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### **Working Mothers and the State: Under Which Conditions do Governments Spend Much on Maternal Employment Supporting Policies?**

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#### Abstract

Over the last years, the level of spending on maternal employment supporting policies has risen in most countries. Still, the variation across governments in this level is substantial. Under which conditions do governments spend relatively much? Drawing on the critical mass literature, we argue that a critical mass of at least 15 per cent of women legislators is a necessary condition for high levels of spending on an important maternal employment supporting policy: parental leave benefits. We test this hypothesis with a fuzzy-set qualitative comparative analysis (fsQCA) of the governments from 12 OECD countries between 1980 and 2003 ( $n = 55$ ). The analysis shows that a critical mass of women legislators is indeed a necessary condition for high levels of spending on parental leave benefits. This condition is not sufficient for high spending, though. We find that a critical mass is sufficient for high levels of spending when combined with leftist partisanship, economic growth and economic openness. These conditions are thus all INUS conditions: Insufficient but Non-redundant parts of an Unnecessary but Sufficient (combination of) condition. Additionally, we identify another route towards high spending in which a critical mass is combined with rightist partisanship, the absence of openness and corporatism. By assessing the influence of a critical mass of women in combination with other conditions on an important policy supporting the level of maternal employment, this study contributes to the comparative welfare state literature in general and the literature on new social risks in particular.

#### Key words

Welfare state; maternal employment; parental leave; governments' policy-making; critical mass theory; fsQCA; new social risks

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## 1. Introduction

Over especially the last decade, we have witnessed an influx of studies addressing the variation across countries and/or over time in maternal employment supporting policies, such as parental leave benefits and child care (e.g. Lewis 1992; Sainbury 2001; Clasen 2005: chapter 6; Lambert 2008; Kittilson 2008; Atchison and Down 2009; Morgan 2009; Bonoli and Reber 2010).<sup>1</sup> This scholarly attention is hardly surprising, since in spite of the “context of permanent austerity” (Pierson 2001) in which contemporary welfare states find themselves, many countries have expanded rather than retrenched policies supporting the employment of women. Given the tight budgets governments everywhere face, this is a puzzling phenomenon warranting an explanation. The literature on new social risks (NSRs) offers a compelling account of why expansions in maternal employment supporting policy make sense: the transformation to a post-industrial society has brought to the fore new social risks, such as changing family structures and increased participation of women on the labour market. Hereby post-industrialization pushes for the development of policies catering to these NSRs (see Armingeon and Bonoli 2006). Maternal employment supporting policies are a perfect candidate in this respect, among other factors because they can facilitate the combination of work and care. There is also evidence that the returns on for instance family policy are excellent. Esping-Andersen (2009: 96) shows, based on calculations for the Danish case, that the net return to the exchequer of five years pre-school day-care provision amounts to no less than € 37,150 for a mother earning 67 per cent of average wages.<sup>2</sup> Research also indicates that policies like child care services and (long) paid maternal leave yield the (desired) effect of higher women labour participation (e.g. Gornick et al. 1996, 1997; Mandel and Semyonov 2006).

Against this backdrop, policies supporting working mothers thus seem a win-win situation. Consequently, we would expect high levels of policies supporting mothers to work – like paternal leave benefits – in all advanced democracies. This is not the case. Whilst some governments, like the Nyrop Rasmussen cabinets in Denmark, display high levels of spending on parental leave benefits, other governments such as the Dutch Lubbers and Kok cabinets do not (Armingeon et al. 2008). The existing literature provides no conclusive account for this puzzling finding. For instance, the body of work focusing on welfare state regime differences (e.g. Lewis 1992; Mandel and Semyonov 2006; Morel 2007; Lewis 1992) cannot explain the large differences *within* welfare state regimes (cf. Sainsbury 1999a, 2001; Bussemaker and van Kersbergen 1999; O’Connor 1999). This paper addresses the lacuna in the literature by examining the minimally necessary and/or sufficient (combinations of) conditions for high spending on an important policy supporting maternal employment, parental leave benefits.

Based on *critical mass theory* (e.g. Grey 2002, 2006; Thomas 1994, for an overview see Wängnerud 2009: 59-65), our theoretical argument is that a relatively high share of women legislators (at least 15 per cent) is a necessary condition for high spending on parental leave benefits. A critical mass of women legislators is necessary because maternal employment supporting policies are typically not electorally popular since the median voter fails to support it. For example, no less than 61 per cent of the Swiss electorate voted down a proposal for 14 weeks of paid maternity leave (at 80% of the last income) in the late 1990s (Kuebler 2007: 226-227). Also the population pyramids of Western democracies leave room to question these policies' overall popularity (OECD 2007). The percentage of the population between age 25 and 44 – the group benefiting directly from family policy – is somewhere between 26 (Finland) and 31 (Canada) and thus far from a majority. Perhaps even more importantly, the share of population over 45 years of age – typically not benefiting from the policies – is substantially higher. This proportion ranges from an exceptional low of 33 per cent in Ireland to 46 per cent in Italy. These figures indicate that the median voter does not benefit from the policies. Bonoli and Häusermann (2009) show that this observation likely matters. Based on an analysis of the voting behaviour on referendum issues in Switzerland, Bonoli and Häusermann find that the youngest generation (in their case between 18 and 39 years of age) was two or three times (depending on the referendum) more likely to support maternity insurance than the oldest generation of people (65 years or older).

Having a large share of women legislators – a critical mass – is not sufficient for high spending on parental leave benefits, though. We propose and empirically show that other (combinations of) conditions are relevant too, especially leftist partisanship combined with economic growth and openness. These conditions are all so-called INUS conditions – an '*insufficient but non-redundant part of an unnecessary but sufficient condition*' (Mackie 1980[1974]: 62, italics in original).

We test our theoretical arguments with a fuzzy-set qualitative comparative analysis (fsQCA) (Ragin 1987, 2000, 2008) on government-level data for 12 OECD countries between 1985 and 2003,<sup>3</sup> amounting to 55 cases. FsQCA is particularly apt for identifying the minimally necessary and/or sufficient (combinations of) conditions that lead towards the outcome or its absence and is therefore apt for testing our central hypotheses.

The study's main contribution is demonstrating the minimally necessary and sufficient (combinations of) conditions under which governments display high levels of spending on parental leave benefits. A second, related, contribution is that this study offers a thorough empirical test of the critical mass hypothesis. Although the idea of a critical mass gained much popularity in recent years, current literature focuses mainly on the theoretical construction of the concept (e.g. Childs and Krook 2006; Dahlerup 2006) instead of testing its empirical effects (for an ex-

ception see Grey 2002). Therefore, so far, the notion of a critical mass has remained more of a theoretical construct than an empirical finding (Studlar and McAllister 2002: 234).

This paper has the following structure. Section 2 discusses the existing literature and shows why this literature falls short to explain under which conditions governments spend much on maternal employment supporting policies. Section 3 develops our central theoretical arguments of the importance of a critical mass of women legislators and the accompanying INUS conditions. Section 4 discusses the operationalization (calibration in fuzzy-set terminology) of the outcome and the causal conditions. Section 5 discusses the findings of the fsQCA analysis. The final section deals with the study's implications.

## 2. Existing literature

A large part of the current literature on maternal employment supporting policy tries to explain the level or provision of policies that support the employment of mothers (e.g. Lewis 1992; Sainsbury 1999a, 2001; Bussemaker and van Kersbergen 1999; O'Connor 1999; Mandel and Semyonov 2006). Regarding the provision of such policies, for example Lewis (1992, 1997) and Sainsbury (1999a, 2001) study the effect of gender regimes. By differentiating between strong male-breadwinner states, modified male-breadwinner states, and weak male-breadwinner states, Lewis (1992, 1997) finds that there is a substantial cross-national difference in policy provision for supporting paid and unpaid labour by women. Strong male-breadwinner states, like Ireland and the UK, provide policies that maximize men's participation to the labour market and minimize women's. Men provide the family income while women take care of the children. Both women's labour market participation and the level of child care and maternal leave policies are low in these countries. In modified male-breadwinner states, like France, social security aims at compensating parents for the costs of their children. By rewarding women for unpaid labour, like child care, also here women's participation in the labour market is low. Finally, weak male-breadwinner states like Sweden both stimulate women's labour market participation and compensate women's unpaid labour as mothers (Lewis 1992; Sainsbury 1999a).

