****

********Preliminary draft version: Please do not cite or circulate without permission!****

****

June 25th 2019

Childcare services' accessibility and affordability to counter Matthew effects: Insights from England and South Korea

Hyejin Choi

IWSR, Yonsei University

choihj.jean@gmail.com

Ijin Hong (Correspondent author)

IWSR, Yonsei University

hong.ijin@gmail.com

How do childcare service use and socioeconomic status (SES) relate to one another? The broad understanding is that parents of higher SES gain more easily access to childcare facilities and resources than those of lower social class standing, even in the presence of considerable social investment reforms (Cantillon, 2011). Despite this general agreement, many questions remain open regarding the exact way in which formal and informal childcare services are used according to the different socio-economic standing of families in modern-day welfare states. This study aims to add more nuance to this question by analyzing the relationships between parental economic class and child-care arrangements for early childhood and pre-school children in England and South Korea - two countries that have been characterized by a rapid expansion in childcare services as of recent. By using the British "Childcare and early years survey of parents" (2015) and the "National Childcare Actual Conditions Survey" (2015) in Korea, this study examines the relationship between SES and the use of different kinds of childcare services, such as formal public and private facilities, home-based, and informal kinship care in England and South Korea. Using an instrumental variable approach to address the endogeneity of the use of childcare services, we find that high-income families in Korea are less prone to rely on institutional care services, which are more popular with lower income households. An opposite trend was found in England, with high-income families more readily using formal childcare services. These differences suggest a rethinking of the generalized understanding of SES' influence over childcare service use depending on each welfare state's institutional and contextual features.

I. Introduction

High quality education and care for early childhood (ECEC) services have become the lion's share of the social investment strategy, and they are generally understood as guaranteeing more leeway for working mothers and a successful work-family balance, on the one hand, and also a fair and equalizing start for children for their future lives (Heckman ; Hemerijck 2013, 2017). Would increasing investment in childcare services and education guarantee better chances for human capital advancement of mothers and children? This was certainly what many governments in advanced capitalistic countries were aiming for by increasing their social investment expenditure and decreasing their commitment to social protection (Cantillon 2011, Bourget et al. 2015). Nonetheless, a sheer increase in SI expenditure does not seem to guarantee equalizing opportunities for families independently from social status (Van Lancker and Gysher 2016). This could give rise to the Matthew effect (ME), the observation that the benefits of government spending on social policy disproportionally benefit middle- and upper-class in comparison to other social groups (Bonoli and Liechti 2018; Van Lancker Ghysels 2016; Cantillon 2011)

Indeed, benefits in kind are generally considered to be less redistributive than benefits in cash. In particular, their contribution in reducing poverty and inequality has been questioned, for instance with Le Grand (1982) pointing out that 'Public expenditure on health care, education, housing and transport systematically favours the better off and thereby contributes to inequality in final income' (p. 137). OECD (2008, 2011) reports likewise indicate that net cash transfers reduce overall inequality by one third, whereas services reduce inequality only by one fifth. (Verbist Matsaganis 2014). This might suggest that even universal programmes might not automatically guarantee redistributive effects for low income, disadvantaged groups.

Generally speaking, childcare services and the social investment approach are criticized for not being redistributive enough, as they are naturally tilted towards working families of higher social status (Cantillon 2011; Van Lancker Ghysels 2016). This implies that the use of formal childcare by young children is socially stratified, with low-income or low-skilled parents being less likely to enroll their children in formal childcare services in comparison to more advantaged families (Van Lancker 2013). In addition to that, childcare might simply not be available to all children and families by institutional design (Cantillon & Van Lancker 2013).

Although we agree that effective childcare use is heavily dependent on mothers' working opportunities and social status, the way in which ECEC policies are devised and their institutional underpinnings might help reduce unmet demand for services from low income families by widening service access and affordability (Van Lancker & Ghysels 2016; Pavolini & Van Lancker 2018). In other words, "an appropriate policy design may no doubt help reduce such adverse effects [of unequal access by status]" (Cantillon 2011: 442). In order to better assess this, empirical studies aimed at understanding the inner workings of ECEC policies by institutional design and their effective use are needed.

In this article we empirically examine effective childcare use, and whether this applies equally across social classes, mindful of institutional underpinnings that characterize different countries' policies. In this regard, we strive to understand the extent to which ECEC are able to reach users, depending on their public/private mix, the balance between formal and informal service use, the timetable offered by existing facilities, service eligibility by age of the infant.

