



POLICY BRIEF



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What are the Benefits of Subsidized Early Childcare? Evidence from Kenya.

Providing subsidized early childcare in an urban African slum area can produce important benefits, like increasing maternal employment and earnings. Indirectly, it can enable older siblings to attend school and improve younger children's health and cognitive development leading to higher lifetime earnings. These benefits of subsidized childcare far outweigh the costs.

WHAT'S AT STAKE?

Previous research shows that the gains associated with Early Childhood Care and Education (ECCE) greatly exceed its costs. A study of early education programs in the U.S., for example, found a 7.3 fold benefits-to-costs ratio (Garcia et al., 2016). Unfortunately, nearly all of the Cost Benefit Analyses (CBA) of ECCE programs are conducted in high-income countries. CBA studies in low- and middle-income countries are rare because of limited rigorous evaluations of ECCE programs and challenges to monetizing benefits.

KEY RESULTS

- Mothers who used subsidized childcare services experienced an increase in their earnings and free time.
- Attending day care may increase children's future earnings and life expectancy.
- Subsidized childcare may increase school enrollment for older siblings.
- The benefits associated with providing subsidized early childcare outweigh the costs.

Yet, assessing the relative costs and benefits of programs (even with limited data) can provide valuable information on whether governments should subsidize these programs in poor urban settings.

To assess whether it is worth subsidizing ECCE, researchers from McGill University and the African Population and Health Research Center (APHRC) conducted a randomized controlled trial that provided subsidized childcare to a sample of mothers living in Korogocho, an informal settlement of Nairobi, Kenya. Briefly, 1,222 women with at least one child 1 to 3 years of age were interviewed. We found that 31% of mothers were already using an eligible day care facility at baseline. Women were then randomized to three arms of the study, either receiving a voucher for regular day care, a voucher for a day care that had received some quality improvements, or no voucher (control). The baseline survey was conducted from August to October 2015 while the follow-up survey was carried out in 2016 (September to October). Mothers were given opportunity to access free day care from January to December 2016.

RESEARCH APPROACH

This policy brief presents results of a CBA of the subsidized childcare project. Since information about the monetary value of benefits (mothers' earnings and day care fees saved) is available only for the year that the project was executed, results pertain to the monetization of benefits for this period. Costs include day care fees, cash transfers and expenditures on training and material. Regarding benefits, they can be observed at the child level, the mother level and the sibling level. The monetization of benefits is generally challenging due to the limitations of available data. Thus, we provide a monetary value to benefits only in the case they are easily identifiable using data collected during the survey.

KEY FINDINGS

Mothers who used subsidized childcare services experienced an increase in their earnings and free time.

The importance of women's economic empowerment is undeniable in an area like Korogocho, where working mothers contribute about 50% of household income and spend 17% of their earnings on childcare costs (Clark et al., 2017). We use data from the endline survey to calculate the average income among mothers who participated in the study. First, we consider the whole sample of mothers and find that mothers who received vouchers earned more than

their peers. The difference corresponds to 73 Kshs (\$0.7 USD) per month; that is 876 Kshs (\$9 USD) on an annual basis. When we multiply this last figure by the number of mothers who received vouchers (n=836), we obtain a total of 732,336 Kshs (\$7,300 USD).

When we exclude mothers who were using day care at baseline from our analysis, a comparison of average income reveals once again that mothers who received vouchers earned more than their counterparts. The annual difference in incomes equals 3,924 Kshs (\$39 USD), leading to a total of 2,232,756 Kshs (\$22,300 USD) if we consider all the 569 mothers who received vouchers.

Access to subsidized childcare may also allow a mother to work fewer hours without reducing her earnings. This extra free time can allow mothers to be more involved in social activities or to dedicate more time to childcare. In this case we first consider the sample of mothers who were working during the follow-up survey (whether they used day care at baseline or no). Results reveal that, on average, mothers who received vouchers worked 13 hours less than their counterparts on a monthly basis, which is 156 hours less per year.

When we exclude mothers who were using day care at baseline from the previous sample, the results of the analysis reveal that mothers who received vouchers worked on average 30 hours less than their peers on a monthly basis, which is 360 hours less per year.

