CHAPTER 9

General discussion
MAIN FINDINGS

The aim of this thesis was to explore multiple job holding (MJH) and its relation with health and work participation. In this section, the main findings of this thesis in light of this aim will be presented.

Exploring determinants of and experiences with multiple job holding

The results reported in Chapter 2, 3, and 4 show that multiple job holders are a heterogeneous group of workers. The study presented in Chapter 2 shows that a wide variety of factors, such as demographic factors, health and mastery, and work factors, predict transitions from single job holding (SJH) to MJH. In addition, we found that some factors only predicted transitions to combination MJH (second job as an employee), e.g. working part-time, while others only predicted transitions to hybrid MJH (self-employed in second job), e.g. higher mastery.

We also found that experiences with MJH are heterogeneous. The results in Chapter 3 showed that these experiences ranged from mostly positive to mostly negative, and that some multiple job holders did not experience many benefits or disadvantages of MJH. These findings are in line with a qualitative study conducted in Australia that found heterogeneity among multiple job holders regarding reasons for and personal impact of MJH (1).

Because Chapter 2 and 3, as well as previous research, suggested that multiple job holders are a heterogeneous group, and because this heterogeneity may influence the association between having multiple jobs and health (2), we investigated whether groups of multiple job holders could be empirically distinguished (Chapter 4). We identified four groups: (i) vulnerable multiple job holders, who often had multiple jobs to make ends meet and often experienced stress due to conflicting work schedules. In addition, they often had high job demands and low job resources; (ii) indifferent multiple job holders, who often had multiple jobs because they could not work more hours in their first job. They did not experience many benefits or disadvantages of having multiple jobs; (iii) satisfied combination multiple job holders, who all had a second job as an employee and often had multiple jobs because they enjoyed the combination of jobs. They mainly experienced benefits of MJH. They often worked long hours, but reported low work demands and high resources; and (iv) satisfied hybrid multiple job holders, who were all self-employed in their second job. They also mainly experienced benefits of MJH. The groups we identified are partly in line with a previous study, in which four profiles of multiple job holders were distinguished conceptually, based on reasons for MJH and working hours, among other factors (2). However, in that study no analyses were performed to confirm that these groups could be distinguished empirically.
Multiple job holding as a transient state
MJH seems to be a transient state for a considerable part of multiple job holders. The multiple job holders interviewed for the study presented in Chapter 3 reported many instances of transitions from and to MJH, especially in the group who had multiple jobs for financial reasons and experienced disadvantages of MJH. In addition, Chapter 7 showed that about half of the multiple job holders in 2015 made a transition to single job holding in 2016 and/or 2017. These findings are in line with other studies on the dynamics of MJH. Two studies, conducted in Russia and Canada, found that after one year, 60% of multiple job holders made a transition to single job holding (12, 13). Another study, conducted in the UK, found that around one third of the multiple job holders made transition to single job holding after one year (14). Finally, a study conducted in the US found that of the multiple job holders who held multiple jobs in six out of 14 years, only 14% had multiple jobs in six consecutive years (11).

Exploring consequences of MJH for health
The results of the studies presented in this thesis do not suggest that MJH has positive or negative health consequences. The results presented in Chapter 6 show that multiple job holders do not experience long-term sickness absence more or less often than single job holders. Cross-sectional analyses presented in Chapter 7 also show no differences between multiple and single job holders regarding sickness absence. In addition, no differences were found regarding self-perceived physical and mental health and depressive symptoms. However, multiple job holders did report having one or more chronic diseases more often than single job holders.

Previous research has found mixed results regarding the relation between MJH and health. Some research has indicated that multiple job holders experience better health than single job holders (3, 4). There are also studies that have found that multiple job holders experience worse health (5, 6). On the other hand, Boa et al (2015), Bao et al (2016), and Alali et al (2017) found no health differences between multiple and single job holders (7-9). The results in this thesis support the studies that found no relation between MJH and health.

A possible explanation for these findings is the heterogeneity among multiple job holders. Some workers may experience positive health consequences of having multiple jobs, while for others the health consequences are negative. To examine this, we explored health differences between the four groups of multiple job holders identified in Chapter 4. In cross-sectional analyses we found that multiple job holders in the vulnerable group experienced worse physical and mental health than multiple job holders in the other three groups. After one year of follow-up, no significant differences between these groups regarding changes in health were found.
That vulnerable multiple job holders reported worse health in cross-sectional analyses may be the result of work characteristics related to MJH, e.g. stress due to having to combine work schedules, or work characteristics that single job holders are also exposed to, e.g. having a temporary contract. To analyze whether MJH influences health independent from work characteristics that single job holders are also exposed to, we studied health differences between multiple and single job holders in a homogeneous group of employees, i.e. employees in precarious employment (Chapter 5). We found no differences regarding self-perceived physical and mental health, chronic health problems and sickness absence between multiple and single job holders in precarious employment. This indicates that in this group of employees, MJH is not associated with health independent of work characteristics associated with precarious employment.

