Investing in Early Childhood Development: Essential Interventions, Family Contexts, and Broader Policies

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Abstract

Access to quality early childhood development, care, and pre-primary education is essential for child development and is now recognized as a priority under the Sustainable Development Goals. Investments in early childhood development by major donors have been rising rapidly in recent years. This makes the task of understanding better what works to promote early childhood development, and what may not work as well, a priority. The objective of this special issue of the Journal of Human Development and Capabilities is to contribute to the evidence base in three areas - the roles of program interventions, family contexts, and broader policies in ensuring optimal child development. The issue consists of five research articles, most of which provide evaluations of specific interventions, as well as three shorter notes considering broader policy issues. The main conclusions of the various contributions are summarized in this article together with a brief introduction to simple conceptual frameworks that countries, donors, and other stakeholders may find useful when considering alternative ways to invest in early childhood development.

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1. Introduction

Early childhood development (ECD) has become a central issue in human development thanks to a consensus that investments at an early age are essential for children to reach their full potential and capabilities. The first 1,000 days in the life of children are especially critical for the development of synapses as well as their future physical, intellectual, socio-emotional, and cognitive development (Nelson, 2000; Shonkoff, et al., 2012). There is also a broad consensus that investments in ECD tend to have high returns, and often higher returns than investments in human development later in life (Heckman and Masterov, 2007). Investments in nutrition in the first 1,000 days have especially high rates of return, as illustrated in the case of the Democratic Republic of Congo (World Bank, 2015). On the basis of impact evaluations, Hoddinott et al. (2013a, 2013b) find that young children who benefited from nutrition supplementation in Guatemala were less likely to become stunted and had better cognitive abilities as well as earnings in adulthood.

ECD has been included in the Sustainable Development Goals as part of Goal 4 which aims to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.” The second target under this goal calls for “all girls and boys [to] have access to quality early childhood development, care and pre-primary education so that they are ready for primary education”. By contrast, poor conditions early in life can have lasting negative consequences throughout a child’s life and in adulthood. While progress has been achieved in reducing risks for children in some areas, the challenges that remain are daunting. Black et al. (2016) estimate that 43 percent of children under five years of age are at risk of not attaining their developmental potential in 2010 in low-income and middle-income due to extreme poverty or stunting. This share is down by eight points from 51 percent in 2000, but in absolute terms the number of children at risk decreased only from 279.1 million to 249.4 million in 2010. In addition, as noted by Wagstaff et al. (2014), despite some progress in nutrition and health outcomes for young children, children from the bottom quintiles of the distribution of wealth are often lagging behind, with smaller gains over time in a range of nutrition and health indicators in comparison to better-off children.

As the recognition of the importance of ECD has gained ground over the last decade, investments in ECD have been increasing. This can be illustrated with the case of the World Bank’s operations portfolio. Between fiscal years 2001 and 2011, on average 12 loans or grants were approved for developing countries per year for ECD-related projects by the three human development global practices that cover education, health-nutrition-population, and social protection-labor. The total value of those commitments was at an average of USD 211 million per year (in real terms in 2013 US dollars) during that decade with no upward trend. By contrast, over the next two years commitments for ECD in terms of loans and grants more than tripled, reaching USD 524 million in fiscal year 2012 and USD 707 million in fiscal year 2013 according to the portfolio review by Sayre et al. (2015). Part of this increase was achieved through the Scaling Up Nutrition initiative led by the World Bank in partnerships with other organizations such as the Bill and Melinda Gates Foundation, DFID, the Governments of Canada and Japan, European Commission, USAID, and UN partners. This upward trend has continued over the last three years, with average commitments in nominal terms for fiscal years 2014, 2015, and 2016 of more than USD 1,100 million per year. These represent commitments through loans and grants made by the three practices of the Human Development Network, not including investments by other global practices such as the water and sanitation practice that may benefit or target young children.

With larger investments being made in ECD, the issue of understanding better what works and what does not becomes even more crucial. In order to help all children reach their full potential, the literature suggests that young children and their families should have access to a number of
specific interventions and services that are essential for healthy development. Second, it is important to improve the broader context in which children live, which requires strengthening vulnerable families. Third, we must also pay attention to the broader policy framework for ECD.

