero. This result is strange, since subjective models show men see a negative effect in satisfaction with time after the same change.

Overall, I reject the gender related hypotheses. Again, men appear to make trades in outcomes through VM, while women are unaffected. On one hand, it seems that gender differences persist despite mobility. For example there are significant differences in pay evident in the constant terms of model 1 and model 2. These capture a crude gender pay gap. Women are unable to close this gap using mobility, as inter-firm change does not reward workers and intra-firm change contains the same premiums for both men and women. On the other hand, the gender differences cannot be explained by mobility premiums for men. Men are not rewarded higher earnings through open discrimination at the point of promotion, and thus likely accrue higher wages through some other mechanism, possibly tenure or training. The same can be said for hours. Women work fewer hours than men, as revealed by the constant term. However mobility does not help them "close the gap" between men. Here too, hours may be distributed using some other mechanism.

I reject hypotheses 3a and 3b for objective outcomes. Interestingly, men see a fall in satisfaction with time following VM between firms and within firms, yet only see a fall in hours after VM between firms. Women see no change in satisfaction with time and see no effect on time following VM. This suggests women are able to recreate their conditions when the change is voluntary, but not when the change is involuntary (at

least for hours). Gender differences in time and pay emerge, but these are not the product of statistical or overt discrimination which emerges through mobility.

6.4.3. Gender and Mobility in Germany:

There are few gender differences between workers, where they emerge they run counter to the hypotheses. Men appear to make compromises through mobility, losing in some outcomes, but improving in others, while women appear unaffected by mobility. However, in terms of objective outcomes, men hold better pay, longer hours, and better subjective health than women. Because of this, IVM may capture a regression to the mean for men who leave a position but see a fall in time and wages after the change. The configuration of gender and the mobility–outcomes relationship appears more complicated than theories allow, specifically because there are complexities in how mobility affects outcomes. As previously, the idea that all outcomes are affected by mobility does not hold. Men appear to trade satisfaction with time, and subjective health for more interesting jobs, while women are largely unaffected by VM.

These results could be the product of Germany's coordinated labour market. Differences between groups persist despite movement, and neither gender is affected by mobility which maintains occupational rather than firm-specific differences in wages and conditions. Thus both men and women experience similar outcomes after moving, as proposed by Sørensen (1975). However, internal career ladders reward workers best and reward workers roughly equally for both genders, supporting the argument made by internal labour market theory (Althauser, 1989, Royal, 2000) and efficiency wage theory. The arguments made by overt discrimination theorists do not stand, suggesting both genders earn the same premium from internal structures, and are equally unaffected by voluntary inter-firm change. Although a gender pay gap persists, mobility does not "favour" one gender over the other.

The findings above are similar to Keith and McWilliams (1999, 1995, 1997); inter-firm VM produces no gender differences when estimating pay. IVM also produces no significant gender difference for pay. Gesthuizen (2009) finds no gender differences in the Netherlands using several subjective outcomes. Finally, Latzke et al. (2016) find no gender difference in VM's premium when the outcome is subjective satisfaction, although a gender difference exists in the premium tied to objective pay. However, even here the premium is significant but small, suggesting women gain a smaller portion of the 5% premium given to men. The next section turns to educational differences between workers, checking if those without a third level degree move to vacancies with premiums when compared to those with a third level degree.

6.4.4. Education Differences in Subjective Outcomes:

A key factor in attainment theory is that workers resources (education at the point of entering the labour market), will dictate the opportunities available to workers. Thus workers with higher resources (education) are better able to climb the "structure of inequality", and better able to increase attainment through mobility. In a different argument Thurow (1976) proposes that educational credentials are signals for training potential, not ability, citing statistical discrimination. Therefore workers without specific qualifications will benefit the least from VM and penalised the most for IVM. These workers struggle to "signal" their worth to existing or new employers, and are not able to secure further resources (training or experience) needed for attainment. Regarding IVM, those with fewer educational characteristics are perceived as less productive or less trainable, and therefore fall into precarious or lower valued forms of work, which often leads to dismissal, redundancy, or layoff. The relevant hypotheses are listed at the start of the chapter.

The section starts by considering models with subjective outcomes. These differ in observations and number of respondents, due to large differences in education groups within the sample. Models for those with a basic level of education rely on 10,000+ observations. Models for those with a secondary level of education draw on 14,000+ observations. Models for third level educated workers draw on 7,000+ observations. Splitting the estimates in this way reduces the number of observations severely; however, the final estimates are unbiased. The R-squared figures do not differ significantly between educational groups, suggesting the variable explain the variance in outcomes roughly equally for each group. The output is split in Table 6.6 (satisfaction with work and satisfaction with pay) and Table 6.7 (satisfaction with time). The constant terms in each model provide insight into differences between groups, although the wide standard errors suggest these are insignificant. Workers with a secondary level of education consistently list the highest levels of satisfaction. Satisfaction with pay is the only exception. Those with a third level degree are most satisfied with pay. Results are listed in Table 6.6 and Table 6.7 below.

Table 6.6: Results, Germany 2000-2008: Linear estimated fixed-effects of satisfaction with work and pay. Models estimated separately for each educational group.

VARIABLES	(1) Basic lvl Educ: z-score satisfaction with work	(2) Secondary lvl Educ: z-score satisfaction with work	(3) Tertiary lvl Educ: z-score satisfaction with work	(4) Basic lvl Educ: z-score satisfaction with pay	(5) Secondary lvl Educ: z-score satisfaction with pay	(6) Third lvl Educ: z-score satisfaction with pay
2.Inter-firm voluntary	0.25***	0.27***	0.30***	-0.08	0.05	0.07
	(0.07)	(0.05)	(0.06)	(0.06)	(0.06)	(0.05)
3.Inter-firm involuntary	0.03	**0.23*** **	0.04	-0.10	0.02	-0.03
	(0.10)	**(0.07)**	(0.10)	(0.08)	(0.07)	(0.10)
5.Intra-firm change	0.01	0.07	-0.06	0.01	0.01	-0.00
	(0.17)	(0.09)	(0.13)	(0.14)	(0.09)	(0.08)
Constant	0.18	0.28***	0.04	-0.04	-0.09	0.11
	(0.12)	(0.08)	(0.11)	(0.10)	(0.07)	(0.10)
Observations	10,711	14,552	7,645	10,636	14,488	7,625
R-squared	0.03	0.03	0.03	0.11	0.10	0.11
Number of pid	1,368	1,848	993	1,367	1,848	993
Weight	w11103	w11103	w11103	w11103	w11103	w11103

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Models control for age, contract type, number of children in the house, the size of the firm, the year of the survey, the industry worked, and the occupation of the individual. Models originally controlled for economic growth and unemployment rates. However, since these vary little throughout the panel, both measures were dropped due collinearity with the survey year dummies. A baseline model appears in the appendix.

Table 6.7: Results, Germany 2000-2008: Linear estimated fixed-effects of moving on gross monthly wages, health, and weekly hours. Models estimated separately for each educational group.

VARIABLES	(1) Basic Education: z-score satisfaction with time	(2) Secondary Education: z-score satisfaction with tim	(3) Third level: z-score satisfaction with time
2.Inter-firm voluntary	-0.05	**-0.15*** **	-0.03
	(0.06)	**(0.04)**	(0.06)
3.Inter-firm involuntary	0.01	-0.01	0.04
	(0.07)	(0.07)	(0.12)
5.Intra-firm change	-0.29	-0.07	-0.08
	(0.18)	(0.08)	(0.09)
Constant	0.01	0.07	0.02
	(0.11)	(0.07)	(0.09)
Observations	10,692	14,538	7,641
R-squared	0.03	0.04	0.04
Number of pid	1,368	1,848	993
Weight	w11103	w11103	w11103

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Models control for age, contract type, number of children in the house, the size of the firm, the year of the survey, the industry worked, and the occupation of the individual. Models originally controlled for economic growth and unemployment rates. However, since these vary little throughout the panel. Both measures were dropped due collinearity with the survey year dummies. A baseline model appears in the appendix.

The most striking result from the output, is that third level educated workers are almost completely unaffected by mobility. The output suggests secondary level educated workers rely on change the most; however, two distinct differences between groups can be picked out, both involving those with a secondary level of education. First, those

with a secondary level of education are negatively affected by VM between firms in terms of "satisfaction with time". Leaving the firm has a negative effect on time for this group, while the other education groups are not affected. Second, those with a secondary level of education benefit from IVM between firms, in terms of satisfaction with work. Leaving the firm has a positive effect on working conditions for this group, while the other groups are not affected. Both differences contradict the theory of attainment and the statistical discrimination argument proposed by Thurow (1976). Those with a third level education and a basic level of education are unaffected by mobility.

Starting with satisfaction with work, each education group benefits from VM between firms (models 1, 2, and 3, Table 6.6). Changing employers benefits respondents roughly equally, suggesting workers fill vacancies with subjectively better conditions. This runs counter to attainment theory, which predicts education differences in "gains". Further intra-firm mobility has no effect for each education group, suggesting no one group benefits subjectively from intra-firm movement. Again, this may be the product of working conditions varying less within firms than they do between firms. This is especially true in Germany which typically has flatter organisation structures as argued by DiPrete et al. (1997). However, these results run counter to attainment theory. Regarding IVM, those with a basic level of education and those with a tertiary level of education are not affected by the change, suggesting they are able to recreate their working conditions with a new employer. Again, those with a secondary level of education see increased satisfaction with work after an involuntary change, a finding that also runs counter to attainment theory and the overt discrimination argument. Here, it could be that secondary educated workers, who avoid unemployment, move to more satisfying positions relative to their limited resources.

Regarding satisfaction with pay, no significant effect emerges (models 4, 5, and 6, Table 6.6). Each education group is unaffected by both VM and IVM. This was discussed wider in the sections above. Neither an advantage nor a disadvantage exists between education groups, possibly because of sectoral wage agreements. In this way, German workers may move between carefully defined and known pay categories, which reflect their resources and expectations. Since these are knows, vacancies do not contain particularly "satisfying pay", in that changes in pay match the responsibility of the worker.

Lastly, satisfaction with time contains the second education effect (models 1, 2, and 3, Table 6.7). No education group is affected by mobility, except for those with a secondary level of education. This group sees a fall in satisfaction with time after inter-firm VM, suggesting workers who quit their job for a new employer move to vacancies with less satisfying working time. No other education effect exists for satisfaction with time. IVM between employers too has no effect on satisfaction with time.

Overall, few education differences exist in terms of mobility's effect on outcomes. Two differences emerge, and both are minor. Results suggest that secondary educated workers must compromise satisfaction with time for satisfaction with work following a change to a new employer. Third level educated workers do not have to make the bargain, but neither do they gain much beyond basic satisfaction with work. I reject hypothesis 3c. I further reject hypothesis 3d. Not only does IVM hold no penalties for workers overall, but those with a secondary level degree sometimes benefit from the change, while other groups do not. It is possible that third level educated workers are unaffected by the "gains" of mobility because they rely on other credentials like occupational licenses and tenure based adjustments to pay and satisfaction. Those with a secondary level education may make the largest gains from mobility to a new employer

because they rely on job hopping for changes to satisfaction. However, they must make compromises from the change.

What do the findings mean for attainment theory (Sørensen, 1977)? The idea that those with higher education are better able to "gain" from VM does not emerge. From the output, it seems that third level educated workers are unaffected by mobility except for an improvement in satisfaction with work. Further Thurow's (1976) argument that job queues and statistical discrimination would split workers by qualification type, does not emerge in the output. The results also question the effects of intra-firm mobility, a central concept in Thurow's prediction. Instead it appears that higher educated and lower educated groups are unaffected by mobility, while secondary groups make bargains, improving certain outcomes at the expense of others.

Lower educated groups may move in the secondary labour market as described by Piore (1970), where pay is hourly and conditions do not vary. Upper educated groups may rely on mechanisms other than mobility for career progress, which could be occupational tenure, or employer tenure. This is explored further using objective outcomes.

6.4.5. Education Differences in Objective Outcomes

This section considers the models in Table 6.3 separated by highest level of education achieved. The models for those with a basic level of education draw on 10,700+ observations from 1,300+ respondents. Models for those with a secondary level of education are drawn from 14,000+ observations from 1,800+ respondents. Lastly, models for those with a tertiary level of education rely on 7,000+ observations from 900+ respondents. The constant term in each model reveals education differences at the baseline. Gross monthly pay is significantly higher among those with a third level education (7.85). Those with a secondary level education (7.59) and a basic level of

education (7.60) have a similar rate of pay. Regarding health, those with a basic education have the highest subjective health (7.13), followed by third level educated workers (7.03), and lastly by those with a secondary level of education (6.85). However, the large standard errors suggest the differences are not significant. Last, each education group works a similar amount of weekly hours. Those with a secondary level of education work the longest hours (43.00), those with a basic education work the least (41.55). These differences are minor and insignificant. The results are listed in Table 6.8 and Table 6.9.

