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Putting the child-centred investment strategy to the test: Evidence for the EU27

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Putting the child-centred investment strategy to the test: Evidence for the EU27*

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ABSTRACT

Under the social investment paradigm, a child-centred investment strategy has been developed. Mainstay of such strategy is the provision of childcare services, which are expected to increase maternal employment rates, further children's human capital and mitigate social inequalities in early life. In this article, I critically assess the child-centred investment strategy and explore whether childcare services in European countries in their current state of affairs are up to the task of producing the anticipated benefits. The argument I develop is fairly simple: in order to be effective, childcare services should cover all social groups, in particular children from a disadvantaged background. Drawing on recent EU-SILC data I show that in all but one country this condition is not met: childcare is often used at low or moderate levels, and children from low-income families participate to a much lesser extent than children from high-income families. In order to overcome these childcare deficits, countries should pursue a consistent investment strategy which entails increasing childcare supply and increasing employment opportunities for all social groups. This will require huge budgetary efforts for most member states.

Keywords: social investment, child-centred investment strategy, childcare, ECEC, inequality, European Union

JEL: I3, J13, J24, I24

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1. Introduction

The social, political and economic environment in which European welfare states have to operate has changed dramatically since the oil crisis of 1973, which is considered a major turning point in the transformation of industrial societies into post-industrial societies. Interestingly, though, *prima facie* evidence suggest that welfare states have been remarkably robust, "immovable objects" even, in those past four decades; certainly when compared to the welfare state transformations that materialised in the golden post-war period (Pierson, 1998). The picture of the welfare state as a frozen landscape is at best only a partial truth, however, because there have been important changes in the traditional welfare settlement in qualitative terms, both at the level of policies and at the level of ideas. Governments began to rethink prevailing (social) policy paradigms and recalibrated their social welfare programmes to meet the new risks and realities stemming from profound changes such as economic globalisation and international competition, demographic changes, the shift from manufacturing to service employment, changing family relations and the massive entry of women into the labour market, and new migratory flows[1]. Incrementally at first, but more explicitly since the mid-90s, a common focus on increasing employment, human capital investment and cost containment has been developed which was underpinned by European discourse and policy (Hemerijck, 2011a; Cantillon, 2011). *Post factum*, these qualitative changes have been designated the 'social investment turn' in social policy (Esping-Andersen et al., 2002). This 'social investment perspective' is at present the dominant scholarly paradigm to appreciate the current welfare settlement.

Basically, the core idea underlying social investment is that governments should prepare people for the changed employment circumstances in the post-industrial labour markets. While social policy traditionally aimed to protect people *from* the market, the idea is now to 'empower' people in order to integrate them *into* the market (Jenson and Saint-Martin, 2003). Mainstay of such strategy is human capital investment, giving citizens the opportunity to grasp labour market opportunities themselves, rather than relying on passive cash transfers to repair damage done. In sum, social policy ought to invest in people in order to make them resilient and enhance their capacity to grab the available opportunities in a changed

[1] Summarizing forty years of societal transformation and its impact on risk structures in an exhaustive and balanced way, is an exercise riddled with difficulties and most likely a mission impossible. Hence I refer the interested reader to Esping-Andersen et al., 2002; Taylor-Gooby, 2004; Bonoli, 2005; Jenson, 2009; Hemerijck, 2011b; and Morel et al., 2012, for further reading on the welfare state transformation, new social risks and the social investment paradigm.

labour market, before they become dependent on benefits (Cantillon and Van Lancker, 2012)[2].

In this respect, children and childhood are key to any successful investment strategy. Not only because the sustainability of the welfare state hinges on the number and productivity of future taxpayers, a point emphasized by Frank Vandenbroucke et al. (2011), but also, and maybe foremost, because inequalities in childhood pose a real threat to the accumulation of human capital and are root cause of unequal opportunities in the labour market and later life. To quote Esping-Andersen in his highly-influential contribution on this issue, a child-centred investment strategy "must be a centrepiece of any policy for social inclusion" (Esping-Andersen et al., 2002: 30). Linchpin of such strategy is the provision of high-quality early childhood education and care (hereafter, childcare). The idea is that childcare services not only help to achieve social inclusion through the labour market, by allowing mothers of young children to engage in paid employment and balance their work and family duties, but also by furthering human capital of children by means of a high-quality and stimulating environment. Both dimensions should be in particular beneficial for children from a disadvantaged background, ultimately breaking the intergenerational chain of poverty. The child-centred investment strategy is heavily influenced by the assumption that public investments early on yield significant returns in later life in forgone benefits and reduced crime rates (Carneiro and Heckman, 2003).

The idea of investment-through-childcare is not a mere academic exercise, but impacts on real-life policymaking. The need to increase childcare provision is propagated by influential international organisations such as UNICEF (2008) and the OECD (2001, 2006, 2011), and is also prominently on the European agenda. At the Barcelona Summit in 2002 as part of the European Employment Strategy (European Council, 2002), European member states adopted explicit childcare targets to provide childcare by 2010 to at least 33% of children under 3 years old and to at least 90% of children between 3 and mandatory school age. At present, for the EU, childcare is seen as a means to reach both the EU2020 employment and poverty targets (Van Lancker and Ghysels, 2013), adhering to the investment ideal of mitigating inequalities and preparing productive citizens. Obviously, not all public investment in childcare services is *necessarily* linked to the social investment idea but it is safe to say that childcare expansion in the European Union (EU) is at least *informed* by the child-centred investment strategy (Morgan, 2012).

[2] It should be noted that proponents of the social investment idea, such as Esping-Andersen, fiercely argue that social investment is but one part of the welfare settlement and that adequate income is a precondition for any longer-term investment strategy. In this view, social investment and social protection are mutually reinforcing (Vandenbroucke and Vleminckx, 2011).

