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Australian Children Growing Up with Opportunity

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Abstract

This article focusses on the early years of children in Australia. It discusses the inequality of opportunity as reflected in the statistics, and the potential impacts of this inequality. A brief literature review is provided regarding the impact of formal childcare and preschool attendance on child development, with a specific focus on the impact for children from disadvantaged families. The article concludes with a discussion of possible policy directions to counteract the inequality of opportunity.

Short Description: This article focusses on the early years of children in Australia. It assesses the inequality of opportunity and its impacts, and discusses available policies to counteract this inequality.

Keywords:

JEL:

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1. Introduction

A key question in providing opportunity is how society can create a more level playing field for all children. Some children have many opportunities provided to them in the environment in which they are growing up, while other children may have none and are instead faced by many challenges. As a result, by the time children enter compulsory schooling a large gap can already be observed between children with many opportunities compared to the children facing many challenges.

This article presents recent developments of formal childcare use and preschool attendance by young children in Australia. In addition, it describes the relative prevalence of use amongst specific, disadvantaged subpopulations. To assess the importance of formal childcare and preschool use, a brief discussion of the literature on the impacts of formal childcare and preschool on child outcomes is presented. Since the focus of this article is on children growing up in disadvantaged circumstances, specific attention is paid to this subpopulation in the review. The article then combines these two pieces of information to present a few policy considerations.

The article is structured as follows. Section 2 provides some background statistics on participation in childcare and preschool for different groups of children. Evidence around the impact of childcare and preschool on children is provided in Section 3. A discussion of the implications for Australia in Section 4 concludes the article.

2. Participation in childcare and preschool in Australia

Overall participation in childcare and preschool services has been increasing steadily over time. From 2012 to 2016, there has been a substantial increase in the number of children enrolled in preschool (see Table 1).

Table 1 Children enrolled in a preschool program, by age

	3 year olds		4 year olds		5 year olds	
	no.	% of children	no.	% of children	no.	% of children
2012	53 972	18.0	220 040	74.3	45 996	15.9
2013	44 996	14.9	239 663	79.9	48 387	16.2
2014	44 855	15.0	254 533	83.5	54 656	18.0
2015	66 706	21.3	267 366	88.5	57 907	18.8

Source: Table 3A.25 in the Appendix to Chapter 3 in Productivity Commission (2017).

Table 2 Government expenditure on formal childcare and early childhood education and care (ECEC) (all amounts in '000s of 2015/2016 Australian dollars unless otherwise indicated)

