

# Education for Sustainable Future

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## Introduction

Investment is crucial to sustain and develop our economic and social lives. We build machines and factories with the expectation that they will yield more surplus value and thus profit. We invest in roads, bridges, airports, and faster servers so that goods and services are transported more efficiently. We make investments for a better future.

The most important kind of investment is human investment, particularly in children. This kind of investment is usually called by different names: childcare and education, healthcare and nutrition, training and development, and so on. We have come to regard these activities as forms of “investment” in the sense that it requires money and time and that it is expected to yield “returns” in the future. However, who are the investors? Who pays for the children, and who will benefit from them? Most importantly, where do the children come from?

The answers to these questions may appear obvious at first, but they constitute the core enquiries that lead toward theoretical developments on, for example, the connection between capitalism and patriarchy (Hartman 1981), the definition of domestic work as unpaid labor (Bourne 1985), and how care work is devalued in both private and public spheres (England, Budig, and Folbre 2002; England and Kilbourne 1990; Folbre 2008). These questions also highlight the economic externality of childrearing or “human reproduction” (Lee 1990).

Children are born into families, where the initial investment in children occurs. In a family, children are nourished, protected, nurtured, socialized, and disciplined. None of us could have survived unless someone had given us proper care since birth. Family is the only institution that produces humans. Every society needs a supply of new members to sustain itself. In this regard, the reproductive function of a family is of utmost importance.

This paper aims to discuss how a family perspective contributes to policy formation to ensure inclusive, equitable, and quality education and promote lifelong learning opportunities for all (Sustainable Development Goal 4). First, it will provide a theoretical background on how a family perspective can contribute to our understanding of social sustainability, particularly the reproductive mechanism of educational inequality. It will then discuss the factors that exacerbate the disparities in educational opportunities for children, followed by a review of practices and strategies for reducing inequalities. Finally, it will present policy recommendations and challenges.

### Family Background and Children's Education

Meritocracy is regarded as a pillar of modern democracy and distributive justice. In principle, we believe that individuals should be rewarded according to their *achievement* rather than their *ascription*, and that education should play a vital role in assuring that those who have talent, intelligence, and a good work ethic are rewarded for their *merit*, or the combination of ability and effort. No society in history, however, has realized such a system.<sup>1</sup>

Numerous studies have shown that “social origin,” or the ascribed characteristics of individuals, has a definitive power in shaping their “destination,” and that one’s educational attainment strongly mediates the association between the origin and the destination. Specifically, children of wealthy and highly educated parents are more likely to attain higher education and receive a higher income than children of less wealthy and less educated parents (e.g., Breen 2004; Erikson and Goldthorpe 1992; Ishida 1993). The classic *Colman Report* of 1966 on inequality in school achievement documented that the major factor explaining the variation in the academic performance of children is accounted for by the variation in parental environment, not the variation in school resources, such as

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<sup>1</sup> In fact, Michael Young (1958), who coined the term “meritocracy,” has used it to describe a dystopia.

expenditure per student and the student–teacher ratio (United States, Office of Education, 1966).

Economists have long identified that family resources differentiate the outcome of the children. In this view, family is seen as a production unit that generates utility (i.e., happiness) for the family members. The adult members (usually parents) of the family decide their labor supply, consumption, accumulation, and investment. They also decide fertility and the amount of resources spent on each child. Conversely, children are directly affected by their parents' decisions regarding, for example, the number of siblings, number of parents, home environment, and types of neighborhood.

Figure 1 represents a model that illustrates how social class is reproduced from one generation to the next. In this framework, children start their life with bequests from their biological parents. The bequests include hereditary abilities and heritable material assets, and they translate, to some extent, into the children's innate ability and their income. With these genetic factors as the baseline, parents spend their time and money on their children's human capital, and this type of investment is conceptualized as “home investment” (Leibowitz 1974; Haveman and Wolfe 1995).

