

**Modern Dutch Women:**  
**Are they unhappy in male-dominated economic sectors?**

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**Abstract**

Compared to twenty years ago more women than men between the age of 25 and 34 years old complete tertiary education. However, women remain underrepresented in many high-paying, managerial and male-dominated occupations. This is a cause for concern as it remains a major candidate for the existence of the residual gender wage gap. An overwhelming amount of women keep obtaining their degrees in “typical” female studies such as health and welfare. The question arises whether women and man psychologically have different tastes for the content of the work they do. There is some evidence that women are more prone to stress due to numerous factors when they work in male-dominated sectors or industries. This thesis researches the relation between the extent to which a sector is male-dominated and job satisfaction in this sector. Additionally, the relation between the share of males in a sector and the chances a worker leaves that sector after two years is investigated. The results show a significant negative relation between the share of males in a sector and job satisfaction in that sector. They also show a significant negative relation between the share of males in a sector and the chances a woman stays in that sector after two years, and a positive significant relation for men.

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## 1. Introduction

**“Did you know that in OECD countries less than three out of ten senior managers are women?” –OECD, Closing the Gender Gap: Act Now.**

With an increased employment rate, a smaller gender pay gap and decreased occupational segregation, women have progressed dramatically in the labor market since the 1960s.

However, differences between the jobs done by women and men remain while average earnings of women still lag behind those of men. Female convergence in many high-paying, managerial and male dominated occupations has slowed and has maybe even stopped since the turn of the millennium. The latter is a cause for concern as the underrepresentation of women in these types of jobs remains a big candidate for the residual gender wage gap (Lordan & Pischke, 2016).

As traditional constraints that are used to explain occupational segregation and the residual wage gap such as gender discrimination, lack of female labor supply, lack of investment in human capital and barriers that make it difficult for women to combine work and private life have weakened over time, a search for alternative explanations began. Why do many women continue to work in certain sectors? The theory is that females psychologically have other tastes than men for the content of the work they do (Lordan & Pischke, 2016).

To test this theory Lordan & Pischke did a study that focused on the relation between job satisfaction and particular job attributes. Men tend to be attracted to other attributes in their work than women are; think of working a lot with people (emotional attributes) and physical attributes such as working with your hands. Thus, some jobs/sectors tend to become dominated by males because of these attributes that attract mostly men. They found that females are less satisfied in male dominated jobs while men either like it or are indifferent to it. Additionally, they also found that women are more likely to leave their jobs in certain sectors when the proportion of men in that sector increases, while men are more likely to stay. This study was conducted with British, Russian and American data (Lordan & Pischke, 2016). In this thesis, the research is conducted with Dutch data.

The Netherlands reveals a gender pay gap of 16.1%. The composition of this percentage is as follows; about 14% belongs to full-timers, while 2% belongs to part-timers (Eurostat Statistics Explained, 2017). Additionally, horizontal segregation, which is the under- or overrepresentation

of women in certain occupations or sectors, is also more pronounced in The Netherlands compared to the other countries in the EU-27 (The European Commission, 2013). However, compared to twenty years ago more women than men between the age of 25 and 34 years old complete tertiary education. It seems that females keep choosing to obtain their degrees in “typical” female subjects such as health and welfare studies. As much as  $\frac{3}{4}$  of Dutch tertiary degrees in health and welfare studies went to women in 2009, while only 10% of computer science tertiary qualifications did (OECD, 2011).

It’s also interesting to look at The Netherlands, as we are “the only part-time economy in the whole world”. Many women (mostly mothers) work part-time (Visser, 2002). The Netherlands has the highest part-time rate in Europe which also lies far above the EU-average. In 2012 76.9% of Dutch women looked for part-time work while the EU-average was 32.1% (The European Commission, 2013). Intuitively, the prevalence of part-time work has a large effect on earnings and career profiles and more than half of the pay gap in The Netherlands is due to gender differences in working hours (OECD, 2011).

Gardiner and Tiggemann provided empirical support for the proposition that women in male-dominated industries might face different pressures than those faced by men in the same jobs or faced by women and men in more female-dominated jobs. Women in male-dominated industries reported similar leadership styles as men, however they also report greater pressure from discrimination. Factors such as the organization and tokenism, which is the symbolic inclusion of minority groups such as women into a company, were reported by a lot of women as causing pressure. Despite women not showing overall differences in mental health compared to men, they do report worse mental health than men *when* adapting certain leadership styles. Women in male-dominated industries behaved more like the men in these industries, compared to how they would behave in a more female-dominated industry. Thus a relationship can be found between being in a male-dominated industry and leadership style, and it is this leadership style and the perceived discrimination that in turn causes extra stress for women (Gardiner & Tiggemann, 1999).

For this research data from the LISS panel will be used, specifically data from the 9<sup>th</sup> and 7<sup>th</sup> wave of the “Work and Schooling” questionnaire. The 9<sup>th</sup> wave is used for the hypotheses pertaining to job satisfaction as this is the most recent data available, namely from 2016. Additionally, the 7<sup>th</sup> wave is used to test the hypothesis that a higher share of men in a sector

increases the chances that a women leaves that sector. The two datasets are thus merged. This questionnaire includes questions on education, employment, retirement; in other words a broad range of social core information on the panel members that participated in this questionnaire. Selected members from 6640 households whom are all at least sixteen years old are part of this questionnaire. The response rate is 87.8%, 84.3% of which were completed questionnaires.

This research provides some evidence that there is a significant negative relation between the share of males in a sector and the overall job satisfaction and the satisfaction with work itself of workers in that sector. This relationship is stronger for satisfaction with work itself than it is for overall satisfaction. Additionally, this relationship is stronger for women than it is for men. The proportion of college graduates in a sector also plays a large role in the job satisfaction matter. The satisfaction and share of males relationship is only significant for men when looking at a specific sub-sample of full-time working individuals. The opposite can be found for part-time working individuals as the relationship is only significant for women in that case. Besides that, the relationship between the share of males in a sector and the chances that an individual stays in that sector is also highly significant with a positive relation for men and a negative relation for women, meaning that an increase in the share of males decreases the chances that a woman stays in a sector while it increases the chances a man stays.

The next section will discuss some related literature on job satisfaction, male dominated sectors, part-time work and more. The hypotheses can also be found in this section. The next section, Chapter 3, will provide the empirical strategy and explain the data used for this research. Section 4 then provides the results from the analysis while section 5 will conclude this research by answering the research question and providing some additional final remarks.

## **2. Related Literature**

In this chapter some existing literature on the research topic will be reviewed. This section starts off with some literature on job satisfaction, followed by some literature on industry and sectors in The Netherlands and some literature on working part- (full-) time. Finally, the hypotheses are stated.

### **2.1. Job Satisfaction**

The easiest way to explain job (dis)satisfaction is that it is the discrepancy between what an individual wants (values) in a job and what one receives from this job. This determines his or her job satisfaction. In psychological terms, reference levels are explained by Locke as a “function of the perceived relationship between what one wants from one’s job and what one perceives it as offering or entailing” (Locke, 1969).

By means of a fourfold matrix, a framework originally developed by Zapf (1984) for welfare positions, job satisfaction positions can be calculated. On the one hand you have conditions of the workplace which can be either good or bad; these represent *objective* employment conditions. These conditions strongly depend on aspects such as taxation, the social security system or the child day care infrastructure. As these all have an important impact on labor supply prospects for both men and women, they can strongly influence labor supply opportunities through incentives and also the quantity of labor supplied. Thus, these arise regardless of what type of job an individual has. On the other hand of the matrix you have the *subjective* job satisfaction, as individuals subjectively assess their objective employment conditions for example by means of comparison groups (Kaiser, 2007).

Job satisfaction is an important aspect of determining subjective well-being; and is a key factor in determining labor market outcomes. Firms are particularly interested in job satisfaction, as greater employee well-being tends to be affiliated with better job performance, lower absenteeism, and reduced job turnover (Frey & Stutzer, 2002). Hamermesh stated that various aspects of job satisfaction show the potential for being an important variable for analyzing “inequality in the overall returns to work” (Hamermesh, 2001). In 2005 Kaiser did some research into gender-job satisfaction across European Union member states. The Netherlands with its extensive part-time regime has to (partially) be assessed as an “advanced” modernization country. This means that the country has an equal opportunity regime. The part-time regime does have

specific wage and career penalties for female employees. Denmark and Finland are the only other two countries who can be assessed as “advanced” as female labor supply opportunities also extend to full-time jobs to a relatively high scope. In many other countries however females displayed a significantly higher level of job satisfaction, which suggests a gender-job satisfaction paradox. This means that the higher job satisfaction of women does not necessarily mean that their jobs are better than those of men, but rather that there is a satisfaction gap playing a role because a disadvantage in the labor market, for example in terms of lower pay or promotion aspects, forces women to reduce their job expectations (Kaiser, 2007).

Moore found different levels of job satisfaction which were partially structured by the characteristics of the labor market sectors where men and women work. Women who work in predominantly male sectors or sectors that have a balanced amount of males and females have high job satisfaction that is predicted entirely by their perception of fewer income problems, use of job skills and flexibility in working hours. Women who work in predominantly female sectors have similar job satisfaction levels, *but* these are related to a broader cluster of factors such as fewer perceived income problems, challenge factors, skills and socioemotional rewards of work. Thus, it shows that labor market sectors and the rewards available within these sectors are important determinants for the job satisfaction of both male and female employees (Moore, 1985).