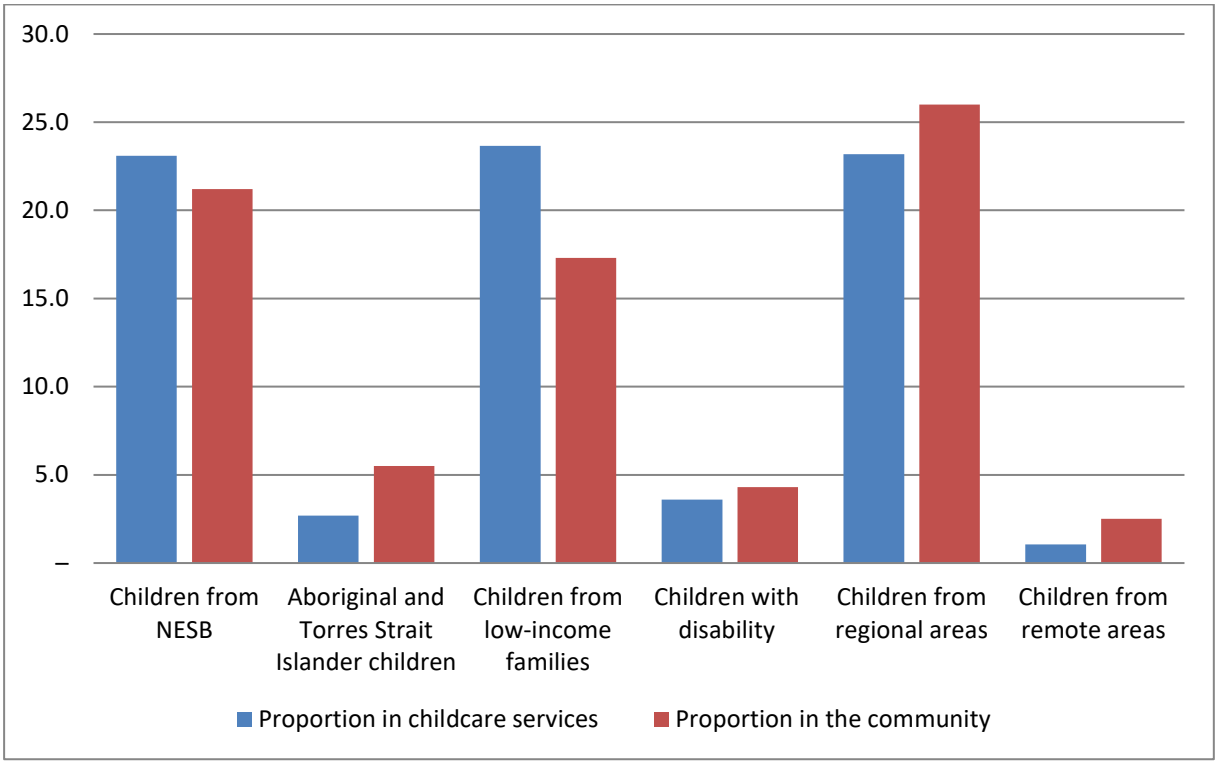
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
govt. expenditure on childcare services	2 889 716	3 171 717	4 429 318	4 349 049	4 663 225	5 080 276	5 648 145	6 450 107	7 271 793	7 449 671
govt. expenditure on ECEC	3 744 417	3 972 453	5 310 046	5 399 242	5 854 944	6 433 196	7 115 962	7 945 329	8 762 858	9 078 425
state and territory govt expenditure on preschool						1 140 388	1 243 263	1 266 786	1 276 420	1 351 887
childcare service expenditure/child	834	903	1241	1202	1276	1373	1501	1683	1875	1894
ECEC expenditure/child	7262	7566	9791	9591	10155	10979	11925	13168	14373	14550
Number of children in '000s	3 463.9	3 511.8	3 569.2	3 617.9	3 654.3	3 700.2	3 763.3	3 833.5	3 877.8	3 932.8

Source: Tables 3A.2 to 3A.5 in the Appendix to Chapter 3 in Productivity Commission (2017).

As Table 2 shows, this has led to an increasing level of expenditure per child in Australia (both from State and federal funding) as well. This steady increase in expenditure has been evident for several years now, as can be seen in Table 2 and as reported in the Productivity Commission's (2014) Childcare Inquiry report. The expenditures on preschool and on formal childcare services have both increased substantially.

Despite average usage increasing over time, there are several groups of children who are missing out. Figure 1 shows the proportion of children from a number of potentially disadvantaged subpopulations in the 0-5 year age category, alongside the proportion of these groups in childcare services. Subpopulations under consideration are children from a non-English speaking background (NESB), children from low-income families, children with a disability, Aboriginal and Torres Strait Islander children, children from regional areas and children from remote areas. Children from the latter four subpopulations are underrepresented in formal childcare services.[1]

Figure 1 Proportion of children from specific subpopulations in childcare services and the community (for 0-5 year old children in 2016)

