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**Are Parents More Likely to Be Unemployed?
A Study of Nine Western Democracies**

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by

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The relation between parenthood and market work is an established field of study in demography. This thesis specifically focuses on the relation between parenthood and unemployment, the involuntary absence of work, in a cross sectional study of nine western democracies. The studied countries are Canada, France, Germany, Italy, Poland, Spain, Sweden, the United Kingdom, and the United States. A significant relation between motherhood and unemployment where found in Germany, Poland, the United States, and to a lesser extent in the United Kingdom.

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1 Introduction

This study deals with the conflict between the responsibilities of parenthood and the demands of market work, specifically the problem potentially facing parents that wish to work but find themselves no longer welcome on the labor market. The research question is:

Is parenthood associated with an increased probability of unemployment in western democracies?

Most previous studies are focusing on the negative effect of motherhood on employment. This means that mothers typically will choose not to work on the labor market anymore when the chores of motherhood reach a certain level. Theories of household production are sufficient to explain this. The aim of my study is to focus on the possibility on involuntary unemployment as a result of motherhood, or possibly fatherhood. This angle has to the best of my knowledge not been pursued before, and that poses some problems in terms of a lack of applicable theories as well as previous studies for direct comparison. The reason for studying unemployment as opposed to the mere absence of employment is that unemployment comes with its own set of problems, in addition to those that can be expected when mothers choose to be housewives. First of all, unemployment, defined as lacking employment and actively seeking it, indicates a clear discrepancy between the current situation and the preferred one, a clear case of unfulfilled need for the individual seeking economic gain and personal fulfilment on the labor market. Second, unemployment is associated with costs for the government in unemployment benefits and such things. Studying unemployment rather than absence of work poses some econometrical problems, and this is probably the reason why nobody seems to have pursued this line of inquiry in the past. Though the distinction between unemployment and the negative of employment is important this study is made against a backdrop of quite severe problems with the conflict between parenthood and market work. Many countries in Europe, many of them included in this study are facing severe challenges with slumping fertility rates, and it is clear by now that low employment rates for women are not at all the answer, accommodating the possibility of being a parent and having an employment seems to be, and this study needs to be understood in the light of that.

Micro data from the Luxembourg Income Study is used for a comparative analysis of Canada, France, Germany, Italy, Poland, Spain, Sweden, the United Kingdom and the United States. A wave of data from the years 2004-2005 will be used for the primary cross sectional studies. This will then be compared to two previous waves from 1994-1995 and 1999-2000, in order to see if there are any changes over time. The data just doesn't lend itself to a study with at real time dimension.

1.1 Aim and Scope

The aim of this thesis is to test whether one, two, three, four or many children has a significant effect on unemployment separately for men and women. Parenthood of infants, children before the age of seven, and older children will also be tested in order to get a different perspective on it. These regressions will be compared with regressions with the absence of employment as well as part time as the dependent variables in order to get a better idea of what might be the explanations for the various results. The results will be interpreted through Becker's (1991) theory of household specialization, Esping-Andersen's (1990) concept of welfare regimes, and the hypothesis of statistical discrimination.

1.2 Outline of the Thesis

In chapter two a short orientation of relevant theory is provided as well as of previous studies and some background using macro data from OECD. Chapter three is a presentation of the LIS micro data with a table of variables as well as graphs for the key variables, chapter four presents the econometric linear probability model and the different varieties of that. Chapter five is the presentation of the empirical results separated for men and women, with short views on the differences over time between the waves. The discussion and concluding remarks, finally, are in chapter six.

2 Theory

The theoretical background will consist of theories about the labor supply and how that is affected by parenthood, combined with the theory of statistical discrimination. A theory of different welfare regimes will provide an illuminating background to the study

2.1 Theoretical Approach

The data will be analyzed in the light of theories of parents, and particularly mothers, choosing absence from work, e.g. withdrawing their labor supply, and theories about the motherhood penalty, the significantly lower wages of mothers of small children. Combined with a theory of statistical discrimination the motherhood penalty theories would form a plausible theoretical hypothesis for why parenthood or at least motherhood would pose an obstacle to getting employment.

Budig and England (2001) lists reduced experience, reduced job effort and productivity, low wage mother friendly jobs, and wage discrimination as theoretical hypothesis for the motherhood wage penalty. They also mention the need to handle spurious econometric effects and interactions with other variables such as marital status. Since experience is very much a variable in itself it can be treated as such and left outside our theoretical framework of parenthood as risk factor for unemployment. A preference for mother friendly jobs would explain lower wages for mothers as Budig and England intended, but hardly why employers would discriminate against parents. An elevated risk of staying involuntarily unemployed for parents should rather be perceived as the result of an ambition on behalf of parents to seek ordinary jobs, combined with employers' suspicion that some parent friendly job would be more suitable for the applicant. Wage discrimination as such is also a plausible explanation for the motherhood penalty, and the grounds for it could work as an explanation for reluctance among employers to hire parents of small children. First and foremost, we must however turn to the concept of reduced job effort and hence productivity among parents of small children.

According to Becker (1991) mothers have a larger share of responsibility for the rearing of children than fathers due to biological differences, for instance the ability to breastfeed. The resulting labor specialization within the household leads to mothers spending their time out of market work doing the chores of parenting rather than leisure. Since this gives mothers little time to recuperate they will have less "energy" left to spend in market work, and would hence, ceteris paribus, be less productive. Becker also hypothesizes that the extra responsibility of parenting put on the shoulders of mothers may mean that they spend time at work making appointments for their children and similar coordinating tasks at the expense of their actual market work.

In the most advanced societies the differences between mothers and fathers may be expected to diminish, and we can speak of parents, as opposed to childless men and women, as those who might be expected to have less energy for market work and to allocate some of the time at the workplace for child oriented activities rather than the work they are employed to perform.

Becker's theory explains how women tend to invest less in human capital due to the aforementioned specialization in motherhood, and that provides an explanation for lower wages for women, and mothers, for the rationality of part time work for mothers since they would have a comparative advantage over their male spouses for household work, and also the choice to refrain from market work altogether and become a housewife. This deficit in human capital does not however explain why employers would refrain from employing parents since they can be assumed to apply only for employment within their range of competence. Low education as well as a relative lack of experience are in any case separate control variables in my investigation, and in the extent that they are actually caused by parenthood, that cause will not be possible for me to disentangle from other causes of low education or a lack of experience.

There are other theories, like Easterlin's (1969) socio-economic theory of fertility. The data at hand will however have difficulties in distinguishing the characteristics of Becker's and Easterlin's theories, and Becker's straight forward mathematical model lends itself well for the analysis of this particular problem.

Statistical discrimination is a form of discrimination distinct from so called taste discrimination, also called preference discrimination, in that statistical discrimination can be considered economically rational. The basis of statistical discrimination is that some distinguishable category of the labor force is statistically less productive than the average worker. This does not mean that every single member of the category is less productive than the average applicant, but on average the members of the category are. Since it is difficult and expensive, and maybe impossible beforehand, for the employer to accurately evaluate the productivity of each single applicant, it is economically rational to use knowledge about certain categories of workers in order to make decisions. The employer might get it wrong in the individual case, but on average the right decision will be made and the overall economic outcome of statistical discrimination may be expected to outperform the one of the employer who spends lots of money on individual evaluation (Budig and England, 2001).

Combining Becker's theory of mothers, and in our case possibly parents, as less productive regardless of any loss of experience or education due to energy at home and time at work spent at child rearing tasks with the theory of statistical discrimination provides us with our theoretical rationale for finding it plausible that employers may disregard parent applicants, and possibly fire parents.

2.2 Previous Research

I have tried to keep this exposé brief and focused on reasonably recent work, and I will start with Gornick (2001) who studied labor market outcomes for women in three different welfare models, labeled conservative, liberal and social democrat. As expected, the highest female labor market participation was found in social democratic regimes, the lowest was in the conservative regimes of continental Europe, with the liberal Anglo-Saxon countries in between. The important part time question was however less clear cut with higher part time rates for women in liberal Britain and the conservative Netherlands than in social democratic Sweden. Part time rates where very low in conservative Italy and Spain, and in the liberal US it was half that of the UK. Gornick also found that policies aiming at encouraging mother's labor are effective since mothers in Belgium, France and Italy, conservative countries with such policies, receive a larger share of families' earnings than in several liberal countries. In Norway a lack of such policies seem to explain the poor performance in that respect compared to the other countries of social democratic regimes.

Guiterrez-Domenech (2005) studied the effects of women's first births on their employment status in Belgium, West Germany, Italy Spain and Sweden. She found that the largest risk of leaving the labor market due to a first birth was in West Germany and Spain. A key explanatory variable was the availability of part time work, and a lack thereof seems to punish especially Italy and Spain. High education significantly helped women to remain in the labor market in all the countries of the study except Sweden. The explanation for this seems to be public childcare being generous enough to erase the difference between income groups. Another finding of importance for this study is the changes over time, where Spain has developed towards higher female labor market attainment whereas West Germany has moved the other way. The author mentions the household taxation system of Germany as a possible explanation of the opposite development in that country. The maternity leave variable had no significant effect, possibly because it becomes counterproductive if it is too generous.

Sayer (2005) found that the household gender division of domestic work has decreased since the mid-1960s in the United States, but by her last data wave of 1998, there were still a half hour leisure gap in favor of the men. Craig (2006) used Australian data to investigate gender division in domestic work. The move of women into the labor market was not really found to correspond to a move of men into domestic work in Australia. She also found an increased and even less equal double (market and domestic) workload after women became mothers. Dribe and Stanfors (2009) found evidence of an increased gender division in domestic work associated with the emergence of parenthood in Sweden during 1990 and 1991. They however also found that the effect was smaller in the years 2000 and 2001. Craig and Mullan (2010) compared the domestic workload for parents with that of childless couples in the United States, Australia, Italy, France, and Denmark. Like Dribe and Stanfors, they found that the domestic workload was indeed larger for parents, as well as more differentiated between the genders, and especially so in the Anglo-Saxon countries of Australia and the United States. Anxo et al (2011) in a similar study for France, Italy, Sweden and the US found similar results and also support for political context and family policy as important factors. Nielson and Stanfors (2014) tried to find evidence of a transition to a more gender neutral domestic work

load of a Nordic fashion in Canada, Germany and Italy, any signs of that where however scares except for Canada and Germany on weekends.

Mandel and Semyonov (2006) studied the employment opportunities of women in 22 developed countries and how those are affected by different welfare state policies. As could be expected, a vast welfare state correlated well with strong female labor market participation. The study however finds the paradox that countries with large public sectors and high female labor force participation has a lower proportion of women in leading positions and a stronger emphasis on women being in traditionally female occupations. It is assumed that the ample opportunities for women to take care of their young children in those countries discourage employers hiring them for key positions since the risk of having to do without them for extended periods increase with those opportunities.

Misra et al (2007) made a similar study in which they classified different political strategies, e g "strategies that emphasize equalizing women's opportunities in the labor force (the primary earner strategy); strategies that emphasize rewarding and supporting women's caretaking (the primary caregiver strategy); strategies that emphasize equalizing women's labor market opportunities, while also supporting women's caretaking, particularly when children are young (the choice strategy); and a model meant to equalize women's employment opportunities through supports for caring, while also equalizing men's engagement in caring (the earner-career strategy)"(Misra et al, 2007, p29). The primary earner strategy and the primary caregiver strategy are both associated with poor performance regarding mother's positions on the labor market. The choice strategy pursued in Belgium and France is more successful, and in France the study actually finds no motherhood penalty on wage. The earner-career strategy is found to be most successful associated with the smallest motherhood penalties.

Bardasi and Gornick (2008) studied part time penalties in Canada, Italy, Sweden, the UK and the US. They found that Sweden actually didn't have a part time penalty, whereas it was between 12 and 22 percent in the other four countries. The prime explanatory factor for part time penalties was a labor market segregated between full time and part time occupations.

Destro and Brady (2010) Studied the effects of welfare states on the labor market attainment of single mothers in a comparative study of 17 developed countries. The authors found few significant such effects, but rather a uniform pattern of highly educated older mothers of fewer and older children being more likely to be employed than low educated younger mothers of more and younger children. The discouraging effects of generous welfare states are observed among single mothers below the age of 25.

Boeckmann et al (2014) made a study of the cultural and institutional effects on women's labor market outcomes. They found a negative effect of long durations of maternal leave, and assumed it is related to degrading of human capital. In the other direction public child care had a positive effect on mother's labor market participation, as well as on the full time-part time ratio among working mothers. The study also found significant effects of the cultural context on women's labor market outcomes.

Stanfors (2014) investigated the connection between employment and parenthood in the other direction, studying the propensity for professional women for having second and third birth while retaining their careers in Sweden The results implied substantial differences between the opportunities for men and women to combine a professional career with higher order births, as well as differences between the different professions.

2.3 Context

The aforementioned study by Misra et al (2006) used a theoretical framework based on the effect of different welfare regimes on the household supply of labor that will be used as a contextual backdrop to facilitate further conclusions in this study. The theory is developed by Esping-Andersen (1990) and classifies countries in three broad categories, the liberal, the conservative, and the social democratic. Among the countries in this study, the continental European, e g France, Germany, Italy and Spain are the conservative ones, they all have a larger or smaller catholic influence on policy, Poland is a complication since it is catholic but also post-communist, which might separate Poland from the other continental catholic conservative countries. The Anglo-Saxon countries Canada, the UK and the US are the liberal ones. Sweden is the only social democratic country in my study. Due to a higher acceptance of mothers in the labor market, and better public childcare, Misra et al (2006) also group Belgium and France in its own hybrid category between conservative and social democratic. That obviously means France in this study. It is quite difficult to predict how these things might affect unemployment among parents, and we move on to get better distinctions.

Bardasi and Gornick (2007) calls the conservative model the "primary caregiver/secondary earner strategy", the liberal model is referred to as the "primary earner/secondary carer strategy", the social democratic model is called the" dual earner-carer strategy. They also have a name for the hybrid model associated with Belgium and France, they call it the "Conservative choice model". According to the authors the conservative political model is focused on facilitating women's roles as housewives/caregivers/mothers, the liberal model is usually more than just laissez faire, in for instance the USA there is legislation enacted to help women getting a competitive position on the labor market to provide opportunities to be a provider and earner. The conservative choice model aims to provide the opportunity for women to choose between care and career, whereas the social democratic model aims to facilitate for women to cope with both.

The aim of Bardasi and Gornick is not to provide an explanation for involuntary unemployment among parents. Unemployment is the purgatory between employment and a position outside the labor market, and it is quite difficult to predict what would tend to make parents unemployed rather than employed or out of the labor market. Factors that reduce parent's, particularly mother's, labor supply does not necessarily increase their unemployment, it may rather be expected to reduce it since a reduced supply of labor usually means leaving the labor market, and hence not be unemployed. The Conservative strategy may for instance reduce the parenthood effect on unemployment since its aim is to facilitate for mothers to function outside the labor market. However, it is possible that mothers that has

been more or less forced out of the labor market by policy might end up unemployed when the children are older and the practical opportunity for market work opens up in the household.

The liberal strategy may cause unemployment among parents since it encourages women to work, while they as mothers may carry baggage that makes them less favored by employers. Legislation providing equal rights for women and mothers are obviously aimed to counteract that effect, but such policies may or may not be effective. The latter is of great interest in any study of these matters. Turning to the social democratic model that too may turn parenthood into a source of unemployment. The aim is to make it possible for men and women to be earners as well as active parents at the same time, this means that they will tend to be in the labor market, but employers may prefer the ones that are not trying to do both at the same time, creating a disadvantage for mothers compared to other women, and also, possibly creating a disadvantage for fathers of small children. The social democratic model includes policies to ban the laying off of employees due to parenthood, but is that legislation watertight, and is there any significant effect of parents, or at least mothers, having a harder time than the childless in finding jobs? Studies (Mandel and Semyonov, 2006) show that an effective accommodation of mother's needs hurt their chances of advancing into management positions, maybe those policies make employers shy away from applicants that are mothers as well. One policy that has been shown to have dubious results is generous parental leave. It has been shown that it tends to hurt women's career opportunities as well as reducing employment among mothers if it is too generous.

It can be expected that such a policy may create unemployment among parents and especially mothers since their human capital is eroded by the long leave, and employers may be reluctant to hire those who can be expected to take such long leaves. An empirical complication is that such prejudice would affect young women in general, and not just those who are already mothers of small children. An interesting question is whether the Swedish policy of paternal leave might take some pressure off the chests of mothers, this may however be very difficult to determine empirically, at least in this study.

