

# The Economic Value of Child Care

County of Wellington Child Care Services

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This report is intended to stimulate discussion. Child Care Services supports the notion that there is a need for a broad range of services for supporting children’s healthy development and family well-being - and licensed child care is an essential part of those services.

# The Economic Value of Child Care

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In Wellington and Guelph

## Healthy Economies Depend on Child Care

- Countries with the healthiest families and sustained economic development are also most likely to view a licensed child care system as an essential part of the public infrastructure supporting the economy.

Each year more nations and regions around the world are considering child care and early childhood education as part of the public infrastructure designed to support the economy and to benefit society. These nations and regions (e.g., Sweden, New Zealand, Quebec) view child care as necessary for strengthening economic prosperity by encouraging high employment/population ratios by assisting parents in combining work and family responsibilities.

The Organisation for Economic Co-operation and Development (OECD) has identified publicly supported child care and early childhood education as critical to nations' wealth and citizen well-being. Hence, the OECD has been systematically documenting and comparing OECD member countries' development of child care and early childhood education policies and services since 1996, and is able to use this substantial database of world-wide statistics and information for relating child care to economic wealth.<sup>1</sup> Canada is classified as a rich nation, and yet, OECD and the United Nations International Children's Education Fund (UNICEF) relate our comparatively high level of relative child poverty (about 15%) to the low overall investment of the Gross Domestic Product (.3%) into our nation's child care and early childhood education infrastructure.<sup>2</sup>

Substantial longitudinal evaluation research studies show that child care and strategies for improving families' income are critical to reducing child poverty. Ultimately strategies without child care provisions and supports for improvements to family income have had little impact on reducing child poverty.<sup>3</sup>

The provincial Early Learning Program strategy for child care and early childhood education involved the historic move of child care policy to the Ministry of Education in 2011. This move, recommended by the OECD, fortifies the strategy for child care's governance and infrastructure by placing it under the domain of public education. By placing child care in the context of Education, it has greater potential to reduce child poverty and benefit all children and families, while also moving child care away from its restrictive image of being a social welfare service.<sup>4</sup>

This historic move will benefit the economy as well. The World Bank supports such action as an investment in human capital that prioritizes the development of less costly preventative programmes for young children who are vulnerable to developmental delay rather than more costly remedial programmes for older children and adults.<sup>5</sup> In fact, the World Bank formally states that well conceived early childhood development programmes are a cost effective means of strengthening society.<sup>6</sup> "When children fall behind, they tend to stay behind."<sup>7</sup> A Canadian Paediatric Society Position Statement (2011) claims that if Canada does not address children's developmental vulnerability while they are young, economic growth in this country will likely be reduced by 15% to 20% over the next 60 years.<sup>8</sup>

# THE BENEFITS OF CHILD CARE AND EARLY CHILDHOOD EDUCATION

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## 1. Regional Economic Development

For every public dollar that is spent on child care in Ontario, there is a return on investment that benefits the regional economy. Economists describe the impact that the child care sector has on regional economies as “multipliers.”<sup>9</sup> Child care and early childhood education multipliers across North America range in value, from 1.6 to 3.25, depending on the region being considered.<sup>10</sup> This means that for every dollar invested, the economy’s output can be up to \$3.25.

- For every public dollar that is spent on child care in Ontario, the multiplier is 2.27. This means that an investment of \$1 results in an economic output of \$2.27.

There are, however, limitations on how effective the current system of child care and early childhood education can be in supporting regional economic development. Child care that is not full time, not high quality, and not delivered in a systematic way does not support regional economic development.<sup>11</sup>

For there to be sustainable economic benefits for our region, full time, high quality, licensed child care and early childhood education needs to be available to families across all of our service planning areas.

- Research firmly shows that informal care arrangements that many families are forced to rely on in the absence of available accessible licensed child care options **do not** contribute to regional economic development in the same way that a system of high quality child care does.