With respect to the level or presence of maternal employment supporting policies, some scholars focus on the effect of welfare state regime instead of the gender regime (e.g. Sainsbury 1999a; Bussemaker and van Kersbergen 1999; O'Connor 1999; Mandel and Semyonov 2006; Morel 2007; Bolzendahl 2009). A first cluster of social-democratic countries like Sweden, Denmark, and Norway has generous social benefits and services in general and for supporting maternal employment in particular. These are typically weak male-breadwinner states. Second, there is a group of liberal countries, like the UK, the United States (US) and Australia, which do not

provide an extensive system of benefits, neither to support the traditional family, nor to stimulate maternal employment. These are strong male-breadwinner states. Third and finally, there are the conservative-corporatist countries, including Germany, the Netherlands and Belgium, where policy provision is directed at supporting the traditional family, that is men as breadwinners and women as caretakers. These countries largely fit the modified male-breadwinner type.

Scholars expect that the type of welfare state regime affects the level of generosity of policies that support the employment of mothers. Mandel and Semyonov (2006), for example, find that social-democratic welfare states are more generous than market-oriented liberal welfare regimes. Others suggest that the type of welfare state does not or just partly explains the variation across countries (Gornick et al. 1996, 1997; Bussemaker and van Kersbergen 1999; O'Connor 1999; Sainsbury 1999a, 2001). For instance, by comparing Norway and Sweden, Sainsbury (1999a, 2001) seeks to explain why these two Nordic countries differ in terms of policies benefiting women, mothers in particular. According to Sainsbury, maternity benefits in Sweden are more generous than in Norway because the latter had strong ideals about the “domestic mother”, that is to say, this country institutionalized maternalism. Moreover, Norway did not have the united and cross-class coalition formed by several women’s organizations with an interest in the same policies and rights existing in Sweden. These findings reveal that besides differences between the three welfare state regime types, there are substantial differences *within* welfare regimes types. This suggests that welfare state regime cannot (fully) account for the variation between countries in maternal employment supporting policies. The same holds for the gender regimes discussed above; also within these regimes, there is much variation across countries and within countries over time (that is, across governments).

### 3. Theory and hypotheses

#### *The important of a critical mass*

Which (combinations of) conditions are minimally necessary and/or sufficient for high levels of spending on maternal employment supporting policies? Based on critical mass theory, our main causal condition is the percentage of female legislators. The idea of a critical mass essentially means that a critical mass of female legislators, ranging from 15 to 40 per cent, should be present in national parliament before significant women-friendly changes in policies occur, like child care, the right of abortion and generous maternal leaves (e.g. Dahlerup 1988, 2006; Thomas 1994; Bratton and Ray 2002; Grey 2002, 2006, see Wängnerud 2009). There is evidence to suggest that the percentage of female legislators matters. For example, Thomas (1994: 83) argues that female legislators are more liberal than men and show a more positive attitude to-

wards women's issues and social welfare issues. Women's voting-behaviour reflects their positive attitudes towards women-friendly policies. Consequently, when a substantial number of women legislators is present in parliament, women's interests should be better catered for. Thomas shows that women also more often initiate women-friendly policies dealing with child care and social welfare issues than male politicians. Additionally, women-friendly policies initiated by female legislators pass more often in parliament than similar policies initiated by men. Related, Bratton and Ray (2002) and Kittilson (2008) find a positive relation between the number of women legislators and child care policy. However, Kittilson (2008: 332) notes that increasing the number of women in parliament alone is not sufficient to stimulate the adoption of women-friendly policies. Other factors like women's movements and organizations are also important in order to get women's issues on the policy agenda. Focusing on total social spending, Bolzendahl (2009) demonstrates a significant positive effect of women legislators and suggest that women's representation could be a potential mechanism for translating changing gender relations to more women-friendly policies. Similarly, Lambert (2008) shows that the percentage of women in parliaments is both significantly and positively related to maternal employment policies. Additionally, the number of women legislators significantly affects the generosity of maternal employment policies.

Our focus on parental leave as an important policy among maternal employment supporting policies warrants an explanation, since it is uncommon in the literature to concentrate exclusively on parental leave. Most studies instead centre on child care (e.g. Bonoli and Reber 2010), child care and maternity leave (e.g. Eliason et al. 2008; Hicks and Kenworthy 2008) or a broader range of family-friendly policies (e.g. Kittilson 2008; Lambert 2008; Misra and Jude 2008; Fleckenstein and Seeleib-Kaiser 2009). Notwithstanding the value of these studies, there are reasons to suggest that parental leave is indeed a crucial policy shaping mothers' decisions regarding work and care (see e.g. Erjnæs 2008). Parental leave, which in many countries comes *de facto* still down to maternal leave, is interesting because it has two possible effects on maternal employment that are at least to some extent conflicting. Parental leave could spur maternal employment by facilitating the combination between work and care. However, parental leave that in fact is maternal leave strengthens the traditional gender-division on work and care and may consequently endanger the future careers of mothers (see also Morgan 2008). We think there are stronger grounds to expect a positive effect of parental leave on women's employment, based on a recent study by Bergemann and Riphahn (2009). Interested in the causal effect of the 2007 reform in Germany that allows the parents of newborns a high level of parental leave benefits for a maximum of one year (*Elterngeld*), Bergemann and Riphahn's analysis of the German Socio-

Economic Panel shows that this reform increases the speed with which mothers re-enter the labour market.

Although some scholars rejected the idea of the importance of a critical mass because of a lack of evidence (see Dahlerup 2006; Childs and Krook 2006), the findings discussed above reveal that a critical mass is likely crucial for women-friendly policy outputs and social spending. Therefore, we expect that a critical mass of female legislators is a necessary condition for a high level of maternal employment supporting policies, like parental leave benefits. Additionally, because many scholars suggest that the presence of a critical mass of female legislators is in itself insufficient for women-friendly policy outcomes to occur, we hypothesize that the presence of a critical mass of female legislators is a necessary, but not sufficient, condition for high spending on parental leave benefits (*critical mass hypothesis*). Table 1 presents this hypothesis, as well as the other hypotheses (to be discussed next).

TABLE 1: *Hypotheses*

<p><i>Critical mass hypothesis</i></p> <p>A critical mass of female legislators is a necessary condition for high spending on parental leave benefits</p>	<p><math>\text{CRIT\_MASS} \leftarrow \text{LEAVE}</math></p>
<p><i>Leftist partisanship and growth hypothesis</i></p> <p>The combination of a critical mass of female legislators, the presence of economic growth and leftist partisanship is sufficient for high levels of spending on parental leave benefits</p>	<p><math>\text{CRIT\_MASS} * \text{GROWTH} * \text{LEFT} \rightarrow \text{LEAVE}</math></p>
<p><i>Corporatism and openness hypothesis</i></p> <p>The combination of a critical mass of female legislators, the presence of corporatism and openness is sufficient for high levels of spending on parental leave benefits</p>	<p><math>\text{CRIT\_MASS} * \text{CORP} * \text{OPEN} \rightarrow \text{LEAVE}</math></p>
<p><i>The absence of openness hypothesis</i></p> <p>The combination of a critical mass of female legislators and the absence of openness is sufficient for high levels of spending on parental leave benefits</p>	<p><math>\text{CRIT\_MASS} * \sim \text{OPEN} \rightarrow \text{LEAVE}</math></p>

*Notes:* CRIT\_MASS is a critical mass of female legislators, LEAVE is high spending on parental leave benefits, GROWTH is high economic growth, LEFT is leftist partisanship, CORP is corporatism, OPEN is openness,  $\leftarrow$  indicates a necessary relationship,  $\rightarrow$  indicates a sufficient relationship,  $\sim$  means the absence of a condition.

