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Universal Pre-School and Labor Supply of Mothers

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INTRODUCTION

Expanding access to pre-school education and childcare services has been a key policy on the agenda of many governments for over 30 years. Several motivations have been at the heart of these policies. On the one hand, expanding access to quality pre-school education is expected to have positive effects on child development and reduce socio-economic inequalities in life chances by providing a nurturing and stimulating environment to all children. On the other hand, an increased availability of affordable pre-school services is also hoped to raise maternal employment, which in turn could promote gender equality, reduce poverty, foster economic growth and increase the tax base. By making it easier to reconcile work and family responsibilities, the provision of childcare services might also help to increase fertility, which could contribute to relieving pressures created by ageing populations.

A large and robust literature that looks carefully at various policies implemented over the past 30 years provides important insights into the link between universal pre-school and maternal labour supply. It shows that universal pre-school childcare is not always a panacea; instead, the impact of these policies has been very mixed. In what follows, we summarise this evidence, discuss why it is so mixed, and ask whether lessons can be learned to make future policies more effective.

BACKGROUND

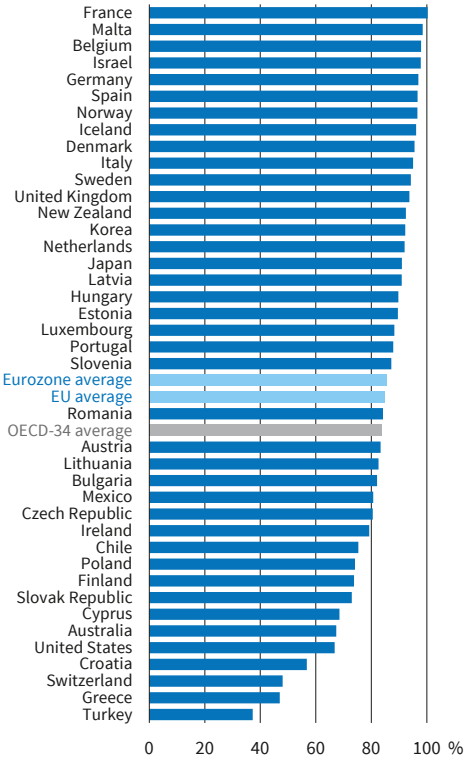
Several Scandinavian countries have been providing high-quality affordable childcare for pre-school children of all socio-economic backgrounds since the 1970s. Throughout the following decades, many middle and high-income countries followed the Nordic example and introduced policies aimed at making pre-school education universal by increasing its availability or making it cheaper for parents to use. Pre-school education is now available to more families than ever before, but there is still a wide variation in the use of childcare services across countries (Figure 1). This is despite strong political pressure for further expanding the access. In the European Union, for example, it was agreed at the 2002 Barcelona Summit that member states should provide childcare to at least 90% of children between 3 years old and the mandatory school age, and to at least 33% of children under 3 years of age by 2010.

Similarly to the wide variation in the use of childcare, there is a wide variation in how childcare services are organised and provided. Figure 2 shows the variation across countries in the effective cost of childcare to a specific family, but it also hints at the different ways that childcare services are implicitly or explicitly subsidised by governments. And there remains a considerable "motherhood" gap in employment. Across all OECD countries in 2013, 54% of mothers whose youngest child is aged 0-2 (or 67% of those whose youngest is aged 3-5) were employed, with an overall female employment rate of 74%. Some mothers may prefer not to work while their children are young, but survey data suggest that the lack of affordability and availability of pre-school and childcare services are important factors which hold mothers back from working more. According to the 2012 European Quality of Life Survey, almost 60% of childcare users report difficulties with childcare use in the European Union because of cost and availability, with a third reporting severe difficulties (Molinuevo, 2015).

Therefore, the question of whether universal pre-school can promote maternal labour supply remains highly relevant to the public debate in many countries.