That no health differences between multiple and single job holders were found may also be partly explained by a healthy multiple job holder effect, i.e. exit selection from MJH based on health status. The results presented in Chapter 7 showed that depressive symptoms were related to stable transitions from MJH to single job holding (SJH). In addition, depressive symptoms and worse mental health were related to an unstable MJH-pattern (from MJH to SJH, to MJH). Previous research has found that multiple job holders experience fewer burnout complaints and stress, especially those who do not have multiple jobs out of financial necessity (2, 4). In one of these studies, it was suggested that this supports the aspiration hypotheses: multiple job holders are more ambitious and energetic than other workers, and they have multiple jobs to further their careers (4). However, a healthy multiple job holder effect may also explain why in these studies it was found that multiple job holders experience better health than single job holders. Future research on the relation between MJH and (mental) health should take this healthy multiple job holder effect into account.

Exploring consequences for work participation
Having multiple jobs seems to be positively related to work participation. However, it is also positively related to economic dependence. The study reported in Chapter 8 shows that multiple job holders worked in more months than single job holders during a five-year follow-up period. This is in line with a previous study that found that multiple job holders are unemployed less often than single job holders (10). An explanation for this may be that after losing one job, multiple job holders still have one or more jobs to rely on, while single job holders become unemployed. The study reported in Chapter 8, however, adds to the literature that multiple job holders were economically dependent in more years than single job holders, i.e. they earned less than social assistance benefits for a single person in more years than single job holders. In periods during which multiple job holders rely on one job, they may be more likely to experience spells of inadequate employment, i.e. working part-time (involuntarily) and/or earning a low wage. This may occur because losing a job is often accompanied by a reduction in working hours among multiple job holders (11) (see also Chapter 7).
METHODOLOGICAL CONSIDERATIONS

In this section, issues regarding the internal and external validity of the studies presented in this thesis will be discussed.

Internal validity
The internal validity of the studies presented in this thesis may have been influenced by the way in which MJH was measured, selection bias, the extent to which heterogeneity among multiple job holders was taken into account, and limited statistical power.

In the studies presented in most Chapters, MJH was measured by asking respondents to report their current working situation, which may have caused underestimation of the health consequences of MJH. In Chapter 3 and 7 it was found that for many workers MJH is a transient state. In addition, in Chapter 7 we found that multiple job holders with poor mental health are more likely to return to SJH (healthy multiple job holder effect). When asking respondents about their current MJH status, those multiple job holders who made a transition to SJH because of poor health will not be classified as multiple job holders. As a result, workers who remain in MJH are relatively healthy, despite potential health risks associated with MJH. This may result in an underestimation of the health consequences of MJH.

Additionally, in five out of the six Chapters using quantitative analyses, the Study on Transitions in Employment, Ability and Motivation (STREAM) and the Netherlands Working Conditions Survey (NWCS) were used. Participants in STREAM were selected from participants in an online panel of a Dutch market research company based on their age, working status, gender, and educational level (15). An advantage of selecting participants from an existing online panel is a relatively high response rate. The response rate of the baseline measurement of STREAM in 2010 was 70% (15). In subsequent measurements, the response rate decreased from 82% of the baseline population in the second measurement to 65% of the baseline population in the seventh measurement. Non-response analyses regarding the baseline measurement of STREAM showed small differences between different age groups and educational levels, but they were deemed too small to affect the results (15). A disadvantage of using an existing internet panel may be selection bias: online panels may suffer from undercoverage and self-selection. Undercoverage occurs when certain parts of the population have zero probability of participating in an online panel, for instance because they do not have internet access (16). Self-selection occurs when certain (groups of) individuals are more likely to participate in the online panel (16, 17). Self-selection is more likely to cause selection bias if there is little control over who enters the panel. In the case of the panel used to recruit STREAM participants, about
one third was recruited from a representative study previously conducted by the market research company. The other participants were recruited by snowballing techniques or online advertising (15), over which there was little control. We do not know whether and how selection bias influenced our findings. Individuals who participated in the NWCS were selected by Statistics Netherlands using a random sample. In addition, participants in the NWCS were able to fill-out a hardcopy version of the questionnaire in addition to an online version (18). Therefore, it is less likely that selection bias occurred. A drawback of this method is the relatively low response rate, which may have caused selection bias. In the 2012 measurement of the NWCS used in Chapter 5 and 8, the response rate was 31.5%. Non-response analyses showed that men aged 55 to 64 years were overrepresented, while women aged 15 to 24 years were underrepresented. In addition, individuals with a non-Western ethnic background were underrepresented (18). It is unknown whether and how this may have influenced our findings.

Further, because STREAM is a longitudinal study, selective loss-to-follow-up may have affected the results presented in Chapter 2 and 7. For Chapter 2, the first four measurements of STREAM were used (2010-2013). In this period, multiple job holders (57%) were less likely to participate in all measurements than single job holders (64%). Among multiple job holders, no statistically significant differences were found between individuals lost to follow-up and those who participated in all of the first four measurements of STREAM. In addition, the relation between gender, educational level, age, contract type, working hours, and health on the one hand, and participation in all STREAM measurements on the other, was not different between multiple and single job holders.