### *Other conditions*

A critical mass alone is not sufficient to bring about a high level of spending on maternal employment supporting policies, we propose. Let us therefore address four other conditions that (in combination) could be conducive to high levels of spending. We do not expect these conditions to be sufficient individually, but rather expect that they are INUS conditions, that is Insufficient but Nonredundant (i.e. Necessary) parts of a Unnecessary but Sufficient (combination of) condition(s). Stated differently, these are causes ‘within a combination of causes that are jointly sufficient for an outcome’ (Mahoney and Goertz 2006: 232).

A first condition that we include is *leftist partisanship*. If partisanship matters, cabinet composition shapes the type of social policies implemented (e.g. Korpi and Palme 2003). Most scholars agree that leftist parties and rightist ones differ with respect to their objectives regarding socio-economic policies. However, the literature is inconclusive if and how the partisan composition of cabinets affects spending on maternal employment supporting policies. For example, Sainsbury (1999b: 268) finds that, in general, leftist parties are more committed to gender equality as a policy goal than rightist parties are (see also Huber and Stephens 2001). Additionally, the presence of Christian democratic parties in cabinet has a negative bearing on gender-equality policies because of these parties’ traditional beliefs about family (Sainsbury 1999b: 269). Bolzendahl (2009) also finds that, in combination with the percentage of women legislators, leftist parties have a positive effect on social spending. Others, like Sainsbury (1999a) show that leftist partisanship does not necessarily mean generous provision of family policies and services (see also Seeleib-Kaiser, Van Dyk and Roggenkamp 2008). Since the late 1960s, in both Norway and Sweden the social democrats dominated the executive as government party for approximately the same number of years. Still, as we discussed above, both countries differed substantially in the provision of maternal employment supporting policies. This suggests that partisan composition is not by itself sufficient for high expenditures on maternal employment supporting policies but needs to be combined with other conditions.

A condition that we consider an especially likely candidate in this respect is *high economic growth*. The amount of economic growth influences how much governments can afford to spend on social policy. High economic growth enables governments to spend more on relative luxurious policies, like parental leave, whereas low economic growth or even a decreasing economic growth does not leave much room for high expenditures (see also Bolzendahl 2009; Kittilson 2008). The current literature on maternal employment lacks insights on the effect of economic growth. However, we propose that it is likely that high economic growth in combination with leftist partisanship is sufficient for high levels of spending. The reasoning behind this is simple: we expect that leftist government with a general preference for maternal employment supporting



policies (see above) will make use of the larger financial room to maneuver that economic growth offers to push for such policies. Since we expect a critical mass of female legislators to be a necessary condition for high levels of spending, we also expect it to be part of the hypothesized (combinations of) conditions sufficient for the outcome. We thus hypothesize the combination between economic growth and leftist partisanship in the context of a critical mass of female legislators to be sufficient for high levels of spending on maternal employment supporting policies (*leftist partisanship and growth hypothesis*, CRIT\_MASS\*GROWTH\*LEFT).

Another condition we include is the *presence of corporatism*. There is no consensus on the definition of corporatism. For example, Siaroff (1999: 177) indicates as core features of corporatism ‘the co-ordinated, co-operative, and systematic management of the national economy by the state, centralised unions, and employers (...)’. Differently, Baccaro (2003: 683) proposes a broader definition of corporatism ‘a particular structure of the interest representation system, characterized by monopolistic, centralized and internally non-democratic associations’. We define corporatism as the degree of coordination of wage bargaining (Kenworthy 2001). The reasoning behind this is that the more coordinated wage bargaining is, the more likely and plausible that government and social partners can come to coordinated action with respect to socio-economic performance. Findings show that corporatism relates positively to women-friendly policies (Kittilson 2008; see also O’Connor 1999; Lambert 2008). Labour unions can be, and often are, used as platforms to bargain in favour of improving policies and services that support maternal employment (Sainsbury 1999b; see also Martin and Swank 2004). Moreover, O’Connor (1999) shows that the level of unionization matters for the provision of maternal employment supporting policies (see also Sainsbury 1999b, 2001). When (labour) unions are used as platforms to get women-friendly issues on the policy agenda, the presence of women legislators matters in the decision-making process and especially in the adoption of such policies, that is in the agenda-setting process (see also O’Connor 1999: 68; Sainsbury 1999b: 268). However, we expect that corporatism by itself is neither necessary nor sufficient for high levels of maternal employment policy expenditures; it is the combination of corporatism with another condition – openness – that matters.

Specifically, based on the literature on other social policy areas, especially active labour market policy (e.g. Martin and Swank 2004; Armingeon 2007), we hypothesize that the presence of corporatism in combination with a *high degree of economic openness* is sufficient for high levels of spending on maternal employment supporting policies, again in the context of a critical mass of female legislators (*corporatism and openness hypothesis*, CRIT\_MASS\*CORP\*OPEN). The argument here is that it are the open, corporatist economies that are especially likely to pick up new poli-

cies to address emerging problems (like new social risks) (see also Katzenstein 1985). When international economic competition pushes for the increase of employment rates, corporatist countries can (and often do) respond. However, on the other hand, in the context of high economic competition, open economies may also be especially likely not to be able to afford high social expenditures on relatively luxurious programmes (see also Armingeon 2007: 924). The latter suggests a negative effect of economic openness on governmental spending on maternal employment supporting policies, i.e., that the absence of economic openness rather than its presence is conducive to high spending on parental leave benefits. We therefore also hypothesize that the absence of openness, again in the context of a critical mass of female legislators, is an INUS condition for high spending (*the absence of openness hypothesis*, CRIT\_MASS\*~OPEN).

## 4. Calibration

### *Outcome*

This study's indicator for the level of spending on maternal employment supporting policies is total public and mandatory private cash benefits on maternal and parental leave as a percentage of gross domestic product (GDP), taken from Armingeon and colleagues' (2008) Comparative Political Data Set I. Table A1 in the Appendix presents the raw data for spending on these parental leave benefits. The table also includes some background information on the cabinets, specifically their country and period in office. Table A1 indicates that there is ample variation across countries. For example, all Swedish governments have high levels of spending, whereas the Australian cabinets have very low levels of spending on parental leave. The table also reveals interesting variation across governments. While most Norwegian governments have high levels of spending, Harlem Brundtland 2 has a substantially lower level of expenditure. Because of the variation across governments within countries and between countries in the level of spending on parental leave benefits, we take governments as our unit of analysis. Such an approach is still rare in comparative welfare state research (exceptions include Armingeon and Giger 2008; Giger and Nelson 2011; Vis 2010; Schumacher et al. 2012). Still, decision-making about social policy takes place within governments. Therefore, to know what governments do, one needs to study governments instead of the typically used alternatives like countries or country-years.

To allow for fuzzy-set qualitative comparative analysis, we need to transform (calibrate) the raw data into fuzzy-sets. Fuzzy-sets are continuous variables that are purposefully calibrated using theoretical and substantive knowledge and which indicate a degree of set-membership (Ragin 2000: 162). A fuzzy-set includes two qualitative breakpoints, 1 (fully in the set, that is full

set-membership) and 0 (fully out of the set, full non-membership). The crossover point of a fuzzy-score (.5) indicates that a government is not more in than out of the set (here: high spending on parental leave) (Ragin 2009: 90; 2000). Because in fuzzy-set applications establishing these breakpoints and the in-between scores is important (Ragin 2000, 2008), let us discuss the procedure. Based on substantive knowledge of the policies, which derives from among others Clearinghouse (2010), Atchison and Down (2009), ILO (2009), Kittilson (2008), Lambert (2008), MISSOC (2006) and Gornick et al. (1997), we calibrate these data as follows. We place the first qualitative breakpoint 1 (fully in the set LEAVE) at 2 per cent of GDP. The second qualitative breakpoint 0 (fully out of the set) is placed at 0 per cent. We place the crossover point .5 (not more in than out of the set) at 1 per cent. To calibrate the in-between scores, we use the direct method of calibration to create a continuous fuzzy-set (Ragin 2008: chapter 5). This method is an often-used way to transform an interval-scale variable, which we have, into a fuzzy-set.<sup>4</sup> The calibrate command in the fsQCA 2.5 software gives the resulting fuzzy-set.<sup>5</sup> Table A2 in the Appendix displays the fuzzy-set scores for the outcome, as well as for the five causal conditions of which we discuss the calibration next.