Table 6.8: : Results, Germany 2000-2008: Linear estimated fixed-effects of gross monthly pay and subjective health. Models estimated separately for each educational group.

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Basic level of Education: log gross wages	Secondary level of Education: log gross wages	Third level: log gross wages	Basic level of Education: health	Secondary level of Education: health	Third level: health
2.Inter-firm voluntary	**-0.03***	-0.01	-0.01	-0.06	-0.12	**-0.24****
	(0.02)	(0.02)	(0.02)	(0.12)	(0.08)	**(0.09)**
3.Inter-firm involuntary	0.00	-0.02	-0.00	-0.05	0.06	0.08
	(0.02)	(0.02)	(0.03)	(0.15)	(0.12)	(0.16)
5.Intra-firm change	0.08	**0.06****	0.05	0.09	0.10	0.16
	(0.06)	**(0.03)**	(0.03)	(0.20)	(0.16)	(0.15)
Constant	7.60***	7.59***	7.85***	7.13***	6.85***	7.03***
	(0.04)	(0.02)	(0.04)	(0.21)	(0.14)	(0.18)
Observations	9,680	13,282	7,051	10,706	14,550	7,642
R-squared	0.13	0.18	0.23	0.10	0.12	0.13
Number of pid	1,323	1,803	964	1,368	1,848	993
Weight	w11103	w11103	w11103	w11103	w11103	w11103

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Models control for age, contract type, number of children in the house, the size of the firm, the year of the survey, the industry worked, and the occupation of the individual. All models controls for general worker satisfaction with work (except models predicting satisfaction with work). Models originally controlled for economic growth and unemployment rates. However, since these vary little throughout the panel both measures were dropped due collinearity with the survey year dummies. A baseline model appears in the appendix.

Table 6.9: Results, Germany 2000-2008: Linear estimated fixed-effects of weekly hours worked. Models estimated separately for each educational group.

VARIABLES	(1) Basic lvl education: weekly hours worked	(2) secondary lvl education: weekly hours worked	(3) third lvl education: weekly hours worked
2.Inter-firm voluntary	**-1.45****	-0.57	-1.08
	(0.59)	(0.52)	(0.72)
3.Inter-firm involuntary	-4.06***	-4.33***	-3.53***
	(1.09)	(0.85)	(0.97)
5.Intra-firm change	3.37*	1.77*	**0.02**
	(1.87)	(1.04)	**(1.63)**
Constant	41.55***	43.00***	42.69***
	(1.14)	(0.81)	(1.14)
Observations	10,719	14,552	7,653
R-squared	0.02	0.01	0.02
Number of pid	1,369	1,848	994
Weight	w11103	w11103	w11103

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Models control for age, contract type, number of children in the house, the size of the firm, the year of the survey, the industry worked, and the occupation of the individual. All models controls for general worker satisfaction with work (except models predicting satisfaction with work). Models originally controlled for economic growth and unemployment rates. However, since these vary little throughout the panel both measures were dropped due collinearity with the survey year dummies. A baseline model appears in the appendix.

Table 6.8 and Table 6.9 show five key differences between education groups. However, few are in line with attainment theory or statistical discrimination. Firstly, workers with a basic level of education lose earnings after VM between firms; the other education groups are not affected. Second, staying with gross wages, secondary level educated workers gain the most from VM within the firm, the other groups are not affected. Third, those with a tertiary level education see a decline in subjective health after VM between firms; the other groups are not affected. Fourth, those with a basic level of education see a fall in hours after VM between firms. Lastly, intra-firm mobility does not affect the hours of those with a third level education, but increases the weekly hours for other education groups.

Starting with gross monthly wages (models 1, 2, and 3 Table 6.8); VM between firms only affects those with a basic education. These workers see a fall in wages after quitting a job and changing employers, suggesting they move to vacancies with lower pay. Since this corresponds with a fall in hours (model 1 Table 6.9), the result is likely product of reduced hours in the new position (estimating wages while controlling for

weekly working hours eliminates the effect). Third level educated workers are expected to gain the most from VM, yet they are unaffected, moving to vacancies which contain no premiums in pay that cannot be explained by worker resources. IVM between firms does not affect any education group in terms of wages, experiencing job loss allows workers to recreate their pay and conditions elsewhere no matter their educational resources. This finding also goes against attainment theory. Lastly those with a secondary level of education see an increase in wages after intra-firm VM. Taking a promotion or another job with the same employer rewards workers with secondary or vocational qualifications best, suggesting they move to internal vacancies with higher premiums. These workers see a 6% rise in pay, while those with a basic level of education or third level of education are not affected by the change itself.

Although the estimate is positive for the other groups it is insignificant and likely to be zero, which could be the result of fewer observations in the models. This finding runs counter to attainment theory where workers with higher education are expected to gain the most from mobility; however, it is possible that efficiency wages are at play in the results above. Workers with a secondary level of education may depend more on firm-specific training than those with a tertiary or a basic level degree. Those with a third level education may have a greater reliance on an occupational status, instead of mobility events. In this way employers ensure that secondary educated workers earn more from promotion, by paying above market wages, in an effort to hold on to key firm-specific skills.

Regarding subjective health (models 3, 4, and 5, Table 6.8), workers are completely unaffected by mobility, except in one type of change. Respondents with a third level education, who quit or resign, move to vacancies where their health declines slightly, suggesting they move to poorer working conditions. All education groups are

unaffected by IVM, suggesting workers are able to recreate their conditions with a new employer after losing their jobs. Lastly, all groups see no benefit in working conditions after an intra-firm change. Taking a promotion does not improve the subjective health of respondents, suggesting workers do not move to objectively better (or worse) vacancies after the change.

Lastly, weekly working time is affected by mobility, and a difference in education exists (models 1, 2, and 3, Table 6.9). Respondents with a basic education see a significant fall in hours after a quit; this leads to a decline in pay, noted earlier. No other group is affected by the change. Workers with a basic education may be struggling to recreate their working hours after a quit or resignation. The other education groups are able to achieve this, without moving to vacancies with lower hours and pay. Regarding IVM, the change negatively affects all workers. Each group loses weekly working time after a dismissal, which curiously does not affect gross monthly pay. Regarding intra-firm mobility (most likely a promotion), respondents with a basic and secondary level of education see an increase in hours, while those with a third level qualification see no change in hours.

Thinking of the results overall, education differences among groups are more apparent in objective models, but these run against the hypotheses. For example, workers with a third level degree are expected to gain the most from VM, but appear to gain nothing and move to objectively worse working conditions in terms of "health". Those with a basic education have the most to lose from mobility, this appears to be the case, losing hours and pay after a quit in order to work "interesting jobs" (as laid out in the subjective models). Those with a secondary level of education gain the most in terms of wages after a career ladder move (intra-firm). This effect remains even when controlling for hours. I reject hypothesis 3c. Those with a third level degree do not have an

advantage over those with a secondary level education, and may hold a disadvantage in terms of intra-firm mobility. I also reject hypothesis 3d. IVM has no effect on workers, regardless of their resources. The findings above run counter to attainment theory, and the theory of statistical discrimination as proposed by Thurow (1976). There are minor education differences between workers, and these differences do not favour those with a third level education. It could be that statistical discrimination is at play for those with a basic education. Since employers are most concerned with internalising a core workforce, they may discriminate against those with a basic education, by offering them part-time positions more often than other groups. However, the highest educated group is not able to secure the premiums that come with intra-firm mobility, a finding that runs counter to statistical discrimination and attainment theory more widely.

6.4.6. Education and Mobility in Germany

All of the hypotheses regarding differences between workers have been rejected, as most differences are minor, and the effects run counter to expectations. Important distinctions can still be made between educational groups and the mobility-outcomes relationship in Germany. As a configuration, worker differences in the mobility-outcomes relationship are fruitful, but cast doubt over attainment theory. Thinking of subjective outcomes, few differences emerge between groups, since mobility in itself has little effect on workers. Secondary level workers appear to be affected by mobility the most, and those with a basic level of education and a third level of education see little change in outcomes. Thinking of objective outcomes, differences between educational groups also emerge. Those with a basic education see a fall in wages after a voluntary change due to a fall in hours, suggesting they are penalised for inter-firm mobility. Those with a secondary education earn more after a voluntary change (provided the change is intra-firm), while other educational groups do not benefit from intra-firm mobility.

The results above could be the product of Germany's strict laws around job design (Marsden, 1999). Thurow (1976) and Sørensen (1977) would expect third level workers to gain the most from intra-firm change, but it could be that this group of workers improves their pay and conditions using firm tenure or a mechanism different to mobility. In terms of theory, efficiency wages as described by Akerlof and Yellen (1986) may be at play in Germany however, the effect applies only to those with a secondary education.

Overall, Germany resembles a strong coordinated market where personal characteristics are not strong determinants of outcomes (Mills et al., 2006b, Mills et al., 2006a, Mills et al., 2008). The main argument of the thesis is supported further, since wages and conditions are collectively bargained, they vary little between educational groups. Knowledge and credentials are protected by occupation or industry (which the models above control for). There are significant differences in baseline pay between those with a third level education and those without. However mobility does little to change these differences. Mobility is not an important predictor of outcomes, as outcomes vary little between and within workers. Career progress and occupational achievement (Sørensen, 1975) occurs best within the firm as explained by internal labour market theorists and efficiency wage theorists (Althauser, 1989, Althauser and Kalleberg, 1981, Akerlof and Yellen, 1986). Differences between workers are minor, but advantage lies with those with a secondary level of education.

The findings presented here contradict other authors summarised in the literature review. In the Netherlands Gesthuizen (2009) finds no education differences in mobility's effect on outcomes; he finds minor education differences in push factors driving mobility, which are not relevant to the output above. However, the relationship is operationalised by interacting years of education with VM, which ignores specific

qualifications. In Germany, Latzke et al. (2016) find minor class differences in mobility's effect on pay and satisfaction with work; where professionals earn the lion's share of mobility's premium, and blue collar workers earn the least. The results above suggest that secondary educated workers gain the most when the change is intra-firm, a type of mobility not considered by Latzke et al. (2016). Further, the findings listed here see inter-firm mobility as an insignificant predictor of changes in pay, while Latzke et al. (2016) see them as crucial for every class group. Lastly, focusing on pay alone, Pavlopoulos et al. (2014) report low-earners gain the most from inter-firm mobility (gaining nothing from intra-firm mobility) in Germany. The authors cite attainment theory and efficiency theory in their work, but find support for neither in their results. The findings here are the near opposite of Pavlopoulos et al. (2014), inter-firm mobility does almost nothing for workers and lowers the pay of those with a basic level of education; further intra-firm mobility is a significant predictor of higher pay for secondary or vocationally educated workers, which could be in the low-paid category.

6.5.Summary

Setting up the research questions and puzzles, chapter 4 argued that Germany's lower mobility rate is the product of its coordinated labour market. It showed that Germany and the UK have comparable rates of IVM and the difference between both countries lies in their rate of VM. Chapter 4 also shows that outcomes vary less between and within German workers when compared to British workers. Ultimately, collective bargaining and industry standards are shaping the rate of VM in Germany, where mobility between firms is limited in terms of rewarding workers due to Germany's standardised employment system.

Looking at Germany, the theory of attainment would predict that the minor rate of VM is due to fewer vacancies, and less utility tied to change. Results suggest this is an

oversimplification, given the two complexities between mobility and outcomes (discussed throughout). Results reveal that VM affects some outcomes over others, suggesting workers move to vacancies where they make trades in outcomes. For example, satisfaction with work is increased by VM in Germany, but mobility has no effect on satisfaction with pay, and a negative effect on satisfaction with time. Here, workers compromised satisfaction with time (and other outcomes) for more interesting or satisfying work. Beyond this, attainment theory predicts that VM will affect subjective and objective outcomes similarly. Yet, this too does not appear to be the case. Workers who see promotions in Germany report a sharp rise in pay, despite the fact that satisfaction with pay is not affected. Further, workers who quit see a fall in pay, but satisfaction with pay is not affected. As with British workers, Germans too make bargains though mobility; compromising on pay and time, for subjective satisfaction at work.