In the last three measurements of STREAM (2015-2017), used in Chapter 7, multiple job holders (63%) were also less likely to participate in all measurements than single job holders (68%). Again, among multiple job holders, no statistically significant differences were found between those lost to follow-up and those who participated in all measurements. However, among multiple job holders, respondents lost to follow-up reported worse physical health than those who participated in all measurements. Among single job holders no differences regarding physical health were found between those lost to follow-up and those who participated in all measurements. Therefore, the physical health of multiple job holders may have been overestimated, which may have affected the findings of cross-sectional analyses in Chapter 7, that did not show differences in physical health between multiple and single job holders.

In addition, we were not able to account for heterogeneity among multiple job holders optimally in each study. This may have obscured differences in health and work participation between some groups of multiple job holders and single job holders. In Chapter 4, four groups of multiple job holders were distinguished based on their reasons for and experiences with MJH, job characteristics, ability to change life and work, social factors, and financial situation.
Multiple job holders in the vulnerable group reported worse physical and mental health than multiple job holders in other groups. It is possible that differences regarding long-term sickness absence (Chapter 6) and work participation (Chapter 8) between vulnerable multiple job holders and other groups of multiple job holders and single job holders also exist. However, the data used in subsequent Chapters did not allow for distinguishing similar groups of multiple job holders, because no information on work characteristics in the second job, and reasons for and experiences with MJH was available.

To account for heterogeneity among multiple job holders, two other strategies were applied: (i) distinguishing between combination multiple job holders and hybrid multiple job holders; and (ii) stratifying the study population, e.g. by gender or educational level. The results presented in Chapter 2, 5 and 6 suggest that the first strategy is not useful to fully account for heterogeneity among multiple job holders. In Chapter 5 and 6, for instance, health differences between single job holders and combination multiple job holders were largely similar to health differences between single job holders and hybrid multiple job holders. A potential drawback of the second strategy is that it is possible that the stratified groups are still heterogeneous because stratifying for multiple factors simultaneously is not always possible because it requires a large study population.

Furthermore, in some Chapters, statistical power issues limited the ability to draw strong conclusions. In Chapter 2, the relatively low number of respondents who made a transition from SJH to MJH resulted in a low events-per-variable ratio (EPV), which may have biased the estimation of coefficients. However, internal validation showed that little bias occurred. In Chapter 5, no statistically significant differences between multiple and single job holders were found, despite the size of the coefficients. Insufficient statistical power is one possible explanation for this. In Chapter 7, we were unable to take into account heterogeneity among multiple job holders due to insufficient statistical power. However, despite these issues related to statistical power, the research presented in this thesis has resulted in new insights on MJH, e.g. regarding heterogeneity among multiple job holders, the healthy multiple job holder effect and the relation between MJH and work participation.

**External validity**

The external validity of the studies presented in this thesis may have been influenced by specific characteristics of the included study population. The studies presented in Chapter 2, 3, 4, and 7 were conducted among workers aged 45 years and older. Previous research has shown that MJH is more common among workers younger than 49 years (19-21). In addition, reasons for MJH also differ between different workers in different age groups: younger workers more often hold multiple jobs for financial reasons than older workers (20, 22, 23). Because reasons for having multiple jobs may influence the relation between MJH and health (2), studies that only included older workers may not be generalizable to younger workers.
In addition, in all studies in this thesis, only workers who had at least one job as an employee, and in some only those who were employee in their main job (Chapter 2, 6, and 8), were included. This makes the results less generalizable to workers who are self-employed in all of their jobs or in their main job. Previous research has suggested that some differences exist between multiple job holders who are employee in their first job and multiple job holders who are self-employed in their first job. For instance, among men, self-employed multiple job holders work more hours in their second job than multiple job holders who are employee in their first job (24). In addition, previous research has shown that self-employed individuals differ from employees. For instance, men and older individuals are more likely to become self-employed (25, 26). Further, the relation between educational level and self-employment seems to be u-shaped. Individuals with a low educational level are more likely to be self-employed out of necessity, while those with a high educational level are more likely to be self-employed because they have identified an opportunity in the market (27).

### MAIN FINDINGS IN CONTEXT

In this section, the findings of this thesis will be discussed in the context of increasing labour market flexibility. It will be explored whether MJH can mitigate negative consequences for employees related to insecurity resulting from increasing flexibility. In addition, it will be discussed whether differences between countries regarding this flexibility and welfare state regimes result in differences in the prevalence of MJH as well as consequences of MJH will be explored.

**Can multiple job holding reduce negative consequences of increasingly flexible labour markets?**

In many countries, labour market reforms have been implemented to increase flexibility. Labour market flexibility can occur on four different dimensions: (i) numerical flexibility, i.e. the ability to adapt the number of workers employed by an organisation; (ii) functional flexibility, i.e. the ability to exchange different workers between different functions; (iii) temporal flexibility, i.e. the ability to adapt working hours; and (iv) wage flexibility, i.e. the ability to adapt wages (28). Labour market flexibility may result in a rise of non-standard employment. Standard employment refers to a stable full-time job with collective bargaining procedures and social rights and protection (29). Non-standard employment types aim to incorporate numerical flexibility (for instance using temporary contract or agency work), temporal flexibility (for instance using zero-hour contracts or on call work), and wage flexibility (for instance using production based payment structures). These dimensions of flexibility, and the related non-standard employment types, are associated with risks for employees (see Table 1). These risks,
in turn, can result in adverse outcomes. Numerical flexibility, for instance, increases the risk of unemployment, which in turn is associated with poor health and general well-being (30, 31). In addition, employees with a temporary contract have been shown to get fewer opportunities to increase their employability, e.g. through training (32), which may further increase their risk of unemployment. Further, temporal flexibility creates a risk of underemployment for employees, i.e. working part-time involuntarily. This, in turn, can result in material deprivation and poor health and well-being (33, 34).