In this article, I critically assess the child-centred investment strategy and explore whether childcare services in European countries *in their current state of affairs* are up to the task of producing the anticipated benefits. The argument I develop is fairly simple: in order to be successful, childcare services should be within reach of children from disadvantaged families who are expected to benefit disproportionally, both in terms of child development and maternal employment. If that is not the case, so I argue, the child-centred investment strategy as it is currently developed is bound to fail. Using recent and comparative data for the EU27, I aim to shed light on this issue and explore some tentative explanations which may ultimately yield valuable lessons for European policymakers.

In the following section, I discuss the basics of the child-centred investment strategy, further develop the main argument and articulate my research questions. This is followed by a section on data and method used, and the analyses proper. I end this piece with a discussion of the implications of my results for the future of child-centred investment in European countries.

2. Child-centred investment: basics and pitfalls

The development of formal childcare services constitutes an essential dimension of the child-centred investment strategy. Such services express the goals of the social investment perspective in two ways: they invest in the human capital of mothers by helping them engage (or remain) in paid work; and they invest in the human capital of children by providing them with quality educational stimulation at an early age. Both elements are not new, as the reconciliation of paid work and family life (and gender equality) was the main rationale for Scandinavian countries to push a service-oriented agenda from the 1970s onwards (Ferrarini, 2006), and investment in human capital has since long been recognized as the predominant mechanism to raise productivity (e.g. Becker, 1964). Rather novel in this context, and resonating more 'traditional' goals of social protection, is the explicit commitment to social inclusion and the firm believe that childcare will prove to be the most efficient policy tool to mitigate social inequalities early on in life and to combat child poverty (Esping-Andersen et al., 2002).

Increasing human capital should be all the more relevant in a post-industrial labour market, which is characterized by upward skill requirements and a declining share of routinizing labour stemming from the industrial era, i.e. traditional working-class jobs (Oesch and Menés, 2011). This is likely to exacerbate the gap between those who can and those who cannot or are not able to acquire the skills needed in a 'knowledge economy'. Thus, a failure to increase the resilience of future workers by enhancing their human capital (and their labour market prospects) will require more public resources devoted to unemployment and social assistance benefits. For this reason, the social investment approach is particularly targeted at investment in children, since early developments in cognitive capacities are critical to develop a capacity to learn. James Heckman, amongst others, argues that the economic return from early interventions is much higher than the return from later interventions such as public job training programs (Heckman, 2006). Investing in young children by means of qualitative childcare now pays large dividends in the future in tax revenues and forgone social spending, concomitantly contributing to sound public budgets.

The whole idea of childcare as a device for furthering human capital is based on a large body of research stemming from neuroscience and developmental psychology that established that human capital accumulation is determined especially in the first years of life (Shonkoff and Phillips, 2000). Moreover, economic and sociological research established strong correlations between early educational stimulation on the one hand and educational achievements and longer-term outcomes in terms of labour market attainment and earning capacity on the other (Ruhm and Waldfogel, 2011; Lowenstein, 2011). Yet, these benefits are conditional on the quality of the childcare services: services of low quality may be harmful and yield detrimental outcomes in terms of child development. Important quality aspects are *inter alia* the staff to child ratio, the quality of the staff-child interactions, staff qualifications, group size, the curriculum and the integration of both care and educational elements (for further reading on the issue of quality, see Penn, 2011 and OECD, 2012).

The use of qualitative childcare services should be especially beneficial for children living in disadvantaged families (Esping-Andersen et al., 2002). It is well established that child poverty relates to very adverse long-term effects. Growing up in poverty is associated with worse health outcomes and lower levels of psychological well-being, impaired cognitive and emotional development, inadequate schooling and an increased chance of early dropout; all of which lead in the longer term to lower earning capacities, less labour market opportunities and a higher risk of incarceration. In short, children growing up in poverty face inferior life chances and low levels of social mobility (Duncan et al., 1998; Vleminckx and Smeeding, 2001; Hackman et al., 2010). Even worse, given the inheritance of social inequality, children growing up in poverty have a great chance of becoming poor parents themselves. For sure, child poverty is anathema to the ideal of social investment which explains why the benefits of high-quality childcare for disadvantaged children are emphasized in the child-centred investment strategy.

Childcare is expected to mitigate early inequalities mainly through two channels. First, allowing mothers from disadvantaged families (often, if not always, having a weak labour market profile) to engage in paid employment does not only yield benefits in terms of human capital (*supra*), but also raises family income which may push them above the poverty threshold. It is indeed an established fact that maternal employment is a bulwark against child poverty (Chen and Corak, 2008; Gornick and Jäntti, 2012). Second, the disparity in terms of school readiness, between children growing up in low-income and children growing up in higher income families, is large already by the time they start school. This is largely so because the former grow up in a less conducive learning environment with parents who are less able to facilitate their children's school readiness than their higher-income and higher-skilled counterparts (Augustine et al., 2009; Waldfogel and Washbrook, 2011; Ermish, 2008). Obviously, other factors which are interrelated with poverty (such as ill health, bad housing, disadvantaged neighbourhoods and impoverished social networks) interfere with and add up to the early disparity in school readiness (Brooks-Gunn, 2003). In short, because these children start off from a disadvantaged point, they have the most to gain from high-quality childcare (Magnusson et al., 2007). Bestowing upon these children a stimulating learning environment offsets (at least partly) the unequal abilities of parents to improve their children's development, language competence and school readiness; hence narrowing the achievement gaps (Currie, 2001; Barnett, 1995). This goes beyond short-term but fading gains in cognitive abilities (such as gains in IQ or test scores), but manifests itself more in terms of social skills, motivation and achievement which makes children better prepared for learning (Heckman, 2006). And because learning begets further learning, the effects of equalizing initial endowments are long-lasting which leads to improved chances for school success and social mobility (Brooks-Gunn, 2003; Magnusson et al., 2007; Phillips and Lowenstein, 2011). These effects have been found in a US as well as in a European context, for different types of services (Havnes and Mogstad, 2011; Sylva et al., 2004; Currie, 2001, see also the overview in UNICEF, 2008). Simplifying an enormous body of literature, the overall conclusion is that formal childcare services, given they are of high quality, promote school readiness.