The objective of this special issue of the *Journal of Human Development and Capabilities* is to contribute to the evidence base in all three areas - the roles of program interventions, family contexts, and broader policies in ensuring optimal child development. Apart from this introduction, the special issue consists of five research articles, several of which provide evaluations of specific interventions, as well as three shorter notes considering policy issues (policy forum section). The main conclusions of the various contributions are summarized in this article together with an introduction to simple conceptual frameworks that countries, donors, and other stakeholders can use when considering alternative ways to invest in early childhood development.

This article is organized into three sections. In the first section interventions for ECD are discussed, first in terms of a list of programs and services that can be considered as essential for young children, and next in terms of a few specific lessons that can be learned from the articles included in this issue about some of these interventions. The second section discusses broader challenges faced by families in raising their children, with a focus on household poverty and the issue of child marriage and early childbirth. The third section considers the role for ECD of the broader policy environment, again first with a general discussion, and then on the basis of some of the messages from the articles included in this issue. A brief conclusion follows.

2. Essential Interventions

Various frameworks have been proposed to conceptualize the needs of young children and identify interventions that may help shield them from risks and achieve their potential. In two subsequent Lancet series on ECD, Engle et al. (2011) and Black et al (2016) provide reviews of strategies for early childhood development, including on the basis of a lifecycle approach to suggest key points of interventions. Britto et al. (2013) focus on areas such as basic health, nutrition, HIV/AIDS, education, and protection services. For maternal and child health, guidelines are provided by the World Health Organization (WHO), with additional guidance from the Partnership for Maternal, Newborn and Child Health (2011 Naudeau et al. (2011) emphasize points of entry for interventions, such as the distinction between center-based and home-based programs.

An additional framework suggested by Denboba et al. (2014) complements these various approaches by providing a simple list of 25 essential interventions visualized in Figure 1 by sector. These interventions can also be organized in terms of the timing of delivery. For that purpose, Denboba et al (2014) organize their 25 interventions around five packages of services provided at different times in the life of a child: a family support package that should be provided throughout the ECD period from conception to a child’s entry in primary school, a pregnancy package, a birth package, a child health and development package, and a preschool or early learning package.

The first package to support families has the largest number of interventions. It includes services related to maternal education, planning for family size and spacing, education about early stimulation, social assistance transfer programs, prevention and treatment of maternal depression, parental leave and adequate child care, child protection services, access to health care, micronutrient supplementation and fortification, access to safe water, adequate sanitation, and hand washing education. The pregnancy package emphasizes prenatal care, iron and folic acid supplementation for pregnant mothers, and counseling on adequate diets for pregnant mothers. The birth package covers skilled attendance at delivery, birth registration, and exclusive breastfeeding for the first six months of life. The child health and development package includes
immunizations, adequate, nutritious, and safe diet, therapeutic zinc supplementation for diarrhea, prevention and treatment of acute malnutrition, and deworming. Finally the learning package considers pre-primary education and the transition to primary school.

**Figure 1: Essential Interventions for Young Children and Their Family**

Four of the eight articles included in this special issue are devoted to a discussion of ECD interventions such as those highlighted in Figure 1. The first article by Caceres et al. (2016) is included in the policy forum section of the journal. This is a short conceptual note based in large part on a review of the literature (led by the authors) on the impact of early childhood interventions conducted by the Independent Evaluation Group (2015a) at the World Bank. The authors draw three main conclusions from their review for policy makers. First, support for the early development of children should start from birth given the emphasis in the literature on the first 1,000 days of life. Second, government policies and programs should support parents through existing services, whether one is considering specific locations such as health facilities, or specific programs such as conditional cash transfers. Third, resources should be made available by governments in priority to meet the needs of the most vulnerable children who need interventions the most. As just one example, this could mean targeting geographic areas with especially high rates of stunting or poverty. In their conclusion, the authors advocate starting with essential health
and social protection services and following up with parenting support and early stimulation and education components, as is also suggested through the interventions highlighted in Figure 1.

