

CHILD DEPRIVATION IN ONTARIO
- A (less than perfect) comparison with Europe -

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Abstract

This study assesses how child deprivation in Ontario compares to that of Ontario's population in general and that of children in eight European high-income countries (France, Germany, United Kingdom, Belgium, the Netherlands, Denmark and Sweden). This research has been motivated by the publication of UNICEF's 10th Child Report Card in May 2012 which monitors child poverty in developed countries, including Europe, Canada, the United States, Australia, New Zealand and Japan. Due to lacking data, the report card only compares child deprivation for Europe. For Ontario, however, deprivation information is available in the 2009 Ontario Material Deprivation Survey. Being a province that is close to Canada's average socio-economic performance, replicating the report card methodology allows exploring how child deprivation in Ontario, and possibly Canada, compares Europe. While the European and Ontario data are both from 2009 and the definitions for a number of deprivation items overlap, a perfect comparison is not possible: differences in deprivation can thus also be due to differences in the data.

This study finds that Children in Ontario have somewhat higher deprivation levels (11.7%) than the Ontario population as a whole (9.9%). In comparison to the eight European countries, Ontario also has higher child deprivation levels, ranking right after France which has the highest deprivation rates and 19th out of 30 countries. Just like their European peers, Ontario children are more likely to live in households with lone parents, low education, low income and fewer employed household members and the deprivation rates for children living in these families are again among the highest. Nevertheless, the relative disadvantage that such children in Ontario face seems smaller than in the European countries: the discrepancy between the average child deprivation rate and those of children with high risk characteristics is smaller. Furthermore, when comparing the overlap between children living in low income families (LICO) and those living in deprived families this study finds that about 6% of the children is both income poor and deprived; 6% is deprived only and 10% is income poor only (78% is neither income poor or deprived). In sum, rather than resembling the Nordic countries, child deprivation in Ontario resembles more to that in Belgium, Germany, United Kingdom and especially France.

These findings suggest that: i) collecting deprivation information in Canada will contribute to a better and more nuanced understanding of poverty; ii) monitoring progress on child poverty (such as Ontario's target to reduce child poverty) also requires child specific indicators of material deprivation; iii) the lack in overlap between income poor and deprived could be a reason to reassess poverty reduction measures to 'low income' households as they risk excluding half of the deprived households.

1. Introduction

Despite high average living standards in rich countries, child poverty still exists and, in most countries children have an above average risk of living in poverty. UNICEF's biennial Child Report Card monitors and compares child poverty between developed countries, including European countries, Canada, the United States, Australia, New Zealand and Japan.

The 10th Report Card not only compares monetary poverty but, for the European countries, it also compares child deprivation (UNICEF Innocenti Research Centre, 2012). "The Report Card [...] discusses monetary poverty and deprivation as related but conceptually distinct. The main arguments for this separate treatment relate to the fact that traditional monetary poverty measures and deprivation measures are telling a story of their own. While money-metric indicators of poverty give an indication of the financial means of the household to satisfy its needs, deprivation indicators provide information on degree to which some of these needs are actually met. The latter is the result of a mixture of variables including the income and resources available to the households, spending decisions by the households, the availability of (public) goods and services and the state of the economy in general. Mixing deprivation indicators with monetary poverty data in a single index leads the loss of dimensions rather than more insights gained from adding dimensions." (de Neubourg et al, 2012, p. 1)

Unfortunately, there is no comparison with Anglo-Saxon countries in terms of deprivation because such information is less routinely collected in these countries and, when it exists, it is not fully comparable to that of the European countries. This is also the case in Canada where efforts to collect information on material deprivation have only begun recently with the Ontario Material Deprivation Survey (OMDS, only for 2009) and the Canadian Household Panel Survey (collection started end 2011, the data will be made available earliest end 2013).

Using the Ontario survey data this paper replicates the Report Card 10 methodology to explore how deprivation of Ontarian children compares to that of Ontarians in general and their peers in European countries. While the European and Ontario survey data were both collected in 2009 and a direct comparison will be possible for a number of deprivation items, the comparison is less than perfect. Firstly, the Report Card uses 14 child specific indicators for the European countries while the 9 selected Ontario indicators are only available at a household level. Secondly, to compare the relation between monetary poverty and deprivation we can only use Canada's official Low-Income Cut-Offs (LICO) rather than the EU's at-risk-of-poverty indicator (with a threshold at 60% of the national median) that is used in the discussion paper underlying the Child Report Card (de Neubourg et al, 2012).

The paper is structured as follows: section 2 outlines the methodology followed by UNICEF's Report Card, its implementation on the Ontario data and details comparability issues. Section 3 presents the Ontario results at deprivation indicator and composite child deprivation index level while section 4 analyzes which family characteristics are associated with an increased risk of deprivation. Section 5 shows the relative contribution of each deprivation indicator to the total index and section 6 analyses the degree to which deprived children also live in income poor households. Where possible, the results for Ontario are compared to the European average and a selection of European countries with similar average living standards namely France, Germany, United Kingdom, Belgium, the Netherlands, Denmark and Sweden. Section 7 summarizes the findings and their relevance for the Canadian / Ontarian context.

