



The Centre for Spatial Economics

Assessing past, present and future economic and demographic change in Canada

Early Learning Impact Analysis of Subsidy Removal

Prepared for:

Ontario Coalition for Better Child Care

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Table 1: Impact of the Elimination of \$63.5 million in funding

Direct GDP (\$ millions)	-60.9
Indirect GDP (\$ millions)	-2.2
Induced GDP (\$ millions)	-85.2
Direct, Indirect & Induced GDP (\$ millions)	-148.3
Direct Employment (Jobs)	-1,862
Indirect Employment (Jobs)	-30
Induced Employment (Jobs)	-1,139
Direct, Indirect & Induced Employment (Jobs)	-3,030
Parents Labour Supply Effect (Jobs)	-3,480

Source: Statistics Canada Simulation & Calculation by Author

The Ontario Coalition for Better Child Care requested that the Centre for Spatial Economics estimate the short-term economic impacts of the ending of \$63.5 million in funding for the Early Learning and Care sector (ELC). According to Ontario Municipal Social Services Association (2009) this funding provides fee subsidies to 7,605 children from low and below average income families and wage subsidies to 5,275 workers. Unfortunately, the exact distribution of funding is not known. As discussed in Fairholm (2009a) research shows that demand for centre based child care by Canadian parents is very price sensitive, with a 1% increase in fees leading to a 1% or greater drop in demand. And low-income families and lone parent are more sensitive to fees than families in general. Furthermore, Fairholm (2009a) illustrates that the child care sector workers are very sensitive to changes in wages, with a greater than 1% drop in total hours worked for every 1% decline in wages. These estimates indicate that for every dollar reduction in subsidies there will be at least a dollar drop—and likely more—in the use of child care centre services. This note uses conservative assumptions and calculates the short-term economic impacts from a reduction of \$63.5 million in the use of child care services in Ontario.

The analysis uses a Statistics Canada's Input-Output (IO) model simulation to estimate the direct and indirect economic impacts from reducing the IO commodity—child care, outside the home. The induced effect is then estimated based on the reduction in labour income combined with estimates of tax and import leakages that also influence the induced effect.

If expenditures of \$63.5 million for child care outside the home are removed from the Ontario economy, the direct GDP loss is \$60.9 million. Since the Child Day-Care industry spends on other products and services in the economy there are spillover effects on supplying industries worth an additional \$2.2 million in lost GDP. Also there is a loss of labour income as a result of the decline in output, which lowers spending via the induced effect. Labour income represents a very large share of total expenses in the Child Day-Care industry, which boosts the magnitude of the induced effect per dollar of the original impact. The magnitude of induced effect is influenced by the level of wages of those who lose income. Lower income households tend to spend most of the extra money that they earn and the tax rate is lower, both of which boosts the multiplier effect compared with households that earn average or above average income. According to our estimates this effect will lower GDP by an additional \$85.2 million, leading to a total loss of GDP of \$148.3 million.

Since workers in the Child Day-Care industry have low wages, the direct employment multiplier is quite high per million dollars. Based on Statistics Canada's employment multiplier there would be 1,862 jobs directly lost and a further decline of 30 jobs via the indirect effects. After factoring in the impact on jobs from the induced effect there would be 3,030 jobs lost as a result of the removal of the \$63.5 million in subsidies.

Compared with most other government spending options quality ELC has two unique aspects: children's human capital gains and parents' labour supply effect. The latter contributes to the short-term impact. Powell (1997) estimated for Canada that a 1% increase in fees causes a 0.38% drop in labour force participation and 0.32% drop in average work hours. These effects are larger for low income families particularly for lone parent families (Kimmel (1995)). Data are lacking to estimate the labour supply effect directly, however. Using an average child:staff ratio of seven, the 1,862 direct job losses translates to 13,034 children. At most 7,605 are subsidized children, which leaves 5,429 other children affected. According to City of Toronto data, of the families receiving subsidies 43.2% are for employed lone parents, 14.5% are for two parent families with jobs and 9.3% are for two parent families with one person employed. After adjusting for the number of children per family and assuming a 38% reduction in jobs for subsidized two parent families and that half of the unsubsidized spaces are for full-time care of which 0.22 mothers are employed full-time (see Fairholm (2009b) there would be 3,480 mother's who would leave their jobs. Moreover many subsidized single parents are at increased risk of being pushed onto the welfare rolls if they lose their fee subsidies, which also would increase government expenses.



