

Impact of Early Childhood Care
and Education on Children's
Preschool Cognitive
Development: Canadian
Results from a Large Scale
Quasi-Experiment

Pierre Lefebvre (UQAM)

Phil Merrigan (UQAM)

Matthieu Verstraete (UQAM)

Quebec's Childcare Policy

- September 1997:
 - 1) Full-time daycare spaces offered at 5\$ per child per day for children aged 4;
 - 2) All public schools offer full-time kindergarten (K) for 5 year olds.
- September 2000: The low-fee policy applies to all children aged 0 to 59 months.
- Midyear 2003 : The number of totally subsidized spaces is 170,000 up from 77,000 partly subsidized spaces in 1998.

Quebec's Childcare Policy

- No such important policy changes for pre-K and K children enacted in the other Canadian provinces over the years 1994 to 2003
- The Objective of Quebec's Childcare Policy under study: enhance child development and equality of opportunity for children.
- The Outcomes used: The Peabody Picture Vocabulary Test – Revisited (PPVT-R) raw and standardized scores.

Quebec's Childcare Policy

- Methodology: Difference-in-Differences (DD) and Difference-in-Differences-in-Differences (DDD).
- Estimation Technique: Ordinary Least-Squares (OLS) with adjustments for the standard error of program effects (Bootstrap and Bertrand et al.).
- Data Set: The first five waves of Statistics Canada's National Longitudinal Survey of Children and Youth (NLSCY)

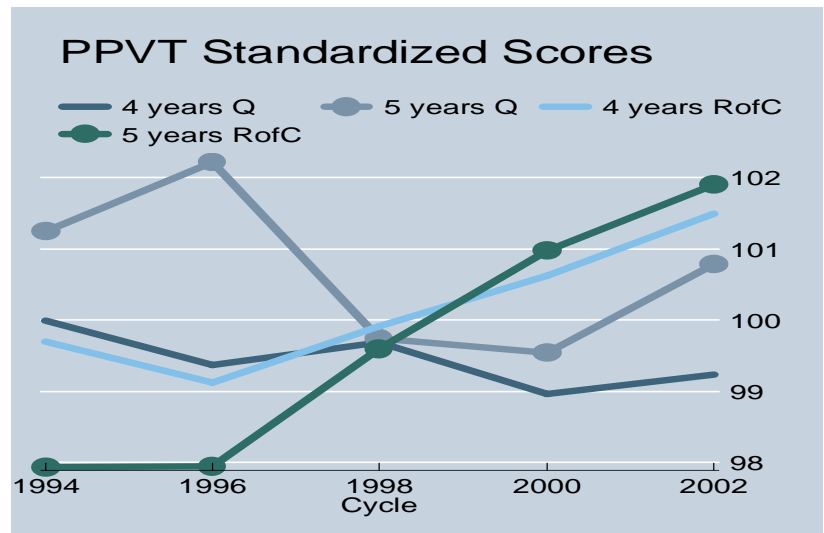
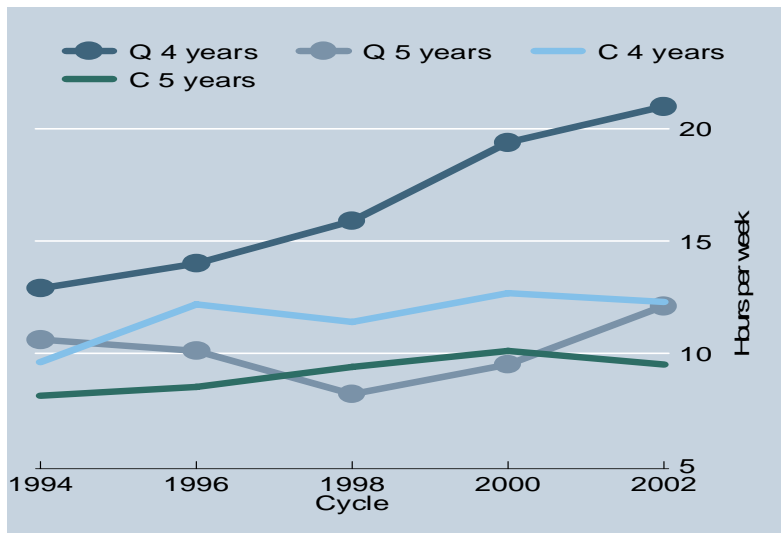
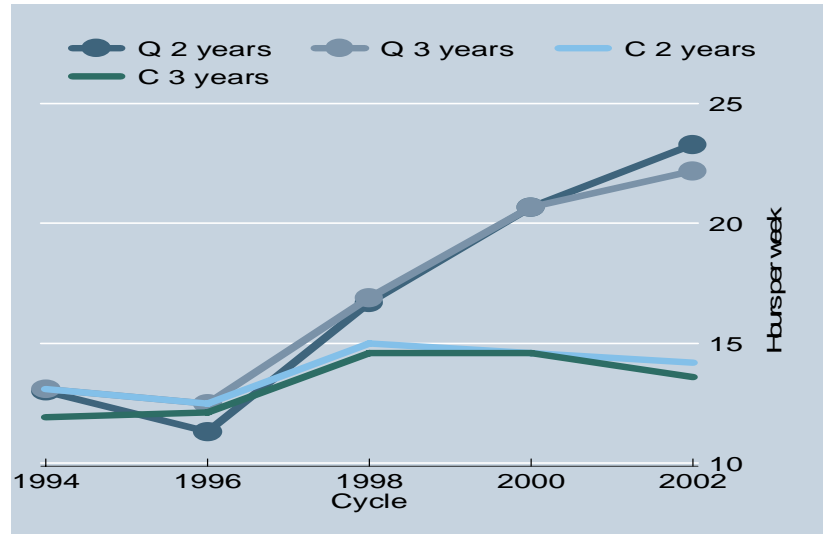
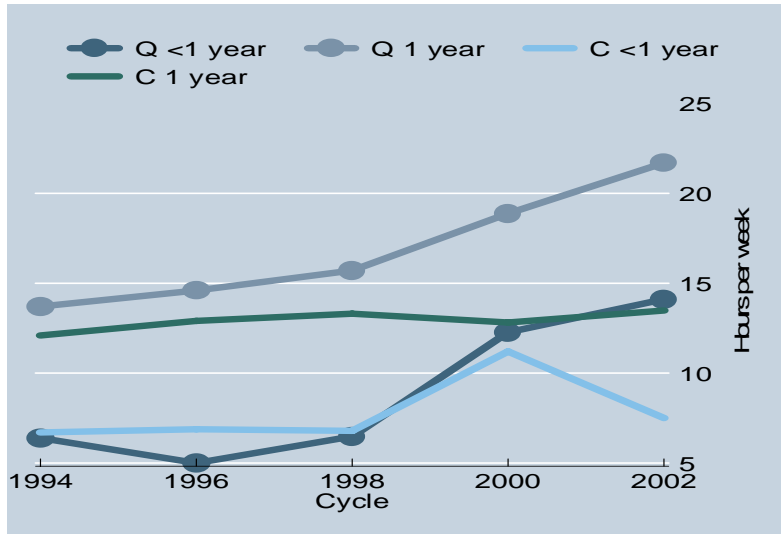
Quebec's Childcare Policy

