Research Article

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Disentangling the complexity of family policies: SPIN data with an application to Lithuania and Sweden, 1995–2015

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Abstract

BACKGROUND
Family policies influence how men and women structure their time in the labour market and in the home. Analyses based on expenditure data, regime types, and single policies, however, cannot represent how policies support individuals’ labour market attachment and care for children. Data from the Social Policy Indicator (SPIN) database offer a tool for measuring the extent to which the family policies of a country support both the earner-carer and the traditional-family models. This large-scale database offers harmonized data on social policies over time for a wide range of countries. It allows scholars to empirically push the frontiers of research on the intersection of gender equality, family and employment dynamics, and social policy.

METHODS
We describe how measures of earner-carer and traditional-family support were constructed using data from the SPIN database. We use the cases of Lithuania and Sweden to compare the policy developments over time and demonstrate how these developments are represented by SPIN data.

CONTRIBUTION
We present data from the SPIN database, which provides a useful tool for demographers and social scientists interested in the link between family policies and fertility. We describe the range of applications in demographic research so far as well as the advantages and limitations of the database. Using Lithuania and Sweden as an example, we also highlight how the data mirror convergence and divergence in family policy in comparative perspective.

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1. Introduction

Social policies are a key tool that governments have to address societal developments and respond to social needs. How policies shape behaviour and social structures is a fundamental question in understanding intended and unintended effects of policies. Low fertility is one issue that has worried policymakers, as it has become a widespread feature of post-industrial Eastern and Western countries since the last quarter of the 20th century. Low fertility contributes to a shrinking labour force, and many fear that this might make it difficult to sustain an ageing population. Family policies have been suggested as a potential way to increase fertility rates because they offer financial and labour market support to families with children (see discussions in Gauthier and Philipov 2008; McDonald 2000; Neyer 2005; Neyer and Andersson 2008; Thévenon 2011). The specific form this support takes may affect the division of paid and unpaid work in the family to different degrees. Family policies can support a stay-at-home mother/male-breadwinner family (that is, a gender-traditional family) and/or a family in which both parents are in paid work and share the upbringings of their children (that is, an earner-carer family).

Discussions among researchers and policymakers, however, have not only been about a remedy to low fertility but also about gender equality. McDonald (2000) and Goldscheider, Bernhardt, and Lappegård (2015) argue that supporting both partners’ earning and caring as well as enhancing gender equality may be a precondition to increase fertility. They maintain that as long as women have to do most of the unpaid work at home while also being in paid work, a common feature of post-industrial societies, they will rather forego childbearing than shoulder the dual burden of work and care or give up employment altogether for having children (England 2010; McDonald 2000; Goldscheider et al. 2015). Therefore, family policies facilitating the combination of paid and unpaid work for both mothers and fathers would make it easier for couples to have the number of children they want.

Research shows that family policies may have an impact on fertility, but the results are not consistent (Gauthier 2007; Neyer 2005). We argue that the conceptualizations and measurements of family policy have contributed to this inconclusiveness. Some research has, for example, used gender regimes to denote a country’s support to different family models (Pfau-Effinger 1998). Classifications based on regime types make it difficult to capture how family policies vary over time. There is also the danger that regime-type approaches mix causes and outcomes in their typologies (see argument in Korpi and Palme 1998). Another example is the conceptualization of family policies on a continuum from support of a gender-traditional family model to support of an earner-carer family model (Mandel and Semyonov 2006). The drawback here is that countries’ family policies can support both family types simultaneously to different degrees. Lastly, the use of expenditures on family policies in total, on single policies or on combinations of...
policies as measures (for example Luci-Greulich and Thévenon 2013), has the drawback that it captures governmental spending, not the amount to which individuals are entitled.

Thus, we argue that in order to assess the relationship between family policies and fertility, we need a different approach and conceptualization of family policies. First, we need to acknowledge an essential feature of family policies, namely that they are multidimensional (see Ferrarini 2003; Korpi 2000; Neyer and Andersson 2008). Multidimensionality refers to two aspects: On the one hand, it denotes that family policies usually comprise several policies that may belong to different policy fields, such as parental leave policies, child subsidies, and tax policies. On the other hand, it signifies that family policies may have different functions, such as supporting a gender-egalitarian or a gendered family model. Usually, the functions are not clear-cut; they may be ambivalent or even contradictory. Some family policies may support a gender-egalitarian behaviour and others a gendered behaviour. Second, we need to acknowledge that family policies are time-variant. Family policies may be amended, cut, extended, or otherwise changed over time. Such changes may shift the functions of family policies, for example, towards more forceful support of a gender-egalitarian family behaviour or towards a stronger support of a gendered family model. Third, we also need to consider what individuals can expect to receive when they have a child and whether this support backs a more gender-egalitarian childrearing behaviour or a traditional gender-divided family form. To study the link between family policies and fertility, we need measures that capture these various dimensions of family policies. The Social Policy Indicator (SPIN) database provides such measures. SPIN is a longitudinal database that, among other social policies, acknowledges a variety of different policies that support families. Moreover, it offers the possibility to synthesize these policies into indicators of two types of family support that are simultaneously in place in many countries, namely support of earner-carer model and support of traditional-family model. It thus captures not only what a prospective parent can expect to receive when on leave with a newborn child, but also what share of the support favours a gendered and what share a gender egalitarian behaviour.