These complexities appear in both configurations of the mobility-outcomes relationship, discussed throughout the chapter. Regarding mobility types, inter-firm mobility leads workers to improved subjective outcomes best, while intra-firm mobility leads to objective outcomes best. This shows two separate mechanisms are at work, with the external labour markets on one hand, and internal career ladders on the other. Quitting affects subjective measures best, but promotions although rare, lead to improve objective outcomes, beyond the characteristics of the worker. Further quitting lowers the earnings and weekly working hours of workers, a finding that runs completely counter to attainment theory, and may touch on the importance of the firm as a key mechanism for attainment in Germany. This penalty which stems from VM goes beyond the complexity of objective-subjective mismatch noted earlier. Even when models consider subjective outcomes, negative effects emerge from VM. Here workers may be sacrificing satisfaction with time, and subjective health for “interesting work”.

Thus German mobility between employers may be driven less by dissatisfaction with conditions, and more by the general want for more satisfying or interesting work. Similar results appear in Gesthuizen and Dagevos (2008) and Kalleberg and Mastekaasa (2001) (although neither comments on the distinction). Most of all, these results further support the main argument of this chapter, German mobility is not driven by a need to improve working conditions or pay, but instead a desire to move to more satisfying or interesting jobs.

These results emerge somewhat in the models which consider worker differences. Although Sørensen (1975) accepts worker inequality in the distribution of attainment, he sees gender or class differences as stemming from the point of skill acquisition, not at the point of mobility itself. Instead Hachen (1990) and Acker (2006) consider the inequalities past the point of skill acquisition, as differences in limited-opportunities. They cite overt and statistical discrimination. Yet the output suggests a more complicated relationship than one where men hold an advantage over women, and non-tertiary educated groups lose out to tertiary educated ones. When outcomes are subjective, men appear to use mobility to bargain for subjective improvement with work, losing out in several other measures, while women see none of these penalties but few rewards. When outcomes are objective it is men who are further penalised by mobility while women see no effect. Although VM improves subjective satisfaction with work for men and women, men make bargains (losing other subjective and objective outcomes) while women are unaffected. This goes against the predictions of overt and statistical discrimination. To say that men hold an advantage over women regarding the premiums of VM would be inaccurate. Instead men and women make separate bargains when moving to more interesting forms of work, where women are less affected by the risks of VM. Importantly the sample considered for women, may not be representative of the average German woman's experience overall.

Regarding differences between education groups, secondary educated workers make gains when outcomes are subjective, while other groups are protected. However, they gain the most when outcomes are objective. Third level educated workers see few improvements as a result of mobility since it is secondary level educated workers who benefit from change. This runs completely counter to attainment theory, and statistical discrimination. Instead third level educated groups may rely on mechanisms other than mobility in order to improve outcomes, possibly tenure or training, while secondary groups rely on internal changes in a career ladder.

The results listed here are in conflict with a number of other authors previously mentioned. Several consider Germany specifically, and most use the same dataset (Pavlopoulos et al., 2014, Latzke et al., 2016, Kattenbach et al., 2014, Schmelzer, 2010). The finding that inter-firm mobility yields no significant objective reward (and constitutes a penalty when working hours are not controlled for) is in direct conflict with the authors above. Pavlopoulos et al. (2014) argues the near opposite of this, suggesting that intra-firm mobility yields no effects, and inter-firm mobility increases pay. Latzke et al. (2016) too find that inter-firm mobility rewards workers, and that professionals earn the most from these changes, although they do not consider intra-firm mobility, and further consider several years together (1985-2013). Schmelzer (2010) argues that job mobility in Germany is crucial to future wage growth, especially direct job mobility. Whether the changes contain immediate benefits for workers, or whether mobility is part of a long term strategy of finding a suitable career ladder, is not explored. The output in this thesis suggests the best strategy for increasing immediate earnings is to pursue promotion or an intra-firm job change, as laid out by efficiency wage theory or internal labour market theory. It may be that earnings growth is positively affected by mobility, where workers use job changes to find career ladders

with high paying vacancies. However, this mobility in itself does not lead workers to higher paying positions; rather it is part and parcel of a wider strategy of increasing pay.

As a concluding argument, German working lives may be less mobile because the immediate outcomes after an employer change are also minor. In fact respondents who quit their job for a new vacancy make compromises in time, pay, and general conditions. These new vacancies contain premiums in some outcomes and penalties in others. Mobility leads workers to objectively better outcomes, but only when the change occurs with the same employer, offering some support for internal labour market theory and efficiency wage theory. Differences between workers cast doubt on Becker's theory of discrimination, and Sørensen (1977) theory of attainment. While the British chapter paints mobility as a process where movement leads to improved working conditions, the German chapter illustrates mobility as a bargaining process for gaining "interesting" or "satisfying work".

7. Country Analysis and Conclusion

This chapter considers the final aim and concludes the work overall, tying together the key points. First, it compares both countries with reference to time and pay, two outcomes that have reacted to mobility in unique ways. This is the final aim of the thesis and the last configuration of mobility and outcomes. Second, it interprets the results for each configuration, lists the implications of the work, and considers the recommendations for future research.

7.1.Country comparisons

The third aim of the thesis is to explore the institutional context, focusing on the consequence of mobility in Germany and the UK. The section considers the final configuration of the mobility-outcomes relationship, country differences. As before, the *complexities* between mobility and outcomes also emerge. Treating the relationship between mobility and outcomes as utilitarian would mean a simple relationship between countries. The country with the most mobility has the highest reward tied to mobility. However, treating mobility as a process of bargaining reveals a different process. First, in both countries, mobility has a multi-faceted effect on outcomes, which is rarely uniform. Second, in both countries there is a mismatch between mobility's impact on subjective and objective measures of the same outcome. Results reveal that "quits" and "promotions" lead workers to separate outcomes in both countries. Evidence suggests these are motivated by different bargains in both countries. A set of hypotheses is offered in chapter 2; these are listed below for reference.

Hypothesis 4a: Voluntary mobility will have a positive effect on outcomes in the UK.

Hypothesis 4b: Involuntary mobility will have a negative effect on outcomes in the UK.

Hypothesis 5a: Voluntary mobility will have a positive effect on outcomes in Germany only if it is intra-firm.

Hypothesis 5b: Involuntary mobility will have no effect on outcomes in Germany.

This section considers the hypotheses above with reference to country specific chapters. It pays attention to two sets of outcomes specifically; mobility's impact on pay and mobility's impact on time. Since satisfaction with work reacts predictably in both countries (VM increases subjective satisfaction with work, IVM has no effect), the topic is avoided to save space. Pay and time however, reveal interesting differences in both countries which are worth revisiting.

Due to a lack of space the nuance of VM and IVM are ignored, the discussion instead focuses on the effect of VM and IVM overall. Nuance emerges, but it is discussed only briefly, the larger focus is on the main country differences. Pay (subjective and objective) and time (subjective and objective) show two points of contention in both countries regarding how they react to VM and IVM.

An argument running throughout this thesis claims that the German labour market is more predictable, where conditions vary less between firms (due collective bargaining), and within firms (due to a flatter organisation design). As described by Hall and Soskice (2001), the German labour market is "rigid" while the UK and US labour markets are "fluid" (similar distinctions are common, for example Mills et al. (2006b) consider the UK market as "open" and the German market as "closed"). This rigidity is a consequence of tripartite bargaining, between employers, unions, and the state. It allows firms to consider investment and internalisation of skills, however, this section disregards the perspective of the firm focusing on the perspective of workers. In Germany, mobility's impact is limited due to collectively agreed wages and conditions

(this is especially true when estimating outcomes tied to pay). As a result the vacancies available to workers vary less in the rewards they offer to workers.

This is not true for the UK. The country has greater inequality in earnings and a wider span of working conditions. Further, the process of bargaining is individualised, meaning bargains take place between employers and employees. This fluid nature stems from low union power, and low union coverage, discussed in detail in chapter 4. Thus firms are able to hire and fire workers easily focusing their efforts on a core team of workers, by the same token workers are able to move between firms quickly, comparing and contrasting various different vacancies to their own resources. Theoretically, the large mobility found in the UK should be the result of workers moving to better jobs where workers make gains. However, mobility's effect on outcomes is almost exclusively subjective. Mobility is institutionalised into the process of bargaining, but wages and other compensation are driven by efficiency alone, leaving workers to bargain over subjective concepts and (possibly) responsibilities.

The models below compare and contrast Germany and the UK using two outcomes, time and pay. The models below begin by listing the effect of mobility on subjective and objective measures of time.

Table 7.1: Results for BHPS & SOEP (2000-2008), subjective and objective measures of time.

	BHPS	SOEP	BHPS	SOEP
	Number of hours worked weekly	Annual hours worked, e11101 (divided by 52 for weekly hours)	Satisfaction with time, linear z-scores	Satisfaction with time, linear z-scores
VARIABLES				
2.Inter-firm voluntary	0.47***	-1.06**	0.14***	-0.08***
	(0.18)	(0.34)	(0.02)	(0.03)
3. Inter-firm involuntary	-0.68	-4.09***	0.05	0.02
	(0.42)	(0.56)	(0.05)	(0.05)
5.Intra-firm voluntary	-0.14	1.67*	0.04*	-0.12**
	(0.19)	(0.91)	(0.02)	(0.06)
6.intra-firm involuntary	-0.48		-0.00	
	(0.95)		(0.12)	
Constant	34.93***	43.03***	0.01	0.16
	(1.94)	(0.54)	(0.24)	(0.20)
Observations	26,020	33,522	26,032	32,871
R-squared	0.02	0.01	0.14	0.03
Number of pid	3,698	4,223	3,698	4,181
Wave/Years	10-18	2000-2008	10-18	2000-2008
Weights	Clustered SE	w11103	Clustered SE	w11103

Note: Estimates taken from Table 5.2 and Table 5.3 for the UK; and Table 6.2 and Table 6.3 for Germany. All estimates consider measures of time alone (subjective and objective).

The output is summarised in Table 7.1. The constant coefficients reveal baseline differences for Germany and the UK. In terms of objective working hours, German respondents work 43 hours at the model's baseline. It should be noted that the hours outcome was operationalised using the annual working time measure, and so may not be fully accurate. British respondents work 35 hours at the model's baseline. The prevalence of part-time and casual forms of work is likely pulling down the UK average. The models in each country do not control for part-time work, but part time workers are considered in the sample (see Table 3.6 on p 74). These contracts are less prevalent in Germany, although forms of mini-work exist. This is evident in the standard error of both countries, listed below the constant terms. The German constant is more predictable (0.54) than the UK's constant (1.94) suggesting working time varies far more in the UK than Germany. In terms of satisfaction with working time, German satisfaction is above the mean (0.16), when compared to UK satisfaction, which sits at the mean (0.01); the standard errors reveal that this difference is not significant at the baseline.

Inter-firm VM in both countries produces different estimates depending on the institutional context. The change has a positive effect on both subjective and objective outcomes in the UK. The change has a negative effect on both subjective and objective outcomes in Germany. Clearly, the assumption that voluntary mobility leads workers to vacancies with "better" working time does not hold for both countries.

British respondents who move voluntarily see increased hours, and increased satisfaction with hours with a new employer. Germans see hours as a point of contention, or a point of compromise after moving to a new vacancy, giving up objective hours and satisfaction with hours but gaining in other outcomes (satisfaction with work, not listed above but discussed previously).

Regarding intra-firm VM, results in both countries appear mixed, but an institutional difference is again apparent. British workers who take a promotion see no change in objective hours, but a minor positive change in satisfaction with hours. Here mobility has a surplus effect on satisfaction with hours, without changing the objective hours themselves. This may be the results of better control over hours following a promotion, where workers are better able to organise their working time, without seeing an increase or decrease in actual working time. In Germany, workers see an increase in weekly working hours after (what is most likely) a promotion, followed by a fall in their satisfaction with time. Changes in working hours (either an increase or a decrease) lead to dissatisfaction with time among German workers. This could stem from the nature of promotions in Germany, which could contain sharp increases in responsibility, where workers must work longer and more demanding hours.

Lastly, IVM also has country-specific effects. In the UK, IVM has no significant effect on time, using neither objective nor subjective outcomes. Here, workers do not see a change in hours which cannot be explained by personal characteristics, and so

subsequent vacancies themselves do not affect working time. In Germany, IVM has an effect on objective measures of time alone. Workers who lose their job move to positions with far lower working time than can be explained by their resources. However, the same change does not have an effect on satisfaction with time in Germany. Despite a fall in hours, workers remain equally satisfied with working time after the change. This could reflect a change in the responsibility of workers, suggesting they move to less demanding jobs with shorter hours.