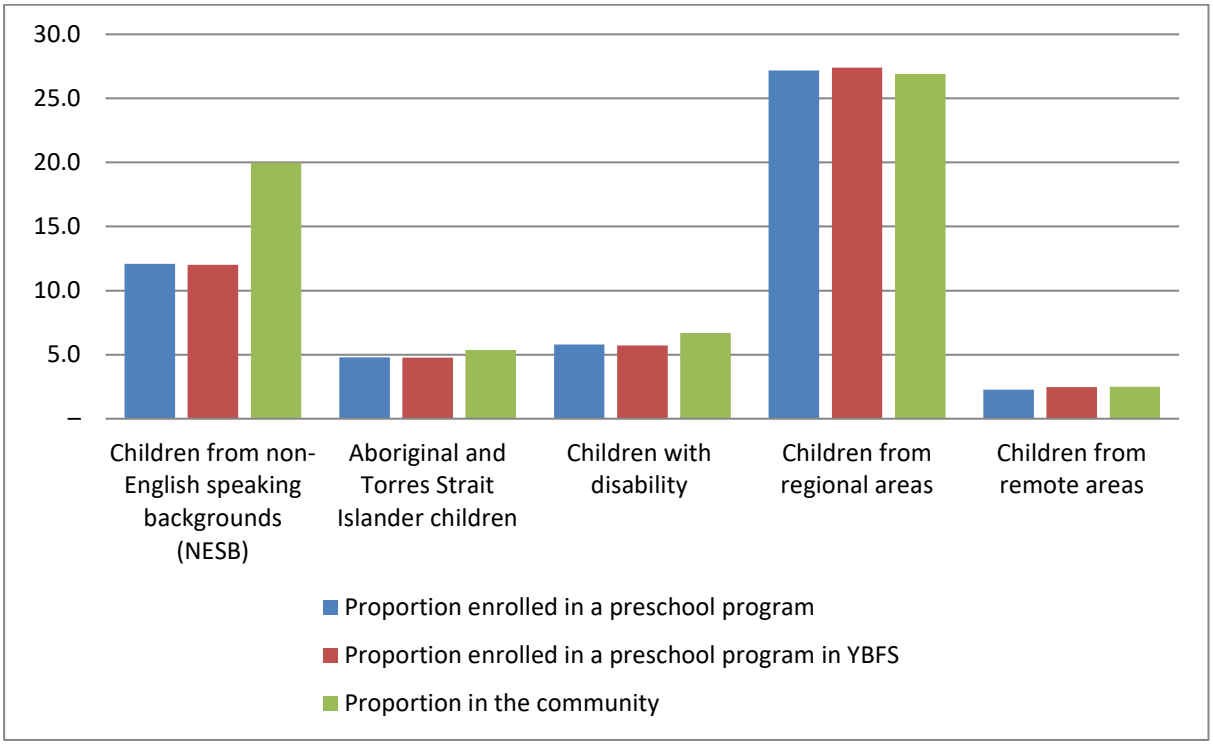


Source: Table 3A.13 in the Appendix to Chapter 3 in Productivity Commission (2017).
Note: Data are from 2016 or from the most recent year that is available.

[1] Note that to a large extent, the numbers on which the histogram in Figure 1 is based are estimates derived from population samples rather than exact counts in the population.

This underrepresentation is much less evident for children aged 3-5 years old in preschools. Figure 2 shows that most groups are only slightly underrepresented in preschool services, except for children from a non-English speaking background who are substantially less likely than other children to attend preschool.

Figure 2 Proportion of children from specific subpopulations in preschool services and the community, and proportion in preschool programs in the year before school (YBFS) (for 3-5 year old children in 2015)



Source: Table 3A.16 in the Appendix to Chapter 3 in Productivity Commission (2017).
Note: Data from 2015 or as recent as is available.