Table 1. Different dimensions of flexibility

<table>
<thead>
<tr>
<th>Dimension of flexibility</th>
<th>Examples of associated employment forms</th>
<th>Risks for employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numerical</td>
<td>Temporary contracts, agency work</td>
<td>Unemployment</td>
</tr>
<tr>
<td>Functional</td>
<td>Job/task rotation</td>
<td>High job demands</td>
</tr>
<tr>
<td>Temporal</td>
<td>Zero-hour contracts, on call work</td>
<td>Underemployment</td>
</tr>
<tr>
<td>Wage</td>
<td>Production based payment structures</td>
<td>Low income</td>
</tr>
</tbody>
</table>

It has been suggested that MJH is associated with labour market flexibility (10). Previous studies, as well as the results in Chapter 2, show that employees without a permanent contract and those who work part-time are more likely to have multiple jobs (14, 35, 36). The association between labour market flexibility and MJH may arise because having multiple jobs can be used by employees in flexible employment as a strategy to reduce job and income insecurity, known as hedging (20, 37). When losing a job, the effects may be less far-reaching if an employee has multiple jobs. In the case of a zero-hour contract, adding another job increases the likelihood of being able to work enough hours to make ends meet. In addition, having multiple jobs may be used as a strategy by some employees to develop new skills and knowledge, which may increase their employability (10).

The results in Chapter 8 can be used to explore whether MJH can reduce the risks associated with flexible labour markets for employees. These results show that multiple job holders participated in paid work more months than single job holders during a five-year follow-up period, which indicates that MJH as a strategy against job insecurity may be effective. However, multiple job holders were also found to be economically dependent (earning less than social assistance for a single person) in more years. The loss of a job and income may cause economic dependency among some multiple job holders. This indicates that multiple job holders may face a higher risk of underemployment. However, among employees without a permanent contract, no relation was found between having multiple jobs and economic independence. It is important to note, however, that the number of years being economically dependent among multiple and single job holders with a temporary contract was considerably higher than the number of years being economically dependent among employees with a
permanent contract. Nonetheless, these results suggest that among the group most at risk of job insecurity, MJH can be effective at reducing this insecurity without being accompanied by a higher risk of being economically dependent.

In light of increasing flexibility on many labour markets, and the potentially buffering effect of MJH on job insecurity, the results of this thesis give rise to the question of whether MJH should be facilitated or even stimulated to prevent negative consequences of flexible work arrangements regarding health and work participation. In addition, it is important that, if MJH is facilitated or stimulated, the risk of underemployment as well as other potential drawbacks of MJH, e.g. stress due to having to combine work schedules, are properly addressed.

‘Employee sharing’ is a labour market phenomenon described by Eurofound as a group of employers hiring a worker or multiple workers jointly, where this group of employers is also jointly responsible for these employees. As such, employee sharing can be seen as a form of MJH initiated by employers, which can give contractual security to involuntarily mobile workers (38). For employers, the benefits can include higher commitment among employees as well as sharing the employment risk. For employees, the benefits can include higher employment and income security. In France, 65% of the workers in employment groups have long-term contracts and 78% work full-time (38). Employee sharing may also reduce the risk of underemployment, because when one job ends, other employers may be able to provide the employee with a new job. In addition, depending on the combination of (heterogeneous) jobs, employee sharing could also result in the acquisition of distinct skills and knowledge by employees.

In conclusion, MJH as well as employer-initiated versions of it such as employee sharing, have the potential to increase job and income security for employees. In addition, MJH could contribute to the acquisition of distinct skills and knowledge. More research, however, is necessary to determine which combinations of jobs and/or work characteristics can contribute to attaining these potentially beneficial consequences.

Differences between countries regarding flexibility, welfare state regimes, and multiple job holding
Countries differ regarding the flexibility of their labour markets and welfare states. In this section, it will be explored whether the prevalence of MJH, reasons for MJH, and health consequences of MJH differ between countries, in relation to the flexibility of their labour market and their welfare state regime.

Concerning differences in labour market flexibility, in this section the focus will be on the percentage of employees with a temporary contract, the percentage of employees working part-time, employment protection, and insecurity regarding working hours, measured by
control over working hours and last minute changes to work schedules. Regarding different types of welfare state regimes, we build on the typology constructed by Bambra et al. (39), who distinguished between five types of European welfare state regimes: (i) Anglo-Saxon; (ii) Bismarckian; (iii) Scandinavian; (iv) Southern European; and (v) Eastern European. The US will be included in the Anglo-Saxon welfare state regime, as has been done in other studies (40).

