

Early childhood development as economic development  
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Early childhood development is economic development with a very high return. A decade ago this statement would have been dismissed. Spending on programs for young children was conceived as consumption, an immediate cost to the economy. An expanding research base refutes this claim and has swelled the audience for early childhood concerns engaging economists, scientists, health providers, and even financiers.

The economic rationale for investing in early childhood programming is gathered from four types of analyses: random control studies, longitudinal tracking of children; economic modelling of labour market effects; and studies examining the early childhood sector itself and its multiplier effects on economies.

Validation of the human capital approach is heavily influenced by U.S. longitudinal studies showing sustained benefits from early interventions for children in disadvantaged circumstances. Based on these findings, respected economists, such as Nobel Prize winner James Heckman, conclude that scarce public resources would best be used for at-risk communities<sup>1</sup>. Population health promoters counter with data showing that developmental vulnerabilities are not exclusive to children from low-income homes—children with vulnerabilities exist across the economic spectrum. Targeting resources, they demonstrate, would exclude the majority of children with vulnerabilities -- those belonging to middle class and affluent families.<sup>2</sup>

More recently, economists are questioning whether “scarce resources” are a consideration. Quebec’s early childhood program has been criticized for its costs. However, analyses have found the province recoups its entire outlay from the additional tax revenue generated by the increased numbers of mothers entering the workforce.

U.S. longitudinal studies

Researchers have followed three U.S. longitudinal studies on the impact of preschool education on children from disadvantaged backgrounds. The participants were largely African-American children deemed to be at-risk because of low family income, and the mothers’ age, educational attainment and lone-parent status. The families typically lived in neighbourhoods with persistent poverty.

Ypsilanti’s Perry Preschool the Abecedarian study in North Carolina and the Chicago Child-Parent Centers have tracked their original cohorts for up to four decades. Each study was unique, but all provided a group program emphasizing parent involvement and the development of children’s literacy skills. Child-to-staff ratios were low and educators had university level training in early childhood education.

Assessed over time, the preschool groups showed greater on-time secondary school graduation, higher

participants.<sup>3</sup> No long-term effect was found on the IQ of the participants, but preschool did help children develop better cognitive habits and improved impulse control.<sup>4</sup>

The Chicago and Abecedarian studies included samples of children who attended both preschool and enriched elementary school programming. Others participated only in preschool, or only in enriched schooling. The most consistent and enduring outcomes were from preschool participation. School-aged programming provided added academic and earning advantages, but social behaviours were not appreciably different from the preschool-only groups.

The benefits of preschool were quantified by comparing the original costs of the program per child to their adult behaviours, including employment earnings, taxes paid, social welfare used and criminal justice costs incurred. Preschool's influence on health costs was not considered in the overall tally, but positive results were found in a separate study of Perry Preschool participants at 40 years of age.<sup>5</sup>

Only the financial returns for participants as they entered youth and adulthood were considered by the studies, not modifications in their parents' behaviour. In the Abecedarian study, for example, all-day preschool made it possible for parents to work or upgrade their skills. Parental benefits from lowered welfare use and increased tax revenues paid were not factored into the results, nor were more immediate benefits accruing to the child, such as reduced demand for health care or special education.

As dramatic as the findings from these studies are, the initial outlay was substantial and public investments that take a generation to realize provide little incentive for policy makers whose actions are often determined by election cycles.

Cost-benefit findings from three major longitudinal studies involving disadvantaged children attending preschool in U.S. urban areas

	Abecedarian	Chicago Child-Parent Centres	Perry Pre-school
Year Began	1972	1983	1962
Location	Chapel Hill, NC	Chicago, IL	Ypsilanti, MI
Sample Size	111	1539	123
Design	Random Control	Compared children who only received kindergarten	Random Control
Study Period	6 weeks – age 5 & 6-8 years	Age 3 and 4-8 years	

Age last assessed	Age 21	Age 28	Age 40
Costs per child	\$13,900/yr	\$7,428 per child	\$15,166/yr
Benefits calculated	\$143,674	\$83,511	\$258,888
Return on each \$1 spent	\$4:1		

A sample of children from each site was selected to assess the impact of the interventions and compared to a sample from similar communities that did not receive enriched interventions.