### *Conditions*

Based on the hypotheses presented above, we construct five causal conditions: critical mass of female legislators, leftist partisanship, high corporatism, high economic openness, and high economic growth. Like for the outcome, the raw data need to be calibrated into fuzzy-sets. Let us discuss the procedure per condition.

For establishing the fuzzy-set *critical mass of female legislators* (CRIT\_MASS), we focus on the number of women in parliament. There is no consensus in the literature regarding the exact level at which there is a critical mass of women (Studlar and McAllister 2002: 235). Current literature varies from a critical mass of 15 per cent of female legislators to a critical mass of 40 per cent (see Wängnerud 2009). Dahlerup (2006: 520) argues that a large critical mass is not important for reaching desired policy outcomes. Under the right circumstances, even a small percentage of female legislators could be able to make major changes. Grey (2006: 94) suggests that different critical masses might be necessary, depending on the desired outcome. Because current findings indicate a critical mass effect at 15 per cent and higher (e.g. Grey 2002), we place the cross-over point of .5 (not more in than out of the set CRIT\_MASS) at 15 per cent of female legislators. The qualitative breakpoint of 1, that is fully in the set CRIT\_MASS, is placed at the level of 40 per cent female legislators, the highest threshold of a critical mass indicated in the literature. The other qualitative breakpoint 0 (fully out of the set CRIT\_MASS) is placed at 0 per

cent of women legislators. Like for the outcome, we use the direct method of calibration to calibrate the in-between scores.

For the fuzzy-set *leftist partisanship* (LEFT), we focus on leftist cabinet composition, calculated as the percentage of total cabinet posts held by leftist parties, weighted by days (Armingeon et al. 2008). Calibrating this measure into fuzzy-sets, a score of 100 per cent turns into a fuzzy-score of 1, that is fully in the set of leftist partisanship, and a score of 0 per cent into a fuzzy-score of 0, meaning fully out of the set of leftist partisanship. We place the crossover point .5 (not more in than out of the set LEFT) at 50 per cent and, again, use the direct method of calibration for the in-between scores.

For the fuzzy-set *high corporatism* (CORP), we use an indicator that measures the degree of centralization of wage bargaining, based on Kenworthy's (2001) classification (see also Visser 2009). We use the Kenworthy-index since, to our knowledge, this is the only index showing variation on an annual basis, hence able to capture changes in a country's degree of corporatism.<sup>6</sup> We place the first qualitative breakpoint 0 (fully out of the set CORP) at 1. Countries that score '1' in this classification are characterized by fragmented wage bargaining, which mostly takes place at the firm-level and thus does not represent a corporatist system. The second qualitative breakpoint 1 (fully in the set CORP) is placed at 5. Countries that score '5' in this classification are characterized by centralized bargaining by peak confederation(s) or government imposition of a wage schedule/freeze, with a peace obligation (Kenworthy 2001), which is typical of a corporatist system. The corporatism variable is recoded into a continuous variable. The procedure is as follows. First, all raw data below or above the qualitative breakpoints, that is  $<1$  and  $>5$ , are recoded as follows (see Ragin 2006): lowest through 1, new value 1; 5 through highest, new value 5. The new minimum and maximum are 1 and 5. Then, the fuzzy-set is computed by taking these transformed raw data and subtracting the lower limit (here: 1) from each score and then dividing the result by the [upper limit minus the lower limit], here:  $5 - 1 = 4$ . In formula: fuzzy-set score = [transformed raw data – lower limit]/[upper limit – lower limit].

Following most studies, we measure *high economic openness* (OPEN) by the sum of import and export, that is total trade, as a percentage of the gross domestic product (GDP) (Armingeon et al. 2008). Calibrating this measure into a fuzzy-set, a fuzzy-score of 0 (fully out of the set OPEN) is set at 0 per cent of economic openness, that is a fully closed economy. A fuzzy-score of 1 (fully in the set OPEN) is set at 100 per cent of economic openness, that is a fully open economy. We place the crossover point .5 (not more in than out of the set OPEN) at 50 per cent of economic openness. Like for the conditions CRIT\_MASS and LEFT, the direct method is used to calibrate the in-between fuzzy-scores.

Finally, for the fuzzy-set *high economic growth* (GROWTH) we use the change in the level of economic growth during a cabinet period (Armingeon et al 2008). We focus on the change in growth since previous research suggests that it is not so much the level of socio-economic conditions like growth that make governments act, but the changes therein (e.g. Vis 2010). The first qualitative breakpoint 1 (fully in the set GROWTH) is placed at plus 5 per cent. The second qualitative breakpoint 0 (fully out of the set GROWTH) is placed at minus 5 per cent. Substantial knowledge about developed democracies indicates that a reduction (or increase) of economic growth of 5 per cent is unusual and has a significant impact on the possibilities for socio-economic policy making. The crossover point .5 (not more in than out of the set GROWTH) is placed at 0. The in-between scores are calibrated with the direct method.

## 5. Method and findings

After having discussed our hypotheses and the calibration of the outcome and causal conditions, let us now turn to the fuzzy-set qualitative comparative analysis to identify the minimally necessary and sufficient (combinations of) conditions for high levels of spending on parental leave benefits. The fsQCA analysis consists of three steps, conducted with fsQCA 2.5 software.

TABLE 2: *Necessary condition analysis of high spending on parental leave benefits*

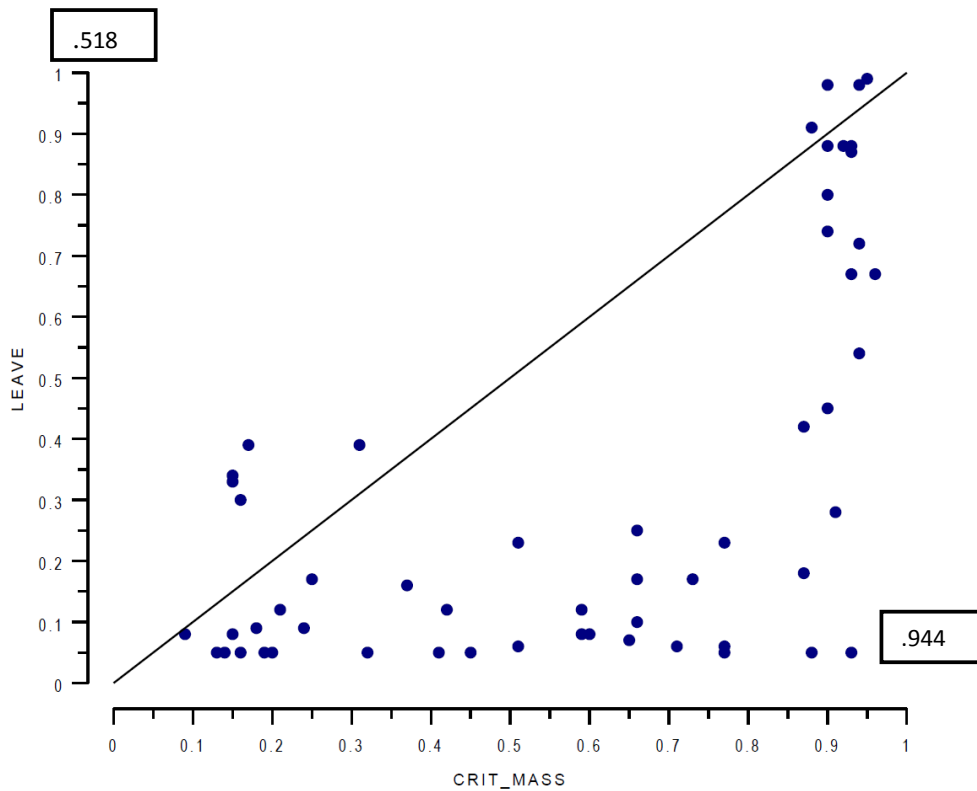
Condition	Consistency	Coverage
Critical mass of female legislators (CRIT_MASS)	.94	.52
Leftist partisanship (LEFT)	.59	.51
Corporatism (CORP)	.77	.53
Openness (OPEN)	.88	.46
Economic growth (GROWTH)	.76	.48
~ Critical mass of female legislators (~CRIT_MASS)	.36	.28
~Leftist partisanship (~LEFT)	.64	.33
~Corporatism (~CORP)	.57	.35
~Openness (~OPEN)	.50	.42
~Economic growth (~GROWTH)	.66	.43