Overall, mobility is a significant predictor of working time in the UK. The German models too produce significant effects, but several run counter to the hypothesis. In the UK, IVM has no significant effect on outcomes, while in Germany IVM has a negative effect on weekly working time alone. I accept *hypothesis 4a* for the UK, but reject *hypothesis 5a* for Germany.VM has a positive effect on working time in the UK, but in Germany intra-firm mobility has a positive effect on subjective time, but a negative effect on satisfaction with time. Finally, I reject *hypothesis 4b* for the UK, but accept *hypothesis 5b* for Germany. In both countries, IVM is largely unimportant, at least for measures of working time.

In both countries the complexities of seeing mobility as a utilitarian process emerge. First, the assumption that VM (or IVM) has a similar effect across a range of outcomes does not hold. In fact VM often leads to compromises, with workers who move gaining in some outcome and losing in another, both of which try to capture utility. This is evident in the German results, where workers see a fall in hours and satisfaction with hours after a voluntary change. Second, there is a mismatch between mobility's effect on objective and subjective measures of the same outcome; the assumption that both react similarly to mobility does not hold. This is evident in the UK, where positive

change in satisfaction with time, does not mean increased time, but may instead mean a greater control over time. The next section turns to measures of pay.

Table 7.2: Results for BHPS & SOEP (2000-2008), subjective and objective measures of pay.

	BHPS	SOEP	BHPS	SOEP
VARIABLES	Log Gross monthly pay	Log gross monthly pay	Satisfaction with pay, linear z-scores	z-score satisfaction with pay
2.Inter-firm voluntary	0.01*	-0.02*	0.24***	0.02
	(0.01)	(0.01)	(0.02)	(0.04)
3. Inter-firm involuntary	-0.07***	-0.01	0.05	-0.02
	(0.02)	(0.01)	(0.05)	(0.04)
5.Intra-firm voluntary	0.01*	0.07***	0.10***	0.01
	(0.01)	(0.02)	(0.02)	(0.06)
6.intra-firm involuntary	-0.09*		0.02	
	(0.05)		(0.11)	
Constant	7.47***	7.71***	-0.19	0.25
	(0.08)	(0.04)	(0.27)	(0.25)
Observations	26,057	30,013	26,016	32,749
R-squared	0.25	0.18	0.07	0.10
Number of pid	3,698	4,066	3,698	4,180
Wave	10-18		10-18	
Weights	Clustered SE	w11103	Clustered SE	w11103

Note: Estimates taken from Table 5.2 and Table 5.3 for the UK, and Table 6.2 and Table 6.3 for Germany. All estimates consider measures of pay alone (subjective and objective).

Table 7.2 considers subjective and objective measures of pay in both countries. The constant terms reveal baseline differences in Germany and the UK. In terms of objective gross monthly pay, both countries use different currencies and are not directly comparable. Both are in natural logs. However, the standard errors reveal minor differences between countries. German baseline gross monthly pay has a smaller standard error (0.04) than the standard error for British workers (0.08) suggesting the average is more predictable in Germany than the UK; the difference is statistically significant as the standard errors do not overlap. Again, this could be the product of Germany's coordinated market where earnings inequality is lower than in the UK. As an aside, the German 90/10 ratio[22] of income inequality is listed as 3.25 (2000-2002),

[22] The 90/10 ratio is a measure of inequality. It captures the size of income of the top ten percent compared to the bottom 10 percent. The coefficient focuses on income as a whole, not just wages. Thus Germany's top ten percent earns three times more than its

while the same measure for the UK is 4.67 (O Riain, 2014). Regarding satisfaction with pay, the UK's baseline satisfaction was below the average (-0.19), while baseline satisfaction in Germany was above the average (0.25). The standard errors reveal the differences at baseline may not be significant.

Considering inter-firm VM first; British respondents who quit their job move to vacancies with better subjective and objective pay. The results in Germany are different. Here respondents who quit move to lower paid vacancies. However the change has no effect on workers' subjective satisfaction with pay. In this way quitting leads workers to lower paid jobs but does not affect how workers evaluate their pay. This could be the product of reduced responsibility after the change. German workers resign from a firm and move to a position where pay is lower but responsibility is also lower, aligning both the pay and the role filled by the worker. As mentioned in the country specific chapters, this result is closely tied to weekly working hours. Controlling for weekly hours eliminates the negative effect on objective pay in Germany, and the positive effect on objective pay in the UK.

The effects of intra-firm VM also differ by country. In the UK, intra-firm VM has a significant positive effect on pay, and a significant positive effect on satisfaction with pay. However, the objective effect is minor, a 1% increase in monthly earnings after the change. The estimate remains significant even when controlling for weekly hours, confirming the change resembles a type of *attainment* (Sørensen, 1975, Sørensen, 1977). In Germany, intra-firm mobility has a strong positive effect on pay, but no significant effect on satisfaction with pay. Again, this could be due to respondents earning more as they move through an internal career ladder, but experiencing no

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bottom ten percent, and the UK's top ten percent earns four times more than its bottom ten percent.

change in satisfaction due to increased responsibility in a new role. The effect remains even after controlling for weekly hours. It is far greater in Germany than the UK.

There is a sharp contrast between the German effect and the British effect, which could be the product of frequency. In Germany, intra-firm mobility is less common, hence throughout an average respondent's time in the labour market, she may see just one or two promotions, which carry a significant change in pay. These changes are more common in the UK, due to the higher organisational structures (DiPrete et al., 1997). Hence workers may need to experience a number of promotions before seeing a substantial change in pay. Common in both countries is the fact that movement in the firm itself has a positive effect tied to earnings, independent to the characteristics of the worker.

Lastly, the effects of IVM differ by country. In the UK, IVM has a strong negative effect on objective pay, but no significant effect on satisfaction with pay. In Germany, IVM has no effect on pay whatsoever, neither subjective nor objective. This could be the product of Germany's welfare state which supports workers during their unemployment with generous benefits (as suggested by Kalleberg and Mastekaasa (2001) and Fasang et al. (2012)). The opposite is true in the UK, where workers strive to take the quickest available job after an involuntary change. Thus IVM is most consequential for workers in "liberal" economies, but not "coordinated" markets. It's possible that workers who experience a fall in wages (in the UK) take lower paid vacancies in an effort to leave unemployment as quickly as possible. The fact that satisfaction with pay is unaffected by moving to the vacancy may be due to workers moving to less demanding positions where their lowered pay corresponds to a lowered set of responsibilities. As mentioned, it is expected that both objective and subjective

outcomes improve with voluntary mobility, and worsen with involuntary mobility. The results above are far more nuanced.

I reject *hypothesis 4a* for the UK, despite the fact that mobility's effect is significant it is weak and disappears once weekly hours are controlled for. I accept *hypothesis 5a* for Germany. Intra-firm mobility is a strong predictor of wages, and is more important than inter-firm change as laid out by efficiency wage theory and internal labour market theory. Finally, I accept *hypothesis 4b* for the UK models predicting pay, and *hypothesis 5b* for Germany. In the UK IVM has a significant negative effect on objective pay. In Germany this effect is absent.

The complexity with seeing country differences as fuelled by utilitarian gain does not emerge. First, the assumption that VM (or IVM) has a similar effect across a range of outcomes does not hold. VM means compromises for workers. As with hours, this complexity emerges best in the German results. Workers who change employers see a minor fall in pay and no change in satisfaction with pay. In fact, workers use mobility to gain more interesting or satisfying forms of work, compromising on pay. Second, the assumption that VM affects subjective and objective pay equally does not hold, this is another complexity that is not considered by utility-driven theories. This is evident in the UK's results, where the positive change in satisfaction with pay following a quit equates with a minor increase in actual pay, one which disappears when controlling for weekly working hours.

In both countries the relationship between mobility and outcomes appear to shape worker action, but not through utilitarian gain. The highly mobile market of the UK does not improve objective wages which are set by efficiency and competition. However, mobility gives workers a chance to negotiate their conditions and responsibilities, which may better align with their pay after a move. By the same token,

the German market, with clearly defined pay and conditions, internalises workers with high premiums tied to internal change. The results of intra-firm mobility in Germany could also be the product of increased responsibility, but it is clear that objective increases in pay depend on intra-firm change. Workers who take a promotion see a sharp increase in objective pay, but the new responsibilities tied to the promotion may keep satisfaction with pay from rising.

Beyond the hypotheses and complexities above, one similarity in both countries is the fact that inter-firm mobility *does not suggest immediate financial gain for workers, and instead contains tradeoffs and compromises*. This finding runs counter to a wider narrative on mobile labour markets. The idea that mobile markets give workers the chance to improve pay and status with a new employer does not emerge in either set of models. Quitting in an open market (UK) and a closed market (German) affects workers roughly equally. Inter-firm mobility (and on a broader note, mobile labour markets overall) may be a tactic for placing oneself near strong career-ladders, but it does not immediately reward workers with *attainment*. The findings above show that career progress and increased pay occur best with a given firm or a given employer, which is especially true in Germany.

Authors argue that turbulence and movement is good for workers over the long term (OECD, 2010, Brown et al., 2008, Direnzo and Greenhaus, 2011). However the output above suggests that workers gain little from mobile markets, at least in the immediate sense. Brown et al. (2008) specifically cite turbulent markets as important to workers' pay and conditions. Where France limits the ease with which employers are able to fire workers, the US allows for "dynamic markets", where labour is mobile, and firms are born and die regularly. This is framed as a better deal for all, although throughout their argument it becomes apparent that the deal benefits employers best. *"...economic*

turbulence results in stronger industries, as more productive firms tend to replace less productive ones... Although there are costs to workers... who are caught up in the adjustment process, most... handle economic turbulence well. Over time, their job changes result in improved jobs, although job change often involves a period without work. Workers who initially find a good job with a firm—for whatever reason—typically do better than workers who change jobs [own emphasis]. *When workers do lose... good jobs because of firm downsizing, they may end up in an inferior job. Those workers who start out on bad job ladders with low earnings and low earnings growth usually are able to land on better job ladders by changing jobs.*" ((Brown et al., 2008):p120)

The gains of mobile labour markets for employers are obvious; any long term commitment previously held to hiring workers is loosened. The gains of a mobile labour market for labour are vague, framed as something to be gained over time. Even in the passage above the premiums of mobile markets appear more complex than a simple win-win for capital and labour. Those who are mobile are not always rewarded for this mobility. Brown et al. (2008) concede that those who join strong and secure firms and limit their mobility do better than mobile workers. It also seems that the passage above describes internal career ladders as the best way to improve working conditions and pay; mobility *in itself* is the best strategy for one day becoming immobile or mobile in the intra-firm sense alone.

The vague suggestion that workers have much to gain from mobile markets also appears in the OECD (2010) Employment Outlook report. It writes "labour reallocation" (mobility), is an important element in productivity growth. As argued above, the point is appealing; mobile labour markets move workers through industries, passing on skills and knowledge. The chapter highlights that inefficient businesses close, forcing workers to be laid off, dismissed, or mobile for other involuntary reasons. In contrast productive

firms grow, forcing employers to expand, hire new workers, and invest in some of the workers left behind by a closing firm. There are country differences in the rates of mobility (or reallocation), which are summarised as barriers to be removed. Removing these will "*enhance growth*". As argued throughout, many of these points may be true. Employers can make obvious gains from flexible markets; the point is not contested. However, authors are vague about the gains offered to employees. These are less clear. The OECD concedes that reallocation can have disruptive "distributional effects", specifically for those who experience IVM. Regarding an upside, the report finds mixed evidence of a wage "premia" and improved conditions for those who move, depending on the country considered. Overall the OECD (2010) points out that mobile markets offer opportunities and costs. Those who quit typically progress their career and pay, those who lose their job, typically experience penalties in pay and conditions. The findings in this thesis, builds on the nuance in this statement. First, VM contains few benefits for workers, beyond the subjective. Second, IVM indeed contains penalties for workers, but these appear sharpest in markets where mobility is most common (the UK). Finally, in terms of objective gains, the largest premiums in both countries come from internal promotions in the form of efficiency wages. The OECD ultimately conclude that partial reforms may "result in no or negative productivity gains" and that the effect on workers will likely be heterogeneous:

(page 200 (OECD, 2010))"There is… evidence suggesting… the effect of selected labour… policies and institutions (including employment protection, unemployment benefits, and product market regulation) on the wage share in value added is limited, which… leads to the conclusion that the benefits of… reforms in this area are likely to be shared with workers in the form of higher average wages. However, not all workers are likely to gain from these reforms in the same way. In particular, the evidence… suggests that reforms involving the relaxation of regulatory provisions on individual

and collective dismissals are likely to increase the number of workers who are affected by labour mobility at the initiative of the employer."