The welfare state regimes are distinguished based on four dimensions (see Table 2) (39-42). The first dimension is social transfers, and refers to the height of social transfers, e.g. unemployment benefits. In Southern European welfare states, for instance, social transfers are fragmented, because of the polarization in this welfare regime: some groups of employees are entitled to high benefits, while other groups receive no or very limited benefits (41). The second dimension is entitlement, and refers to who is entitled to social transfers. The third dimension is redistributive impact, which relates to the extent to which a welfare state regime contributes to redistributing income among different socio-economic groups. In Bismarckian welfare states, for instance, the redistributive impact is relatively small, because benefits are often earnings related. The fourth dimension, role of the market, refers to the extent to which private organisations are involved in the implementation of the welfare state, e.g. the provisions of benefits.

Figure 1 shows that MJH is most prevalent in Scandinavian welfare states, with the highest MJH rates found in Iceland. In Bismarckian welfare states MJH is also relatively prevalent, especially in the Netherlands and Switzerland. MJH was found to be less prevalent in Southern, Anglo-Saxon and Eastern European welfare states.

Figure 2 shows a rather small positive association between the prevalence of temporary contracts and the percentage of the working population holding multiple jobs. Figure 3 shows that in countries with a high prevalence of part-time work, MJH rates are relatively high. This is illustrated by the Netherlands, where about half of the employees works part-time, and around 8% has multiple jobs. Part-time work seems to be particularly common in Bismarckian welfare state regimes, which may explain the relatively high prevalence of MJH in these countries. There seems to be no relation between employment protection legislation and working time changes on the one hand, and prevalence of MJH on the other (see Figure 4 and 5).

In this section it will explored whether differences between countries and welfare state regimes exist regarding the prevalence of different reasons for MJH. It is possible that differences between countries exist regarding reasons that workers have for holding multiple jobs. In much of the previous literature on MJH, three hypotheses regarding reasons for MJH are dominant. Firstly, the hours-constraint/deprivation hypothesis, according to which workers who want to work more hours, for instance to make ends meet, but cannot do so in their primary job, are more likely to have multiple jobs (4, 36, 43). Secondly, the heterogeneous jobs/
aspiration hypothesis, which states that highly ambitious workers are more likely to have multiple jobs, because this supports them in their ambitions, or because it increases their job satisfaction (4, 35). Thirdly, the hedging hypothesis, according to which workers have multiple jobs to increase job security (20, 37).

Table 2. Welfare state regimes

<table>
<thead>
<tr>
<th></th>
<th>Scandinavian (SC)</th>
<th>Bismarckian (BI)</th>
<th>Southern European (SE)</th>
<th>Anglo-Saxon (AS)</th>
<th>Eastern European (EE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social transfers</td>
<td>Generous</td>
<td>Earnings related</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Entitlement</td>
<td>Universal</td>
<td>Limited (insurance-based)</td>
<td>Limited (linked to work position)</td>
<td>Limited</td>
<td>Limited (insurance-based)</td>
</tr>
<tr>
<td>Redistributive impact</td>
<td>Large</td>
<td>Limited</td>
<td>Limited</td>
<td>Limited</td>
<td>Limited</td>
</tr>
<tr>
<td>Role of market</td>
<td>Small</td>
<td>Small</td>
<td>Small</td>
<td>Large</td>
<td>Large</td>
</tr>
<tr>
<td>Example countries</td>
<td>Denmark, Norway, Finland, Germany, the Netherlands, France</td>
<td>Greece, Italy, Spain</td>
<td>The United Kingdom, Ireland</td>
<td>Poland, Czech Republic, Hungary</td>
<td></td>
</tr>
</tbody>
</table>


Figure 1. Prevalence of MJH in European countries categorised by welfare state regime (EE = Eastern European, AS = Anglo-Saxon, SE = Southern European, BI = Bismarckian, SC = Scandinavian) (Source: Labour Force Survey (Eurostat))
Evidence on differences between (groups of) countries regarding prevalence of reasons for MJH is scarce. A study in the US, with a liberal welfare state, found that the hours-constraint hypothesis applied to more multiple job holders than the heterogeneous jobs hypothesis (36). This is in line with a study that indicated that financial reasons for MJH are common in the US (22). On the other hand, hours-constraint seems to be less common in the UK, another country with a liberal welfare state, than in Germany, that has a Bismarckian welfare state (35). Besides, the heterogeneous jobs hypothesis seems to be more applicable to British than German multiple job holders (35). These differences may be explained by higher rigidity on the
German labour market, which may not enable German workers to work their preferred number of hours in the first job (35). Based on these studies, there seems to be no relation between welfare state regime and reason for MJH. However, labour market rigidity may play a role.