References

- Blau, D. (1993). "The Supply of Child Care Labor." *Journal of Labor Economics*, 11(2), pp. 324-347.
- Blau, D. (2001). *The Child Care Problem: An Economic Analysis*. New York: Russell Sage Foundation..
- Chevalier, A., C. Finn, C. Harmon and T. Viitanen, (2006). "The Economics of Early Childhood Care and Education." *Technical Research Paper*, National Economic and Social Forum.
- City of Toronto (2010). Child Care Dataset.
- Cleveland, G., M. Gunderson and D. Hyatt, (1996). "Child Care Costs and the Employment Decision of Women: Canadian Evidence." *Canadian Journal of Economics*, 29(1), pp. 132-51.
- Doiron, D. and Kalb, G. (2005a), "Demands for Child care and Household Labour Supply in Australia", *Economic Record*, 81(254), 215-236.
- Doiron, D. and Kalb, G. (2005b), "Effects of Child Care Demands and Policies on household Labour Supply in Australia", Policy Research Paper no. 25, the Commonwealth Department of Family and Community Services
- Fairholm (2009a) "Literature Review of the Child Care Labour Market" prepared for the Child Care Human Resources Sector Council, Understanding and Addressing Workforce Shortages (ECEC) project. Child Care Human Resources Sector Council, Ottawa, Canada.
- Fairholm (2009b) "Literature Review of the Socioeconomic Effects and Net Benefits", prepared for the Child Care Human Resources Sector Council, Understanding and Addressing Workforce Shortages (ECEC) project. Child Care Human Resources Sector Council, Ottawa, Canada.
- Kimmel, J. (1995). "The Effectiveness of Child Care Subsidies in Encouraging the Welfare-to-Work Transition of Low-income Single Mothers." *American Economic Review, Papers and Proceedings*, 85(2), pp. 271-275.
- Michalopoulos, C., Robins, P.K. and Garfinkel, I. (1992), 'A Structural Model of Labor Supply and Child Care Demand', *Journal of Human Resources*, 27(1), 166-203.
- Ontario Municipal Social Services Association (2009). "Sustaining the future: What is at stake for families and children in Ontario", Mississauga, Canada
- Powell, L. (1997). "The Impact of Child Care Cost on the Labour Supply of Married Mothers: Evidence from Canada." *Canadian Journal of Economics*, 30(3), pp. 577-94.
- Powell, L. (1998). "Part-Time versus Full-Time Work and Child Care Costs: Evidence for Married Mothers." *Applied Economics*, 30(4), pp. 503-11.
- Powell, L. (2002). "Joint Labor Supply and Childcare Choice Decisions of Married Mothers." *Journal of Human Resources*, 37(1), pp. 106-128.



The Centre for Spatial Economics

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Macroeconomic Advisors, LLC based in St. Louis, MO and Haver Analytics based in New York, NY are partners of the Centre in providing clients with comprehensive economic consulting and information services.

The Centre for Spatial Economics (C4SE) was formed in July 2000 through an initiative of two consulting firms: Strategic Projections Inc. (SPI) and Stokes Economic Consulting Incorporated (SEC). These two firms specialize in demographic and economic research. A key part of this research has been the geographical distribution of demographic and economic activity. The Centre was established as a partnership of SPI and SEC to improve the quality of information and research conducted in Canada and to make the information and research available to organizations requiring such information, and to the public as the opportunity arises.

At present the Centre for Spatial Economics is a partnership of four corporations: Strategic Projections, Stokes Economic Consulting, Robert Fairholm Economic Consulting, and Quantitative Economic Decisions. In addition to the staff of these corporations, the Centre draws from a list of academics and research consultants on an as needed basis to minimize overhead costs and to obtain the best researchers for the topic at hand.

Robert Fairholm

Robert Fairholm is the President of Robert Fairholm Economic Consulting. He produces custom research for clients on a range of topics, including productivity, fiscal forecasting, labour supply, demand and occupational models and forecasts, and impact analyses. He has over 20 years of experience in economic analysis, modeling and forecasting. Prior to joining the Centre for Spatial Economics as was the Managing Editor of the International Bank Credit Analyst from 2001 to 2003, and provided a monthly forecast of interest rates, equity markets, commodity prices, economic trends and currency movements in the world's principal economies. From 1993 to 2001, Robert directed the Canadian forecasting operations of Standard & Poor's DRI. He was responsible for all the Canadian macro, industrial and provincial forecasts and related services. Since Robert first became manager of DRI's Canadian forecasting group it won the KPMG, Watson Wyatt Worldwide and the Financial Times awards for forecast accuracy 5 times, including the Watson Wyatt Crystal Award presented in 2001 for the best predictor over the previous 5 years.