Apart from reviewing the literature on ECD interventions, in a separate study the Independent Evaluation Group (2015b) conducted an assessment of World Bank support for ECD that holds lessons not only for the World Bank, but also for other donors, governments, and nonprofits engaged in the field. One of the conclusions from this assessment was that investments in ECD could have larger impacts by broadening the traditional focus on health and child survival to include early stimulation as well as development interventions in health, nutrition, and social protection, as illustrated again in practical terms by interventions listed in Figure 1. Within those interventions the assessment emphasizes the importance of early stimulation (often defined as taking place before age three) and pre-primary care and education (for children ages three to six).

Within the context of Figure 1, early childhood and pre-primary programs are part of education interventions listed as essential. This special issue includes two articles that evaluate the impact of preschool programs on young children. Both programs have been implemented by Save the Children. First, Dowd et al. (2016) report on outcomes for children who benefited from early childhood care and development interventions in Ethiopia. The authors note that focused support for foundational skills is often lacking in preschools in the developing world in part because teachers often have a narrow understanding of emergent literacy and math skills. Instead of fostering skill building and learning through play, teachers may focus on rote skills learning, such as reciting the alphabet or repeated counting. In order to improve the instruction given in preschools, the intervention provided training to teachers using the Emergent Literacy and Math (ELM) toolkit training modules as well as classroom resources. The idea was to help teachers rely on simple but effective activities and games that could be incorporated into daily programs.

Using a randomized design (albeit for children sent by their parents to preschools, which may not be representative of the population as a whole) and the International Development and Early Learning Assessment (IDELA) tool administered to the children twice over seven months, the authors compare outcomes for children in existing ECCD programs versus those in ELM-enhanced programs. Comparisons are also provided between community-based and school-based interventions, but this comparison did not generate statistically significant differences. Overall, the results suggest that ELM-enhanced ECCD programs generate larger benefits for children than standard programs with effect sizes often at more than twice the gains observed for standard programs. These gains were especially large for children from lower socio-economic backgrounds, suggesting that the program helped the poorest children catch up.

The second program was implemented in Bangladesh in a somewhat similar way. Diazgranados et al. (2016) measure the effect of attending an enhanced-quality preschool (PROTEEEVA) versus attending a standard government program or not attending any program at all. Using a quasi-experimental design, and again the IDELA measurement tool, the authors find that preschoolers in the enhanced and government programs had statistically significant gains in emergent math skills as well as emergent literacy and language skills in comparison to students not enrolled at all. However, there were only positive and not statistically significant differences between the enhanced and standard government preschools. In the area of socio-personal development as well, there were no statistically differences between the enhanced and standard models, but there were gains versus not attending a preschool at all. The authors suggest that the lack of statistically significant gains between the enhanced and standard models may be due to small sample sizes. Overall, when considering the evidence from the two programs in both Bangladesh and Ethiopia, the evidence does point to promising gains from the enhanced model.
The last article in this special issue on specific interventions considers the benefits from cash transfer programs targeted to the poor in Mexico. Recall that in Figure 1, under the social protection interventions, social assistance transfer programs are listed because they play such an important role for the very poor whose children are often the most at risk of not fulfilling their potential. Confronted with rising poverty after the economic crisis of 1995, the Mexican government changed course in its poverty alleviation strategy, terminating universal subsidies for tortilla and funding instead new investments in human capital through PROGRESA. The program gave cash transfers to rural households in poverty provided children attended school and households visited public health clinics and participated in educational workshops on health and nutrition. Founded in 1997, PROGRESA already covered two years later 2.6 million families. The substantial level of funding allocated to the program was a deliberate choice to favor interventions better targeted to the very poor that also involved co-responsibility on the part of beneficiaries, thereby promoting long-term behavioral changes.

PROGRESA, later renamed Oportunidades by Mexico’s new administration, had a major impact on government and donor thinking on policies for human development and poverty reduction. The innovations was replicated in several other countries (for a synthesis of the evidence with conditional cash transfers, see Fiszbein et al., 2009). The article included in this issue by Valadez-Martinez (2016) looks at whether gains in household income at the time of birth of children thanks to PROGRESA-Oportunidades were associated with gains in physiological, cognitive, motor, and emotional well-being for rural children. Structural equation models suggest that, not surprisingly, income gains around the time of birth are indeed associated with better child outcomes at four to six years of age, so that PROGRESA-Oportunidades had an indirect positive impact on children’s growth and development. This is not technically speaking a causal analysis based on randomization as with the previous two articles, but the findings are encouraging.