Figure 1

Enrolment Rates for 3-to-5-Year-Olds in Pre-Primary Education or Primary School, 2014

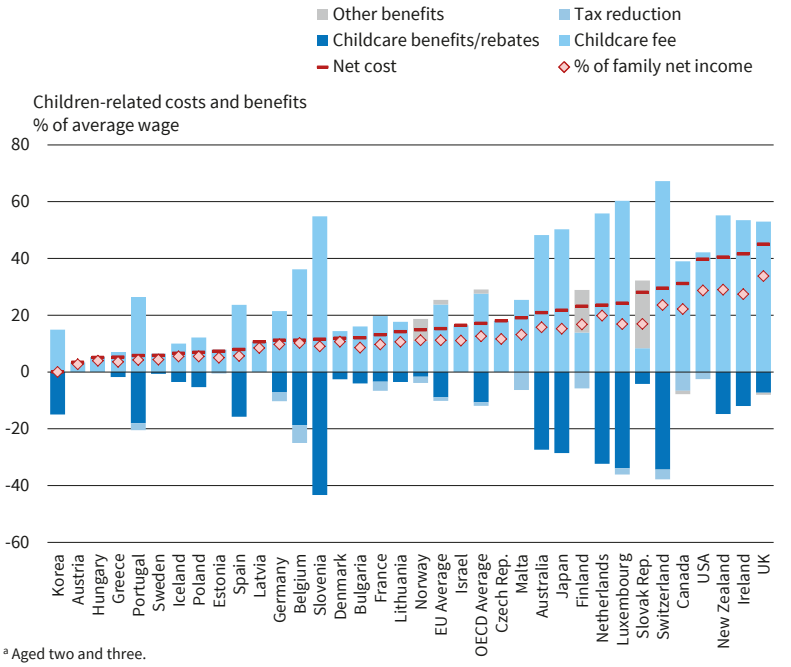


Source: OECD Education Database.

EVIDENCE ON THE IMPACT OF UNIVERSAL PRE-SCHOOL ON MATERNAL LABOUR SUPPLY

Figure 2

Net Childcare Costs for a Dual-Earner Family with Two Children[a] and with Full-Time Earnings at 150% of the Average Wage, 2012



[a] Aged two and three.

Source: OECD Family Database.

The impact of the provision of pre-school on maternal labour supply has long been a question of interest to economists. However, estimating this impact is challenging. Ideally, researchers would randomise access to pre-school across families. In this situation, the impact of access on maternal labour supply would be measured by simply comparing the labour market outcomes of mothers whose children have been assigned access and those of mothers whose children have not.

Obviously, such an experiment is difficult, if not impossible, to implement, so economists have looked for real life situations or "quasi-experiments" to mimic this type of situation. The introduction of policies expanding access to pre-school over the past 30 years has provided many such situations and enabled economists to estimate the causal impact of increased access to pre-school on maternal labour supply in a robust fashion. Economists have used two main features of these policies as source of quasi-random variation in access to pre-school. First, researchers have exploited the fact that governments have often increased the number of free or subsidised pre-school places at a different pace in different regions of the country. Under the assumption that maternal labour supply would have evolved similarly in all regions otherwise, it is possible to attribute to the impact of the programme the difference in the change in labour market outcomes of mothers over time between regions where access expanded more quickly and regions where access expanded more slowly.

Second, in many countries, children become eligible for free or subsidised pre-school on a particular date that is based on their date of birth (for example, children might be allowed to access pre-school from the first September that follows their third birthday). This type of rule means that two otherwise very similar children born just one day apart (on, say, 31 August and 1 September) would become eligible for a free place perhaps up to a year apart. The short-run impact of becoming eligible for a free pre-school place can then be estimated by comparing the outcomes for mothers of children born on either side of the cut-off date.

Today, this "quasi-experimental" literature includes studies spanning a wide range of countries from different regions of the world and with different institutions and cultural traditions. In Table 1, we summarise the key aspects of a subset of these papers. What we find is that the provision of subsidised pre-school education has had very different impacts on maternal employment and hours of work across countries and across different groups of mothers within countries. Some countries, such as Spain, Argentina and Canada, saw significant increases in maternal labour force participation as a result of policies that expanded access to pre-school education. In other countries, such as the US and some of the Nordic countries, offering free or cheaper care to pre-school children seems to have had no impact.

WHAT DETERMINES THE EFFECTIVENESS OF UNIVERSAL PRE-SCHOOL AT INCREASING MATERNAL LABOUR SUPPLY?