It is perhaps even harder to predict the effects of the conservative choice model. A prime difference between Belgium and France and the other conservative countries is that the conservative choice countries provide generous public childcare in a fashion similar to the social democratic countries, and maybe that can reduce unemployment among mothers. Maybe the idea of choice creates unemployment among those who have the nerve to choose both on the other hand.

A further hypothesis that poses a problem in this study is that generous unemployment benefits may encourage parents that have actually made the choice to leave the labor market to register as unemployed in order to receive the benefits as an extra income. Than would mean that generous unemployment benefits in a statistical sense would increase unemployment among parents, especially mothers, but we would really be dealing with a statistical artifact, parents outside the labor market counted as unemployed.

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2.3.1 Unemployment and fertility graphs

Graphs based on data obtained from the OECD will illustrate the fertility and labor market developments in the studied countries during a period overlapping the three data waves for each of the three welfare state regimes. Poland and Sweden will be combined even though Poland isn't really a social democrat regime, the communist past make it different from the conservative regimes too, and by combining Poland with Sweden, liberal charts, conservative charts, and the ones with Poland and Sweden is obtained. Starting with liberal regime unemployment in figure 1, the common patterns is peaks of unemployment in the early 90s and in the financial crisis in the late 00s. The UK starts with high levels from its severe early 80s crisis, but performs better later on, and the US is particularly hard hit be the financial crisis.

Figure 1 Liberal regime unemployment
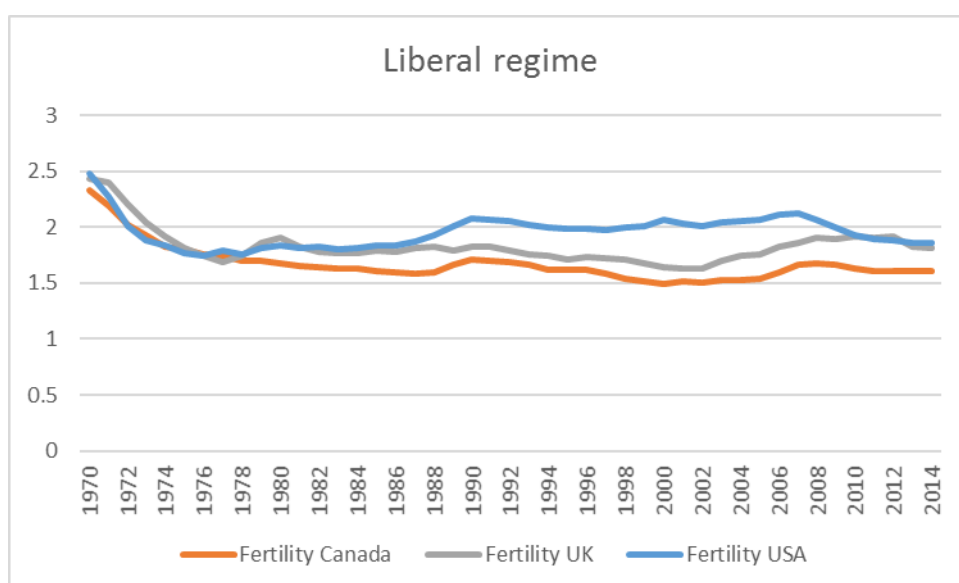
Figure 2 Liberal Regime fertility

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Looking at the fertility graph of the liberal regimes in figure 2, we notice that a drop in fertility took place in the 70s, and that it stabilized during that decade. We also notice that the US had a higher fertility over the period of the three waves of this study, and that levels in Canada are bordering on problematically low.

Unemployment in the conservative regimes is displayed in figure 3. Germany obviously start at unification, and its unemployment peak at an odd time, and then runs against the current during the financial crisis. Spain is a country that used to have very high unemployment, then seemed to normalize, but it was very hard hit by the financial crisis and reverted to its old very problematic levels.
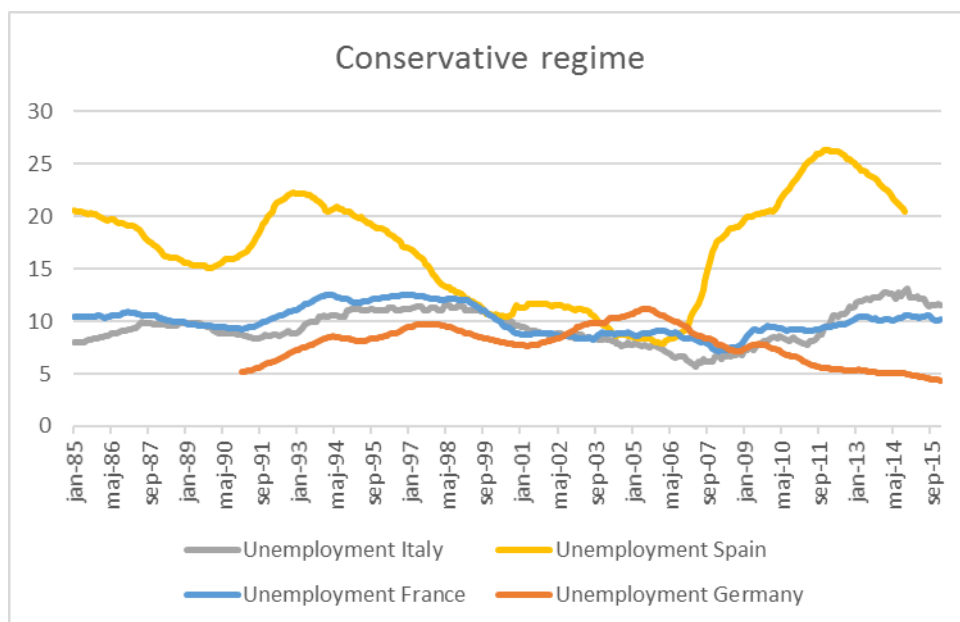
Figure 3 Conservative Regime Unemployment
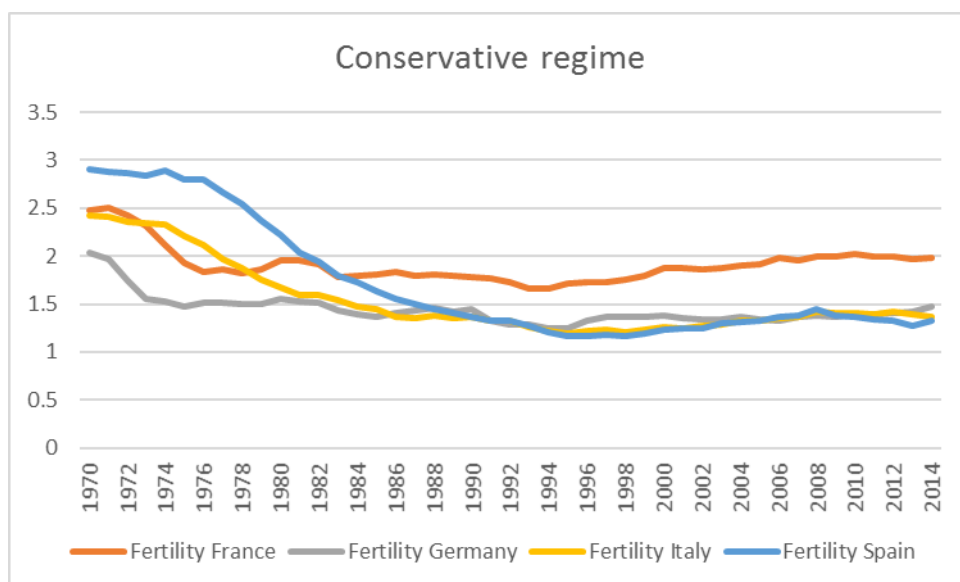
Figure 4 Conservative Regime Fertility

Figure 4, with conservative regime fertility tells us that Germany had an early fertility drop from low levels, whereas fertility in Spain dropped late and from high levels. In the end,

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France is the odd one out with higher fertility, whereas the rest of the conservative countries are struggling with problematically low levels.

Poland and Sweden finally in figure 5. Sweden starts at very low unemployment levels in the 80s, is hit quite hard by the early 90s crisis and reaches the levels around 10 percent that we have seen as more normal for countries of other regimes. After that Sweden recuperates a bit, but never returns to the low levels of the past, unemployment is oscillating in the 5 to 8 percent band since the late 90s, and the late 00s crisis is clearly visible. Poland displays a pattern quite different from all the others, probably dealing with its very own post-communist problems, after those problems seem to be overcome, the financial crisis is as visible as in Sweden, but a minor problem for Poland compared to the previous ones. At the end Poland ends up at the same level as Sweden, but during the most important wave of this study, unemployment is very high.

Fertility in Poland displays a pattern similar to most countries with a drop in fertility from high levels to lower ones, however the drop in Poland is the latest of the lot, even later than the drop in Spain. The levels have ended up being very low in Poland. Sweden displays a different, oscillating pattern at mostly healthy levels. Quite noteworthy is that Sweden has gone through both severe crises of the period with its highest levels of fertility. Fertility for Poland and Sweden can be viewed in figure 6 below.
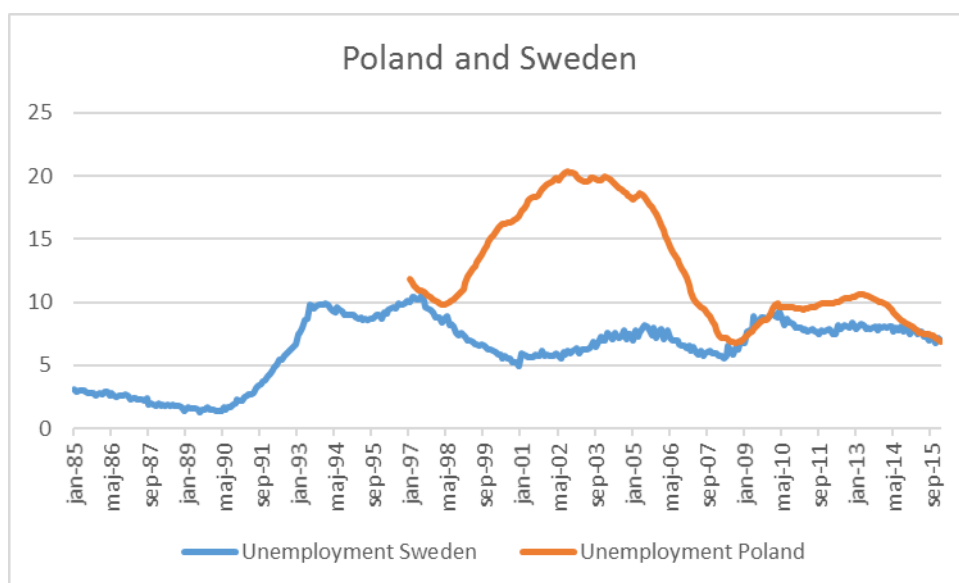
Figure 5 Unemployment, Poland and Sweden

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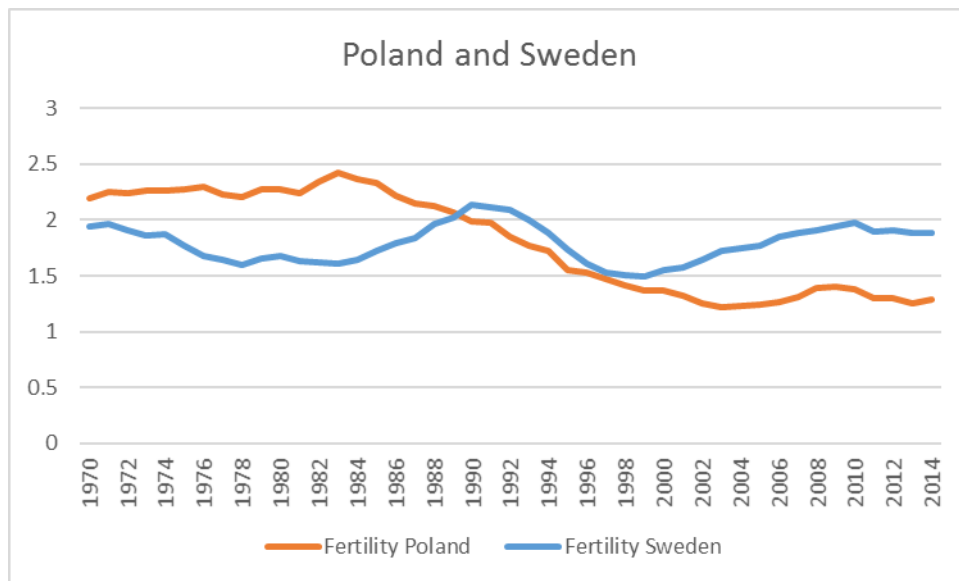
Figure 6 Fertility, Poland and Sweden

3　Data

The data is obtained from the Luxembourg Income Study, a database created for the purpose of providing comparable household and individual level micro data from a number of different countries. The variables are oriented on income, as the name suggests, as well as labor market, education, health, family and others. The chosen countries are Canada, France, Germany, Italy, Poland, Spain Sweden the United Kingdom and the United States, partly due to the availability of data, and partly to get a god diverse sample of countries. The study contains three waves, the first one containing data from 1994 or 1995, the second with data from 1999 and 2000, and the third wave contains data from 2004 or 2005 all depending on which country the data is from. The main cross sectional study will be on the third wave, and the other two will be used for a brief comparison over time (http://www.lisdatacenter.org/our-data/lis-database/documentation)

3.1 The data

Focusing on the third wave of 2004 and 2005 we can take a look at the gender specified sample unemployment rate in the different countries in figure 7. In order to get a more relevant dataset for parenting all individuals under 18 and above 45 has been excluded. The sample unemployment levels give approximately the same levels as in the macro data from OECD, and the ranks between countries of high unemployment and lower is consistent with the macro data. The relative gender unemployment rates can hence also be assumed to roughly reflect the situations in the respective countries at the time. The pattern that emerges right away is that the US has a higher level of unemployment for men, while all the others have a higher level for women. This could possibly be due to less generous unemployment benefits in the US, a potential problem for the study since those coded as unemployed who want benefits cannot be distinguished from those who actually want a job. A rather malevolent interpretation is that only the American female unemployment is actually unemployment. Another difference is that gender differences are small in Anglo-Saxon countries and Sweden, whereas they are quite large in the others, especially in Poland and Spain

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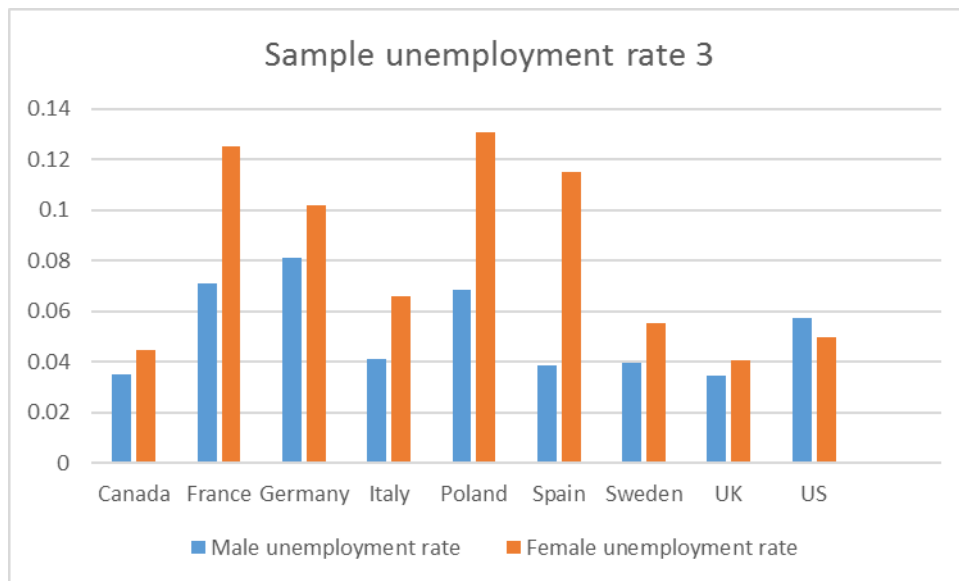
Figure 7 Sample unemployment rate
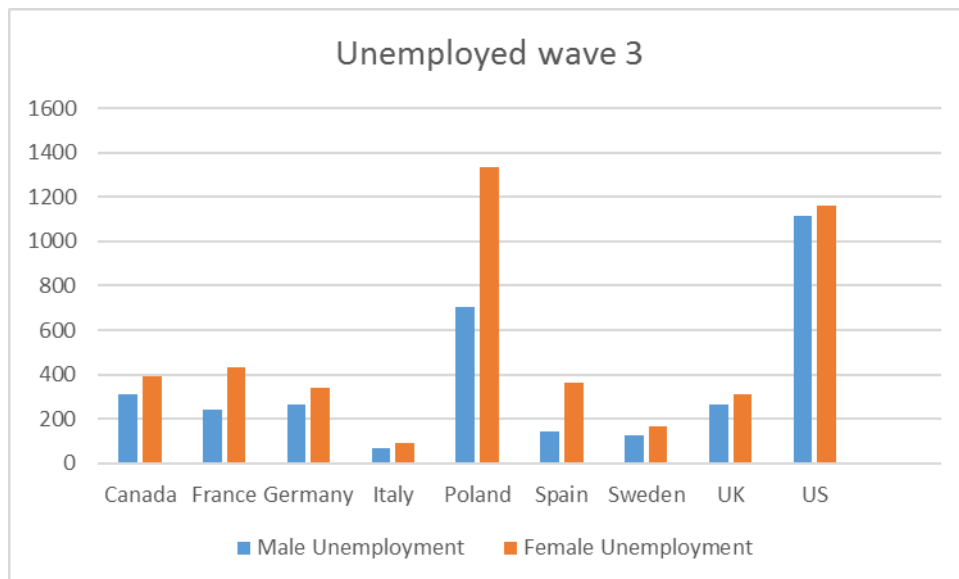
Figure 8 Numbers of unemployed

Turning to the actual numbers of unemployed in figure 9, there are plenty of unemployed of both genders in all countries with the possible exception of Italy, making the empirical endeavor at hand plausible.