The following charts demonstrate the importance of full time, full year licensed child care spaces and their impact on the local economy in our service delivery area

### Glossary of terms

**“Purchasing power of families”** represents the ability of families to spend money in their local economy because they are accessing a local full time child care space. Only full time spaces are counted because full time, year round child care is important for helping families to stay connected to the workforce. The formula for determining the purchasing power of families used on the charts below is the number of full time licensed centre-based child care spaces in the area X the median family income (after tax) for the area.<sup>12</sup>

**“The child care and ECE investment output impact on the economy”** represents the multiplier effect of every dollar invested into child care in the community. The multiplier used on the charts below is 2.27.

This means that for every dollar invested into child care, there is a \$2.27 economic output. The formula for determining the output impact on the economy used below is the average cost of care for a full time space X the number of full time licensed centre-based child care spaces in the area (not including part time spaces) X the multiplier (2.27).<sup>13</sup> The dollars invested in child care currently are mostly from fee-paying families; for a true multiplier impact on the economy using this particular formula, the investments in child care are meant to be public funding.

“With an additional 50 full time licensed child care spaces” represents the potential increase in the number of families’ ability to spend money in their local economy, and the potential increase in the investment output impact on the economy if there were an additional 50 full time, year round child care spaces in the area. The formula for determining the increase in the purchasing power of families is the median family income (after tax) for the area X 50 (full time licensed centre based child care spaces), added to the existing figure representing the “purchasing power of families” who have access to licensed child care in the area.<sup>14</sup> The formula for determining the increase in the investment output impact on the economy if there were 50 more spaces is the average cost of care for a full time space X (the number of full time licensed centre-based child care spaces in the area (not including part time spaces) + an additional 50 spaces) X the multiplier (2.27).

<b>City of Guelph</b>		
	<b>Based on current full time licensed spaces in child care centres</b>	<b>With an additional 50 full time licensed child care spaces</b>
<b>Purchasing Power of families using licensed child care</b>	\$95,182,003	\$98,356,853
<b>Child Care and ECE investment output impact on the economy</b>	\$39,338,961	\$40,652,295

<b>Town of Erin</b>		
	<b>Based on current full time licensed spaces in child care centres</b>	<b>With an additional 50 full time licensed child care spaces</b>
<b>Purchasing Power of families using licensed child care</b>	\$4,584,146	\$8,535,996
<b>Child Care and ECE investment output impact on the economy</b>	\$1,442,204	\$2,685,644

<b>Town of Minto</b>		
	<b>Based on current full time licensed spaces in child care centres</b>	<b>With an additional 50 full time licensed child care spaces</b>
<b>Purchasing Power of families using licensed child care</b>	\$1,257,272	\$3,990,472
<b>Child Care and ECE Investment output impact on the economy</b>	\$571,943	\$1,815,297

<b>Township of Centre Wellington</b>		
	<b>Based on current full time licensed spaces in child care centres</b>	<b>With an additional 50 full time licensed child care spaces</b>
<b>Purchasing Power of families using licensed child care</b>	\$10,121,077	\$13,472,427
<b>Child Care and ECE Investment output impact on the economy</b>	\$3,754,928	\$4,998,283

<b>Township of Guelph/Eramosa</b>		
	<b>Based on current full time licensed spaces in child care centres</b>	<b>With an additional 50 full time licensed child care spaces</b>
<b>Purchasing Power of families using licensed child care</b>	\$4,263,504	\$8,070,204
<b>Child Care and ECE Investment output impact on the economy</b>	\$1,392,556	\$2,635,910

<b>Township of Mapleton</b>		
	<b>Based on current full time licensed spaces in child care centres</b>	<b>With an additional 50 full time licensed child care spaces</b>
<b>Purchasing Power of families using licensed child care</b>	No full time spaces	\$3,004,600
<b>Child Care and ECE Investment output impact on the economy</b>	No full time spaces	\$1,243,354