## **2.2. Industry/Sectors**

Horizontal segregation is the under- or overrepresentation of women in certain occupations or sectors. When comparing the most popular economic sectors of men and women in the Netherlands, it becomes evident that horizontal segregation is pronounced. As much as 62.8% of Dutch women work in the female top five most popular sectors while only 49.6% of men do so in the male top five. This shows a higher density of women’s choices compared to Dutch men (The European Commission, 2013). Figure 1 below provides an overview of the fifteen sectors that are identified for the purpose of this research.

Two out of the five most popular sectors overlap each other for males and females, which are “Wholesale & Retail” and “Public administration”. These two sectors reveal the lowest gender gap and include 19.4% of women and 20% of men from the Dutch workforce. Meaning that it was less pronounced in the Netherlands than in the other EU-27 countries. However, the sector

“Manufacturing” reveals lower participation with 5% of Dutch women and 13.8% of Dutch men employed, while the EU averages are respectively 10.3% and 20.5% (The European Commission, 2013).



Figure 1

### **2.3. Part-Time Work**

The Netherlands is known as the “only part-time economy in the world”. What is called the “one-and-a-half” combination is the most popular; for households with and without children and twice as frequent than any other country in Europe. The one-and-a-half combination means that the household has one individual working full-time while the other works a part-time job (Visser, 2002). Eurostat data from 2002 on the reasons for working part-time shows that the discrepancy between preferred working hours and actual hours for women is fairly small, meaning that the ones that work part-time because they couldn’t find a full-time job (“undesired part-time work”) is as low as 3.5%. In other words, most women work part-time simply because they want to. These percentages differ substantially from other selected EU member states (Plantenga, 2002).

Extensive part-time employment limits the amount of women that end up in management positions; only 28% of workers with a supervisory roll are female while less than 5% of board-members of listed companies are (OECD,2011). In The Netherlands more than half of the pay gap is related to gender differences in working hours. Available data shows that as of 2016 the (unadjusted) gender pay gap was about 16.1% in the Netherlands. However, more young women



than men (between 25 and 34 years old) complete tertiary education; respectively 38% and 44% compared to twenty years ago. In typical female subjects such as “health and welfare” almost  $\frac{3}{4}$  of Dutch tertiary degrees went to women, while only 10% of computer science tertiary qualifications did (OECD, 2011).

Some other research on the relation between job satisfaction and the share of males in a sector has been done. A few writers have suggested that women tend to alter their leadership style when an industry is numerically dominated by men. These changes in turn negatively affect their mental health. This research, based on anecdotal evidence and limited research findings, tested this empirically by investigating the impact of working in either a female- or male-dominated industry on leadership style, mental health and stress levels of 60 male and 60 female managers. Women reported more pressure from their jobs than men and women in male-dominated industries reported the highest level of pressure stemming from discrimination (Gardiner & Tiggemann, 1999).

#### **2.4. Hypotheses**

This thesis presents the idea that women might not like the nature that is particular to male dominated jobs as they have different tastes for the content of the work they do. In 2008 Pinker stated that women tend to prefer jobs in which a lot of empathy and working with people is required, while men tend to prefer jobs where they can “make things”. This is why women rarely become aerospace engineers and more often teachers (Pinker, 2008). As women in The Netherlands seem to have a strong preference for certain subjects in school which ultimately influences them to start working in specific sectors, it might be the case that working in certain sectors has a negative effect on job satisfaction for women which leads to the first hypothesis:

***H1: The share of males in a sector has a negative relation with female overall job satisfaction.***

As overall job satisfaction takes into account numerous other components such as wage discrimination, promotion prospects and job security (Clark, 1997) it would be interesting to include a measure about how satisfied one is with the work itself that one does. This leads to Hypothesis 1B:

***H1B: The share of males in a sector has a negative relation with female satisfaction with work itself.***

In addition to this, Lordan and Pischke complemented the job satisfaction regressions with regressions for staying in a specific occupation between two periods and called them “stayer regressions”. If women are less satisfied in male-dominated jobs than it could be that this prompts them to look for other work soon, this leads to hypothesis 2:

***H2: The share of males in a sector has a negative relation with the chance that a female stays in a sector.***

In terms of part-time work, The Dutch are the absolute leaders (CBS, 2016). The extensive amount of part-time work has a big effect on earnings and career profiles as more than half of the pay gap in the Netherlands is related to gender differences in working hours (OECD, 2011). As many women choose to work part-time (“undesired” part-time work because one couldn’t find a full-time job is as low as 3.5%) (Plantenga, 2002), it can be argued that women simply choose to work in sectors where working part-time is more feasible (OECD, 2011). If for any reason a woman ends up in a (male-dominated) full-time job, it probably happened because she desired it.

This thesis argues that these women are less susceptible to (negative) influences that may arise from working in a (male dominated) full-time job and are thus less prone to job dissatisfaction due to the numerical domination of men in a sector. This leads to the following hypotheses:

***H3: The share of males in a sector has no relation with the overall job satisfaction for full-time working females.***

***H3B: The share of males in a sector has no relation with satisfaction with work itself for full-time working females.***

***H4: The share of males in a sector has no relation with the chance that a full-time working female stays in a sector.***

For completeness the regressions will also be run for part-time working individuals and men.

### **3. Data & Empirical Strategy**

For the purpose of this research the “Work and Schooling” questionnaire will be used. This is a longitudinal study from the LISS panel delivering a broad range of social core information about labor market participation, job characteristics, pensions, schooling and courses on all the panel members. The survey conducted yearly by CentERdata is in the field since 2008. The most recent data is from 2016, which is the 9<sup>th</sup> wave and is conducted online as an internet questionnaire. This questionnaire is administered in Dutch and ran from April 4<sup>th</sup> 2016 to May 31<sup>st</sup> 2016. It consists of 6640 selected number of household members; all of whom are at least sixteen years old. A reminder is sent twice to non-respondents. This leads to a response rate of 87.8%, of which 84.3% were completed surveys. Additionally, the 7<sup>th</sup> wave of the survey (April 7<sup>th</sup> to May 27<sup>th</sup> 2014) will also be used to compute the variable “*stayers*” and other corresponding variables for the mobility regressions by merging this data with the wave 9 data.

The questionnaire has about 164 questions and starts off with some questions on education and educational programs/courses. After that some questions on employment; such as hours worked and the first job of the respondents follow. The questionnaire also contains numerous questions on topics such as retirement, disability, parental leave etc. What is most important to this research however, is that it contains various questions on job satisfaction. As not every topic in this questionnaire is useful to this research, only questions that are helpful to answer the research question will be used.

To measure overall job satisfaction the question “*q:cw133 – “How satisfied are you with your current work?”*” will be used. Respondents could answer this question on a 10-point Likert scale with (0) being not at all satisfied and (10) being fully satisfied. The question “*q:cw130 – “How satisfied are you with the type of work that you do?”*” is used to measure satisfaction with work itself, because it speaks to how pleased an individual is with the kind of work he or she is doing. This is dependent on for example in what sector the individual works. Overall job satisfaction allows for other components such as promotion prospects, wage discrimination and job security to determine the level of job satisfaction (Clark, 1997).

The key variable used in this research is the share of males in a sector, which will be computed by means of (“*q:cw402 – “In what sector do you work?”*”) which contains information on fifteen

sectors. The sector classification this data sample works with is the SBI 1<sup>st</sup> digit classification. For each sector the total amount of workers is determined. Afterwards the total number of men in a sector is divided by the total amount of workers in that sector to find the share of males per sector; a variable called “*shareofmales*”.

The control variables used in this research are the net monthly wage, weekly hours worked, the proportion of college degree holders in each sector and age. The net monthly wage is used instead of the gross monthly wage, as net monthly wages are what remains after taxes and social insurance premiums have been deducted. This can differ a lot by type of job, type of company and type of sector. Consequently, using the net income is more logical for this research. Pischke et al. use the proportion of college graduates in a sector to capture the “*Degree holders*” variable (Lordan & Pischke, 2016). After four years, college graduates obtain their bachelor’s degree (Study in the USA, 2016). This can be considered equal to what is called HBO (hogeschool) in The Netherlands. Thus, anyone with a HBO diploma or higher (WO-University, Other) are considered degree holders for the purpose of this research (*q:cw005 – “What is the highest level of education you have completed with diploma or certificate?”*). Again, for each sector the total amount of respondents that have completed some type of education is determined. Respondents with at least a HBO diploma are considered degree holders. The “*sharedegrees*” variable is then computed, dividing the degree holders per sector by the total amount of respondents per sector.

According to CBS the labor force consists of all individuals between 15 and 75 years old who are either working 12 hours or more a week, or are willing to do so (CBS, 2016). Thus, for the “*age*” variable all individuals who are between 16 years old (the respondents for the questionnaire are all at least 16 years old) and 75 years old will be considered.

The “*hoursworked*” variable that will be used for the purpose of this research (“*q:cw126 – “How many hours per week are you employed, according to your employment contract?”*”) are those of the respondents between 16 and 75 years old, whom work at least 12 hours a week or are willing to do so. To capture the effect the share of males has on job satisfaction for individuals working full-time, a “*hoursworked*” of 36 and higher is considered full-time for the purpose of this research. Consequently, a “*hoursworked*” of <36 is considered part-time.