To summarize, providing high-quality childcare as part and parcel of a child-centred investment strategy is expected to further human capital of mothers and children alike, and should in particular yield benefits for children from disadvantaged backgrounds and mitigate social inequalities by tackling its root causes. There are, however, several reasons why such child-centred investment strategy might fail.

First of all, notwithstanding the fact that positive effects on school readiness are increasingly albeit inconsistently found for 'regular' care services in European countries (Vandenbroeck et al., 2012), the assumptions regarding the benefits for disadvantaged children are almost entirely based on experimental evidence drawn from quite unique and high-intensive US-based 'model programmes' (in particular the HighScope

Perry Preschool Programme, the Chicago Child-Parent Center Program and the Carolina Abecadarian Project). These model programmes do not reflect the heterogeneity in services found in European countries and it is not clear whether these findings are readily transferable to any given context or scale, such as child minders which are a common type of non-parental care in several European countries (Morrissey and Warner, 2007; Baker, 2011). Moreover, most of these programmes concern preschool children, while largest progress in terms of social and cognitive development is expected to be gained for toddlers (Heckman, 2006). *Second*, and related to the first point: quality is primordial but there is great variety in the quality of care services in and across countries. Regular care services for under threes usually focus on care and safety and less so on education while staff often has low levels of training (the Nordic countries are exceptions here, see the discussion below). It is not clear how a stimulating environment adhering to the necessary quality can be achieved in such context. *Third*, childcare services do not operate in isolation and should be connected to parental leave, education systems and broader welfare programs. There is evidence of harmful effects of first-year non-parental care in terms of cognitive and emotional well-being (Belsky, 2001; NICHD ECCRN, 2003; Han et al., 2001), highlighting the importance of parental leave systems allowing (at least one of the) parents to rear children themselves in the critical beginning of life. European leave regulations differ greatly across countries in terms of duration and remuneration, however, not always matching the availability of childcare services or providing the right incentives for parents to take up leave (see Moss, 2012, for an overview). Adding to that, previous research has demonstrated that the use of leave is socially stratified which might reinforce prevailing inequalities too (Ghysels and Van Lancker, 2011; Van Lancker and Ghysels, 2013). A similar argument holds for the transition from childcare to compulsory schooling. School systems in many European countries are known to reproduce or even reinforce existing inequalities which may very well offset much of the benefits gained (Schütz et al., 2008). Indeed, US research has shown that this is most likely to happen in schools of lower quality (Currie and Thomas, 2000). And of course, because the quality of parental care also differs greatly among socio-economic groups, the existence or absence of broader child support arrangements such as home intervention programmes (focusing on changing parent's behaviour) presumably plays a role in the success or failure of childcare services too (Waldfogel, 2002; Ruhm, 2011). In sum, a successful child-centred investment strategy clearly cannot limit itself to childcare services alone. *Finally*, although correlations between the use and availability of childcare and maternal employment have been found time and again, some studies have shown that the creation of additional childcare places mainly crowd out informal arrangements and in particular benefits mothers who are already employed (e.g. Havnes and Mogstad, 2011). Even the causal effect of childcare on maternal employment is thus not *a priori* to be assumed.

One argument, however, precedes these issues of quality, employment and generalizability. In order to be a beneficial strategy for disadvantaged families, childcare services should be within reach of these families. Recent research casts some doubt whether this is actually the case in European societies (OECD, 2011; Ghysels and Van Lancker, 2011). If this is true, childcare may not only fail to mitigate social inequalities but might even exacerbate them and raise new issues of social inequality between the haves and the have-nots, because the better-off children are able to ameliorate their existing advantage through the benefits of childcare while the children who would benefit the most are excluded. This would actually end up being the reverse of what is aimed for.

Basically, there are two pathways to ensure the inclusion of disadvantaged children: 1) Extending childcare coverage to all children, irrespective of family background and parents' labour market attainment (i.e. a strategy of *universalising* childcare); or 2) if childcare coverage is incomplete, giving priority to disadvantaged children to participate (i.e. a strategy of *targeting* childcare). According to Esping-Andersen (2005), the universal strategy is preferable from a social investment point-of-view because it kills two birds with one throw: it ensures access for disadvantaged children whilst allowing mothers to engage or remain in paid work. In the empirical analysis, I will investigate the social distribution of childcare use in the EU27. This exercise will allow to assess whether countries have succeeded in universalising and equalising access for all social groups alike or, if that is not the case, whether priority is given to disadvantaged children.

3. Data, definitions and method

Data are drawn from the European Union Survey on Income and Living Conditions (EU-SILC), wave 2009. The EU-SILC is the main source for cross-national research on income and living conditions in the European Union as well as for monitoring progress towards the Barcelona childcare targets. Although sometimes criticized (e.g. Keck and Saraceno, 2011), the SILC data is currently the only data source allowing to calculate childcare usage among young children in a 'regular week' for all EU member states. In this analysis, I distinguish between two types of care. First, *formal care services* include care centers, nursery schools, professional child minders and family daycare providers. Second, *informal care* relates to care given by grandparents, relatives and friends. It should be noted that formal care entails both public and private services. The inclusion of private childcare is a crucial issue insofar as private-market services, particularly if they are not subsidized, may hide inequalities in quality as well as access (I will come back to this issue in the discussion). The empirical analysis is limited to children below 3. Although non-parental care should ideally start around age 1 (see the discussion above), in several European countries children are enrolled much earlier. Furthermore, using this age bracket is consistent with the European approach as set down in the Barcelona targets and allows to compare homogenous groups because, starting at age 3, the role of educational systems becomes very diverse in European countries and a comparison of service use becomes much more complex. A drawback is that I cannot take into account the uptake of leave schemes which will beyond doubt negatively influence childcare use levels, especially among the very youngest children. I will come back to this when discussing the results (*infra*, §4).