Attending day care may increase children's future earnings and life expectancy.

There is a vast literature showing the positive impact of ECCE programs on cognitive development, academic success and future earnings. Using American data, Lin et al. (2016) found, for example, that a standard deviation increase in a child's cognitive skills increases their hourly wage by 13 percent by age 28. Furthermore, Clark et al. (2017) found that in Korogocho 22% of children who were not enrolled in a day care showed signs of cognitive delay. This is more than twice the proportion observed among children who attended day care (9%).

Regarding child health, there is evidence that the use of day care in the context of low- and middle-income countries has a positive effect on child health and nutrition (Leroy et al., 2012; Clark et al., 2017). Moreover, participants of ECCE programs are more likely to have better health-related habits (e.g. low propensity to smoke) than their peers when they grow up, leading to an increase of their life expectancy. That being said, enrollment in day care is beneficial for a child since it reduces the risk of morbidity and death

throughout his lifetime. In their study which investigated the effect of an American ECCE program, Masse and Barnett (2002) used data from the follow-up survey at age 21 and found that the rates of smoking for the control and the treated groups were respectively 55% and 39%. Furthermore, they highlighted the fact that being a non-smoker at age 20 increases life expectancy by 6.5 years.

Subsidized childcare may increase school enrollment for older siblings.

The expected benefit at the sibling level is school enrollment and, hence, an increase in future earnings. In African countries, childcare support is generally provided by older siblings. Such a practice is likely to interfere with adolescents' education, since they can be forced to leave school. In Kenya, Lokshin et al. (2000) found that fully subsidized childcare increased siblings' school enrollment by 14%. Moreover, Clark et al. (2017) found that Korogocho adolescents aged 14 to 17 whose younger siblings do not attend day care were less likely to be enrolled in secondary school compared to their peers living in households where younger children attend day care.

The benefits associated with providing subsidized childcare outweigh the costs.

Our CBA aimed at comparing costs and benefits associated with the subsidized day care project. The total cost (8,499,330 Kshs or \$85,000 USD) of the project includes cash transfers (1,993,000 Kshs or \$19,930 USD), the cost of day care materials and training (1,924,200 Kshs or \$19,242 USD) and day care fees (4,582,130 Kshs or \$45,800 USD). Thus, the total cost per child in the project is 9,392 Kshs (\$90 USD) per year.

Benefits can be grouped into two categories. The first category corresponds to benefits whose monetization is



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straightforward; that is, an increase in mothers' earnings (732,336 Kshs or \$7,300 USD) and the amount of money saved by mothers because of the free access to day care facilities (4,582,130 Kshs or \$45,800 USD). The second category consists of benefits we do not monetize due to data limitations; these are: mothers' free time, school enrolment of older siblings, and the cognitive development and health improvement of children enrolled in day care.

Despite the limitations of our study, it appears from our analysis that it is worth investing in ECCE program since the benefits are shared across several individuals and can be observed throughout their life-cycle.

POLICY INSIGHTS

Assessing the relative costs and benefits of early childcare can provide valuable information on whether governments should subsidize these programs. The results of our CBA from the Kenya project demonstrate to decision-makers:

Subsidizing childcare is an effective strategy for promoting mothers' economic empowerment.

There is a common belief that in sub-Saharan Africa, childcare is not a barrier to mothers' economic activities since they can either rely on an extensive kin support, or their children can accompany them at work. Results of the CBA suggests that it will be hard for African mothers to achieve their full economic potential without an access to affordable day care facilities.

Access to day care centers may positively impact the life of younger generations.

Children's health and education lay the cornerstone for their future life and play a crucial role in the socioeconomic development of a society. Thus, any project likely to promote health and education, such as a subsidized childcare program, deserves support from governments.

Subsidized childcare is cost-effective.

In Korogocho, day care fees are estimated at 5,063 Kshs (\$50 USD) on average per year per child. This amount can be viewed as worthwhile given the returns in child health and development and the increases in mothers' earnings that it yields. Investment in women and children through day care subsidies is both the right thing for governments to do, and the sensible thing to do.

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