<b>Township of Puslinch</b>		
	<b>Based on current full time licensed spaces in child care centres</b>	<b>With an additional 50 full time licensed child care spaces</b>
<b>Purchasing Power of families using licensed child care</b>	No full time spaces	\$4,086,050
<b>Child Care and ECE Investment output impact on the economy</b>	No full time spaces	\$1,243,354

<b>Township of Wellington North</b>		
	<b>Based on current full time licensed spaces in child care centres</b>	<b>With an additional 50 full time licensed child care spaces</b>
<b>Purchasing Power of families using licensed child care</b>	\$2,896,188	\$5,735,588
<b>Child Care and ECE Investment output impact on the economy</b>	\$1,268,220	\$2,511,575

## 2. Labour Force Mobilization

### Employment levels are connected to child care availability

When two parent families face labour market issues that discourage their work involvement (such as a local job market that is limited to one sector, shift work, etc) and there is the added stress of complicated child care arrangements, they often decide that they are “better off” financially and emotionally by having one parent not work (for single parent families, this is not likely to be an option at all).<sup>15</sup>

Despite a documented preference to work full time, parents will work part time, shorter days, and/or take jobs that accommodate the available child care schedule.<sup>16</sup>

- In Canada, there is an increase in numbers of parents working part time (rather than full time) that has been connected to child care not being available when they need it.<sup>17</sup>
- A 2011 OECD report shows that in Canada the proportion of working women who work fewer than 30 hours per week (part time) has risen since 1976. High rates of workers involved in part time and fragmented work arrangements reduces overall economic productivity. Lack of available child care contributes to parents’ part time and fragmented work arrangements.<sup>18</sup>
- Strategies and policies designed to support parents’ attachment to the workforce reduce gender inequality. Supportive policies for families who work are also important for addressing problems of population ageing and pension sustainability. A Goldman Sachs research paper states that in countries where it is relatively easy for women to work **and** have families, female employment and fertility **both** tend to be higher.<sup>19</sup>

### Employment levels are connected to the cost of child care

- Research shows that a 10% increase in the cost of child care can result in a 2% decrease in maternal employment in the population.<sup>20</sup>
- Families tend to seek out child care with a goal of cost reduction in mind, and tend to consider quality of their child’s care after they’ve found options they can afford.<sup>21</sup>

Across Canada, the highest cost of care in a licensed child care programme is for infants. For example, a full year of centre-based infant care can cost families about \$15,930 in Wellington and Guelph. Two semesters (i.e., one year) of tuition for a first year student in the College of Arts, BA programme at the University of Guelph is \$6,832.26.<sup>22</sup>

The chart on the next page shows about how much, on average, families are paying for licensed centre-based child care in our service planning area. The far right column on the chart includes information about single parent families. Single parent families do not have the same options as two-parent families in deciding that one parent could remain working while the other cares for the children, nor do they

have the same level of flexibility as two parent families to coordinate their work schedules with family obligations (i.e., a strategy that is referred to as “off-shifting”).<sup>23</sup>

### Child Care Expenses for One Child in Full Time Centre-based Child Care as a Portion of Family Income<sup>24</sup>

	Median Family Income after tax	Median female lone parent family income after tax	Annual Average Cost of Full Time Child Care	Portion of Median Family Income spent on child care for one child	Portion of Median female lone parent family income after tax spent on child care for one child
<b>City of Guelph</b>	\$63,497	\$35,879	\$11,561	18%	32%
<b>Town of Erin</b>	\$79,037	\$39,678	\$10,954	14%	28%
<b>Town of Minto</b>	\$54,664	\$34,420	\$10,954	20%	32%
<b>Township of Centre Wellington</b>	\$67,027	\$38,812	\$10,954	16%	28%
<b>Township of Guelph/Eramosa</b>	\$76,134	\$48,266	\$10,954	14%	22%
<b>Township of Mapleton</b>	\$60,092	\$50,713	\$10,954	18%	22%
<b>Township of Puslinch</b>	\$81,721	\$38,245	\$10,954	13%	29%
<b>Township of Wellington North</b>	\$56,788	\$33,318	\$10,954	19%	34%

