Working Mothers;

The influence of employment on motherhood

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Abstract

Using data from the ESS and the ILO a sample of 4908 women between age 25 and 47 is created. Logistic regression analysis has shown that unemployed females overall have the highest chance to be a mother. The direct relationship between self-employment and motherhood is not statically different for the wage-employed. Job autonomy and part-time work are positively related to motherhood. Since self-employed women have more job autonomy and are more often working part-time, self-employment has an indirect relation. Women living in countries with a high parental leave level, do not prefer working in wage-employment over self-employment differently than women living in countries with low parental leave levels. Whether a woman has a partner, a partner without an income or a partner with an income does not change the preference for combining motherhood with one type of employment relative to the other.

1. Introduction

Scientific articles concerning women’s employment are available in abundance. The latter is also the case for motherhood and employment. There are several sub streams regarding motherhood and employment, yet individually they fail to give an overall picture of the relationship between motherhood and employment.

One branch of research focusses on the motherhood employment gap. This stream, in general, tries to find underlying mechanisms on why mothers are hindered in their labor-participation and subsequently could possibly end up in unemployment. In 2014, Rense Nieuwenhuis published his book called; “Combining Institutional and Demographic Explanations of Women’s Employment and Earnings Inequality in OECD Countries, 1975-2005”. In this book the motherhood employment gap is described and later partially explained by national contextual factors, such as policies. His main finding regarding this inequality in employment is that women with children were more often unemployed, compared to women without children, in the period between 1975 and 1999. Baker (2010) adds that mothers are more often unemployed than women without children and males altogether because of similar reasons indicated by Nieuwenhuis, yet Baker indicates different reasons too; domestic arrangements and “societal judgements”. Then there is the phenomenon that mothers are underpaid. Budig and England (2001) claim that mothers are underpaid because of three reasons; they have less experience due to a temporal absence of the labor market, the negative effect of children on their productivity and finally, straight-up discrimination.

Another line of research, centers on the effects of children on the mothers mode of employment. The conclusions of the latter branch of research share the similarity that they accept the notion that there is a relationship between the presence of children and the mother’s self-employment status (Wellington, 2006; Caputo & Dolinsky, 1998; Aidis & Wetzel, 2007). Uncertainty exists to what the cause is for this increase in the proportion of the self-employment branch. One established phenomena is that women who have young children are more often in the self-employment branch compared to women without children (Wellington, 2006; Caputo & Dolinsky, 1998). This empirical relation is most often explained with the notion that self-employed mothers can balance life and career in a much more effective way compared to regular employment. This stream of research primarily investigates the effect of women’s individual characteristics, like human capabilities and household composition.

Unfortunately, problems occur when the two different streams of research are brought together, for the sake of getting a more elaborate and inclusive overview. The focus of the motherhood employment gap lies on explaining differences between and within the levels of unemployment and employment. This however is difficult to combine with the dichotomy, which the other branch of research primarily focusses on; self-employment versus wage-employment.
While reviewing the literature to the best of my knowledge, articles exclusively make the comparison between either the unemployed and employed (Nieuwenhuis, 2014; Baker, 2010) or the self-employed and paid-employed (Wellington, 2006; Caputo & Dolisnky, 1998; Aidis & Wetzels, 2007). Articles which include all the three mentioned groups, unemployed, paid-employed and self-employed, are non-existent. I have yet encountered articles which represent the entire group of women participating in the labor market properly. Therefore this article functions as a bridge between the two branches of mothers’ labor research. Considering the relation between women’s wage-employment, self-employment, unemployment and the presence of young children in the family household. Taking into account both (a portion) of contextual and individual characteristics. Another opportunity in this article is to investigate the effect of “job-characteristics”.

Different types of employment, bring up different constraints and opportunities. Raising children while working a 40-hour workweek might not prove to be ideal. Job autonomy and control is an important job-characteristic that differs significant between the three included groups. Self-employed women have more job autonomy than women in the wage-employed sector (Boden, 1999). This job autonomy puts women in control over two important aspects regarding time management. Women could choose their own working times and even the amount of working hours. Job autonomy and subsequently self-employment might prove to be a way for women to combine family and employment in an effective way (Wellington, 2006).

Furthermore the effect of partner’s will also be taken into account. The case might be that partners provide enough income, taking away the female’s need to participate in the working force for economic reasons. Other important options to consider regarding partners, is whether there is a partner at all. I assume that women with a child do more often have a partner than no partner, since it takes two to create a child and the likelihood of ending the relationship between the time of the birth of the child and its twelfth birthday\(^\text{1}\) is smaller than the likelihood relation continuing. But none the less it is interesting to examine the employment type of choice if any at all for this growing group of single mothers. Also interesting is that both single women and women with a partner point equally often (±55%) towards taking care of the children as a reason for part-time employment (Ruggeri & Bird, 2014).

Then there is the point of context; geographical location and time period. Firstly, most of the encountered established articles focus on the North-Americas (Wellington, 2006; Caputo & Dolisnky, 1998; Budig & England, 2001) or very particular European countries (Aidis & Wetzels, 2007). Secondly, the researches use data of at least 10 years of age (Wellington, 2006; Caputo & Dolisnky, 1998; Aidis & Wetzels, 2007; Nieuwenhuis, 2014; Budig & England, 2001).

The majority of data for this article will come from the European Social Survey round 7 collected throughout 2014 and published in December of that year. This survey has data of respondents inhabiting 15 European countries. When focusing on different European countries, differences in institutional context could be larger than when focusing on the United States solely. European countries provide overall extensive policies regarding parental leave, but variance between them is tremendous (Addati, Cassirer & Gilchrist, 2014).

Parental support policies grant women paid time off for a certain period of time. It is important to note that both the percentage of payment and the amount of weeks differ significantly between continents and countries. On average, Europe has the most extensive policies, but the actual amount of leave differs allot. For example Norway’s parental leave for women is about three times as high as Switzerland’s or Belgium’s arrangements. These arrangements only are available for females in paid-employed, which might pull women into paid-employment since it might prove to enable women to combine their active employment status and motherhood (Addati, Cassirer & Gilchrist, 2014).

\(^{1}\text{In this paper young children are defined as children of at most 12 years of age.}\)
In an attempt to combine the two discussed streams and also partially controlling for the unaccounted job-characteristics, the next central question is constructed: *To what extent is having children explained by unemployment, self-employment and wage employment for women in 15 European countries?* Then the effect of specific job characteristics (a & b) which are more present in some types of employment will be investigated as intervening factors. The individual (c) and contextual (d) characteristic are moderating variables in the second question: *To what extent can differences, in having children, between the types of employment be explained by (a) job autonomy, (b) working hours, (c) partner status and (d) the degree of parental support in countries?*

After laying down the theoretical brickwork, the methodology will be discussed. Subsequently, the results of the conducted regression analysis will be discussed in the results section. In the conclusion the empirical results will be connected with the theoretical assumptions and derived hypothesis. Finally, a discussion in which both the limitations of this study and possible future research topics are displayed.

2. **Theory**

One of the driving forces behind females engaging in labor is economic necessity. Other forces focus around values derived from productive work; companionship, satisfaction, and success. Of course these are all important goals, if not absolutely necessary (Esterik & Greiner, 1981). However, time constrains often limit women’s possibilities to fulfill these values. Traditional norms and roles often push women in accounting disproportionately for domestic activities, childcare for example. If women would work as much as men did and continued their domestic activities, women would overall lead a busier life, with less leisure time (Holmes & Jones, 2010).

2.1 **Type of work**

Women are engaged with self-employment for many possible reasons. Many of these reasons center on the greater flexibility women in self-employment enjoy. Boden (1999) found in a cross sectional analysis that women with children especially indicate greater flexibility and family-related reasons as contributions for the choice of becoming/remaining self-employed. In this paper I will argue that women in self-employment, compared to the wage-employed, will more often have children, because there are constraints perceived in wage employment, which does not allow for an optimal combining of childcare and that particular type of work. The constraints are mainly derived from job-characteristics like job autonomy and working hours. I expect that women in self-employment are more often mother compared to non-mother. Since unemployed women are in absolute terms more flexible, unemployment will be favored over self-employment.

**H1:** Self-employed women will have more often children compared to wage-employed women (a) and have less often children compared to unemployed women (b).

2.2 **Job autonomy**

There are several possible reasons why self-employment could be more flexible than wage-employment. Job autonomy and working hours are the most apparent. Job autonomy gives women the opportunity to decide about their own working hours. For example a woman could decide to first put her child(ren) in bed at 20:00 and then do some work for her own business. The previous example is very hard imaginable when being wage-employment, when one is often bound to the regular office hours. I expect that job-autonomy is generally higher for the self-employed compared to the wage-employed. Making job autonomy a pull factor towards self-employment as a way to effectively combine children and employment. Leading from this there should be a positive relationship observed between a women’s job autonomy and the presence of children.

**H2:** The relationship between the “type of employment” and “having children” (as formulated in H1) is (partially) explained by “job autonomy”.


2.3 Working hours

The amount of working hours has a rather peculiar place for the self-employed. When not stratifying for gender, the overall weekly working hours of the self-employed is much higher as it is for wage-employed, almost 10 hours a week more (Martin, 2013). I believe this is a result of the additional autonomy for the self-employed; when an individual could work more hours, one could decide to do so, for all possible reasons. So, many self-employed, with fewer non-work-related responsibilities, take this opportunity. However, this job autonomy is two-sided, when other responsibilities appear, the self-employed have more often the opportunity to reject certain opportunities. Hence, I think that self-employed women without children work more hours and women with children work less hours compared to wage-employed women. Females engage disproportionately in so called part-time-self-employment. This is portrait by data from the LFS (2014); “The proportion of women among the self-employed was much lower (34.2 %) than among employees, but was higher among part-time self-employed persons (55.4 %).” Women in self-employment are 22.7% more often working less than 35 hours a weeks compared to women in wage-employment. But on the other hand women in self-employment have 7.4% more often weeks of 48+ working hours (ILO, 2016). This making me believe that the self-employed have a broader range of working hours to choose from. When self-employed women become a mother they might have the opportunity to take a step back.

H3: The relationship between the “type of employment” and “having children” (as formulated in H1) is (partially) explained by “working hours”.

2.4 Parental leave

Then there are other factors which might increase the flexibility of all or some mothers, not exclusively the self-employed. Two factors are governmental reconciliation family policies and the partner’s status. Governmental reconciliation family policies have the purpose to support women in combining childcare, while still retaining their wage-employment status. The main arrangement in many countries is the parental leave. These arrangements give women in the wage-employment sector the opportunity to have paid time off, sometimes up to more than a year (Nieuwenhuis, 2014; Addati, Cassirer & Gilchrist, 2014). Thus, giving women a lot of flexibility in the early stages of their childbearing and childcare. Therefore, I believe that the “higher” the paid parental leave within a country, the less wage-employed women will be constraint, taking away the main relative merit of self-employment. Parental leave arrangements makes wage-employment more flexible, possibly even more than self-employment.

H4: The effect of self-employment and unemployment on the likeliness of motherhood, will be weaker, the more extensive parental leave policies within a country are.

2.5 Partner effects

Whether a female has a partner and whether he enjoys income is also an important factor which alters women’s employment relations. This is because women may have less need for flexibility when an unemployed partner could take care of the children. The other way around, when the partner of a women who recently had a child enjoys an income, their might be less need to continue working while the children are in a critical phase of their lives. If no partner is around, I believe mothers will more often primarily be unemployed and secondly self-employment because of the increased autonomy and control over working hours, making it easier to “combine” employment and young children.

H5a: The effect of self-employment and unemployment on the presence of at least one child, will be stronger, when a woman has no partner.

H5b: The effect of self-employment and unemployment on the presence of at least one child, will be weaker, when a woman has a partner with no income.
H5c: The effect of self-employment and unemployment on the presence of at least one child, will be stronger, when a woman has a partner with income.