Female employment are closest to male employment in Sweden and Canada, and the differences are very large in Spain. The combination of high unemployment and low employment for women in Italy and Spain. This could either be due to severe discrimination against women in the Italian and Spanish labor markets, or a preference for housewifeing combined with a transfer system that motivate housewives to seek unemployment benefits as suggested above.

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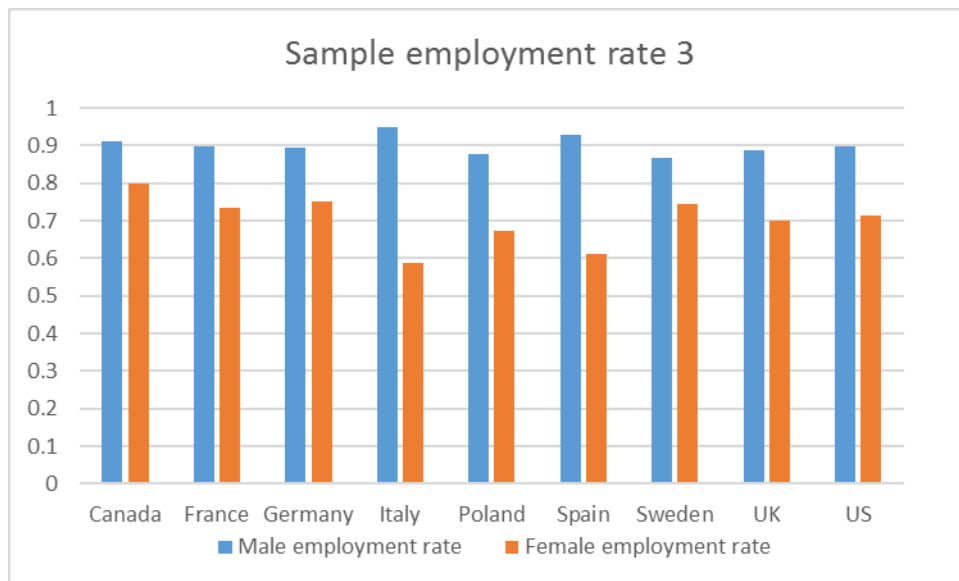
Figure 9 Sample employment rate

3.2 The variables

The Luxemburg Income Study data contains single period cross-sectional samples of households in the entire populations of nations. The individuals in the data are all the individuals in the randomly selected household. Turning to table x we find that Wave 3 is comprised of the adjacent years 2004 and 2005. Since different countries have samples from different years, no year has all the countries, and at least adjacent years are preferable. In the bottom of the table we have the different national sample sizes in individuals. Displayed in the table are basic descriptives of the variables. Means for Number of children, Age of youngest child and age are presented with the standard errors beneath. For the rest of the variables percentages are presented

Table 1 Variable descriptives

	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	USA
Year	2004	2005	2004	2004	2004	2004	2005	2004	2004
Unemployed	3.55	8.82	5.08	4.12	8.46	6.04	3.98	3.08	3.70
Employed	85.23	81.00	81.63	74.43	76.48	75.73	80.51	78.39	79.77
Part time	12.47	16.32	24.87	15.52		11.18		22.86	13.9
Number of children	1.2	1.33	1.5	1.28	1.66	1.37	1.23	1.31	1.49
	(1.2)	(1.16)	(1.1)	(1.05)	(1.23)	(1.02)	(1.18)	(1.21)	(1.26)
Age of youngest child	7.2	5.86	8.11	7.4	8.18	6.68	6.12	6.22	6.51

	(5.59)	(5.09)	(5.68)	(5.7)	(5.69)	(5.56)	(5.3)	(5.24)	(5.38)
Female	52.82	53.85	54.47	56.41	54.64	54.44	51.56	55.46	54.46
Living with Partner	75.45	80.07	79.95	83.10	86.21	89.26	74.76	75.11	77.01
Immigrant	19.04	11.92	14.53	9.49		9.03	16.62		18.01
Disabled	14.74	6.47	2.04	0.41	4.33	4.01	3.18	10.01	4.31
Low Education	10.63	18.52	12.36	44.73	9.31	44.97	10.48	19.94	11.47
High Education	59.97	34.59	28.92	10.81	16.38	29.63	30.97	23.77	39.35
Sample size	68542	25364	26824	20581	99038	37491	36918	65232	210648

Dependent variables

Three different independent variables will be used in the different versions of the model. The most important dependent variable is unemployment, not employment or the lack thereof. The definition of unemployment is the absence of work combined with the activity of looking for it, and LIS has the ambition to adhere to the ILO definition stating that an unemployed person must be able to start working within two weeks and have made some effort to find work during the past four weeks. In order to test whether low unemployment among parents in a certain country is due to actual low employment or parents leaving the labor market regressions using the absence of employment as the dependent variable will be used and compared to the unemployment regressions. LIS defines employment as "any employment activity in the current period", and the negative of that will be used for those control regressions. The third set of regressions will use part time as the dependent variable in order to get an indication whether the availability of part time work can explain different unemployment rates among parents. Part time is either self-reported, when available, or the LIS threshold for part time work of 30 hours work per week or less is applied (LIS website).

Independent variables

The prime independent variables will be the presence of children, their numbers, and the age of the youngest child. Children refers to children living in the household, not an individual's biological children living elsewhere. The definitions of number of children and age of youngest child are pretty straight forward, and basically included in the variable names.

Controls will be included for age, living with partner, immigrant, disabled and education. Age is a pretty straight forward variable needing no further explanation. I believe that living with partner is an economically more relevant variable than marital status and it will hence be included as an explanatory variable. Living with partner is defined as "partner is clearly identified as co-residing in the same household". The immigrant dummy is unfortunately not available for Poland and the UK, hence separate regressions with that variable will have to be made for the rest of the countries. LIS explains the immigrant dummy as

"All persons who have that country as country of usual residence and (in order of priority):
- whom the data provider defined as immigrants;

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- who self-define them-selves as immigrants;
- who are the citizen/national of another country;
- who were born in another country."

The disability variable is defined by LIS as "disabled persons who have a permanent disability condition, defined as a (physical or mental) health condition that permanently limits an individual in his/her basic activity functioning (such as walking or hearing), even if the limitation is ameliorated by the use of assistive devices or a supportive environment". For the education control the LIS categories high, medium and low education is used, where low is less than completed secondary education, medium is completed secondary education, and high is completed tertiary education. A dummy for disabled will be included when available, as well as a dummy for immigrant.

Now, let's move on to see what to do with the variables.

4 Methods

The method of inquiry is a linear probability model with unemployment as the dependent variable. A linear probability model is a model there the dependent variable is a dummy and the coefficients are the probabilities of a certain outcome, for instance unemployment. As the name suggests the relations between the dependent variable and the explanatory ones are assumed to be linear. There are a couple of problems associated with this model, first of all, the error term can assume only two values, and they are obviously not normally distributed. This, combined with the fact that the standard errors are heteroscedastic, means that the standard errors are not very reliable (Dougherty, 2011) The quality of the data seems to be good enough for such an approach, and the results will be straight forward to interpret. Since I am working with three waves roughly five years apart, each variety of the basic model will have to be ran three times, one for each wave. The variables that can be included for all countries differ between the waves. The models will be run separately for men and women since the differences between the genders is one of the most interesting aspects of this study, the comparison between the outputs for men and women will be more interesting than including a gender dummy.

Separate regressions for each of country and for each wave will be made. Analyzing the differences between the countries' full OLS outputs will be one of the more interesting aspects of the study Outputs of pooled regressions will be displayed in the appendix.

In order to determine if a specific age of the youngest child or a specific number of children is associated with an increased or decreased probability of unemployment the models will be ran with both stratified numbers of children and ditto ages of youngest child. I will not do this simultaneously due to the risk of multicollinearity.

The basic model is displayed below:

$$Y_i = \alpha + X1N1 + X2N2 + X3N3 + X4N4 + X5N5 + X6C + + \varepsilon_i$$

Y is the dummy for unemployment, α is the intercept, N1 to N4 represents the numbers of children 1 to 4, N5 represents more than four children, C represents the controls, only age, age squared and living with partner, education, immigrant and disabled, ε_i Is the error term. When the effects of the age of the youngest child is investigated I will run the model with dummies for infant, child below the age of seven, and child between seven and 18 instead of the number of children integers.

One of the most important aspects of this study is trying to distinguish between low unemployment among parents due to them being employed, and due to them leaving the labor market. For this purpose, I will run my regressions with the unemployed dummy as the independent variable, as well as using the negative of the employed variable. Comparing the results from these I will hopefully be able to determine if a lower unemployment effect than

expected is due to a lesser effect than expected crowding out parents from market labor, or if unemployment just appear to be low due to parents, presumably mothers mostly, leaving the labor market. In order to determine whether part time work is a factor, I will run regressions with that as the dependent variable as well.

5   Empirical Analysis

5.1 Structure of outputs

The econometrical outputs can be made using number of children or age of youngest child as the independent variable, unemployment is used as the main independent variable, and the lack of employment and part time work is used as independent variables in other regressions in order to better understand the results of the unemployment regressions. The immigrant variable is unfortunately not available for Poland and the UK, and in order to get an idea if the observed results are actually a picked up immigrant effect separate regressions without Poland and the UK will be ran with the immigrant control variable added

Runs combining number of children and age of youngest child have been made, they however create problems of multicollinearity.

5.2 Results

The main analysis of the cross sectional data for the third wave will be done separately for the genders, beginning with the men. First of all, the output with unemployment as dependent variable and the numbers of children and after that the procedure will be repeated with the age groups of children, where especially the presence of an infant is of interest. After that the procedure is done with the absence of employment data, the part time data, and the regressions with the immigrant variable. The last analysis for each gender is the comparison with the older waves. Men and women are compared at the end. In order to be considered statistically significant, the effects must be significant at least at the 5% level. In order to save space only the explanatory variables will be presented, the full regression outputs can be viewed in Appendix A.

5.2.1 Men

Unemployment as dependent variable

As can be seen in table 2 below, there are very few statistically significant effects of fatherhood on unemployment. Only being a father of four in Canada is associated with a reduced probability of unemployment, and only being a father of many in France is associated with an increased probability of unemployment.

Table 2 Men, # children, Unemployment

Unemployment	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	US
One child	-0.017	-0.023	-0.024	0.0068	-0.0022	0.0050	-0.00076	0.014*	-0.0031
	(0.010)	(0.016)	(0.021)	(0.017)	(0.0096)	(0.012)	(0.013)	(0.0062)	(0.0051)
Two children	-0.015	-0.016	-0.032	0.025	-0.0066	0.0084	0.0082	0.0078	-0.0063
	(0.011)	(0.016)	(0.021)	(0.019)	(0.0099)	(0.013)	(0.013)	(0.0056)	(0.0048)
Three children	-0.015	0.0033	0.022	0.011	-0.019	0.0068	0.00054	0.0084	-0.0095
	(0.013)	(0.021)	(0.034)	(0.020)	(0.012)	(0.018)	(0.014)	(0.0076)	(0.0055)
Four children	-0.033**	0.013	0.015	-0.030	-0.0020	0.014	0.050	0.033	-0.0077
	(0.011)	(0.042)	(0.065)	(0.017)	(0.018)	(0.028)	(0.038)	(0.018)	(0.0084)
Many children	-0.032	0.44**	0.32	-0.038*	0.015	0.016	0.014	0.094*	-0.0024
	(0.017)	(0.14)	(0.17)	(0.018)	(0.024)	(0.044)	(0.039)	(0.043)	(0.013)
N	8814	3385	3156	1695	10328	3653	3158	7610	26304
R-sq	0.00861	0.0362	0.0569	0.0246	0.0127	0.0248	0.0208	0.0332	0.0173

Standard errors in parentheses

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Turning over to the issue of what ages of children that may affect the probability of unemployment, the picture is entirely different, sorted this way neither of the effects in Canada of France are visible, however, being a father of an infant or younger children is associated with an increased probability of unemployment in the UK.

Table 3 Men, age of children, Unemployment

Unemployment	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	USA
infant	0.00073	0.032	0.023	0.0090	-0.0046	-0.0071	0.00061	0.045***	-0.012*
	(0.016)	(0.024)	(0.071)	(0.027)	(0.012)	(0.012)	(0.013)	(0.011)	(0.0059)
Young child	-0.014	-0.0071	-0.013	0.0029	-0.0095	0.0037	0.0060	0.011*	-0.0035
	(0.0082)	(0.013)	(0.018)	(0.015)	(0.0070)	(0.010)	(0.010)	(0.0046)	(0.0041)
Old child	-0.016	-0.017	-0.0053	0.021	-0.0068	0.012	-0.0030	-0.0045	-0.0060
	(0.0086)	(0.014)	(0.018)	(0.017)	(0.0073)	(0.013)	(0.013)	(0.0052)	(0.0042)

N	8814	3385	3156	1695	10328	3653	3158	7610	26304
R-sq	0.00862	0.0257	0.0491	0.0235	0.0124	0.0252	0.0200	0 .0350	0.0174

Standard errors in parentheses

* p<0.05, ** p<0.01, *** p<0.001

Absence of employment as dependent variable

In order to better understand what is going on we move on to having no employment, either as unemployed or being outside the labor market, as the independent variable. The US displays a decrease in the probability of not working for fathers of one child, and in the UK there is an increased probability of not working for fathers of one child significant at the 5% level. The US effect remains up to three children and then ceases to be significant, however the coefficients are still in the same direction and magnitude. The UK effect picks up strength from three children. In France, fathers of many has an increased probability of not working significant at the 5% level, it is very strong in magnitude.

Table 4 Men, # children, No employment

No employment	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	US
One child	-0.027*	-0.024	-0.026	0.014	-0.0024	0.0046	-0.021	0.029**	-0.025***
	-0.014	-0.017	-0.022	-0.018	-0.011	-0.014	-0.015	-0.0093	-0.0065
Two children	-0.024	0.0031	-0.022	0.032	0.0014	0.004	-0.016	0.021*	-0.030***
	-0.014	-0.017	-0.022	-0.02	-0.011	-0.015	-0.015	-0.0083	-0.0064
Three children	-0.025	0.02	0.037	0.018	-0.009	0.013	-0.01	0.071***	-0.032***
	-0.017	-0.022	-0.036	-0.02	-0.013	-0.023	-0.016	-0.014	-0.0071
Four children	-0.0019	0.059	0.022	-0.023	0.0031	0.13	0.041	0.089***	-0.021
	-0.037	-0.047	-0.069	-0.018	-0.02	-0.083	-0.034	-0.026	-0.011
Many children	-0.052	0.43**	0.32	0.04	0.015	-0.007	0.035	0.20***	-0.015
	-0.028	-0.14	-0.17	-0.087	-0.027	-0.045	-0.057	-0.05	-0.018
N	9329	3504	3237	1713	10974	3775	4848	8265	28035
R-sq	0.0452	0.0925	0.071	0.0526	0.2	0.0773	0.115	0.204	0.188

Standard errors in parentheses

* p<0.05, ** p<0.01, *** p<0.001

Comparing the effects of children on not working with the effects on unemployment, the directions of coefficients are the same in the UK as well as in the US, however these significant results do not correspond to similarly significant results for unemployment. Notably, the effects of many children in France are basically identical in both regressions. The

decreased probability of unemployment for fathers of four previously observed in Canada do not correspond to a similarly significant decreased probability of not working.