Despite finding mixed results for an upside to mobile labour markets for workers, the report concludes this can be fixed by limiting the negative effects of IVM *"Indeed, without impairing labour reallocation, unemployment benefits designed [to be generous] will sustain income during job search and might promote better job matches and hence reduce wage losses at re-employment ..."* Ultimately, a series of policy recommendations are proposed to make the market more mobile for the sake of efficiency. While this is understood, the idea that workers can make gains from the changes is underdeveloped and does not fit the findings presented in this thesis.

Considering the assumption directly, Direnzo and Greenhaus (2011), citing Brown et al. (2008), suggest workers must focus on maximizing their employability in the new, volatile, economy. Job turnover provides opportunities for gaining skill, building human capital, and improving job satisfaction, even when their base level of satisfaction is relatively high. As with other papers above, the idea that unsatisfactory jobs exist because of the market's insistence on low quality conditions is not mentioned. Instead, it is taken for granted that these positions must exist, and that although bad, they are stepping stones to something better in a volatile economy. Mobility is framed as a consequence of developing "career competencies" where workers enhance their employability and move to more satisfying jobs. Thus, mobility is presented as opportunity. Portions of this argument appear in the UK chapter of this thesis; several subjective measures of work are improved by mobility. The problem is the strong implication that mobility will move workers to better jobs overall, ones with higher pay and overall better positions. In truth mobility leads workers to improve unfavourable for similar pay, or a similar rate of pay (higher pay for longer hours). On the other hand,

mobility in Germany is limited partially because good working conditions are more widely available.

Overall, each of the authors sees the interest of employers and the interest of labour as one and the same. Each suggests that both gain from competitive markets, where turbulence produces strong firms, industry winners, and good working conditions. It is inconceivable that poor pay and poor working conditions for staff could be a part of the winning formula, which creates strong firms and industry winners (yet these emerge constantly). The findings in this thesis would further challenge Brown et al. (2008), the OECD (2010), and Direnzo and Greenhaus (2011). Ultimately, results suggest that workers gain little from inter-firm mobility, and largely see improved subjective improvements which possibly stem from working in poor conditions. Objectively, workers gain the most through intra-firm mobility within a secure firm, which improves both the pay and the subjective working conditions of staff. From the perspective of the authors above, less mobile labour markets like Germany's are limiting the opportunity structure of the workforce, not pursuing good working conditions and industry pay for the majority.

Even in the literature of economics, there is little evidence that mobile markets carry direct benefits for workers. Bertola (1990) tests the assumption that protected markets lead to higher unemployment rates for those who move for IVM. As before, mobile labour markets may be more "efficient" for the economy, and more profitable for the employer, but the question of whether these have unwanted penalties for workers, is a good one. Bertola (1990) tests whether immobile and protected labour markets lead to inflated wages, for those in permanent and stable jobs. He finds no relationship between changes in job protection strength, and the level of unemployment. Pushing the argument further, he finds such changes do not lead to artificially increased wages for

insiders. In fact, in less mobile and secure labour markets, wages tend to be lower "and more sensitive to outside unemployment", especially in times of economic downturn. This suggests that those who fall into unemployment are not "crowded out" of a secure labour market, and although unemployment may be extended it is not increased by changes in protection. Elsewhere, Bertola and Rogerson (1997) test the assumption that high protection leads to lower turnover, an argument presented by Brown et al. (2008). In fact, a country's wage negotiation is said to have a larger effect on labour market turnover, than the strength of job protections legislation. Further, both papers find that the impact of protection and turnover has a limited effect on earnings, and in fact, both may be shaped by institutions governing earnings.

Despite these findings, flexibility is still on the agenda for most European countries (Thelen, 2014). The idea that this flexibility has something to offer workers, should be contested and challenged.

7.2.Interpretation, Meaning, and Discussion

The sociological perspective on labour markets sees inequality as tied to position in a social structure, not to the characteristics of individuals. As a result, the concept of job mobility is particularly important for capturing premiums tied to vacancies (Sørensen and Kalleberg, 1981). The theoretical reasons for job mobility rely on utilitarian gain, where change is driven by the promise of better vacancies with better outcomes, independent of the worker's resources (Sørensen, 1975, Sørensen, 1977). In this view, every configuration of the mobility-outcomes relationship is theoretically simple. For mobility types, VM will be driven by utility and gain; IVM will result in loss. For differences between workers, dominant groups (with resources) will gain the most from VM, while others will gain less (Sørensen, 1975). For country differences, markets where workers have the most to gain from mobility will have the most mobility (Brown

et al., 2008). This thesis tests this assumption and outlines two complexities. First, mobility does not improve all outcomes equally, bargains and compromises are inevitable since employer and workers are in conflict. Second, mobility affects subjective and objective measures of the same outcome differently. Although new vacancy contain better rewards, the vacancy also brings new demands from employers, which must be weighed up to gage utility. The central assumption, that VM is uniformly good, does not hold. Instead results show the complexities above work to the advantage and disadvantage of workers in each configuration. These are discussed in reverse order below.

7.2.1. Country differences in mobility and outcomes

If VM is assumed to lead to better jobs, then countries with less VM are seen as limiting workers. However, once the complexities described above are considered, both countries reveal advantages and disadvantages of mobility's impact on outcomes.

Inter-firm mobility in Germany results in slightly lower pay and fewer hours for workers. However, respondents who experience the change move to vacancies with more satisfactory work. Employer change may be fuelled not by attainment as described in the literature, but by a need for more satisfying forms of work, or a need to correct for work mismatch. Inter-firm mobility in the UK results in slightly higher pay coupled with longer hours. However, the largest effects of VM are subjective satisfaction These subjective satisfactions do not manifest in an objective sense. Here it is possible that employer change is fuelled by a need to correct for poor working conditions, or to improve subjective feelings about work.

Country differences in the consequence of mobility, likely explain a larger portion of country differences than previous authors have considered. Mills et al. (2006a) discuss the importance of domestic institutions when explaining patterns of job mobility in 12

countries. Broadly, they identify two systems of labour markets; “open” and “closed” which are shaped by welfare regime, education and training, and employment systems. The typology is outlined in section 2.3.1 on p 46 alongside the worlds of welfare capitalism typology (Esping-Andersen, 2013).

The key impact of institutions is not fully explored by Mills et al. (2006b). Authors cite the importance of employment protection systems and the strength of collective bargaining as important in shaping “openness”, but the mechanism of these suggests they influence the rate of involuntary change alone. Specifically, the authors cite employment relations systems, made up of work council strength, collective bargaining strength, and strength of unions. These are said to influence job protection, but job protection is concerned mostly with rates of IVM. The major difference between both countries lies in rates of VM, with a low rate in Germany and a high rate in the UK.

In this way, Mills et al. (2006a) talk about institutions “shielding” workers from job mobility induced by globalization, but their mention of individualised bargaining is perhaps a better reflection of reality. This is further reflected in chapters 5 and 6 of this work. Focusing on what workers gain from mobility better illustrates the importance of collective bargaining as a dimension shaping mobility patterns. In the UK workers gain little in terms of intra-firm mobility, pursuing promotion leads to minor changes in pay and minor changes in satisfaction. Hence, workers move between firms in an effort to find better work. However, the utility they gain from such changes are largely subjective, with more satisfaction in pay, hours, and work. It could be that wages are competitive and driven by efficiency, that mobility leaves workers to instead try to correct for their role, responsibility, and conditions, in an effort to better align this with their pay.

In Germany workers gain the most from intra-firm mobility, at least when pay is the outcome. Pursuing promotion leads workers to vacancies with much higher pay, which goes beyond worker characteristics alone. Hence, workers limit mobility between firms, in an effort to pursue promotions and gain tenure.

Further, the Varieties of Capitalism approach (which considers the perspective of firms not workers) makes a similar distinction; Germany is an example of a coordinated market economy, while the UK is a liberal market economy. The main perspective is summarised in section 2.3.1 on p 46.

When discussing Germany Hall and Soskice (2001) cite industrial relations as important for maintaining coordinated market economies. They specifically note the importance of wage setting at the industry level. As an example, coordinated market economies rely on skilled production which leaves employers vulnerable to poaching. In an effort to correct this, collective agreements standardise wages and conditions in an effort to make firm commitment more likely. This is never tested in the literature, but the results produced in the thesis supports the view. VM between firms does not reward workers significantly, improving only subjective satisfaction at the cost of a fall in hours and pay. Intra-firm promotions provide workers with the biggest increase in pay, as workers try to internalise workers into the firm.

Making the same argument for Liberal Market Economies, Hall and Soskice (2001) point out individualised bargaining between the individual and the employer, which leads to a wide variance in pay, and a freedom in firing and hiring for employers. Hall and Soskice cite heavy market competition which keeps "*wages and inflation low*". But this is only part of the British system as a whole. While heavy market competition keeps workers moving, they also gain little from this competition. Most of the change in the British system is voluntary, but the reward tied to this voluntary mobility is largely

subjective. The best mechanism for improving wages beyond a respondent's fixed resources is to pursue promotion within an internal career ladder. As a result, the mobility experienced in Liberal Market Economies is closer tied to job mismatch rather than career progress, where workers may be moving in an effort to improve their immediate conditions, they may also be looking for an internal career ladder to commit to. Hall and Soskice (2001) allude to this when they claim Liberal Market Economies offer a "general" skill-set to young workers which is transferable between firms, "*Educational arrangements that privilege general, rather than firm-specific skills, are complementary to highly fluid labour markets; and the latter render forms of technology transfer that rely on labour mobility more feasible*" (ibid: p30). This may be true, but what is left unsaid is the fact that workers move to vacancies with little more than subjective improvements from fluid labour markets. Some face significant financial penalties for involuntary mobility, pushing workers into lower valued jobs. Thus the observation that companies *"developing an entirely new product line can hire in personnel with the requisite expertise, knowing they can release them if the project proves unprofitable"* (ibid: p40) is true for firms, but carries few benefits for workers, at least in terms of immediate rewards. If the change is involuntary, it can result in significant penalties.

For both authors, asking what workers get out of mobile or immobile labour markets sheds light on the wider system. The two labour markets described by Mills et al. (2006b) and Hall and Soskice (2001) thus have two different versions of "quits" for example, and two different versions of "promotion". In Germany a quit may be driven by a want of interesting or more satisfying work, where compromises must be made. In the UK, a quit may be driven by a need to improve working conditions or increase working hours. Respondents who change firms see a change in their subjective feelings about work and pay, but not their objective pay. Thus when person-specific factors are

taken into account, workers are no better off in terms of earnings with a new employer than with an existing employer.

By the same token, countries differ in terms of what workers get from a "promotion". In the UK, a promotion carries a miniscule change in pay, and a minor improvement in subjective feelings about work; workers will likely need to experience several promotions before seeing a substantial change in earnings. In Germany, a promotion has no effect on subjective outcomes, but a large significant premium in pay, which possibly reflects the fact that promotions are uncommon in Germany. In both countries, workers see a type of efficiency wage, earning above what is expected according to *human capital* (Becker, 1994). However, in the UK promotion affects both objective and subjective outcomes positively, but in Germany only objective pay is affected. This could be the result of increased responsibility which follows promotion in Germany, in this way workers who receive promotions do not feel different about pay following the change, because they feel it reflects their added responsibility. Thus both countries contain advantages and disadvantages to voluntary mobility types.

Two recommendations are considered for future authors hoping to compare country mobility regimes. First, more recent data should be considered for the UK. This is due to the profound changes in the British labour market that took place while the thesis was carried out. Research began in 2012, as Britain was emerging from the European Debt Crisis, returning to growth, and ending a period of austerity. Crisis years were not used in the research design as they were considered non-representative of the sample. However, by the summer of 2017, when the conclusion of this work was written, Britain had voted to leave the European Union. Although the impact of the move will not be clear until the terms are negotiated, it is likely that change will lead to further inequality in pay and working conditions. Many EU-level regulations of working conditions and

working time could no longer apply to the UK once agreements are finalised. This will lead to further dispersion of their quality. As a result, these changes will increase the rate of voluntary job mobility in the UK (after a period of low mobility due to lack of confidence after key agreements are made). Second, more country comparisons should be made between capitalisms and their consequence for the mobility-outcomes relationship. Many Eastern-European countries are routinely advised to deregulate their labour markets to ensure mobility. While this may work for attracting foreign direct investment, it will likely lead to precarity and instability for the workers themselves. The section below turns to models estimating worker differences and their meaning.

7.2.2. Differences between workers

Overall, authors have focused on the differences in rates of mobility between gender and education groups, framed as differences in life-chances. Hachen (1990) summarises these as the limited-opportunity model. This approach assumes mobility does not bring "universal utility" to workers. Instead overt or statistical discrimination limits the distribution of these opportunities, leaving vulnerable workers less able to seize the life chances of quits and promotions. This thesis pushed the argument further, exploring worker differences in the consequence of mobility. Mobility contains patterns of bargaining between groups through the medium of mobility. Once the complexities described above are considered, each group reveals subtle differences in how they react to VM.