Figure 1. Central Causal Model

3. Methods

3.1 Introduction to Methods

Data from the European Social Survey round 7 will be used. This data was collected throughout 2014 and finally published in early 2015. This survey contains a high amount (±500) of variables for 28221 people. The respondents come from 15 European member states, unfortunately the focus lies very centered on the Northern-European countries. France is the most Southern country which is an indication of the center of attention for this broad survey (ESS, 2015). The other countries in this survey are: Austria, Belgium, Switzerland, Czech Republic, Denmark, Germany, Estonia, Finland, (France), Ireland, Netherlands, Norway, Poland, Sweden and Slovenia.

This is observational data only, bringing threats, primarily to internal validity. Time order when determining causality is a legit problem in this specific investigation. It is uncertain whether women first have a child and then (possibly) prefer one mode of employment over the other, or that females first have a type of work and then decide to have children. This makes this study one of association rather than one of causality. Since regression is the method with which the relationship will be tested and motherhood is a binary variable opposed to the three nominal categories of type of employment, motherhood will be treated as the dependent variable. Choosing type of employment as the dependent variable would mean multinomial regression analysis is the specific subtype of regression, which I am not familiar with at this point. Since, the dependent variable is binary, logistic regression can be used, which I am also not familiar with, but is easier to master than multinomial regression. In this paper four controls are used; age, education, religiosity and country. How these are categorized, treaded and coded will be explained in section 3.8 till 3.11.

To create the sample of interest two filters will be included; gender and age. Only women aged between 25 and 47 are included. The lower limit is since a majority of this group younger than 25 does not have children for all kinds of reason (education, finances, lifestyle, etc.) Since, this article tries to explain the
combining of childcare and employment and a child in this instance is someone less than 12 years of age it would not really make sense to include women outside of their peak of fertility. Hence, I set the upper limit to women who were 35 plus 12 years of age at the time of the survey. Women with a missing value on one of the variables will be excluded from the sample.

The numbers regarding the paid parental leave weeks and amount of pay is accessible in a series of publications: “Maternity and paternity at work: Law and practice across the world” in the “International Labour Organization” (Addati, Cassirer & Gilchrist, 2014). Appendix 5 contains a guide how to use the spss-syntax file and the actual syntax written out. With this syntax it is possible to examine every coding and test I computed.

3.2 Dependent Variable (Y): Motherhood

To know whether there is a young child (<12 years) in the family two sets of variables is being matched with each other namely; “N person in household: relationship to respondent” and “Year of birth of n person in household”. Then a dummy will be created and filters will be applied to divide the women with and without children, younger than 12. I somewhat arbitrarily chose 12 years of age since this is the age where most children start going to secondary education (Eurydice, 2015).

3.3 Independent Variable (X1): Type of work

For retrieving the main independent variable I will use the variable “Employment relation”, which is included in the data set. This variable has 7 different possible values; 1. Employee 2. Self-Employed 3. Working for own family business 6. Not applicable 7. Refusal 8. Don’t know 9. No answer. Individuals with 1 as an answer “Employee” are considered regular wage-employees. Individuals with either 2 or 3 as a value are the “Self-Employed”. The group with the value “not applicable” are the unemployed. Individuals with either answer 7, 8 and 9 are not included in the analysis.

3.4 (Mediating) Independent Variable (X2): Job autonomy

The values for job autonomy will be derived from the variable; “Allowed to decide how daily work is organized”. I am aware this variable does not cover the concept of job autonomy fully, however it measures that aspect of job autonomy I am especially interested in. This variable indicates how much freedom people have when deciding about working hours and is measured on a 0 to 10 scale. Women answering with “Not applicable” are unemployed and it therefore seems illogical to include these since there is not such a thing as job autonomy in those cases. Cases with “Refusal”, “Don’t know” and “No answer” will be treated as cases with missing values.

3.5 (Mediating) Independent Variable (X3): Working hours

The amount of working hours an individual works is derived from the variable; “Total hours normally worked per week in main job overtime included”. Ranging from 0 to 168 hours a week, with a peak around the 40-hours mark. Part-time employment is defined as an individual working on a weekly basis 5 till 30 hours and full-time employment >30 hours (Buddelmeyer, 2005).

3.6 Independent Variable (X4): Partner effects

To check the “partner’s effect hypothesis” three categories will be constructed. The first one being no partner, the second partner without paid work and lastly partner with paid work. To divide “no partner”, “partner without paid work” and “partner with paid work”, the variable-series “Partner's doing last 7 days” will be used. Where “not applicable” stands for “no partner”. The group “partner without paid work” is made of persons checking one of the next boxes; “education”, “unemployed, actively looking for job”, “unemployed, not actively looking for job”, “permanently sick or disabled”, “retired”. 
“community or military service”, “housework, looking after children, others” and “other”. Person checking the box “paid work” make up the group “partner with paid work”.

3.7 (Interacting) Independent Variable (X5): Parental leave

The numbers regarding the paid weeks and amount of pay is accessible in a series of publications: “Maternity and paternity at work: Law and practice across the world” in the “International Labour Organization” (Addati, Cassirer & Gilchrist, 2014). A quick analysis shows that Norway (3500) scores higher for this variable than Belgium (1153), Sweden (1120) and Switzerland (1120) combined. For the height of the parental leave a new variable will be created; “Cumulative Parental Leave”. The amount of paid weeks times the percentage of pay will be the function of this newly constructed variable. This variable will further be categorized into low and high parental support. The cut-off point is the average height of the parental leave, which for my sample is 1747.01. Appendix 2 shows what the height of this newly computed variable is and whether they fall into the low or into the high category.

3.8 Control Variable: Education

For the control variable, education; “Highest level of education” will be used. Here all types of ISCED-classifications are represented. Also many kinds of sub forms, which I will combine to reduce back to 7 original levels of education. Appendix 1 contains a very detailed description of how these groups are constructed. These 7 levels of education are split into two groups; “No/Lower Education” and “Higher Education”. The bigger group “No/Lower Education” is made out of the subgroups; “Not completed ISCED level 1”, “ISCED1”, “ISCED 2”, “ISCED 3”. “ISCED 4”, “ISCED 5” and “ISCED 6” are the subgroups which make up the group “Higher Education”.

3.9 Control Variable: Age

For the second control variable, age. I will use “Age of respondent, calculated”. As mentioned earlier only women between 25 and 47 are included, this will leave this variable with not have that much variance, but then again it is a control variable and therefore I am not that interested in the effects of extreme cases. Ideally the inclusion of this variable leaves the “real model” unaltered.

3.10 Control Variable: Religiosity

The third variable is religiosity. In the survey respondents were asked: “Belonging to particular religion or denomination”. They could answer either with “yes” (1), “no” (2), “refusal” (7), “don’t know” (8) and “no answer” (9). 7, 8, and 9 are treated as missing values. The other two answers are operationalized as dummies.

3.11 Control Variable: Country

The final control variable is the country a women lives in. There are 15 different countries included in the original ESS. The 15 included countries are: Austria, Belgium, Switzerland, Czech Republic, Denmark, Germany, Estonia, Finland, France, Ireland, Netherlands, Norway, Poland, Sweden and Slovenia. These 15 countries will all be coded as a dummy.

3.12 Descriptive statistics and frequencies for dependent, independent and control variables

The tables below show different frequencies and descriptive statistics for the independent, control and dependent variable(s). All the frequencies for the dummy control variables can be found in the appendix (table 2a and table 2b).
4. Data Analysis

4.1 Introduction
Since I want to know how the different variables correlate to each other and what the strength of this relation is, I started the analysis with performing a bivariate analysis. The main purpose of this correlation analysis is to get a preliminary glance at the “simple” association between the independent and dependent variables. After the correlation analysis, a regression analysis is performed to see which independent variables and control variables can explain what percentage of the observed variance of the dependent variable. This can be seen by consulting the Nagelkerke pseudo R. The regression table shows which variables have a statistically significant effect, as well as size and direction of this effect.

4.2 Discussion of the results

4.2.1 Bivariate analysis

This bivariate analysis consist of roughly three parts and purposes to find “preliminary answers” on my hypotheses. In the first part the relationship between type of employment and motherhood is examined. In the second part I will assess the relationship between the main independent variable and the two mediating variables; job autonomy and working hours. In the third and final part I will examine the

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2 Unemployment is both a value in the variables “type of employment” and “working hours”
3 Important to note here is that the N for this variable is actually 4735 since I marked the unemployed as being missing on this value.
association between these mediating variables and the main dependent variable (motherhood). Figure 2 displays a schematic representation of the approach to this part of the analysis.

Figure 2. Schematic representation of the bivariate analysis.

4.2.1.1 “Type of employment” vs “Motherhood”

The relationship between type of employment and motherhood is the basis of my first hypothesis. This relationship is being tested by creating crosstabs and computing the Pearson Chi-Square score. The type of employment is inputted not as three separate dummies, but rather as one nominal variable. In table 4 the frequencies, row percentages and difference between motherhood and non-motherhood are presented. Looking at this table we can see that the biggest fraction of the women is mother. However when splitting up the women on type of employment it reveals that there is quite a difference to the actual fractions of women being mother. Wage-employed women are overall less likely to be a mother compared to the other groups. Self-employed women (54,3%) are more often mother compared to the wage-employed women (52,1%). The unemployed women are most likely to be mother. 60,7% of the unemployed women is mother, comparing this to the wage-employed and self-employed they are respectively 8,6% and 6,4% more likely to be mother. This is in line with hypothesis 1, as stated in the theory section.

Table 4. Employment relation and motherhood cross tabulation

<table>
<thead>
<tr>
<th></th>
<th>No-Mother</th>
<th>Mother</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wage-Employed</td>
<td>2084 (47,9%)</td>
<td>2264 (52,1%)</td>
<td>4,2%</td>
</tr>
<tr>
<td>Self-Employed</td>
<td>177 (45,7%)</td>
<td>210 (54,3%)</td>
<td>8,6%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>68 (39,3%)</td>
<td>105 (60,7%)</td>
<td>21,4%</td>
</tr>
</tbody>
</table>

The relation also proved to be significant. The Pearson Chi-Square for this relationship is 5,459, with 2 degrees of freedom, at an exact significance level of 0,066 (2-sided). The assumption of at least 5 expected counts is met; the minimum expected count is 82,09. This tells us that there is indeed a relationship.

4.2.1.2 “Type of employment” vs “Job autonomy” and “Working hours”

Job autonomy and working hours are both modeled as mediating effects between type of employment and motherhood. In this part I will check the first section of these mediating relationship. Therefore in this section the relationship between type of employment and job autonomy, respectively working hours is closer examined. Important to note is that unemployed females are assigned into the missing group when it comes to job-autonomy and are not categorized into the part-time and full-time groups and
therefore will not have a score for these two variables. Hence, the group of unemployed women is not further analyzed in this section.

Type of employment is, as said many times before, a nominal variable. Job autonomy is operationalized as a scale ranging from 0 till 10. To see whether the groups (self-employed and wage-employed), the groups are being split. Then to determine whether these groups have a significantly different value for this job-autonomy, a t-test is performed. This test is used to assess the correctness of hypothesis 2. Table 5 shows the mean and standard deviation (between brackets) split for wage-employees and self-employees. Also the difference in percentages and probability is displayed in the last two columns.

Table 5. Comparing job-autonomy scores between wage- and self-employed

<table>
<thead>
<tr>
<th>N=4735</th>
<th>Wage-employed (N=4348)</th>
<th>Self-employed (N=387)</th>
<th>Difference</th>
<th>Probability (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job autonomy</td>
<td>6,05 (3,210)</td>
<td>9,25 (1,657)</td>
<td>52,89%</td>
<td>&lt;0,0001</td>
</tr>
</tbody>
</table>

The difference between the mean job-autonomy score for the wage employed (6,05) and self-employed (9,25) is statistically significant on a high level (p<0,0001). This indicates that the difference of 52,89% cannot be ascribed to chance. The average score of the self-employed is exceptionally high, since the scale has a maximum value of 10. This is a (preliminary) indicator that the first part of hypothesis 2 is correct.