*Notes:* ~ indicates the negation, that is the absence of a condition. Consistency is the degree to the sub-set relationship of necessity is approximated. Coverage indicates the proportion of membership in the outcome explained by the solution (Ragin 2008: chapter 3).

### *Necessary condition analysis*

First, we conduct an analysis of necessary conditions (cf. Schneider and Wagemann 2010: 404). Table 2 displays the results. A condition is necessary for the outcome when the consistency value is ‘much higher’ than .75 (Schneider and Wagemann 2010: 406). We set the threshold for necessity conservatively at a consistency level of at least .90. As table 2 indicates, only a high share of female legislators (i.e. a critical mass) has a consistency that meets the necessity threshold (.94).<sup>7</sup> An XY-plot of the outcome and this condition, which figure 1 displays, nicely shows that critical mass is a necessary condition for high spending on parental leave benefits, as almost all cases are located below the 45° diagonal. The necessary condition analysis thus lends support for our hypothesis that a critical mass of female legislators is a necessary – but not sufficient – condition for high spending on parental leave benefits.

FIGURE 1: XY-plot *critical mass and high spending on parental leave benefits*



### *Sufficient condition analysis*

The next step is to find the sufficient (combinations of) conditions, using the so-called truth table algorithm (Ragin 2009: 104). This algorithm transforms the fuzzy-set membership scores into a truth table, using the direct link between the rows of the truth table and the corners of the property space, that is the multidimensional space that includes all logically possible com-

binations of causal conditions. In this paper, the property space has  $2^5$  (partisanship, corporatism, openness, growth, critical mass) (= 32) corners. Truth tables are useful because, among other factors, they reveal the analytical differences and similarities between cases and indicate the degree of diversity in the data, that is, reveal which logically possible combinations of conditions are not observed empirically (Schneider and Grofman 2006: 13). Table A3 in the Appendix displays the truth table.

The subsequent step is to employ Boolean algebra to minimize the truth table. Boolean minimization is the ‘reduction of a long, complex expression into a shorter, more parsimonious expression’ (Rihoux and De Meur 2009: 35). Logical AND or intersection (\*) refers to the combination of sets, that is the combination of conditions leading to the outcome. Logical OR or union (+) refers to the union of sets, that is the presence of one of the conditions or both produce the outcome (Rihoux and De Meur 2009: 34-35). For the minimization of the truth table, the researcher needs to decide what level of consistency is high enough to code the outcome as present, with consistency being the degree to which cases sharing a given combinations of conditions agree in displaying the outcome (Ragin 2008: 44). Because of the drop in the level of consistency between .80 and .74, we code those configurations with a consistency value of .80 and above as present (1) and the rest as absent (0). The truth table (see table A3) indicates that there are nine logical remainders, i.e., not all configurations that are logically possible exist empirically. We present the results for the intermediate solution (including only “easy” counterfactuals) in the main text and report the ones of the complex solution (including no simplifying assumptions), and the parsimonious solution (including all possible simplifying assumptions) in a note. Raw coverage is the proportion of the sum of the membership scores in the outcome explained by a particular path (e.g. CORP\*~LEFT\*~OPEN\*CRIT\_MASS), with ~ indicating the absence of a condition. Unique coverage indicates the proportion of the sum of the membership scores in the outcome accounted for by that particular path only (Ragin 2008: chapter 3).

The results of the fsQCA analysis, which table 3 presents, reveal two paths towards high levels of spending on parental leave benefits: 1) a critical mass of female legislators AND corporatism AND the absence of leftist partisanship (rightist partisanship) AND the absence of openness OR 2) a critical mass of female legislators AND openness AND leftist partisanship AND high economic growth.<sup>8</sup> The emergence of critical mass in each of the path make sense theoretically and empirically. Since the necessary condition analysis identified a critical mass of female legislators to be necessary for high levels of spending, as we hypothesized it would, we also expected this condition to show up as INUS condition in the results of the sufficiency analysis.

TABLE 3: Result of the fsQCA analysis of high spending on parental leave

Solution	CRIT_MASS*CORP*~LEFT*~OPEN +	CRIT_MASS*LEFT*GROWTH*OPEN →	LEAVE
Cases with membership > .5	Kohl 3, Holkeri 1, Kohl 2	H.Brundtland 3 et al., N.Rasmussen 4, Persson 1&2, N.Rasmussen 1, Lipponen 1, Blair 2, N.Rasmussen 2&3, Carlsson 2&1	
Raw cov.	.30	.45	
Unique cov.	.15	.30	
Consistency	.79	.80	
Solution coverage: .60			
Solution consistency: .76			

Notes: For explanation of coverage etc., see main text. The cases are listed in the order of degree of membership to the specific path.



Moreover, the second path lends support to the leftist partisanship and growth hypothesis, with the addition of openness. More specially, there are eight leftist governments with high spending on parental leave benefits that have a critical mass of female legislators, face economic growth and have an open economy (Harlem Brundtland 3 et al., Nyrup Rasmussen 4, Persson 1&2, Nyrup Rasmussen 1, Lipponen 1, Blair 2, Nyrup Rasmussen 2&3, and Carlsson 2&1). Most of these governments stem from the Nordic countries (Denmark, Finland, Sweden and Norway), sharing also other institutional features, like the type of welfare state. It would, however, be too quick a conclusion to state that spending relatively much on parental leave benefits is thus a typical Nordic affair and relates mostly to the type of welfare state. For one, there is also a British leftist government with high spending on parental leave benefits, while the UK has a very different type of welfare state than the Nordics (liberal versus social-democratic). But perhaps more importantly, there is substantial variation across the Danish and Norwegian governments in the level of spending on parental leave benefits: in the former, the Schlüter governments spend relatively little while the Nyrup Rasmussen governments spend a lot; in the latter, Harlem Brundtland 2 spend very little, while the other governments spend relatively much. Rather than the type of welfare state, our results show that it is the combination of leftist partisanship and high economic growth and a critical mass of female legislators that is sufficient for high levels of spending on parental leave benefits in open economies. As we hypothesized, these leftist governments spend (relatively) much on these benefits when the state of the economy offers the financial room to do so.

Conversely, the findings fail to support the corporatism and openness hypothesis. Instead, the first path reveals that it is the combination of corporatism in a relatively closed economy that is sufficient for rightist governments with a critical mass of female legislators to have a high level of spending on parental leave benefits. We are not that surprised by this result, since it is in line with our absence of openness hypothesis. Apparently, rightist governments in a closed economy and with a critical mass of female legislators need a push from another actor (especially the labour union) before turning to high spending on parental leave benefits. Given that rightist governments are typically less favourable towards gender equality than leftist governments, this finding makes theoretical sense.