In this article, I present a full time equivalent (FTE) measure of care use in order to take into account differences in care use intensity (i.e. hours of attendance per week). It is quite obvious that low-intensity use (say one or two days in the week, or only for few hours a day, which is for instance common in The Netherlands, e.g. Plantenga and Remery, 2009) is not suitable to allow for maternal employment and to improve school readiness. Consequently, low-intensity childcare use does not adhere to the social investment ideal and simply relying on average use might obscure this important dimension. Following Rauch (2007), Meagher and Szebehely (2012) and the approach used in the OECD Family Database, FTE care use represents the proportion of children as if they were receiving full-time care use (30 hours per week or more)[3]. This gives us better insight into the genuine contribution of a particular country's childcare system to the social investment ideal.

To gauge the social stratification of care use, families with young children (defined as families with at least one child below 6[4]) are divided into five income groups[5] (quintiles) for each country and FTE formal care use is compared between children living in low-income households and children living in high-income households. To properly report the outcomes, I present for every country an inequality ratio (IR), i.e. the average FTE care use among children living in the highest income family (fifth quintile) divided by the average care use among children living in a low income

3 The calculation is as follows: FTE = proportion of children in formal childcare * average number of hours per week (as % of 30 hours per week). See OECD Family database, *PF3.2: Enrolment in childcare and pre-schools* (http://www.oecd.org/els/social/family/database).

4 Because we want to compare children who are disadvantaged relative to other children, it would not make sense to include all households (including childless families) to calculate income groups.

5 To compare households with a different number of members and different needs, household income is standardized using the so-called modified OECD-scale. The outcomes are somewhat sensitive to the use of this equivalence scale; other analyses (not shown) using non-standardized household income however do not alter the overall interpretations of the results. In Hungary, Luxemburg and Portugal, though, the IR increases with more than 2 points while the IR decreases with more than 2 points in Poland and Ireland.

family (first quintile). An inequality ratio (IR) of 2 thus means that children from a high-income family are twice as much enrolled in FTE childcare than their counterparts from a low-income family, while an IR of 1 means an equal distribution of care use.

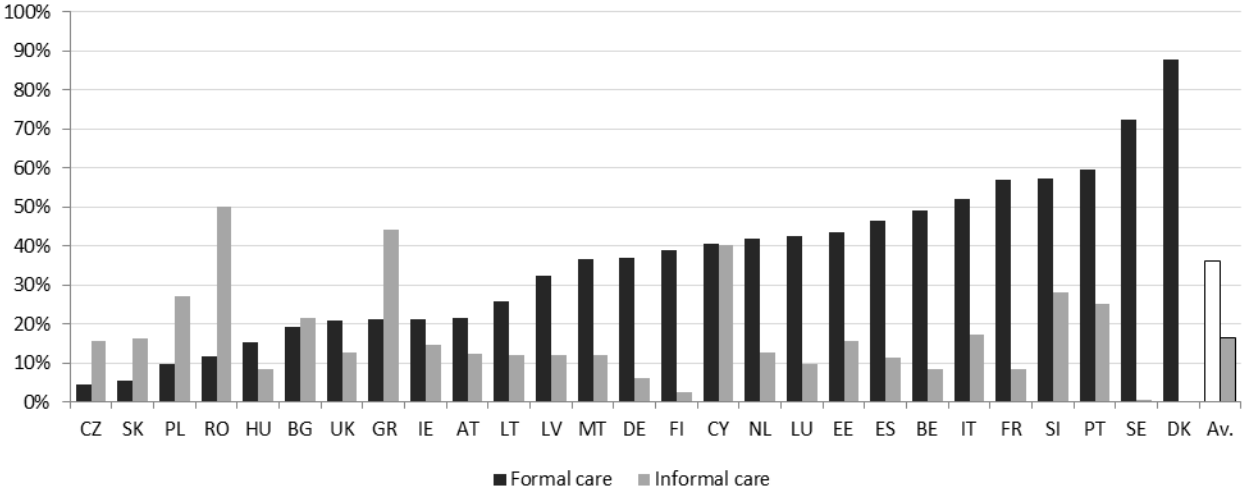
I will investigate both strategies (universal coverage for all social groups or priority access for disadvantaged children) for a successful child-centred investment strategy in the subsequent section. Average use across the EU27 will be examined first, followed by an exploration of its social distribution. Given the available data, I will also consider the distributional outcomes as a function of labour market attainment and informal care use.

4. Results: The social distribution of childcare use in Europe

4.1. Average care use

Figure 1 shows the average FTE measure of formal and informal childcare use for all children below 3 in the EU27. The disparity in formal care use between countries is enormous, ranging from more than 70% FTE in Sweden and Denmark to barely 5% in Czech Republic and Slovak Republic. France, and perhaps more surprisingly Italy, Slovenia and Portugal are also high-coverage countries with FTE use exceeding 50%. A group of countries reporting above-average use consist of Belgium, Spain, Estonia, Luxemburg, The Netherlands, Cyprus, Finland, Germany and Malta, while Latvia, Lithuania Austria, Ireland, Greece, United Kingdom and the former socialist economies Bulgaria, Hungary, Romania and Poland are underachievers with figures ranging from 10% to 30%.

Figure 1. FTE care use for all children below 3, EU27



Source: own calculations on EU-SILC 2009. Countries are ranked by average FTE formal care use. Average is unweighted.

Regarding FTE informal care use (i.e. care given by grandparents, friends or relatives), one can see this is the major channel of care for young children in only some of the low-coverage countries while informal care is almost non-existent in Sweden and Denmark. Indeed, the SILC data indicate a modest trade-off between informal and formal care use (r = -0.38): the higher formal care use, the lower the reliance on informal care in a regular week, and *vice versa*.