We believe that the broader the ECEC services' scope of reach and eligibility for eligible families (with children aged 5 and below), the better the chances are to alleviate Matthew effects. To this end, two country cases highly committed to the social investment strategy, i.e. the universalistic oriented and bold reformer South Korea (Fleckenstein & Lee 2017, Hong & Lee, forthcoming), on the one hand, and England, relying on more targeted SI reform, represent an interesting empirical ground for understanding how effective service use works given their different institutional settings. The analysis is made possible by the existence of comparable survey data in these two countries, the British "Childcare and early years survey of parents" (2015), on the one hand, and the "National Childcare Actual Conditions Survey" (2015) in Korea, which has been explicitly modelled after its British counterpart.

This article is structured as follows. First, we will discuss previous findings in literature and see how our study contributes to the discussion. Secondly, we will examine institutional settings of ECEC policies in England and South Korea.

II. Literature Review

1. Social Investment Strategy and the Matthew effect

There existing literature has no univocal results when it comes to what determines childcare choice decisions of mothers with young children. The wide range of empirical results is not surprising given the many national, cultural, and methodological differences that exist across existing studies. A common issue that emerges from these many studies, though, is the unequal access to childcare service use, which tends to be tilted towards the needs of high-income, dual-earner middle classes (Hemerijck 2017). This is also a crucial point of criticism of the SI approach, which, by focusing on work and investment above social protection for the most vulnerable, benefits only those households that are fully integrated in the labour market and have higher educational capacity, a phenomenon labeled "Matthew effects" (Cantillon 2011).

This bias has been extensively documented in empirical literature. By focusing on a relatively good SI performer in the EU, i.e. the Flanders region in Belgium, Ghysels and Van Lancker (2011) measured effective usage of childcare services, parental leave benefits, and child benefits. With the partial exclusion of benefits, their findings suggested that family policies mainly benefit higher income families, and, in particular, that "the socially selective character of parental leave and formal childcare services undoes the redistributive effect of the child benefit system" (p.),

In a similar vein, Pavolini and Van Lancker (2018) have recently found through a quantitative study that use of formal childcare services is indeed affected by Matthew effects, although cultural preferences (demand side) and structural limits of childcare availability and affordability (supply side) also seem to be influential in that respect.

Due to the considerable heterogeneity of policy arrangements in different countries, and the lack of comparable data, a focus on the institutional context has been hitherto lacking in comparative studies. Quantitatively oriented research is generally unable to closely distinguish policy features more closely due to data limitations; on the other hand, country-specific and idyosincratic analyses do not consent to identify the institutional differences within policy

mechanisms that make certain outcomes possible (Van Lancker & Ghysels 2016).

Institutional differences in each country may have different aspects of childcare use depending on contextual features. The interpretation of the Matthew effect is not limited to mere accessibility, and a more thorough investigation into the ways ECEC services are devised is needed.

2. Childcare in England and Korea

Early years education has had a high political and policy profile in England and South Korea. Compared to other European countries where have a long history of pre-school provision, state intervention was relatively late and responsibility for childcare was essentially regarded as a private matter in both countries. However, there has been considerable development of the ECEC provision in England since 1997, in Korea since 2003.

In England, the introduction of several small-scale measures in the early 1990s marked the beginning of a shift towards social investment strategy on childcare, which was accelerated by the launch of the National Childcare Strategy in 1998. New Labour committed to a long term vision of the childcare through a number of initiatives, particularly directed at disadvantaged areas and lower income families. However, the progressive governments' vision is increasingly of universal childcare (Vevers, 2004b; Labour Party, 2005). The progressive government put high policy profile on the potential benefit of the ECEC to improve children's educational outcomes and facilitate maternal employment so reducing child poverty (Lewis, 2009). It is noteworthy that the Conservative/Liberal Democrat Coalition took power with a commitment to austerity in 2010, but the childcare expansion was maintained.

In Korea, childcare has become a policy issue since the early 2000s with a large drop in fertility rate. The fertility rate caused a big shock in Korean society when it dropped to 1.08 in 2003 and 1.05 in 2005. With the coming to power of a new progressive government in 2003, Korea began to tackle the issues with the expansion of childcare. The Roh Moo-Hyun administration in particular focused on child care policy as a core driver of 'social investment welfare state', claiming for the first time in Korea that child care is a universal right and expand the childcare coverage. As like England, the childcare agenda was continued during the conservative regime. The conservative government also proclaim the universal free childcare. Especially, Park Geun-hye won the 2012 presidential election with an electoral platform that included a pledge, State-responsible childcare and surprisingly, claim more progressive child care policies than those of the Democratic Party.