2. Family Contexts

While specific interventions are essential to enable children to reach their full potential, the broader context in which children live is even more important, which points to the role of the family and community. Black and Aboud (2011) emphasize the importance of nurturing care defined as a home environment sensitive to children’s health and nutritional needs – an environment that is “responsive, emotionally supportive, and developmentally stimulating and appropriate, with opportunities for play and exploration and protection from adversities” (Black et al., 2016). By the time they reach primary school age, children should be healthy and well-nourished, securely attached to caregivers, able to interact positively with families, teachers and peers, able to communicate in their native language, and ready to learn in school (Naudeau et al., 2011). Unfortunately children from disadvantaged socio-economic backgrounds are much more likely not to achieve these milestones in comparison to children from better-off backgrounds.

Two articles in this special issue discuss the issue of family context and how it may affect young children. The first article is a traditional poverty measurement analysis documenting trends in poverty in Turkey using a nationally representative four year panel. The article focuses on poverty measurement among young children. Although it is less directly focused on ECD as traditionally defined, it is included in this special issue to remind readers of the fact that widespread poverty can have serious consequences for young children, and that we may underestimate how many children poverty may affect when looking at poverty data only at one point in time. Specifically, Dayıoğlu and Şeker (2016) show that while on a cross-sectional basis less than a third of children ages zero to six are poor according to standard income thresholds, this increases
to more than half over four years when considering children whose household may be considered as poor at any point in time. Nearly half of children also experience various forms of severe material deprivation. Part of the reason why so many children are in poverty is due to the fact that social assistance programs available to children and their family are insufficient, a situation fairly different from Mexico where as discussed earlier the PROGRESA-Oportunidades program does provide support to the very poor. This implies that whether children live in poverty and experience various forms of deprivation depends almost uniquely on the labor market earnings of parents, with those earnings heavily influenced as expected by the parent’s education attainment.

Poverty and extreme poverty are often defined in monetary terms. This is also for the most part the approach taken by the article on Turkey in this special issue. But it is important to emphasize that the reality of the life of the poor and extreme poor is complex, with the extreme poor often faced with multiple sources of disadvantage. In a report for the French Economic and Social Council published already almost 30 years ago, Wresinski (1987) defined extreme poverty as follows: “A lack of basic security is the absence of one or more factors that enable individuals and families to assume basic responsibilities and to enjoy fundamental rights. Such a situation may become more extended and lead to more serious and permanent consequences. Extreme poverty results when the lack of basic security simultaneously affects several aspects of people’s lives, when it is prolonged, and when it severely compromises people’s chances of regaining their rights and of reassuming their responsibilities in the foreseeable future.” This definition relies on three main references. The first is that of a lack of one or several basic securities which may have a cumulative impact and lead to an insecurity affecting new dimensions in a poor person’s life. The second is that of time: extreme poverty is associated with the persistence of this insecurity over possibly long periods of time, including through intergenerational transmission. The third is that of the inability of the extreme poor to exercise their rights and assume their responsibilities.

The first reference, namely the idea that sources of disadvantage can be multiple and cumulative, is recognized nowadays in the literature, as witnessed by the growing literature on multidimensional poverty. But cumulative disadvantage can also be documented in other areas which may be correlated with poverty but are also distinct. One such area, discussed by Wodon (2016) in the second article in the policy forum section of this issue, is that of child marriage for girls (defined as marrying before the age of 18), its relationship with early childbirth (defined as having a child before the age of 18), and the impact that early childbirth has not only on the girls who marry early, but also on their children when they are born of mothers younger than 18. Child marriage and early childbirth can indeed have dramatic consequences for early childhood development as well as survival for the children born of mothers younger than 18.