### Flexible licensed child care spaces are needed to support families

- Parents will seek the best combination of care arrangements they can get in order to achieve a comfortable level of work-life productivity.<sup>25</sup>
- When child care programmes’ schedules are wider (e.g., earlier mornings, later evenings, even overnight and weekends), then families have more flexibility and can make choices among licensed options in order to find the programme that best suits their expectations and supports their child’s development.

In Canada, more people are working during hours that fall outside of the traditional work-day than ever before,<sup>26</sup> and many are working fewer hours overall, which can also lead to sporadic work schedules.<sup>27</sup>

The pressure for families to cope with the work-life balance struggles that come from not being able to

work during traditional day-time hours can influence their child care decisions. What tends to happen in this kind of situation is families will prioritize any available child care arrangement that meets their schedule needs over a child care arrangement that is higher quality.<sup>28</sup>

Research over the past several years shows that parents make decisions to enter into, re-enter, or stay in the workforce after having children based on a number of job-related characteristics such as having to work non-traditional hours, shift and seasonal work, or commuting. Licensed home child care is an available child care option in Wellington and Guelph that has potential for supporting families whose schedules do not match centre-based care.

In rural communities in particular, families tend to work long hours (about 1.5 hours per day longer than families in urban areas). Research shows that families living in rural communities often have no other choice but to rely on informal child care, because of a lack of available care and because the care schedules of programmes that do exist may not meet their care needs. This can interfere with rural families' ability to continue working, despite their desire to.<sup>29</sup>

### **Child care benefits employers**

Canadian work-life balance research includes examining public policy and a range of employer level supports for working families with young children. Return on investment (ROI) analyses of such work-life balance supports (e.g., parental leave policies, flexible work schedules, etc) have traditionally been described in terms of their impact on families, with emphasis on how these supports help to reduce the stresses individuals and families experience associated with caring for others while working. More recently, however, the research has included examinations of the return on investment of work-life policies and employer level supports in a wider frame – including the ROI such supports have on overall workplace effectiveness, employee performance and other benefits that accumulate for all employees (not only those with children).<sup>30</sup>

Canadian statistics on sick time and workplace absenteeism illustrate the work-life balance challenges experienced by families with small children. Research shows that mothers of young children miss work an average of 10 days, and fathers miss work an average of 1.5 days due to child illness each year.<sup>31</sup> These challenges become more difficult when a child care arrangement doesn't work out for whatever reason (e.g., unreliable provider, mis-fit between the programme and the expectations of parents, poor quality, too expensive, etc). It is estimated that parents of young children spend about 10 hours of work time organizing a new child care arrangement when a new one needs to be secured.<sup>32</sup> Research from the US shows that breakdown in child care arrangements that causes workplace disruption costs American businesses \$3 billion each year.<sup>33</sup>

## The need for encouraging growth of licensed child care

- Families are using informal child care in our community. In Canada, 70% of children 5 years and younger, and 84% of school age children (6 to 12 years) have both their parents, or their sole parent, working.

Canadian estimates of the population of children who need child care show that the majority is in informal care for at least part of their parents' working hours.<sup>34</sup>

- There is a licensed child care space available for only about 10% of children in Wellington and Guelph, and yet about 74% of all mothers with children younger than 6 years (and 95% of fathers) are working.<sup>35</sup>
- It is reasonable to expect that there is a significant majority of working families that is relying on informal (unpaid and paid) child care arrangements in our communities so that they can be part of the local workforce.

The use of informal child care can result in additional financial consequences for families and for communities. Only an estimated 35% of unlicensed caregivers provide receipts.<sup>36</sup> This results in a majority of families being unable to access tax return incentives that are designed to reduce some of the cost burden experienced by young families paying for child care. This also means that child care providers who are working "under the table" are not contributing to the tax base.