As recent studies [Bauernschuster and Schlotter (2015), Cascio et al. (2015) and Cattan (2016)] have observed, there are several factors that influence the effectiveness of universal pre-school on maternal labour supply.

First, universal pre-school policies have typically been more effective in contexts where the availability and use of alternative forms of childcare were low to begin with. Where mothers were already relying on informal care, or paying for privately-provided care, we

Table 1

Review of Studies Evaluating the Maternal Labour Supply Impacts of Pre-School Policies

Country	Policy	Impact	Reference
Argentina	Large-scale construction of pre-primary school facilities for children aged 3-5 between 1993 and 1999. Half-day, 5 working days	7-14 percentage point (pp) increase in maternal employment when the stock of pre-primary places increases from covering 0 to 100% of children aged 3-5 in the province.	Berlinski and Galiani (2007)
Spain	Extension of pre-school places for 3-year-olds on the premises of primary schools starting in 1991-92. Full-day, 5 working days	2.8 pp increase in employment rate as a result of offering full-time public childcare for 3 year olds	Nollenberg and Rodriguez-Planas (2015)
US	Universal pre-K availability for 4-year-olds in Georgia and Oklahoma. Full-day, 5 working days	No impact on maternal labour supply	Fitzpatrick (2010)
US	Pre-K funding initiatives for 3 and 4 year olds in several districts of the US between 1990 and 2006. Full or part-day for 4 or 5 days a week depending on district.	3.8 pp increase in labour force participation and 4.4 pp increase in employment of mothers of 4-year-olds as a result of introducing PK in a school district	Sall (2014)
US	Introduction of kindergarten programs for 5-year-olds in different school districts between mid-1960s to late 1970s. Half-day.	12 pp increase in employment as a result of the increase in places associated with the initiatives (at least four single mothers with no children younger than five entered the work force for every ten additional children enrolled in public school)	Cascio (2009)
Canada (Quebec)	Provision of day care spaces at the subsidized free of $5/day/child for children aged 0-4 (introduced in early 2000s). Full-day, 5 working days	7.7 pp increase in employment of women in two-parent families (effects for lone mothers not reported)	Baker, Gruber and Milligan (2008)
UK (England)	Provision of free half-day (15 hrs/wk) nursery places for 3-year-olds and free full-day (30-35hrs/wk) school places for 4-year-olds. Both are 5 working days, 38 weeks per year (introduced in 1990s and 2000s)	2.1 pp (no) increase in participation (employment) one year after eligibility to free part/time nursery. 5.7 pp (3.5 pp) increase in participation (employment) one year after eligibility to free full/time education (relative to last term of part/time nursery)	Brewer, Cattan, Crawford and Rabe (2017)
Germany	Introduction of a legal claim to a place in kindergarten in Germany for children aged 3 to 6 in 1996. Half day, 5 working days.	Eligibility due to the cut-off rule increases the probability of employment by 6 pp	Bauernschuster and Schlotter (2015)
Norway	1975 Kindergarten Act to quadruple the number of child care places for 3-6 years old by 1981. Full-day, 5 working days	Hardly any effect of reform on maternal labour supply	Havnes and Mogstad (2011)
Sweden	Introduction of a cap on childcare prices that led to considerable reductions in prices depending on family type and region of residence in 2002	No effect on maternal labour supply	Lundin, Mork and Ockert (2008)
France	Provision of free public schooling for 2- and 3-year olds. 28 hours per week.	No impact of eligibility at 2 years old. 3.6 pp increase in participation of lone mothers from eligibility at 3 years old. No impact on mothers in two-parent families.	Goux and Maurin (2010)

Source: The authors.

can see that mothers substituted the newly-provided or cheaper service for other arrangements, but did not change their labour market behaviour very much. However, in contexts where an expansion of universal pre-school care represents an overall expansion in the use of childcare, universal pre-school care genuinely eases the constraints preventing mothers from working and, as a result, can have a greater impact on maternal employment. In other words, policies aimed at expanding access are more effective in contexts where there is less scope for universal pre-school policies to "crowd-out" other childcare arrangements. The experiences of Norway and Argentina provide a good illustration of this contrast. In Norway in the early 1970s, Havnes and Mogstad (2013) argue that working mothers relied heavily on informal care. As a result, when heavily subsidised pre-school services were offered for all children between the ages of 3 and 6, the employment rate of mothers only increased marginally. In Argentina, though, the construction of pre-primary places in primary schools in the 1990s led to a large increase in the take-up of pre-school education services by children who would otherwise have stayed at home with their mothers. Accordingly, the policy led to a large increase in the labour force participation of these mothers (Berlinski and Galliani, 2007).