We introduce the logic behind the measures on family support constructed from SPIN data in the next section, detailing which policies fit within the two measures and how they are calculated. We then describe the measures specifically as they refer to Lithuania and Sweden from 1995 to 2015, illustrating both how the measures reflect the policies and how support for earner-carer and traditional-family arrangements has shifted over time in the two cases. We chose Sweden as a well-known case of family policies that support both women’s and men’s engagement in care and paid work. The development of family policies in Lithuania has been less widely discussed and offers a useful comparison because of its tumultuous recent history with political independence from the Soviet Union and nation-building. At some points in time, the two cases look
remarkably similar in the measures we describe here, yet they arrived at these values in different ways. Exploring the policies behind the measures therefore offers an illustrative example of what the measures entail. These developments in Lithuania and Sweden are then contextualized by locating them among other countries for which these measures have been produced in the SPIN database. In addition, we survey the literature in which the measures have appeared and provide an overview on the demographic studies in which these measures have been applied. Finally, we discuss the advantages and disadvantages of the approach used to assess the orientation of family policy towards earner-carer and traditional-family arrangements, specifically in light of Lithuania’s and Sweden’s family policy development.

2. Background

Contrary to most other databases, the SPIN database is a theory-driven database. It is based on the so-called institutional, or social-rights, approach (Ferrarini 2003; Korpi 2000; Nelson et al. 2020). This approach to classifying social policies builds on T. H. Marshall’s idea of social citizenship and the social rights citizens of a country have as written down in country legislation. According to Marshall (1950), citizens in a country have civil, political, and social rights. He argues that social citizenship entitles citizens to at least a basic level of welfare. Building on this idea, Korpi and Palme (1998) develop indicators that are based on legislation of social insurances, capturing what citizens are entitled to receive when they are not able to be in paid work. An important indicator developed in this connection is what a typical worker earning an average production worker’s wage is entitled to receive in percent of her/his wage, called the replacement rate.

In regard to family policies, Korpi (2000) creates a typology based on both the institutional, or social-rights, approach and a gender approach. This typology captures to which degree family policies support a gender-equal and/or a gender-traditional division of paid and unpaid work. This allows classifying countries. Countries are said to have earner-carer forms of family support if their policies attribute high levels of support to earner-carer families, in which both partners work and share childrearing, and if they have low levels of support for a gender-traditional family behaviour. If the support of

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4 At first, the data collected covered information from 18 OECD countries on four main social insurances connected to working life: unemployment, sickness, work accident, and old age. As of 2019, the SPIN database covers additional social insurances and social assistance programs for up to 34 countries (see www.spin.su.se). One of the modules included in the SPIN database is the Parental Leave Benefit (PLB) dataset. The data available cover institutional information on parental leave benefits for 18 OECD countries from 1930 to 2010. Data for 2015 will be released during 2020. Another module in SPIN relevant for our study is the Child Benefit Dataset (CBD). For an overview of the SPIN database and planned expansions, see Nelson et al. 2020.
both types of division of work in the family is low, the country is said to have market-oriented family policies. If high levels of support are directed to a gender-traditional division of work in the family and low levels of support to an earner-carer family behaviour, countries are deemed to have traditional-family policies. If high support is assigned to both family arrangements, countries are said to have a contradictory family policy model (see Ferrarini 2003; Korpi 2000; Korpi, Ferrarini, and Englund 2013). This approach accounts for the multidimensionality as well as the potential ambiguities of family policies by measuring the extent to which both family arrangements are supported in a country. Moreover, it allows policies to change over time and does not use static regime types. Finally, it avoids the use of expenditures, which measure total governmental spending on families, by taking into account what individuals can expect to receive.

The information in the SPIN database builds on this logic. Replacement rates are calculated for a range of social benefits, of which we utilize the ones relevant for our study: parental leave benefits, childcare leave, and child benefits in cash and through tax deductions, as well as tax rebates for a sole breadwinner, also called marriage subsidies (for the relevant modules in SPIN, see Table A-1 in Appendix). The rates are calculated for every fifth year. In our study, we include data for the years 1995, 2000, 2005, 2010, and 2015.

The model family used for the calculation of the replacement rates consists of two adults and two children. One of the children is the newborn for which one of the parents is on leave, the other child is below school age. The inclusion of a second, older child in the model family acknowledges that the level of some family benefits in some countries may depend on the age of a child. It thus allows estimating how much a two-child family would receive in cash child benefits.

Parental leave benefits are the income-related benefits paid to the parent on leave after the birth of a child. As income-related benefits, they are an incentive for parents, and especially mothers, to enter the labour market before they have a child and also to return to it after the leave of absence (Wesolowski and Ferrarini 2018), thus making it possible for them to be both earners and carers. To meet the eligibility requirements for income-related parental leave benefits in all countries, the parent on leave is assumed to have worked for two years on an average production workers’ wage before going on

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5 The information used to construct the measures is taken from various sources, both international and national ones. One frequently used source is the Mutual Information System on Social Protection of the European Union (MISSOC, see www.missoc.org). For countries associated with the Council of Europe, the Mutual Information System on Social Protection of the Council of Europe (MISSCEO, www.missceo.coe.int) has been used as a source. The Social Security Programs Throughout the World (SSPTW), published by the United States Social Security Administration in collaboration with the International Social Security Association, is another repeatedly used source (www.ssa.gov/policy/docs/progdsrc/ssptw/). For the calculation of net wages and replacements, information from the European Tax Handbook from the International Bureau of Fiscal Documentation (www.ibfd.org) has been used throughout the years.
leave with the newborn. Since the amount of parental leave payment, the length of payment, and sharing options between parents differ among countries, the replacement rate in the Parental Leave Benefit (PLB) dataset is calculated in the following way: The duration of leave (in weeks) allocated to the mother and to the father and the weeks of leave that can be shared among the parents during the first year after the child’s birth are summed up. Then, the amount of the weekly income-related benefit in a country’s currency is calculated net of taxation. This amount is multiplied by the total number of leave weeks possible during this first year, resulting in the total amount of parental leave benefits during the first year. This total amount is then divided by the yearly net wage of an average production worker. This net replacement rate for the first year after the child’s birth is used to denote the extent of a country’s support for earner-carer families, called earner-carer support.6