Besides differences between countries and welfare state regimes regarding prevalence of and reasons for MJH, differences may also exist regarding health consequences of MJH. Previous research has shown that differences in welfare state regimes can moderate the adverse effects of insecurity resulting from labour market flexibility on health (44-46). Differences in welfare state regimes may also result in differences in health consequences of MJH. In Table 3, an overview of studies on the relation between MJH and health is presented. In each of the welfare state regimes, for most of the health outcomes no differences was found between multiple and single job holders. In addition, in most welfare state regimes a positive relation between MJH and health was found in a similar amount of studies as a negative relation. In conclusion, there seems to be no clear relation between welfare state regimes and health outcomes of MJH.

In addition to country-specific differences, differences in study design, e.g. study population or outcome measure, may also explain the varied results of the studies presented in Table 3. By comparing different countries that have participated in the European Working Conditions Survey, this limitation can be bypassed.

Figure 6 shows differences in the relation between MJH and poor general health between countries, grouped by welfare state regime. There seem to be no large differences between welfare state regimes regarding the relation between MJH and risk of poor general health. It is important to note, however, that only in a few countries statistically significant differences were found between multiple and single job holders regarding risk of poor health.

In Figure 7 differences in depressive symptoms between multiple and single job holders are presented per country. Some differences between welfare state regimes are apparent. In most Bismarckian and Southern European welfare states, for instance, multiple job holders experience more depressive symptoms than single job holders. In Scandinavian and Anglo-Saxon welfare state regimes, no differences between multiple and single job holders regarding depressive symptoms were found. In Eastern European welfare states, mixed results were found: in some countries multiple job holders seemed to experience more depressive symptoms than single job holders, while in other countries they experienced fewer depressive symptoms. Again, it is important to note that only few statistically significant differences between multiple and single job holders were found.
Table 3: Overview of studies on relation between MJH and health

<table>
<thead>
<tr>
<th>Welfare state</th>
<th>Country</th>
<th>Outcome measure</th>
<th>Relation between MJH and health¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS US</td>
<td>Injuries (work and home)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>AS US</td>
<td>Mortality (all cause)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>AS US</td>
<td>Carpal tunnel syndrome and epicondylitis</td>
<td>+/-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Burn-out complaints</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>AS US</td>
<td>Job stress</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>AS US</td>
<td>Depressive symptoms</td>
<td>+/-</td>
<td></td>
</tr>
<tr>
<td>AS US</td>
<td>Mental exhaustion</td>
<td>+/-</td>
<td></td>
</tr>
<tr>
<td>AS Canada</td>
<td>Sickness absence (work-related)</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>BI Belgium</td>
<td>Accidents (work-related)</td>
<td>+/-</td>
<td></td>
</tr>
<tr>
<td>BI Netherlands</td>
<td>Burn-out complaints</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td></td>
<td>General self-perceived health</td>
<td>+/-</td>
<td></td>
</tr>
<tr>
<td>BI Netherlands</td>
<td>Burn-out complaints</td>
<td>+/-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chronic musculoskeletal health problems</td>
<td>+/-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sickness absence</td>
<td>+/-</td>
<td></td>
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<tr>
<td></td>
<td>Self-perceived physical health</td>
<td>+/-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-perceived mental health</td>
<td>+/-</td>
<td></td>
</tr>
<tr>
<td>BI Netherlands</td>
<td>Depressive symptoms</td>
<td>+/-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chronic health problems</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>SC Denmark</td>
<td>Long-term sickness absence (all cause)</td>
<td>+/-</td>
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<tr>
<td></td>
<td>Sickness absence (all cause)</td>
<td>+/-</td>
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<tr>
<td></td>
<td>Sickness absence (injury)</td>
<td>+/-</td>
<td></td>
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<tr>
<td>SE² Brazil</td>
<td>Sickness absence (musculoskeletal)</td>
<td>+/-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sickness absence (mental)</td>
<td>-</td>
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</tbody>
</table>

¹ - = Negative relation, multiple job holders experience worse health
+/- = No statistically significant difference between multiple and single job holders
+ = Positive relation, multiple job holders experience better health

² Brazil is classified as a Southern European welfare state, due to its fragmented entitlement to benefits, and mixed system of state and private implementation of the welfare state (46)

In conclusion, differences between welfare state regimes regarding the prevalence of MJH seem to exist: MJH is most prevalent in Scandinavian and Bismarckian welfare states. No evidence was found for differences regarding the prevalence of reasons for MJH between different welfare state regimes. In addition, there are some indications that differences in the association between MJH and depressive symptoms exists between welfare states, with multiple job holders experiencing more depressive symptoms than single job holders in Bismarckian and Southern European welfare states. However, because the analyses were conducted on cross-sectional data, more research with a longitudinal design on this topic is necessary.
Figure 6. Ratio of multiple job holders in poor health to single job holders in poor health (OR) (EE = Eastern European; AS = Anglo-Saxon; SE = Southern European; BI = Bismarckian; SC = Scandinavian) (Bold bars represent statistically significant differences. Source: European Working Conditions Survey)

Figure 7. Difference between multiple and single job holders regarding depressive symptoms (range: 0-6) (EE = Eastern European; AS = Anglo-Saxon; SE = Southern European; BI = Bismarckian; SC = Scandinavian) (Value > 0 indicates multi-jobbers experience more depressive symptoms, bold bars represent statistically significant differences) (Source: European Working Conditions Survey)
RECOMMENDATIONS FOR RESEARCH

The findings in this thesis do not suggest that differences regarding health exist between multiple and single job holders. However, due to methodological issues regarding heterogeneity among multiple job holders and the healthy multiple job holder effect, we are not able to rule out that such health differences do exist. In the paragraphs below, recommendations for future research on these issues are presented in order to increase our understanding of whether and how MJH influences health. Further, recommendations regarding future research on the relation between MJH and work participation are presented.