Comparing the two paths, we see that economic growth only has a bearing on high spending on parental leave benefits for leftist governments, and corporatism only for rightist governments. Moreover, while it is the absence of openness that is conducive to high spending among rightist governments, it is the presence of openness that is conducive to high spending among leftist governments. Different than expected, our analysis thereby also shows that leftist

partisanship as well as rightist partisanship go together with high levels of spending on parental leave benefits.

Although the above findings make theoretical as well as intuitive sense, let us mention that two of the 11 governments with membership  $>.5$  to the first path do not have a high level of spending on parental leave benefits (Kohl 2 and Kohl 3). This suggests that there might a “road block” that hinders high levels of spending on parental leave benefits from coming about. A plausible explanation here is that the absence of high levels of spending stems from the political orientation of these two Kohl governments. These were Christian democratic governments that are traditional on issues related to mothers’ employment and thus unlikely candidates for high spending on parental leave benefits. In future work, it would be interesting to assess this in more detail, as well as investigate the common features of the governments that do display high levels of spending on this policy.

Finally, it is good practice to also conduct a fsQCA analysis of the negation of the outcome (here: low spending on parental leave benefits) since configurational approaches like fsQCA do not assume causal symmetry (Rihoux and Ragin 2008). In this paper, however, we are theoretically interested in the (combinations of) conditions under which *high* levels of spending on maternal employment supporting policies come about instead of in those related to *low* levels of spending. Still, the results of the analysis of the negation of the outcome, which we summarize here and present in full in the appendix, enable us to crosscheck our findings. As we expected, in the analysis of the negation of the outcome, none of the conditions showed up as necessary for low levels of spending on parental leave (full results in table A4). The results of the sufficiency analysis are largely in line with those of the presence of the outcome (see table A5). Most importantly for our argument is that the *absence* of a critical mass of female legislators features in three of the four paths to low spending on parental leave benefits. The absence of a critical mass of women is only a sufficient condition when combined with another condition (the absence of leftist government – i.e., rightist government – in path 1, the absence of openness in path 3 and high economic growth in path 4). For the negation of our outcome, the absence of a critical mass of female legislators is thus an INUS condition, just as the conditions with which this condition needs to be combined before it is sufficient. This makes sense theoretically. If a critical mass of female legislators is necessary for a high level of parental leave benefits, the absence of a critical mass should be sufficient – though not necessarily individually so – for the negation of the outcome. This is what the analysis indeed shows.

## 6. Conclusion

Over the last years, most countries have expanded their maternal employment supporting policies, like parental leave benefits, probably in response to the new social risks arising from post-industrialization. However, not all governments display high levels of spending on such policies. The literature thus far does not identify the necessary and/or sufficient (combinations of) conditions for governments to spend much on parental leave benefits. This study adds to this discussion by presenting new data for 55 governments in 12 countries between 1980 and 2003. It conducts an fsQCA analysis on these data which reveals the minimally necessary and sufficient (combinations of) conditions for high levels of spending on parental leave benefits. We drew on critical mass theory to argue that the presence of a critical mass of female legislators was necessary for high levels of maternal employment supporting policies. Our necessary condition analysis corroborated this hypothesis, showing that without the presence of a critical mass of women in parliament, it is very unlikely that governments have high levels of spending on parental leave benefits. With respect to the sufficient conditions, we found two distinct paths towards this outcome, in each of which a critical mass of female legislators entered as expected: 1) corporatism combined with rightist partisanship and the absence of openness and 2) leftist partisanship combined with high economic growth and the presence of openness. The overwhelming majority of governments with high spending on parental leave benefits have membership to path 2. This suggests that leftist partisanship is important for high levels of spending, but only when there is the financial room to manoeuvre.

These findings are largely in line with, and extend, existing work. They support existing work by revealing the importance of a critical mass of female legislators, of leftist partisanship and – to a lesser extent – of corporatism. The findings furthermore extend current studies by showing that rightist partisanship can also be conducive to high levels of spending on parental leave benefits when there is a corporatist system; that leftist government require financial room to manoeuvre in the form of economic growth; and that the presence of economic openness only has a bearing on such policies for leftist governments. Our analysis also demonstrated that a high level of spending on parental leave benefits might be difficult to achieve, not only because there were not many governments with high levels of spending, but also because two Kohl governments did display the fostering conditions yet not the outcome. Delving in more depth into these cases, as well as in the cases that are “successful” in reaching high levels of spending on this policy, would be an interesting avenue for future research.

The fsQCA analysis of the negation of the outcome, i.e., low levels of spending on parental leave benefits, revealed no necessary conditions – in line with theoretical predictions. Also

in line with our expectations, the absence of a critical mass of female legislators was a sufficient condition for low levels of spending on parental leave, though not individually so. Also a rightist government in a context of a low degree of corporatism showed up as sufficient to keep the levels of spending on parental leave benefits low. These results corroborate existing work and develop it further. Currently, there are more combinations of conditions leading to low levels of spending on parental leave benefits than to high levels of spending. It comes therefore as no surprise that there are also many more governments with low spending than there are with high spending. As one would expect theoretically, when the financial room to manoeuvre is limited, it is easier to spend little than to spend a lot.

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## Appendix

TABLE A1: *Total public and private mandatory parental leave cash benefits*

Government	Country	Period in office	Spending on parental leave benefits
Hawke 3	Australia	07/87-04/90	0
Hawke 4		04/90-12/91	0
Keating 2 & 3		12/91-03/95	0
Howard 1		03/96-10/98	.08
Howard 2		10/98-11/01	.07
Howard 3		11/01-10/04	.07
Martens 6 & 7	Belgium	11/85-05/88	.23
Martens 8 & 9		05/88-03/92	.35
Dehaene 1		03/92-06/95	.48
Dehaene 2		06/95-07/99	.45
Verhofstadt 1		07/99-07/03	.48
Mulroney 2	Canada	12/88-11/93	.34
Chrétien 1		11/93-06/97	.34
Chrétien 2		06/97-11/00	.27
Chrétien 3		11/00-12/03	.46
Schlüter 4	Denmark	06/88-12/90	.89
Schlüter 5		12/90-01/93	.93
N.Rasmussen 1		01/93-09/94	1.35
N.Rasmussen 2 & 3		09/94-03/98	1.46
N.Rasmussen 4		03/98-11/01	1.05
Holkeri 1	Finland	04/87-04/91	1.79
Aho 1		04/91-04/95	2.70
Lipponen 1		04/95-04/99	1.68
Lipponen 2		04/99-04/03	1.23
Chirac 1	France	03/86-05/88	.72
Rocard 1 et al.		05/88-03/93	.85
Balladur 1		03/93-05/95	.76
Juppé 2 & 1		11/95-06/97	.78
Jospin 1		06/97-05/02	.85
Kohl 2	Germany	01/87-12/90	.59
Kohl 3		12/90-10/94	.64
Kohl 4		11/94-09/98	.59
Schröder 1		10/98-09/02	.50
Lubbers 2	Netherlands	07/86-11/89	.15
Lubbers 3		11/89-08/94	0
Kok 1		08/94-08/98	0
Kok 2		08/98-07/02	0
Harlem Brundtland 2	Norway	05/86-10/89	.69
Harlem Brundtland 3 et al.		11/90-10/97	1.31
Bondevik 1		10/97-03/00	1.65
Stoltenberg 1		03/00-10/01	1.63
Carlsson 2 & 1	Sweden	03/86-02/90	1.65
Carlsson 3		02/90-10/91	2.25
Bildt 1		10/91-10/94	2.29
Persson 1 & 2		03/96-09/02	1.24
Thatcher 2	UK	06/86-06/87	.18
Thatcher 3 & Major 1		06/87-04/92	.19
Major 2		04/92-05/97	.21

*Contd...*

TABLE A1 *continued*

<b>Government</b>	<b>Country</b>	<b>Period in office</b>	<b>Spending on parental leave benefits</b>
Blair 1		05/97-06/01	.18
Blair 2		06/01-05/05	.20
Reagan 2	US	01/85-01/89	0
G.H.W. Bush		01/89-01/93	0
Clinton 1		01/93-01/97	0
Clinton 2		01/97-01/01	0
G.W. Bush 1		01/01-01/05	0

*Sources:* Spending on parental leave benefits: Armingeon et al. (2008). Other variables: Woldendorp et al. (2000); recent years collected by the authors.