For example, it is untrue to say that British tertiary educated workers hold an advantage over workers with a secondary level education when it comes to benefiting from VM, as laid out by *statistical discrimination* (Thurow, 1976). Instead, secondary educated workers are able to improve subjective outcomes through VM, while tertiary educated workers improve objective pay through VM. This point is missed in the literature

because authors often focus on objective pay alone (Keith and McWilliams, 1999), or subjective satisfaction alone (Gesthuizen, 2009). Tertiary educated workers may have more control over their subjective conditions, improving them through mechanisms other than mobility. These may be bargaining, occupational licenses, or union voice. Secondary educated workers may be more reliant on mobility itself as the mechanism to move into vacancies with better conditions. It could also be that non-tertiary groups work in industries with a wider spectrum of working conditions.

Considering gender, the results support the theories of Acker (2006), who highlights the importance of using varied outcomes to capture varied and complex *inequality regimes* within firms. Women (especially black women) are prone to falling into broadly defined occupations, with less training and less attention from managers. Within these occupations they are likely to be given less visible (but crucial) tasks. Further, the nature of inequality regimes, which stem from *statistical discrimination* among other reasons, will push women to depend on the firm more than men and force them to make complex tradeoffs within the regime. Women will depend on mobility itself for reward, while men can bargain for reward through training and "grooming". According to Acker (2006) when leaving an inequality regime, women may move to objectively better conditions since there are vast differences between (firm-specific) inequality regimes.

The results in UK's subjective models (Table 5.4 and Table 5.5) support these theories. Women rely on promotions for subjective improvements in outcomes, but they are also strongly affected by demotion. Men are slightly less affected by the changes, suggesting they may have more control over their conditions while with an employer. At first it appears that women benefit more than men in objective models. Results show women earn more after a quit to a new vacancy, when compared to men (Table 5.6). However subsequent analysis shows that women use this mobility to move to vacancies with

longer working hours, which reflects the increase in pay. Thus women do gain objectively from inter-firm mobility, but this gain is not a form of attainment. Instead it is the result of bargaining for longer hours. Strangely promotion does not carry increased hours, but increases women's satisfaction with hours, possibly signalling greater control over working time overall, men are unaffected by the change and typically use promotion to lower their working hours.

The *inequality regime* perspective emerges less in Germany, where women are completely unaffected by VM, and men make compromises in outcomes (one of which is lower working hours). Women may be reliant on the firm when the outcome is working time, as they see a sharp decline in hours (and satisfaction with time) after IVM. However several outcomes do not affect women in the German models, suggesting men are those most affected by firm-specific *inequality regimes*. Leaving a firm forces men to make compromises in hours and pay, for more interesting forms of work.

In the results above, there are wider gender differences in mobility's impact on time, than there are on mobility's impact on pay. This finding fits with previous authors who find no gender difference in the effect mobility has on earnings (Keith and McWilliams, 1995), but does not fit with the idea of overt discrimination, which is predicted to shape the chances of promotion or demotion, as well as its consequences. This lack of effect could be the product of controlling for occupation and industry categories when estimating pay, since gender differences less often emerge from employers paying different rates for the same role. Rather, they emerge from the filtering of women and men to specific occupations and industries with fewer or more opportunities (Cooke, 2016, Cooke, 2014). It is possible that *overt discrimination* is shaping the working time available to women, forcing them to look beyond a single employer in the UK, and to

stick to a given employer in Germany. In this way, women are seen as less capable of working full time within the inequality regimes described by Acker (2006), by changing employers women are able to correct this. No systemic gender differences in the relationship between VM and outcomes emerge. This is true in both countries. However, while no systemic difference between genders emerges, men and women make different gains in mobility in both countries.

Considering educational differences, the limited-opportunity model (Hachen, 1990) again assumes that differences between workers are largely difference in the chance of promotion or quit. But the approach does not consider the effects of these on outcomes. Thurow (1976) proposes that less educated workers are blocked from opportunity and training in the labour market since they are unable to signal their "usefulness" to employers, statistical discrimination. Sørensen (1977) also argued that education is an important part of attainment theory, and that worker education credentials (and other resources like class, status) are particularly important since they remain unchanged throughout a person's time in the labour market. Those with high education use mobility to close the gap between their resources and their reward (pay, status etc). Thus more educated workers would be more mobile and gain the most from mobility.

However the results above show that secondary level educated workers use mobility to improve subjective outcomes (often relying on the firm), while third level educated workers improve objective outcomes using mobility, seeing only minor changes in subjective outcomes. In the UK for example, secondary and basic educated workers often gain the most from intra-firm VM (increased satisfaction with security, pay, and time). Third level educated workers are hardly affected by VM when outcomes are subjective. However, when the outcome becomes objective pay or working time, third level educated workers gain the most from inter-firm VM while other groups see no

change in pay but increased working hours. The results are somewhat different in Germany, the effect of VM on subjective outcomes differs little by educational group, but secondary educated workers must make bargains between satisfaction with work and satisfaction with time following mobility. Third level educated workers are less affected by mobility. However, secondary educated workers also see significant pay premium for intra-firm VM, earning more after intra-firm VM compared to third level educated workers. Several of these findings run completely counter to *statistical discrimination.*

In the UK, it's possible that third level educated workers have a greater control over their working conditions due to occupational license, while those with a secondary level or basic level of education fall into poorer working conditions, which are corrected using mobility. It's also possible that secondary educated workers are aware of their limited prospects, and so appreciate the effect of promotion than those with a third level education. Lastly, it's possible that British non-tertiary workers rely on moving through vacancies *because* they receive less training at work, similar to women in the *inequality regime*. Tertiary educated groups are able to improve outcomes through training and development, while non-tertiary groups move through vacancies searching for better outcomes. In Germany, workers with a secondary or vocational education may move through clearly defined pay grades, where a "promotion" or an intra-firm change, results in moving from one wage bracket to another. Those with a third level education may instead be following industry or occupational mechanisms guided by tenure or levels of experience, instead of specific mobility events. In short, the assumption that third level educated workers gain the most from mobility does not hold, as workers make trades in outcomes based on their resources. The section below considers the key recommendation for testing between worker differences.

Further work must compare and contrast worker groups in the mobility-outcomes relationship. New-career theorists (Arthur and Rousseau, 2001, Tolbert, 2001) suggest all groups benefit from mobility roughly equally. Further work should consider the impact of social class, testing the consequences of mobility between class groups. Theoretically, the "employment relationship" proposed by Goldthorpe (2000, 2002), implicitly considers the mobility-outcomes relationship. Class categories may better capture worker differences than educational categories. The final section turns to the micro relationship between mobility and outcomes, and its meaning.

7.2.3. Types of mobility and outcomes

Finally, all VM is assumed to benefit workers regardless of mobility type. Thus promotions are expected to lead to better vacancies as much as voluntary quits should lead to better vacancies with new employer. Yet, these are separate mechanisms with different consequences for workers.

The theory of attainment (Sørensen, 1977), one of the simpler predictions of VM and outcomes, has usefulness. However throughout this work important distinctions and limitations emerge. The theory argues that VM is a key step to improving worker outcomes; it is beneficial to workers because vacancies always contain better jobs. Yet, results show that voluntary changes have different effects on subjective and objective outcomes, depending on whether the change is between or within firms. In the immediate sense, VM between firms lead to workers to improved subjective outcomes, and do little for objective outcomes, counter to both the theory of *attainment* and *values-rewards theory* (discussed in the review of chapter 2). Promotions however, contain objective improvements offering better earnings and hours.

It is possible that workers who quit do so to pursue future promotion opportunities elsewhere, as suggested by Kronberg (2013, 2014) and Brown et al. (2008). It could

also be that mobility in itself does not improve career outcomes like pay, but is an artefact of worker characteristics. Both of these suggestions would explain the fact that cross sectional or OLS estimates produce significant effects of quitting on outcomes, but fixed-effects regression produces weak estimates for quitting on outcomes. Both of these suggestions run counter to attainment theory. In both countries mobility within the firm improves objective outcomes best, as predicted by *efficiency wage theory.*

This section considers each theory in turn, comparing the findings with its prediction. Authors have also used the theory of *values-rewards* outlined by Kalleberg and Mastekaasa (2001) (page 188), which states that changes in work attitudes stem from changes in reward which are driven by job mobility; thus *"...promotions and quits should result in higher satisfaction and commitment through increased job rewards such as better pay or more interesting work, whereas downward/lateral mobility and (especially) layoffs are likely to lead to less rewarding jobs and thus to lower satisfaction and commitment."* Here, the theory considers both VM and IVM, where as Sørensen (1975) previously warned against considering both processes together, possibly for good reason. As with other theories, *values-rewards theory* treats inter-firm and intra-firm mobility as the same. Results throughout the work routinely show this is not the case, almost each time models are estimated. Kalleberg and Mastekaasa (2001) consider subjective outcomes alone, without considering the impact of mobility on objective measures, although they heavily imply that increased "reward" is tied to greater wages or lower hours. Overall, their results contain three shortcomings, the conflation of inter- and intra-firm mobility, the universal application of the theory across outcomes, and the failure to distinguish between subjective and objective outcomes. Each of these stems from the utilitarian view that mobility leads to better jobs.

Efficiency wage theory (Akerlof and Yellen, 1986) has been discussed throughout the thesis and is often cited by authors summarised in the literature review. It predicts employers will offer above market wages (and in cases working conditions) in an effort to internalise key staff. Thus within firm mobility should produce increased wages, and improved working conditions for workers, at least in the immediate sense. Inter-firm mobility should produce a weaker effect, as workers will move to market rates, set by efficiency and competition. The output throughout confirms this is true in both countries, some nuance to the findings should be considered at this point. Several of these findings cross over with internal labour market theory (Althauser, 1989).

In the UK intra-firm mobility carries minor improvements in subjective satisfaction but improves objective outcomes. The change increases pay and hours as predicted by efficiency wage theory. In Germany this mobility contains high premiums in terms of pay, while leaving the firm contains penalties. These findings also support efficiency wage theory. The theory explains the relationship best in both sets of estimates. Employers in Germany are offering high wages that are reliant on tenure and internal career structures, and movement between firms is possible but means making compromises, like losing working hours for more interesting forms of work. In the UK, the premium tied to intra-firm mobility is small, suggesting workers may have to experience more than one promotion before they see larger gains in pay, but this makes sense since firms structures in the UK tend to be taller. Since organisations are flatter in Germany, mobility within the firm carries larger premiums which likely correspond with increased responsibility.

As a note of caution, the results above do not suggest internal labour markets are not in decline; the findings in chapter 4 agree with previous authors (Tilly, 1998, Kronberg, 2013, Kronberg, 2014), rates of intra-firm changes are lower and falling compared to

inter-firm changes (Table 4.3 p106). Particularly in the UK, intra-firm mobility sees a sharp decline in the years approaching the 2008 European Debt Crisis. Instead, the point is that the rewards tied to intra-firm mobility have not been replaced by inter-firm mobility. Again, it could be argued that workers use inter-firm mobility to "settle" in a career ladder with prospects, yet this nuance is not considered in the theory of attainment or value-rewards.

Throughout, this work questions the concept of "voluntary" mobility. The thesis uses the term out of convention, but calling such movements "voluntary" may be misleading. Instead, workers (especially in the UK) may be moved to new positions in an effort to maintain poor working conditions and inflexible hours in a wider economy. Within the firm too, mobility to new opportunities contains bargains and compromises which are "voluntary" only in that they allow workers to leave poorer conditions. What should replace the concept of "voluntary mobility"? This question is left to future work. Lateral changes, employee-initiated changes, and position changes may be useful concepts which avoid the agency-focused perspective of "voluntary mobility".

Future work should consider the following. First, the theoretical suggestion that mobile markets benefit both workers and employers should be questioned further. The idea that mobile markets lead workers to improve their pay and conditions with new employers is not supported in the results. Although the suggestion that mobility may be used to locate "good" career ladders is noted. Instead mobility has various effects on workers depending on the type of mobility, the worker's characteristics, and the institutional context of the change. Second, more work is needed in developing the relationship between IVM and outcomes. Conceptually, the theory of attainment (Sørensen, 1977) does not give much thought to IVM. The predictions it does offer, often fail. Workers appear roughly capable of reproducing their working conditions after the change,

instead of moving to lower valued positions. *Values-rewards theory* tries to address this, but fails, as shown in the empirical chapters of this thesis, and in the work of those proposing it (Kalleberg and Mastekaasa, 2001). This suggests the theory is underdeveloped. Third, future research must at least control for intra-firm mobility when considering mobile markets; these are complimentary to inter-firm changes yet are often left out of analysis. As mentioned throughout the thesis, the fact that intra-firm mobility is in decline is not contested. Instead it is a strong mechanism for rewarding workers which is not being replaced by the mechanism if inter-firm mobility. The fact that intra-firm changes are in decline should worry researchers further.