Looking at age of children instead, we notice that the increased probability of not working for fathers in the UK is concentrated around the smaller children before school age, for infants and older children the effect is only significant at the 10% level. In the US the negative effect is present for fathers. Worth noticing is a reduced probability of not working significant at the 5% for fathers of infants in Sweden. Comparing with the previously observed probabilities of unemployment, the increased probabilities in the UK correspond to similar increased probabilities of unemployment as well, however, the decreased probabilities in the US do not correspond to significantly decreased probabilities of unemployment, albeit the coefficients are in the right direction.

Table 5 Men, age of children, No employment

No Employment	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	USA
infant	-0.015	0.034	0.026	0.013	-0.017	-0.016	-0.044**	0.067***	-0.032***
	(0.018)	(0.024)	(0.073)	(0.027)	(0.013)	(0.015)	(0.016)	(0.014)	(0.0086)
Young child	-0.015	0.010	-0.0075	0.0088	-0.011	-0.0043	-0.015	0.032***	-0.023***
	(0.012)	(0.014)	(0.019)	(0.016)	(0.0078)	(0.012)	(0.012)	(0.0075)	(0.0053)
Old child	-0.022	-0.013	-0.0032	0.030	0.011	-0.0017	0.0032	0.011	-0.020***
	(0.012)	(0.015)	(0.018)	(0.018)	(0.0081)	(0.015)	(0.014)	(0.0087)	(0.0053)
N	9329	3504	3237	1713	10974	3775	4848	8265	28035
R-sq	0.0447	0.0845	0.0642	0.0522	0.200	0.0755	0.115	0.201	0.188

Standard errors in parentheses

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Part time work as dependent variable

The part time regressions are made in order to get an idea about the power of part time work to reduce unemployment an absence of work among parents by comparing part time estimates with unemployment estimates. Unfortunately, the part time variable is not available for Poland and Sweden. For the rest of the countries we do not observe any large effects for the fathers, as could be expected. Being a father of one reduces the probability of part time work in the US, and being a father of many reduces that probability in Italy and Spain. All at the 5% level. The reduced probability of part time work for fathers of one in the US correspond to a reduced probability of not working.

Table 6 Men, # children, Part time

Part time	Canada	France	Germany	Italy	Spain	UK	US
One child	-0.021	0.012	-0.035*	-0.017	-0.014	0.0088	-0.013**
	(0.014)	(0.015)	(0.018)	(0.022)	(0.0094)	(0.0076)	(0.0051)
Two children	-0.029*	-0.012	-0.0085	-0.023	-0.012	0.014	-0.012*
	(0.013)	(0.013)	(0.02)	(0.02)	(0.0092)	(0.0076)	(0.0047)
Three children	-0.033*	-0.013	-0.026	-0.0049	0.0037	0.025*	-0.0048
	(0.015)	(0.016)	(0.02)	(0.035)	(0.016)	(0.012)	(0.0057)
Four children	-0.036	0.051	0.024	-0.046	-0.017	0.043	-0.0092
	(0.02)	(0.046)	(0.054)	(0.025)	(0.013)	(0.023)	(0.0076)
Many children	0.025	0.06	-0.046*	-0.063**	-0.025**	0.12*	0.013
	(0.049)	(0.099)	(0.018)	(0.02)	(0.0095)	(0.058)	(0.014)
N	8100	2806	2846	1600	3443	7335	24647
R-sq	0.0198	0.0189	0.0434	0.00736	0.00926	0.0186	0.047

Standard errors in parentheses

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

When we sort by the ages of children instead, the only statistically significant effect is a reduced probability of part time work for fathers of many in Canada. This doesn't correspond to anything needing an explanation in the other regressions.

Table 7 Men, age of children, Part time

Part time	Canada	France	Germany	Italy	Spain	UK	USA
infant	-0.016	-0.012	0.0027	-0.031	-0.010	0.021	-0.011
	(0.019)	(0.015)	(0.048)	(0.022)	(0.011)	(0.012)	(0.0066)
youngchild	-0.014	0.000052	-0.013	-0.013	-0.0034	0.014*	-0.0084*
	(0.011)	(0.011)	(0.016)	(0.017)	(0.0083)	(0.0066)	(0.0041)
oldchild	-0.036***	-0.017	0.00092	-0.023	-0.011	0.012	-0.0061
	(0.010)	(0.012)	(0.019)	(0.017)	(0.0082)	(0.0073)	(0.0042)

N	8100	2806	2846	1600	3443	7335	24647
R-sq	0.0202	0.0165	0.0411	0.00749	0.00847	0.0165	0.0466

Standard errors in parentheses

* p<0.05, ** p<0.01, *** p<0.001

With immigrant

Including the immigrant variable into the model poses a couple of problems. First of all, Poland and the UK needs to be dropped since they lack that variable. The other problem is that the model is stretching a bit thin, making it difficult to obtain statistical significance. This needs to be done separately for the countries where it is possible in order to determine whether the observed effects of children are actually an immigrant effect.

Taking a look at the immigrant variable we notice that it significantly raises the probability of unemployment in Sweden and France, ant to a lesser extent in Canada and Spain, where the increased probability is only significant at the 10% level, in Italy and the US immigrants actually has a significantly lower probability of unemployment, and in Germany the variable is not statistically significant

Table 8 Men, Immigrant variable

	Canada	France	Germany	Italy	Spain	Sweden	US
Immigrant	0.039*	0.097***	0.027	-0.050***	0.043*	0.077***	-0.011**
	(0.016)	(0.02)	(0.022)	(0.011)	(0.021)	(0.018)	(0.0042)

Standard errors in parentheses

* p<0.05, ** p<0.01, *** p<0.001

Comparing the coefficients for children with the output without the immigrant variable, we would particularly expect changes in the results for the countries where the immigrant variable is significant. However, the effect for fathers of many in France is roughly the same and still significant at the 5% level, in Sweden there are no significant effects, same as before, and in Italy the previously observed weakly significant reduced probability of unemployment for fathers of many actually vanishes when the immigrant effect in the same direction is introduced. The reduced probability of unemployment for fathers of many seems to be an immigrant effect. In Canada, we had a reduced probability of unemployment for fathers of for significant at the 5% level, and when the immigrant control is introduced the picture is enhanced with significant effects for fathers of three and many as well. From this we may conclude that only the reduced probability in Italy seems to be an immigrant effect.

Table 9 Men, Unemployment with Immigrant

Unemployment	Canada	France	Germany	Italy	Spain	Sweden	US
One child		-0.027	-0.026	-0.024	0.006	0.0041	-0.0046	-0.003

	(0.017)	(0.016)	(0.021)	(0.017)	(0.012)	(0.013)	(0.0051)
Two children	-0.014	-0.017	-0.035	0.025	0.0083	0.0084	-0.0062
	(0.019)	(0.016)	(0.021)	(0.019)	(0.013)	(0.013)	(0.0048)
Three children	-0.042*	-0.0049	0.016	0.012	0.0061	0.00045	-0.0091
	(0.017)	(0.021)	(0.034)	(0.02)	(0.018)	(0.014)	(0.0055)
Four children	-0.046**	0.0043	0.007	-0.034	0.013	0.041	-0.0072
	(0.016)	(0.042)	(0.065)	(0.018)	(0.027)	(0.038)	(0.0084)
Many children	-0.059**	0.39**	0.31	-0.015	-0.012	0.0046	-0.0018
	(0.022)	(0.14)	(0.17)	(0.024)	(0.049)	(0.038)	(0.014)

Standard errors in parentheses

* p<0.05, ** p<0.01, *** p<0.001

Summary for men

Summing up, there are few significant unemployment effects for fathers. The effects on probabilities of fathers not working are more substantial, albeit confined to a few countries and in different directions, notably an increased probability of fathers not working in the UK, and a decreased probability of fathers not working in the US. The coefficients however tend to point in the same directions for unemployment and absence of employment.

The part time regressions are included mostly as a possible explanation for observed unemployment effects, but we haven't got much of those for the fathers. We can however conclude that fatherhood can decrease the probability of part time work, especially for fathers of many in Canada.

The immigrant variable, finally, is significant in most countries, but we cannot conclude that the little effects of fatherhood on unemployment we have observed are immigrant effects. Inclusion of the immigrant variable actually strengthens the decreased probabilities of unemployment for fathers of higher numbers of children in Canada.

Changes over time

In order to get some idea of changes over time regressions have been made for the waves of 1994-1995 and 1999-2000. There are two problems involved here, the first is that none of them contain unemployment data for Sweden, which needs to be excluded, and the second is that the controls are lacking for the first wave, creating a risk that the coefficients for children are actually picking up effects associated with the controls. And indeed, there are more significant coefficients for children in that first wave. If they are to be trusted there were significant decreases in the probabilities of unemployment for fathers of infants in Germany and Italy, significantly increased probabilities of unemployment for fathers of small as well as smaller children in Spain and the UK. In Poland, there is a significantly lower probability of unemployment for fathers of older children. The changes to the second wave is that the infant effect in Italy disappears, while the German effect remain, the small child effects all but vanish, an effect significant at the 10% level remains in the UK, and only the British old child

effect remans, albeit weakened. These changes, however, may be artificial due to the introduction of the controls. From the second wave to the third the infant effect in Germany ceases to be significant, and the effects in the UK moves from young and old child down to infant and young child. Those effects in the UK are the only ones that remain, and for some reason, the unemployment effect of fatherhood in the UK has moved to younger children. And the overall trend, perhaps exaggerated by deficiencies in the data, seems to be that all effects of fatherhood on unemployment in both directions vanish over time. The pooled regression outputs for all three waves can be viewed in Appendix B.

5.2.2 Women

Unemployment as dependent variable

For women, Germany, Poland and the US stand out as countries where motherhood is associated with a significantly higher probability of unemployment for all mothers albeit stronger in Germany and only significant at the ten percent level for mothers of one and many in the US, and not significant at all for mothers of many in Poland. In the UK mothers of two has an increased probability of unemployment significant at the 5% level.

Table 10 Women, # children, Unemployment

Unemployment	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	US
One child	0.012	0.021	0.12***	0.053	0.034**	0.024	0.036*	0.016*	0.012*
	(0.012)	(0.019)	(0.026)	(0.031)	(0.011)	(0.021)	(0.018)	(0.0067)	(0.0046)
Two children	0.0058	-0.0041	0.070**	0.032	0.045***	0.034	0.012	0.020**	0.018***
	(0.012)	(0.019)	(0.026)	(0.021)	(0.012)	(0.022)	(0.015)	(0.0066)	(0.0045)
Three children	0.017	0.062*	0.12***	0.047	0.041**	-0.0068	0.011	0.020*	0.026***
	(0.016)	(0.026)	(0.035)	(0.055)	(0.014)	(0.028)	(0.018)	(0.0089)	(0.0064)
Four children	0.0097	0.082	0.31**	-0.029	0.084***	-0.058	0.042	0.0073	0.041***
	(0.022)	(0.061)	(0.10)	(0.020)	(0.023)	(0.034)	(0.041)	(0.012)	(0.012)
Many children	0.013	0.31*	0.64**	-0.025	0.049	0.25	0.16	0.20*	0.048*
	(0.034)	(0.14)	(0.21)	(0.032)	(0.027)	(0.28)	(0.087)	(0.081)	(0.019)
N	8754	3433	3243	1392	10215	3120	2957	7535	25079
R-sq	0.00742	0.0483	0.0781	0.0697	0.0404	0.0315	0.0355	0.0237	0.0369

Standard errors in parentheses

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Turning to the age categories of children as risk factors for unemployment for their mothers, having an infant increases the probability of unemployment in the US. Mothers of children under the age of seven have a significantly increased probability of unemployment in France, Germany, Poland, the UK and the US. In Italy a similar effect is significant only at the 10% level. This seems to be an effect of mothers returning to the labor market after caring for them in their infant years. Turning to the older child category the picture changes and the effect only remains strong in Poland.

Table 11 Women, age of children, Unemployment

Unemployment	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	USA
infant	-0.013	0.0051	0.016	-0.042	-0.028	-0.0069	0.031	0.021	0.031***
	(0.012)	(0.025)	(0.059)	(0.025)	(0.016)	(0.027)	(0.020)	(0.012)	(0.0089)
Young child	0.015	0.056***	0.12***	0.077*	0.040***	0.031	0.019	0.030***	0.021***
	(0.011)	(0.017)	(0.026)	(0.033)	(0.0094)	(0.019)	(0.014)	(0.0065)	(0.0042)
Old child	0.0025	-0.019	0.034	0.020	0.033***	0.021	0.0089	0.0036	0.0094*
	(0.0097)	(0.017)	(0.018)	(0.023)	(0.0083)	(0.019)	(0.015)	(0.0054)	(0.0038)
N	8754	3433	3243	1392	10215	3120	2957	7535	25079
R-sq	0.00788	0.0474	0.0649	0.0801	0.0416	0.0301	0.0322	0.0224	0.0368

Standard errors in parentheses

* p<0.05, ** p<0.01, *** p<0.001

Absence of employment as dependent variable

This is the really classic one in this field of study, and as can be expected all numbers of children are connected with a significantly increased probability of not working for women of all countries, the soul exception is that being Sweden. Across the board the coefficients increase with the numbers of children. There are differences between the countries, with Canada, Poland, Spain and the US having lower coefficients, and the rest, including the UK, having higher. France has moderate coefficients for mothers of one or two, but high coefficients for mothers of more than two children. Italy also has a high increase with increasing numbers of children.

Table 12 Women, # children, No employment

No employment	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	US
One child	0.055**	0.047*	0.21***	0.12**	0.089***	0.090***	0.027	0.21***	0.064***
	(0.018)	(0.02)	(0.026)	(0.038)	(0.012)	(0.024)	(0.019)	(0.011)	(0.0079)

	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	USA
Two children	0.079***	0.091***	0.23***	0.16***	0.15***	0.15***	-0.0004	0.25***	0.11***
	(0.017)	(0.02)	(0.028)	(0.038)	(0.013)	(0.025)	(0.017)	(0.011)	(0.0077)
Three children	0.13***	0.27***	0.34***	0.32***	0.18***	0.12**	0.037	0.35***	0.16***
	(0.024)	(0.028)	(0.04)	(0.058)	(0.016)	(0.037)	(0.022)	(0.016)	(0.0099)
Four children	0.21***	0.35***	0.47***	0.39***	0.20***	0.20*	0.074	0.45***	0.21***
	(0.042)	(0.056)	(0.079)	(0.11)	(0.024)	(0.084)	(0.038)	(0.028)	(0.016)
Many children	0.31***	0.47***	0.72***	0.56***	0.23***	0.48***	0.22*	0.64***	0.26***
	(0.067)	(0.1)	(0.12)	(0.07)	(0.029)	(0.086)	(0.086)	(0.038)	(0.024)
N	10461	4087	3935	2217	13220	4511	5138	10294	33525
R-sq	0.072	0.135	0.108	0.177	0.147	0.129	0.0909	0.215	0.128

Standard errors in parentheses
* p<0.05, ** p<0.01, *** p<0.001

Comparing with the coefficients for unemployment we can conclude that the effects on unemployment previously observed in Germany correspond to the high probabilities of not working. And that the significantly increased probabilities of unemployment observed for mothers in Poland and the US actually correspond to moderately increased probabilities of not working. In the UK very high probabilities of not working correspond to moderate effects on unemployment, possibly indicating voluntary housewifeing.