From a policy development and service delivery planning perspective (at all levels of government), the undocumented nature of informal care used by families has two notable disadvantages:

1. It makes a proportion of child care work invisible, diminishing our ability to account for child care's true economic value;<sup>37</sup> and,
2. It contributes to the "market failure" of the child care industry to improve quality levels based on competitive market strategies. In other words, because informal child care is virtually invisible, the motivation for providers to offer better care than their competitors as a way to compete for client-families is also less likely. Therefore, the "market" fails to support improvements in child care quality through competition in the same that it might in another industry.<sup>38</sup>

## 3. Child Care and Children's Healthy Development

Controlled research studies are most able to demonstrate the remarkable return on investment that child care and early childhood education has on children's healthy development. About 10 years ago, American economist, James Heckman recommended to the US government that the economic well-being of the country would improve significantly if there were a substantial public investment in child care and early childhood education in America. Heckman's proposition is based on Human Capital

Theory (early intervention is a good investment that protects against the expense of remedial action later in life).<sup>39</sup>

For child care and early childhood education to have an impact on children's development and the subsequent gains for society, programmes need to be delivered in strategic ways.

- Full time, full year programmes have a greater impact on child development compared to part time, part year programmes.
- Children's participation in child care and early childhood education programmes **earlier** in their lives has a greater impact on their development than starting programmes later in their young lives.

Long term, children's involvement in high quality child care and early childhood education contributes to higher educational outcomes, lower rates of grade retention (school failure), and lower rates of children's involvement in special education. At its greatest potential, child care and early childhood education is known to influence individuals' health and their cognitive, social and financial status at 40 years of age.<sup>40</sup>

- To have an impact on children's development, the focus of the early childhood education and care programming must involve the children directly.

Other approaches to supporting children's development are not as effective. For example, family-based home visiting strategies alone (without a formal early childhood education component) and even programmes that offer a combination of services (i.e., a parenting programme that includes children's involvement in early education and care activities) have little demonstrated direct impact on children's development.<sup>41</sup>

- Above all else, child care and early childhood education must be **high quality** to achieve an economic return on system investment.<sup>42</sup>
- Quality rating systems play an important role in connecting public funding to child care programmes that demonstrate interest in developing and sustaining high quality programming for children and families.<sup>43</sup>

All research studies that show a statistically significant impact of child care and early childhood education on the economy have also shown that for the impact to be measurable on children's development, programme staff must be well qualified and well paid. It is also important for child care and early childhood education programmes to have a strong focus on curriculum and to account for academic knowledge and skills **and** social emotional skills among children.<sup>44</sup>

## Final Note: Local Economic Development Depends on Child Care

- Child care is as important to the local economy as public transportation and road systems.

Child care is both an industry in its own right as well as an infrastructure that enables other sectors of the economy to function. It is therefore critical for strategic planning for sustainable economic development to include planning for the infrastructure of child care and early childhood education. This applies to urban and rural development. The Federation of Canadian Municipalities recommends that in order for rural communities to maintain a high level of quality of life and sustainable economic competitiveness, there needs to be infrastructure development unique to serving both urban and rural populations that includes child care services.<sup>45</sup>

This is what we need to move toward. The infrastructure for child care and early childhood education must have sustained funding that is also flexible in order to be responsive to the community. Ultimately, the lack of available child care spaces costs taxpayers more than a comprehensive, publicly planned child care system would.<sup>46</sup>

The cost-benefit research on child care's contribution to regional economies shows that the current market-based strategy for child care does not reap the same benefits as public child care and early childhood education systems do. Public systems that assume common governance are able to strengthen the link between system planning and system delivery. This has an impact on the development of policies and services, so that they can be more directly focused on ensuring that there are adequate facilities, well-trained educators, strong curricular approaches for supporting children's well-being.<sup>47</sup> In the current child care system, there are additional administration costs associated with planning for services and delivering funding to third parties, while, at the same time, there is less ability to ensure that services are delivered where (and how) they are needed to meet children's, families' and communities' needs.