Lastly, future work should limit the impact of past unemployment on outcomes. This is especially important in the UK data, where extended job history files exist as part of the larger spell dataset. These events were not controlled for, as this would have added to the large number of variables included. Since results show involuntary mobility has a scarring effect, greater effort should be made to parse out even brief periods of unemployment.

Linked to the previous point, greater conceptual work is needed to distinguish between job mismatch and the process of advancing one's career, whatever theory one chooses to focus on- economic advancement (Goldthorpe, 2000), attainment (Sørensen, 1975), efficiency wage theory (Akerlof and Yellen, 1986), or values-rewards theory (Kalleberg and Mastekaasa, 2001). Authors often imply that VM leads workers advancing their career, less often authors concede that mobility is a strategy for dealing with poor working conditions or a poor person-job fit. Brown et al. (2008) concede this point, but argue that *overall* mobile markets with the freedom to hire and fire will create strong and competitive firms that pass profits to workers in the shape of secure, good quality, and high paid work. As stated (even in their own findings), this hardly manifests for

mobile workers, as non-mobile workers earn more and are more satisfied with work than their counterparts.

7.2.4. Summary

This work contributes to the existing discussion of mobile labour markets and worker mobility (Gesthuizen, 2009, Gesthuizen and Dagevos, 2008, Kronberg, 2013, Kronberg, 2014, Cha, 2014, Sallaz, 2017, Reichelt and Abraham, 2017). Specifically, it moves the focus away from previous analyses looking at the causes and consequences of mobility (seeing them as life-chances), and instead focusing on the key assumption that VM improves outcomes, rewards workers, and is inherently "good". Throughout the literature, mobility is treated as a vehicle for positive change, career progression, and work improvement. This takes the shape of worker pursuit of utility (attainment theory and values-rewards theory), and an employer's desire to internalise workers (efficiency wage theory).

However, this approach is an oversimplification, as empirical papers and the results presented here have shown. Firstly, outcomes are multi-faceted. Pay, security, working conditions, and time require tradeoffs and compromises; workers use mobility to gain improvements in some outcomes for no change (or a penalty) in others. Second, the assumption that subjective and objective outcomes are similar measures of utility, does not hold. At times, mobility improves subjective outcomes, with no change in objective reality, at other moments it improves objective outcomes, with no effects on subjective feelings. These two complexities shed light on the effects of worker mobility and the reasons behind country differences in mobility.

Mobile markets, are not functionalist or efficient social constructs where workers improve their lot every time they seize a new vacancy. More often, mobile markets appear to be mechanisms for improving poor working conditions, between and within

firms with advantages and disadvantages based on configurations. Regarding mobility type, inter-firm mobility improves subjective outcomes best, while intra-firm mobility improves objective outcomes best. Although compromises exist, workers who move between firms are mainly in search of subjectively better positions to work in. Intra-firm mobility is where workers improve objective pay best; climbing internal ladders in an effort to improve their rates of worth and get closer to *attainment*.

Differences between workers are also nuanced. Women use mobility to make improvements while men appear to rely on other mechanisms in the UK. The opposite appears to be the case in Germany. A uniform effect across genders and contexts does not emerge. Educational groups too, show nuances that go beyond what is laid out in attainment theory. Lower educated groups depend on mobility for subjective outcomes, seeing improvements through change, while third level educated workers are unaffected by mobility relying on other mechanisms to change subjective satisfaction. However when outcomes are objective third level educated workers gain the most from VM in the UK, while secondary level educated workers gain the most in Germany; again suggesting that third level educated workers are not uniformly "above" other education groups.

Lastly, the country specific mechanisms of mobility have their own nuance. In the UK mobility may be driven by workers improving subjective feelings about work, but gaining almost nothing objectively. Here, individualised labour markets mean wages are governed by efficiency and competition, pushing workers to negotiate for working conditions, and responsibilities instead. The country's larger rate of mobility may be closer tied to its wide variance in working conditions than to a vehicle for attainment or class mobility. In Germany, mobility between firms may be fuelled by a desire for more satisfying types of work or a want for interesting work. Hence workers must make

compromises, sacrificing hours and pay for a new position with a new employer, for increased satisfaction with work.

The assumption that workers have much to gain from mobile labour markets should be treated with scepticism, since the conclusion assumes the interests of labour and the interests of capital are the same. Instead mobile markets may act as a release valve for poor working conditions, or an alternative to the lack of career ladders which employers avoid constructing. As Sørensen (1983) noted later, "*One may see the considerable amount of inequality in personal attainments found in labor markets... to be created in large organization as deliberate devices to move employee performance from perfunctory to consummate*." The large disparities in rewards act as incentives to gain more from workers. This catch may have spilled into the wider economy; where precarity and mobility are "deliberate devices"; keeping employees mobile means limiting the commitment of employers. Authors often suggest mobility is crucial in placing workers into organisations where they have better chances of improving outcomes and gaining attainment. Less often they consider the importance of ensuring that workers don't need to chase attainment in a market with poor conditions. The mobile markets of the UK are fuelled by voluntary changes. The coordinated markets of Germany contain few of these. While one gives workers an opportunity structure to negotiate the working conditions they believe are fair, the other offers good conditions as standard.

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1. Appendix:

The table below considers the main models estimating the relationship between mobility and subjective outcomes for the UK.

Table 1.1: Full models for subjective outcomes. UK (2000-2008)

VARIABLES	(1) Satisfaction with work linear z-scores	(2) Satisfaction with pay linear z-scores	(3) Satisfaction with security linear z-scores	(4) Satisfaction with time linear z-scores
z_worksat		0.22***	0.24***	0.35***
		(0.01)	(0.01)	(0.01)
Vol inter-firm	0.36***	0.24***	0.10***	0.14***
	(0.03)	(0.02)	(0.02)	(0.02)
Invol inter-firm	0.06	0.05	0.04	0.05
	(0.06)	(0.05)	(0.05)	(0.05)
Other inter-firm	0.08**	-0.05	0.03	0.04
	(0.04)	(0.04)	(0.04)	(0.04)
Vol intra-firm	0.18***	0.10***	0.11***	0.04*
	(0.03)	(0.02)	(0.02)	(0.02)
Invol intra-firm	-0.09	0.02	-0.07	-0.00
	(0.12)	(0.11)	(0.12)	(0.12)
Other intra-firm	-0.02	0.06	0.02	0.04
	(0.05)	(0.04)	(0.04)	(0.04)
Ref: (16-30)				
agecat (31-45)	-0.03	0.02	-0.04	-0.06*
	(0.03)	(0.03)	(0.03)	(0.03)
agecat (46-65)	-0.02	-0.04	-0.08*	-0.13***
	(0.05)	(0.04)	(0.04)	(0.04)
agecat (66-80)	0.20	0.19	0.08	0.03
	(0.12)	(0.13)	(0.13)	(0.12)
Ref: (permanent)				
0.temporary	-0.09	-0.02	-1.12***	0.05
	(0.06)	(0.06)	(0.08)	(0.05)
Ref: (1-99)				
jbsize1 (100-499)	0.05	-0.05*	-0.05	-0.04
	(0.03)	(0.03)	(0.03)	(0.03)
jbsize1 (500-1000+)	-0.01	-0.03	0.01	-0.01
	(0.03)	(0.03)	(0.03)	(0.03)
Ref: wave 10				
11.wave	-0.02	0.11***	0.01	0.04
	(0.03)	(0.03)	(0.03)	(0.03)
12.wave	-0.05	0.09***	0.04	0.03
	(0.03)	(0.03)	(0.03)	(0.03)
13.wave	-0.07*	0.08**	0.05	0.00
	(0.04)	(0.04)	(0.04)	(0.03)
14.wave	-0.05	0.13***	0.07	0.07*
	(0.04)	(0.04)	(0.04)	(0.04)
15.wave	-0.07	0.20***	0.07	0.07
	(0.04)	(0.04)	(0.04)	(0.04)
16.wave	0.00	0.18***	-0.01	0.09***
	(0.03)	(0.03)	(0.03)	(0.03)
17.wave	0.00	0.21***	0.04	0.12***
	(0.03)	(0.03)	(0.03)	(0.03)
18.wave	-0.04	0.26***	-0.04	0.13**
	(0.06)	(0.06)	(0.06)	(0.06)
Ref: No children				
1 child	0.04	0.07***	-0.02	0.05**
	(0.03)	(0.03)	(0.02)	(0.02)
2 children	-0.01	0.07**	-0.02	0.08**
	(0.03)	(0.03)	(0.03)	(0.03)
3+ children	0.05	0.10*	-0.03	0.09*
	(0.05)	(0.05)	(0.05)	(0.05)
Ref:				
Agriculture	-0.04	0.01	-0.03	0.05*
	(0.03)	(0.03)	(0.03)	(0.03)
Energy	-0.01	0.25**	0.10	0.25***
	(0.12)	(0.12)	(0.12)	(0.10)
Mining	-0.06	0.13	-0.09	0.16**

	(0.10)	(0.09)	(0.10)	(0.08)
Manufacturing	0.07	0.41*	-0.25	0.18
	(0.18)	(0.21)	(0.25)	(0.23)
Construction	-0.12**	0.02	-0.12***	0.04
	(0.05)	(0.04)	(0.04)	(0.04)
Trade	0.05	0.08	-0.07	0.11*
	(0.06)	(0.06)	(0.06)	(0.06)
Transport	-0.12**	0.01	-0.05	-0.01
	(0.05)	(0.04)	(0.04)	(0.04)
Finance	-0.05	0.01	-0.12**	-0.04
	(0.06)	(0.05)	(0.05)	(0.05)
Services	-0.12	-0.10	-0.00	0.18***
	(0.08)	(0.07)	(0.06)	(0.06)
Ref: Managers				
Professionals	-0.01	0.01	0.07**	0.08**
	(0.04)	(0.03)	(0.04)	(0.03)
Technician	0.01	0.04	0.09***	0.10***
	(0.03)	(0.03)	(0.03)	(0.03)
Clerical	-0.07**	0.04	0.06*	0.13***
	(0.04)	(0.04)	(0.03)	(0.03)
Services	0.02	-0.08*	0.14***	0.06
	(0.04)	(0.04)	(0.04)	(0.04)
Skilled agri	0.09	0.05	0.15	0.19*
	(0.14)	(0.14)	(0.11)	(0.11)
Craft workers	-0.05	-0.04	-0.00	0.05
	(0.05)	(0.05)	(0.05)	(0.04)
Plant and machinery	-0.13***	-0.01	0.04	-0.01
	(0.05)	(0.05)	(0.05)	(0.04)
Elementary	-0.11**	0.03	0.10**	0.13***
	(0.05)	(0.05)	(0.05)	(0.05)
Unemployment rate	-0.06	0.01	0.03	-0.03
	(0.04)	(0.04)	(0.04)	(0.04)
Growth	-0.01	0.02	0.00	0.01
	(0.01)	(0.01)	(0.01)	(0.01)
Constant	0.39	-0.19	-0.17	0.01
	(0.25)	(0.27)	(0.26)	(0.24)
Observations	26,231	26,016	25,984	26,032
R-squared	0.02	0.07	0.09	0.14
Number of pid	3,724	3,698	3,698	3,698
Wave	10-18	10-18	10-18	10-18
Weights	Clustered SE	Clustered SE	Clustered SE	Clustered SE

The table below considers the main models estimating the relationship between mobility and objective outcomes for the UK.