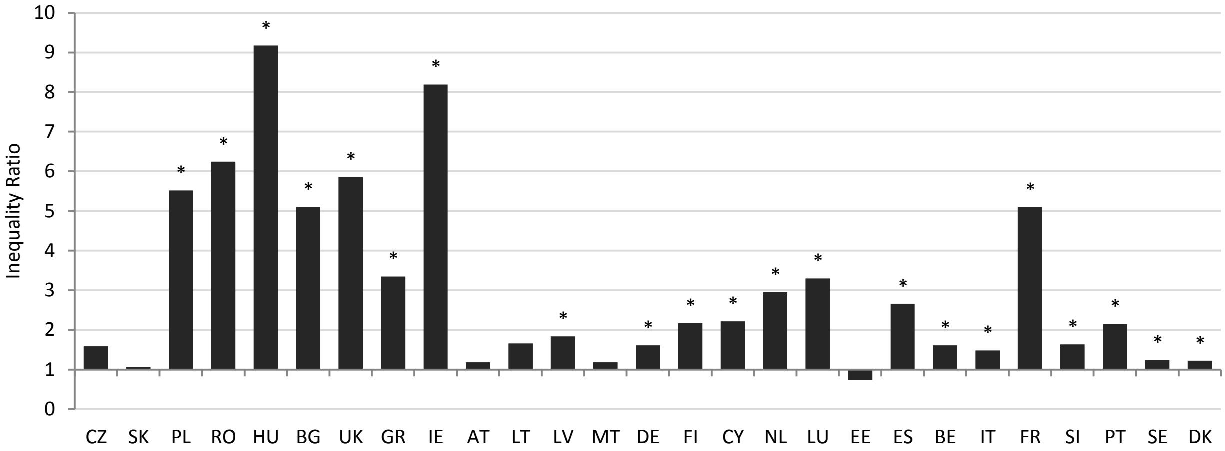
Although childcare use in European countries does not translate into consistent clusters of countries (and certainly does not follow the traditional welfare regimes), two general observations can be made: 1) the Central and Eastern European member states, which were in the socialist era characterized by high levels of care use have fallen back to the bottom of the league table, confirming earlier findings on trends in family policy in these countries (see Plantenga and Remery, 2009; Szelewa and Polakowski, 2008; Saxonberg and Sirovátka, 2006). Slovenia is a truly exceptional case; 2) Even in the high-coverage countries, including Sweden, FTE formal care us is not universalized: a significant share of young children are not catered for in formal childcare services.

Obviously, in evaluating countries' achievement with regards to universal coverage, due account should be taken of existing parental leave entitlements. In order to neutralize the effect of parental leave uptake, I also looked at a the FTE formal care use among 1 and 2-year olds (results not shown). Although average usage figures are higher overall for this age group, still the only country approaching universal use is Denmark (with 90% FTE formal care use).

4.2. The social stratification of care use

Let us now turn to the social distribution of care use. Figure 2 reports inequality ratios for FTE formal care use across the EU27. The data demonstrate that care use is socially stratified in the large majority of countries. Only in 6 countries (Czech Republic, Slovak Republic, Austria, Lithuania, Malta and Estonia) the difference between children from low-income and high-income families is not significant, but none of these countries satisfy the first condition of universal use. Not a single country reports significant higher levels of care use for children from low income families *vis-à-vis* their higher income counterparts which means that in none of the European countries childcare services are targeted towards disadvantaged children.

Figure 2. Inequality in FTE formal care use, children below 3, EU27



Source: own calculations on EU-SILC 2009. Countries are ranked by average FTE formal care use. Significance level for the difference between low and high income families: * $p < 0.05$.

Prima facie, the magnitude of the inequality is particularly striking in countries characterized by low levels of overall FTE care use, such as Poland, Romania, Hungary, Bulgaria, United Kingdom and Ireland while usage is more equal in countries reporting higher levels of FTE care use, such as Belgium, Italy, Slovenia and Portugal (France is an exception here). Indeed, the IR attenuates when average usage goes up (r = -0.42). However, one should be careful in interpreting these figures. Although inequality ratios between 1.5 and 2 might seem reasonable compared to the extreme inequalities in the left-hand side of the graph (from an IR of 5.5 in Poland over 9 in Hungary to 8 in Ireland), in reality these translate into a wide gap when average use is at a high level. In the example of Belgium (IR: 1.6), this amounts to 61% of children from high-income families enrolled in formal care compared to only 38% of children living in a low-income household. In France, the situation is even more dramatic: an average FTE care use of 57% (see figure1) conceals usage rates of 15% for low-income children compared to 77% of high-income children. Such inequalities increase the gap between the haves and the have-nots (Schütz et al., 2008), and are detrimental to the whole idea of social investment. The only two countries more or less ensuring equal participation in formal childcare at high levels are Denmark and Sweden with IRs of 1.2. However, here too, the inequalities are not negligible (92% v 75% in Denmark and 75% v 60% in Sweden).

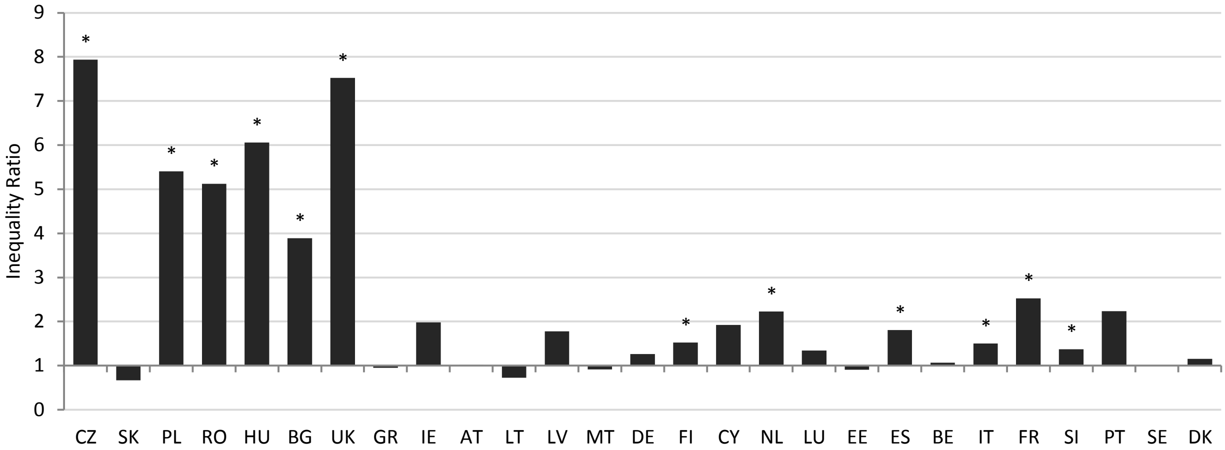
4.3. The role of employment and informal care