- Child care is not a publicly delivered service. In Ontario, the main investors in child care and early childhood education are families paying fees for child care.

Public investments to support child care in Wellington and Guelph are distributed to independent child care programme operators by the County of Wellington Child Care Services. Although all child care centres in Ontario are required to have a provincial Day Nurseries license to operate; in our service planning area, only programmes engaged in a service contract with Child Care Services receive public funding. The main features of the child care "system" are through the elements related to the service system management responsibilities Child Care Services has for planning and delivering public funding to child care operators. Even so, public funding comprises only about 24% of the overall revenue that child care programmes need to operate; typically, the majority of their revenue (76%) is paid for by families.

Child care is delivered to families in Ontario based on a market strategy that is supported by limited public funding and policy. The child care system is supplemented by independent (not for profit and for profit) organizations and businesses. This method of system delivery appeals to some because of the

potential cost-savings to government; however, there are a number of factors that limit the cost-savings reality.<sup>48</sup> There is low profitability in child care, due to its high labour expenses; when child care is delivered with the intention of reducing costs and gaining profits, wages of workers are most often compromised in order to keep costs down.<sup>49</sup> Early childhood educators' wages have a direct link to quality levels in child care programmes: the lower the wages, the lower the quality.<sup>50</sup> To have a positive impact on sustainable economic development, child care must be high quality.

- The OECD recommends that coordination of child care and early childhood education policies occur at a central level (i.e., one ministry: the Ministry of Education), and practical management of the system occur at the municipal level. Integration of child care and early childhood education services at the local level reduces the investment cost, and improves the cost benefit outcome.<sup>51</sup>

Municipalities in Ontario already have some degree of authority to manage the child care system at the local level; however, our management capacity can be heightened to have a greater impact on local economic development. Strengthening and supporting our role as the Consolidated Municipal Service Manager (CMSM) for child care and early childhood education benefits us locally and is a worthwhile pursuit because:

- ▶ Child care is a labour intensive industry, which helps to make it an employment creating sector.<sup>52</sup> Every one full time job in child care creates or sustains up to 2.15 jobs in Canada.<sup>53</sup>
- ▶ The current licensed centre-based child care industry in Wellington County and Guelph generates over \$20 million annually (\$5,243,372 in Wellington and \$15,262,496 in Guelph) making it a notable industry in our community.
- ▶ There are more than 450 child care and early childhood education workers in Wellington and Guelph's centre and licensed home-based child care industry.

These important factors emphasize the progress that can be achieved by supporting our role as the CMSM to manage the child care sector as an integrated system.

Building the infrastructure for economic development in Wellington and Guelph includes helping families to balance their work and family priorities. Economic and social progress at a societal level requires children's well-being at the family level. Wellington and Guelph's economic wealth will benefit from high quality child care and early childhood education across all of our service planning areas.