Using survey data, lower usage of formal childcare and preschool was found for children from low-income and Indigenous families in a number of studies. Using the Longitudinal Survey of Indigenous Children (LSIC) and the Longitudinal Survey of Australian Children (LSAC), the difference in formal childcare attendance between the general population of children and the population of Indigenous children is substantial. Based on the LSIC, Azpitarte *et al.* (2016) find that no more than 30% of Indigenous children attend childcare at any given age, while based on the LSAC, Houng *et al.* (2011) report that 55% of the general population of children aged 2 to 3 use formal childcare. Examining the same LSAC sample, Kalb *et al.* (2014) report that children in families on low and middle incomes (under $73,000) and children in families where only one of the parents is employed are the least likely to

attend any formal childcare. Employment, low income and Indigeneity are likely to be correlated, and some of the differences between populations could also be due in part to the different locations in which these groups reside. The Indigenous population, for example, are substantially more likely to live in remote areas where less formal childcare is available. As a result, families may be constrained in the choices they make due to where they live. Using the 2001 Census, Biddle (2007) finds a similarly low level of preschool attendance by 3-5 year old Indigenous children that is about 7 percentage points less than for non-Indigenous children, and using the 2011 Census, Arcos Holzinger and Biddle (2015) conclude that these results have not changed much. Hewitt and Walter (2014) argue that there has been a substantial increase in preschool attendance over recent years, but this has been mostly in the more remote areas. In major cities and in inner/outer regional areas a quarter to one-third of all Indigenous children did not attend preschool in the year before full-time schooling.

Within groups there may be considerable heterogeneity. For example, despite the substantially lower overall formal childcare use by Indigenous families, usage varies by parental employment similar to the variation in non-Indigenous groups. Differences by parental education level are even much larger for Indigenous children than children in the general population. (Houng *et al.*, 2011; and Azpitarte *et al.*, 2016).

The above differences in childcare use by characteristics indicate that more advantaged families are more likely to use formal childcare and preschool, potentially further extending the advantage that they already have. It may also be the case that families in specific regions of Australia are better served than in others. As a result there may be local shortages of childcare places. These could be shortages in a general sense (i.e. any childcare) or shortages in terms of affordable high-quality childcare which is of a sufficient quality to be acceptable to parents. Unfortunately, little central (public) information is collected on the availability of childcare places at a local level. The discussion in this section also indicates that measures of how well children from specific subgroups are represented in childcare and preschool partly depends on the data used. Accurate information on which groups miss out on childcare and preschool services is essential for policy design.

3. Impact of childcare and preschool on child development

The effects of formal childcare attendance on children are still debated in the literature. However, there is more agreement on the impacts of structured formal childcare, particularly

care that includes a preschool component. Structured formal childcare attendance is believed to positively affect children's cognitive development, although it may have some negative impacts on their behavioural outcomes. Disadvantage is likely to negatively affect child development as briefly outlined in Section 3.1, but this can be partly mitigated by participation in high-quality childcare or preschool services as discussed in Section 3.2.

3.1 Disadvantage and child development

A considerable literature, starting with the work of Heckman and Rubinstein (2001), focuses on the investigation of non-cognitive skills and education outcomes of children and adolescents. Recently, much of the literature on child development has focused on the effects of childcare on individuals' non-cognitive skills. The well-known articles by Cunha and Heckman (2007) and Cunha *et al.* (2010) indicate that for both cognitive and non-cognitive skills, the ability gaps among individuals open up at an early age. Early interventions are then particularly important in guaranteeing high effectiveness of support programmes for disadvantaged children who often start lagging behind from birth (or even before birth).

Medical studies have shown that children in disadvantaged households may start to lag behind in development if they are exposed to toxic stress, which is clearly distinguished from positive stress arising from minor events (e.g. going to a doctor or a new childcare centre) and from tolerable stress which is defined as difficult events (such as a death or severe illness in the family), that are manageable within a nurturing family. Toxic stress is caused by extreme, prolonged adversity in the absence of a supportive network of adults. The medical literature has shown that toxic stress can have major implications for the child's development. In the words of Williams Shanks and Robinson (2013): "When it occurs, toxic stress can actually damage the architecture of the developing brain, leading to disrupted circuits and a weakened foundation for future cognitive, social, emotional, and physical development (McEwen and Sapolsky, 1995; McEwen, 2008)." Williams Shanks and Robinson (2013) highlight that persistent poverty is often an indicator for several aligned stressors, including inadequate housing, food insecurity, neighbourhood violence, and parental unemployment.