Naturally, the above findings should be interpreted in conjunction with labour market outcomes and the availability of other care arrangements. It is well documented that the increase in female labour market participation has been a socially stratified process, with large differences in employment between low skilled and high skilled women (Cantillon et al., 2001; Gesthuizen et al., 2011). To the extent that employed parents rely on childcare services and the employment of parents also explains their position in the income distribution, the social stratification of care use could simply be a reflection of unequal labour market patterns (Ghysels and Van Lancker, 2011). If this were to be true, the inequality in FTE childcare use should disappear when limiting the sample to children with employed mothers[6]. I investigate this in Figure 3, and the results demonstrate that for the majority of countries the difference in care use is no longer significant. For these countries, labour market attainment indeed explains the stratification of care use[7]. This calls for a balanced interpretation. The relationship between childcare use and maternal employment is presumably reciprocal: availability of childcare services gives mothers of young children a better option to engage in paid employment which in turn will induce a higher need for childcare places (Steiber and Haas, 2012). If one assumes that employment and childcare use move together, advocates of activation will not necessarily be worried by the unequal outcomes in childcare use: childcare use will equalize when employment patterns converge. Social investment advocates, however, cannot be satisfied with such state of affairs: a child-centred investment strategy is explicitly committed to furthering human capital of disadvantaged children, which surely includes children whose mother is not (yet) employed.

[6] Mothers are regarded to be employed if they declare themselves to be (full-time or part-time) employed at the moment of interview, which matches the time frame of the childcare questions.

[7] One has to be careful still. The inequality is probably not explained away by employment in Portugal. Due to a small number of cases (n=94), the IR of 2.2 is near-significant (p = 0.052).

Figure 3. Inequality in FTE formal care use, children below 3 with employed mothers, EU27

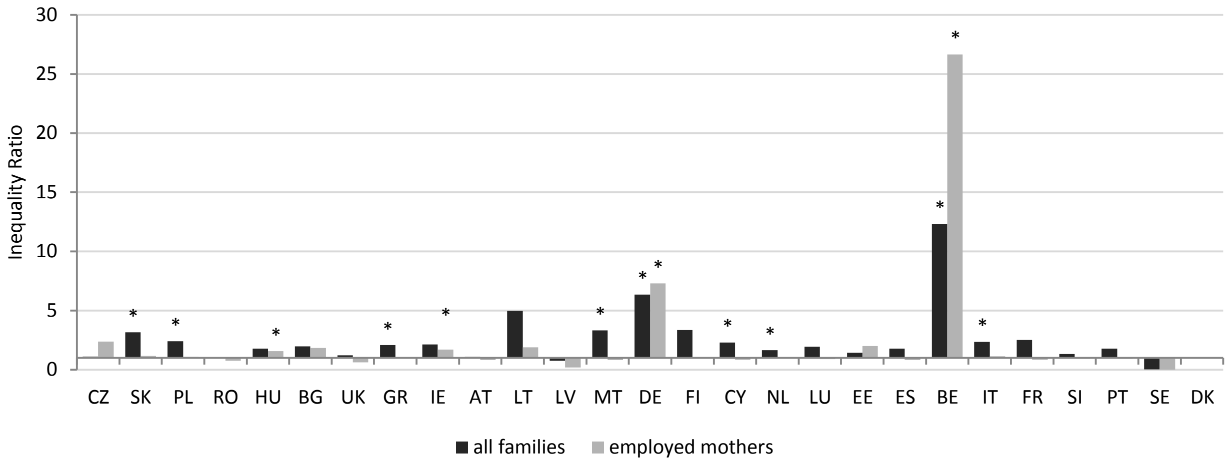


Source: own calculations on EU-SILC 2009. Countries are ranked by average FTE formal care use. Significance level: * $p < 0.05$.

Furthermore, bringing employment into the equation does not explain the social stratification in care use for all countries alike. While in some of the low coverage countries the huge inequalities are maintained (or even exacerbated, cf. Czech Republic and United Kingdom), in others the inequality in care use is mitigated but not fully explained by labour market participation. In Italy, for instance, the inequality ratio is 1.5 which translates in usage rates of 45% of children in low-income families versus 67% of children in high-income families. Similarly, for France this amounts to 34% versus 86%; for Slovenia to 50% versus 68%. In these countries, childcare participation is constrained for children from low-income families *even if their mothers are employed*.

From a activation perspective, this does not have to be a problem if these families are able to fulfil their care demands through informal channels. Indeed, it is often assumed that more disadvantaged families, including low income families, families with a lowly educated mother, minorities and immigrant parents, are more likely to depend on informal arrangements as their primary source of childcare (Debacker, 2008; Henley & Lyons, 2000). Again, however, social investment advocates cannot be satisfied with informal care for disadvantaged children because these arrangements are often not conducive for promoting school readiness (*supra*). Figure 4 shows the inequality ratio of informal care use in the EU27 for all mothers (dark bars) and for employed mothers (grey bars). In several countries, no significant difference between income levels can be discerned; but when there is a difference, the use of informal care is biased *against* low-income families. This pattern is not confined to specific countries but emerges across low, middle and high-coverage countries. The results do not support the assumption that low-income families rely more on kith and kin while high-income families fulfil their care demands through formal childcare services: low-income families are less likely to use *both* formal and informal care.

Figure 4. Inequality in FTE informal care use, children below 3, EU27



Source: own calculations on EU-SILC 2009. Significance level: * $p < 0.05$.

It could however be that the expected trade-off between informal and formal care explains the inequality in care use only among working mothers. The grey bars in figure 4 show that, while in almost all countries differences between income levels disappear, in some countries inequalities still prevail (Germany and in particular Belgium are cases in point). Even more, there is not a single country in which we find that children from low-income families are significantly more cared for by grandparents, relatives or friends compared to children from high-income families. In other words, the existing inequality in FTE formal childcare use amongst working mothers is not explained by a trade-off with informal arrangements.