## End Notes

- <sup>1</sup> OECD (2006). *Starting Strong II: Early Childhood Education and Care*. Available at: [www.sourceoecd.org/education/9264035451](http://www.sourceoecd.org/education/9264035451)
- <sup>2</sup> UNICEF Innocenti Research Centre (2005). *Poverty in Rich Countries*. Florence, Italy: UNICEF.
- <sup>3</sup> Penn, H. (2007). Childcare market management: how the United Kingdom Government has reshaped its role in developing early childhood education and care. *Contemporary Issues in Early Childhood*, 8 (3): 192-206.
- <sup>4</sup> Pascal, C. (2009). *With Our Best Future in Mind: Implementing Early Learning in Ontario*. Report to the Premier by the Special Advisor on Early Learning. Available for download: [www.ontario.ca/earlylearning](http://www.ontario.ca/earlylearning).
- <sup>5</sup> Woodhead, M. (2006). Changing perspectives on early childhood: theory, research and policy. *International Journal of Equity and Innovation in Early Childhood*, 4 (2):5-48.
- <sup>6</sup> See the World Bank website at [www.worldbank.org/](http://www.worldbank.org/)
- <sup>7</sup> Felitti, V.J. (2002). Reverse alchemy in childhood: Turning gold into lead. Centre for Disease Control, Adverse Childhood Experiences Study, & Heckman, J. (2002). Invest in the very young. University of Chicago, cited in Williams, R. & Clinton, J. (2011). Getting it right at 18 months: In support of an enhanced well-baby visit. *Paediatric Child Health*, 16 (10): 647-650.
- <sup>8</sup> Kershaw, P., Warburton, B., Anderson, L., Hertzman, C., Irwin, L.G., Forer, B. (2010). The economic costs of early vulnerability in Canada. *Canadian Journal of Public Health*, 101 (3): S8-12 cited in Williams, R. & Clinton, J. (2011). Getting it right at 18 months: In support of an enhanced well-baby visit. *Paediatric Child Health*, 16 (10): 647-650.
- <sup>9</sup> Fairholm, R. (2011, June 22). Economic Impacts of Early Learning and Care. *Early Education Economic Forum, Atkinson Centre, OISE/University of Toronto*. Toronto, Ontario: The Centre for Spatial Economics.; Wehner, Kelly, & Prentice (2008); Warner, M. E. (2006). Overview: Articulating the economic importance of child care for community development. *Community Development, Journal of the Community Development Society*, 37 (2), pp. 1-6.; Warner, M. E. (2006). Putting child care in the regional economy: Empirical and conceptual challenges and economic development prospects. 37 (2), pp. 7-22.; and, Warner, M., Adriance, S., Barai, N., Hallas, J., Markeson, B., Morrissey, T., et al. (2004). *Economic Development Strategies to Promote Quality Child Care*. Ithaca, New York: Linking Economic Development and Child Care Research Project, Cornell University.
- Multipliers account for the input and the corresponding output of units in economic terms. Robert Fairholm, Canadian economist at the Centre for Spatial Economics, uses an example of car manufacturing to illustrate the concept. A \$100 increase in spending on cars requires a \$100 increase in production, which indirectly increases production by all other suppliers to the car (tires, etc) by \$20, resulting in a needed increase in production by *their* suppliers by \$2 – making the multiplier in this scenario 1.22 (\$122/\$100) (2011, p. 9).
- <sup>10</sup> For the multipliers for a rural region in Manitoba, see: Wehner, Kelly, & Prentice, 2008. For the US state average of 1.91 to 3.25 for the entire country of the US, see: Liu, Ribeiro, & Warner, 2004. For all of Canada, the multiplier is 2.34 - see: Centre for Spatial Economics, 2009. Establishing the multiplier (long term and short term) of early childhood education and care programmes for specific regions includes analyses of the programme costs, programme benefits, kindergarten to grade 12 educational savings, participant earnings, smoking health, post-secondary school attendance, criminal justice system savings, welfare expenditure savings, etc. For Ontario, the multiplier for child care and early childhood education is determined to be 2.27 (Fairholm, 2011).
- <sup>11</sup> Centre for Spatial Economics. (2009). *Understanding and Addressing Workforce Shortages in Early Childhood Education and Care (ECEC) Project: Literature Review of the Socioeconomic Effects and Benefits*. Ottawa: Child Care Human Resources Sector Council. & Cleveland, G., & Krashinsky, M. (2005, July 25). *The Nonprofit Advantage: Producing Quality in Thick and Thin Child Care Markets*. Scarborough, Ontario: Department of Management, University of Toronto at Scarborough. & Liu, Z. R., Ribeiro, R., & Warner, M. (2004). *Comparing Child Care Multipliers in the Regional Economy: Analysis from 50 States*. Cornell University Linking Economic Development and Child Care Research Project.
- <sup>12</sup> The formula for estimating the purchasing power of families in an area who use licensed child care comes from Ribeiro & Warner, Methodology Guide, Section 4: Number of Working Parents using child care X the median annual family income (after tax) for the area. The number of full time, full year spaces (licensed capacity, November, 2011) is used to represent the “number of working families” using licensed child care. There is obvious variation in how families actually use child care (as is described in this report), however, this variable is used based on the premise that full time, year round child care is important to supporting families’ sustained connection to the workforce.
- <sup>13</sup> This formula is based on the current investment into child care based on parent fees and licensed capacity (infants to full time 72 mos; School Age and part time spaces are not included) X the Ontario multiplier 2.27 (Fairholm, 2011; a recent Report to the Toronto Core Service Review, Community Development and Recreation Committee, July 20, 2011, by Zeenat Janmohamed, Executive Director of the Centre for Society and Child Development included the statement, “every dollar invested in childcare increases the economy’s output (GDP) by \$2.30.”). There are municipal variations that would have an impact on the “true” multiplier for each region, however, for the purpose of this exercise, using the 2.27 multiplier is most efficient and most reliable.