Now moving on to the other mediating variable; working hours. This variable is coded as a dummy variable. The part-time group is made out of person working typically 5-30 hours a week and the full-time group is made out of person working typically more than 30 hours on a weekly basis. Because this variable has nominal characteristics and so does the other variable; type of employment, a similar strategy is used as in 4.2.1.1. Coming down to a cross tabulation and a computing of the Pearson Chi-Square test.

The wage-employed females are (relatively) less often participating in part-time working weeks compared to the self-employed. Self-employed women (29,7%) participate more often in part-time work compared to the wage-employed (25,1%). This finding is (preliminary) support of the first part of hypothesis 3. What is rather remarkable however, is that self-employed females work overall more weekly-hours (40,20) compared to the wage-employed (36,52). This might be an indication that self-employed women have a wider range of working hours; they can choose how many hours they work more freely compared to the wage-employed. In table 6 the frequencies, row percentages and difference between Part-time and Full-time are presented.

Table 6. Employment relation and working hours cross tabulation

<table>
<thead>
<tr>
<th>N=4735</th>
<th>Part-time</th>
<th>Full-time</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wage-Employed</td>
<td>1091(25,1%)</td>
<td>3257(74,9%)</td>
<td>49,8%</td>
</tr>
<tr>
<td>Self-Employed</td>
<td>115(29,7%)</td>
<td>272(70,3%)</td>
<td>40,6%</td>
</tr>
</tbody>
</table>

The Pearson Chi-Square score for this relationship is 4,002, with 2 degrees of freedom, at an (exact) significance level of 0,051 (2-sided). With a minimum expected count of 98,57, the assumption of at least 5 expected counts is met. I can conclude that the relationship is significant, since I expected a sided relationship\(^4\); Self-employees work relatively more often part-time.

\(^4\) When glancing over table 5 this seems indeed the case
4.2.1.3 “Job autonomy” and “Working hours” vs “Motherhood”

The final thing left to do is to see whether the mediating variables have association with the dependent variable; Motherhood. After that the overall mediating paths will be closer looked at. In this (sub)section the unemployed females will be left out for similar reasons as mentioned in 4.2.1.2.

For the association between job autonomy and motherhood the cases will be split into non-mothers and mothers, the job autonomy means for both groups will be computed and a t-test is computed in order to acknowledge what the probability is that these differences in means can be ascribed to mere chance. In other ways table 7 will look an awful lot like table 5. Where the only difference is that wage-employed is replaced by non-mothers and self-employed is replaced by mothers.

Table 7. Comparing job-autonomy scores between non-mothers and mothers

<table>
<thead>
<tr>
<th>N=4735</th>
<th>Non-mothers (N=2261)</th>
<th>Mothers (N=2474)</th>
<th>Difference</th>
<th>Probability (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job autonomy</td>
<td>6,20 (3,283)</td>
<td>6,42 (3,184)</td>
<td>3,55%</td>
<td>0,0193</td>
</tr>
</tbody>
</table>

Mothers have generally speaking more job autonomy than non-mothers. The difference between these groups is rather small, but statistically significant. That mothers have higher job autonomy is in line with theoretical expectations.

It is difficult to say whether the effect of job autonomy that contribute via this mediating variable to be a mother is significant in size. As discussed earlier self-employed women have on average 52,89% more job autonomy and mothers have only 3,55% more job autonomy.

Now there is only the relationship between working hours and motherhood to examine. For the association between working hours and motherhood a Pearson Chi-Square score will be computed and the row percentages will also be presented. This table, on its turn, will look a lot like table 6 since working hours and motherhood are both treated as nominal variables.

Table 8. Motherhood and working hours cross tabulation

<table>
<thead>
<tr>
<th>N=4735</th>
<th>Non-mother</th>
<th>Mother</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part-time</td>
<td>461(38,2%)</td>
<td>745(61,8%)</td>
<td>61,8%</td>
</tr>
<tr>
<td>Full-time</td>
<td>1800(51,0%)</td>
<td>1729(49,0%)</td>
<td>-3,93%</td>
</tr>
</tbody>
</table>

For this test the Pearson Chi-Square score is 58,845 at an (exact) significance level of p<0,001 (2-sided). The minimum expected count for this Chi-Square test is 575,87; which is well-above the threshold of a minimum expected count of 5. Part-time workers are more often mother compared to full-time workers. To be specific, part-time workers (61,8%) are more often mother compared to full-time worker (49,0%). This is what I expected in the text accompanying hypothesis 3 in the theoretical framework.

With this finding and the finding in the earlier (sub)section we can conclude that, at least looking when looking at the isolated relationship, that self-employed women work more often part-time and subsequently that part-time work contributes to being a mother. The size of this effect is difficult to assess however.

4.2.1.4 Conclusion of the bivariate analysis

The findings in section 4.2.1 are all in line with personal expectations. However, these findings do not fulfill the requirements to accept my hypotheses; more is needed. Since, the expectation is that multiple
factors explain (partial) variance in motherhood⁵, it is also necessary to model and analyze their effect simultaneously. The need also exists to check whether these found relationships also uphold when controlling for (possible) interfering variables like age, education, religiosity and country. Another reason why bivariate analysis is not the endpoint in this analysis is that hypotheses 5 and 6 are not included in the bivariate analysis and might especially alter the findings of hypothesis 1. Hypotheses 2 and 3 are not directly affected but the possibility exists that they actually are influenced in some unforeseen way.

4.2.2 Logistic regression analysis

Logistic regression analysis is the type of statistics used for checking models with multiple independent variables and a binary dependent variable. Since I also included interaction effects in my model “partner effect” and “parental leave”, the final model (4) will additionally be conducted a total of 5 times; 1 for each partner effect (3) and for each category of parental leave (2). So, the sample will be split up a total of 5 times and then the changes in coefficients will be examined. Changes in the coefficients could tell something about the effect of these variables.

For the logistic linear regression I will build up a model in an incremental and systematic way. Model 1 and 4 are used to test hypothesis 1. Model 1 in combination with model 2 or model 3 is used for hypothesis 2, respectively hypothesis 3. Model 4 is used to check whether the findings in the earlier models still hold. It is also used to compare to model 5 and 6. For model 5, the sample is split on the height of the parental leave in the respondent’s country, the cutoff point here is the mean height of the parental leave (1747). In model 6, I split the sample on “partner status” and compute the regression for each of the values for this variable. In table 9 the buildup for the model is summarized.

<table>
<thead>
<tr>
<th>Table 9. Model build-up</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N=4908⁶</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>1  2  3  4  6a⁷</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>(Low parental leave)</td>
</tr>
<tr>
<td>(High parental leave)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>5a⁸</td>
</tr>
<tr>
<td>(No partner)</td>
</tr>
<tr>
<td>5b</td>
</tr>
<tr>
<td>(Partner without income)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>5c</td>
</tr>
<tr>
<td>(Partner with income)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Type of employment</strong></td>
</tr>
<tr>
<td>X X X X X</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Part/full-time</strong></td>
</tr>
<tr>
<td>- X - X X</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Job autonomy</strong></td>
</tr>
<tr>
<td>- - X X X</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
</tr>
<tr>
<td>X X X X X</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Education</strong></td>
</tr>
<tr>
<td>X X X X X</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Religiosity</strong></td>
</tr>
<tr>
<td>X X X X X</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Country</strong></td>
</tr>
<tr>
<td>X X X X -</td>
</tr>
</tbody>
</table>

4.2.2.1 Results of the logistic regression analysis

In the next table the findings of all models are summarized. Important to note is that the reference category is the group with the highest frequency. To show how much of the variance is explained by the actual model the Nagelkerke R² is used. In table 10 the B-coefficient, the standard error (between brackets), the statistical significance level and the Nagelkerke R² is presented. The B-coefficient represents the logit chance of Y=1 happening, compared to the chance of Y=0 happening. The odds ratio can be found by computing e⁸.

---

⁵ This is supported in the previous section: “Bivariate analysis”
⁶ This is the initial starting point of this analysis, some cases will get excluded in later paragraphs
⁷ The regression model will be conducted for both types of parental leave, to estimate the interaction effect, the country control is left out for these models for reasons I will discuss in that particular section
⁸ The regression model will be conducted for all values for partner effect to estimate the effect of this variable
The coefficients for model 1 differ quite largely from each other. The constant is highly significant but is of little interest for this particular paper. The constant is the intercept with the Y-axis and basically tells us what the chance is when all other variables are 0. This however means that the reference categories are also part of this constant. Just to illustrate what the constant means in this example is that wage-employed, high-educated and non-religious women from Ireland have 1,993 (e^{0.690}) higher predicted odds of being a mother compared to non-mother.

Now to the actual coefficients of interest. Type of employment is the only included independent variable. Since the wage-employed group is bigger compared to the self-employed and the unemployed group, the wage-employed are the reference. Unfortunately the self-employed have a statically insignificant coefficient (p=0.181). The self-employed do not have a statically higher chance to be a mother compared to the wage-employed. Unemployment has a B-coefficient (+0.317) which is statistically significant (p=0.053). The unemployed therefore have a higher chance of being a mother and it is quite substantial; an odds ratio of 1.17 (e^{0.317}), meaning that for all unemployed non-mothers there are 1.17 unemployed mothers. Since the unemployed have a higher B-coefficient than the self-employed and this coefficient is insignificant, we can deduct that self-employed women are less-likely to be a mother compared to the unemployed. This is in line with the second (b) part of hypothesis 1.

Although of little interest in this paper, the control variables seem to have a lot of influence of the dependent variable. This is especially true for religiosity and the home country. The home country variable is interesting because Ireland’s coefficient seems to be relatively high up the spectrum of B-coefficients for countries. Meaning that women in Ireland are much more likely to have children than

---

9 A positive number was expected so the p-level when doing a one-sided test would be actually lower than 0.1

---

Table 10. Regression results (part 1)

<table>
<thead>
<tr>
<th>N=4908</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B (se)</td>
<td>B (se)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.690*** (0.194)</td>
<td>0.504*** (0.196)</td>
</tr>
<tr>
<td>Type of employment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-employed</td>
<td>0.145 (0.109)</td>
<td>0.118 (0.110)</td>
</tr>
<tr>
<td>Unemployed</td>
<td>0.317* (0.164)</td>
<td>0.459*** (0.165)</td>
</tr>
<tr>
<td>Job autonomy</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Part-time</td>
<td>-</td>
<td>0.548*** (0.073)</td>
</tr>
<tr>
<td>Controls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-0.017*** (0.005)</td>
<td>-0.017*** (0.005)</td>
</tr>
<tr>
<td>Education Low</td>
<td>0.047 (0.061)</td>
<td>0.012 (0.061)</td>
</tr>
<tr>
<td>Religious</td>
<td>0.351*** (0.063)</td>
<td>0.334*** (0.064)</td>
</tr>
<tr>
<td>Control: Country</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AT</td>
<td>-0.747*** (0.144)</td>
<td>-0.737*** (0.145)</td>
</tr>
<tr>
<td>BE</td>
<td>-0.059 (0.152)</td>
<td>-0.018 (0.153)</td>
</tr>
<tr>
<td>CZ</td>
<td>-0.432*** (0.140)</td>
<td>-0.270* (0.142)</td>
</tr>
<tr>
<td>CH</td>
<td>-0.351** (0.161)</td>
<td>-0.394** (0.165)</td>
</tr>
<tr>
<td>DK</td>
<td>0.126 (0.161)</td>
<td>0.215 (0.162)</td>
</tr>
<tr>
<td>DE</td>
<td>-0.407*** (0.133)</td>
<td>-0.390*** (0.134)</td>
</tr>
<tr>
<td>EE</td>
<td>0.118 (0.142)</td>
<td>0.255* (0.144)</td>
</tr>
<tr>
<td>NL</td>
<td>0.043 (0.142)</td>
<td>-0.040 (0.144)</td>
</tr>
<tr>
<td>FI</td>
<td>-0.179 (0.149)</td>
<td>-0.78 (0.151)</td>
</tr>
<tr>
<td>FR</td>
<td>0.152 (0.147)</td>
<td>0.261* (0.149)</td>
</tr>
<tr>
<td>NO</td>
<td>-0.250 (0.163)</td>
<td>-0.193 (0.164)</td>
</tr>
<tr>
<td>PL</td>
<td>-0.263* (0.151)</td>
<td>-0.109 (0.153)</td>
</tr>
<tr>
<td>SE</td>
<td>0.148 (0.152)</td>
<td>0.230 (0.153)</td>
</tr>
<tr>
<td>SI</td>
<td>-0.700*** (0.170)</td>
<td>-0.543*** (0.172)</td>
</tr>
</tbody>
</table>

Nagelkerke pseudo R² 0.037 0.051

*p<0.1  **p<0.05  ***p<0.01 (2-sided)
comparable women in Austria (-0.747) and Slovenia (-0.700). In which country a woman lives in seems to be a good predictor for motherhood. Religious women are also more likely to have children compared to non-religious women.