Table 13 Women, age of children, No employment

No Employment	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	USA
infant	0.20***	0.11***	0.26*	0.031	0.19***	0.18***	0.011	0.37***	0.23***
	(0.029)	(0.029)	(0.10)	(0.056)	(0.020)	(0.032)	(0.024)	(0.019)	(0.013)
Young child	0.11***	0.13***	0.28***	0.18***	0.13***	0.12***	0.024	0.26***	0.15***
	(0.016)	(0.018)	(0.026)	(0.035)	(0.011)	(0.021)	(0.016)	(0.010)	(0.0069)
Old child	-0.00089	0.012	0.051*	0.10**	0.031**	0.037	-0.0031	0.080***	0.0044
	(0.015)	(0.019)	(0.022)	(0.033)	(0.0094)	(0.022)	(0.016)	(0.010)	(0.0066)
N	10461	4087	3935	2217	13220	4511	5138	10294	33525
R-sq	0.0764	0.112	0.114	0.169	0.148	0.127	0.0879	0.210	0.137

Standard errors in parentheses
* p<0.05, ** p<0.01, *** p<0.001

When we turn to the ages of children, the pattern previously observed with the men, that the effects are concentrated at the young children, is to a large extent repeated. Looking at the

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infant coefficients, there is a significantly increased probability of mothers of infants not being employed in Canada, France Poland, Spain the UK, and the US. At least at the 10% level in Germany. In the US an increased probability of not working correspond to a significant increase in the probability of unemployment,

Comparing the coefficients for young child with the correspondent unemployment coefficients, we first of all notice the increased probabilities across the board except in Sweden, and the particularly high coefficients in Germany and the UK. This correspond to no significant effect on unemployment in Canada and Spain, and an effect significant only on the 10% level in Italy. This could indicate the choice of being housewives for these mothers, or their lack of employment would show up as unemployment. In France, Germany, Poland, the UK and the US increased probabilities of unemployment for these mothers indicate an interest of returning to the labor market. The coefficient is particularly high, at a different order of magnitude, in Germany.

For the older children the effect on not working ceases to be significant in Canada, France and Poland, and it gets weakened to the 10% significance level in Germany. This could indicate a successful return to the labor market, and in Poland it corresponds to an increased probability of unemployment that could be interpreted as a return to the labor market in progress as the children get older. In Italy and the UK, the increased probabilities of not working for these mothers do not correspond to increased probabilities of unemployment, again providing an indication of housewifeing, The differences in the not working coefficients in Germany and the US tell us different stories as the relatively low coefficients for not working in the US tells a story of a return to the labor market still in progress, the very high levels for not working in Germany rather indicates a remaining housewife norm, and women struggling to get back to the labor market after motherhood.

Part time work as independent variable

In stark contrast with the men, mothers are displaying strongly increased probabilities of part time work. Germany, Poland and the US had increased probabilities of unemployment for mothers, since we don't have part time data for Poland we can only conclude that Germany combines their increased probabilities of unemployment with really high magnitudes of increased part time work probabilities, whereas the US combine the increased probability of unemployment with moderate levels of increased probability of part time work. Germany, it seems, gets it all, very highly increased probabilities of not working, combined with high resistance for mothers trying to come back, indicated by the high unemployment effects, and a high probability of part time work for those who work after all. The largest overall part time coefficients are in Germany and Britain, the two countries with the largest probabilities of mothers not working as well. The hypothesis in previous studies of part time work as protection against unemployment for mothers is not fairing very well here. For France, where part time is specifically supposed to help mothers getting a position in the labor market part time levels are a lot lower than in Germany and Britain, but substantially higher than the rest, it is combined with moderate probabilities of not working for mothers of few, and no significant effects on unemployment, so maybe it actually provides some help for mothers

who want to stay on the labor market. Maybe it has some benefit in Britain since high levels of not working is combined with minimal effects on unemployment.

Table 14 Women, # children, Part time

Part time	Canada	France	Germany	Italy	Spain	UK	US
One child	0.035*	0.051*	0.32***	0.063	0.14***	0.35***	0.082***
	(0.017)	(0.024)	(0.035)	(0.043)	(0.025)	(0.015)	(0.0081)
Two children	0.094***	0.18***	0.48***	0.14**	0.16***	0.51***	0.14***
	(0.016)	(0.026)	(0.036)	(0.047)	(0.026)	(0.014)	(0.008)
Three children	0.16***	0.29***	0.51***	0.27**	0.15***	0.52***	0.18***
	(0.026)	(0.038)	(0.058)	(0.093)	(0.044)	(0.022)	(0.011)
Four children	0.18***	0.32***	0.60***	-0.075	0.097	0.57***	0.20***
	(0.044)	(0.088)	(0.12)	(0.087)	(0.079)	(0.042)	(0.019)
Many children	0.1	0.49**	0.65***	-0.36***	0.14	0.53***	0.27***
	(0.069)	(0.18)	(0.15)	(0.064)	(0.25)	(0.1)	(0.032)
N	7818	2768	2807	1287	2722	7166	23862
R-sq	0.0203	0.0666	0.215	0.0991	0.0612	0.246	0.0464

Standard errors in parentheses

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Turning to the ages of children the significant effects for infants are an increased probability of part time in Spain, the UK, and the US. All of those also have significantly increased probabilities of not working, and the US has an increased probability of unemployment as well. Looking at the other categories of children the pattern from the previous table is recognizable, with very high coefficients for Germany and the UK, moderate levels for the rest, and interestingly even quite low levels for mothers of older children in Canada. Since being a mother of older children in Canada neither increases the probability of not working or unemployment the conclusion must be that a high coefficient for part time isn't needed in Canada. In all of these countries we must however conclude that part time work is an important strategy to cope with the challenge of combining motherhood with market work, and possibly resistance against mothers at the labor market.

Table 15 Women, age of children, Part time

Part time	Canada	France	Germany	Italy	Spain	UK	USA
infant	0.064*	0.036	0.18	0.053	0.14***	0.34***	0.15***
	(0.032)	(0.038)	(0.19)	(0.081)	(0.041)	(0.028)	(0.016)
Young child	0.11***	0.15***	0.38***	0.12**	0.11***	0.46***	0.14***
	(0.017)	(0.024)	(0.038)	(0.047)	(0.022)	(0.014)	(0.0077)
Old child	0.045**	0.087***	0.28***	0.12**	0.076**	0.29***	0.073***
	(0.015)	(0.024)	(0.031)	(0.039)	(0.024)	(0.014)	(0.0069)
N	7818	2768	2807	1287	2722	7166	23862
R-sq	0.0158	0.0483	0.203	0.0940	0.0554	0.235	0.0446

Standard errors in parentheses

* p<0.05, ** p<0.01, *** p<0.001

With immigrant

Adding the immigrant variable to the women's regression we notice that the immigrant variable itself is only significant in Canada and France, and in those countries it is associated with an increased probability of unemployment. In Sweden there is a weaker effect significant at the 10% level, and in the US there is an opposite effect also significant at the 10% level.

Table 16 Women, Immigrant variable

	Canada	France	Germany	Italy	Spain	Sweden	US
Immigrant	0.073***	0.11***	0.0088	0.034	0.04	0.042*	-0.011*
	(0.021)	(0.026)	(0.027)	(0.057)	(0.033)	(0.018)	(0.0046)

Standard errors in parentheses

* p<0.05, ** p<0.01, *** p<0.001

With the immigrant variable included the pattern is of significantly increased probabilities of unemployment for mothers in Germany and the US, and nowhere else except an increased probability of unemployment for mothers in France carried over almost exactly from the precious regression without he immigrant variable. For French mothers of many the effect has ceased to be significant, but the coefficient is still high. For mothers of one in Sweden the coefficient is slightly reduced from the previous regression, and like the aforementioned French one, it is no longer significant at the 10% level. The coefficients for Germany and the US has practically not changed at all when the immigrant variable was introduced and we can quite safely conclude that they are not immigrant effects.

Table 17 Women, Unemployment with Immigrant

Unemployment	Canada	France	Germany	Italy	Spain	Sweden	US
One child	-0.011	0.021	0.12***	0.054	0.023	0.032	0.012*
	(0.02)	(0.019)	(0.026)	(0.031)	(0.021)	(0.017)	(0.0046)
Two children	-0.019	-0.0033	0.069**	0.033	0.033	0.011	0.018***
	(0.021)	(0.019)	(0.026)	(0.021)	(0.022)	(0.015)	(0.0045)
Three children	0.01	0.058*	0.12***	0.048	-0.0085	0.0097	0.026***
	(0.029)	(0.026)	(0.035)	(0.054)	(0.028)	(0.018)	(0.0064)
Four children	-0.021	0.074	0.31**	-0.04	-0.066	0.034	0.042***
	(0.044)	(0.061)	(0.1)	(0.026)	(0.035)	(0.04)	(0.012)
Many children	-0.034	0.27	0.63**	-0.022	0.23	0.15	0.048**
	(0.045)	(0.15)	(0.21)	(0.03)	(0.29)	(0.087)	(0.019)

Standard errors in parentheses

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Summary for women

What can be concluded is that the more children a woman has, the higher the probability of her not working. The basic difference between countries is that the probability is lower in Canada, Poland, and the US, and for one or two children in France. The exception is Sweden with an effect only significant at the 10% level and only for the mothers of many. The rather uniform increased probability for mothers of not working translates into a more diverse set of increased probabilities of unemployment for mothers. In Germany, Poland, and the US the high probabilities of not working correspond directly to high probabilities of unemployment for mothers. The only effect significant at least at the 5% level is for mothers of two in the UK, and that coefficient correspond to a very high coefficient for not working. Since the UK has a pattern of very high coefficients for not working we can however conclude that the moderate coefficients for unemployment in the UK are not due to mothers having an easier time on the labor market. The US on the other hand has high coefficients for unemployment combined with moderate coefficients for not working, indicating that American mothers seem to be interesting in market work but facing significant difficulties on the labor market, possibly due to motherhood.

Turning to ages of children the results basically confirms the results for numbers of children, with increased probabilities of not working across the board except in Sweden. For mothers of infants there is an increased probability of not working in in Canada, France Poland, Spain the UK, and the US, and at the 10% level for Germany. Those probabilities only translate into an increased probability of unemployment in the US. The overall pattern is that the coefficients for not working decrease as we move from young to old children, indicating a return to the labor market. Some of the coefficients cease to be significant as well. Only Poland has a significantly higher probability of unemployment for mothers of older children, corresponding

to a moderate increase in the probability of not working. The return to the labor market for mothers of older children do not seem to be associated with unemployment in any other country.

The part time regressions tell us that high coefficients are found basically in those countries where we find high coefficients for not working. Instead of part time as a means to keep women in the labor market, we rather find a measurement of the degree of problems connected with motherhood in the various countries, since the same female populations tend to leave the labor market as well as work part time. High coefficients for part time doesn't seem to protect German mothers from unemployment either, albeit such an effect may exist in the UK.

The immigrant variable is significant in Canada and France, and at the 10% level in Sweden and negative at the 10% level in the US. The motherhood coefficients basically remain the same after it is introduced in most countries. And like we did for the men we may conclude that we are not observing an immigrant effect picked up in the coefficients for children.

Changes over time

Returning to changes over time, again, Sweden is missing, as well as all the controls in the first wave. For women there are, however, changes in the other direction as well, that is more coefficients that are significant in the second wave. In the first wave the only significant infant effect I a decreased probability in Italy, and that is only significant at the 10% level. As we move to the second wave, that coefficient increases, but ceases to be significant, at the same time effects in that same direction emerges in Canada and Poland, also significant only at the 10% level. For young and older children there are strongly significant increases in the probabilities on unemployment everywhere except for older children in France. We need to remember here that Sweden is excluded from these regressions. The change from the first to the second wave is a weakening of the coefficients across the board, leading to a loss of statistical significance in Italy and for older children in Spain, and a weakening to the 10% significance level for young children in Spain and older children in Canada. This may unfortunately be due to the introduction of the controls.

Moving on to the third wave the trends seem to continue, indicating that this may actually be trends. The tendency of motherhood of infants being associated with a lower probability of unemployment is increased, and in the third wave it is significant at the 1% level in Poland, at the 5% level in Italy where it is returning from the first wave, and at the 10% level in France where the effect is new. For young and older children, the previously observed changes are augmented as well. The coefficients are reduced further in Canada, Spain and the UK, leading to a complete loss of statistical significance in Canada and Spain, and for older children in the UK. For the other countries the coefficients are steady or even increasing slightly.

Studying the changes over time in the coefficients for not working, the changes are less clear, and it is difficult to make a case for a strong trend towards more mothers working. At least from the second wave to the third, and changes form the first wave to the second are, again, less certain. Pooled regressions for the waves can be viewed in Appendix B.

5.2.3 Comparison of men and women

The striking difference between men and women is that there is still a very substantial effect of motherhood on the probability of working, spilling over to the probabilities of unemployment and part time work, whereas the picture for men is less clear and differ more across countries. The overall image of the study is one of still very gender divided patterns around 2005. The strong coefficients for mothers not working and part time tells a story of particularly mothers needing to cope with parental tasks in accordance with Becker's theory, and of fathers still specializing on market work. Only the UK has a substantially increased probability of not working for fathers, and that is combined with surprisingly high coefficients for most things in this study. In the US we find a combination of increased probabilities for mothers and decreased probabilities for fathers, underlining the tenets of Beckerian theory. Whereas the data paints a picture of traditional gender patterns in all countries except possibly Sweden, the changes over time give a vague trend towards more gender equality, at least in some of the countries, and at least when we are focusing on the unemployment effects.

6 Conclusion

6.1 Discussion

The unemployment effects for men are minor and scattered, for some reason the fathers of many have an increased probability of unemployment in France. In Canada on the other hand, there is a reduced probability of unemployment that is enhanced when the immigrant control variable is introduced. The results for the absence of employment are more interesting however, considering that the only really clear results ate the opposite effects in liberal countries UK and USA, perhaps indicating that attitudes towards parents are a more viable explanation than the liberal systems as such. The reduced probabilities of not working in the US, and unemployment in Canada wound indicate a strong position for the single bread winner concept in those liberal countries, whereas fathers in the UK seem to meet some sort of resistance on the labor market, coupled with a rather poor performance for the UK in most parameters in this study.

Turning to the women, increasing numbers of children make the probability of not working increase, and this spills over in unemployment in Germany, Poland, the US and to a lesser extent in the UK. Unemployment signals a willingness to work, and may be the symptoms of a collision between modern attitudes of women supposed to be working and prejudice about the lack of "energy" for market work among mothers of larger numbers of children. The coefficients for not working are however high in Germany and the UK, and we seem to be observing a large resistance against mothers in those labor markets. It is noteworthy that liberal UK is more akin to conservative Germany than to the other liberal Anglo-Saxon countries, again suggesting the limited use of the welfare regimes as explanation. The US is perhaps more like we would have expected the liberal countries to be, with lower levels of mothers outside the labor market, yet high coefficients for unemployment due to mothers banging on the labor market door. It is difficult to know what to make of Poland in terms of regimes, but we may conclude that its patterns closely resemble those of the US.

For the other conservative countries, the coefficients for being outside the labor market are moderate compared to Germany, and notably liberal UK, and they do not spill over in increased unemployment for mothers, taking a reminder look at figure 7 however tells us that the coefficients for Spain are not as impressive as they seem, the very high unemployment levels for women indicate that the problem is for women generally, leaving little space for mothers to get any worse, a similar problem also reveals itself for France, further stripping away the halo of the expectedly successful middle way. Figure 7 also tells us that the UK is a liberal country after all with unemployment for women actually lower than that for men, the typical liberal pattern, and from this we may conclude that the UK is not like Germany at all, like the coefficients suggest, but rather that it differs from Canada and the US by raising

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massive obstacles for those women who become mothers, while performing a lot better for women in general than the continental conservative countries. Comparing with the unemployment rates for women in general also makes Germany look a bit better, the situation for women is at least not as bad as in Spain, and like in the UK we are looking at a quite severe problem for mothers specifically.

To nuance the picture further we can take another reminder look at figure 9, suddenly Canada, France, Germany, the UK, and the US all look alike in their proportions of male versus female employment, and Italy joins Spain as another really bad example. From here we can paint a picture from the ground up. Italy and Spain had particularly low female employment rates compared to the male ones in comparison to the ratios in the other countries. This however only spills over in very high levels of employment for women in Spain, and the statistical effects on mothers compared to those poor base levels look moderate, especially in Spain. France had a gender employment ratio similar to the liberal countries, that ratio turns into a highly elevated unemployment rate for women, and again, the UK differs from the other liberal countries regarding mothers specifically, not for women in general. It is very difficult to find support for the notion of France being a special case with intermediate policies among conservative countries. Sweden provides some support for the notion that regimes do matter, it looks like the bright and shining example it likes to think of itself, but it may also be due to different, more equal attitudes in the population rather than policy.