Along these policy agenda, both countries experience significant increase in coverage and fund in childcare. However, Korea shows much radical change in terms of spending on early child care and education and the enrollment compare to England. Korea spent 0.08% of its GDP in 1998, one of the lowest among the OECD countries. But, currently, Korea spend 0.95% of GDP which is similar to Netherlands, which is even greater than Germany (0.5%), Japan (0.4%) and the UK (0.65%). Figure 1 shows that expenditure on under-fives has increased sharply in real terms since 1998 and substantially (by almost 40%) between 2012 and 2014); this is the result of the expansion of the entitlement to free early education for age below 5. In particular, when considering child care expenses excluding pre-primary education, Korea is

one of the biggest spenders from among the OECD countries. In England, currently, part-time nursery provision for children aged three and four is free and nearly universal. Those children are entitled to 15 hours a week of free early education for 38 weeks a year. Expenditure has increased steadily since 1997. This is the result of the entitlement to free early education for three- and four-year-olds increasing from 12.5 to 15 hours in September 2010 and the extension to disadvantaged two-year-olds from September 2013 (Sibieta, 2015).

<Figure 1> here

When it comes to the care coverage by age of the child, Korea's advancements are more apparent. Compared to the countries in Northern Europe where child care services have been well-developed, Korea's child care coverage among preschool children quite high. Indeed, its coverage is higher than that of Finland. Furthermore, while child care coverage among infants age 0-1 is relatively low in Northern European countries, Korea's child care coverage for newborns and one year- old infants is as high as 32.5% and 71.7%, respectively. Coverage for three- to five-year-old children is nearly 90%. While, England has relatively early school starting age. State nursery provision, and some private nursery schools, were supplemented by a playgroups and pre-schools, run on a voluntary basis, often by parents, and operating in church halls and community centres several mornings a week. Education becomes compulsory in the term after a child turns five. In England it has long been the norm for children to begin school one or two terms earlier than this, in so-called 'reception classes'. Since 2012, children over three years old are entitled for 15 hours free childcare. Parents of children under 2 should pay for their care while government provides childcare service for children living in disadvantaged areas and low-paid parents even they are under 2.

Although the UK has expanded the investment in children but the UK has one of the lowest childcare service use rates in Europe and has one of the biggest gaps in use between the rich and poor. The "out-of-pocket" childcare costs shows how these costs are shaped by different types of policies. In England, government provides only very limited free childcare hours and the 'out of pocket payment' is very high. Even after deducting all relevant types of government support, typical out-of-pocket expenses for two pre-school children can add up to 20% and more of total family budgets. While in Korea, the out of pocket payment is relatively low and provide about 6 to 9 hours of care per day during weekday. For these reasons, we may expect children under universal childcare programme may experience the lower stratification in terms of the accessibility to childcare service. Based on the discussion, we present following hypothesis for the childcare accessibility.

<Table 1> here

Despite of the common policy agenda of social investment, Engalnd and Korea have take different path in terms of the institutional expansion. And the difference is more complicated, when we consider the institutional structure.

In England, pre-school educational provision in England has been patchy and diverse in terms of the level of fee and programme. 'Childcare' means any form of care for a child including education and any other supervised activity (Childcare Act 2006). Providers are varied and have differing characteristics. Nursery schools and classes provide early education and childcare for children between three and five years old. Some may take children from two

and a half. Nursery schools and classes are usually open during school hours in term times. Most children will be offered a part time place. This usually means a morning or afternoon session of around two and a half hours. Some may offer additional out of school care to help working parents. At nursery school children will begin the first stage of the National Curriculum. This is called the Foundation Stage where children learn through planned play. Nursery school, nursery class and infant class (part of primary schools)2 provision is restricted to term-time only. Although a full school day is offered in primary schools and some nursery schools, this is not generally the case with nursery classes or preschool groups (or playgroups), which offer a morning or afternoon session. Full day care all the year round is offered in day nurseries; these are run by local authority social services departments (for children identified as being 'at risk') or by private and voluntary bodies, so catering for the needs of working parents (notably mothers).

While the ECEC in Korea comprises two separate systems. ECEC in Korea evolved as separate systems of "education" and "care," with contrasting interpretations of the aim and purpose of these services and differing constructions of the child and its needs within the service. Child care centers serve infants to five-year-olds and Kindergartens are the official education institutions for children aged three to five. There is a clear difference in terms of qualifications and working conditions for kindergarten teachers and child care workers. In case of Kindergarden teacher requires a university education while child care center require only child care worker certificate which can be attained through online childcare course in private education institutes. Also, Kindergarten is inspected and regulated by the Early Childhood Education Division within the Ministry of Education (MOE) while childcare center is inspected and regulated by Ministry of Health and Welfare(MOHW).