In model 2; working hours is added as a dummy part-time (5-30h) or full-time (>30h), unemployment is both a value for type of employment and working hours. When adding working hours to the equation something interesting happens. When we compare it to model 1 , the gap between the unemployed (0.459) and self-employed and wage-employed gets bigger. The B-coefficient for the self-employment is still not statically different in relation to the constant. The decrease of the constant and the linked B-coefficient for self-employment tells us that part-time self-employed and wage-employed women have a higher chance of being a mother compared to the full-time employed. The relatively high B-coefficient of 0.548 (p<0.001) for part-time work, tells us that part-time employed women have an odds ratio of 1.73 ($e^{0.548}$) of being a mother over non-mother.

The explanatory power of this model is higher than model 1. The Nagelkerke pseudo R² has risen from 0.037 (model 1) to 0.051. The latter indicating that this model predicts motherhood better than model 1. The addition of part-time work is for that reason a justified inclusion.

Now this is a good moment to reflect on hypothesis 3. In that hypothesis I stated that the relationship between type of employment is partially explained by working hours. The direct effect of self-employed on motherhood is not existent. However, part-time working week seems to be a good predictor for motherhood, combined with the finding in section 4.2.1.2, that part-time work is relatively more frequently the mode of working hours for the self-employed (29.7%) compared to the wage-employed (25.1%). The latter two statements combined indicate that although it does not explain the relationship between type of employment and motherhood directly, self-employed women are more often mother, because they work part-time more often (compared to the wage-employed).

During this analysis different background check, although not presented, computed. One striking finding of these background checks is that women in unemployment are much more often engaged with education (18.5%), compared to the wage-employed (6.3%) and self-employed (4.9%). This finding is unwanted, I expected that numbers regarding “in education” would be much lower and more equal. Since this latter observation might alter the outcome, model 1 and model 2 are computed again but now when filtering out the females still in education. The outcomes are presented (in a similar fashion as table 10) in table 11.

---

10 Since the minimum age of the woman in the sample is 25
Now we can see that our expectation earlier is actually true; part-time employed women have less chance to be a mother compared to the unemployed. Since, the wage-employed (6.3%) and unemployed (18.5%), in this particular sample, are more often in education compared to the self-employed (4.9%) and we combine this with the observation that the constant and B-coefficient for the unemployed both increased, we can deduct that being in education decreases the chances of being a mother. The self-employed group has the least women in education, hence their B-coefficient decreases. In simple words, because women in education were over represented in wage-employment relative to self-employment, a part of the B-coefficient of self-employment was caused because of this.

The overall explanatory power of the model also increases, which supports my decision that for the rest of the analysis the women in education are left out. Now whether it is necessary to rework the bivariate analysis section (4.2.1) is unlikely because of two reasons and will be elaborated on in appendix 2.

Now, after the (little) detour I made in the paragraphs above, I can conclude that hypothesis 3 is true. The reason why hypothesis 3 is tested before hypothesis 2 (job autonomy) is one with consequences. The expectation written down in hypothesis 2 is about job autonomy. But, job autonomy is only relevant for the employed, not in the slightest for the unemployed, since they have no job and for this reason alone a score for job autonomy would be meaningless for them. This is the main reason why unemployed women were attributed a missing value. The latter has consequences for the remainder of the regression analysis, they will simply not be included in the models when job autonomy is also included. Practically

<table>
<thead>
<tr>
<th>Table 11. Regression results when filtering out females in education</th>
</tr>
</thead>
<tbody>
<tr>
<td>N=4585</td>
</tr>
<tr>
<td>Constant</td>
</tr>
<tr>
<td>Type of employment</td>
</tr>
<tr>
<td>Self-employed</td>
</tr>
<tr>
<td>Unemployed</td>
</tr>
<tr>
<td>Part-time</td>
</tr>
<tr>
<td>Job autonomy</td>
</tr>
<tr>
<td>Controls</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>Education Low</td>
</tr>
<tr>
<td>Religious</td>
</tr>
<tr>
<td>AT</td>
</tr>
<tr>
<td>BE</td>
</tr>
<tr>
<td>CZ</td>
</tr>
<tr>
<td>CH</td>
</tr>
<tr>
<td>DK</td>
</tr>
<tr>
<td>DE</td>
</tr>
<tr>
<td>EE</td>
</tr>
<tr>
<td>NL</td>
</tr>
<tr>
<td>FI</td>
</tr>
<tr>
<td>FR</td>
</tr>
<tr>
<td>NO</td>
</tr>
<tr>
<td>PL</td>
</tr>
<tr>
<td>SE</td>
</tr>
<tr>
<td>SI</td>
</tr>
</tbody>
</table>

Nagelkerke pseudo R² | 0.045 | 0.066 |

*p<0.1 **p<0.05 ***p<0.01 (2-sided)

11 Also the sizes of the change support this, the difference between the wage-employed and self-employed was relatively smaller than the difference between wage-employed and unemployed, which is reflected in the relatively small decrease in B-coefficient for the self-employed and much bigger increase in the B-coefficient for the unemployed.
meaning that the unemployed females will be excluded for models 3 and 4, since job autonomy is included in these two upcoming models. The latter is off course a pity, but it is not that big of a miss. The B-coefficients for unemployment, have proven in earlier models (1 and 2) that the relationship is as expected and significant. Females in unemployment are more likely to be a mother compared to women in wage-employment and self-employment. Coming down to the statement that at least part b of hypothesis 1 is true. Now for model 3 and model 4 table 12 is created which is in a similar style like table 11, with the only exception that unemployed females are not included. Model 3 is primarily used to assess the correctness of hypothesis 2. Model 4 is used as an overall check, to see how the coefficients and variables behave when adding all theorized predictors.

Table 12. Regression results (part 2)

<table>
<thead>
<tr>
<th>N=4444</th>
<th>3 B (se)</th>
<th>4 B (se)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1,089*** (0,212)</td>
<td>0,901*** (0,215)</td>
</tr>
<tr>
<td>Type of employment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-employed</td>
<td>0,047 (0,116)</td>
<td>-0,001 (0,118)</td>
</tr>
<tr>
<td>Job autonomy</td>
<td>0,014 (0,011)</td>
<td>0,019* (0,011)</td>
</tr>
<tr>
<td>Part-time</td>
<td>-</td>
<td>0,678*** (0,078)</td>
</tr>
<tr>
<td>Controls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-0,029*** (0,005)</td>
<td>-0,030*** (0,005)</td>
</tr>
<tr>
<td>Education Low</td>
<td>0,016 (0,065)</td>
<td>-0,026 (0,066)</td>
</tr>
<tr>
<td>Religious</td>
<td>0,342*** (0,067)</td>
<td>0,315*** (0,068)</td>
</tr>
<tr>
<td>AT</td>
<td>-0,777*** (0,151)</td>
<td>-0,682*** (0,152)</td>
</tr>
<tr>
<td>BE</td>
<td>-0,054 (0,161)</td>
<td>-0,005 (0,163)</td>
</tr>
<tr>
<td>CZ</td>
<td>-0,391*** (0,147)</td>
<td>-0,176 (0,150)</td>
</tr>
<tr>
<td>CH</td>
<td>-0,400** (0,174)</td>
<td>-0,460*** (0,176)</td>
</tr>
<tr>
<td>DK</td>
<td>0,159 (0,174)</td>
<td>0,290* (0,176)</td>
</tr>
<tr>
<td>DE</td>
<td>-0,388*** (0,141)</td>
<td>-0,365** (0,143)</td>
</tr>
<tr>
<td>EE</td>
<td>0,089 (0,150)</td>
<td>0,261* (0,152)</td>
</tr>
<tr>
<td>NL</td>
<td>0,074 (0,150)</td>
<td>-0,033 (0,153)</td>
</tr>
<tr>
<td>FI</td>
<td>-0,096 (0,159)</td>
<td>0,023 (0,161)</td>
</tr>
<tr>
<td>FR</td>
<td>0,138 (0,155)</td>
<td>0,274* (0,157)</td>
</tr>
<tr>
<td>NO</td>
<td>-0,190 (0,173)</td>
<td>-0,101 (0,175)</td>
</tr>
<tr>
<td>PL</td>
<td>-0,304* (0,159)</td>
<td>-0,093 (0,162)</td>
</tr>
<tr>
<td>SE</td>
<td>0,193 (0,163)</td>
<td>0,306* (0,153)</td>
</tr>
<tr>
<td>SI</td>
<td>-0,616*** (0,184)</td>
<td>-0,410** (0,187)</td>
</tr>
</tbody>
</table>

Nagelkerke pseudo R² | 0,040 | 0,062 |

*p<0,1 **p<0,05 ***p<0,01 (2-sided)

In model 3 job autonomy is added to the equation and working hours is left out. The B-coefficient for self-employment is statistically (highly) insignificant. The B-coefficient for job autonomy is positive, this is something I expected, however the coefficient is insignificant. The B-coefficient for job-autonomy however is on the borderline of being significant, therefor model 4 will give additional information on the basis on which I will conclude whether or not hypothesis 2 is accepted.

Moving over to model 4, the B-coefficient for self-employment is still insignificant. The B-coefficient for job autonomy (0,019) is significant and has the “right” (positive) direction. The overall effect however is limited since the B-coefficient is relatively low and the scale ranges from 0 till 10. Meaning that part-time employment (0,678), contributes more to the likelihood of motherhood than what job autonomy maximally (0,019 x 10= 0,190) can contribute to the likeliness of being a mother. Since there was no relationship between self-employment and motherhood directly, job autonomy does not partially explain this relation. Hypothesis 2 therefore is rejected. What we can see however is that job autonomy contributes to having children and (section 4.2.1.2) that the mean for job autonomy is higher for the self-employed (9,25) compared to the wage-employed (6,05).
We can conclude that self-employment has no direct effect but does have an indirect (positive) effect on motherhood. The following two findings combined will explain why this is the case: (1) job autonomy and working hours are both statistical significant predictors of motherhood and (2) the finding (in 4.2.1.2) that self-employment houses the predictors, job autonomy and working hours, relatively more often than that wage-employment does. In figure 3, the causal path between self-employment and motherhood is schematically represented. Important to not with this figure is that the plus signs are in comparison to wage-employment.