### 3.1. Descriptive Statistics

#### 3.1.1. Wave 9

Appendix A shows the descriptive statistics of the wave 9 sample used for this research. For the overall job satisfaction almost all of the respondents (90.8%) reported that they are to some extent satisfied with their work, as they indicate a value higher than 5 (which is the indifference point) on the 10-point Likert scale. Most respondents (63.2%) indicate a 7 or 8 on the 10-point Likert scale of satisfaction, which is relatively high. Less than 5% of the respondents indicated that they are *not* satisfied to some extent. For satisfaction with work itself 90.1% of the respondents reported a satisfaction of 6 or higher. 59.2% of respondents reported a 7- or 8-point satisfaction. Among women, 62.3% report a 7- or 8-point satisfaction on the overall satisfaction scale, while for men this is slightly higher (64%). For satisfaction with work itself, 58.8% of women report a 7- or 8-point satisfaction on the scale while for men this is 59.5%.

Figure 2 shows the distribution for the overall satisfaction and the satisfaction with work itself:

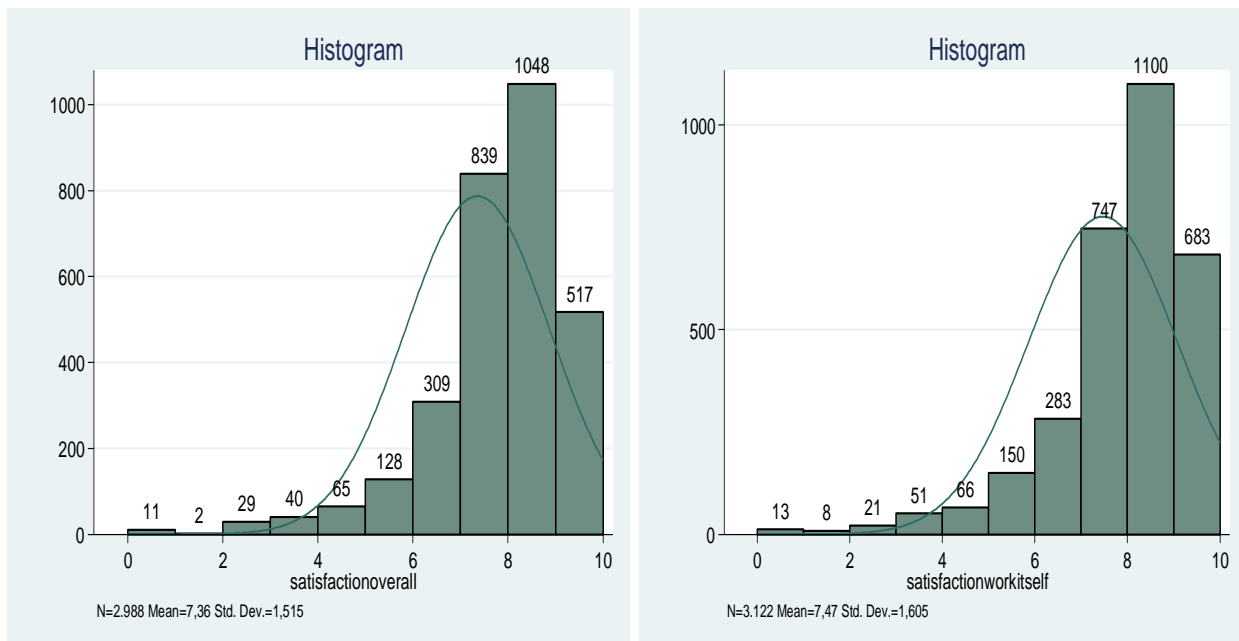


Figure 2

Most women are active in the “healthcare and welfare” sector (31.8%); “other” follows with 16.9% of women active and “education” with 11.4%, totaling to about 60.1 % of women actively employed in these three sectors. The distribution is quite different for men. Most men are active

in “industrial production”, “other” and “government services, public administration and mandatory social insurances” totaling to about 40.6% of men active in these three sectors. Thus, it also becomes evident from these numbers that the density of choices is much higher for women. The highest share of males can be found in “construction” (85%), “utilities production, distribution and/or trade (80.6%)”, “transport, storage and communication” (79.7%), “industrial production” (79.3%), “agriculture, forestry, fishery, hunting” (75%), “business services” (61.9%) and “government services, public administration and mandatory social insurances” (61.2%).

Figure 3 shows the distribution of the share of males and the share of females per sector:

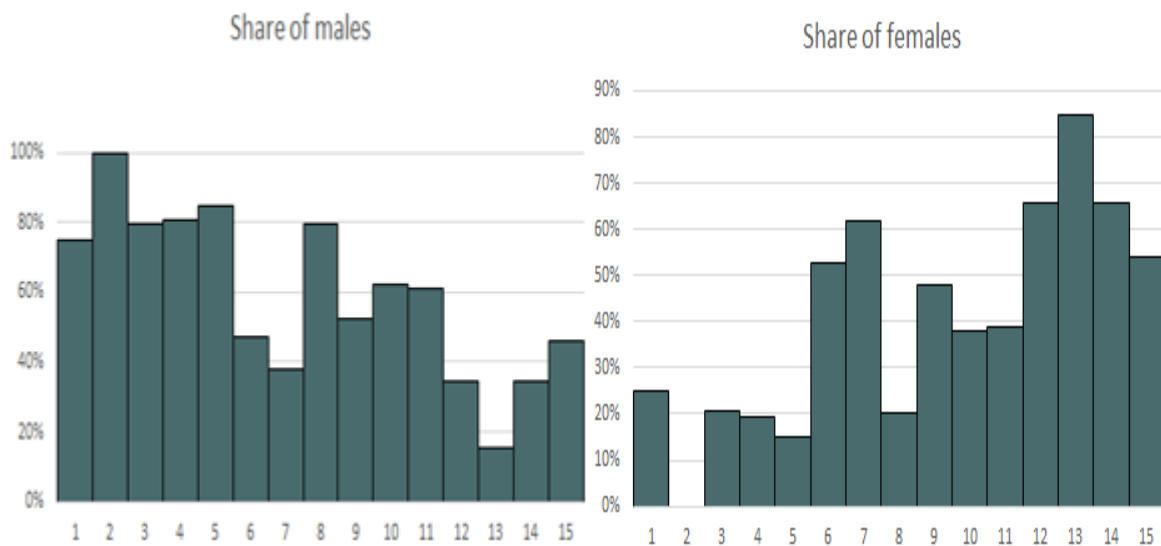


Figure 3

The average net monthly income for women is about 1.230€ with a standard deviation of 3.802€.

For men these amounts are respectively 1.943€ and 2.722€. The maximum amount of hours worked in a week is 137, which is stated by only one (female) respondent. The rest of the female respondents worked for 44 hours or less a week. The average amount of hours women worked a week was 28.4 with a standard deviation of 8.1 hours. For men the amounts are respectively 36.7 and 5.6 hours worked a week.

Most female respondents stopped schooling after obtaining a “MBO Professional training program (intermediate professional education) (BOL)” diploma or certificate. 35.1% of female respondents have a diploma or certificate for HBO or higher, while this is 40.7% for male

respondents. Most male respondents stopped schooling after obtaining a “MBO-plus to access HBO, short HBO education (less than two years) (higher professional education).

Females make up 53.6% of the sample with an average age of 48.8 years old. The average age for males is 51.1 years old and they make up 46.4% of the sample. Most households (61%) consist of 2 members with a standard deviation of 1.

For the purpose of this research the relation the share of males in a sector has with the chances a female stays that sector will also be considered. To research this the “*mobility regressions*” with variable “*stayers*” are introduced. The “*stayer*” variable is equal to 0 when an individual is active in another sector at time period  $t+2$  (wave 9) compared to time period  $t$  (wave 7), meaning this individual has left or changed sector after 2 years. The variable is equal to 1 when an individual remained in the same sector at time period  $t+2$ . All remaining variables such as for example “*shareofmales2014*” will be computed from the wave 7 data. Out of all female respondents, 11.8% worked in a different sector in wave 9 compared to wave 7. For men this is 10.9%.

### **3.1.2. Wave 7**

Overall the descriptive statistics of wave 7 are quite similar to the wave 9 descriptive statistics, with only small deviations. For example, in 2014 most women were active in the same three sectors as in wave 9, namely “healthcare and welfare”, “other” and “education”. Only the proportion is slightly higher, namely 61.2%. The same applies to men as 41.9% of men are active in the three sectors “industrial production”, “other” and “government services, public administration and mandatory social insurances”. About 31.2% of female respondents had a diploma or certificate for HBO or higher education. For men this is 36.9%. Thus, these percentages are quite a bit lower than in 2016.

Appendix B shows the correlation matrix for the correlations between all variables. All control variables are correlated with both overall job satisfaction and satisfaction with work itself, which is why it is important to include them in the regressions. The share of males is negatively correlated with both overall job satisfaction and satisfaction with work itself. This is also the case for the stayer variable, as it is negatively correlated with the share of males. Additionally, the stayer variable is positively correlated with satisfaction with work itself. The control variables

show only small correlations between one another meaning that presumably there is no multicollinearity problem.

### **3.2. Empirical Strategy**

To research the relation between the share of males in a sector and the job satisfaction for females in that sector, two different OLS models will be run. Does the fact that a sector is dominated by men have a relation with whether females are less or more satisfied with their job and working in that sector? Do females take this into account in advance when choosing to work in certain sectors or not? One regression focuses on the overall job satisfaction while the other regression is included to compute aspects of job satisfaction with the work itself. The latter is included because it focuses on what *type* of job the individual is active in, in which the number of men (presumably) is not taken into account. This leads to the following regressions, which will both be run separately for females and males:

$$(1) \text{ Job Satisfaction}_{overall} = \beta_0 + \beta_1 * \text{share of males} + \beta_2 * \text{vector of other sector controls} + \beta_3 * \text{personal control variables} + \varepsilon$$

$$(2) \text{ Job Satisfaction}_{withworkitself} = \beta_0 + \beta_1 * \text{share of males} + \beta_2 * \text{vector of other sector controls} + \beta_3 * \text{personal control variables} + \varepsilon$$

The sector (control) variable is the proportion of college graduates in that sector. The personal net monthly income, weekly hours worked, age and age squared are also included in all regressions.