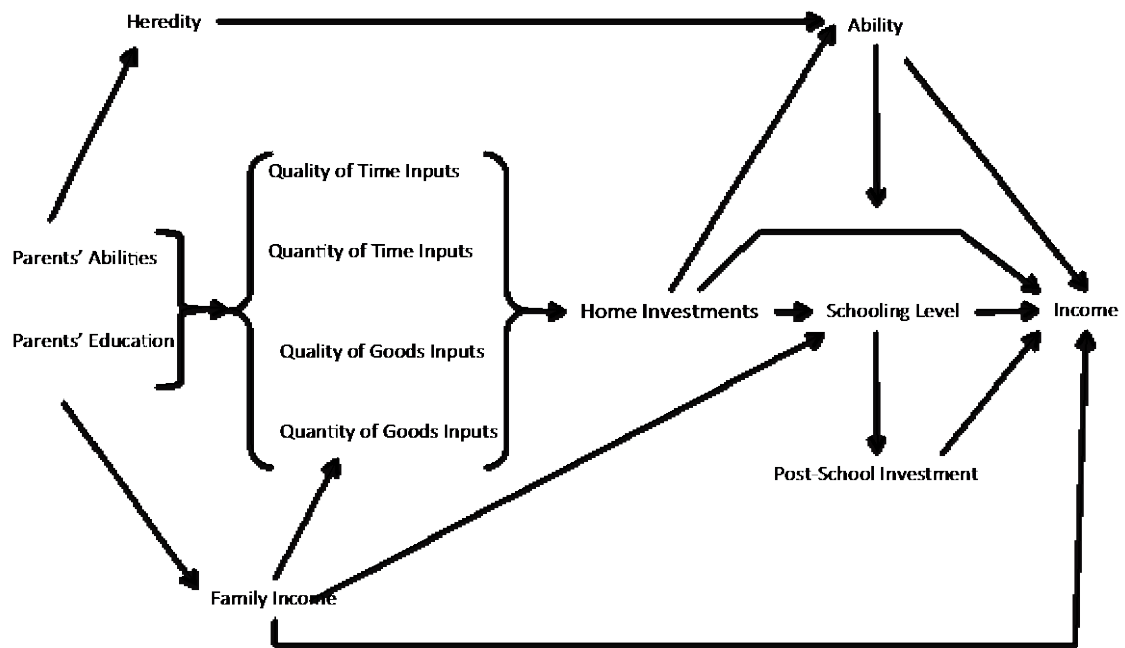


Figure 1 Home Investment in Children (Source: Havemann and Wolfe (1995, p. 1833) adopted from Leibowitz (1974))

Home investment has two components: parents' time and their money, both of which have "quantity" and "quality" that depend on the parents' income, ability, education, and preference. On average, parents with higher income and education have a larger quantity of time and goods than their less educated counterparts. Likewise, parents with more income and abilities have preferences for higher quality of time and money that are conducive to children's education than parents with fewer resources and abilities do. Moreover, although Figure 1 does not include the factors related to family structure, we can estimate that families with two parents have more resources for children than single-parent families.

The differences in the level of home investment or the differences in the quantity and quality of time and money that children receive from their parents have recursive effects on the fundamental inequality in the children's life chances. Obviously, children cannot choose their parents nor do they have control over their parents' income, education, and decisions. As noted by Philip Brown (Brown 1990), today's children are living in

*parentocracy*, in which their educational attainment is dependent upon the wealth of the parents and their willingness to invest in their education.

### Family Structure, Income Disparity, and Unequal Childhood

The model described above does not include the issue of family structure. In fact, unequal childhood (Lareau 2000, 2003) is further exacerbated by two recent trends: changes in the family structure and a widening income disparity.

In the last thirty years, there has been a sharp increase in the number of children born outside a marriage. In OECD countries, the proportion of children born outside a marriage increased from 11% in 1980 to 33% in 2007. Children growing up in single parent families have also tripled, from 5.5% in 1980 to 14% in 2012 (OECD 2011a). Research to project the future of families is underway. Although it is difficult to make inter-country comparisons of projected trajectories of family change because of differences in the comparison timeframe and method involved, the bulk of the projections for 2025–2030 suggest a consistent upward trend, where the single-parent households are expected to increase by between 22% and 29% (OECD 2011b).

There is abundant evidence that shows children living in an adverse family environment suffer from negative consequence. For example low family income is associated with divorce, single parenthood, reduced education, and low ability in parenting (Mayer 1997). Children living in single-parent household are more likely to drop out of school, are more likely to have children at a young age, and are more likely to be single parents themselves (McLanahan and Sandefur 1994)<sup>2</sup>. The trend is that the proportion of children in adverse family environments has been increasing with the surge

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<sup>2</sup> The literature does not agree on which aspect of the family structure negatively affects a child's outcome but agrees that single parenthood, poverty, and violence in families do adversely affect children's wellbeing (e.g. in Heckman and Masterov 2007).

in divorce rates. More children are living single-parent families.

Parallel to the changes in the family structure and increase in the number of children in an adverse family environment, income disparity is widening in most countries. In the 1980s, the richest 10% of the population earned 8.1 times the income of the poorest 10%. Today, the ratio of income has risen to 9.6. That is, the richest 10% are earning 9.6 times the income of the poorest 10%. It is not only the increasing income disparity between the top and bottom that matters. In recent decades, approximately 40% of the population at the lower end of the income distribution did not benefit from economic growth in many countries. In some cases, low earners have even seen their income fall in real terms (OECD 2016). That is, those with a lower and the lowest income are being left behind. Moreover, statistics show that more children are born into low income families (OECD 2016).

As noted above, the educational opportunities of children are heavily dependent on their family background. The providence of our birth significantly determines our fate. The education gap between children of rich parents and those of poor parents, however, seems small when placed in the context of global comparison.

For example, almost all children in North America and Western countries have learned the basics in reading, mathematics, and science regardless of their parents' wealth. On the other hand, the proportions of children with basic education in many of the developing countries have a wider disparity based on the income of their parents. In Lebanon, for example, 80% of children in the highest income quintile have learned the basics in reading while only 29% of children in the lowest quintile had such an opportunity. In Peru, 89% of children in the highest quintile family have learned basics in mathematics, but only 38% of children in the lowest quintile have such skills. In Philippines, 77% of children from the richest families had learned the basics in science, but only 56% of children from the poorest parents have basic science knowledge (UNESCO 2016).