Take heterogeneity among multiple job holders into account

To account for heterogeneity, it is important to distinguish distinct groups of multiple job holders. There are several ways to do this. Firstly, by using a single variable. Previous research has, for instance, made a distinction based on gender (20, 48), or reason for MJH (2). In Chapter 2, 5, and 7, multiple job holders were grouped according to employment status in their second job: employee versus self-employed. Previous research found few differences between men and women regarding determinants of MJH (48). In addition, the results presented in this thesis show few differences between multiple job holders with a second job as an employee and those who were self-employed in their second job. That suggests that these variables are not very useful for taking into account heterogeneity among multiple job holders. Secondly, a combination of multiple variables can be combined to distinguish groups of multiple job holders, for instance using latent class analyses (LCA). This approach was used in Chapter 4. The advantage of using multiple variables is that more homogeneous groups can be created.

When choosing a (combination of) variable(s) to group multiple job holders, it is important to take into account whether this variable can also be measured among single job holders, e.g. gender, or only among multiple job holders, e.g. reason for MJH. Choosing a variable that can also be measured among single job holders allows for comparing multiple job holders to similar groups of single job holders, whereas choosing a variable that can only be measured among multiple job holders only allows for a comparison with the general population of single job holders.

Reduce a potential healthy multiple job holder effect

Further, it is recommended that future research on health differences between multiple and single job holders takes the healthy multiple job holder effect into account. Previous research has suggested several ways to reduce the healthy worker effect, which can also be applied to reduce the healthy multiple job holder effect. Firstly, it is advised to apply ‘exposure lagging,’ i.e. using past exposure to a hazardous work environment instead of current exposure. The rationale is that current exposure only applies to workers in good health, who have been able
to continue working despite past exposure (49). In a similar vein, past exposure to MJH could
be used in studies on the relation between MJH and health. However, it is unknown how long
the exposure to MJH should be lagged, i.e. how long the period between the measurement of
the exposure and the outcome should be.

Secondly, including both current and past exposure to measure MJH may reduce the healthy
worker effect (50). Workers who currently hold multiple jobs as well as those who have recently
made a transition from MJH to SJH could be classified as multiple job holders. That way,
workers who held multiple jobs, experienced poor health, and made a transition to single job
holding, will be classified as multiple job holders.

Thirdly, choosing an appropriate comparison group can be a strategy to reduce the healthy
multiple job holder effect (51). Instead of comparing multiple job holders with single job holders
in general, a comparison with specific groups of single job holders, for instance, using matched
comparison may reduce the healthy multiple job holder effect (52). In addition, choosing an
internal comparison group may reduce the healthy multiple job holder effect. In studies on
exposure to specific MJH characteristics, e.g. conflicting work schedules, comparing multiple
job holders who are exposed to this characteristic with multiple job holders who are not may
reduce the healthy multiple job holder effect.

**Study how the transient nature of MJH influences health**

In addition, the transient nature of MJH and how this influences workers’ health should be
studied further. The results in Chapter 3 and 7 indicate that, for many, MJH is a transient
state. It is unknown whether such transitions are voluntary or involuntary. It is possible that
they occur because temporary contracts end and are not renewed, although the workers in
question would have preferred to stay in the job. On the other hand, for some MJH may be
temporary solution to a (financial) issue, which is ended voluntarily if the issue disappears.
Besides, it is unknown whether these transitions themselves influence health. Previous
research has shown that young multiple job holders as well as those with a lower level of
education and those who work and earn less are more likely to experience shorter spells of
MJH (13). Future research on the relation between MJH transitions and health should take
into account heterogeneity among multiple job holders regarding the duration of MJH spells
and frequency of transitions.

**Study the influence of MJH on work participation**

In this thesis, it was found that multiple job holders work during more months than single
job holders during a five-year follow-up period. However, it is unknown whether differences
between multiple and single job holders existed during this follow-up period regarding work
characteristics, e.g. job demands and resources and contract type. Further research should
study potential differences regarding such work characteristics, since they are also related to general well-being and health (53, 54). In addition, previous research has shown that MJH is related to higher job mobility (10), but it is unknown whether this mobility is upward or downward. Future research is recommended to look into this further.

Additionally, little is known about which combination of work characteristics influence participation in paid work. Previous research has suggested that combining different jobs may diversify skills and knowledge (10), which could contribute to sustainable employability, and subsequently work participation as well as economic independence. However, the study presented in Chapter 3 indicated that positive spill-over effects can occur between similar jobs as well, and that this could also improve job satisfaction and human capital. It is important to increase our knowledge of how different combination of jobs influence work participation and economic independence, for instance to inform initiatives regarding employee sharing.