To research the relation between the share of males in a sector and the chances that a female stays in that sector between two periods the variable “*stayer*” is added to the model. The expectation is that if women dislike working in sectors where a lot of males are active they will increasingly try to find other type of work or leave a particular male-dominated sector. This leads to the following mobility regression, which will also be run separately for females and males:

$$(3) \text{ Stayer} = \beta_0 + \beta_1 * \text{share of males} + \beta_2 * \text{vector of other sector controls} + \beta_3 * \text{personal control variables} + \varepsilon$$

As explained before, it is very popular among Dutch women to work part-time by choice, as opposed to working full-time. The expectation therefore is that the job satisfaction and the chances of leaving a sector for full-time working women will differ from women working part-



time. This leads to regressions (1), (2) and (3) being run again for women (and additionally also for men) working full-time. This leads to the following regressions:

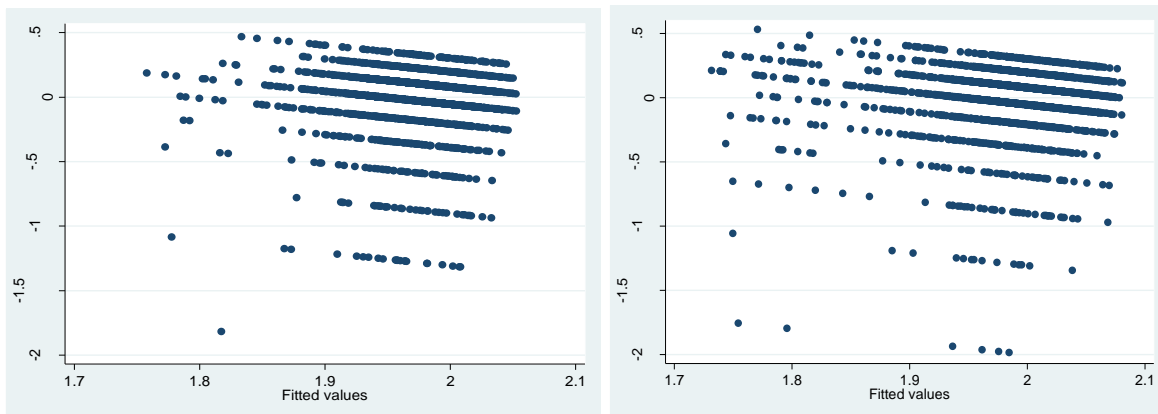
(4)  $Job\ Satisfaction_{fulltimeoverall} = \beta_0 + \beta_1 * \text{share of males} + \beta_2 * \text{vector of other sector controls} + \beta_3 * \text{personal control variables} + \varepsilon$

(5)  $Job\ Satisfaction_{fulltimewithworkitself} = \beta_0 + \beta_1 * \text{share of males} + \beta_2 * \text{vector of other sector controls} + \beta_3 * \text{personal control variables} + \varepsilon$

(6)  $Stayer_{fulltime} = \beta_0 + \beta_1 * \text{share of males} + \beta_2 * \text{vector of other sector controls} + \beta_3 * \text{personal control variables} + \varepsilon$

### 3.3. Gauss-Markov Assumptions

For the purpose of this research OLS models will be used. Consequently checking for the Gauss-Markov assumptions is important. First, the models must not suffer from heteroscedasticity. As is evident from figure 4 below; the scatterplots of the residuals; all models suffer from heteroscedasticity. This means that the variance of the error term is not constant. This might be caused by the fact that the dependent variables are ordinal variables. Additionally, the Breusch Pagan test shows a P-value of 0.000 for all three models meaning the null hypothesis of homoscedasticity must be rejected. Robust standard errors are used to control for this.



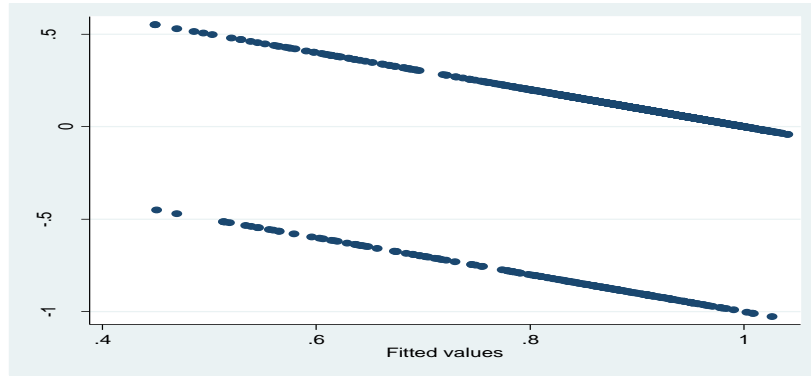


Figure 4: overall satisfaction (upper left), satisfaction with work itself (upper right) and mobility (bottom).

The variance inflation factors of the three models show that presumably none of the models suffer from multicollinearity, which can also be seen in the correlation matrix (Appendix B). The correlations between the variables are quite small. Lastly, the error terms must be checked for normality. All of the job satisfaction models show some signs of non-normality. It is also the case for the mobility regressions. However, as the sample used for the purpose of this research is quite large, the central limit assumption goes into operation. This means that the interpretation of the coefficients should be normal.

## **4. Results**

In this chapter the OLS results from the models explained in the previous chapter will be discussed. The model includes three different regressions on overall job satisfaction, satisfaction with work itself and the “mobility regression”. All regressions are also run for full-time working females. Additionally for completeness, all models will also be run for part-timers and males.

### **4.1. OLS Regressions**

#### **4.1.1 Overall Job Satisfaction**

The elaborate results from the overall job satisfaction model can be found in Appendix C. When the share of males (“*shareofmales*”) in a sector is the only explanatory variable it has a significant negative relation of -0.3790 with overall job satisfaction (“*satisfactionoverall*”) for women. Meaning that a one unit increase of the share of males (from 0 to 1) in a sector decreases the overall job satisfaction of women in that sector by 0.3790 points. This can also be interpreted as that a 1% increase in the share of males in a sector decreases the overall job satisfaction of women by 0.0037 points. This relation is not significant for men.

Adding the proportion of college graduates (“*shareddegrees*”) to the regression results in insignificant negative relations of share of males with overall job satisfaction for both males and females. The proportion of college graduates has a large, positive and significant relation (1%-level) for both females and males of respectively 0.9821 and 0.6124 with overall job satisfaction.

Figure 5 (below) shows the above-mentioned regression results for women. The correlation table from appendix B might help in explaining these results. From the wave 9 correlation table it becomes clear that there is a negative correlation between the proportion of college graduates in a sector and the share of males in that sector. Meaning that an increase of the proportion of college graduates is accompanied by a decrease of the share of males and vice versa. The proportion of college graduates has a positive correlation with overall job satisfaction indicating that an increase of the proportion of college graduates in a sector is accompanied by an increase in the overall job satisfaction in that sector. The “*shareddegrees*” positive correlation with overall job satisfaction is stronger than the “*shareofmales*” negative correlation. Thus, through an increase in the proportion of college graduates in a sector, which in turn affects the share of males in a sector, the share of males loses its “*power*”. As overall job satisfaction takes into account

different components such as for example promotion prospects, this could be interpreted as that higher educated individuals, regardless of what sector they work in, are less focused on attributes pertaining to the job and more focused on for example getting promoted.

	(1) satisfactionoverall	(2) satisfactionoverall
shareofmales	-0.379** (0.183)	-0.299 (0.184)
sharedegrees		0.982*** (0.223)
age		
nettoink_f_log		
hoursworked		
Constant	7.522*** (0.0819)	7.065*** (0.139)
Observations	1,528	1,528
R-squared	0.002	0.014

Robust standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Figure 5

Adding some demographic variables such as age and also the personal net monthly income to the regression still shows insignificant “*shareofmales*” results for both males and females. The age and net personal monthly income both have small but significant positive relations with overall job satisfaction for both men (respectively 0.0092 and 0.0658) and women (respectively 0.0172 and 0.0674).

Adding weekly hours worked to the regression now significantly increases the negative relation the share of males has with overall job satisfaction to -0.4892 for women. For men this relation is -0.4134 (significant at the 10%-level). Thus, the amount of hours worked a week is the main variable that significantly changes the relation the share of males in a sector has with overall job satisfaction, for women. Figure 6 (below) shows these findings for women. The correlation table from appendix B shows that the weekly hours worked have a bit of a strong positive correlation with the share of males.

