Abstract: In the last two decades, a wage penalty associated with motherhood has been observed in many countries. Topical cross-country evidence suggests that institutions that promote the reconciliation of work and family life, e.g. parental leave, can contribute to the diminution of this penalty. Almost all European countries have established some kind of parental leave. The consensual aim of these policies is to diminish sharp drops of income after the birth of a child through a stronger attachment of the women to the labour market. As parental leave systems vary considerably across European countries in terms of duration, benefits, job protection and 'daddy months", a comparison of the effects of these characteristics on the mothers' wages may provide useful insights into whether and how they alleviate negative income effects. However, to the best of my knowledge, there is no comprehensive study for European countries that analyzes these potential effects. This paper aims at closing this gap and providing useful results for future enhancements of the parental leave systems in European countries.

Before elaborating on the data and methodology used in this study, a closer look at microeconomic theory and related empirical studies is required. According to microeconomic theory, the effect of parental leave on the wages of mothers is not straightforward. Heckman (1978) doubts that these policies have any effects on the wages of mothers. He points out that institutional choices may reflect a society's preferences. However, I question that governments always act in line with most women's will, especially if the majority of representatives are men who decide on a bill that primarily affects women. I follow the reasoning of Del Boca and Locatelli (2006), arguing that women in Europe might have similar preferences, but face different alternatives determined by public policies. Indeed, some features of parental leave schemes theoretically increase the mothers attachment to the labour market or even the same employer, hence diminishing the motherhood penalty, while others might have negative effects on mothers' wages. On the one hand, job protection, the father's use of parental leave, and a relatively short duration are expected to lower the wage penalty of motherhood. On the other hand, long durations of the leave and high benefit levels may prevent mothers from returning to work early (or at all), resulting in long employment breaks or complete withdrawals from the labour market, both implying a larger wage loss. In addition, employers might pass the nonwage costs of parental leave directly to the mothers by lowering their wages, or they avoid these costs by not hiring potential mothers (Gangl and Ziefle 2009, Ruhm 1998, Blau and Kahn 1996). To sum up, the effects of the qualities of a parental leave system on mothers' wages is an empirical question.

As stated above, empirical analyses on the impact of parental leave policies, or, in a broader sense, reconciliation policies, on the mothers' wages are scarce. The few existing studies provide mixed results. Ruhm (1998) found negative wage effects of the introduction of parental leave policies in Europe, especially for more extensive mandates. Ondrich et al. (2003) concluded that one month of parental leave reduces the post-break wage growth by 1.5 % in Germany. Ziefle (2004) showed similar results for the same country. Waldfogel (1998) and Phipps et al. (2001) showed that maintaining the same job position after maternity leave decreases the motherhood penalty for women in the United Kingdom and the U.S., and
Canada, respectively. This mechanism could also hold true for parental leave. As to studies that compare different countries, Stier et al. (2001) as well as Moller et al. (2006) took into account different welfare state regimes, but not particular reconciliation policies. Dupuy and Fernández-Kranz (2007) investigated on the role of labour market institutions, among them parental leave. According to their results, parental leave and job protection regulations are associated with a lower motherhood penalty because they protect mothers against contract termination. The authors propose that these policies are the most effective for the reduction of the earnings gap between mothers and non-mothers but also between men and women. But, again, they did not take a closer look at different parental leave characteristics.

In this study, the European Statistics on Income and Living Conditions (EU SILC) is used as the data basis for the assessment of the impact of parental leave characteristics on mothers' wages across Europe. It has been conducted annually since 2004 in almost all European countries plus Norway and Iceland. I use the EU SILC longitudinal data from 2004 to 2008 which includes 22 European countries2 and Norway. After estimating the selection into employment with a Heckman selection model, the impact on hourly wages of mothers is estimated for each country separately by a fixed effects panel regression. In the next step, a model is estimated that includes the data of all countries in the sample. In this model, besides personal characteristics, features of the countries' parental leave systems are inserted. The following features are accounted for: duration of parental leave, job protection, amount of benefits, and the share of fathers using parental leave. These data stem from the OECD data base on family policies and other sources. It is expected that a short duration, job protection as well as the share of fathers using leave have positive effects on the wages of mothers. However, a long duration and generous benefits are expected to affect their wages negatively.