Hypothesis 1 Korea would have a low inequality in terms of childcare accessibility since the universal childcare programme may lower the stratification.

Hypethesis 2 England would have a high inequality in terms of childcare accessibility for the children under three years old while there would not be such pattern in Korea.

Hypothesis 3 If there is Matthew effect in both countries, the childcare program may increase advantages for better off children, while those who need it the most miss out for the better and .

III. Methods

Data and Sample

The data used in this article come from the 2015 Childcare and early years survey of parents(CEYSP) in England and the 2015 National Childcare Actual Conditions Survey(NCACS) in Korea. Both CEYSP and NCACS are national representative cross-sectional survey of below five years old children. The benefits of using the CEYSP include large sample sizes and detailed questions relating to the childcare use and other household characteristics. The NCACS collects data in every five year and the latest survey was conducted in FY 2014/2015. We restrict our sample to opposite-sex couples where both members of the couple report information on their time allocation decisions, allowing us to analyze the time devoted to children by both parents. In case of UK, some respondent report that children's childcare pattern was not usual because of the special occasion such as holiday or sickness

leave. We exclude those who had special occasion (N=276, 11%).

Dependent variable

As noted earlier, we investigate two measures of the childcare use; formal child-care accessibility and the amount of time spent in the formal childcare scheme are chosen. According to the institutional differences, we distinguish the age of children in England and types of care according to institutional characteristics in Korea. Both survey asked the number of hours each former providers looked after each child in a reference week or reference day. Using this information, we built a variable equal to the sum (in hours per day) of care provided to children. In terms of childcare time in formal care setting, the CEYPS asks about the childcare time use in a specific reference week. In the same manner, the KCS asks about the childcare time in a specific reference day. Time use information was collected based on the reference week, but the respondent had a special occasion in the past week, they reported usual time use pattern for childcare. To facilitate the comparison of study findings, we transform the day based data to week based data using the frequency of using center (or group) based childcare service. As most children who use formal childcare five days in Korea, it can be good approximate measure for childcare time use during a week.

Independent Variables and Covariates

Socio-economic status was operationalised by education and income. The educational level was classified into 0: "High school (HS) education and below", 1: "Academic education". In England, General Certificate of Secondary Education, A level above and other academic qualification as academic. We used three binary variables: (a) low (corresponding to the International Standard Classification of Education [ISCED upper secondary qualification without university access, (b) high (university entry qualification and above and other academic qualification. In Korea, we categorized (1) high school graduates (2) college and university (partly higher secondary education, and tertiary education). Education (Le Carret, Laffont, Mayo, & Fabrigoule, 2003). We used three binary variables: (a) low (corresponding to the International Standard Classification of Education [ISCED 0–1], no or primary education; reference), (b) medium (ISCED 2, lower secondary education), and (c) high (ISCED 3–4, higher secondary education, and ISCED 5–6, tertiary education). We also included in the regressions the binary variable partner (scored 1 if living with a partner and 0 otherwise).

The independent variable of interest was the income status. In CYEP, the annual household income was categorised as < £10000, £10 000 to £19,999, £20,000 to £29 999, £30,000 to £44,999, and > =£45,000. To make comparison with England, the PPP exchange rate was used as it helps to minimize misleading comparisons that normally arise with the use of market exchange rates. Reflecting PPP exchange rate (2015)1, the annual household income in Korea.

---

[1] The Purchasing-power-parity (PPP) exchange rate (or conversion rate) between two countries is the rate at which the currency of one country needs to be converted into that of a second country to ensure that a given amount of the first country's currency will purchase the same volume of goods and services in the second country as it does in the first. In the WEO

The total yearly net household income was divided into the following five groups: 1−900 euros, 901−1500 euros, 1501−2200 euros, 2201−3000 euros, and 3001 euros or more. The corresponding wording in the questionnaire was: "what is your household's total income from all these sources, including Tax Credits, before any deductions for income tax, National Insurance, and so on?

We also included the following covariates, based on the literature: number of children under five years old; number of persons in the household; province of residence; urban versus rural residence. The age of the selected child, the number of children below five in the household, the household size, and the size of area of residence of the household (for example, metropolitan, urban versus rural) are expected to affect the use of childcare. The choice of controls was motivated by past evidence regarding the determinants of childcare accessibility. Mothers working status is measured in UK survey using three categories: (a) 0 (b)15 (c) 16-29 (d) 30-. Korea, we categorized the total number of working hours of mothers using dummy variables. The choice of controls was motivated by past evidence regarding the determinants of childcare accessibility. Educational attainment was categorised as having less than a high school education, having a high school education, having attended some university or a trade school, or being a university graduate. The number of persons in the household.