	(1) satisfactionoverall	(2) satisfactionoverall	(3) satisfactionoverall	(4) satisfactionoverall
shareofmales	-0.379** (0.183)	-0.299 (0.184)	-0.271 (0.189)	-0.489** (0.200)
sharedegrees		0.982*** (0.223)	0.843*** (0.230)	0.607*** (0.233)
age			0.0172*** (0.00336)	0.0165*** (0.00373)
nettoink_f_log			0.0674** (0.0321)	0.0328 (0.0430)
hoursworked				0.0101* (0.00612)
Constant	7.522*** (0.0819)	7.065*** (0.139)	5.890*** (0.270)	6.093*** (0.342)
Observations	1,528	1,528	1,427	1,177
R-squared	0.002	0.014	0.043	0.034

Robust standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Figure 6**

The (“*hoursworked*”) variable has a positive correlation with overall job satisfaction. Thus, longer work weeks are accompanied by an increase in the share of males which in turn decreases the overall job satisfaction. As more women tend to work part-time than men (thus they overall work less hours than men, which is also evident from the descriptive statistics) this relation makes sense. The correlation magnitudes of the weekly hours worked and the share of males with overall job satisfaction lay quite close together. Weekly hours worked has a positive correlation of 0.0562 with overall job satisfaction, while share of males has a negative correlation of -0.0445 with overall job satisfaction. Thus, the longer work weeks pick up a higher share of males by means of longer hours significantly increasing the relation the share of males has with overall job satisfaction.

#### **4.1.2. Satisfaction With Work Itself**

The elaborate results from the regression on satisfaction with work itself can be found in Appendix D. When share of males is the only explanatory variable in the regression the relation with satisfaction with work itself is negative and significant for women with a magnitude of -0.5770 (significant at the 1%-level). For men this relation is -0.3302 (significant at the 10%-level). When adding the proportion of college graduates in a sector to the regression, the negative relation the share of males has with satisfaction with work itself decreases to -0.4839 for females but remains significant. The relation for males is no longer significant. The relation

“*sharedegrees*” has with satisfaction with work itself is very large for females, namely 1.0215 and significant at the 1%-level. For males the effect is 0.8384 and also significant at the 1%-level. Thus the results compared to the overall job satisfaction are stronger.

The negative correlation (Appendix B) “*shareofmales*” has with “*satisfactionworkitself*” is larger than the correlation it has with overall job satisfaction. When individuals assess their satisfaction with work itself, it could be that they look at attributes that are unique and specific to the type of job they are doing. As these attributes might be more attractive to men than they are to women, these could be experienced as less satisfying.

Adding the personal net monthly income and age for females decreases the relation the share of males has with satisfaction with work itself to -0.4019 but it remains significant. For men the relation is -0.3836, significant at the 10%-level. The age and personal net monthly income also have significant and positive relations with satisfaction with work itself for both men (respectively 0.0076 and 0.1051) and women (respectively 0.0213 and 0.0640).

Adding weekly hours worked to the regression for females does not result in insignificant results. The share of males relation is now largely increased with a magnitude of -0.6172 of the share of males with satisfaction with work itself (significant at the 1%-level). For men this relation is -0.4083, significant at the 10%-level. Figure 7 shows the results on satisfaction with work itself, for women.

	(1) satisfactionworkitself	(2) satisfactionworkitself	(3) satisfactionworkitself	(4) satisfactionworkitself
shareofmales	-0.577*** (0.198)	-0.484** (0.198)	-0.402** (0.201)	-0.617*** (0.209)
sharedegrees		1.022*** (0.227)	0.631*** (0.238)	0.441* (0.246)
nettoink_f_log			0.0640** (0.0299)	0.0308 (0.0386)
age			0.0213*** (0.00333)	0.0190*** (0.00374)
hoursworked				0.00954 (0.00621)
Constant	7.713*** (0.0862)	7.242*** (0.139)	6.046*** (0.233)	6.318*** (0.316)
Observations	1,622	1,622	1,513	1,183
R-squared	0.005	0.016	0.058	0.039

Robust standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Figure 7

Longer work weeks are accompanied by a higher share of males. The “*hoursworked*” variable also has a larger positive correlation with satisfaction with work itself than it has with overall job satisfaction. Presumably all of these higher correlations ensure that the share of males in a sector relation with satisfaction with work itself remains significant.

#### **4.1.3. Mobility Regression**

Moving on to the “*mobility regressions*” (elaborate results in Appendix E) with share of males in a sector being the only explanatory variable gives a negative relation of -0.2385 with the chances a female stays (“*stayer*”) in that particular sector (significant at 1%-level). This means that a 1% increase of the share of males in a sector decreases the chances a female stays in that sector by 0.0023 points (or increases the chances she leaves by this amount). For males the relation is positive and also significant at the 1%-level with a magnitude of 0.1770. This is an interesting finding as it seems that a higher number of men in a sector means that the chances a female stays (“*stayer*”) in that sector decreases but has the opposite effect for men, namely that it increases their chances of staying.

Adding the proportion of college graduates to the regression gives a significant negative relation of “*shareofmales2014*” with the chances a female stays in a sector of -0.2166 (significant at the 1%-level). For males this relation is 0.2218, also significant at the 1%-level. The relation “*sharedegrees2014*” has with the chances an individual stays in a sector is positive and significant for both females and males with magnitudes of respectively 0.1896 and 0.1405, which is lower than the relation it has with both types of job satisfaction. However, adding the proportion of college graduates to the regression did not result in an insignificant share of males relation.

The wave 7 correlation table from Appendix B shows a higher negative correlation between the proportion of college graduates (in 2014) and the share of males (2014) than in 2016. The proportion of college graduates again has a positive but smaller correlation with the chances an individual stays in a sector, meaning that an increase in the number of people that have a college degree or higher is accompanied by a higher chance that a person stays in a sector.

Adding age and personal net monthly income gives a significant negative relation of -0.2104 for females and a significant positive one for males of 0.1654 of the share of males with the chances an individual stays in a sector at time  $t+2$ . Both are significant at the 1%-level..

Lastly, adding weekly hours worked still gives a significant negative relation of -0.2007 for females and a significant positive relation of 0.1374 for men, both significant at the 1%-level, of share of males with the stayer variable. Thus, adding all the control variables only results in small changes in the magnitudes of the share of males relation with the “*stayer*” variable. Most results however are significant at the 1%-level. Figure 8 shows these findings, for women.

	(1) stayer	(2) stayer	(3) stayer	(4) stayer
shareofmales2014	-0.239*** (0.0388)	-0.217*** (0.0389)	-0.210*** (0.0389)	-0.201*** (0.0391)
sharedegrees2014		0.190*** (0.0492)	0.122** (0.0491)	0.0415 (0.0466)
nettoink_f_log			0.0267*** (0.00753)	0.0329** (0.0130)
age2014			0.00461*** (0.000751)	0.00287*** (0.000793)
hoursworked2014				-0.000479 (0.00137)
Constant	0.974*** (0.0135)	0.887*** (0.0268)	0.535*** (0.0593)	0.629*** (0.0886)
Observations	1,362	1,362	1,273	1,003
R-squared	0.021	0.031	0.104	0.066

Robust standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Figure 8

#### **4.1.4. Full-Time/Part-Time**

All the regressions are also run for the sub-sample of full- and part-time working individuals (Appendix F-K). Surprisingly, the relation the share of males in a sector has with overall job satisfaction is only significant for males (-0.6365) at the 1%-level. Meaning that the more men are active in a sector the less (overall) satisfied full-time working men are. Figure 9 (below)



shows the overall job satisfaction findings for full-time men (left) and full-time women (right).

	(1) satisfactionoverall		(1) satisfactionoverall
shareofmales	-0.670*** (0.246)	shareofmales	-0.320 (0.367)
sharedegrees	0.301 (0.287)	sharedegrees	1.228*** (0.444)
nettoink_f_log	0.115 (0.0767)	nettoink_f_log	0.0871 (0.0593)
age	0.00185 (0.00435)	age	0.00557 (0.00619)
hoursworkedfulltime	0.000323 (0.0210)	hoursworkedfulltime	0.0132 (0.0401)
Constant	6.669*** (0.902)	Constant	5.577*** (1.599)
Observations	938	Observations	356
R-squared	0.018	R-squared	0.040
Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1		Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1	

Figure 9

The results for satisfaction with work itself are the same as the results for overall job satisfaction. The negative relation of -0.5283 of share of males with satisfaction with work itself is only significant for men, significant at the 5%-level (Appendix G).

“*Shareofmales2014*” has no significant relation with the chances that a full-time working females stays in a sector. A positive significant relation of 0.1912 is found for full-time working men (significant at the 1%-level), meaning more full-time working men tend to stay in a sector when the share of males increases in that sector (Appendix J). The correlation table for the sub-sample of full-time working individuals in Appendix B shows that longer work weeks have a negative correlation with the share of males and the chances an employee stays in a sector. Meaning that an increase in the weekly hours worked is accompanied by higher shares of males.

Additionally, the length of the workweek has a negative correlation with the “*stayer*” variable. The share of males correlation with stayer is however not significant.

For completeness, all regressions are also done for part-time working individuals. The relation the share of males in a sector has with overall job satisfaction of part-time working women is now reversed and significant only for women, with a magnitude of -0.5244 (Appendix H). The relation with satisfaction with work itself is -0.6701, also significant for women at the 1%-level (Appendix I). Figure 10 shows the overall job satisfaction results for part-time women (left) and part-time men (right).