Figure 3. Confirmed relationship(s)

In the next paragraphs unemployment is added as a factor again, for two reasons. The first one is that I do not expect the interaction effects to have any influence on job autonomy at all and for that reason can be left out. The other reason is that it is necessary to include unemployment in order to be able to compare the interaction effect on wage-employment and self-employment with a “reference point”.

The goal of the next paragraph, accompanying table 14, is to analyze whether parental leave alters the relationship between type of employment and motherhood. Model 5a only includes females which are living in a country with low parental leave (<1747)\(^{12}\), subsequently model 5b only includes females living in a country with high parental leave (>1747). The control variable, country, will be left out of the next model (5a and 5b). This is due to the fact that parental leave is a country characteristic and it therefore could cause multicollinearity issues.

Table 13. Regression results for final model when also controlling for “low and high parental leave”

<table>
<thead>
<tr>
<th>Type of employment</th>
<th>5a B (se)</th>
<th>5b B (se)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>0.450* (0.235)</td>
<td>1.749*** (0.286)</td>
</tr>
<tr>
<td>Self-employed</td>
<td>-0.003 (0.148)</td>
<td>0.033 (0.170)</td>
</tr>
<tr>
<td>Unemployed</td>
<td>0.734*** (0.266)</td>
<td>0.966*** (0.281)</td>
</tr>
<tr>
<td>Part-time</td>
<td>0.788*** (0.091)</td>
<td>0.347*** (0.126)</td>
</tr>
<tr>
<td>Age</td>
<td>-0.017*** (0.006)</td>
<td>-0.047*** (0.008)</td>
</tr>
<tr>
<td>Education Low</td>
<td>-0.220*** (0.081)</td>
<td>-0.057 (0.094)</td>
</tr>
<tr>
<td>Religious</td>
<td>0.288*** (0.080)</td>
<td>0.204** (0.094)</td>
</tr>
</tbody>
</table>

Nagelkerke pseudo R² | 0.052 | 0.045 |

N= 2641 1944

*p<0.1 **p<0.05 ***p<0.01 (2-sided)

For this interaction effect we are especially interested in the changes of B-coefficients for type of employment (self-employment and unemployment). What we can see is that the B-coefficient for unemployment rises when moving from women living in low parental leave countries to women living

---

\(^{12}\) The cutoff point is the average height of “parental leave” for this particular sample
in high parental leave countries. This means that when moving from model 5a to model 5b, the chance of the unemployed being a mother increases compared to the wage-employed and self-employed. This is the opposite of what was expected and written down in hypothesis 4. Therefore, we conclude that the height of the parental leave does not alter the relationship between type of employment and motherhood in the expected way. As a matter of fact, the complete opposite might be true; the lower the parental leave the stronger the relationship between wage-employment and motherhood.

Then there is only one relationship and by coming hypothesis left to examine. In table 14 relevant output of the regression analysis is presented. In model 6a only females without a partner are included. In model 6b only females with a partner with no income are included. Finally, in model 6c only females with a partner with income are included.

| Table 14. Regression results for final model when also controlling for “type of partner” |
|---------------------------------------------------------------|-------------------|-------------------|-------------------|
|                                                               | 6a (No-partner) B (se) | 6b (Partner without income) B (se) | 6c (Partner with income) B (se) |
| Constant                                                      | -1,427*** (0,388)  | 4,982*** (1,004)  | 2,733*** (0,293)  |
| Type of employment                                           |                  |                  |                  |
| Self-employed                                                | 0,088 (0,254)     | 0,767 (0,611)     | -0,047 (0,137)    |
| Unemployed                                                   | 1,264*** (0,292)  | 0,965 (0,671)     | 1,012*** (0,323)  |
| Part-time                                                    | 0,750*** (0,158)  | 0,182 (0,326)     | 0,629*** (0,102)  |
| Control: Country (Ireland is reference)                      |                  |                  |                  |
| Age                                                          | 0,011 (0,010)     | -0,105*** (0,023) | -0,059*** (0,007) |
| Education Low                                                | 0,442*** (0,061)  | -0,280 (0,308)    | -0,216*** (0,081) |
| Religious                                                    | 0,285** (0,139)   | 0,108 (0,296)     | 0,298*** (0,086)  |
| AT                                                           | -1,053*** (0,275) | -1,250* (0,663)   | -0,596*** (0,210) |
| BE                                                           | -0,423 (0,329)    | -0,256 (0,600)    | -0,275 (0,214)    |
| CZ                                                           | -0,147 (0,266)    | -1,916*** (0,646) | -0,460*** (0,201) |
| CH                                                           | -0,966*** (0,369) | -1,259 (0,832)    | -0,492*** (0,229) |
| DK                                                           | -0,034 (0,360)    | -0,442 (0,851)    | 0,066 (0,226)     |
| DE                                                           | -0,582** (0,271)  | -1,114** (0,581)  | -0,554*** (0,191) |
| EE                                                           | 0,043 (0,287)     | -0,772 (0,665)    | 0,039 (0,204)     |
| NL                                                           | -0,463* (0,281)   | -0,307 (0,732)    | -0,094 (0,207)    |
| FI                                                           | -0,485 (0,357)    | -1,856*** (0,569) | -0,066 (0,215)    |
| FR                                                           | 0,261 (0,259)     | -0,766 (0,654)    | 0,230 (0,218)     |
| NO                                                           | -0,833** (0,393)  | -0,545 (0,889)    | -0,212 (0,228)    |
| PL                                                           | -0,797** (0,373)  | -0,504 (0,609)    | -0,262 (0,213)    |
| SE                                                           | 0,095 (0,303)     | 0,348 (0,901)     | 0,164 (0,222)     |
| SI                                                           | -1,622*** (0,509) | -1,186* (0,704)   | -0,548** (0,237)  |

<table>
<thead>
<tr>
<th>Nagelkerke pseudo R²</th>
<th>0.119</th>
<th>0.245</th>
<th>0.087</th>
</tr>
</thead>
<tbody>
<tr>
<td>N=</td>
<td>1268</td>
<td>281</td>
<td>3036</td>
</tr>
</tbody>
</table>

*p<0,1 **p<0,05 ***p<0,01 (2-sided)

In this section we are especially interested in in changes in the B-coefficients for unemployment and self-employment. Single women (6a) overall have less chance to be a mother compared to women with a partner. Women with a partner without income have a significant higher chance of being a mother. The B-coefficients for the Self-employed are in none of the three groups statically different from the wage employed. The B-coefficient is significant in model 6a and 6c and not in 6b. The coefficient in model 6a is higher than in model 6c. The coefficient of model 6c on its turn is higher than the B-coefficient in model 6b (for unemployment). The above discussed findings are somewhat in line with hypothesis 5. In these models, the changes in B-coefficients for unemployment are in the “correct” way, while the self-employed are not in the slightest way affected by the “partner effect”.

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5. Conclusion

In this paper I examined the effect of the type of employment and their characteristics on whether women will be more or less likely to have children. The main finding is that the type of employment does change the likelihood of women having children. In this paper three types of employment are included: unemployment, wage-employment and self-employment. The unemployed women are the most likely to be a mother. Self-employed women are more likely to be a mother compared to the wage-employed, but solely for the reason that self-employment offers more job autonomy and more flexibility when it comes to working hours. When levels of job autonomy and part-time work would be equal in both self- and wage-employment, no difference in motherhood-likelihood would be observed.

Most of the European countries cope with the question of how to finance the aging population. An increase in birthrates might prove an effective way to flatten the ageing. The findings in this paper suggest that women need flexibility and till some degree freedom in order to balance life and career. Increasing women’s job autonomy and flexibility when it comes to working hours are possible measures to stimulate women to get children. This increase in the factors above might be achieved by supporting females to get into self-employment or have policy measure address these particular issues for the wage-employed.

Whether or not a women has a partner (with income), does not affect whether she will be more or less inclined to combine either self-employment or wage-employment with motherhood. Only the unemployed females are more inclined to be a mother when there is no partner around or a partner with an income, compared to women with a partner without an income. The expectation stated in the theory section was that when the parental leave is high the (positive) effect of self-employment and unemployment on having children would be dampened. This expectation was based on the fact that parental leave can offer wage-employed women more flexibility (in an somewhat artificial way) and for this reason might take away the merits of unemployment and self-employment. The results proof that the effect of parental leave is rather the opposite of this initial expectation. Although women are overall more likely to get children in these “high parental leave countries”, the unemployed seem to be also more inclined to have children, compared both to its counterpart in “low parental leave countries” and the wage-employed and self-employed in general. Secondly, the likelihood of motherhood when being wage-employment is in no model statically different from the likelihood of self-employment women being a mother.

6. Discussion

This discussion serves two purposes. In this piece I will reflect on the internal and external validity of this paper and secondly recommendations for future research will be provided. The internal validity of this paper is troubled by a number of things. Because the time-order between type of employment and motherhood is unclear, this paper has become one of association rather that causality. This problem could be solved by doing a panel study. Unfortunately, because of the lack of time and monetary resources this was not possible in this particular paper.

Then there is the fact that the indicator for job autonomy is a rather narrow one. It asks the people to score their ability to decide about their daily activities on a 0 till 10 scale. Better, more objective job autonomy indicators could provide more accurate results.

A weak point of this study is the way I handled the interaction effects. I deliberately choose a less “elegant” way to test hypothesis 4 and 5. Since I this is the first time I worked with logistic regression, interaction effects and dummies, time had to be cut somewhere when clocks started becoming my enemy. The number of cases used in this paper seem sufficient to generalize onto the entire population. The population here being, women between 25 and 47, not in education, in 15 European countries.
The control variables in this paper behaved in some occasions as a good predictor for motherhood. Especially the country variable showed a lot of variation and dispersion. It for some reason matters for her chance of being a mother whether women come from Austria or from Sweden. This is a direct indication that other contextual factors are at work. My recommendation for further research goes for that reason out to exploring and examining country policies and societal believes that might explain the variation in levels of motherhood.

A (latent) finding which I have not discussed in the results section, is that lower educated females have a higher chance to be a single mother compared to the higher educated. The second recommendation for further research is about this finding. Exploring and mapping the causes to why these lower educated females are more often single mother and what the consequences are for these females and the society as a whole.
Literature


Appendix

Appendix 1:

“Not completed ISCED level 1” is the first group, when starting with the least educated. “ISCED 1, completed primary education” is the second group. “Vocational ISCED 2C < 2 years, no access ISCED 3”, “General/pre-vocational ISCED 2A/2B, access ISCED 3 vocational”, “General ISCED 2A, access ISCED 3A general/all 3” and “Vocational ISCED 2A/2B, access ISCED 3 vocational” will all be reduced to the category “ISCED 2”. The fourth category will be “ISCED 3” and consists out of the following: “Vocational ISCED 3C < 2 years, no access ISCED 5”, “General ISCED 3 >= 2 years, no access ISCED 5”, “General ISCED 3A/3B, access ISCED 5B/lower tier 5A”, “General ISCED 3A, access upper tier ISCED 5A/all 5”, “Vocational ISCED 3C >= 2 years, no access ISCED 5”, “Vocational ISCED 3A, access ISCED 5B/lower tier 5A” and finally “Vocational ISCED 3A, access upper tier ISCED 5A/all 5”. The fifth group “ISCED 4” will consist out of the following values: “General ISCED 4A/4B, access ISCED 5B/lower tier 5A”, “General ISCED 4A, access upper tier ISCED 5A/all 5”, “ISCED 4 programs without access ISCED 5”, “Vocational ISCED 4A/4B, access ISCED 5B/lower tier 5A” and “Vocational ISCED 4A, access upper tier ISCED 5A/all 5”. The sixth group “ISCED 5” will consist out of the following values: “ISCED 5A short, intermediate/academic/general tertiary below bachelor”, “ISCED 5B short, advanced vocational qualifications”, “ISCED 5A medium, bachelor/equivalent from lower tier tertiary”, “ISCED 5A medium, bachelor/equivalent from upper/single tier tertiary”, “ISCED 5A long, master/equivalent from lower tier tertiary” and finally “ISCED 5A long, master/equivalent from upper/single tier tertiary”. The last group “ISCED 6” will consist of the group “ISCED 6, doctoral degree”. The values “Other”, “Refusal”, “Don’t know” and “No answer” will be treated as missing values. Since this variable is a control in my analysis, I am not too much interested in details regarding this variable. The purpose of this variable is just to prove that education does not alter the relationship between the variables of interest. Because it makes the analysis much more comprehensible, these 7 groups are further divided into 2 groups; “No/Lower Education” and “Higher Education”.