**RECOMMENDATIONS FOR PRACTICE**

The results presented in this thesis suggest that multiple job holders in general do not experience worse health than single job holders, that their work participation is higher, and that they are economically dependent more often than single job holders. Because multiple job holders are a heterogeneous group of workers, specific groups of multiple job holders may experience worse consequences. Policy makers as well as employers can potentially support groups of multiple job holders who experience adverse consequences of MJH.

**Employers**

The results presented in this thesis indicate that it is important for employers to know which employees have multiple jobs and how they can accommodate these employees to prevent negative experiences with and consequences of MJH. In doing so, it is important that preferences of individual employees are taken into account. In Chapter 3 and 4, a part of the multiple job holders reported experiencing stress due to conflicting work schedules. Employers could respond to this by allowing more flexible working times as well as more flexibility regarding scheduling shifts, if possible. This would make combining multiple jobs with activities outside work less stressful. However, for some multiple job holders more flexible shifts may not be preferable, as it can make planning activities outside work more difficult, or because it can interfere with family routines. This underlines the importance of tailored approaches to accommodate multiple job holders.
In addition, employers that offer part-time jobs may cooperate to combine several part-time contracts into one full-time contract. In this approach, referred to as ‘employee sharing,’ different part-time jobs are matched regarding tasks, work schedules, and location. Potentially, such arrangements can provide workers with a sufficient income, while reducing the demands specific to having multiple jobs. Moreover, if tasks are matched optimally, these jobs may contribute to the development of skills and knowledge of employees. Research into such employee sharing could shed light on how it is experienced by multiple job holders, what the long-term effects on health, skills acquisition and work participation are, as well as on which combination of jobs result in the most positive consequences.

Policy makers
The results of the studies presented in this thesis suggest that a group of vulnerable multiple job holders experiences worse health than other multiple job holders. However, it is possible that worse health in this group is mainly the result of being exposed to adverse work characteristics single job holders can also be exposed to. Indeed, comparing multiple and single job holders who were exposed to adverse employment conditions, i.e. precarious employment, showed no health differences. Therefore, it is recommended that policy makers focus on adverse work and employment conditions, that have been shown to be related to worse health among employees, regardless of the number of jobs they hold, e.g. having a temporary contract (46). It is important to note that supporting multiple job holders in finding higher quality jobs to improve their health does not make these lower quality jobs disappear. Other workers will have to perform these jobs instead. Improving the quality of such jobs, regarding working conditions as well as employment conditions, may be a more effective way of improving health of workers.

Even though no differences in health were found between multiple and single job holders in precarious employment, special attention for vulnerable multiple job holders may be warranted. The results in Chapter 3 show that most workers who mainly experience MJH negatively report that they feel unable to change their situation, e.g. find a new (full-time) job. Supporting these multiple job holders in finding a new job may improve their experience with MJH, and/or job satisfaction in general. In addition, it may contribute to their self-perceived ability to find new jobs. This support can be given in the form of facilitation of life-long learning, which may improve the employability of these multiple job holders (55). Alternatively, more active labour market policies, e.g. job search assistance programs, may help these workers in finding a new job (56).

Further, we found that although having multiple jobs is associated with participation in paid work in more months during five years of follow-up, it was also associated with longer periods of being economically dependent. Multiple job holders may need support in securing continuous employment with sufficient income to prevent economic independency, either in
the form of a full-time job, or multiple part-time jobs. Again, coordinated forms of MJH may be of use here, for instance if the work schedule of the current jobs is difficult to combine with the work schedules of new jobs. Alternatively, policies regarding development of skills and knowledge could support multiple job holders in finding and keeping employment with sufficient income to be economically independent.

**CONCLUSIONS**

In the Netherlands, a relatively large and growing proportion of the working population has multiple jobs. The aim of this thesis was to explore determinants of, experiences with and consequences of MJH. The results show that multiple job holders are a heterogeneous group of workers, for instance regarding experiences with MJH. We also found that many multiple job holders move into and out of MJH often. In addition, we found no health differences between multiple and single job holders. However, we did identify one group of multiple job holders that experienced worse health than other groups of multiple job holders. It is unclear to what extent these differences in health are the result of exposure to work characteristics related to MJH, e.g. stress due to having to combine work schedules, or exposure to work characteristics single job holders are also exposed to, e.g. having a temporary contract. In addition, a healthy multiple job holder effect may have played a role: multiple job holders who experience worse mental health are more likely to make a transition to single job holding. Therefore, health differences between multiple and single job holders may be underestimated. Further, we found that multiple job holders experienced higher work participation than single job holders, but also that they are economically dependent more often.

We recommend future research on the relation between MJH and health to take heterogeneity among multiple job holders, as well as a potential healthy multiple job holder effect, into account. Employee sharing by employers can potentially reduce negative consequences of MJH, e.g. stress due to combining work schedules, while retaining the positive consequences for work participation. In addition, policy makers could support vulnerable multiple job holders in finding employment that better matches their preferences with job search assistance programs or by facilitating life-long-learning, for instance. Such policies could also support multiple job holders in finding employment with sufficient income to prevent economic independency.
REFERENCES