Long-term positive effects were found for the children who lived in communities with enriched programming for 4- to 8-year-olds, but not for those in the younger child site communities. The positive outcomes actually strengthened over time in the older child sites, as seen in measures collected when children were in grades 3, 6, 9 and 12. Children in the BBBF communities used health, special education, social services, child welfare and criminal justice services less than those in the control neighbourhoods. The reduction in the use of special education services alone saved more than \$5,000 per child by grade 12. Overall, government funders realized a cost-benefit of more than \$2 for each \$1 invested in the project.<sup>7</sup>

Why did younger children receive no lasting benefits from the interventions, while older children did? One explanation is that the modest project investment per child did not provide enough intensity for younger children.<sup>8</sup> Program spending in the older children's sites was on top of investments already made in every child via the school system. Schools offered a universal platform so that enriched supports reached all children, while no equivalent service is available for children during their preschool years.

#### Child care as regional economic development

Building on U.S. models of economic impacts, a 2004 study of Winnipeg's child care sector demonstrated its multifaceted role in a regional economy: as an economic sector in its own right with facilities, employees and consumption from other sectors; as labour force support to working parents; and for the long-term economic impact it has on the next generation of workers.<sup>9</sup>

Winnipeg's 620 child care facilities provide care to about 17 percent of the city's children. Gross revenues are over \$101 million a year; 3,200 people are employed with total earnings of \$80 million annually. Prentice found more jobs in child care than in the entire Manitoba film industry, and about as many as in the better-known bio-tech and health research or the energy and environment sectors, which are priority areas for development in the city.

Child care is also a job creator. For every child care job, 2.15 others were created or sustained. Child care also allows mothers and fathers to work. Parents with children in child care earn an estimated \$715 million per year. Overall, every \$1 invested in child care provided an immediate return of \$1.38 to the Winnipeg economy, and \$1.45 to Canada's economy.

In 2007, a rural, northern and Francophone region of Manitoba were analyzed. Those studies identified higher returns, with every \$1 of spending producing \$1.58 of economic effects.<sup>10</sup>

#### Preschool as economic stimulus

Previous studies did not focus on the state as a beneficiary of child care investments. This study released on the heels of the 2008 collapse of the financial markets when governments

were looking for stimulus projects, showed how investing in educational child care was a highly effective practice:

**Biggest job creator:** Investing \$1 million in child care would create at least 40 jobs, 43 percent more jobs than the next highest industry and four times the number of jobs generated by \$1 million in construction spending.

**Strong economic stimulus:** Every dollar invested in child care increases the economy's output (GDP) by \$2.30. This is one of the highest GDP multipliers of all major sectors.

**Tax generator:** Earnings from increased employment would send back 90 cents in tax revenues to federal and provincial governments for every dollar invested, meaning investment in child care virtually pays for itself.

The study also quantified the immediate costs of the sector's poor f !

	Year	Description	Benefits	Ratio
<i>Fortin, Godbout, St-Cherny</i>	2011	Examined benefit of enhanced maternal employment due to low cost child care	Quebec gains \$1.5B in increased tax revenue Pays \$340M less in social benefits Increased GDP by +1.7%	1:1.05 for Quebec government 1:0.44 for Canadian government
<i>Ray D. Peters, et al</i>	2010			

## Early childhood programming: A no cost solution

Initiated in 1997, Quebec's early childhood services are popular. They reimburse both users and the larger society, not only in improved child outcomes, but also with unpredicted bonuses such as higher birth rates and reduced poverty levels.

Economist Pierre Fortin's<sup>12</sup> analysis of Quebec's child care system does not deal with these extras, or with the personal medium- or long-term benefits to the child attendees of children's programs. Rather, he focuses on changes in the mothers' labour force





work barriers for the most vulnerable families, and help ensure all children reach their full potential.

To receive maximum financial efficiencies and social benefits, states are advised to organize and fund programs to meet these goals.

<sup>1</sup> Heckman, J.J. (2006). Skill formation and the economics of investing in disadvantaged children. *Science*, 132, 1900-1902.

<sup>2</sup> Janus, M. &