To classify earner-carer versus traditional-family support, the PLB distinguishes between income-related parental leave benefit and childcare leave.7 Childcare leave is a benefit mostly given in low flat-rate amounts, not related to previous employment, for leave after the termination of the income-related parental leave. Childcare leave information is collected in a similar way as for parental leave; however, the yearly net replacement rate for the duration of the childcare leave benefit is calculated for the 12-month period after the termination of the income-related parental leave. Maternity grants, cash and fiscal child allowances, and marriage subsidies are included in traditional-family support.8 These benefits are not income-related, and historically they root in supplementing a male breadwinner’s income to have a ‘family wage.’ They are considered to either directly support a stay-at-home mother or, in the case of child allowances, support predominant structures of a gendered division of paid and unpaid work in the family (see discussion in Montanari 2000). These benefits are calculated as yearly sums, which are then divided by the net yearly wage of an average production worker. For this study, we summed up the net replacement rates for childcare leave, maternity grants, cash and fiscal child allowances, and marriage subsidies to receive the replacement rate that denotes the extent of support to a traditional family, called traditional-family support.

6 The data in SPIN and consequently PLB concentrate on cash transfers. We are aware that public childcare would be another important feature to include in earner-carer support measures, especially public childcare for the youngest children, 0 to 2 years old. However, unfortunately there are no good comparative and longitudinal data available.

7 The indicators concerning childcare leave are still under construction and when completed, they will be integrated into the PLB dataset.

8 Data on cash and fiscal child allowances are taken from the CBD module, while marriage subsidies are calculated by subtracting the net wage of a single average production worker’s wage (APWW) from the net wage for a couple which can be found in the Social Insurance Entitlement dataset. Data on maternity grants are taken from the PLB dataset.
One advantage of calculating a yearly replacement rate in the way mentioned is that the measure takes into account both the taxation and the duration of benefits. Taking taxation into account avoids mixing taxable and non-taxable benefits that could bias comparisons between countries (Ferrarini et al. 2013). Moreover, accounting for the duration of benefits avoids giving too much weight to high replacement rates with short duration. These result in lower replacement rates when the duration is short. So, 100% replacement during 10 weeks will result in a lower annual replacement rate than 70% during 40 weeks. Finally, the approach also uses legislated benefit ceilings instead of formal replacement rates that do not account for earnings ceilings that might take effect for an average production worker in some of the countries (Wesolowski and Ferrarini 2018).

3. Country comparison

3.1 Lithuania

3.1.1 The development of family policies in Lithuania since 1990

According to Stankūnienė and Juknienė (2009), Lithuanian family policy started to take form a few years before the Soviet Union broke apart and Lithuania became an independent country in 1991. Before the break-up of the Soviet Union, Lithuania was a Soviet republic during most of the 20th century and therefore had the same family policy as other republics. At first, the goal for the development of Lithuanian family policies was to improve the economic situation of families, but after the decline of fertility to lowest low levels at the beginning of the 2000s, more pronatalist goals entered into family policy formation (Stankūnienė and Juknienė 2009).

As early as 1989, partly paid parental leave was expanded until the child turned 18 months old, while unpaid leave was extended until the child turned 3 years old. Although the “Population Programme of Lithuania,” developed by researchers and policymakers, suggested family policies that expanded the opportunities of parents to reconcile work and care, the conservative government in power opted to support stay-at-home mothers. Between 1990 and 1992 it introduced a number of low paid benefits for families that promoted a gendered family behaviour. At the same time, many preschool institutions were closed down (Stankūnienė and Juknienė 2009).

Family policy goals changed again with the Social Democratic Party coming to power in 1993. In 1994, steps were taken to implement reconciliation policies supporting the combination of paid work and childcare for both women and men, in our typology called earner-carer support. However, in 1996, a conservative government came to power.
and the system of low paid benefits was expanded, while policies supporting work-family reconciliation were neglected, but not abandoned. After 2001, when a social-democratically influenced government came to power, work-family reconciliation policies were expanded, but the maternity (birth) grant as well as child benefits were also increased. Since 2006, fathers are entitled to receive a paternity benefit (known colloquially as ‘daddy days’), with a replacement rate of 100% of earnings for the first month after a child’s birth. Moreover, as of 2008, the maternity and parental leave benefits amount to 100% of a wage during the first year and 85% for the second year (Stankūnienė and Juknienė 2009).

Since independence, changes in government thus led to inconsistencies and changes in goals and ideas from conservative and rather patriarchal focus on traditional-family support to a more social-democratic focus on earner-carer support. According to Stankūnienė and Juknienė (2009), this seems to be typical for the other Baltic countries as well. Overall, however, one can see an expansion of what in our typology is called earner-carer support in Lithuania (see Figure 1, dark grey bars).