Demographic variables drawn from the CNCCS include the age of the selected children, the number of children below 5 year old in the household, the total number of persons in the household, the availability of kinship caregivers, the mother and fathers′ working time, flexibility of the spouse's hours of work, the ethnicity of the parents, immigrant status of the mother, and the size of area (big city, small-medium city, and rural), and the binary variable partner (scored 1 if living with a partner and 0 otherwise).

Statistical analyses were carried out using a series of regressions. The advantage of regressions is that they allow us to look at the relationship between SES and center based childcare use hours while controlling for other factors that may affect the relationship between SES and center based childcare use hours. These controls are very important because there is a potential issue of selection bias due to the fact that child and family characteristics are potentially related to both child outcomes and childcare decisions. To address this problem we

---

online database, the implied PPP conversion rate is expressed as national currency per current international dollar. The PPP exchange rate in the WEO database comes from a calculation that starts with the PPP exchange rate reported by the ICP for 2011, which is then extended backwards and forwards by the growth in relative GDP deflators (the deflator of a country divided by the deflator of the United States). Differences in PPP exchange rate estimates with other organizations must be confirmed from the providers of those estimates. The International Comparisons Program (ICP) is a global statistical initiative that produces internationally comparable Purchasing Power Parity (PPP) estimates. The PPP exchange rate estimates, maintained and published by the World Bank, the OECD, and other international organizations, are used by WEO to calculate its own PPP weight time series. Currently, WEO PPP exchange rates are based on the ICP's 2011 report. For more information, you can go to the World Bank's ICP page.

examine the relationship between childcare and child outcomes while controlling for an extensive set of factors which could affect the relationship of primary interest.

Ⅳ. Results

Descriptive statistics (Table 2) show differences between England and Korea in childcare use and other factors that may have increased or decreased child-care provision. Table 2 shows that higher income family have fewer children and their youngest child is relatively older. Of the households, the largest proportion, 40 percent, used a sitter as the primary mode of care for their selected child. The presence of an additional preschooler aged 0-5 is lower for low income family than for high income family. Part-time employment among daughters was lower in 0000 (00%) than in 0000(00%). The proportion of mothers employed full-time was 00 per cent in England and 00 per cent in Korea. Obviously, mothers with young children from the disadvantaged background choose to be engaged in full-time employment. Fewer parents were single parent in Korea (0%) compared to England (00%). In England, kinship care were more restricted than in Korea, as can be seen from the significant difference. In England, parents had on average about one child more than in Korea.

<Table 2> Descriptive data here

The estimates from the OLS regression analysis are shown in Table 3. As we can observe in both cases, the effect of income is significant when comparing high-income to low-income households. It shows the existence of an important access bias as high-income families are more than twice as likely to use childcare than low-income ones. Our first and second hypothesis, on the social inequality is shaped by different types of policies, is unsurprisingly confirmed. More particularly, the threshold of 50 per cent appears decisive, as amore fine-grained differentiation does not affect the size of the coefficients, and creates categories with too few observations. With regard to the network level variables, the high cost of childcare for low-income families appears to reduce the overall chances of using childcare, whereas a more progressive fee structure significantly improves them.

The OLS analyses are displayed and provide the empirical test of our third hypothesis with regard to the impact of the age limit on the access bias for low-income families. As can be observed in Model 2 and Model 3, children in the higher socio-economic group have rather use longer childcare service compare to the children from lower social economic group. While in Korea, the trend shows opposite trend. The children from the low socio-economic groups tend to use longer childcare compare to those in the higher socio-economic group. Our data support our third hypothesis that the exclusion of disadvantaged children from centre-based care under the residual programme and partly universal programme did not alleviate the stratification effects. However, the over-representation pattern in Korea is quite unusual. Despite the fact that the universal programme is tend to alleviate the inequality, however, still, the children from high income family tend to use more childcare.

<Table 3> OLS Regression here

To examine this issue more specifically, we can turn to our third hypothesis, which assumes an impact of SES that may be related to the childcare policy. In comparison to England children, Korean children are more likely to be found in funded childcare. Can this result be interpreted as evidence of the impact of the Matthew effect? In fact, in England, the limited numbers of children in non-parental childcare suggest the affordability but the government funded free childcare is mostly used by the disadvantaged children.