3.2 Impacts of childcare and preschool for disadvantaged groups

There is some evidence that childcare and preschool may have more positive impacts on child outcomes for relatively disadvantaged groups. Gregg *et al.* (2005) suggest that the negative impact of full-time childcare in the first 18 months of a child's life may be larger for children of higher educated women and smaller for children of single mothers. In Australia, there is

weak evidence (with the weakness possibly due to small sample numbers) that children from more disadvantaged backgrounds (e.g. from low-income families or from an Indigenous background) may benefit more from day care centre care than other children (Kalb *et al.*, 2014). However, as mentioned in Section 2, children from disadvantaged backgrounds are less likely to attend childcare centres. An earlier study by Houng *et al.* (2011) also found that the effects of centre day care were larger for disadvantaged groups such as single parent families and to a lesser extent for families with primary carers who had not completed high school relative to more highly educated primary carers. The value of formal care relative to informal care is higher for these more disadvantaged families than for the average family, which makes access to formal care the more important.

Besides the quality of childcare relative to the home environment, the intensity (and timing) of childcare use is also likely to play a role in the impact it has on child outcomes as already indicated in the discussion of the research by Gregg *et al.* (2005) in the previous paragraph. For example, in research based on the LSAC, Kalb *et al.* (2014) found 15 to 29 hours of attendance per week to have the largest beneficial impact on learning outcomes at age 4-5. In an earlier study by Houng *et al.* (2011), also using LSAC data but focussing on children's care and outcomes at a slightly younger age (care at age 0-1 and outcomes at age 2-3), it was found that smaller amounts of day care were optimal than were found in Kalb *et al.* (2014). However, any formal care use was always found to lead to better child outcomes compared to zero use. In these studies, no allowance is made for differences in the quality of the home environment, which as shown in the previous paragraph is likely to be relevant as well.

An Australian study, using LSAC data, by Warren and Haisken-DeNew (2013) shows the positive significant association between preschool attendance (at age 4 to 5) and NAPLAN outcomes at age 8 to 9 (Year 3). For Numeracy, the highest benefits from attending preschool are obtained by children whose test scores are at the higher end of the test score distribution, whereas for Reading and Spelling, children whose test scores were just above the National Minimum Standard benefited the most. The results on the Average Treatment Effect on Treated (children who attended preschool) and the Average Treatment Effect for the Untreated (children who did not attend preschool) imply that it is the children missing out on attending preschool who might have gained the most from attending. The quality of preschool as measured through the qualifications of the preschool teacher is shown to be important. At least a degree in Early Childhood Education or a Diploma in Early Childhood Education or Child Care needs to be held by the preschool teachers for the positive impacts to appear.

Understanding the mechanisms through which childcare/preschool programs may be beneficial to children is important for effective policy development. Felfe and Lalive (2012) study young German children (0-3 years of age) in general and nominate three potential pathways: a) a child spends less time with his/her mother and more time at childcare, so depending on the relative quality of both, this could have a positive/negative effect on child development; b) the average quality of the now smaller amount of the mother's time with the child may change due to substitution of low-quality mother's time with non-parental childcare time; and c) more parental time can be spent in market work, thus increasing family income. Using this framework, they find that older children and children from advantaged backgrounds are more likely to use childcare, and benefit the least in terms of child development. Boys, younger children, children with low birth weight and from lower socio-economic backgrounds tend to benefit more in terms of child development. This is similar to the finding by Warren and Haisken-DeNew (2013) that children currently not attending preschool would benefit the most. Estimates based on the gains from childcare experienced by the current children attending childcare are therefore lower bounds of these gains.