Aidukaite (2019) states that after the financial crisis of 2008–2010, retrenchment of social policies took place, and in the field of family policy, family benefits were especially cut down. Earnings-related maternity and parental leave benefits were reformed, and parents can now choose between a one-year leave at 100% replacement of earnings or two years leave with a rate of 70% of previous earnings during the first year and 40% of earnings during the second year. The paternity leave of one month after the child’s birth has been kept in place (Aidukaite 2019). Thus, in terms of the typology and calculations used in this paper, it is rather the traditional-family support that decreased (see Figure 1, light grey bars), while earner-carer support increased and was diversified.

### 3.1.2 Earner-carer and traditional-family support in Lithuania 1995–2015

We describe family policies in Lithuania from 1995 to 2015 using the typology of earner-carer and traditional-family support, as defined in the background section. Figure 1 shows the replacement rates of earner-carer support and traditional-family support from 1995 to 2015 for every fifth year. The replacement rates show how much an average production worker can expect to receive in percent of her/his annual net wage when on leave with the newborn (second) child.
In 1995, earner-carer support was made up of 8 weeks maternity leave at a replacement rate of 100% and 44 weeks of shareable dual parental leave at 60% of previous earnings until the child’s first birthday. This summed up to an annual net replacement rate of around 67% of an annual net wage for an average production worker (4,326 Lithuanian litas, LTL). Replacement rates remained the same in the year 2000, but due to differences in taxation, this summed up to an annual net replacement rate of around 69% of an annual net wage for an average production worker (7,790 LTL). An earnings ceiling was in place, but the average production worker’s wage did not hit the ceiling. In the year 2005, the only difference was that the 44 weeks of shareable dual parental leave was increased to 70% of previous earnings until the child’s first birthday. This summed up to an annual net replacement rate of around 78% of an annual net wage for an average production worker (11,146 LTL). By 2010, the 8 weeks of maternity leave remained the same and the 44 weeks of shareable dual parental leave had increased to 100% of previous earnings until the child’s first birthday. This summed up to an annual net replacement rate of 100% of an annual net wage for an average production worker (18,155 LTL). In 2015, earner-carer support continued to consist of a maternity leave at 100% of earnings
paid for 8 weeks after birth and, thereafter, parents could draw dual parental leave at 100% of earnings until the child turned 1 year old. This summed up to an annual net replacement rate of 100% of an annual net wage for an average production worker (6,662 EUR). The average production worker’s wage did not hit the earnings ceiling throughout this entire period.\(^9\)

In terms of traditional-family support, this consisted of a maternity grant of 360 LTL and 540 LTL in cash child benefit in total for 12 months in 1995, summing up to almost 21% of an annual net wage for an average production worker. By 2000, the maternity grant had increased to 750 LTL and 1,125 LTL in cash child benefit were given in total for 12 months, increasing traditional-family support to around 24% of an annual net wage for an average production worker. By 2005, the maternity grant had increased to 1,000 LTL, 1,725 LTL were given in cash child benefit, and 229 LTL in fiscal child benefit in total for 12 months, summing up to almost 26.5% of an annual net wage for an average production worker. In 2010, the maternity grant remained 1,000 LTL, but the cash child benefit had increased to 1,794 LTL, and the fiscal child benefit had increased to 540 LTL for 12 months, summing up to almost 21% of an annual net wage for an average production worker. After adopting the euro, the maternity grant was 418 EUR and 216 EUR in cash child benefit in total for 12 months, summing up to a mere 9.5% of an annual net wage for an average production worker.\(^10\)

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3.1.3 Changes over time captured in the measure

As Figure 1 shows, the level of earner-carer support increased gradually from around 67% to 100% of an average production worker’s yearly net wage over the time period 1995–2015 (see Figure 1, dark grey bars). The level of traditional-family support, however, first increased from around 21% in 1995 to almost 27% in 2005, only to clearly decrease down to around 10% in 2015 (see Figure 1, light grey bars). This mirrors the description of Stankūnienė and Juknienė (2009) of a shift in focus of family policy depending on which parties were in power. The focus on traditional-family support increased, while earner-carer support stayed about the same until it was clearly increased under a social-democratically influenced government. By 2015, the replacement rate for traditional-family support had decreased, which Aidukaite (2019) attributes to the economic crisis that took place in 2008–2010. Note that the development of the replacement rate does not solely reflect increases or decreases of benefits and thus political decisions about family benefits. The replacement rate is also driven by the development of the average production worker’s wage. For example, between 2005 and 2010, wages increased substantially, while benefits increased only slightly. The result of these different developments is that cash benefits in 2010 replaced a lower share of an average production worker’s wage than in 2005 despite the increase in benefits.

3.2 Sweden

3.2.1 The development of family policies in Sweden since 1990

According to Kälvesten (1955), family policy in Sweden was expanded after the Myrdals drew attention to the risk of depopulation in their seminal book *Kris i befolkningsfrågan* (Crisis in the Population Question) in 1934. Most relevant for our comparison are the income-related, gender-egalitarian parental leave benefits that were first introduced in 1974 and were developed mostly by the social-democratic and liberal parties (Ferrarini and Duvander 2010). We will, however, concentrate on the development since 1990 to give the reader the possibility to compare the development of family policies in Sweden and Lithuania during the same time period.