Child marriage remains highly prevalent today, especially in sub-Saharan Africa and South Asia (Nguyen and Wodon, 2015). Girls who marry as children tend to have children earlier and more children over their lifetime than if they had married later. This impact of child marriage on fertility has consequences among others for poverty, since the probability of being (monetarily) poor tends to increase with the number of children in the household, all other things being equal. Child marriage also has potentially large negative impacts on the girls’ education since it is often very difficult to remain in school in many countries once married. Agency for girls may also be affected by child marriage, as may the risk of intimate partner violence. Overall, child marriage may lead to multiple and cumulative disadvantages for girls (for a review, see Parsons et al., 2015).

In addition, and this is the important point for the article in this special issue, child marriage, by leading to early childbirth, increases not only the risk of maternal mortality, but also the risks of under-five malnutrition and mortality for the children of young mothers. The marginal
effects documented by Wodon (2016) are rather large, with the risk of under-five mortality increasing by 3.5 percentage points on average across estimations for 15 countries and the risk of under-five stunting increasing by 6.3 percentage points. This again suggests that apart from ensuring that children benefit from essential interventions and services, broader policy efforts are also needed, not only in areas such as poverty, but also in other areas such as child marriage.

If child marriage and early childbirth can have such dramatic negative consequences at the margin for the development of children born of young mothers, this should be taken into account when implementing policy frameworks for ECD. In other words, policy frameworks for ECD should include recommendations for programs to end child marriage and early childbirths, or at least recognize the overlap of common interest with such programs. As discussed by Malhotra et al. (2013), strategies to end child marriage include empowering girls with information, skills, and support networks; educating and mobilizing parents and community members; enhancing the accessibility and quality of formal schooling for girls; offering economic support and incentives for girls and their families; and finally fostering an enabling legal and policy framework. Among those interventions, those that tend to be best documented in terms or robust impact evaluations are related to schooling (Kalamar et al., 2016). Overall, beyond the focus on essential interventions identified in the previous section, broader policies are clearly needed. Some are directly at the core of ECD strategies, but some may be in areas adjacent to ECD as illustrated with the case of child marriage and early childbirth. The role for broader policies and coordination is discussed next.

4. Broader Policies

Essential interventions are needed for children to reach their full potential, but this is not enough. As discussed in the previous section, policies to strengthen families in order to reduce risks such as those brought about by poverty, child marriage, or other types of vulnerabilities are also needed. The fact that essential interventions are not enough is recognized by Denboba et al. (2014) who suggest that in addition to providing access to essential services, countries should also be mindful of four broader policy principles: they should prepare a multi-sectoral ECD diagnostic and strategy; implement widely through effective coordination mechanisms; create synergies and cost savings among interventions; and monitor, evaluate, and scale up successful interventions. These principles were inspired in part by the framework for ECD policy developed at the World Bank under the Systems Approach for Better Education Results (SABER).

SABER is designed to help governments examine and strengthen the performance of their education systems so that all children and youth can be equipped with knowledge and skills for life. SABER aims to fill a gap in the availability of policy data, information, and knowledge about factors that influence educational quality, and about ways to improve learning. The initiative relies on diagnostic tools and policy data to evaluate country policies through the lens of global evidence-based standards, helping countries to determine which changes and policies could be implemented to improve learning. While most of the SABER domains are related to education, one of the domains is cross-sectoral and focuses on ECD. The SABER-ECD framework is structured around three core policy goals: establishing an enabling environment, implementing widely and monitoring and assuring quality (Neuman and Devercelli, 2013). For each policy goal, based on evidence from impact evaluations and a benchmarking exercise of top-performing systems, a set of policy levers are presented that decision-makers can act upon in order to strengthen ECD. The structure of the SABER-ECD policy diagnostic tool is visualized in Figure 2.
The first policy goal in SABER-ECD – establishing an enabling environment – serves as a foundation for ECD policies. Three policy levers are considered: the enabling environment for ECD policies and programs which includes the legal and regulatory framework to support ECD provision, the coordination between sectoral programs and policies by various Ministries as well as other stakeholders who affect ECD outcomes, and finally the financing provided for ECD both in terms of the level of resources made available and how they are made available. The second policy goal – implementing widely – refers to the coverage and scope of ECD programs and whether access to these programs is equitable. The second goal relies on an approach somewhat similar to the list of essential interventions mentioned earlier, albeit in a less detailed way. The third and last policy goal under SABER-ECD deals with data and quality assurance systems that are needed to ensure that the services being provided are of adequate quality. The policy levers under this goal reflect the importance of data availability and systems to monitor ECD outcomes, as well as the role of quality standards for ECD service delivery, and finally their enforcement.