Whereas the infant and small child coefficients mirror the coefficients for numbers of children, the old child coefficients show a more or less large reduction from a woman's small child motherhood years, indicating a return to the labor market. The poor performers in this process are Italy, Poland and the UK, again placing the UK in the conservative group rather than the liberal according to observed performance. The unemployment effects of this process are observed in Poland, possibly some resistance in the return to the labor market.

Part time work does not stand out as a good explanation for low unemployment for mothers. Rather, high coefficients for part time work and motherhood mirror high coefficients for being outside the labor market almost precisely, and the highest coefficients, in Germany and the UK, are also paired with significantly heightened levels of unemployment for mothers. The previously expected example of France using availability of part time as a remedy for motherhood unemployment is not seen in the data since French coefficients for part time are moderate, at least at lower numbers of children, and compared to Germany and the UK. And again, the data is challenging the welfare regime concept by placing Germany and the UK in a league of its own, and describing liberal Canada and the US as well as conservative France, Italy and Spain as quite similar. Mothers of older children have lower coefficients than mothers of young children in every country but Italy, in the light of previous regressions indicating a return to full time work as the children grow older. Mothers of infants have no significant increase in the probability of part time in France Germany and Italy, perhaps indicating part time as a strategy for labor market returners. Unfortunately, part time data for Poland and Sweden are missing, but Canada and the US has the lowest part time coefficients for old child mothers, possibly indicating some validity of the liberal regime concept, albeit with the UK as a conspicuous exception.

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6.1.1 Comparison with previous research

The results are difficult to compare with previous research since my focus is on a new angle. Some of the results seen in previous studies can however be verified. I have however The results of Guiterrez-Domenech (2005) that Germany has a very high risk of mothers leaving the labor market, I however found that Spain rather has a high level of unemployment for women in general. The results also support the basic axis of age of the mother, age of the child, education of the mother, and number of children seen in Destro and Brady (2010) where high age, high education, few children, and older children means a higher probability of mothers working at the labor market. The results also confirm the overall image of previous research of the social democratic model, represented by Sweden being the most successful at keeping mothers in the labor market, with liberal Canada and the US as intermediate, and the continental conservative countries lagging behind. Nominally liberal UK however turn out to be an anomaly resembling the conservative countries a lot more than the other Anglo-Saxon liberal countries, and Poland turns out resembling the conservative countries.

6.2 Conclusion

The research question for this thesis is:

Is parenthood associated with an increased probability of unemployment in western democracies?

And the answer is not really fatherhood, but yes, motherhood is associated with an increased probability of unemployment, especially in Germany, Poland and the US, and to a lesser extent in the UK. In the UK and the US, countries labeled liberal regimes in the Esping-Andersen (1990)- framework, these effects arise against a backdrop of lower unemployment for women than for men, indicating a conflict of interest emerging with motherhood specifically, especially in the US. Germany and Poland has a pattern of higher unemployment for women, and the significantly higher probability of unemployment for mothers come on top of that. The moderate motherhood effect and the liberal pattern of lower unemployment for women in the UK is however combined with a very large significant motherhood effect on leaving the labor market, much more so than in the US. Italy and Spain has no significant motherhood effects on unemployment, and moderate effects on leaving the labor market, this is however explained by very low female to male employment ratios in those countries, combined with very high unemployment for women in Spain. Previous studies led me to believe that France was a special case with its own successful political model, there is however little support for that in the data. Sweden stands out as the good example it so desperately would like to be, with gender equality in unemployment, near gender equality in employment ratios, no statistical unemployment effect of motherhood, and it is the only country in this study with no motherhood effect on leaving the labor market as well. Being the only country in the study labeled social democrat in the Esping-Andersen framework, it suggests that that regime actually does what it is supposed to. However, attitudes in the

Swedish population may be an alternative explanation. Part time work is no good explanation for low unemployment effects, rather, the part time coefficients mirror the coefficients for mothers leaving the labor market in all the countries, suggesting that part time work will be proportionate to the problems of motherhood on the labor market rather than an effective solution.

Becker (1991) wrote that the most advanced societies might have diminished gender differences in parental responsibilities and in labor market outcomes. In this study that hypothesis is certainly supported for Sweden, remaining problems like wage gaps and glass ceilings are not visible in this data, but we can also observe how traditional gender divisions were still visible to different extents and in slightly different shapes in all the other countries in the last (2004-2005) wave, and that changes from the two previous waves are present but slow. The pattern that emerges is quite compatible with Becker's theory of gender specialization and extra burdens of parenthood placed on the shoulders of women, but once more attitudes in the populations might be just as good an explanation, perhaps a combination is the right answer. Turning to the question of statistical discrimination finally, there may be a case for that in the three countries with highly significant motherhood effects on unemployment, Germany, Poland and the US. For some reasons mothers in those countries who wants work are facing difficulties getting it that are statistically connected to the fact that they are mothers, a plausible explanation is that employers in those countries are weary of the diminished work capacity that mothers could be expected to have according to Becker, but we can't really tell at this point.

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Appendix A

Unemployment Men

Unemployment	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	US
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age	0.0031	-0.0083	-0.015	-0.0099	-0.014**	-0.0049	-0.011	-0.021***	-0.0084**
	(0.0048)	(0.0099)	(0.015)	(0.016)	(0.0047)	(0.010)	(0.0079)	(0.0048)	(0.0028)
agesq	-0.000034	0.000074	0.00021	0.00011	0.00021**	0.000054	0.00014	0.00029***	0.00011**
	(0.000069)	(0.00014)	(0.00021)	(0.00022)	(0.000068)	(0.00014)	(0.00011)	(0.000067)	(0.000040)
onechild	-0.017	-0.023	-0.024	0.0068	-0.0022	0.0050	-0.00076	0.014*	-0.0031
	(0.010)	(0.016)	(0.021)	(0.017)	(0.0096)	(0.012)	(0.013)	(0.0062)	(0.0051)
twochildren	-0.015	-0.016	-0.032	0.025	-0.0066	0.0084	0.0082	0.0078	-0.0063
	(0.011)	(0.016)	(0.021)	(0.019)	(0.0099)	(0.013)	(0.013)	(0.0056)	(0.0048)

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threechild~n	-0.015	0.0033	0.022	0.011	-0.019	0.0068	0.00054	0.0084	-0.0095
	(0.013)	(0.021)	(0.034)	(0.020)	(0.012)	(0.018)	(0.014)	(0.0076)	(0.0055)
fourchildren	-0.033**	0.013	0.015	-0.030	-0.0020	0.014	0.050	0.033	-0.0077
	(0.011)	(0.042)	(0.065)	(0.017)	(0.018)	(0.028)	(0.038)	(0.018)	(0.0084)
manychildren	-0.032	0.44**	0.32	-0.038*	0.015	0.016	0.014	0.094*	-0.0024
	(0.017)	(0.14)	(0.17)	(0.018)	(0.024)	(0.044)	(0.039)	(0.043)	(0.013)
livepartner	-0.0072	-0.020	-0.017	-0.021	0.023*	-0.041*	-0.032*	-0.048***	-0.0099
	(0.0099)	(0.017)	(0.023)	(0.017)	(0.011)	(0.019)	(0.014)	(0.0074)	(0.0052)
disabled	0.032*	0.087**	0.19*	0.25	0.10***	0.11*	-0.065***	0.046***	0.10***
	(0.013)	(0.032)	(0.082)	(0.14)	(0.030)	(0.049)	(0.015)	(0.013)	(0.022)
loweduc	0.025	0.059***	0.11***	0.045***	0.056***	0.042***	0.059**	0.039***	0.041***
	(0.013)	(0.015)	(0.030)	(0.013)	(0.012)	(0.010)	(0.020)	(0.0073)	(0.0067)
hieduc	-0.00066	0.0095	-0.053***	0.018	-0.035***	0.00023	-0.0022	-0.0067	-0.024***
	(0.0065)	(0.011)	(0.013)	(0.016)	(0.0059)	(0.0086)	(0.0086)	(0.0043)	(0.0031)
_cons	-0.023	0.28	0.35	0.23	0.27***	0.16	0.28*	0.43***	0.21***
	(0.076)	(0.17)	(0.26)	(0.29)	(0.079)	(0.18)	(0.13)	(0.083)	(0.047)
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N	8814	3385	3156	1695	10328	3653	3158	7610	26304
R-sq	0.00861	0.0362	0.0569	0.0246	0.0127	0.0248	0.0208	0.0332	0.0173

Unemployment Men age of children

Unemployment	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	US
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age	0.0030	-0.012	-0.016	-0.0077	-0.013**	-0.0040	-0.012	-0.023***	-0.0086**
	(0.0050)	(0.010)	(0.016)	(0.016)	(0.0048)	(0.011)	(0.0082)	(0.0049)	(0.0028)
agesq	-0.000031	0.00014	0.00023	0.000078	0.00020**	0.000038	0.00016	0.00032***	0.00011**
	(0.000073)	(0.00015)	(0.00022)	(0.00023)	(0.000069)	(0.00015)	(0.00012)	(0.000069)	(0.000040)
infant	0.00073	0.032	0.023	0.0090	-0.0046	-0.0071	0.00061	0.045***	-0.012*
	(0.016)	(0.024)	(0.071)	(0.027)	(0.012)	(0.012)	(0.013)	(0.011)	(0.0059)
youngchild	-0.014	-0.0071	-0.013	0.0029	-0.0095	0.0037	0.0060	0.011*	-0.0035
	(0.0082)	(0.013)	(0.018)	(0.015)	(0.0070)	(0.010)	(0.010)	(0.0046)	(0.0041)
oldchild	-0.016	-0.017	-0.0053	0.021	-0.0068	0.012	-0.0030	-0.0045	-0.0060
	(0.0086)	(0.014)	(0.018)	(0.017)	(0.0073)	(0.013)	(0.013)	(0.0052)	(0.0042)

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	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	US
livepartner	-0.0095	-0.025	-0.023	-0.018	0.025*	-0.039*	-0.030*	-0.048***	-0.0099*
	(0.0094)	(0.016)	(0.022)	(0.017)	(0.010)	(0.018)	(0.013)	(0.0072)	(0.0050)
disabled	0.032*	0.093**	0.20*	0.25	0.10***	0.11*	-0.067***	0.048***	0.10***
	(0.013)	(0.032)	(0.083)	(0.14)	(0.030)	(0.049)	(0.016)	(0.013)	(0.022)
loweduc	0.026	0.060***	0.11***	0.042***	0.056***	0.042***	0.060**	0.041***	0.041***
	(0.013)	(0.015)	(0.031)	(0.012)	(0.012)	(0.010)	(0.020)	(0.0074)	(0.0067)
hieduc	-0.00067	0.0068	-0.053***	0.017	-0.034***	0.00090	-0.0031	-0.0079	-0.024***
	(0.0065)	(0.011)	(0.013)	(0.016)	(0.0058)	(0.0084)	(0.0085)	(0.0043)	(0.0031)
_cons	-0.022	0.32	0.37	0.20	0.26**	0.14	0.29*	0.45***	0.21***
	(0.079)	(0.18)	(0.27)	(0.29)	(0.080)	(0.19)	(0.14)	(0.085)	(0.047)
N	8814	3385	3156	1695	10328	3653	3158	7610	26304
R-sq	0.00862	0.0257	0.0491	0.0235	0.0124	0.0252	0.0200	0.0350	0.0174

No employment Men

No employment	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	US
age	-0.022**	-0.067***	-0.045**	-0.058**	-0.085***	-0.02	-0.077***	-0.020***	-0.026***
	-0.0073	-0.011	-0.017	-0.021	-0.0062	-0.012	-0.0087	-0.0059	-0.0036
agesq	0.00031**	0.00088***	0.00062**	0.00075**	0.0012***	0.00028	0.00100***	0.00025**	0.00035***
	-0.0001	-0.00015	-0.00023	-0.00028	-8.8E-05	-0.00016	-0.00012	-8.5E-05	-5.2E-05
onechild	-0.027*	-0.024	-0.026	0.014	-0.0024	0.0046	-0.021	0.029**	-0.025***
	-0.014	-0.017	-0.022	-0.018	-0.011	-0.014	-0.015	-0.0093	-0.0065
twochildren	-0.024	0.0031	-0.022	0.032	0.0014	0.004	-0.016	0.021*	-0.030***
	-0.014	-0.017	-0.022	-0.02	-0.011	-0.015	-0.015	-0.0083	-0.0064
threechild~n	-0.025	0.02	0.037	0.018	-0.009	0.013	-0.01	0.071***	-0.032***
	-0.017	-0.022	-0.036	-0.02	-0.013	-0.023	-0.016	-0.014	-0.0071
fourchildren	-0.0019	0.059	0.022	-0.023	0.0031	0.13	0.041	0.089***	-0.021
	-0.037	-0.047	-0.069	-0.018	-0.02	-0.083	-0.034	-0.026	-0.011
manychildren	-0.052	0.43**	0.32	0.04	0.015	-0.007	0.035	0.20***	-0.015
	-0.028	-0.14	-0.17	-0.087	-0.027	-0.045	-0.057	-0.05	-0.018

	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	US
livepartner	-0.029*	-0.078***	-0.025	-0.035	-0.025	-0.066**	-0.0068	-0.11***	-0.026***
	-0.014	-0.019	-0.025	-0.02	-0.014	-0.022	-0.015	-0.01	-0.0069
disabled	0.13***	0.17***	0.28***	0.29	0.59***	0.29***	0.24***	0.36***	0.62***
	-0.017	-0.034	-0.074	-0.15	-0.02	-0.051	-0.052	-0.018	-0.016
loweduc	0.039*	0.058***	0.095**	0.039**	0.053***	0.055***	-0.019	0.12***	0.058***
	-0.018	-0.016	-0.031	-0.014	-0.013	-0.012	-0.016	-0.01	-0.0077
hieduc	-0.025*	0.013	-0.054***	0.0083	-0.060***	-0.0047	0.075***	-0.012	-0.028***
	-0.01	-0.012	-0.015	-0.016	-0.0067	-0.011	-0.012	-0.0066	-0.0044
_cons	0.49***	1.37***	0.94**	1.15**	1.58***	0.46*	1.52***	0.50***	0.59***
	-0.12	-0.19	-0.29	-0.38	-0.11	-0.21	-0.15	-0.1	-0.061
N	9329	3504	3237	1713	10974	3775	4848	8265	28035
R-sq	0.0452	0.0925	0.071	0.0526	0.2	0.0773	0.115	0.204	0.188

No employment Men age of children

No employment	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	US
age	-0.022**	-0.072***	-0.047**	-0.056**	-0.084***	-0.019	-0.075***	-0.022***	-0.026***
	(0.0074)	(0.011)	(0.017)	(0.021)	(0.0063)	(0.012)	(0.0090)	(0.0060)	(0.0036)
agesq	0.00032**	0.00097***	0.00064**	0.00071*	0.0012***	0.00026	0.00096***	0.00029***	0.00034***
	(0.00011)	(0.00016)	(0.00024)	(0.00028)	(0.000089)	(0.00017)	(0.00013)	(0.000087)	(0.000052)
infant	-0.015	0.034	0.026	0.013	-0.017	-0.016	-0.044**	0.067***	-0.032***
	(0.018)	(0.024)	(0.073)	(0.027)	(0.013)	(0.015)	(0.016)	(0.014)	(0.0086)
youngchild	-0.015	0.010	-0.0075	0.0088	-0.011	-0.0043	-0.015	0.032***	-0.023***
	(0.012)	(0.014)	(0.019)	(0.016)	(0.0078)	(0.012)	(0.012)	(0.0075)	(0.0053)
oldchild	-0.022	-0.013	-0.0032	0.030	0.011	-0.0017	0.0032	0.011	-0.020***
	(0.012)	(0.015)	(0.018)	(0.018)	(0.0081)	(0.015)	(0.014)	(0.0087)	(0.0053)
livepartner	-0.033*	-0.081***	-0.031	-0.032	-0.023	-0.058**	-0.0058	-0.10***	-0.028***
	(0.013)	(0.018)	(0.023)	(0.019)	(0.012)	(0.022)	(0.014)	(0.010)	(0.0066)
disabled	0.13***	0.18***	0.28***	0.29	0.59***	0.29***	0.24***	0.37***	0.62***