While, in Korea, undersupply of kindergarten space can be a more pressing problem than affordability. Children will forego the developmental opportunities that high quality childcare can bring while parents are hindered in their attempts to seek employment and improve family incomes. The issues are similar where good-quality childcare is in short supply. Since the parents mostly perceive that the quality of childcare service is higher in the kindergarten than childcare center, they tend to prefer the kindergarten. But the number of space in kindergarten is far below than the demand and it does not offer morning and night care, the children from the disadvantaged families are more likely use childcare center than kindergarten. Also, there is clear stratification pattern in terms of the use of the private educational institution. Private institutions provide curriculum experiences for young children in art, music, gymnastics, languages and mathematics. The teachers may have specialist subject qualifications. They are wholly privatised businesses operating in the free market as education enterprises. Children often attend hakwon after attending a half-day kindergarten programme.

<Table 4> OLS Regression here

DISCUSSION

Our comparative analysis presents the clearly different pattern in childcare pattern in England and Korea which has different institutional structure. Overall, childcare use was stratified by socioeconomic background. Using nationally representative household data supplemented with direct information from the ECEC institutions which the child attended, this study examined the associations between family background and characteristics of ECEC use in England and Korea to-date. The analyses provide some evidence for associations in the expected direction children in the low income household. Part of the disadvantages found for children with low-educated parents.

This may suggest that institutional characteristics such as universalism do affect to the accessibility to the childcare. Being poor does not per se prevent access to care of high structural quality in a highly universal ECEC system. These findings may imply that in general governments which remove financial access barriers to ECEC, e.g., by strongly subsidizing it, may protect some groups of children from experiencing further disadvantage regarding the quality of early education and care provision. Overall, the presented evidence on associations between family background characteristics and ECEC access provides some indication of modestly unequal educational opportunities faced by children from low-educated.

This result confirms earlier findings (Becker, 2010) and therefore deserves greater scientific and political attention in light of studies emphasizing the significance of group composition for process quality and child development. According to Winter et al. (2012) parents with higher education, which is also known to be associated with SES, hold a greater degree of knowledge in child development, which was apparent in the pre-intervention phase of the study. Those findings support a much earlier study conducted by Parks and Smeriglio (1986), which also concluded that parents of lower SES tend to demonstrate less parenting knowledge than those of higher SES.

However, the findings of this study present results that differ. We consider more in detail than previous studies how the policy context in terms of access to a place and other context specific regulations may impact the options faced by different socio-economic groups. In Korea, parents in the low socio-economic group were significantly more likely use childcare center than those in the high socio-economic group. For those parents in the low socio-economic groups, the childcare center is often the only available option despite the fact that they quality of childcare is not optimal. Especially, when the parents with irregular and unsocial working hour, it is not possible to use kindergarten service. The results in the quantitative phase indicate that there were more permissive parents in the low socio-economic group.

The present study makes an important contribution by applying a sociological investment and accommodation perspective to parental choices of ECEC quality and by considering a large number of quality characteristics and distinguishing between different levels of observability.

References

Barbier (2012) “SI has been criticized as potentially or actually ignoring todays’s poor as spending is rechanneled to activation from income support” (Nolan 2017: 48)

Bonoli, Cantillon, Van Lancker (2017) (Matthew effects: due to the underlying inequalities in the LM, spending on human capital and ALMP might induce greater social inequality in the long term – p.68)

Bouget et al. (2015) ESPN

Cantillon, B. (2011) ‘The Paradox of the Social Investment State: Growth, Employment and Poverty in the Lisbon Era’, Journal of European Social Policy 21(5): 432–49.

Cantillon, B., & Van Lancker, W. (2013). Three shortcomings of the social investment perspective. Social policy and society, 12(4), 553-564.

Corluy, V. & Vandenbroucke, F. (2014). Individual employment, household employment, and risk of poverty in the European Union: a decomposition analysis. In B. Cantillon and F. Vandenbroucke (eds.), *Reconciling Work and Poverty Reduction: How Successful are European Welfare States?*. Oxford: OUP (limited job-growth for work-poor households)

Ghysels, J., & Van Lancker, W. (2011). The unequal benefits of activation: an analysis of the social distribution of family policy among families with young children. Journal of European social policy, 21(5), 472-485.

Esping-Andersen, G. (2015). Investing in early childhood. Revue Belge de Sécurité Sociale, 2015(1): 99-112

Esping-Andersen, G. (2009). Incomplete revolution: Adapting welfare states to women's new roles. Polity.

Hemerijck, A. (2013). Changing welfare states. Oxford University Press.