The disparities between children from rich families and those from poor families are much larger in developing countries than they are in developed countries. While secondary education has long become universally available in developed countries, it is only available to the limited privileged few in some developing countries (Engle et al. 2011). This difference in the magnitude of educational gap poses different problems for the world community as children in different circumstances in the global economy have different types of needs.

### Strategies for Reducing Inequality

Despite the differences in the magnitude of education gap between high-income countries and low-income countries, a large body of literature on the inequality of children's education strongly agrees on the effect of family circumstances (e.g. Engle et al. 2011 Heckman and Masterov 2007). As noted above, family is the major producer of children, where they would receive initial investment in their skills, abilities, motivation, and schooling. Ironically, thus far, it is the very place that inequality begins with a cumulative effect on the abilities and educational outcome.

The good news, however, is that the cross conception between neuroscience and social science has provided a much deeper understanding on the plasticity of brain development and identified the "critical period" of or the window of opportunity for brain development. In other words, we have begun to understand "what works" in reducing educational inequalities. Research on how children learn in the early stages of childhood is making substantial contribution to the development of intervention programs in early childhood. Assessments on the effectiveness of intervention programs in early childhood development generally report positive results across the different levels of economic development of countries in which the programs were administered.

Since the mid-1960s, numerous intervention programs have been initiated in



the United States that target preschool children of disadvantaged families. These programs vary widely in design (randomized or not), enrolment age, length of observation period, and other parameters. Reviews on the effectiveness are generally consistent although in some cases, the effects were weak. Generally, children's school performance improved, and more children graduated from high school with better test scores (Currie and Blau 2006). Longitudinal programs that monitor the participating children into adulthood<sup>3</sup> also find these children maturing into adults who attained higher education, higher employability, increased income, and lower incarceration rates. Heckman and Masterov (2007) argued from the economic perspective that the returns for disadvantaged children are highest for investments made at young ages. The return rate declines exponentially as the participants become older.

Similar results are reported in developing countries. In their review of 42 effectiveness studies from low-income and middle-income countries, Engle et al. (2011) argued that early childhood development can be improved greatly through intervention with greater effects for high quality programs and for the most vulnerable children. Similar to the case in the United States, the program reviews varied in their design and measurement. Some programs focused on parents while others focused on both parents and children. Some studies focused on preschool attendance while some focused on improving preschool programs. They generally provided positive outcomes, specifically in demonstrating that early childhood education is the most effective and cost-efficient measure to ensure the holistic development of children.

Studies have also found that countries with higher preschool enrolment have smaller disparities in schooling attainment of youth aged 15–19 years. After controlling for the countries' gross domestic products and inequality rates as

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<sup>3</sup> They include Carolina Abecedarian program (Ramey et al., 2000), High/Scope Perry Preschool Program (Schweinhart et al. 2005), Chicago Parent–Child Program (Reynolds et al. 2002), and the Nurse–Family Partnership (Olds et al. 1997).

measured by the Gini index, for every percentage point increase in preschool enrolment, the schooling gap declined at 0.02 grades (Engle et al 2011: 1348).

### Conclusion and Policy Recommendation

The importance of family is recognized everywhere, including by prominent declarations and international legal arrangements, such as the Universal Declaration of Human Rights. Despite the strong consensus on the importance of family, however, family issues are gradually losing saliency on the international development platform (IFFD 2016). It seems that it is easier to argue on the magnitude of problems and consequences of “family breakdowns” than constructively discuss how we can support families. One could speculate that the family issue would create headlines only when it is “dysfunctional”: a situation similar to what Tolstoy wrote about in the opening of *Anna Karenina*, “all happy families are alike” (thus not interesting); “each unhappy family is unhappy in its own way” (and thus makes headlines and is worthy of mention).

As repeatedly noted in the literature on how family backgrounds affect children’s educational outcome, it is the family that matters. A large portion of our life chances depends on what kind of family we are born into. We also know that educational opportunity strongly mediates the link between social origin and destination. Providing equitable and inclusive education, SDG 4, is thus crucial for distributive justice and the sustainable future of humanity. The review presented in this paper is far from exhaustive, but the importance of early intervention is clear. If we are to reduce inequality in educational opportunities, early childhood is the most effective period for successful intervention.

The policy recommendations of this paper are as follows:

- Acknowledge the fact that children are born with different life chances. It is the family environment that strongly affects, if not determines, the outcome of children.

- Support families so that they can ensure the sound development of their children.
- Focus on early childhood because it is the period that is most responsive to environmental changes.

The challenges awaiting us, however, are enormous because childrearing is regarded as part of people's private activities. The knowledge that early childhood matters is not sufficient to surrender the sanctity of the family. At the same time, however, families cannot and should not be the sole agent responsible for the upbringing of the next generation. The true challenge is in designing institutions to redirect resources toward a sound development of human capital generated in families. The future of the humanity depends on the stock of knowledge, skills, intelligence, creativity and many attributes embodied in the coming generations.

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