The last two articles in this special issue deal with various aspects of the broader policies needed for ECD for which SABER-ECD provides a useful framework. The first article by Aram et al. (2016) looks at a specific aspect of the regulatory and legal environment for ECD service provision in Turkey where private and community driven efforts have played an important role in expanding access to early childhood education and care (ECEC) services for the poor. An issue however is the fact that some of the regulations imposed on private providers may affect negatively the cost of provision without providing substantial and commensurable benefits for the children enrolled in the centers. This in turn may reduce affordability of the programs for the poor, and thereby program take-up. Using data from 141 private ECEC facilities in Istanbul, the authors look at the relationship between outdoor space requirement for facilities (which date back to the 1960s but have limited benefits today) and the prices that parents must pay to enroll their children as well as the take-up of the services among the poor. Controlling for other center characteristics, facilities located in districts with outdoor garden requirements tend to be more expensive and to have a smaller share of students enrolled who are from disadvantaged socio-economic backgrounds. Although these partial correlations may not necessarily reflect causal effects, they suggest a

Figure 2: Three Core ECD Policy Goals under SABER

Source: Neuman and Devercelli (2013).
potential negative relationship between the outdated regulations and the ability of the centers to serve the poor, and serve as a reminder that caution is needed when designing regulations, or in this case failing to update them when they appear to be counterproductive as opposed to useful.

Finally, the article by Gove and Black (2016) considers the complex issue of measuring progress in ECD for the new target adopted under the Sustainable Development Goals in a way that could serve both the interests of individual countries and the need to have internationally comparable data across countries. The authors first reflect briefly on the history of global ECD goals and the challenges brought about by measurement. Two different challenges are discussed. The first is related to the fact that multiple different instruments have been used in the literature in order to attempt to assess the growth and development of young children. As mentioned earlier, two of the articles included in this issue rely on one of those measurement tools - the International Development and Early Learning Assessment. Yet other tools and approaches are being used, including the ECD module and index developed by UNICEF as part of the Multiple Indicator Cluster Survey and the MELQO (Measuring Early Learning Quality and Outcomes) approach developed by UNICEF, the World Bank, and Brookings. The second challenge is the balance required between the need for countries to have flexibility in defining standards in terms of what it means for a child to be developmentally on track, and the need for the international community to be able to rely on comparable data in order to monitor progress towards the ECD target under the Sustainable Development Goals. The good news is that both approaches need not be mutually exclusive, so that various tools can be used for measurement and continue to be developed further.

5. Conclusion

ECD is essential for children to reach their full potential and is now recognized as a priority under the Sustainable Development Goals. Investing in children at a young age is clearly the right thing to do from an ethical point of view, but it is also a smart move from an economic point of view. This is because investments in ECD have been shown to have high internal rates of returns while also reducing inequalities later in life. As countries, donors, and other stakeholders have become aware of the lasting benefits from ECD, investments in ECD have been rising rapidly over the last few years. This makes it even more important to assess with empirical evidence which programs and policies tend to work well, and which may not work as well.

The objective of this special issue is to contribute in a small way to the rapidly expanding literature on ECD with a focus on the respective roles of program interventions, family contexts, and broader policies in promoting optimal growth and development for children. The topic of ECD is complex and interventions in multiple sectors are needed to give the best opportunities to young children. For that reason, apart from summarizing the results of the articles included in the issue, this introduction also included a brief discussion of two simple but complementary conceptual frameworks that countries, donors, and stakeholders may find useful when considering alternative ways to invest in ECD. These frameworks help in locating the specific contributions of the articles in this issue in terms of the broader set of issues that must be considered when investing in ECD.

Investments in ECD are one of the smartest investments that countries can make. A child’s early years represent a unique window of opportunity to make resources available in order to improve opportunities and human capital for life and break the transmission of poverty from one generation to the next. The good news is that we are learning which interventions and policies should be supported, and there is also now an international commitment to make this happen.
References