- Quick Review of Previous Research on early childhood education and care (ECEC), mainly from the US:
 - 1) Interventions at younger ages produce the largest positive effects on outcomes;
 - 2) Effects tend to fade over time in the absence of continued intervention;
 - 3) Placing a toddler (0-2 year olds) in childcare during “long” hours (21h/week or more) has adverse effects on his development, particularly for “affluent” children;
 - 4) Preschool educational programs (3-5 year olds) have short-term positive effects on cognitive development.

Quebec's Childcare Policy

- Quick Review of Previous Research on early childhood education and care (ECEC), from Canada:
 - 1) Lefebvre and Merrigan (2002): non-parental care vs. parental care has no effect on the cognitive development of children;
 - 2) Gagné (2003): full-time employment of a “high quality type” mother induces a lower cognitive score for the child (PPVT-R scores of 4 and 5 year olds);
 - 3) Baker et al. (2005): negative impact of Québec's policy on diverse outcomes measuring the “well-being” of children (0 to 4 year olds).

Quebec's Childcare Policy



Quebec's Childcare Policy

- Results:
 - 1) No Effects for the 4 year olds.
 - 2) Negative Size Effect on the order of a third of a standard deviation of the standardized score for the 5 year olds.
 - 3) The results of the 5 year olds are driven by children whose mother has a university degree.
- Suggestion for the implementation of Quebec's Childcare Policy : Adopt a more flexible framework, i.e. authorize the use of daycare spaces on a part-time basis instead of mandatory full-time use.