Table 1.2: Full models for objective outcomes. UK (2000-2008)

VARIABLES	(1) Log Gross monthly pay	(2) Subjective health	(3) Weekly hours
Vol inter-firm	0.01*	0.15***	0.47***
	(0.01)	(0.03)	(0.18)
Invol inter-firm	-0.07***	0.12**	-0.68
	(0.02)	(0.06)	(0.42)
Other inter-firm	-0.11***	0.02	-1.11***
	(0.01)	(0.05)	(0.30)
Vol intra-firm	0.01*	0.05	-0.14
	(0.01)	(0.03)	(0.19)
Invol intra-firm	-0.09*	0.05	-0.48
	(0.05)	(0.12)	(0.95)
Other intra-firm	-0.03*	-0.09	0.04
	(0.01)	(0.06)	(0.31)
Ref: (16-30)			
agecat (31-45)	0.06***	-0.03	0.36
	(0.01)	(0.04)	(0.27)
agecat (46-65)	0.05***	-0.07	0.70*
	(0.02)	(0.06)	(0.36)
agecat (66-80)	-0.29***	-0.16	-6.70***
	(0.06)	(0.15)	(1.31)
Ref: (permanent)			
temporary	-0.10***	0.07	-1.61***
	(0.03)	(0.07)	(0.58)
Ref: (1-99)			
jbsize1 (100-499)	-0.05***	-0.01	0.03
	(0.01)	(0.04)	(0.22)
jbsize1 (500-1000+)	-0.02**	-0.01	0.26
	(0.01)	(0.04)	(0.20)
Ref: wave 10			
11.wave	0.04***		0.22
	(0.01)		(0.22)
12.wave	0.10***	0.02	0.12
	(0.01)	(0.04)	(0.23)
13.wave	0.15***	0.23***	0.20
	(0.01)	(0.05)	(0.24)
14.wave	0.18***	0.00	0.07
	(0.01)	(0.05)	(0.31)
15.wave	0.23***	-0.11**	0.23
	(0.01)	(0.06)	(0.32)
16.wave	0.28***	-0.03	-0.04
	(0.01)	(0.04)	(0.22)
17.wave	0.32***	0.02	-0.34*
	(0.01)	(0.03)	(0.20)
18.wave	0.33***	-0.02	-0.50
	(0.02)	(0.08)	(0.42)
Ref: No children			
1 child	-0.03***	0.04	-1.67***
	(0.01)	(0.03)	(0.23)
2 children	-0.07***	0.07*	-2.65***
	(0.01)	(0.04)	(0.28)
3+ children	-0.07***	0.05	-3.29***
	(0.02)	(0.06)	(0.47)
Ref:			
Agriculture	-0.02	-0.31***	-0.18
	(0.01)	(0.05)	(0.24)
Energy	-0.02	0.16	0.40
	(0.04)	(0.11)	(0.81)
Mining	0.08**	-0.00	0.26
	(0.04)	(0.13)	(1.52)
Manufacturing	-0.00	0.28	1.11
	(0.06)	(0.19)	(1.01)
Construction	-0.01	-0.04	-0.24
	(0.02)	(0.05)	(0.31)
Trade	0.02	-0.00	0.06
	(0.03)	(0.07)	(0.41)
Transport	-0.06***	-0.05	-0.83**

	(0.02)	(0.05)	(0.34)
Finance	-0.02	0.06	-0.34
	(0.02)	(0.06)	(0.39)
Services	0.00	0.10	-0.29
	(0.02)	(0.08)	(0.43)
Ref: Managers			
Professionals	-0.06***	0.01	-0.68**
	(0.01)	(0.04)	(0.28)
Technician	-0.08***	-0.05	-0.97***
	(0.01)	(0.04)	(0.24)
Clerical	-0.13***	0.04	-1.34***
	(0.01)	(0.04)	(0.28)
Services	-0.18***	0.03	-1.61***
	(0.02)	(0.05)	(0.38)
Skilled agri	-0.10**	-0.03	0.49
	(0.04)	(0.13)	(1.37)
Craft workers	-0.07***	0.01	-0.49
	(0.02)	(0.06)	(0.32)
Plant and machinery	-0.07***	0.02	0.14
	(0.02)	(0.06)	(0.38)
Elementary	-0.19***	-0.01	-1.46***
	(0.02)	(0.06)	(0.42)
Unemployment rate	-0.02*	-0.03	0.42
	(0.01)	(0.05)	(0.30)
Growth	-0.01	-0.02	-0.04
	(0.00)	(0.02)	(0.08)
Constant	7.47***	5.54***	34.93***
	(0.08)	(0.33)	(1.94)
Observations	26,057	22,806	26,020
R-squared	0.25	0.02	0.02
Number of pid	3,698	3,672	3,698
Wave	10-18	10-18	10-18
Weights	Clustered SE	Clustered SE	Clustered SE

The table below considers the main models estimating the relationship between mobility and subjective outcomes for Germany.

Table 1.3: Full models for subjective outcomes. Germany (2000-2008).

VARIABLES	(1) Work satisfaction	(2) pay satisfaction	(3) time satisfaction
z_worksat		0.27***	0.16***
		(0.01)	(0.01)
Vol inter-firm	0.27***	0.02	-0.08***
	(0.03)	(0.04)	(0.03)
Invol inter-firm	0.13***	-0.01	0.01
	(0.05)	(0.04)	(0.05)
Other Inter-firm	-0.13	-0.26***	0.02
	(0.36)	(0.08)	(0.46)
Intra-firm mobility	0.03	0.01	-0.10
	(0.07)	(0.06)	(0.06)
Ref: (16-30)			
agecat (31-45)	-0.00	0.02	-0.06*
	(0.04)	(0.03)	(0.03)
agecat (46-65)	0.00	0.02	-0.03
	(0.04)	(0.04)	(0.04)
agecat (66-80)	0.01	0.40*	0.45
	(0.39)	(0.24)	(0.29)
Ref: (permanent)			
temporary	-0.08*	-0.04	0.03
	(0.04)	(0.04)	(0.03)
Ref: No children			
1 child	-0.00	0.04**	-0.01
	(0.02)	(0.02)	(0.02)
2 children	-0.01	0.05	-0.09***
	(0.03)	(0.03)	(0.03)
3+ children	-0.00	0.12**	-0.05
	(0.05)	(0.05)	(0.05)
Ref: 1-200			
Firmsize (201-2000)	-0.12***	-0.02	-0.02
	(0.04)	(0.03)	(0.03)
Firmsize (2000+)	-0.05*	-0.05**	-0.01
	(0.03)	(0.02)	(0.03)
Ref: 2000			
2001.syear	-0.03	0.07***	0.01
	(0.02)	(0.02)	(0.02)
2002.syear	-0.08***	0.00	0.00
	(0.02)	(0.02)	(0.02)
2003.syear	-0.10***	-0.04**	0.02
	(0.02)	(0.02)	(0.02)
2004.syear	-0.14***	-0.06***	0.01
	(0.02)	(0.02)	(0.02)
2005.syear	-0.17***	-0.03	0.02
	(0.02)	(0.02)	(0.02)
2006.syear	-0.22***	-0.04**	-0.00
	(0.02)	(0.02)	(0.02)
2007.syear	-0.25***	-0.02	0.01
	(0.02)	(0.02)	(0.02)
2008.syear	-0.25***	-0.02	0.08***
	(0.02)	(0.02)	(0.02)
Ref:			
Agriculture	0.16	-0.08	0.12
	(0.11)	(0.09)	(0.12)
Energy	0.01	-0.12*	-0.04
	(0.10)	(0.07)	(0.07)
Mining	0.10	0.25**	0.47***
	(0.34)	(0.13)	(0.16)
Manufacturing	0.02	0.03	0.04
	(0.05)	(0.03)	(0.04)
Construction	-0.00	0.03	0.03
	(0.05)	(0.04)	(0.04)
Trade	-0.04	0.02	-0.00
	(0.05)	(0.04)	(0.05)
Transport	-0.02	0.13**	-0.03
	(0.07)	(0.05)	(0.06)
Finance	0.15*	0.14*	0.02
	(0.09)	(0.07)	(0.07)

Ref: Managers			
Professionals	0.03	-0.00	0.04
	(0.04)	(0.03)	(0.04)
Technician	0.01	-0.03	0.06*
	(0.04)	(0.03)	(0.03)
Clerical	0.04	-0.04	0.07*
	(0.05)	(0.04)	(0.04)
Services	-0.01	-0.05	0.07
	(0.06)	(0.05)	(0.05)
Skilled agri	-0.15	0.16	0.09
	(0.13)	(0.14)	(0.12)
Craft workers	-0.08	-0.02	0.05
	(0.05)	(0.04)	(0.04)
Plant and machinery	-0.09	0.03	0.05
	(0.06)	(0.05)	(0.05)
Elementary	0.01	-0.06	0.04
	(0.06)	(0.05)	(0.05)
Constant	0.17***	-0.01	0.03
	(0.06)	(0.05)	(0.05)
Observations	33,177	33,012	33,140
R-squared	0.02	0.10	0.03
Number of pid	4,219	4,218	4,219
Weight	w11103	w11103	w11103

The table below considers the main models estimating the relationship between mobility and objective outcomes for Germany.

Table 1.4: Full models for objective outcomes. Germany (2000-2008).

VARIABLES	(1) gross monthly pay	(2) health	(3) weekly working hours
Vol inter-firm	-0.02*	0.04	-1.06***
	(0.01)	(0.06)	(0.33)
Invol inter-firm	-0.01	0.12	-4.09***
	(0.01)	(0.08)	(0.56)
Other inter-firm	0.13	-0.26	-7.06**
	(0.16)	(0.97)	(3.06)
Intra-firm mobility	0.06***	0.13	1.67*
	(0.02)	(0.10)	(0.91)
Ref: (16-30)			
agecat (31-45)	0.04***	0.06	0.05
	(0.01)	(0.06)	(0.34)
agecat (46-65)	0.04***	0.05	-0.10
	(0.01)	(0.07)	(0.40)
agecat (66-80)	-0.27**	1.33***	-7.79***
	(0.11)	(0.43)	(2.52)
Ref: (permanent)			
temporary	-0.06***	-0.14**	-0.44
	(0.01)	(0.07)	(0.43)
Ref: No children			
1 child	0.01	0.06*	-0.57***
	(0.01)	(0.04)	(0.19)
2 children	0.01	0.02	-0.70**
	(0.01)	(0.05)	(0.28)
3+ children	0.00	0.03	-2.06***
	(0.01)	(0.09)	(0.43)
Ref: 1-200			
Firmsize (201-2000)	-0.04***	-0.01	-0.00
	(0.01)	(0.06)	(0.37)
Firmsize (2000+)	-0.01	0.01	0.02
	(0.01)	(0.05)	(0.26)
Ref:2000			
2001.syear	0.03***	-0.04	-0.11
	(0.00)	(0.03)	(0.14)
2002.syear	0.07***	-0.17***	-0.20
	(0.00)	(0.03)	(0.16)
2003.syear	0.12***	-0.22***	-0.29*
	(0.00)	(0.03)	(0.17)
2004.syear	0.14***	-0.34***	-0.37**
	(0.00)	(0.03)	(0.18)
2005.syear	0.15***	-0.35***	-0.25
	(0.00)	(0.04)	(0.18)
2006.syear	0.16***	-0.40***	-0.11
	(0.01)	(0.04)	(0.18)
2007.syear	0.18***	-0.52***	0.04
	(0.01)	(0.04)	(0.18)
2008.syear	0.20***	-0.56***	0.04
	(0.01)	(0.04)	(0.19)
Ref:			
Agriculture	-0.01	0.11	-0.44
	(0.03)	(0.19)	(0.75)
Energy	0.03	-0.13	-0.52
	(0.02)	(0.18)	(0.74)
Mining	0.04	0.64	-0.63
	(0.04)	(0.59)	(1.21)
Manufacturing	0.03**	0.03	-0.80*
	(0.02)	(0.07)	(0.41)
Construction	0.01	0.05	-0.47
	(0.02)	(0.08)	(0.42)
Trade	0.01	0.07	-0.40
	(0.02)	(0.08)	(0.59)
Transport	0.02	0.03	0.37
	(0.02)	(0.11)	(0.67)
Finance	0.00	0.14	0.44
	(0.04)	(0.15)	(0.74)
Ref: Managers			
Professionals	-0.01	0.11	-0.43

	(0.01)	(0.07)	(0.41)
Technician	-0.03***	0.17**	-1.21***
	(0.01)	(0.07)	(0.37)
Clerical	-0.06***	0.16**	-1.38***
	(0.01)	(0.08)	(0.42)
Services	-0.06***	0.03	-1.10**
	(0.02)	(0.10)	(0.52)
Skilled agri	-0.07**	0.26	-0.45
	(0.03)	(0.22)	(2.38)
Craft workers	-0.05***	0.13	-1.38***
	(0.01)	(0.09)	(0.47)
Plant and machinery	-0.05***	0.03	-1.55***
	(0.01)	(0.10)	(0.52)
Elementary	-0.06***	0.07	-1.56***
	(0.02)	(0.11)	(0.48)
Constant	7.67***	7.02***	43.03***
	(0.02)	(0.10)	(0.54)
Observations	30,549	33,470	33,522
R-squared	0.17	0.02	0.01
Number of pid	4,107	4,222	4,223
Weight	w11103	w11103	w11103