Hemerijck, A. (Ed.). (2017). The uses of social investment. Oxford University Press.

Kim, Hong, Lee (in preparation) Not another 'welfare paradox' story: A multilevel analysis of social investment policies and female employment

Hong, I., Kwon, E., & Kim, B. (2019). Measuring Social Policy Change in Comparative Research: Survey Data Evidence from South Korea. Journal of Comparative Policy Analysis: Research and Practice, 21(2), 131-150.

Hong, Lee (forthcoming)

La Grand (1982) Matthew effects in UK

Pavolini, E., & Van Lancker, W. (2018). The Matthew effect in childcare use: a matter of policies or preferences?. Journal of European Public Policy, 25(6), 878-893.

Ranci?

Richardson, Patana (2012) (services growing, cash benefits flat)

Saraceno (2017: 64): SIA's assumptions hiding inequalities in life chances and in evaluating high-low skill women

Van Lancker, W., & Ghysels, J. (2016). Explaining patterns of inequality in childcare service use across 31 developed economies: A welfare state perspective. *International Journal of Comparative Sociology*, 57(5), 310-337.

Verbist, G., & Matsaganis, M. (2014). The redistributive capacity of services in the EU. Reconciling work and poverty reduction: how successful are European welfare states, 185-211.

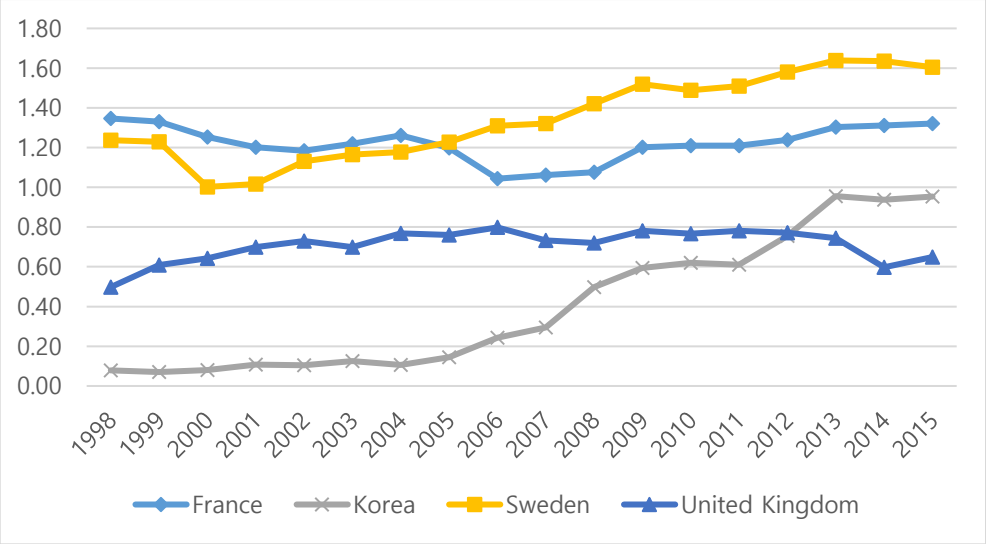
Vinck, J., Lebeer, J., & Van Lancker, W. (2018). Non-take up of the supplemental child benefit for children with a disability in Belgium: A mixed-method approach. *Social Policy & Administration*.

<Table 1> Enrollment and out-of-pocket payment

	Total 0-2 year olds		Total 3-5 year olds		Single-parent two-child family	Dual-earning two-child couple family
	2010	2016	2010	2016		
France	47.9	56.7	100.0	100.0		
Korea	38.2	53.4	84.6	93.4	4.407	9.767
Sweden	46.5	46.5	97.1	95.9	4.039	3.858
United Kingdom	40.1	31.5	-	100.0	22.743	40.772