5. Discussion: lessons learned and the way forward

The empirical results warrant for some general lessons to be learned for any successful child-centred investment strategy. The outcomes show crystal clear that the majority of EU member states have a long way to go in universalizing and equalizing formal care use for children below 3. Although one cannot directly infer problems of rationing from usage figures as presented in this article, there is ample evidence of shortage in childcare slots in almost all European countries (except for the Nordics), in particular the Central and Eastern European countries (see the overview in Plantenga and Remery, 2009: 40-41). This is supported by research on the effects of childcare on female labour supply: while early research focused on the role of childcare costs (e.g. Blau and Robbins, 1988), nowadays the consensus seems to be that availability is key for maternal employment, in particular in a European context where childcare is in almost all countries subsidized one way or the other (Kreyenfeld and Hank, 2000; Viitanen, 2005; Wrohlich, 2011). Detailed country studies indeed show that almost all European countries have implemented an income-related tariff system for their publicly provided or subsidized childcare services or provide childcare subsidies targeted towards low-income families when childcare has to be purchased on the private market (an exception here is Ireland, where *both* availability and affordability is problematic) (European Parliament, 2007; UNICEF, 2008). Obviously, childcare costs play an important role in families' care decisions, certainly so for low-income households for whom childcare costs proportionally incur a bigger cost. Yet, lowering prices cannot increase childcare participation if parents are not able to attain a free childcare slot in the first place (Farfan-Portet et al.,2011). Consequently, while continuously monitoring affordability for low income families, European countries have to drastically increase the number of available childcare places. That is the first lesson learned.

Notwithstanding its importance, increasing childcare supply is no sufficient condition for equalizing formal care use. Consider the example of the three Nordics where childcare places are guaranteed as a social right and no problem of rationing occurs. While Denmark and Sweden indeed display high levels of care use, equally distributed among social groups, Finland reports much lower levels of childcare use with a bias against low-income families. The latter country resembles Sweden and Denmark in that a place in public childcare is a social right and heavily subsidized, but differs in that it also installed a cash-for-care scheme in 1985[8] as an alternative to childcare services (Ellingsaeter, 2012). Underpinned by a 'freedom of choice' rhetoric, a cash benefit is paid to families with a child below 3 not enrolled in childcare; *de facto* extending the period of parental leave until a child's third birthday (Sipilä et al., 2010). The popularity of the scheme explains the low levels of formal care use compared to Sweden and Denmark (in 2007, 52 per cent of Finnish children below 3 were cared for at home, Repo, 2010). Without going too much into detail here, it is in fact an incentive for mothers (who are still responsible for the bulk of caregiving work) not to use formal childcare, especially for those with low earning potential facing limited employment opportunities (*infra*; Meagher and Szebehely, 2012).The Finnish cash-for-care scheme thus contributes to the inequality in outcomes reported in figure 2. A similar policy ambiguity can be found in other countries characterized by high inequality in care use across income groups, such as France, where family policies include both the provision of childcare to

[8] Sweden had a similar system installed in 1994 by the then centre-right government only to be abolished in 1996 by the subsequent centre-left government. It was reinstalled again in 2008 by a centre-right government. Municipalities are however free whether to offer it to its citizens. Although it is too premature to sort any significant effect, it cannot be but interpreted as a divergence from a consistent investment approach.

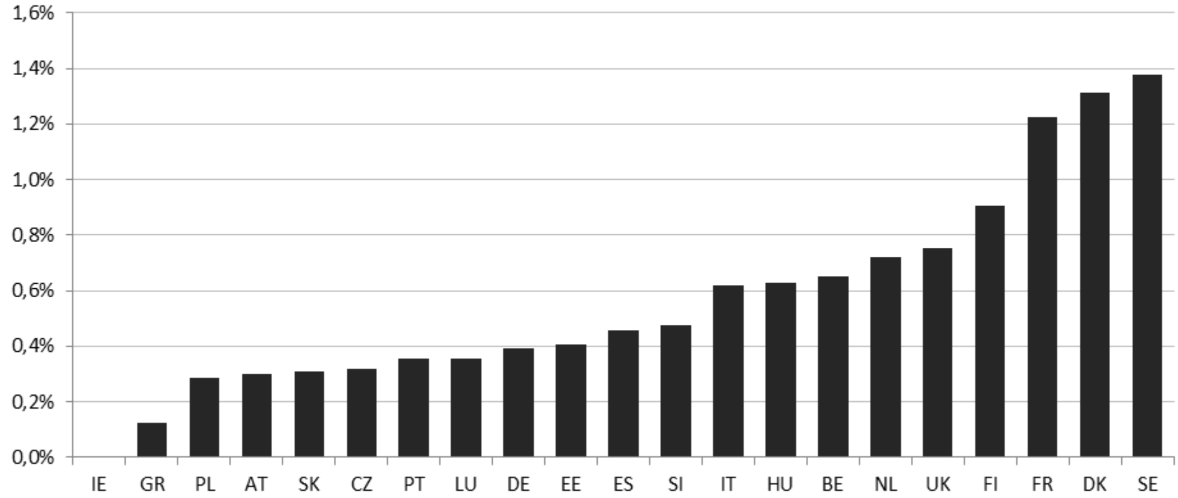
encourage maternal employment and cash benefits to encourage mothers to take care of the children themselves (Morel, 2007). Here, too, the incentive structure encourages low-paid mothers to stay at home. Contrary to the availability of parental leave in the critical first year of a child's life, long periods of home-care leave go against the child-centred investment prescription of extending childcare coverage to all children on the one hand, and are detrimental for maternal employment opportunities, in particular for mother with lesser career prospects, on the other (Gornick and Hegewisch, 2010). Thus, the second lesson learned is that a child-centred investment strategy is in dire need of a *consistent* set of policies, which highlights the importance of including a broader set of policies into the analytical framework.