<sup>14</sup> The formula for estimating the purchasing power of families, with 50 additional full time, year round spaces, is the median family income (after tax) for the area X 50 (spaces)+ the existing “purchasing power” of families in the area who use licensed child care (see above)

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<sup>19</sup> Daly, K. (2007). Gender inequality, growth and global ageing. *Goldman Sachs Global Economics Paper No: 154*.

<sup>20</sup> Blau 2001 in Barnett, W. S., & Ackerman, D. J. (2006). Cost, benefits and long-term effects of early care and education programs: recommendations and cautions for community developers. *Community Development*, 37 (2), pp. 86-100.

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<sup>22</sup> University of Guelph, Office of Registrarial Services. (2011, September). *Student Financial Services*. Retrieved 12 7, 2011, from Undergraduate Student Tuition Fees: [www.uoguelph.ca/registrar/studentfinance/index.cfm?app=tuition&page=index&level=ug&year=2011&semester=fall&cohort=2011&campus=uofg&feepage=canft](http://www.uoguelph.ca/registrar/studentfinance/index.cfm?app=tuition&page=index&level=ug&year=2011&semester=fall&cohort=2011&campus=uofg&feepage=canft)

<sup>23</sup> Ruhm, C.J. (2011). Policies to assist parents with young children. *The Future of Children*, 21 (2): 37-68.

<sup>24</sup> Median family income after tax data are 2006 Census data from the Wellington-Dufferin-Guelph Coalition for Report Cards on the Well-Being of Children (2011). The well-being of children ages 7-13: A report card for Wellington-Dufferin-Guelph. The average cost of child care is the average of the “Average Public Rates 2010-2011” for full time, full year (52 weeks - Policies vary among programmes, however many require fees to be covered during times that the child is away from the programme for vacation, etc.) Infant, Toddler and Preschool care. Infant care is valued at \$15,340 (Guelph & Wellington), Toddler care is valued at \$10,244 (Guelph) and \$9,360 (Wellington), Preschool care is valued at \$9,100 (Guelph) and \$8,164 (Wellington). Please note that child care subsidies are available to families to support them in covering the cost of child care based on the following income guide, established by the Province of Ontario (Ministry of Education):

Family Income	Family's Share of Cost per month	Family Income	Family's Share of Cost per month
Under \$20,000	No cost		
\$ 25 000	\$ 42	\$ 30 000	\$ 83
\$ 35 000	\$ 125	\$ 40 000	\$ 167
\$ 45 000	\$ 292	\$ 50 000	\$ 417
\$ 55 000	\$ 542	\$ 60 000	\$ 667
\$ 65 000	\$ 792	\$ 70 000	\$ 917

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