During the economic crisis in the 1990s, the level of the income-related parental leave benefit – then paid for 12 months – was cut back to 75% and then increased again to 80% of the pre-leave wage (Ferrarini and Duvander 2010). Three additional months of benefit could be drawn, but at a low flat rate.\textsuperscript{11} In 1994, the coalition of conservative and

\textsuperscript{11} These three months that were paid at a flat rate existed since 1980, when the duration of this benefit was expanded from one to three months (Statens Offentliga Utredningar 2017).
liberal parties that was in power from 1991 to 1994 announced that one month of parental leave will be reserved for each parent, effective by 1995. At the same time they introduced a flat-rate home-care allowance paid to parents whose children did not use public childcare. The home-care allowance was short-lived. It was abolished after the Social Democratic Party returned to power in 1994 (Ferrarini and Duvander 2010). In 2002, during the social-democratic rule, the reserved period for one parent was extended from one to two months and the duration of parental leave from 15 to 16 months. 13 months were paid at 80% of pre-leave income, while 3 months were paid at a low flat-rate amount.

As of 2008, the centre-right government that had come to power in 2006 revived the home-care allowance of the early 1990s (Lundqvist 2011). To counter this move towards a traditional-family model, the government introduced a tax relief for couples in which the father used more than the legally allocated share of parental leave, the so-called ‘gender-equality bonus’ (Ferrarini and Duvander 2010; Lundqvist 2011). Neither the home-care allowance nor the gender-equality bonus gained popularity – only 4% of all parents drew home-care allowance (Duvander and Ellingsæter 2016). The subsequent government, led by the Social Democrats, abolished the home-care allowance in 2016 (Sveriges riksdag 2016) and the gender-equality bonus in 2017. Instead, in 2016, it extended the reserved part of parental leave to three months so that the current regulation allocates three months of the income-related parental leave to one parent, three months to the other, and seven months that can be shared as parents prefer (Försäkringskassan 2019).

Ferrarini and Duvander (2010) state that parental leave is used by basically all mothers and around 90% of fathers. The high earnings ceiling ensures most parents 80% of their pre-leave income. Commonly, collective bargaining agreements state that the employer pays an additional 10% below the ceiling and 90% above the ceiling. Since most parents are covered by collective agreement, this reduces the income loss during parental leave substantially.

3.2.2 Earner-carer and traditional-family support in Sweden 1995–2015

We now turn to a description of family policies in Sweden from 1995 to 2015 using our typology of earner-carer and traditional-family support. Figure 2 shows the replacement rates of earner-carer and traditional-family support from 1995 to 2015 for every fifth year. To recall, replacement rates show how much an average production worker can expect to receive in percent of her/his annual net wage when on leave with the newborn (second) child.
In 1995, earner-carer support consisted of 12 months of shareable parental leave at 80% of an annual net wage for an average production worker, with one month reserved for each parent, summing up to almost 81% of an annual net wage for an average production worker (134,976 Swedish kronor, SEK). In 2000, no change had occurred, but due to taxation differences the replacement rate was around 79% of an annual net wage for an average production worker (156,511 SEK). In the year 2005, earner-carer support consisted of 13 months of shareable parental leave at 80% of an annual net wage for an average production worker (187,015 SEK), with now two months reserved for each parent. It is important to note that, as described in the background, only the first 12 months of this leave are included in the SPIN measure since it is calculated as the replacement rate for the leave during the first year after the child’s birth. The replacement rate was 80% of an annual net wage for an average production worker. In 2010, earner-carer support remained the same of 13 months of shareable parental leave at 80% of an annual net wage for an average production worker (239,282 SEK), with two months reserved for each parent (12 months coded). By then, however, the social insurance

Source: SPIN 2020 (data not yet released).
agency multiplied the income by a factor of 0.97 so that the effective gross replacement rate was 77.6\% of an annual net wage for an average production worker. Further, changes in taxation rules with an introduction of an earned-income tax credit (EITC) led to a higher net income. Therefore, the net replacement rate was 71\% of an annual net wage for an average production worker. In the year 2015, the income-related leave regulations were the same as in 2010, and the net replacement rate again was around 71\% of an annual net wage for an average production worker (273,445 SEK).12

Traditional-family support in 1995 consisted of three months of flat-rate paid leave after income-related parental leave at 60 SEK per day, as well as 18,000 SEK of cash child benefit (in total for 12 months), amounting to a replacement rate of around 16\% of an annual net wage for an average production worker. In 2000, the flat-rate leave benefit remained the same and parents received 20,400 SEK of cash child benefit, summing up to around 15\% of an annual net wage for an average production worker. By 2005, the three months of flat-rate leave after income-related parental leave had increased to 180 SEK per day and the cash child benefit to 22,800 SEK, yielding a replacement rate of around 18\% of an annual net wage for an average production worker. By 2010, the cash child benefit had increased to 27,000 SEK and the net replacement rate was thus 16\% of an annual net wage for an average production worker. By 2015, the cash child benefit and the flat-rate leave after income-related parental leave had remained the same as in 2010, and the replacement rate was around 14\% of an annual net wage for an average production worker.13

3.2.3 Changes over time captured in the measure

As Figure 2 shows, there are only small changes to be seen in the strength of support to both dimensions during our observation period in Sweden. Effectively, however, earner-carer support has been reduced to around 70\% of an annual net wage for an average production worker due to changes in the calculation of benefits and tax effects of the EITC that was introduced after the change in government in 2007 (see Figure 2, dark grey bars for 2010 and 2015). The EITC is granted only on earned income, not on parental

Source 2000: SPIN calculations.  

Source 2000: SPIN calculations.  
leave benefits and thus gives a higher net income compared to before. We want to remind the reader that parents who are covered by collective bargaining may receive somewhat more than the presented replacement rates in Figure 2 (dark grey bars). For traditional-family support, the only changes are small fluctuations in the effect of the cash child benefit, while the three months of leave paid in flat-rate amounts have not changed during the period studied (see Figure 2, light grey bars).