	(1) satisfactionoverall		(1) satisfactionoverall
shareofmales	-0.548** (0.248)	shareofmales	0.228 (0.564)
sharedegrees	0.304 (0.271)	sharedegrees	1.156* (0.652)
nettoink_f_log	-0.0294 (0.0629)	nettoink_f_log	-0.146 (0.0947)
age	0.0220*** (0.00469)	age	0.0183** (0.00928)
hoursworkedparttime	0.0262*** (0.00946)	hoursworkedparttime	-0.0223 (0.0162)
Constant	6.076*** (0.435)	Constant	7.380*** (0.766)
Observations	821	Observations	192
R-squared	0.045	R-squared	0.051

Robust standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Figure 10

Comparing the correlation tables for the sub-sample of full-time working individuals and part-time working individuals (Appendix B) shows that “*hoursworkedparttime*” has a smaller positive correlation with the share of males in a sector than “*hoursworkedfulltime*” has. As more women than men tend to work part-time, this correlation is less pronounced than for the

sub-sample of full-time working individuals. This makes sense. Additionally, the weekly hours worked of part-time working individuals have a positive correlation with overall job satisfaction while for full-timers this correlation is negative. This may give some insight as to the (different) results found for full- and part-time working individuals.

“*Shareofmales2014*” has a negative significant relation of -0.1942, significant at the 1%-level, for part-time working women with the chances that they stay in a sector. Meaning that, the higher the number of men in a sector, the smaller the chance a part-time working female is still active in that sector at t+2 (Appendix K).

#### **4.1.5. Summary**

Overall, there is a negative relation between the share of males in a sector and both types of job satisfaction for both men and women. The relation is more pronounced for women than for men, and is stronger for satisfaction with work itself. The proportion of college graduates also play a large role in how satisfied individuals are. The mobility regressions give a negative significant relation between the share of males and the chances a women stays in a sector and a positive significant relation for men. An interesting finding arises when it comes to full-time working individuals as the relation the share of males has with overall job satisfaction and satisfaction with work itself is highly significant, albeit only for males. For part-time individuals the opposite effect can be found as the relation of the share of males in a sector with overall job satisfaction and satisfaction with work itself is only significant for part-time working women. These results are the same for the mobility regressions.

## **5. Conclusion**

This thesis researches the relation between the share of males in a sector and the overall job satisfaction and satisfaction with work itself for women in those sectors. Also, the relation the share of males in a sector has with the chances an employee stays in that sector over a period of two years is researched. Following an interesting paper by Lordan and Pischke on the matter with Russian, English and American data the idea came about to do part of their research with Dutch data. Data from the 7<sup>th</sup> and 9<sup>th</sup> wave of the “Work and Schooling” questionnaire from the LISS panel is used for that purpose.

From the results it follows that there is a significant negative relation between the share of males in a sector and both types of job satisfaction of workers in that sector. This negative relation is stronger for satisfaction with work itself than it is for overall job satisfaction and it is also stronger for women than it is for men. This confirms the first hypothesis and hypothesis 1B of the share of males having a negative relation with job satisfaction for women. Thus, the higher the numerical dominance of men in a sector the less satisfied workers are in those sectors. This corresponds with the findings by Lordan and Pischke and also some other related literature.

The relation of the share of males in a sector with the chances an employee stays in that sector is significantly negative for women and significantly positive for men, confirming the second hypothesis. This means that when the share of males increases in a sector the chances a female remains in that sector after two years decreases. For men however, the opposite is found as the chances of staying increases when the share of males in a sector increases.

There is a negative relation between the share of males in a sector and the satisfaction of full-time working women in that sector, however this relation is not significant. As these results can't be fully interpreted the third hypothesis and hypothesis 3B can't be confirmed nor rejected.

Interestingly, a significant negative relation is found for full-time working men for both overall job satisfaction and satisfaction with work itself.

The results are the same for the mobility regressions as the relation is only significant for full-time working men. The last hypothesis of the share of males having no relation with the chances a full-time working female leaves a sector can thus not be confirmed nor rejected.

The opposite results are found for part-time working employees as the results are only significant for part-time working women, while they are not for men.

One limitation of this research is that the data used is not on more specific employment, think of for example at company level. This would give the opportunity to use aspects that are more specific to the type of job an individual is active in, which might play a larger role in the satisfaction of employees. Two examples of these aspects could be company size or type of task/responsibility at the job. It's plausible that the data becomes more representative at this level. Another limitation is that a large part of the dataset is not highly educated (HBO or higher). As the proportion of college graduates does seem to have a highly significant and large relation with job satisfaction, it could be that this would slightly change the outcomes or at least the sizes of the outcomes. Lastly, the observations for the sub-sample of full-time working women and of part-time working men is relatively small thus it would be handy to have more data on these two sub-samples.

This thesis only researches the relation between the share of males in a sector and overall job satisfaction and satisfaction with work itself. It would be interesting to include another satisfaction aspect such as for example satisfaction on the atmosphere among colleagues to the research. It could also be interesting to add more waves to check the mobility to see how large the trend is over a longer time period. And following findings by Gardiner and Tiggemann it is not necessarily the share of males but the effect the share of males has on the mental health of women, through for example leadership style, which also plays a role in their job satisfaction. Thus it would be interesting to check for aspects such as stress, mental health and more in future research.

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## 7. Appendix

### Appendix A: Wave 9 Descriptive Statistics

Overall Job Satisfaction (“q: cw133 – “How satisfied are you with your current work?”)

*N=2,988*

*Min=0 Max=10*

*Mean=7.36*

*St. Dev.=1.51*

satisfacti onoverall	Gender		Total
	Male	Female	
0	5 0.34	6 0.39	11 0.37
1	0 0.00	2 0.13	2 0.07
2	15 1.03	14 0.92	29 0.97
3	23 1.58	17 1.11	40 1.34
4	27 1.85	38 2.49	65 2.18
5	64 4.38	64 4.19	128 4.28
6	149 10.21	160 10.47	309 10.34
7	416 28.49	423 27.68	839 28.08
8	519 35.55	529 34.62	1,048 35.07
9	181 12.40	187 12.24	368 12.32
10	61 4.18	88 5.76	149 4.99
Total	1,460 100.00	1,528 100.00	2,988 100.00

Satisfaction With Work Itself (“q:cw130 – “How satisfied are you with the type of work that you do?”)

*N=3.122*

*Min=0 Max=10*

*Mean=7.47*

*St. Dev.=1.60*

satisfacti onoverall	Gender		Total
	Male	Female	
0	5 0.34	6 0.39	11 0.37
1	0 0.00	2 0.13	2 0.07
2	15 1.03	14 0.92	29 0.97
3	23 1.58	17 1.11	40 1.34
4	27 1.85	38 2.49	65 2.18
5	64 4.38	64 4.19	128 4.28
6	149 10.21	160 10.47	309 10.34
7	416 28.49	423 27.68	839 28.08
8	519 35.55	529 34.62	1,048 35.07
9	181 12.40	187 12.24	368 12.32
10	61 4.18	88 5.76	149 4.99
Total	1,460 100.00	1,528 100.00	2,988 100.00



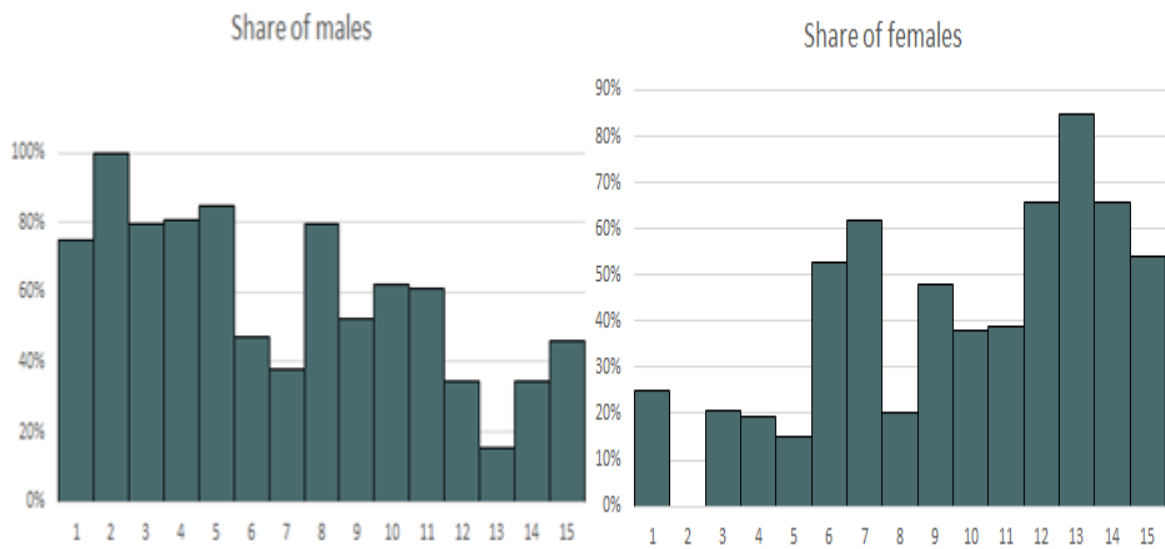
Sector Analysis (“q:cw402 – “In what sector do you work?”)  
 N=3.361  
 Min=1 Max=15

agriculture, forestry, fishery, hunting	1
mining	2
industrial production	3
utilities production, distribution and/	4
construction	5
retail trade (including repairs of cons	6
catering	7
transport, storage and communication	8
financial	9
business services (including real estat	10
government services, public administrat	11
education	12
healthcare and welfare	13
environmental services, culture, recrea	14
other	15