(0.017)	(0.035)	(0.074)	(0.15)	(0.020)	(0.052)	(0.052)	(0.018)	(0.016)
loweduc	0.038*	0.060***	0.098**	0.036**	0.055***	0.057***	-0.017	0.12***	0.057***
(0.018)	(0.016)	(0.031)	(0.013)	(0.013)	(0.012)	(0.016)	(0.010)	(0.0076)
hieduc	-0.025*	0.011	-0.054***	0.0071	-0.059***	-0.0043	0.076***	-0.014*	-0.027***
(0.0100)	(0.012)	(0.015)	(0.016)	(0.0066)	(0.011)	(0.012)	(0.0067)	(0.0044)
_cons	0.50***	1.44***	0.96**	1.11**	1.57***	0.43*	1.50***	0.51***	0.59***
(0.12)	(0.19)	(0.30)	(0.38)	(0.11)	(0.22)	(0.15)	(0.10)	(0.061)
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N	9329	3504	3237	1713	10974	3775	4848	8265	28035
R-sq	0.0447	0.0845	0.0642	0.0522	0.200	0.0755	0.115	0.201	0.188

Part time Men

Part time	Canada	France	Germany	Italy	Spain	UK	US
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age	-0.022*	-0.021*	-0.029*	-0.028	-0.0038	-0.0054	-0.038***
	-0.0086	-0.0084	-0.014	-0.014	-0.0074	-0.0051	-0.0037
agesq	0.00029*	0.00029*	0.00035	0.00038	0.000047	0.000064	0.00051***
	-0.00012	-0.00012	-0.00019	-0.0002	-0.0001	-0.000072	-0.000052
onechild	-0.021	0.012	-0.035*	-0.017	-0.014	0.0088	-0.013**
	-0.014	-0.015	-0.018	-0.022	-0.0094	-0.0076	-0.0051
twochildren	-0.029*	-0.012	-0.0085	-0.023	-0.012	0.014	-0.012*
	-0.013	-0.013	-0.02	-0.02	-0.0092	-0.0076	-0.0047
threechild~n	-0.033*	-0.013	-0.026	-0.0049	0.0037	0.025*	-0.0048
	-0.015	-0.016	-0.02	-0.035	-0.016	-0.012	-0.0057
fourchildren	-0.036	0.051	0.024	-0.046	-0.017	0.043	-0.0092
	-0.02	-0.046	-0.054	-0.025	-0.013	-0.023	-0.0076
manychildren	0.025	0.06	-0.046*	-0.063**	-0.025**	0.12*	0.013
	-0.049	-0.099	-0.018	-0.02	-0.0095	-0.058	-0.014
livepartner	-0.028*	-0.015	-0.041	0.017	-0.027	-0.023*	-0.039***
	-0.014	-0.015	-0.022	-0.023	-0.017	-0.0089	-0.006
disabled	0.043*	0.052	0.089	0.063	-0.012	0.085***	0.18***
	-0.017	-0.027	-0.061	-0.12	-0.0093	-0.017	-0.029

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	Canada	France	Germany	Italy	Spain	UK	US
loweduc	0.0013	0.021	-0.033	-0.00033	-0.0049	0.039***	-0.0036
	-0.016	-0.011	-0.02	-0.014	-0.0082	-0.0087	-0.006
hieduc	-0.0077	0.036***	-0.02	0.012	-0.0014	0.0027	-0.012**
	-0.011	-0.0099	-0.013	-0.022	-0.0098	-0.0058	-0.0036
_cons	0.51***	0.41**	0.69**	0.55*	0.13	0.15	0.77***
	-0.15	-0.15	-0.24	-0.26	-0.13	-0.088	-0.065
N	8100	2806	2846	1600	3443	7335	24647
R-sq	0.0198	0.0189	0.0434	0.00736	0.00926	0.0186	0.047

Part time Men Age of children

Part time	Canada	France	Germany	Italy	Spain	UK	US
age	-0.023**	-0.022*	-0.029*	-0.028	-0.0052	-0.0059	-0.038***
	(0.0088)	(0.0087)	(0.014)	(0.015)	(0.0077)	(0.0052)	(0.0037)
agesq	0.00032*	0.00031*	0.00034	0.00038	0.000067	0.000075	0.00051***
	(0.00013)	(0.00012)	(0.00019)	(0.00021)	(0.00011)	(0.000074)	(0.000053)
infant	-0.016	-0.012	0.0027	-0.031	-0.010	0.021	-0.011
	(0.019)	(0.015)	(0.048)	(0.022)	(0.011)	(0.012)	(0.0066)
youngchild	-0.014	0.000052	-0.013	-0.013	-0.0034	0.014*	-0.0084*
	(0.011)	(0.011)	(0.016)	(0.017)	(0.0083)	(0.0066)	(0.0041)
oldchild	-0.036***	-0.017	0.00092	-0.023	-0.011	0.012	-0.0061
	(0.010)	(0.012)	(0.019)	(0.017)	(0.0082)	(0.0073)	(0.0042)
livepartner	-0.031*	-0.011	-0.051*	0.018	-0.030	-0.022*	-0.041***
	(0.014)	(0.014)	(0.020)	(0.022)	(0.017)	(0.0087)	(0.0058)
disabled	0.043*	0.053*	0.091	0.064	-0.012	0.086***	0.18***
	(0.017)	(0.027)	(0.061)	(0.11)	(0.0092)	(0.017)	(0.029)
loweduc	0.0017	0.021	-0.035	0.00050	-0.0051	0.041***	-0.0032
	(0.016)	(0.011)	(0.020)	(0.015)	(0.0082)	(0.0087)	(0.0060)
hieduc	-0.0076	0.035***	-0.018	0.012	-0.0013	0.0022	-0.011**
	(0.011)	(0.010)	(0.013)	(0.022)	(0.0100)	(0.0058)	(0.0036)

_cons	0.53***	0.43**	0.70**	0.55*	0.16	0.16	0.76***
	(0.15)	(0.15)	(0.24)	(0.26)	(0.13)	(0.089)	(0.065)
N	8100	2806	2846	1600	3443	7335	24647
R-sq	0.0202	0.0165	0.0411	0.00749	0.00847	0.0165	0.0466

Unemployment Men with Immigrant

Unemployment	Canada	France	Germany	Italy	Spain	Sweden	US
age	0.0078	-0.0085	-0.015	-0.012	-0.0047	-0.012	-0.0080**
	-0.0079	-0.0099	-0.015	-0.016	-0.01	-0.0079	-0.0028
agesq	-0.0001	0.000076	0.00021	0.00014	0.000053	0.00015	0.00011**
	-0.00011	-0.00014	-0.00021	-0.00022	-0.00014	-0.00011	-0.00004
onechild	-0.027	-0.026	-0.024	0.006	0.0041	-0.0046	-0.003
	-0.017	-0.016	-0.021	-0.017	-0.012	-0.013	-0.0051
twochildren	-0.014	-0.017	-0.035	0.025	0.0083	0.0084	-0.0062
	-0.019	-0.016	-0.021	-0.019	-0.013	-0.013	-0.0048
threechild~n	-0.042*	-0.0049	0.016	0.012	0.0061	0.00045	-0.0091
	-0.017	-0.021	-0.034	-0.02	-0.018	-0.014	-0.0055
fourchildren	-0.046**	0.0043	0.007	-0.034	0.013	0.041	-0.0072
	-0.016	-0.042	-0.065	-0.018	-0.027	-0.038	-0.0084
manychildren	-0.059**	0.39**	0.31	-0.015	-0.012	0.0046	-0.0018
	-0.022	-0.14	-0.17	-0.024	-0.049	-0.038	-0.014
livepartner	-0.0017	-0.018	-0.018	-0.025	-0.039*	-0.032*	-0.01
	-0.016	-0.017	-0.023	-0.018	-0.019	-0.014	-0.0052
disabled	0.033	0.093**	0.19*	0.24	0.11*	-0.051***	0.10***
	-0.023	-0.032	-0.082	-0.14	-0.049	-0.014	-0.022
immigr	0.039*	0.097***	0.027	-0.050***	0.043*	0.077***	-0.011**
	-0.016	-0.02	-0.022	-0.011	-0.021	-0.018	-0.0042
loweduc	0.018	0.047**	0.11***	0.047***	0.043***	0.050*	0.045***
	-0.028	-0.015	-0.031	-0.013	-0.01	-0.02	-0.0071

	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	US
hieduc	0.0036	0.0066	-0.052***	0.017	0.0005	-0.0046	-0.024***		
	-0.011	-0.011	-0.013	-0.016	-0.0085	-0.0086	-0.0031		
_cons	-0.12	0.27	0.35	0.28	0.14	0.28*	0.21***		
	-0.13	-0.17	-0.26	-0.29	-0.18	-0.13	-0.047		
	--------------	--------------	--------------	--------------	--------------	--------------	--------------		
N	2520	3385	3156	1695	3653	3158	26304		
R-sq	0.0202	0.0515	0.058	0.0297	0.0286	0.0358	0.0177		

Unemployment Women

Unemployment	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	US
age	0.0033	-0.036**	-0.038*	-0.091***	-0.025***	-0.016	0.0035	-0.018***	-0.012***
	(0.0064)	(0.011)	(0.017)	(0.025)	(0.0062)	(0.015)	(0.0092)	(0.0047)	(0.0027)
agesq	-0.000055	0.00044**	0.00046	0.0012***	0.00030***	0.00018	-0.000097	0.00024***	0.00015***
	(0.000093)	(0.00016)	(0.00024)	(0.00034)	(0.000088)	(0.00021)	(0.00013)	(0.000066)	(0.000039)
onechild	0.012	0.021	0.12***	0.053	0.034**	0.024	0.036*	0.016*	0.012*
	(0.012)	(0.019)	(0.026)	(0.031)	(0.011)	(0.021)	(0.018)	(0.0067)	(0.0046)
twochildren	0.0058	-0.0041	0.070**	0.032	0.045***	0.034	0.012	0.020**	0.018***
	(0.012)	(0.019)	(0.026)	(0.021)	(0.012)	(0.022)	(0.015)	(0.0066)	(0.0045)
threechild~n	0.017	0.062*	0.12***	0.047	0.041**	-0.0068	0.011	0.020*	0.026***
	(0.016)	(0.026)	(0.035)	(0.055)	(0.014)	(0.028)	(0.018)	(0.0089)	(0.0064)
fourchildren	0.0097	0.082	0.31**	-0.029	0.084***	-0.058	0.042	0.0073	0.041***
	(0.022)	(0.061)	(0.10)	(0.020)	(0.023)	(0.034)	(0.041)	(0.012)	(0.012)
manychildren	0.013	0.31*	0.64**	-0.025	0.049	0.25	0.16	0.20*	0.048*
	(0.034)	(0.14)	(0.21)	(0.032)	(0.027)	(0.28)	(0.087)	(0.081)	(0.019)
livepartner	-0.0097	-0.050**	-0.052*	-0.0053	0.0094	0.018	-0.035*	-0.036***	-0.035***
	(0.0089)	(0.018)	(0.021)	(0.023)	(0.0097)	(0.021)	(0.015)	(0.0064)	(0.0042)
disabled	-0.0026	0.053	0.023	0.99***	-0.014	0.037	-0.033	0.031*	0.11***
	(0.0086)	(0.031)	(0.054)	(0.029)	(0.026)	(0.041)	(0.026)	(0.013)	(0.020)
loweduc	0.026	0.084***	0.12**	0.035	0.13***	0.092***	0.092**	0.030***	0.073***
	(0.018)	(0.020)	(0.039)	(0.022)	(0.016)	(0.019)	(0.029)	(0.0087)	(0.0093)

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	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	US
hieduc	-0.029**	-0.050***	-0.022	0.022	-0.095***	-0.018	-0.038***	-0.0066	-0.023***
	(0.0096)	(0.012)	(0.014)	(0.031)	(0.0063)	(0.017)	(0.0094)	(0.0049)	(0.0031)
_cons	0.022	0.85***	0.82**	1.78***	0.60***	0.40	0.076	0.39***	0.30***
	(0.10)	(0.19)	(0.30)	(0.46)	(0.10)	(0.26)	(0.15)	(0.081)	(0.046)
N	8754	3433	3243	1392	10215	3120	2957	7535	25079
R-sq	0.00742	0.0483	0.0781	0.0697	0.0404	0.0315	0.0355	0.0237	0.0369

Unemployment Women with age of children

Unemployment	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	US
age	0.0026	-0.044***	-0.041*	-0.097***	-0.028***	-0.018	0.0019	-0.020***	-0.012***
	(0.0066)	(0.011)	(0.018)	(0.024)	(0.0063)	(0.015)	(0.0094)	(0.0048)	(0.0027)
agesq	-0.000041	0.00059***	0.00055*	0.0012***	0.00034***	0.00020	-0.000067	0.00027***	0.00016***
	(0.000097)	(0.00016)	(0.00025)	(0.00033)	(0.000090)	(0.00021)	(0.00014)	(0.000069)	(0.000040)
infant	-0.013	0.0051	0.016	-0.042	-0.028	-0.0069	0.031	0.021	0.031***
	(0.012)	(0.025)	(0.059)	(0.025)	(0.016)	(0.027)	(0.020)	(0.012)	(0.0089)
youngchild	0.015	0.056***	0.12***	0.077*	0.040***	0.031	0.019	0.030***	0.021***
	(0.011)	(0.017)	(0.026)	(0.033)	(0.0094)	(0.019)	(0.014)	(0.0065)	(0.0042)
oldchild	0.0025	-0.019	0.034	0.020	0.033***	0.021	0.0089	0.0036	0.0094*
	(0.0097)	(0.017)	(0.018)	(0.023)	(0.0083)	(0.019)	(0.015)	(0.0054)	(0.0038)
livepartner	-0.0088	-0.055**	-0.053*	-0.0053	0.013	0.019	-0.037*	-0.037***	-0.036***
	(0.0086)	(0.017)	(0.021)	(0.024)	(0.0093)	(0.020)	(0.015)	(0.0064)	(0.0042)
disabled	-0.0028	0.050	0.0077	0.89***	-0.016	0.037	-0.028	0.032**	0.11***
	(0.0086)	(0.031)	(0.054)	(0.037)	(0.026)	(0.041)	(0.026)	(0.013)	(0.020)
loweduc	0.027	0.093***	0.13***	0.040	0.13***	0.091***	0.093**	0.032***	0.076***
	(0.018)	(0.020)	(0.038)	(0.022)	(0.016)	(0.019)	(0.029)	(0.0088)	(0.0093)
hieduc	-0.029**	-0.054***	-0.038**	0.014	-0.097***	-0.020	-0.039***	-0.0084	-0.025***
	(0.0097)	(0.012)	(0.015)	(0.030)	(0.0061)	(0.017)	(0.0093)	(0.0049)	(0.0031)
_cons	0.032	0.97***	0.84**	1.86***	0.64***	0.42	0.10	0.41***	0.29***
	(0.11)	(0.19)	(0.30)	(0.45)	(0.11)	(0.26)	(0.15)	(0.082)	(0.045)

	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	US
N	8754	3433	3243	1392	10215	3120	2957	7535	25079
R-sq	0.00788	0.0474	0.0649	0.0801	0.0416	0.0301	0.0322	0.0224	0.0368