Source: OECD Family Database

<Figure 1> Childcare Spending



Source: OECD Family Database

<Table 3> OLS Regression

	England						Korea					
	Total		0-2 yrs old		3-4 yrs old		Total		0-2 yrs old		3-4 yrs old	
	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
Income status												
£20,000-29,999	0.17	(0.53)	-0.01	(0.76)	0.25	(0.72)	0.46	(0.56)	0.22	(0.93)	0.07	(0.55)
£30,000-44,999	0.06	(0.56)	0.24	(0.80)	-0.01	(0.77)	1.01	(0.73)	0.87	(1.30)	0.15	(0.70)
£45,000 or more	**2.15*****	**(0.59)**	**1.41**	**(0.87)**	**2.52****	**(0.79)**	-0.87	(0.69)	**-2.67***	**(1.25)**	-1.00	(0.65)
Respondent' Education level												
2.edup	**1.45***	**(0.61)**	1.61†	(0.94)	0.92	(0.79)	-1.10†	(0.58)	-0.56	(1.00)	**-1.25***	**(0.56)**
3.edup	**2.12*****	**(0.44)**	**2.29*****	**(0.62)**	**1.77****	**(0.59)**	**-1.08***	**(0.54)**	-0.37	(0.92)	-1.00†	(0.52)
Children's age	**5.11*****	**(0.15)**	**2.92*****	**(0.36)**	**7.31*****	**(0.46)**	**6.60*****	**(0.13)**	**11.61*****	**(0.46)**	**2.21*****	**(0.25)**
Relative care	**-7.55*****	**(1.02)**	**-4.88*****	**(1.18)**	12.38***	(1.80)	**-3.98*****	**(0.77)**	**-4.63*****	**(1.30)**	**-4.33*****	**(0.77)**
Babysitter, nanny care	**-3.64****	**(1.23)**	**10.31*****	**(2.22)**	-0.95	(1.47)	**-5.21****	**(1.87)**	**-6.61***	**(3.37)**	**-3.85***	**(1.74)**
Rurality												
Town	**-1.11****	**(0.39)**	-0.66	(0.57)	**-1.52****	**(0.51)**	0.49	(0.52)	1.08	(0.88)	0.48	(0.50)
Rural Area	-0.24	(0.60)	0.75	(0.81)	-0.78	(0.84)	-0.25	(0.56)	-1.04	(0.97)	0.81	(0.55)
Household size	**-1.06*****	**(0.16)**	-0.14	(0.24)	**-1.43*****	**(0.22)**	**-0.59***	**(0.28)**	-0.01	(0.50)	**-0.55***	**(0.26)**
No. of children under 5	0.04	(0.27)	-1.05*	(0.42)	**0.62*****	**(0.35)**	**2.86*****	**(0.41)**	**3.17*****	**(0.77)**	**1.34*****	**(0.38)**
Working time status												
15 hours	0.59	(0.72)	0.19	(1.00)	1.35	(1.00)	**7.12****	**(2.24)**	**11.06****	**(4.31)**	2.02	(2.00)
16-29 hours	**3.36*****	**(0.46)**	**5.28*****	**(0.67)**	**2.23*****	**(0.61)**	**6.99*****	**(0.96)**	**10.67*****	**(2.03)**	**4.19*****	**(0.82)**
30 hours +	**8.72*****	**(0.53)**	**13.84*****	**(0.80)**	**5.78*****	**(0.69)**	**10.87*****	**(0.59)**	**16.01*****	**(1.14)**	**7.58*****	**(0.53)**
Single parent	**1.32***	**(0.53)**	**2.30****	**(0.76)**	0.69	(0.72)	-2.31	(1.59)	**-6.28***	**(2.96)**	-0.47	(1.46)
Non-British white	0.47	(0.44)	1.08†	(0.64)	-0.19	(0.59)	-0.31	(1.14)	0.89	(1.98)	-1.24	(1.10)

Availability	0.09	(0.35)	-0.29	(0.51)	0.13	(0.47)	-0.71	(0.56)	**3.17****	**(0.93)**	**1.26***	**(0.51)**
			0.39	(0.52)	-0.23	(0.48)	0.59	(0.44)	-1.80†	(1.01)	0.47	(0.52)
Whether burdening	0.03	(0.36)					**2.66*****	**(0.53)**	**1.58***	**(0.76)**	0.33	(0.42)
Constant	1.55	(1.02)	0.17†	(1.36)	-3.52†	(2.11)	**3.44****	**(1.17)**				

<Table 4> OLS Regression for Matthew effect

	England		Korea					
	Free Hours Beneficiaries		Childcare center		Kindgarten		Private institute	
	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
Income status								
£20,000-29,999	**-2.99*****	**(0.49)**	0.53	(0.83)	-0.09	(0.60)	0.02	(0.17)
£30,000-44,999	**-2.32*****	**(0.51)**	-0.35	(1.09)	0.82	(0.78)	0.54***	(0.22)
£45,000 or more	**-3.23*****	**(0.54)**	-2.89**	(1.03)	1.11†	(0.74)	0.91***	(0.21)
Respondent' Education level								
Secondary	1.28*	(0.56)	-2.16*	(0.86)	0.94	(0.62)	0.12	(0.18)
Tertiary	-0.14	(0.40)	-2.93***	(0.80)	1.37	(0.58)	0.48	(0.16)