### 3.3 Lithuania and Sweden compared to other countries

The SPIN database offers measures to calculate the degree of earner-carer and traditional-family support for many other countries besides Lithuania and Sweden. All measures are calculated in the same manner as described for Lithuania and Sweden and are therefore comparable across countries. Figures 3 and 4 display the measures for earner-carer and traditional-family support, respectively, for the earliest period we observe, 1995 (see light grey bars in Figures 3 and 4), and for the latest period for which we have data for all countries, 2010 (see dark grey bars in Figures 3 and 4). As evident, these measures capture significant shifts over time in policy support for earner-carer and traditional-family arrangements.

In 1995 only 7 out of the 32 countries for which we have data, among them Lithuania and Sweden, provided earner-carer support of more than 60% of an average production worker’s net wage (see Figure 3, light grey bars). This support is at a level that we consider a necessary threshold to promote a gender-equalitarian sharing of work and care. Only five of these countries offered earner-carer support above 80% of an average production worker’s net wage and thus at a level at which a gender-equalitarian reconciliation of family and work may become a realistic option for many couples. In all other countries, earner-carer support was below 40% of an average production worker’s net wage, in the majority of countries (20) even below 30%. All countries with support above 60% were either Nordic (Norway, Sweden, and Finland) or Eastern European (Hungary, Romania, Slovenia, and Lithuania) countries.
By 2010, five more countries had joined this group – two previously conservative countries (Austria and Germany) and three more Eastern European countries (Bulgaria, Estonia, and Latvia) – so that by 2010 more than a third of our observed countries offered earner-carer support above 60% of an average production worker’s net wage (see Figure 3, dark grey bars). Most remarkably, among countries that provide support at this level, there seems to be a tendency to offer more than 80% of an average production worker’s net wage. As Figure 3 shows, between 1995 and 2010 only in three more countries – Canada, Portugal, and Denmark – did earner-carer support increase substantially (17 to 23 percentage points); but it is still far below the 60% limit and thus the stepping stone to an earner-carer family policy orientation.

We now turn to Figure 4, showing traditional-family support for 1995 and 2010 for 32 countries.
Figure 4: Traditional-family support over time in 32 countries

The comparison of traditional-family support across countries shows that in 1995 the countries that are commonly considered conservative Western European welfare states – France, Germany, Austria, and Belgium – but also Denmark and Finland as well as Bulgaria, Czech Republic, Hungary, Latvia, Slovenia, and Estonia provided the highest traditional-family support (see Figure 4, light grey bars). The benefits measured as a percentage of an average production worker’s net wage ranged between 31% (Estonia) and 68% (France).\(^{14}\) By 2010 Russia, Ukraine, Slovakia, the Czech Republic, and Bulgaria had substantially increased their traditional-family support (more than 25 percentage points), while in Denmark, Finland, and France the traditional-family support decreased noticeably by more than 10 percentage points (see Figure 4, dark grey bars).

\(^{14}\) We take 30% as the threshold for traditional-family support. Like our thresholds to classify earner-carer support, this limit may seem arbitrary and may lead to some misclassifications (e.g., Denmark). However, we think that given women’s lower wages and higher share of part-time work than men’s, 30% of an average production worker’s wage may already be an incentive for some couples to choose a traditional division of care and work.
If we compare the level of traditional-family support with the level of earner-carer support among the countries that have taken the road towards supporting a more gender-equal reconciliation of work and care, we get a more nuanced picture of their policy orientation. In 2010 (see Figures 3 and 4, dark grey bars), Austria, Germany, Bulgaria, Latvia, and Hungary combined high earner-carer support (above 60% of an average production worker’s net wage) with high traditional-family support (between 37% and 81% of an average production worker’s net wage). Their family policies seem to be ambivalent, providing support for a gender-equal division of care and work as well as for a traditional work-care behaviour. In contrast, Finland, Norway, Sweden, Lithuania, Estonia, Romania, and Slovenia have high earner-carer support (above 60% of an average production worker’s net wage) but comparatively low traditional-family support (between 16% and 26% of an average production worker’s net wage). Their family policies are more clearly directed towards an earner-carer family model than towards a traditional one. With respect to Lithuania and Sweden, the comparison across countries revealed that both countries belong to the group of states whose family policies focused consistently on earner-carer support during the 15 years of our observation (see Figure 3 and 4, first four bars to the left). In this respect, both countries were among the vanguards and both were more similar to each other than were the Nordic countries or the Baltic States among themselves.

4. Applications of SPIN measures in comparative research

The measures of earner-carer and traditional-family support have been used in a few demographic studies so far to analyse developments of family policies and correlations with fertility rates and fertility intentions (Billingsley and Ferrarini 2014; Billingsley, Neyer, and Wesolowski 2018; Ferrarini 2003; Wesolowski and Ferrarini 2018). Comparative analyses have been conducted both with aggregated data as well as with harmonized individual-level data. Here we illustrate the range of applications thus far for these measures with a short overview of results from inferential analyses, especially regarding fertility and fertility intentions.

In his dissertation, Ferrarini (2003) analyses the development of family policies in 18 OECD countries from 1970 to 1995. Both measures on family policy support were used as explanatory factors in pooled time-series analysis with fertility rates and female labour force participation rates, respectively, as outcomes and female labour force participation, unemployment, and GDP as control variables. Ferrarini (2003) demonstrates that both types of family policies are connected to higher fertility rates, but that only earner-carer support is connected to higher female labour force participation during this time period. For a later period, namely 1995–2011, results of pooled time-
series analysis by Wesolowski and Ferrarini (2018) demonstrate that only higher earner-carer support is correlated with higher fertility rates. Traditional-family support, in contrast, is not correlated with higher fertility rates neither as a single explanatory factor nor in combination with earner-carer support and other control variables, such as female labour force participation, unemployment, and GDP. In addition to a different time frame, the latter study includes Eastern European countries, whereas Ferrarini’s (2003) study covers only Western OECD countries.