This connects to labour market policy: a consistent child-centred investment strategy cannot but include the implementation of consistent employment policies. The results showed that inequality in care use disappeared in the majority of countries when the analysis was limited to children whose mother is employed. Again, the Nordics may serve as a useful example here. Sweden and Denmark pursued a consistent investment-oriented labour market policy (with strong emphasis on active policies and training programs), influenced by the notion that gender equality could only be achieved by increasing women's employment opportunities and men's opportunities to take care of the children (the so-called 'dual earner/dual carer' model, Korpi, 2000). This entailed a focus on the provision of generous parental leave entitlements and public sector employment, and creating labour market conditions conducive for low-skilled women (Korpi et al., 2011). In most other countries (including Finland), however, employment opportunities for women are more limited, certainly so for low-skilled women. Few countries have followed a consistent investment approach towards employment (Bonoli, 2009; Vandenbroucke and Vleminckx, 2011). This is the third lesson: ensuring that childcare services are able to mitigate social inequalities entails a focus on increasing maternal employment across all social groups. However, similar to childcare, quality is important here. When mothers experience job instability with for instance unpredictable working hours and/or fluctuating work schedules which in turn induces parental stress and leads to volatility in non-parental care arrangements, employment might negatively affect the socioeconomic development of children (Johnson et al., 2012). Such jobs are often prerogative of disadvantaged families.

This brings me to the final lesson. Even when governments will have implemented a consistent set of policies and the conditions for a successful child-centred investment strategy are fulfilled, equal use of childcare services across social groups will not be guaranteed (cf. Denmark approaching but not satisfying universal coverage). First, this may be due to the details of policy implementation (e.g. how is the service exactly delivered? Are there unforeseen barriers for enrolment?), which calls for more in-depth studies of policy design (one example being Van Lancker and Ghysels, 2012, for Sweden and Belgium). Second, irrespective of implementation issues, childcare use not only depends on structural opportunities and constraints, but also on social and cultural values on motherhood and children's needs. Some parents will always be unable or unwilling to enrol their children in non-parental care services (Lewis et al., 2008). Such families are in need of other policy recipes, and a smart child-centred investment approach should acknowledge that.

So, then, what is the way forward for European countries? Only in Denmark, and to a lesser extent in Sweden, do the outcomes more or less adhere to a successful child-centred investment strategy. In these countries, childcare services are heavily subsidized, a childcare slot is a social right for each child from the age of 1, out-of-pocket fees are related to disposable income, services have to meet strict quality requirements (e.g. conforming to centrally set educational curricula and staff-child ratios) and childcare staff is properly trained and adequately paid (Van Lancker and Ghysels, 2012; OECD, 2012). It is quite clear from the results that the majority of countries have a very long way to go in order to come close to the Danish example, inevitably requiring governments to switch into higher gear and take a huge leap forward. To have an idea of the size of the effort needed, Figure 5 shows the spending on childcare in percentage of GDP. Whilst only being illustrative, we immediately see the budgetary effort faced by some countries if one uses Denmark as the benchmark. Doubling (Belgium, The Netherlands, United Kingdom), tripling (Germany, Spain, Slovenia, Estonia,) or even quadrupling (Poland, Austria, Czech Republic, Slovak Republic) the public investment in childcare will certainly require political wherewithal but might be very hard to achieve for some of the underachievers, in particular the Central and Eastern European member states; certainly so in a social and economic context of austerity in which short-term fiscal consolidation instead of achieving longer-term investment goals is the prime policy objective (e.g. Hemerijck, 2012).

Figure 5. Average net government spending on childcare, % of GDP, 2007



Source: own calculations on OECD SOCX database. *Note*: childcare includes spending on day-care services, pre-primary (ISCED0) education and, if applicable, tax credits for childcare.

Not only the budgetary effort might be inconceivable, one should also be aware of path dependency in expanding childcare. Indeed, publicly providing and/or subsidizing childcare services might not be feasible for those countries where childcare services are mainly provided through the market (i.e. Ireland and United Kingdom, but also The Netherlands, Poland, Portugal, Austria and Czech Republic, according to the *OECD Family Database*). Although market-driven childcare provision does not necessarily exclude government involvement (policymakers can stimulate demand in various ways, e.g. demand-side subsidies such as childcare vouchers and tax rebates), from a social investment point-of-view this might not be a viable option because private provision is related with lower quality, higher private costs and problems of rationing, especially in disadvantaged neighbourhoods. For instance, the Netherlands have known a shift from supply-side to demand-side subsidies following its 2005 Child Care Act, which led to a proliferation of for-profit facilities at the expense of not-for-profit facilities. These for-profit facilities tend to be concentrated more in neighbourhoods with higher purchasing power (Noailly and Visser, 2009). Notwithstanding this important issue of service delivery, whatever choices governments make (or have made in the past) and irrespective of who bears the main burden of the cost, the total cost of universalizing high-quality childcare services for all social groups will hover around the same order of magnitude(see Esping-Andersen, 2005, for a similar argument).

6. Conclusion

In this article, I have developed the argument that childcare services should be within reach of disadvantaged children in order to be effective in increasing maternal employment rates, furthering children's human capital and mitigating social inequalities. The results demonstrate, however, that in almost all EU member states childcare coverage is not universal and socially stratified. Children from low-income families use formal childcare to a much lesser extent than children from high-income families. The only country approaching the child-centred investment ideal of universalizing and equalizing childcare coverage is Denmark. In discussing the results, I derived some lessons for governments pursuing a child-centred investment strategy: they should increase the availability of high-quality childcare places while simultaneously increasing employment opportunities for all social groups, embedded in a broader set of consistent investment policies. For most EU member states, this will require a huge budgetary effort which might not be feasible in the short or even in the long run. Further research should concentrate on identifying strategies in which governments can ensure access to qualitative childcare for children from a disadvantaged background, given budgetary constraints and path-dependent institutional configurations.

The main point to take home is that the children who would benefit the most from being integrated into qualitative childcare are the ones most likely to be excluded. This will exacerbate rather than mitigate social inequalities in early life. Hence, the unavoidable conclusion is that a child-centred investment strategy in its current state of affairs is bound to fail.

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