Appendix 2:

<table>
<thead>
<tr>
<th>Table 1. Frequencies of Dummies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Austria</td>
</tr>
<tr>
<td>Belgium</td>
</tr>
<tr>
<td>Switzerland</td>
</tr>
<tr>
<td>Czech Republic</td>
</tr>
<tr>
<td>Denmark</td>
</tr>
<tr>
<td>Germany</td>
</tr>
<tr>
<td>Estonia</td>
</tr>
<tr>
<td>Finland</td>
</tr>
<tr>
<td>France</td>
</tr>
<tr>
<td>Ireland</td>
</tr>
<tr>
<td>Netherlands</td>
</tr>
<tr>
<td>Norway</td>
</tr>
<tr>
<td>Poland</td>
</tr>
<tr>
<td>Sweden</td>
</tr>
<tr>
<td>Slovenia</td>
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</table>
Appendix 3:

Table 2a. Frequencies of Control Variable Dummies

<table>
<thead>
<tr>
<th>N=4908</th>
<th>Low Education</th>
<th>High Education</th>
<th>Not-Religious</th>
<th>Religious</th>
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<tbody>
<tr>
<td>No</td>
<td>2656</td>
<td>2252</td>
<td>2423</td>
<td>2485</td>
</tr>
<tr>
<td>Yes</td>
<td>2252</td>
<td>2656</td>
<td>2485</td>
<td>2423</td>
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</tbody>
</table>

Table 2b. Country Dummies

<table>
<thead>
<tr>
<th>N=4908</th>
<th>AT</th>
<th>BE</th>
<th>CH</th>
<th>CZ</th>
<th>DE</th>
<th>DK</th>
<th>EE</th>
<th>IE</th>
<th>FI</th>
<th>FR</th>
<th>NL</th>
<th>NO</th>
<th>PL</th>
<th>SE</th>
<th>SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
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<td>4615</td>
<td>4686</td>
<td>4472</td>
<td>4457</td>
<td>4662</td>
<td>4533</td>
<td>4414</td>
<td>4603</td>
<td>4576</td>
<td>4534</td>
<td>4676</td>
<td>4623</td>
<td>4605</td>
<td>4701</td>
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<tr>
<td>Yes</td>
<td>353</td>
<td>293</td>
<td>222</td>
<td>436</td>
<td>451</td>
<td>246</td>
<td>375</td>
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<td>305</td>
<td>332</td>
<td>373</td>
<td>232</td>
<td>285</td>
<td>303</td>
<td>207</td>
</tr>
</tbody>
</table>

Appendix 4:

The first argument is rather simple, whether or not the hypotheses are accepted depends not on the “simple” bivariate relationships. The second reason is a little more substantial, I expect the changes created by this exclusion of women in education not to change the sign of the effect but only the sizes. In the parts about the relation between type of employment and the two mediating effects (4.2.1.2), the unemployed women are not included anyway. The difference between “in education” for wage-employed (6.3%) and self-employed (4.9%) is so small that it is not worthwhile to rework those parts, since the outcomes will be more or less the same. Now let me move on to why it is not necessary to rework the bivariate relationship between type of employment and motherhood (4.2.1.1). I stated in that section that unemployed females are more often mother compared to the other two groups. This still holds, the only difference is, is that unemployed women are even more often mother when excluding the women still in education. The latter bivariate relation still holds, the only difference is that it has grown in strength. In the same section I compare self-employed women to wage-employed women. Now, I stated that the self-employed are 2.2% more likely to be a mother compared to the wage-employed. This 2.2% difference is bigger than the difference of women still occupied with education (1.4%). Therefore even if all women in education were not to have children, the bivariate relationship still holds, it has only become smaller.
Appendix 5:

To use the data set go to http://www.europeansocialsurvey.org/data/download.html?r=7. Sign-up using your information, and download the spss file. Below my syntax is provided. To use it, copy it in the “syntax editor”, rewrite the first command to have it select the ESS file on the computer. The first part of the syntax (until line 372), is used to create the needed data set to run the tests. Everything after line 372 is used to create different tables and other data. Enjoy:


*** Taking only the variables of interrest out of the original ESS file ***

GET
FILE='C:\Users\Kevin\Downloads\ESS7e01.sav'
/KEEP gndr agea wkdcorga cntry edulvlb rlgblg emplrel wkhtot rshipa2 rshipa3 rshipa4 rshipa5 rshipa6 rshipa7 rshipa8 rshipa9 rshipa10 rshipa11 rshipa12 rshipa13 yrbrn2 yrbrn3 yrbrn4 yrbrn5 yrbrn6 yrbrn7 yrbrn8 yrbrn9 yrbrn10 yrbrn11 yrbrn12 yrbrn13 pdwrkp edctnp uemplap uemplip dsbldp rtdp cmsrvp hswrkp dngothp dngdkp dngnapp dngrefp dngnap edctn.

*** Filtering out males and females with an age not between 25 and 47 ***

FILTER OFF.
USE ALL.
SELECT IF (gndr = 2 & agea >= 25 & agea <= 47).
EXECUTE.

*** Creating a new variable which indicates wheter women have children below 12 living in the household ***

recode rshipa2 (66 77 88 99=sysmis) (else=0) into fam2_youngchild.
if (rshipa2=2 & yrbrn2 >= 2003) fam2_youngchild=1.

recode rshipa3 (66 77 88 99=sysmis) (else=0) into fam3_youngchild.
if (rshipa3=2 & yrbrn3 >= 2003) fam3_youngchild=1.

recode rshipa4 (66 77 88 99=sysmis) (else=0) into fam4_youngchild.
if (rshipa4=2 & yrbrn4 >= 2003) fam4_youngchild=1.

recode rshipa5 (66 77 88 99=sysmis) (else=0) into fam5_youngchild.
if (rshipa5=2 & yrbrn5 >= 2003) fam5_youngchild=1.
recode rshipa6 (66 77 88 99=sysmis) (else=0) into fam6_youngchild.
if (rshipa6=2 & yrbrn6 >= 2003) fam6_youngchild=1.

recode rshipa7 (66 77 88 99=sysmis) (else=0) into fam7_youngchild.
if (rshipa7=2 & yrbrn7 >= 2003) fam7_youngchild=1.

recode rshipa8 (66 77 88 99=sysmis) (else=0) into fam8_youngchild.
if (rshipa8=2 & yrbrn8 >= 2003) fam8_youngchild=1.

recode rshipa9 (66 77 88 99=sysmis) (else=0) into fam9_youngchild.
if (rshipa9=2 & yrbrn9 >= 2003) fam9_youngchild=1.

recode rshipa10 (66 77 88 99=sysmis) (else=0) into fam10_youngchild.
if (rshipa10=2 & yrbrn10 >= 2003) fam10_youngchild=1.

recode rshipa11 (66 77 88 99=sysmis) (else=0) into fam11_youngchild.
if (rshipa11=2 & yrbrn11 >= 2003) fam11_youngchild=1.

recode rshipa12 (66 77 88 99=sysmis) (else=0) into fam12_youngchild.
if (rshipa12=2 & yrbrn12 >= 2003) fam12_youngchild=1.

recode rshipa13 (66 77 88 99=sysmis) (else=0) into fam13_youngchild.
if (rshipa13=2 & yrbrn13 >= 2003) fam13_youngchild=1.

exe.

compute atleastoneyounghild =0.
if (fam2_youngchild=1 | fam3_youngchild=1 | fam4_youngchild=1 | fam5_youngchild=1 | fam6_youngchild=1 | fam7_youngchild=1 | fam8_youngchild=1 | fam9_youngchild=1 | fam10_youngchild=1 | fam11_youngchild=1 | fam12_youngchild=1 | fam13_youngchild=1 ) atleastoneyounghild = 1.

exe.

compute N_youngchildren = sum(fam2_youngchild to fam13_youngchild).

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*** Reducing the amount of categories in the variable "Highest level of education" ***

RECODE edulvlb (113=1) (800=6) (212 thru 225=2) (226 thru 325=3) (410 thru 425=4) (500 thru 725=5).
EXECUTE.

RECODE edulvlb (0 thru 3=1) (4 thru 7=0) (1000 thru Highest=SYSMIS) INTO EducationLow.
VARIABLE LABELS EducationLow 'EducationLow'.
EXECUTE.

RECODE edulvlb (1000 thru Highest=SYSMIS) (4 thru 7=1) (0 thru 3=0) INTO EducationHigh.
VARIABLE LABELS EducationHigh 'EducationHigh'.
EXECUTE.

*** Making "Working in family business" also be marked as "self-employed" within the "Employment Relation" variable ***

RECODE emplrel (3=2).
EXECUTE.

*** and dummyfying this "Employment Relation" variable ***

RECODE emplrel (6=5).
EXECUTE.

RECODE emplrel (1=1) (2=0) (5=0) (7 thru Highest=SYSMIS) INTO Employee.
VARIABLE LABELS Employee 'Regular Employed'.
EXECUTE.

RECODE emplrel (2=1) (1=0) (5=0) (7 thru Highest=SYSMIS) INTO SelfEmployed.
VARIABLE LABELS SelfEmployed 'Self-Employed'.
EXECUTE.
*** Creating dummies for parttime, fulltime and unemployed women ***

RECODE wkhtot (666=400).
EXECUTE.

RECODE wkhtot (5 thru 30=1) (31 thru 300=0) (400=0) (700 thru Highest=SYSMIS) INTO Parttime.
VARIABLE LABELS Parttime 'Parttime'.
EXECUTE.

RECODE wkhtot (31 thru 300=1) (5 thru 30=0) (400=0) (700 thru Highest=SYSMIS) INTO Fulltime.
VARIABLE LABELS Fulltime '>=30'.
EXECUTE.

RECODE wkhtot (400=1) (5 thru 300=0) (700 thru Highest=SYSMIS) INTO Unemployed.
VARIABLE LABELS Unemployed 'Unemployed'.
EXECUTE.

RECODE Parttime (1=1) INTO PARTFULLTIME.
VARIABLE LABELS PARTFULLTIME 'Partime2Fulltime'.
EXECUTE.

RECODE Fulltime (1=2) INTO PARTFULLTIME.
VARIABLE LABELS PARTFULLTIME 'Partime2Fulltime'.
EXECUTE.

RECODE Unemployed (1=0) INTO Employee.
VARIABLE LABELS Employee 'Regular Employed'.
EXECUTE.

RECODE Unemployed (1=0) INTO SelfEmployed.
VARIABLE LABELS SelfEmployed 'Self-Employed'.
EXECUTE.
RECODE Employee (1=0) INTO Unemployed.
VARIABLE LABELS Unemployed 'Unemployed'.
EXECUTE.

RECODE SelfEmployed (1=0) INTO Unemployed.
VARIABLE LABELS Unemployed 'Unemployed'.
EXECUTE.

*** Creating dummies for religious ***

RECODE rlgblg (1=1) (2=0) (4 thru HIGHEST=SYSMIS) INTO Religious.
VARIABLE LABELS Religious 'Yes'.
EXECUTE.

RECODE rlgblg (1=0) (2=1) (4 thru HIGHEST=SYSMIS) INTO NOTReligious.
VARIABLE LABELS NOTReligious 'Yes'.
EXECUTE.