The orientation of family policies has also been explored in relation to women’s and men’s fertility intentions (Billingsley and Ferrarini 2014). Here, family policy measures of 21 Eastern and Western European countries from 2000 were used as explanatory factors in multilevel analyses and matched to individual-level data on fertility intentions and sociodemographic characteristics taken from the European Social Survey from 2004. Net of a country’s average propensity for positive fertility intentions in the next three years, higher support to both earner-carer and traditional-family behaviour increases women’s and men’s intentions to have a first child. However, only earner-carer support turned out to be positively related to parents’ intentions to have a second child (Billingsley and Ferrarini 2014).

The results of a recently published study (Wesolowski 2020) hint at the possibility that individual gender-role attitudes moderate the effects of family policy support on fertility intentions. In her multilevel investigation, Wesolowski (2020) combines family policy support measures as explanatory factors with data on fertility intentions as an outcome, as well as a number of sociodemographic control variables for 23 countries from the European Social Survey of 2010. Gender-egalitarian mothers had stronger fertility intentions when earner-carer support was higher. Contrary to this, gender-egalitarian men had stronger fertility intentions when traditional-family support was higher. These somewhat puzzling results show that there is still more to explore in regards to possible synergetic effects of gender-role attitudes and family policy support.

As regards actual births, Billingsley, Neyer, and Wesolowski (2018) match the measures on family policy support to individual-level data on first and second births from harmonized fertility histories from 21 countries. Their multilevel event-history models explore whether a birth of a certain parity occurred in the year of the policy measure or the following two years, net of country-specific propensities for first and second births and individual-level controls. They show that only earner-carer support is related to increased second birth rates, but that both types of support are associated with postponement of first births.

These measures have also been employed in combination with other outcomes, such as women’s labour market attachment, work-family conflict, child well-being, and population health (Bäckman and Ferrarini 2010; Esser and Ferrarini 2010; Ferrarini and Norström 2010; Ferrarini and Sjöberg 2010; Korpi, Ferrarini, and Englund 2013).
Beyond the initial fertility research already described, we propose that SPIN data on family policy support could be utilized even more in demographic studies, particularly in research on family dynamics and partnership instability and all research related to women’s and men’s work and division of paid and unpaid labour.

5. Discussion

In this paper, we have presented arguments for family policy measures that distinguish between support of gender-egalitarian earner-carer family arrangements and traditional gendered family arrangements. In line with prevailing fertility theories, we maintain that it is important to distinguish between these distinct orientations of family policies in fertility research because the division of labour in the home has implications for women’s childbearing behaviour.

SPIN data provide measures of family policy support that allow us to differentiate between support for earner-carer and traditional-family arrangements. We outlined the theoretical principles and logic behind SPIN’s complex harmonization effort and used the cases of Lithuania and Sweden to illustrate how real policies are transformed into these measures. The development of these measures over time reflects changes in the amount given and in the shifts in the orientation of support to families in each country. Although SPIN data may provide the best measures available for comparative research of the link between family policies and fertility, it is not without limitations. In this section, we discuss these generally and in light of these two country contexts. We conclude, however, by acknowledging additional advantages to what we have already outlined that became evident in the course of this exercise.

First, one disadvantage with the approach adopted in the SPIN data is that it reflects only what a four-member family with one or two average production workers (APW) can expect after having a child. The model family approach has the advantage of being simple and reflecting the most common family norm in post-industrial countries or the reality for a portion of the population. It is also used in other indexes, such as poverty indexes. A comparison with alternative model families could inform us about potentially relevant variation in policy design. Incorporating eligibility criteria such as prerequisites for receiving benefits and income ceilings would tell us whether there are substantial subgroups of individuals that receive a very different level of support than the APW model family. In particular, we could see how the replacement rate varies for groups such as high earners as well as immigrants with no work experience in the host country. To this end, measures related to other model families are already being calculated by the social policy group at the Swedish Institute for Social Research.
Second, single parents represent another model family that would be useful to explore because some countries offer specific support to these families. Moreover, given that single parents are overwhelmingly mothers, pegging the replacement rate to a wage in a male-dominated occupation (APW) may not yield the most accurate or generalizable information. Although the APW wage is widely published and easily available, it may be worth collecting information on an average female worker’s wage or on the average wage in areas with many women employees, such as a service worker or public employee wage, for example. This would also be more in alignment with the fact that it is the woman’s wage in the family that is being replaced in the majority of the benefits. A few other aspects in how well the measures represent the family policies and support different family arrangements became noticeable in the discussion of our specific case studies. The measures consider the replacement rate only in terms of one earner in a household. But, policies can be directed specifically to both parents as earners and/or offer support that is conditional on the other partner taking the benefit. A more complete picture of earner-carer support may therefore emerge with a replacement rate of both parents’ income rather than one parent’s income.