Second, universal pre-school policies have larger effects on maternal labour supply in contexts where the female employment rate was initially relatively low. For example, despite being very generous, the expansion of childcare subsidies in Sweden in the early 2000s, where the employment rate of women was already around 80%, did not affect maternal employment at all. In contrast, in Argentina and Spain, where female employment has traditionally been much lower, universal pre-school childcare had a much larger impact. This echoes the argument that women's, or mothers', labour supply elasticities may be falling as it becomes more normal for more women to work (Fitzpatrick, 2012). However, in countries where female employment is low, the price and availability of pre-school services may not be the only barrier preventing mothers from working more: labour demand could be low if the country is experiencing an economic slowdown or if

cultural norms are unfavourable to women working. Both of these factors could, in principle, weaken the ability of universal pre-school to increase maternal labour supply.

It is important to note that there is also a lot of heterogeneity in the impact of these policies within countries (i.e. between groups of different mothers). First, a near-universal finding is that expanded access to pre-school has benefited only mothers who do not have other, younger children. Second, many studies have found that single mothers benefit more from these policies than mothers in two-partner families. This is likely to be the result of two counteracting factors. Single mothers are more likely to be affected, first, by time constraints on when they can work, and second, by credit constraints on affording childcare compared to married mothers. On the other hand, the pay-off from working at all is likely to be higher for highly-skilled women than for those with low education.

Finally, it is important to emphasise that the policies that have been evaluated in the literature vary considerably in design. For example, some reforms increased the availability of free or highly subsidised pre-school education, but others have only changed its price. A priori, one would think that policies affecting both availability and price of pre-school might have a larger impact than those only reducing its price. Additionally, the policies differ widely in the size of the explicit or implicit subsidy, the number of free hours provided, the flexibility with which the subsidy can be taken and the age of the children targeted. All these factors are likely to play an important role in determining whether the provision of universal pre-school helps mothers to work more on the labour market, although there is little evidence of the impact of two slightly different policies within the same context [the exceptions are Goux and Maurin (2008) who compare the impact of free pre-school for two- and three-year-olds in France, and Brewer et al. (2017) who compare the provision of free part-time and free full-time care in England]. Finally, these policies also sit in different institutional contexts where other family policies, such as parental leave or other childcare subsidies, can interact with universal pre-school and exacerbate or weaken the impact of universal pre-school per se.

CONCLUDING THOUGHTS

Our own experience in the UK tells us that concluding that universal pre-school care might do little to help maternal employment can seem counter-intuitive to policy-makers. It is important to realise that, even in contexts where we might expect universal pre-school care to have little impact (that is, in countries with high female employment rates and a functioning market for formal or informal childcare), governments might still be able to justify the expense of universal pre-school care. First, governments usually have several objectives in mind when implementing universal pre-school care, typically some combination of improving, or at least reducing disparities in, children's outcomes, and facilitating maternal employment. Second, where there are benefits from universal pre-school, they do seem concentrated amongst the more disadvantaged mothers, and governments might decide that a universalist approach harms incentives less, or would have greater take-up and less stigma, than a targeted approach. Third, there are also social or political arguments that could support universal pre-school childcare, in that the policy sends a message that caring for children is not just a private matter for families (and, of course, that typically means mothers) to arrange, but it is a concern of the entire society. However, given the expense of universal care, policy-makers might also ask what else they should do to facilitate maternal employment. We suspect this is an area where policy and values need to work together: not only do we need childcare that enables mothers to work, and a tax system that does not unduly penalise second earners, but we also need society in general and employers in particular to support maternal employment, and we need fathers to do more at home so that mothers can do less. Lastly, we might also need childcare policies to relate more closely to parental leave policies, as evidence suggests that the key decision mothers make is whether to return to their previous job as soon as parental leave ends, and this might suggest that it is childcare for the very young – the under three-year-olds – that is more important for maternal employment than childcare for the over three-year-olds.

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