*** Making unemployed women score missing for job autonomy ***

DO IF (Unemployed = 1).
RECODE wkdcorga (ELSE=SYSMIS).
END IF.
EXECUTE.

*** Creating dummies for "no partner", "partner without paid work" and "partner with paid work" ***

RECODE pdwrk (1=1) INTO PartnerWithPaidWork.
VARIABLE LABELS PartnerWithPaidWork 'PWithPW'.
EXECUTE.

RECODE dngnapp (1=1) INTO NoPartner.
VARIABLE LABELS NoPartner 'NP'.
EXECUTE.
RECODE edctnp (1=1) INTO Partnerwithoutpaidwork.
VARIABLE LABELS Partnerwithoutpaidwork 'PWPW'.
EXECUTE.

RECODE uemplap (1=1) INTO Partnerwithoutpaidwork.
VARIABLE LABELS Partnerwithoutpaidwork 'PWPW'.
EXECUTE.

RECODE uemplip (1=1) INTO Partnerwithoutpaidwork.
VARIABLE LABELS Partnerwithoutpaidwork 'PWPW'.
EXECUTE.

RECODE dsbldp (1=1) INTO Partnerwithoutpaidwork.
VARIABLE LABELS Partnerwithoutpaidwork 'PWPW'.
EXECUTE.

RECODE rtrdp (1=1) INTO Partnerwithoutpaidwork.
VARIABLE LABELS Partnerwithoutpaidwork 'PWPW'.
EXECUTE.

RECODE cmsrvp (1=1) INTO Partnerwithoutpaidwork.
VARIABLE LABELS Partnerwithoutpaidwork 'PWPW'.
EXECUTE.

RECODE hswrkp (1=1) INTO Partnerwithoutpaidwork.
VARIABLE LABELS Partnerwithoutpaidwork 'PWPW'.
EXECUTE.

RECODE dngothp (1=1) INTO Partnerwithoutpaidwork.
VARIABLE LABELS Partnerwithoutpaidwork 'PWPW'.
EXECUTE.
RECODE PartnerWithPaidWork (1=0) INTO Partnerwithoutpaidwork.
VARIABLE LABELS Partnerwithoutpaidwork 'PWPW'.
EXECUTE.

RECODE NoPartner (1=0) INTO Partnerwithoutpaidwork.
VARIABLE LABELS Partnerwithoutpaidwork 'PWPW'.
EXECUTE.

RECODE Partnerwithoutpaidwork (1=0) INTO PartnerWithPaidWork.
VARIABLE LABELS PartnerWithPaidWork 'PWithPW'.
EXECUTE.

RECODE NoPartner (1=0) INTO PartnerWithPaidWork.
VARIABLE LABELS PartnerWithPaidWork 'PWithPW'.
EXECUTE.

RECODE Partnerwithoutpaidwork (1=0) INTO NoPartner.
VARIABLE LABELS NoPartner 'NP'.
EXECUTE.

RECODE PartnerWithPaidWork (1=0) INTO NoPartner.
VARIABLE LABELS NoPartner 'NP'.
EXECUTE.

*** After manually constructing the parental leave levels of the countries, these were linked to the corresponding countries ***

RECODE cntry ('AT'=1600) INTO ParentalLeave.
VARIABLE LABELS ParentalLeave 'Cummulative Parental Leave (weeks * %)'.
EXECUTE.

RECODE cntry ('BE'=1153) INTO ParentalLeave.
VARIABLE LABELS ParentalLeave 'Cummulative Parental Leave (weeks * %)'.
EXECUTE.
RECODE cntry (‘CZ’=1960) INTO ParentalLeave.
VARIABLE LABELS ParentalLeave 'Cummulative Parental Leave (weeks * %)'.
EXECUTE.

RECODE cntry (‘DK’=1800) INTO ParentalLeave.
VARIABLE LABELS ParentalLeave 'Cummulative Parental Leave (weeks * %)'.
EXECUTE.

RECODE cntry (‘DE’=1400) INTO ParentalLeave.
VARIABLE LABELS ParentalLeave 'Cummulative Parental Leave (weeks * %)'.
EXECUTE.

RECODE cntry (‘CH’=1120) INTO ParentalLeave.
VARIABLE LABELS ParentalLeave 'Cummulative Parental Leave (weeks * %)'.
EXECUTE.

RECODE cntry (‘EE’=2000) INTO ParentalLeave.
VARIABLE LABELS ParentalLeave 'Cummulative Parental Leave (weeks * %)'.
EXECUTE.

RECODE cntry (‘IE’=2080) INTO ParentalLeave.
VARIABLE LABELS ParentalLeave 'Cummulative Parental Leave (weeks * %)'.
EXECUTE.

RECODE cntry (‘NL’=1600) INTO ParentalLeave.
VARIABLE LABELS ParentalLeave 'Cummulative Parental Leave (weeks * %)'.
EXECUTE.

RECODE cntry (‘FI’=1260) INTO ParentalLeave.
VARIABLE LABELS ParentalLeave 'Cummulative Parental Leave (weeks * %)'.
EXECUTE.

RECODE cntry (‘FR’=1600) INTO ParentalLeave.
VARIABLE LABELS ParentalLeave 'Cummulative Parental Leave (weeks * %)'.
EXECUTE.

RECODE cntry ('PL'=2600) INTO ParentalLeave.
VARIABLE LABELS ParentalLeave 'Cummulative Parental Leave (weeks * %)'.
EXECUTE.

RECODE cntry ('NO'=3500) INTO ParentalLeave.
VARIABLE LABELS ParentalLeave 'Cummulative Parental Leave (weeks * %)'.
EXECUTE.

RECODE cntry ('SE'=1120) INTO ParentalLeave.
VARIABLE LABELS ParentalLeave 'Cummulative Parental Leave (weeks * %)'.
EXECUTE.

RECODE cntry ('SI'=1500) INTO ParentalLeave.
VARIABLE LABELS ParentalLeave 'Cummulative Parental Leave (weeks * %)'.
EXECUTE.

*** Sorting into highlow***

RECODE ParentalLeave (0 thru 1747=1) (ELSE=0) INTO LOW.
VARIABLE LABELS LOW '<1747,01'.
EXECUTE.

RECODE ParentalLeave (1748 thru 10000=1) (ELSE=0) INTO HIGH.
VARIABLE LABELS HIGH '>1747,01'.
EXECUTE.

*** creating dummies out of country variable ****

RECODE cntry ('AT'=1) (ELSE=0) INTO AUSTRIA.
VARIABLE LABELS AUSTRIA '1YES'.

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EXECUTE.

RECODE cntry ('BE'=1) (ELSE=0) INTO BELGIUM.
VARIABLE LABELS  BELGIUM '1YES'.
EXECUTE.

RECODE cntry ('CZ'=1) (ELSE=0) INTO CZECH.
VARIABLE LABELS  CZECH '1YES'.
EXECUTE.

RECODE cntry ('CH'=1) (ELSE=0) INTO SWITZERLAND.
VARIABLE LABELS  SWITZERLAND '1YES'.
EXECUTE.

RECODE cntry ('DK'=1) (ELSE=0) INTO DENMARK.
VARIABLE LABELS  DENMARK '1YES'.
EXECUTE.

RECODE cntry ('DE'=1) (ELSE=0) INTO GERMANY.
VARIABLE LABELS  GERMANY '1YES'.
EXECUTE.

RECODE cntry ('EE'=1) (ELSE=0) INTO ESTONIA.
VARIABLE LABELS  ESTONIA '1YES'.
EXECUTE.

RECODE cntry ('IE'=1) (ELSE=0) INTO IRELAND.
VARIABLE LABELS  IRELAND '1YES'.
EXECUTE.

RECODE cntry ('NL'=1) (ELSE=0) INTO NETHERLANDS.
VARIABLE LABELS  NETHERLANDS '1YES'.
EXECUTE.
RECODE cntry ('FI'=1) (ELSE=0) INTO FINLAND.
VARIABLE LABELS FINLAND '1YES'.
EXECUTE.

RECODE cntry ('FR'=1) (ELSE=0) INTO FRANCE.
VARIABLE LABELS FRANCE '1YES'.
EXECUTE.

RECODE cntry ('NO'=1) (ELSE=0) INTO NORWAY.
VARIABLE LABELS NORWAY '1YES'.
EXECUTE.

RECODE cntry ('PL'=1) (ELSE=0) INTO POLAND.
VARIABLE LABELS POLAND '1YES'.
EXECUTE.

RECODE cntry ('SE'=1) (ELSE=0) INTO SWEDEN.
VARIABLE LABELS SWEDEN '1YES'.
EXECUTE.

RECODE cntry ('SI'=1) (ELSE=0) INTO SLOVENIA.
VARIABLE LABELS SLOVENIA '1YES'.
EXECUTE.

*** Deleting all cases with missing values; for some unknown reason jobautonomy (wkdcorga) and other variables do not work with this command so i computed an additional command ***

FILTER OFF.
USE ALL.
SELECT IF not (wkdcorga > 10 & Employee = 1).
EXECUTE.

FILTER OFF.
USE ALL.
SELECT IF not (wkdcorga > 10 & SelfEmployed = 1).
EXECUTE.

select if not (sysmis(atleastoneyounghild)) & not (sysmis(Employee)) & not (sysmis(SelfEmployed)) & not (sysmis(Unemployed)) & not (sysmis(EducationLow)) & not (sysmis(EducationHigh)).

select if not (sysmis(Parttime)) & not (sysmis(Fulltime)) & not (sysmis(Religious)) & not (sysmis(NOTReligious)) & not (sysmis(PartnerWithPaidWork)) & not (sysmis(NoPartner)) & not (sysmis(Partnerwithoutpaidwork)) & not (sysmis(ParentalLeave)).

*** Data for table 1 & 2***

FREQUENCIES VARIABLES=atleastoneyounghild SelfEmployed Parttime agea wkdcorga EducationLow EducationHigh Employee Unemployed Fulltime Religious PartnerWithPaidWork NOTReligious NoPartner Partnerwithoutpaidwork ParentalLeave
/ORDER=ANALYSIS.

FREQUENCIES VARIABLES=AUSTRIA BELGIUM CZECH SWITZERLAND DENMARK GERMANY ESTONIA IRELAND NETHERLANDS FINLAND FRANCE NORWAY POLAND SWEDEN SLOVENIA
/ORDER=ANALYSIS.

*** DATA for table 3 ***

DESCRIPTIVES VARIABLES=agea wkdcorga at leastoneyounghild Employee SelfEmployed EducationLow
EducationHigh Unemployed Religious NOTReligious PartnerWithPaidWork Parttime Partnerwithoutpaidwork
NoPartner ParentalLeave Fulltime
/STATISTICS=MEAN STDDEV MIN MAX
/MISSING=INCLUDE.

FREQUENCIES VARIABLES= HIGH LOW
/ORDER=ANALYSIS.

***DATA for section 4.2.1.1***

CROSSTABS
/TABLES=emplrel BY atleastoneyounghild
/FORMAT=AVALUE TABLES
/STATISTICS=CHISQ CC PHI LAMBDA
/CELLS=COUNT EXPECTED ROW COLUMN TOTAL SRESID
/COUNT ROUND CELL
/METHOD=EXACT TIMER(5).

*** DATA for section 4.2.1.2***

*** first subsection ***

USE ALL.
COMPUTE filter_$(Employee=1).
VARIABLE LABELS filter_$(Employee=1 (FILTER)).
VALUE LABELS filter_$(0 'Not Selected' 1 'Selected').
FORMATS filter_$(f1.0).
FILTER BY filter_$(. EXECUTE.

DESCRIPTIVES VARIABLES= wkdcorga
/STATISTICS=mean STDDEV min max
/missing=INCLUDE.