	Gender		Total
	Male	Female	
agriculture, forestry	51 3.16	17 0.97	68 2.02
mining	2 0.12	0 0.00	2 0.06
industrial production	226 14.01	59 3.38	285 8.48
utilities production,	29 1.80	7 0.40	36 1.07
construction	108 6.70	19 1.09	127 3.78
retail trade (includi	130 8.06	145 8.30	275 8.18
catering	56 3.47	91 5.21	147 4.37
transport, storage an	126 7.81	32 1.83	158 4.70
financial	76 4.71	70 4.00	146 4.34
business services (in	146 9.05	90 5.15	236 7.02
government services,	178 11.04	113 6.46	291 8.66
education	105	199	304

healthcare and welfar	100 6.20	556 31.81	656 19.52
environmental service	29 1.80	55 3.15	84 2.50
other	251 15.56	295 16.88	546 16.25
Total	1,613 100.00	1,748 100.00	3,361 100.00

*Share of Males and Share of Females Per Sector*



*Proportion of College Graduates (q:cw005 – “What is the highest level of education you have completed with diploma or certificate?”)*

*N=5.831*

*College Graduates (HBO and higher; female=35.1% male=40.7%)*

	Gender		Total
	Male	Female	
HBO (higher professio	481 17.81	499 15.94	980 16.81
teacher training scho	112 4.15	154 4.92	266 4.56
conservatory and art	12 0.44	14 0.45	26 0.45
academic education (i	28 1.04	18 0.57	46 0.79
academic education (i	81 3.00	37 1.18	118 2.02
academic education, b	68 2.52	62 1.98	130 2.23
academic education, m	167 6.19	156 4.98	323 5.54
doctor's degree (Ph.D	57 2.11	48 1.53	105 1.80
other	93 3.44	112 3.58	205 3.52
Total	2,700 100.00	3,131 100.00	5,831 100.00

*No College Graduates (lower than HBO; female=64.7% male=58.6%)*

	Gender		Total
	Male	Female	
did not complete any	10 0.37	23 0.73	33 0.57
did not complete prim	9 0.33	3 0.10	12 0.21
primary school	97 3.59	114 3.64	211 3.62
lower and continued s	21 0.78	13 0.42	34 0.58
VGLO (continued lower	12 0.44	29 0.93	41 0.70
LBO (lower profession	62 2.30	55 1.76	117 2.01
lower technical schoo	179 6.63	201 6.42	380 6.52
MULO, ULO, MAVO (lowe	213 7.89	399 12.74	612 10.50
VMBO vocational train	103 3.81	75 2.40	178 3.05
VMBO theoretical or c	40 1.48	56 1.79	96 1.65
MMS (intermediate gir	5 0.19	43 1.37	48 0.82
HBS (former pre-unive	46 1.70	31 0.99	77 1.32
HAVO (higher general	148 5.48	191 6.10	339 5.81
VWO (pre-university e	58 2.15	78 2.49	136 2.33
gymnasium, atheneum,	53 1.96	49 1.56	102 1.75
KMBO (short intermedi	32 1.19	44 1.41	76 1.30
MBO professional trai	403 14.93	495 15.81	898 15.40
MBO professional trai	23 0.85	42 1.34	65 1.11
MBO-plus to access HB	87 3.22	90 2.87	177 3.04

**No Education (female=0.83% male=0.40%)**

Personal Net Monthly Income: N=6.081

Age: N=6.454 Min=16 Max=98

Weekly Hours Worked (“q:cw126 – “How many hours per week are you employed, according to your employment contract?”): N=2.953 Min=0 Max=137

Male	Female
<u>Average</u> income: 1.943€	<u>Average</u> income: 1.230€
<u>St.Dev.</u> income: 3.363€	<u>St.Dev.</u> income: 3.802€.
<u>Average</u> age: 51	<u>Average</u> age: 48
<u>St.Dev.</u> age: 18	<u>St.Dev.</u> age: 18
<u>Average</u> hours: 34	<u>Average</u> hours: 25
<u>St.Dev.</u> hours: 10	<u>St.Dev.</u> hours: 11

Part-Time Work Weeks

Full-Time Work Weeks

hoursworke dparttime	Gender		Total	hoursworke dfulltime	Gender		Total
	Male	Female			Male	Female	
12	12	41	53	36	251	191	442
13	0	7	7	37	15	2	17
14	1	11	12	38	180	37	217
15	5	22	27	39	7	2	9
16	8	78	86	40	585	157	742
17	0	10	10	42	3	2	5
18	4	32	36	43	1	0	1
19	0	11	11	44	2	2	4
20	20	82	102	45	3	0	3
21	1	15	16	48	1	0	1
22	2	30	32	50	3	0	3
23	1	11	12	54	1	0	1
24	32	165	197	55	1	0	1
25	4	28	32	56	1	0	1
26	1	21	22	60	2	0	2
27	2	22	24				
28	7	87	94	Total	1,056	393	1,449
29	2	5	7				
30	13	49	62				
31	2	5	7				
32	88	205	293				
33	10	1	11				
34	14	21	35				
35	5	6	11				
Total	234	965	1,199				

*Stayer/Mobility*  
*Value 0 if individual has left the sector at t+2*  
*Value 1 if individual has remained in the sector at t+2*

stayer	Gender		Total
	Male	Female	
0	142	161	303
1	1,171	1,202	2,373
Total	1,313	1,363	2,676

*Mobility Per Sector*

stayer	agricultu	mining	industria	utilities	construct	retail tr	catering	transport	Total
0	5	1	13	3	5	36	21	8	303
1	39	1	224	20	103	173	65	114	2,373
Total	44	2	237	23	108	209	86	122	2,676

stayer	financial	business	governmen	education	healthcar	environme	other	Total
0	14	29	16	15	23	12	102	303
1	104	167	224	211	513	50	365	2,373
Total	118	196	240	226	536	62	467	2,676

## Appendix B: Correlation Tables

### Wave 7

	stayer	shareo..	shared~4	nettoi~f	age2014	ho~d2014
stayer	1.0000					
shareofmal~4	-0.0144	1.0000				
sharede~2014	0.0732***	0.1872***	1.0000			
nettoink_f	0.1673***	0.0526***	0.0391***	1.0000		
age2014	0.2296***	0.0116	-0.0950***	0.1053***	1.0000	
hoursw~d2014	0.0120	0.3739***	0.0465	0.4743***	0.0326*	1.0000

Notes: Correlation is significant at the 1%-level (\*\*\*) and the 10%-level (\*)

### Wave 9

	satisf~l	satisf~f	s~fmales	nettoi~f	hoursw~_	shared~s	leeftijd
satisfacti~l	1.0000						
satisfacti~f	0.8296**	1.0000					
shareofmales	-0.0445*	-0.0556**	1.0000				
nettoink_f	0.1385**	0.1766**	0.0563**	1.0000			
hoursworked_	0.0562**	0.0967**	0.2943**	0.5979**	1.0000		
sharedegrees	0.0936**	0.1039**	-0.0552**	0.0661**	0.1036**	1.0000	
leeftijd	0.1371**	0.1742**	-0.0053	0.0977**	0.1312**	-0.1844**	1.0000

Notes: Correlation is significant at 1%-level (\*\*) and 5%-level (\*)

Wave 9 Full-Time

	satisf~l	satisf~f	s~fmales	shared~s	nettoi~g	leeftijd	ho~ltime
satisfacti~l	1.0000						
satisfacti~f	0.8296*	1.0000					
shareofmales	-0.0445*	-0.0556*	1.0000				
shareddegrees	0.0936*	0.1039*	-0.0552*	1.0000			
nettoink_f~g	0.1029*	0.1474*	0.0827*	0.2208*	1.0000		
leeftijd	0.1371*	0.1742*	-0.0053	-0.1844*	0.3430*	1.0000	
hoursw~ltime	-0.0056	0.0003	0.2290*	-0.1304*	0.0545*	-0.0551*	1.0000

Wave 9 Part-Time

	satisf~l	satisf~f	s~fmales	shared~s	nettoi~g	leeftijd	ho~ttime
satisfacti~l	1.0000						
satisfacti~f	0.8296*	1.0000					
shareofmales	-0.0445*	-0.0556*	1.0000				
shareddegrees	0.0936*	0.1039*	-0.0552*	1.0000			
nettoink_f~g	0.1029*	0.1474*	0.0827*	0.2208*	1.0000		
leeftijd	0.1371*	0.1742*	-0.0053	-0.1844*	0.3430*	1.0000	
hoursw~ttime	0.0266	0.0528	0.0757*	0.1527*	0.3062*	-0.0481	1.0000

Wave 7 Full-Time

	stayer	shareo..	shared~4	nettoi~g	h~full~4	leeftijd
stayer	1.0000					
shareofmal~4	-0.0144	1.0000				
sharede~2014	0.0732*	-0.1872*	1.0000			
nettoink_f~g	0.2254*	0.0926*	0.1748*	1.0000		
ho~ltime2014	-0.0518	0.2261*	-0.1419*	0.0409	1.0000	
leeftijd	0.2297*	-0.0232	-0.1397*	0.3318*	-0.0422	1.0000



## Appendix C: OLS Regression Overall Job Satisfaction

### *Overall Job Satisfaction Women*

	(1) satisfactionoverall	(2) satisfactionoverall	(3) satisfactionoverall	(4) satisfactionoverall
shareofmales	-0.379** (0.183)	-0.299 (0.184)	-0.271 (0.189)	-0.489** (0.200)
shareddegrees		0.982*** (0.223)	0.843*** (0.230)	0.607*** (0.233)
age			0.0172*** (0.00336)	0.0165*** (0.00373)
nettoink_f_log			0.0674** (0.0321)	0.0328 (0.0430)
hoursworked				0.0101* (0.00612)
Constant	7.522*** (0.0819)	7.065*** (0.139)	5.890*** (0.270)	6.093*** (0.342)
Observations	1,528	1,528	1,427	1,177
R-squared	0.002	0.014	0.043	0.034