TABLE A2: *Fuzzy-set scores for outcome and the conditions*

<b>Government</b>	<b>LEAVE</b>	<b>LEFT<sup>a</sup></b>	<b>CRIT_MASS</b>	<b>CORP<sup>b</sup></b>	<b>OPEN<sup>c</sup></b>	<b>GROWTH<sup>d</sup></b>
Hawke 3	.05	<b>.95</b>	.14	<b>.75</b>	.26	<b>.51</b>
Hawke 4	.05	<b>.95</b>	.16	<b>.75</b>	.26	.22
Keating 2 & 3	.05	<b>.95</b>	.20	.25	.32	<b>.71</b>
Howard 1	.06	.05	<b>.51</b>	.25	.35	<b>.70</b>
Howard 2	.06	.05	<b>.71</b>	.25	.39	.41
Howard 3	.06	.05	<b>.77</b>	.25	.34	.49
Martens 6 & 7	.09	.05	.18	<b>1.00</b>	<b>.99</b>	<b>.66</b>
Martens 8 & 9	.12	.46	.21	<b>.75</b>	<b>.99</b>	.16
Dehaene 1	.17	<b>.55</b>	.25	<b>.83</b>	<b>.99</b>	<b>.65</b>
Dehaene 2	.16	<b>.55</b>	.37	<b>1.00</b>	<b>1.00</b>	<b>.75</b>
Verhofstadt 1	.17	<b>.58</b>	<b>.73</b>	<b>.75</b>	<b>1.00</b>	.13
Mulroney 2	.12	.05	.42	0	<b>.56</b>	.47
Chrétien 1	.12	.05	<b>.59</b>	0	<b>.80</b>	.44
Chrétien 2	.10	.05	<b>.66</b>	0	<b>.89</b>	<b>.57</b>
Chrétien 3	.17	.05	<b>.66</b>	0	<b>.84</b>	<b>.53</b>
Schlüter 4	.42	.05	<b>.87</b>	<b>.51</b>	<b>.76</b>	.47
Schlüter 5	.45	.05	<b>.90</b>	<b>.51</b>	<b>.77</b>	<b>.60</b>
N.Rasmussen 1	<b>.74</b>	<b>.62</b>	<b>.90</b>	<b>.51</b>	<b>.76</b>	<b>.96</b>
N.Rasmussen 2 & 3	<b>.80</b>	<b>.83</b>	<b>.90</b>	<b>.51</b>	<b>.79</b>	<b>.53</b>
N.Rasmussen 4	<b>.54</b>	<b>.83</b>	<b>.94</b>	<b>.83</b>	<b>.87</b>	<b>.65</b>
Holkeri 1	<b>.91</b>	.42	<b>.88</b>	<b>.63</b>	.48	.07
Aho 1	<b>.91</b>	.05	<b>.95</b>	<b>.63</b>	<b>.57</b>	<b>1.00</b>
Lipponen 1	<b>.88</b>	<b>.58</b>	<b>.90</b>	<b>.75</b>	<b>.74</b>	<b>.71</b>
Lipponen 2	<b>.67</b>	<b>.51</b>	<b>.93</b>	<b>.56</b>	<b>.78</b>	.24
Chirac 1	.30	.05	.16	.25	.37	<b>.53</b>
Rocard 1 et al.	.39	<b>.77</b>	.17	.25	.41	.15
Balladur 1	.33	.05	.15	.25	.38	<b>.84</b>
Juppé 2 & 1	.34	.05	.15	.25	.42	.40
Jospin 1	.39	<b>.95</b>	.31	.25	<b>.53</b>	<b>.53</b>
Kohl 2	.23	.05	<b>.51</b>	<b>.75</b>	.45	<b>.93</b>
Kohl 3	.25	.05	<b>.66</b>	<b>.75</b>	.47	.17
Kohl 4	.23	.05	<b>.77</b>	<b>.75</b>	<b>.52</b>	<b>.54</b>
Schröder 1	.18	<b>.95</b>	<b>.87</b>	<b>.75</b>	<b>.71</b>	.27
Lubbers 2	.07	<b>.05</b>	<b>.65</b>	<b>.75</b>	<b>.97</b>	<b>.76</b>
Lubbers 3	.05	.49	<b>.77</b>	<b>.75</b>	<b>.97</b>	.12
Kok 1	.05	.30	<b>.88</b>	<b>.75</b>	<b>.98</b>	<b>.59</b>
Kok 2	.05	.35	<b>.93</b>	<b>.75</b>	<b>.99</b>	.07
H.Brundtl. 2	.28	<b>.95</b>	<b>.91</b>	<b>.92</b>	<b>.77</b>	.17
H.Brundtl. 3 et al.	<b>.72</b>	<b>.95</b>	<b>.94</b>	<b>.93</b>	<b>.78</b>	<b>.72</b>
Bondevik 1	<b>.88</b>	.05	<b>.93</b>	<b>.92</b>	<b>.79</b>	.31
Stoltenberg 1	<b>.87</b>	.05	<b>.93</b>	<b>.75</b>	<b>.82</b>	<b>.56</b>
Carlsson 2 & 1	<b>.88</b>	<b>.95</b>	<b>.92</b>	<b>.63</b>	<b>.68</b>	<b>.51</b>
Carlsson 3	<b>.98</b>	<b>.95</b>	<b>.94</b>	<b>.75</b>	<b>.60</b>	.21
Bildt 1	<b>.98</b>	.05	<b>.90</b>	<b>.75</b>	<b>.65</b>	<b>.97</b>
Persson 1 & 2	<b>.67</b>	<b>.95</b>	<b>.96</b>	<b>.51</b>	<b>.85</b>	<b>.63</b>
Thatcher 2	.08	.05	.09	0	<b>.57</b>	<b>.75</b>
Thatcher 3 & Major 1	.08	.05	.15	0	<b>.51</b>	.02
Major 2	.09	.05	.24	0	<b>.56</b>	<b>.81</b>
Blair 1	.08	<b>.95</b>	<b>.60</b>	0	<b>.60</b>	.33

*Contd...*

TABLE A2 *continued*

<b>Government</b>	<b>LEAVE</b>	<b>LEFT<sup>a</sup></b>	<b>CRIT_MASS</b>	<b>CORP<sup>b</sup></b>	<b>OPEN<sup>c</sup></b>	<b>GROWTH<sup>d</sup></b>
Blair 2	.08	<b>.95</b>	<b>.59</b>	0	<b>.57</b>	<b>.57</b>
Reagan 2	.05	.05	.13	0	.13	<b>.56</b>
G.H.W. Bush	.05	.05	.19	0	.15	.44
Clinton 1	.05	.05	.32	0	.16	<b>.63</b>
Clinton 2	.05	.05	.41	0	.18	<b>.46</b>
G.W. Bush 1	.05	.05	.45	0	.17	<b>.76</b>

*Note:* Cases that are “in” the set of the outcome or a condition (a score > .5) are indicated in **bold**. Cases with exactly .50 membership in either one or more of the conditions or the outcome drop out of the analysis. Therefore, we slightly adjust those cases with .50 membership (see below).

<sup>a</sup> Lipponen 2 is coded .51 for gov\_left (rather than .50) because the left received most of the votes; Lubbers 3 is coded .49 (instead of .50) because the right received most of the votes.

<sup>b</sup> The Danish cabinets are coded .51 for corporatism (rather than .50) because Denmark is more corporatist than not (Teulings & Hartog 1998; Mailand 2006). The same holds for the Swedish cabinet Persson 1 & 2.