No Employment Women

No employment	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	US
age	-0.016	-0.096***	-0.038*	-0.092***	-0.10***	-0.000063	-0.069***	-0.040***	-0.029***
	-0.0094	-0.01	-0.016	-0.021	-0.0058	-0.015	-0.0094	-0.006	-0.0041
agesq	0.00016	0.0012***	0.00036	0.0012***	0.0012***	-0.000029	0.00082***	0.00040***	0.00033***
	-0.00014	-0.00015	-0.00023	-0.0003	-0.000084	-0.00021	-0.00013	-0.000089	-0.00006
onechild	0.055**	0.047*	0.21***	0.12**	0.089***	0.090***	0.027	0.21***	0.064***
	-0.018	-0.02	-0.026	-0.038	-0.012	-0.024	-0.019	-0.011	-0.0079
twochildren	0.079***	0.091***	0.23***	0.16***	0.15***	0.15***	-0.00037	0.25***	0.11***
	-0.017	-0.02	-0.028	-0.038	-0.013	-0.025	-0.017	-0.011	-0.0077
threechild~n	0.13***	0.27***	0.34***	0.32***	0.18***	0.12**	0.037	0.35***	0.16***
	-0.024	-0.028	-0.04	-0.058	-0.016	-0.037	-0.022	-0.016	-0.0099
fourchildren	0.21***	0.35***	0.47***	0.39***	0.20***	0.20*	0.074	0.45***	0.21***
	-0.042	-0.056	-0.079	-0.11	-0.024	-0.084	-0.038	-0.028	-0.016
manychildren	0.31***	0.47***	0.72***	0.56***	0.23***	0.48***	0.22*	0.64***	0.26***
	-0.067	-0.1	-0.12	-0.07	-0.029	-0.086	-0.086	-0.038	-0.024
livepartner	-0.005	-0.037*	0.0097	0.20***	0.035**	0.15***	0.0017	-0.075***	0.096***
	-0.015	-0.018	-0.023	-0.031	-0.011	-0.025	-0.015	-0.0094	-0.0062
disabled	0.12***	0.11***	0.22**	0.65***	0.43***	0.10*	0.20***	0.32***	0.52***
	-0.018	-0.032	-0.073	-0.035	-0.021	-0.046	-0.035	-0.017	-0.013
loweduc	0.10***	0.15***	0.12***	0.18***	0.17***	0.20***	0.079**	0.19***	0.19***
	-0.027	-0.021	-0.034	-0.03	-0.014	-0.021	-0.024	-0.012	-0.01
hieduc	-0.13***	-0.085***	-0.016	-0.13***	-0.18***	-0.096***	0.031*	-0.027**	-0.066***
	-0.015	-0.015	-0.021	-0.036	-0.0085	-0.021	-0.012	-0.0096	-0.006
_cons	0.57***	2.02***	0.92***	1.81***	2.11***	0.13	1.50***	0.97***	0.72***
	-0.15	-0.17	-0.28	-0.37	-0.096	-0.26	-0.16	-0.099	-0.066
N	10461	4087	3935	2217	13220	4511	5138	10294	33525

| R-sq | 0.072 | 0.135 | 0.108 | 0.177 | 0.147 | 0.129 | 0.0909 | 0.215 | 0.128 |

No Employment Women Age of Children

No employment	Canada	France	Germany	Italy	Poland	Spain	Sweden	UK	U
age	-0.023*	-0.10***	-0.047**	-0.10***	-0.090***	-0.0060	-0.071***	-0.041***	-0
	(0.0095)	(0.011)	(0.016)	(0.021)	(0.0060)	(0.015)	(0.0096)	(0.0060)	(
agesq	0.00035*	0.0014***	0.00063**	0.0014***	0.0012***	0.00013	0.00086***	0.00055***	0
	(0.00014)	(0.00016)	(0.00024)	(0.00031)	(0.000087)	(0.00022)	(0.00014)	(0.000089)	(
infant	0.20***	0.11***	0.26*	0.031	0.19***	0.18***	0.011	0.37***	0
	(0.029)	(0.029)	(0.10)	(0.056)	(0.020)	(0.032)	(0.024)	(0.019)	(
youngchild	0.11***	0.13***	0.28***	0.18***	0.13***	0.12***	0.024	0.26***	0
	(0.016)	(0.018)	(0.026)	(0.035)	(0.011)	(0.021)	(0.016)	(0.010)	(
oldchild	-0.00089	0.012	0.051*	0.10**	0.031**	0.037	-0.0031	0.080***	0
	(0.015)	(0.019)	(0.022)	(0.033)	(0.0094)	(0.022)	(0.016)	(0.010)	(
livepartner	-0.012	-0.032	0.012	0.22***	0.039***	0.16***	0.00031	-0.085***	0
	(0.014)	(0.018)	(0.022)	(0.030)	(0.011)	(0.025)	(0.015)	(0.0094)	(
disabled	0.12***	0.10**	0.17*	0.68***	0.42***	0.093*	0.20***	0.33***	0
	(0.018)	(0.032)	(0.073)	(0.022)	(0.020)	(0.045)	(0.035)	(0.017)	(
loweduc	0.11***	0.18***	0.16***	0.21***	0.18***	0.21***	0.086***	0.21***	0
	(0.027)	(0.021)	(0.033)	(0.029)	(0.014)	(0.021)	(0.024)	(0.012)	(
hieduc	-0.14***	-0.100***	-0.052*	-0.14***	-0.21***	-0.11***	0.028*	-0.058***	-0
	(0.015)	(0.015)	(0.022)	(0.036)	(0.0081)	(0.022)	(0.012)	(0.0094)	(
_cons	0.64***	2.04***	0.96***	1.94***	1.89***	0.15	1.52***	0.90***	0
	(0.15)	(0.17)	(0.28)	(0.37)	(0.098)	(0.26)	(0.16)	(0.098)	(
N	10461	4087	3935	2217	13220	4511	5138	10294	3
R-sq	0.0764	0.112	0.114	0.169	0.148	0.127	0.0879	0.210	0

Part time Women

Part time	Canada	France	Germany	Italy	Spain	UK	US
age	-0.014	-0.025	0.028	0.011	0.038*	0.021*	-0.051***

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	Canada	France	Germany	Italy	Spain	UK	US
	-0.0091	-0.015	-0.019	-0.03	-0.017	-0.0081	-0.0048
agesq	0.00017	0.00028	-0.00044	-0.00021	-0.00063**	-0.00038**	-0.00069***
	-0.00013	-0.00022	-0.00028	-0.00043	-0.00024	-0.00012	-0.00007
onechild	0.035*	0.051*	0.32***	0.063	0.14***	0.35***	0.082***
	-0.017	-0.024	-0.035	-0.043	-0.025	-0.015	-0.0081
twochildren	0.094***	0.18***	0.48***	0.14**	0.16***	0.51***	0.14***
	-0.016	-0.026	-0.036	-0.047	-0.026	-0.014	-0.008
threechild~n	0.16***	0.29***	0.51***	0.27**	0.15***	0.52***	0.18***
	-0.026	-0.038	-0.058	-0.093	-0.044	-0.022	-0.011
fourchildren	0.18***	0.32***	0.60***	-0.075	0.097	0.57***	0.20***
	-0.044	-0.088	-0.12	-0.087	-0.079	-0.042	-0.019
manychildren	0.1	0.49**	0.65***	-0.36***	0.14	0.53***	0.27***
	-0.069	-0.18	-0.15	-0.064	-0.25	-0.1	-0.032
livepartner	0.016	0.054*	0.080**	0.19***	-0.011	0.0056	0.067***
	-0.014	-0.022	-0.029	-0.036	-0.028	-0.012	-0.0064
disabled	0.019	0.084	-0.1		-0.045	0.059*	0.25***
	-0.019	-0.047	-0.086		-0.047	-0.027	-0.031
loweduc	-0.026	0.084**	-0.06	-0.05	0.046	0.069***	-0.0011
	-0.026	-0.03	-0.039	-0.034	-0.027	-0.018	-0.013
hieduc	-0.014	-0.050**	-0.060*	0.13*	-0.10***	-0.098***	-0.017**
	-0.015	-0.019	-0.029	-0.052	-0.023	-0.012	-0.0063
_cons	0.40**	0.66**	-0.24	-0.07	-0.38	-0.12	1.01***
	-0.15	-0.25	-0.32	-0.53	-0.3	-0.13	-0.08
N	7818	2768	2807	1287	2722	7166	23862
R-sq	0.0203	0.0666	0.215	0.0991	0.0612	0.246	0.0464

Part time Women Age of Children

Part time	Canada	France	Germany	Italy	Spain	UK	US
age	-0.019*	-0.029	0.0047	0.0049	0.032	0.0041	-0.050***

	(0.0092)	(0.015)	(0.020)	(0.031)	(0.018)	(0.0082)	(0.0048)
agesq	0.00027*	0.00040	0.000026	-0.00010	-0.00048	-0.000021	0.00072***
	(0.00014)	(0.00023)	(0.00029)	(0.00043)	(0.00025)	(0.00012)	(0.000070)
infant	0.064*	0.036	0.18	0.053	0.14***	0.34***	0.15***
	(0.032)	(0.038)	(0.19)	(0.081)	(0.041)	(0.028)	(0.016)
youngchild	0.11***	0.15***	0.38***	0.12**	0.11***	0.46***	0.14***
	(0.017)	(0.024)	(0.038)	(0.047)	(0.022)	(0.014)	(0.0077)
oldchild	0.045**	0.087***	0.28***	0.12**	0.076**	0.29***	0.073***
	(0.015)	(0.024)	(0.031)	(0.039)	(0.024)	(0.014)	(0.0069)
livepartner	0.020	0.072***	0.094**	0.20***	0.0039	0.010	0.067***
	(0.014)	(0.021)	(0.029)	(0.034)	(0.028)	(0.012)	(0.0064)
disabled	0.018	0.078	-0.17		-0.043	0.063*	0.25***
	(0.020)	(0.046)	(0.085)		(0.048)	(0.026)	(0.031)
loweduc	-0.025	0.11***	-0.031	-0.037	0.054*	0.084***	0.011
	(0.026)	(0.030)	(0.039)	(0.034)	(0.027)	(0.017)	(0.013)
hieduc	-0.022	-0.050**	-0.091**	0.13*	-0.11***	-0.12***	-0.027***
	(0.015)	(0.019)	(0.030)	(0.052)	(0.023)	(0.012)	(0.0062)
_cons	0.45**	0.66**	0.026	0.016	-0.32	0.061	0.96***
	(0.15)	(0.26)	(0.32)	(0.54)	(0.30)	(0.13)	(0.081)
N	7818	2768	2807	1287	2722	7166	23862
R-sq	0.0158	0.0483	0.203	0.0940	0.0554	0.235	0.0446

Unemployment Women with Immigrant

Unemployment	Canada	France	Germany	Italy	Spain	Sweden	US
age	0.0056	-0.035**	-0.038*	-0.090***	-0.015	0.0039	-0.012***
	-0.011	-0.011	-0.017	-0.025	-0.015	-0.0092	-0.0027
agesq	-0.000079	0.00042**	0.00046	0.0011***	0.00017	-0.0001	0.00015***
	-0.00016	-0.00016	-0.00024	-0.00034	-0.00021	-0.00013	-0.000039
onechild	-0.011	0.021	0.12***	0.054	0.023	0.032	0.012*

	Canada	France	Germany	Italy	Spain	Sweden	US
	-0.02	-0.019	-0.026	-0.031	-0.021	-0.017	-0.0046
twochildren	-0.019	-0.0033	0.069**	0.033	0.033	0.011	0.018***
	-0.021	-0.019	-0.026	-0.021	-0.022	-0.015	-0.0045
threechild~n	0.01	0.058*	0.12***	0.048	-0.0085	0.0097	0.026***
	-0.029	-0.026	-0.035	-0.054	-0.028	-0.018	-0.0064
fourchildren	-0.021	0.074	0.31**	-0.04	-0.066	0.034	0.042***
	-0.044	-0.061	-0.1	-0.026	-0.035	-0.04	-0.012
manychildren	-0.034	0.27	0.63**	-0.022	0.23	0.15	0.048**
	-0.045	-0.15	-0.21	-0.03	-0.29	-0.087	-0.019
livepartner	0.0035	-0.054**	-0.053*	-0.0031	0.02	-0.034*	-0.035***
	-0.014	-0.018	-0.021	-0.024	-0.02	-0.015	-0.0042
disabled	-0.019	0.054	0.023	1.01***	0.038	-0.032	0.11***
	-0.013	-0.031	-0.054	-0.027	-0.04	-0.026	-0.02
	Canada	France	Germany	Italy	Spain	Sweden	US
immigr	0.073***	0.11***	0.0088	0.034	0.04	0.042*	-0.011*
	-0.021	-0.026	-0.027	-0.057	-0.033	-0.018	-0.0046
loweduc	0.001	0.068**	0.12**	0.034	0.095***	0.087**	0.076***
	-0.031	-0.021	-0.037	-0.022	-0.019	-0.029	-0.0097
hieduc	-0.03	-0.053***	-0.023	0.022	-0.015	-0.039***	-0.023***
	-0.017	-0.012	-0.014	-0.03	-0.017	-0.0094	-0.0031
_cons	-0.033	0.84***	0.83**	1.76***	0.37	0.066	0.29***
	-0.18	-0.19	-0.3	-0.46	-0.26	-0.15	-0.045
N	2486	3433	3243	1392	3120	2957	25079
R-sq	0.0273	0.0585	0.0782	0.071	0.0328	0.0388	0.0372

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Appendix B

First wave, unemployment

```
--------------------------------------------
                (1)          (2)
                Men         Women
--------------------------------------------
age           -0.020***     -0.033***
              (0.0025)      (0.0030)

agesq          0.00026***    0.00042***
              (0.000036)    (0.000044)

infant        -0.012*       -0.020*
              (0.0057)      (0.0090)

youngchild     0.020***      0.077***
              (0.0042)      (0.0054)

oldchild       0.0099*       0.049***
              (0.0041)      (0.0047)

livepartner   -0.044***     -0.034***
              (0.0052)      (0.0047)

Canada         0.059***      0.045***
              (0.0035)      (0.0036)

France         0.037***      0.091***
              (0.0035)      (0.0047)

Germany        0.017***      0.066***
              (0.0043)      (0.0060)

Italy          0.028***      0.028***
              (0.0050)      (0.0055)

Poland         0.044***      0.096***
              (0.0027)      (0.0032)

Spain          0.082***      0.20***
              (0.0060)      (0.0096)
```

```
UK              0.073***    0.041***
               (0.0040)    (0.0038)


_cons           0.42***     0.66***
               (0.042)     (0.050)
-------------------------------------------
N               88414       82074
R-sq            0.0137      0.0403
-------------------------------------------
```
Standard errors in parentheses
* p<0.05, ** p<0.01, *** p<0.001

Second wave, unemployment


```
-------------------------------------------
                (1)         (2)
                Men         Women
-------------------------------------------
age            -0.0096***   -0.011***
               (0.0025)    (0.0030)


agesq           0.00013***   0.00012**
               (0.000036)  (0.000044)


infant          0.0068      -0.0099
               (0.0063)    (0.011)


youngchild      0.0046       0.048***
               (0.0036)    (0.0058)


oldchild        0.0021       0.027***
               (0.0037)    (0.0047)


livepartner    -0.029***    -0.030***
               (0.0043)    (0.0048)


disabled        0.064***     0.038***
               (0.0097)    (0.0089)


loweduc         0.046***     0.080***
               (0.0044)    (0.0069)


hieduc         -0.017***    -0.026***
               (0.0025)    (0.0037)


Canada         -0.0045       0.010**
               (0.0029)    (0.0037)


France          0.0080       0.062***
               (0.0044)    (0.0061)


Germany         0.016***     0.026***
               (0.0046)    (0.0053)
```

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	Italy	-0.016**	0.0058
		(0.0050)	(0.0087)
	Poland	0.0084**	0.052***
		(0.0026)	(0.0034)
	Spain	-0.010	0.11***
		(0.0059)	(0.011)
	UK	0.015***	0.0037
		(0.0033)	(0.0033)
	_cons	0.23***	0.27***
		(0.042)	(0.050)

```
-------------------------------------------
N          68901      65611
R-sq       0.0203     0.0472
-------------------------------------------
```

Standard errors in parentheses
* p<0.05, ** p<0.01, *** p<0.001

Third wave, unemployment

```
-------------------------------------------
             (1)        (2)
             Men        Women
-------------------------------------------
```

	(1) Men	(2) Women
age	-0.0097**	-0.025***
	(0.0038)	(0.0049)
agesq	0.00012*	0.00032***
	(0.000054)	(0.000070)
infant	0.011	-0.045***
	(0.0074)	(0.010)
youngchild	-0.0053	0.058***
	(0.0055)	(0.0088)
oldchild	-0.0053	0.020**
	(0.0061)	(0.0071)
livepartner	-0.021**	-0.031***
	(0.0065)	(0.0068)
disabled	0.093***	0.025
	(0.019)	(0.013)
immigr	0.037***	0.043***
	(0.0065)	(0.0099)
loweduc	0.049***	0.077***

	(0.0065)	(0.010)
hieduc	-0.011**	-0.029***
	(0.0040)	(0.0053)
Canada	-0.068***	-0.054***
	(0.0093)	(0.011)
France	-0.019*	0.012
	(0.0089)	(0.011)
Italy	-0.061***	-0.048***
	(0.0097)	(0.014)
Spain	-0.056***	-0.00044
	(0.0087)	(0.012)
Sweden	-0.045***	-0.052***
	(0.0085)	(0.0100)
USA	-0.044***	-0.065***
	(0.0075)	(0.0088)
_cons	0.28***	0.59***
	(0.065)	(0.085)
N	43871	41710
R-sq	0.0306	0.0484

Standard errors in parentheses
* p<0.05, ** p<0.01, *** p<0.001