Benzies *et al.* (2011, 2014) evaluate the impact of a special Canadian preschool two-generation program for 112 children (and their parents) from low-income families, including 40 Indigenous children. It was found to have a positive impact on receptive language skills. Mughal *et al.* (2015) used follow-up data on the same children to compare subsequent development across Indigenous Canadian children, other Canadian-born children and migrant children. Although the total sample is further reduced to 78 (21 Indigenous children) and the results should be interpreted with caution, the effects of the programme on Indigenous Canadian children and recent migrant boys were maintained up to age 10, while recent migrant girls lagged considerably behind the average for Canadian-born girls despite the program.

An alternative approach was taken in Ireland, where a scheme targeting parents and their children through an experimentally designed program, Preparing for Life, was set up between 2008 and 2010. Families were randomly assigned a low or a high level of treatment. The high level treatment was administered to disadvantaged families through home visits and was aimed at improving the home environment. Results on the impact of the first 18 months of the programme on parental and child outcomes are reported in Doyle *et al.* (2017). They find that at this early stage the main impacts are on parental behaviours and the home environment and only limited impacts on children's outcomes are observed. Australia has similar parenting-

oriented programs, such as Home Interaction Program for Parents and Youngsters (HIPPY) a two-year early-learning program that aims to help parents to be their children's first teacher at home (and prepare children for school). Due to its non-experimental design, evaluation of this program is difficult but the analyses in Liddell *et al.* (2011) suggests positive impacts across a number of developmental outcomes as well as positive impacts on the home learning environment and parents' sense of social connectedness and inclusion.

4. Discussion

What is clear from the statistical evidence is that children from disadvantaged backgrounds (e.g. low-income families, Indigenous background or single parent families) are much less likely to attend childcare and/or preschool. This is despite research showing that good-quality childcare and preschool could help prepare these children for Year 1 at primary school, and eliminate (or at least reduce) the gap between advantaged and disadvantaged children. Although not all hurdles to participation in childcare and preschool are known and fully understood, a good way to encourage childcare and preschool use would be to ensure childcare services and preschools are locally available, and affordable for low-income families. This means there is a need for generous subsidisation of high-quality formal childcare and preschool for all low-income families. In addition, childcare centres and preschools need to be welcoming, safe places for all families, so that they can build trusting relationships with the parents and children, and encourage and assist parents to develop effective parenting skills.

Despite the comment by then Minister of Social Services, Scott Morrison, that 'We're not trying to run an education system here, we're trying to provide a payment to help people be in work and stay in work … which is good for the economy' (Morris, 2015), childcare is usually seen as having a two-fold objective. First, it enables parents with young children to participate in the labour force. Second, and no less importantly, it has the potential to provide a high-quality educational and social environment, complementing the home environment, where children can (start to) learn important life skills. Both aims are clearly articulated in the Childcare Inquiry:

> "The key features of such an ECEC system broadly relate to the facilitation of both child development outcomes and parental workforce participation, and the integration of

> ECEC with other community services and schools." (Productivity Commission, 2014a:p.15)

However, the Inquiry Report also acknowledges that there can be a tension between the two aims:

> "Furthermore, the two policy objectives that the Australian Government is seeking to meet — child development and workforce participation — are not always mutually consistent and their interaction needs to be carefully considered in ECEC policy design." (Productivity Commission, 2014a:p.16)

In this context, Chang *et al.* (2007) is of interest. Considering the interaction of US welfare and employment programs with childcare programs for single mothers, they find that is important for the childcare to fit in with the work requirements faced, if it is to serve the purpose of facilitating parents' employment as well as have benefits for children's development. This is particularly important if the parents' employment can alleviate the disadvantage experienced by the family at the same time as their children receive better opportunities.

It is clear that in designing childcare policies, the Government needs to consider these policies' impacts on child outcomes. Given that the quality of the home environment relative to the quality of childcare affects whether usage of childcare affects a child's development positively or negatively, the re-distributional impact of childcare policies on childcare use is important regardless of the labour force participation effects.

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