<sup>c</sup> Thatcher 3 & Major 1 are coded .51 for openness (rather than .50), since it is plausible that the British economy is more open than not.

<sup>d</sup> The Swedish cabinet Carlsson 2&1 is coded .49 (rather than .50) for economic growth because of the (looming) crisis; the Australian cabinet Hawke 3 is coded .51 (rather than .50).

TABLE A3: *Truth table*

LEFT	CRIT_MASS	Conditions			Outcome	Cons	N
		CORP	OPEN	GROWTH	LEAVE		
1	1	1	1	1	1	.85	7
0	1	1	0	1	1	.81	1
1	1	0	1	1	1	.80	1
0	1	1	0	0	1	.80	2
1	1	0	1	0	0	.74	1
0	1	1	1	1	0	.72	7
1	0	0	1	1	0	.71	1
1	0	0	0	0	0	.69	1
1	1	1	1	0	0	.68	5
1	0	1	1	1	0	.67	2
1	0	0	0	1	0	.66	1
0	1	1	1	0	0	.66	4
0	0	1	1	0	0	.65	1
0	1	0	1	1	0	.65	2
0	1	0	0	1	0	.64	1
1	0	1	0	0	0	.64	1
0	1	0	0	0	0	.64	2
0	0	1	1	1	0	.63	1
0	1	0	1	0	0	.61	1
0	0	0	1	1	0	.57	2
0	0	0	1	0	0	.57	2
0	0	0	0	0	0	.52	3
0	0	0	0	1	0	.48	5

*Notes:* LEFT is the presence of leftist partisanship, CRIT\_MASS is the presence of a critical mass of female legislators, CORP is a high degree of corporatism, OPEN is a high degree of openness, GROWTH is high economic growth, LEAVE is high public and private mandatory parental leave cash benefits, cons is the degree of consistency of the specific configuration (i.e. combination of causal conditions), N is the number of cases with >.5 membership to that configuration; the nine logical remainders not reported (available upon request).

TABLE A4: *Necessary condition analysis of low spending on parental leave benefits*

<b>Condition</b>	<b>Consistency</b>	<b>Coverage</b>
Critical mass of female legislators (CRIT_MASS)	.56	.65
Leftist partisanship (LEFT)	.38	.69
Corporatism (CORP)	.48	.70
Openness (OPEN)	.68	.74
Economic growth (GROWTH)	.59	.78
~Critical mass of female legislators (~CRIT_MASS)	.58	.96
~Leftist partisanship (~LEFT)	.73	.79
~Corporatism (~CORP)	.68	.86
~Openness (~OPEN)	.50	.90
~Economic growth (~GROWTH)	.61	.84

*Notes:* See table 2.

TABLE A5: Result of the fsQCA analysis of low spending on parental leave

Solution	~CRIT_MASS*~LEFT+	~CORP*~LEFT+	~CRIT_MASS*~OPEN+	~CRIT_MASS*GROWTH	~LEAVE
			+	→	
<b>Cases with membership &gt; .5</b>	Thatcher 2, Reagan 2, Balladur 1, Juppé 2&1, Thatcher 3&Major1, Chirac 1, Martens 6&7, G.H.W. Bush, Major 2, Clinton 1, Clinton 2, Mulroney 2, G.W. Bush 1, Martens 8&9	G.W. Bush 1, Clinton 2, Clinton 1, Mulroney 2, Chrétien 1, Chrétien 2, Chrétien 3, G.H.W. Bush, Reagan 2, Major 2, Thatcher 2, Thatcher 3&Major 1, Juppé 2&1, Balladur 1, Chirac 1, Howard 3, Howard 2, Howard 1	Reagan 2, G.W.H. Bush, Hawke 3, Hawke 4, Keating 2&3, Clinton 1, Chirac 1, Balladur 1, Rocard 1 et al., Clinton 2, Juppé 2&1, G.W. Bush 1	Balladur 1, Major 2, Thatcher 2, Keating 2&3, Martens 6&7, Dehaene 1, Dehaene 2, Clinton 1, Raegan 2, G.W. Bush 1, Chirac 1, Jospin 1, Hawke 3	
<b>Raw cov.</b>	.45	.56	.41	.43	
<b>Unique cov.</b>	.01	.17	.03	.01	
<b>Consistency</b>	.96	.91	.99	.98	
<b>Solution coverage: .73</b>					
<b>Solution consistency: .92</b>					

*Notes:* See table 3. The extremely low unique coverage of path 1 and 4 (.01) indicates that almost all of the cases with membership > .5 have also membership to at least one of the other paths.



## Notes

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<sup>1</sup> Our use of the term *maternal* employment supporting policies is not normative in the sense that we think policies should cater to mothers while the fathers are left out of the equation. However, in reality, in most families it is the mother that will work more hours because of such policies since the father typically (already) has a full-time job.

<sup>2</sup> Specifically, Esping-Andersen shows that the expenditure of € 72,850 on day-care leads to a gross life course wage gain for the mother of € 314,400, which leads to a € 110,000 gain for the exchequer. This results in a net return to the state of € 110,00 minus € 72,850 = € 37,150.

<sup>3</sup> Australia, Belgium, Canada, Denmark, Finland, France, Germany, the Netherlands, Norway, Sweden, United Kingdom (UK), and the United States (US). We focus on these cases because of the availability of qualitative and quantitative data on maternal employment supporting policies. The findings of this study pertain to these cases only, although we argue that a main result – the importance of the share of women in parliament – holds for other advanced democracies too, like Austria or New Zealand. The time period between 1985 and 2003 is also based on the available data. Still, this time period is long enough to capture the change in maternal employment supporting policies that occurred in some of our cases.

<sup>4</sup> So far, membership functions – like the logistic one included in the fsQCA software, which we use to calibrate the raw data – have not received much attention in the literature. Thiem (2010) correctly argues that this is a shortcoming. Thiem shows that different membership functions in interaction with the location of the crossover anchor (.5) produce different measures for coverage, thereby influencing the importance scholars attach to causal paths. Still, we feel confident using the logistic membership function here. Thiem shows that coverage indeed differs across four membership functions (linear, quadratic, root or logistic membership function). However, the difference in the lowest value for coverage and the highest value is 13 percentage point at the most (ranging from .86 to .73, see p.15). While this is indeed a substantial difference, we think that most researchers would draw the same substantive conclusion from these coverage scores, since both .86 and .73 constitute a high level of coverage. The same holds for low levels of coverage differing by 13 percentage points (e.g., .10 and .23). Also because we do not heavily rely on coverage when discussing our empirical results, we therefore feel confident of sticking to the logistic membership function included in the fsQCA software. As a robustness check, we also made a scatter plot of the raw data for our outcome (high spending on parental leave benefits) and a critical mass of female legislators. This plot (available upon request) is very similar to the XY-plot presented in figure 1.

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<sup>5</sup> The software is available at [www.compass.org](http://www.compass.org).

<sup>6</sup> Other dynamic scales of corporatism include Siaroff (1999) and Traxler (2004). However, the former is less useful because it displays only the variation per decade and the latter because it only presents modal rates over 4-year periods. Furthermore, both indices are complex and based on a different conceptualization of corporatism than we adopt here.

<sup>7</sup> Note that openness comes close to being necessary for high spending on parental leave benefits (consistency .88).

<sup>8</sup> The intermediate solution is based on the simplifying assumptions critical mass: present and openness: present. We include these simplifying assumptions because of the results of the necessary condition analysis, which showed critical mass to be necessary and openness close to being necessary (see also note 8).

The result of the complex solution is identical to the intermediate solution presented in the main text. The parsimonious solution is a bit different, with the absence of a leftwing government dropping out of the first path and the presence of openness out of the second. The full parsimonious solution reads: CRIT\_MASS\*CORP\*~OPEN + CRIT\_MASS\*LEFT\*GROWTH → LEAVE (solution cons: .76; cov.: .61).