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### *Overall Job Satisfaction Men*

	(1) satisfactionoverall	(2) satisfactionoverall	(3) satisfactionoverall	(4) satisfactionoverall
shareofmales	-0.302 (0.191)	-0.181 (0.197)	-0.281 (0.206)	-0.413* (0.224)
shareddegrees		0.612*** (0.232)	0.517** (0.242)	0.441* (0.264)
age			0.00923*** (0.00347)	0.00516 (0.00397)
nettoink_f_log			0.0658* (0.0376)	0.0611 (0.0651)
hoursworked				0.00547 (0.00784)
Constant	7.521*** (0.115)	7.203*** (0.171)	6.391*** (0.301)	6.491*** (0.491)
Observations	1,460	1,460	1,365	1,130
R-squared	0.002	0.006	0.019	0.011

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## Appendix D: OLS Regression Satisfaction With Work Itself

### *Satisfaction With Work Itself Women*

	(1)	(2)	(3)	(4)
	satisfactionworkitself	satisfactionworkitself	satisfactionworkitself	satisfactionworkitself
shareofmales	-0.577*** (0.198)	-0.484** (0.198)	-0.402** (0.201)	-0.617*** (0.209)
shareddegrees		1.022*** (0.227)	0.631*** (0.238)	0.441* (0.246)
nettoink_f_log			0.0640** (0.0299)	0.0308 (0.0386)
age			0.0213*** (0.00333)	0.0190*** (0.00374)
hoursworked				0.00954 (0.00621)
Constant	7.713*** (0.0862)	7.242*** (0.139)	6.046*** (0.233)	6.318*** (0.316)
Observations	1,622	1,622	1,513	1,183
R-squared	0.005	0.016	0.058	0.039

Robust standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### *Satisfaction With Work Itself Men*

	(1)	(2)	(3)	(4)
	satisfactionworkitself	satisfactionworkitself	satisfactionworkitself	satisfactionworkitself
shareofmales	-0.330* (0.198)	-0.175 (0.204)	-0.384* (0.212)	-0.408* (0.230)
shareddegrees		0.838*** (0.236)	0.617** (0.250)	0.633** (0.279)
nettoink_f_log			0.105*** (0.0348)	0.0612 (0.0669)
age			0.00763** (0.00358)	0.00311 (0.00412)
hoursworked				0.0216** (0.00939)
Constant	7.642*** (0.120)	7.216*** (0.176)	6.324*** (0.269)	6.029*** (0.500)
Observations	1,500	1,500	1,403	1,134
R-squared	0.002	0.009	0.033	0.018

Robust standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## Appendix E: OLS Mobility Regression

### *Mobility Women*

	(1) stayer	(2) stayer	(3) stayer	(4) stayer
shareofmales2014	-0.239*** (0.0388)	-0.217*** (0.0389)	-0.210*** (0.0389)	-0.201*** (0.0391)
sharedegrees2014		0.190*** (0.0492)	0.122** (0.0491)	0.0415 (0.0466)
nettoink_f_log			0.0267*** (0.00753)	0.0329** (0.0130)
age2014			0.00461*** (0.000751)	0.00287*** (0.000793)
hoursworked2014				-0.000479 (0.00137)
Constant	0.974*** (0.0135)	0.887*** (0.0268)	0.535*** (0.0593)	0.629*** (0.0886)
Observations	1,362	1,362	1,273	1,003
R-squared	0.021	0.031	0.104	0.066

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### *Mobility Men*

	(1) stayer	(2) stayer	(3) stayer	(4) stayer
shareofmales2014	0.177*** (0.0412)	0.222*** (0.0473)	0.165*** (0.0484)	0.137*** (0.0530)
sharedegrees2014		0.140** (0.0569)	0.0693 (0.0568)	0.0962 (0.0624)
nettoink_f_log			0.0404*** (0.0100)	0.0270* (0.0138)
age2014			0.00329*** (0.000829)	0.00269*** (0.000919)
hoursworked2014				0.00261 (0.00241)
Constant	0.789*** (0.0278)	0.710*** (0.0456)	0.321*** (0.0834)	0.365*** (0.125)
Observations	1,314	1,314	1,229	1,014
R-squared	0.012	0.017	0.084	0.045

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## Appendix F: OLS Regression Overall Job Satisfaction Full-Time

### *Overall Job Satisfaction Full-Time Women*

	(1) satisfactionoverall
shareofmales	-0.320 (0.367)
sharedegrees	1.228*** (0.444)
nettoink_f_log	0.0871 (0.0593)
age	0.00557 (0.00619)
hoursworkedfulltime	0.0132 (0.0401)
Constant	5.577*** (1.599)
Observations	356
R-squared	0.040

Robust standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### *Overall Job Satisfaction Full-Time Men*

	(1) satisfactionoverall
shareofmales	-0.670*** (0.246)
sharedegrees	0.301 (0.287)
nettoink_f_log	0.115 (0.0767)
age	0.00185 (0.00435)
hoursworkedfulltime	0.000323 (0.0210)
Constant	6.669*** (0.902)
Observations	938
R-squared	0.018

Robust standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## Appendix G: OLS Regression Satisfaction Work Itself Full-Time

### *Satisfaction With Work Itself Full-Time Women*

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	(1) satisfactionworkitself
shareofmales	-0.373 (0.387)
sharedegrees	0.838* (0.445)
nettoink_f_log	0.147** (0.0594)
age	0.00838 (0.00649)
hoursworkedfulltime	-0.0294 (0.0435)
Constant	6.983*** (1.718)
Observations	354
R-squared	0.044

---

Robust standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### *Satisfaction With Work Itself Full-Time Men*

---

	(1) satisfactionworkitself
shareofmales	-0.565** (0.253)
sharedegrees	0.454 (0.300)
nettoink_f_log	0.0978 (0.0834)
age	0.000981 (0.00451)
hoursworkedfulltime	0.0199 (0.0210)
Constant	6.097*** (0.916)
Observations	938
R-squared	0.014

---

Robust standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## Appendix H: OLS Regression Overall Job Satisfaction Part-Time

### *Overall Job Satisfaction Part-Time Women*

	(1) satisfactionoverall
shareofmales	-0.548** (0.248)
sharedegrees	0.304 (0.271)
nettoink_f_log	-0.0294 (0.0629)
age	0.0220*** (0.00469)
hoursworkedparttime	0.0262*** (0.00946)
Constant	6.076*** (0.435)
Observations	821
R-squared	0.045

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### *Overall Job Satisfaction Part-Time Men*

	(1) satisfactionoverall
shareofmales	0.228 (0.564)
sharedegrees	1.156* (0.652)
nettoink_f_log	-0.146 (0.0947)
age	0.0183** (0.00928)
hoursworkedparttime	-0.0223 (0.0162)
Constant	7.380*** (0.766)
Observations	192
R-squared	0.051

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## Appendix I: OLS Regression Satisfaction With Work Itself Part-Time

### *Satisfaction With Work Itself Part-Time Women*

---

	(1)
	satisfactionworkitself
shareofmales	-0.688*** (0.261)
sharedegrees	0.260 (0.293)
nettoink_f_log	-0.0715* (0.0426)
age	0.0241*** (0.00463)
hoursworkedparttime	0.0295*** (0.00913)
Constant	6.457*** (0.355)
Observations	829
R-squared	0.053

---

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### *Satisfaction Work Itself Part-Time Men*

---

	(1)
	satisfactionworkitself
shareofmales	-0.0118 (0.611)
sharedegrees	1.482** (0.718)
nettoink_f_log	-0.0456 (0.107)
age	0.0113 (0.0100)
hoursworkedparttime	0.00568 (0.0194)
Constant	6.209*** (0.821)
Observations	196
R-squared	0.033

---

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Appendix J: OLS Mobility Regression Full-Time**

*Mobility Full-Time Women*

	(1) stayer
shareofmales2014	-0.150 (0.0919)
sharedegrees2014	0.0478 (0.0843)
nettoink_f_log	0.0300 (0.0221)
age2014	0.00356*** (0.00135)
hoursworkedfulltime2014	-0.0232** (0.0115)
Constant	1.461*** (0.436)
Observations	273
R-squared	0.099

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Mobility Full-Time Men*

	(1) stayer
shareofmales2014	0.199*** (0.0600)
sharedegrees2014	0.106 (0.0691)
nettoink_f_log	0.0397** (0.0178)
age2014	0.00233** (0.000996)
hoursworkedfulltime2014	-0.00141 (0.00425)
Constant	0.399* (0.217)
Observations	851
R-squared	0.043

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1



**Appendix K: OLS Mobility Regression Part-Time**

*Mobility Women Part-Time*

	(1) stayer
shareofmales2014	-0.194*** (0.0454)
sharedegrees2014	0.0395 (0.0561)
nettoink_f_log	0.0334** (0.0159)
age2014	0.00244** (0.000972)
hoursworkedparttime2014	-0.000564 (0.00209)
Constant	0.644*** (0.107)
Observations	730
R-squared	0.062

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Mobility Men Part-Time*

	(1) stayer
shareofmales2014	-0.0880 (0.116)
sharedegrees2014	0.00775 (0.144)
nettoink_f_log	0.00124 (0.0222)
age2014	0.00447** (0.00222)
hoursworkedparttime2014	0.00956* (0.00508)
Constant	0.436** (0.180)
Observations	163
R-squared	0.090

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1