FILTER OFF.
USE ALL.
EXECUTE.

USE ALL.
COMPUTE filter_$(SelfEmployed=1).
VARIABLE LABELS filter_$(SelfEmployed=1 (FILTER)).
VALUE LABELS filter_ $ 0 'Not Selected' 1 'Selected'.
FORMATS filter_ $(f1.0).
FILTER BY filter_ $.
EXECUTE.

DESCRIPTIVES VARIABLES= wkdcorga
/STATISTICS=mean STDDEV min max
/missing=INCLUDE.

FILTER OFF.
USE ALL.
EXECUTE.

***second subsection, first it is neccesary to filter out unemployed women, since they score 0's on part-time full-time and might alter the significance levels***

***Table 6***

USE ALL.
COMPUTE filter_=$(Unemployed=0).
VARIABLE LABELS filter_ $ 'Unemployed=0 (FILTER)'.
VALUE LABELS filter_ $ 0 'Not Selected' 1 'Selected'.
FORMATS filter_ $ (f1.0).
FILTER BY filter_ $.
EXECUTE.

CROSSTABS
/TABLES=emplrel BY PARTFULLTIME
/FORMAT=AVALUE TABLES
/STATISTICS=CHISQ CC PHI LAMBDA
/CELLS=COUNT EXPECTED ROW COLUMN TOTAL SRESID
/COUNT ROUND CELL
/METHOD=EXACT TIMER(5).

FILTER OFF.
USE ALL.
EXECUTE.

***Text beneath table 6 (SE work more hours on average)***

USE ALL.
COMPUTE filter_$(=Employee=1).
VARIABLE LABELS filter_$( 'Employee=1 (FILTER)').
VALUE LABELS filter_$( 0 'Not Selected' 1 'Selected').
FORMATS filter_$( f1.0).
FILTER BY filter_$(.
EXECUTE.

DESCRIPTIVES VARIABLES= wkhtot
/STATISTICS=mean STDDEV min max
/missing=INCLUDE.

FILTER OFF.
USE ALL.
EXECUTE.

USE ALL.
COMPUTE filter_$(=SelfEmployed=1).
VARIABLE LABELS filter_$( 'SelfEmployed=1 (FILTER)'.
VALUE LABELS filter_$( 0 'Not Selected' 1 'Selected').
FORMATS filter_$( f1.0).
FILTER BY filter_$(.
EXECUTE.

DESCRIPTIVES VARIABLES= wkhtot
/STATISTICS=mean STDDEV min max
/missing=INCLUDE.

FILTER OFF.
USE ALL.
EXECUTE.

*** DATA for section 4.2.1.3 ***

*** TABLE 7***

USE ALL.
COMPUTE filter_$(atleastoneyounghild=0).
VARIABLE LABELS filter_$(atleastoneyounghild=0) 'FILTER'.
VALUE LABELS filter_$(atleastoneyounghild=0) 'Not Selected' 0 'Selected'.
FORMATS filter_$(atleastoneyounghild=0) (f1.0).
FILTER BY filter_$(atleastoneyounghild=0).
EXECUTE.

DESCRIPTIVES VARIABLES= wkdcorga
/STATISTICS=mean STDDEV min max
/missing=INCLUDE.

FILTER OFF.
USE ALL.
EXECUTE.

USE ALL.
COMPUTE filter_$(atleastoneyounghild=1).
VARIABLE LABELS filter_$(atleastoneyounghild=1) 'FILTER'.
VALUE LABELS filter_$(atleastoneyounghild=1) 'Not Selected' 0 'Selected'.
FORMATS filter_$(atleastoneyounghild=1) (f1.0).
FILTER BY filter_$(atleastoneyounghild=1).
EXECUTE.

DESCRIPTIVES VARIABLES= wkdcorga
/STATISTICS=mean STDDEV min max
/missing=INCLUDE.
FILTER OFF.
USE ALL.
EXECUTE.

*** TABLE 8***

USE ALL.
COMPUTE filter_$=(Unemployed=0).
VARIABLE LABELS filter_$ 'Unemployed=0 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.

CROSSTABS
/TABLES= PARTFULLTIME BY atleastoneyounghild
/FORMAT=AVALUE TABLES
/STATISTICS=CHISQ CC PHI LAMBDA
/CELLS=COUNT EXPECTED ROW COLUMN TOTAL SRESID
/COUNT ROUND CELL
/METHOD=EXACT TIMER(5).

FILTER OFF.
USE ALL.
EXECUTE.

*** Retrieving data for table 10***

*** Table 10mode1 ***

LOGISTIC REGRESSION VARIABLES atleastoneyounghild
/METHOD=ENTER SelfEmployed Unemployed agea EducationLow religious AUSTRIA BELGIUM CZECH SWITZERLAND
DENMARK GERMANY ESTONIA NETHERLANDS FINLAND FRANCE NORWAY
POLAND SWEDEN SLOVENIA
/Criteria=PIN(.05) POUT(.10) ITERATE(20) CUT(.5).

*** model 2***

LOGISTIC REGRESSION VARIABLES atleastoneyounghild
/METHOD=ENTER SelfEmployed Unemployed Parttime agea EducationLow religious AUSTRIA
BELGIUM CZECH SWITZERLAND

DENMARK GERMANY ESTONIA NETHERLANDS FINLAND FRANCE NORWAY
POLAND SWEDEN SLOVENIA
/Criteria=PIN(.05) POUT(.10) ITERATE(20) CUT(.5).

*** data for text concerning model 2***

CROSSTABS
/TABLES=emplrel BY edctn
/FORMAT=AVALUE TABLES
/STATISTICS=CHISQ
/CELLS=COUNT ROW COLUMN TOTAL
/COUNT ROUND CELL
/METHOD=EXACT TIMER(5).

*** table 11***

USE ALL.
COMPUTE filter_$(=edctn=0).
VARIABLE LABELS filter_$(‘edctn=0 (FILTER)’).
VALUE LABELS filter_$(0 ‘Not Selected’ 1 ‘Selected’).
FORMATS filter_$(f1.0).
FILTER BY filter_$. EXECUTE.

*** model1b ***
LOGISTIC REGRESSION VARIABLES atleastoneyounghild
/METHOD=ENTER SelfEmployed Unemployed Parttime agea EducationLow religious AUSTRIA BELGIUM CZECH SWITZERLAND
    DENMARK GERMANY ESTONIA NETHERLANDS FINLAND FRANCE NORWAY POLAND SWEDEN SLOVENIA
/Criteria=PIN(.05) POUT(.10) ITERATE(20) CUT(.5).

*** model 2b***

LOGISTIC REGRESSION VARIABLES atleastoneyounghild
/METHOD=ENTER SelfEmployed Unemployed Parttime agea EducationLow religious AUSTRIA BELGIUM CZECH SWITZERLAND
    DENMARK GERMANY ESTONIA NETHERLANDS FINLAND FRANCE NORWAY POLAND SWEDEN SLOVENIA
/Criteria=PIN(.05) POUT(.10) ITERATE(20) CUT(.5).

*** table 12 model 3***

LOGISTIC REGRESSION VARIABLES atleastoneyounghild
/METHOD=ENTER SelfEmployed Unemployed wkdcorga agea EducationLow religious AUSTRIA BELGIUM CZECH SWITZERLAND
    DENMARK GERMANY ESTONIA NETHERLANDS FINLAND FRANCE NORWAY POLAND SWEDEN SLOVENIA
/Criteria=PIN(.05) POUT(.10) ITERATE(20) CUT(.5).

***model 4***

LOGISTIC REGRESSION VARIABLES atleastoneyounghild
/METHOD=ENTER SelfEmployed Unemployed Parttime wkdcorga agea EducationLow religious AUSTRIA BELGIUM CZECH SWITZERLAND
    DENMARK GERMANY ESTONIA NETHERLANDS FINLAND FRANCE NORWAY POLAND SWEDEN SLOVENIA
/Criteria=PIN(.05) POUT(.10) ITERATE(20) CUT(.5).

*** table 13 5a***

USE ALL.
COMPUTE filter_$(edctn=0 & LOW=1).
VARIABLE LABELS filter_$( 'edctn=0 & LOW=1 (FILTER)')
VALUE LABELS filter_$( 0 'Not Selected' 1 'Selected').
FORMATS filter_$( f1.0).
FILTER BY filter_$(
EXECUTE.

LOGISTIC REGRESSION VARIABLES atleastoneyoungchild
/METHOD=ENTER SelfEmployed Unemployed Parttime agea EducationLow religious
/CRITERIA=PIN(.05) POUT(.10) ITERATE(20) CUT(.5).

FILTER OFF.
USE ALL.
EXECUTE.

*** 13 5b ***

USE ALL.
COMPUTE filter_$(edctn=0 & HIGH=1).
VARIABLE LABELS filter_$( 'edctn=0 & HIGH=1 (FILTER)')
VALUE LABELS filter_$( 0 'Not Selected' 1 'Selected').
FORMATS filter_$( f1.0).
FILTER BY filter_$(
EXECUTE.

LOGISTIC REGRESSION VARIABLES atleastoneyoungchild
/METHOD=ENTER SelfEmployed Unemployed Parttime agea EducationLow religious
/CRITERIA=PIN(.05) POUT(.10) ITERATE(20) CUT(.5).

FILTER OFF.
USE ALL.
EXECUTE.

*** Table 14 6a ****

USE ALL.
COMPUTE filter_$=(edctn=0 & NoPartner=1).
VARIABLE LABELS filter_$(‘edctn=0 & NoPartner=1 (FILTER)’).
VALUE LABELS filter_$ 0 ’Not Selected’ 1 ’Selected’.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.

LOGISTIC REGRESSION VARIABLES atleastoneyounghild
   /METHOD=ENTER SelfEmployed Unemployed Parttime agea EducationLow religious AUSTRIA BELGIUM CZECH SWITZERLAND
   DENMARK GERMANY ESTONIA NETHERLANDS FINLAND FRANCE NORWAY POLAND SWEDEN SLOVENIA
   /CRITERIA=PIN(.05) POUT(.10) ITERATE(20) CUT(.5).

FILTER OFF.
USE ALL.
EXECUTE.

*** 6b***

USE ALL.
COMPUTE filter_$=(edctn=0 & Partnerwithoutpaidwork=1).
VARIABLE LABELS filter_$(‘edctn=0 & Partnerwithoutpaidwork=1 (FILTER)’).
VALUE LABELS filter_$ 0 ’Not Selected’ 1 ’Selected’.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.

LOGISTIC REGRESSION VARIABLES atleastoneyounghild
/METHOD=ENTER SelfEmployed Unemployed Parttime agea EducationLow religious AUSTRIA BELGIUM CZECH SWITZERLAND

DENMARK GERMANY ESTONIA NETHERLANDS FINLAND FRANCE NORWAY POLAND SWEDEN SLOVENIA

/CRITERIA=PIN(.05) POUT(.10) ITERATE(20) CUT(.5).

FILTER OFF.
USE ALL.
EXECUTE.

*** 6c ***

USE ALL.

COMPUTE filter_$=(edctn=0  & PartnerWithPaidWork=1).

VARIABLE LABELS filter_$ 'edctn=0  & PartnerWithPaidWork=1 (FILTER)'.

VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.

FORMATS filter_$ (f1.0).

FILTER BY filter_$.

EXECUTE.

LOGISTIC REGRESSION VARIABLES atleastoneyounghild

/METHOD=ENTER SelfEmployed Unemployed Parttime agea EducationLow religious AUSTRIA BELGIUM CZECH SWITZERLAND

DENMARK GERMANY ESTONIA NETHERLANDS FINLAND FRANCE NORWAY POLAND SWEDEN SLOVENIA

/CRITERIA=PIN(.05) POUT(.10) ITERATE(20) CUT(.5).

FILTER OFF.
USE ALL.
EXECUTE.