Third, the measures focus on the first 12 months after a child is born as a way of estimating the share of an annual wage replaced. This narrow window of time can lead to an underrepresentation of actual support received that is relevant to the division of labour. SPIN data step over the one-year boundary in an effort to capture support provided through the childcare leave benefit, which increases the accuracy of the traditional-family arrangement measure. New calculations under way will do the same for the earner-carer measure. Once done, this may correct underestimations of some countries’ parental leave provisions, e.g. if parental leave is longer than one year (see for example, Nieuwenhuis, Need, and Kolk 2017). Deciding the correct length of time to observe is not straightforward, however, and in standardization processes some policy features may always be lost. The social policy group at the Swedish Institute for Social Research is also exploring new ways of calculating the benefits that are linked to these timing issues. At the least, the time frame considered for calculating the measures needs to be explicitly discussed by researchers in relation to whether certain policies are excluded that may be relevant to an outcome of interest.

A fourth feature to discuss is that beyond the level of earner-carer support, the calculation of the earner-carer support measure from the SPIN data does not acknowledge policies that incentivize both parents taking parental leave. For example, it does not take into account the paternity leave that may be taken simultaneously with maternity leave. It also does not account for leave that is reserved for either parent. Considering the emphasis in contemporary theory and public discussion on gender equality in both the private and public spheres, this omission is important. Weighting the measures in terms of shareability or reserved months may be one avenue of bringing dual-carer support into
the measure, as would changing the construction to include both parents’ wages potentially.

Finally, SPIN data are collected for every fifth year. Changes in between that may affect family behaviour are not reflected. Yearly data may provide a more accurate picture of the development of family support. An expansion of the database to annual data is already planned by the social policy group at the Swedish Institute for Social Research.

This discussion of limitations illustrates the complexity of calculating a simple, comparable measure across very different policy designs and highlights the ongoing work being done to constantly improve this data source. It may also hide the advantages that SPIN data on family policy support have and do injustice to the tremendous amount of work already invested in the measures. As discussed in our introduction and the background section, other databases of comparative family support may provide some of the information we found missing in SPIN but lack other features that are essential for rigorous analyses of family policies and their effects on demographic behaviour. To our knowledge there is no other database that provides (a) comparable, (b) standardized family policy measures (c) over time, which (d) distinguishes the aims of family policies and (e) recognizes support from different policy areas in the calculation (e.g., taxation, social insurance). The research we cited exemplifies that SPIN data on family policy support can be used for research on a variety of social policy issues of relevance in demographic research, both at the aggregate and individual level, and are particularly useful for comparative and longitudinal research. Note that the use of this aggregate-level data does not overcome inferential issues that may arise, however, and each analyst must make choices related to how best model any relationship between a set of policies and an outcome.

The exercise in comparing Lithuania and Sweden revealed a few additional advantages to highlight besides the arguments stated earlier in this chapter and the brief summary above. In the discussion of why the measures were calculated as they are, we mentioned an important principle in SPIN data, which is that measures reflect what couples can actually expect to receive after having a child instead of a more abstract or aggregated level of support. This principle became even clearer when observing both changes in the policies and the measures simultaneously because it is evident that changes in other arenas such as taxation and wage setting impact the policy support. For example, we saw that two small tax-related changes essentially lowered earner-carer support by 10 percentage points in Sweden. In Lithuania, traditional-family support declined due to wage growth even when there had been small increases in benefits. These fluctuations are unintended consequences that are relevant to individuals but do not necessarily speak to any shift in policymakers’ support. They highlight the fact that individuals’ experience of social insurances is vulnerable to many forces. The SPIN measures on family policy
support, therefore, provide an important check for analysts and policymakers to ensure that the policy continues to provide as strong a support as was intended.

6. Acknowledgements

The policy measures were derived from the Social Policy Indicator (SPIN) database, which has been extended by Katharina Wesolowski and colleagues at the Swedish Institute for Social Research. The construction of the dimensions follows Ferrarini (2003) and Korpi et al. (2013). We presented a draft of this paper at the workshop ‘Challenges to the Welfare State Systems in Baltic and Nordic countries’ organized by Jolanta Aidukaite at the Lithuanian Social Research Centre in Vilnius, Lithuania, and would like to thank the participants for their input. All authors acknowledge financial support from the Swedish Research Council (Vetenskapsrådet) via the Linnaeus Center for Social Policy and Family Dynamics in Europe (SPaDE), grant registration number 349-2007-8701. The authors also want to acknowledge the suggestions and comments of two anonymous reviewers.
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Appendix

Table A-1: List of indicators used to calculate the two family policy dimensions; both released and not yet released data

<table>
<thead>
<tr>
<th>Earner-carer support</th>
<th>Traditional-family support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental insurance: net replacement rate (benefit/average production worker’s wage, APWW), 1st year, average production worker (APW) (from the Parental Leave Benefit, PLB, dataset)</td>
<td>Childcare leave: net replacement rate (benefit/APWW), 12 months after termination of parental leave, APW (to be released in the PLB)</td>
</tr>
<tr>
<td>Maternity grant: net replacement rate (Grant/APWW), APW (to be released in the PLB)</td>
<td></td>
</tr>
<tr>
<td>Cash child benefit (national currency), net yearly replacement rate, APW (from the Child Benefit Dataset, CBD)</td>
<td></td>
</tr>
<tr>
<td>Tax child benefit (national currency), net yearly replacement rate, APW (from the CBD)</td>
<td></td>
</tr>
<tr>
<td>Tax marriage subsidy (national currency), net yearly replacement rate, APW (calculated from the Social Insurance Entitlements Dataset, SIED)</td>
<td></td>
</tr>
</tbody>
</table>

*Note: For coverage of countries and years in the different modules, please check www.spin.su.se. See also Nelson et al. (2020).*