2. Methodology Child Report Card 10 and its application to child deprivation in Ontario

The Child Report Card aims to create awareness of the existence of child poverty in rich countries by providing an international comparison between developed countries. The central feature in the report is a 'league table' ranking countries from a low to a high prevalence of child poverty. Unlike in the previous report cards, which focused on household income to assess whether the household and its minor members were poor or not, the 10th report card additionally uses child deprivation indicators to assess child poverty. While income provides information about the financial resources that a household has to meet its (basic) needs, deprivation indicators provide information about whether the household actually meets those needs.

There are several reasons why one would (also) want to use deprivation information, particularly when analyzing child wellbeing. Firstly, even if one has sufficient financial resources, not all goods and services needed to satisfy needs are provided by the market (Bourguignon and Chakravarty, 2003). Particularly in areas such as education and health, which are key areas for child wellbeing and child development, public or semi-public providers play an important role in determining quantity, access and quality of services. Moreover, children "cannot be regarded as full economic agents exercising consumer sovereignty: they are not able to secure their own income/resources until a certain age and they are not sovereign in making consumption decisions" (de Neubourg et al, 2012, p. 2). In sum, financial resources alone are therefore unlikely to provide sufficient and complete information about whether children's basic needs are met.

The child deprivation approach in the Child Report Card builds on the research tradition pioneered by Townsend (1979) conceptualizing deprivations as the inability to acquire 'social necessities' which are items and activities that no one in that society should go without. Current practice in this tradition is that opinion surveys and/or focus groups are used to find out whether certain items and activities are perceived as necessary by members of society and that subsequent survey questions are designed such that they can differentiate between respondents who choose not to have a certain item and those who do not have an item because they cannot afford it.

Another characteristic of the child deprivation approach is the preference for using child specific information rather than household level information. In addition to the reasons already highlighted above, household level information ignores the distribution of resources between household members. When resources are very limited, adult members can prioritize the needs of the children but the reverse can also be the case. In that respect, child specific indicators are therefore better able to capture whether children's needs are met. Moreover, children's needs may differ from those of adults and thus require different information i.e. items such as playgrounds, toys and children's books.

To measure child deprivation, the report card first selects deprivation indicators which are subsequently compiled into two child deprivation index that provides the basis for the child deprivation league table. The source of information is the 2009 wave of the European Union Statistics on Income and Living Conditions (EU-SILC). This survey provides information for 29 European countries on a range of topics including income and (household level) deprivation; the 2009 wave additionally has a special child wellbeing module which provides information on 19 items relevant for children. Given international comparative perspective of the study, the

deprivation indicators are selected such that they are of relevance to (most of) the countries in the study. More specifically, Cronbach's Alpha is used to screen which combination of indicators reflects the common underlying concept of child deprivation. As a rule of thumb, a coefficient of 0.7 or higher indicates that a specific combination of items can be used as a reliable instrument (Nunally, 1978).

Given the richness of the EU-SILC data, several types of indicators are tested. The official EU measure of material deprivation, a composite indicator based on eight household level deprivation items², does not pass the test; only for a few lower income countries the Alpha is above 0.7 (de Neuboug et al, 2012, p. 4). Subsequently, 14 indicators are retained from a range of household and child level indicators covering various wellbeing domains (financial, durables, dwelling, safety, food and nutrition habits, clothing and footwear, education and educational assets, social relations and participation and, leisure and games). For the pooled sample of countries Cronbach's Alpha is 0.889. For some of the highest income countries (Finland, Iceland, Ireland, Netherlands, Norway and Sweden), however, the Alpha is below 0.7 but it cannot be further improved. The indicators are listed in table A1 in the appendix.

The indicators are subsequently used to calculate a European Child Deprivation Index (de Neubourg et al, 2012) and a so-called Adjusted European Child Deprivation Index (following the methodology by Alkire and Foster, 2008; 2011). The European Child Deprivation Index reflects the percentage of deprived children and is created by adding the number of deprivations for each child (age 0-16) and selecting a benchmark threshold of two deprivations, meaning that only children deprived in two or more items are considered deprived.³ The Adjusted index reflects the average percentage of deprivations and thereby also takes into account the breadth of deprivations (i.e. whether, on average, a deprived child experiences two, three or more deprivations). This information is then used to construct the country league table, analyze the characteristics of deprived children and to study the overlap between income poverty and child deprivation.

Applying the child deprivation approach to Ontario

This paper replicates the above described methodology to study child deprivation in Ontario as compared to the general population in Ontario and to get a first impression of how children in Ontario fare in comparison to European children. However, given that the underlying deprivation data substantially differ between both surveys, the comparison of Ontario with Europe can, at best, be suggestive of true differences in child deprivation.

Currently, the only deprivation data available in Canada are those of the Ontario Material Deprivation Survey (OMDS) which was collected as a supplemental module to the March-May

² The EU material deprivation indicator consists of eight items indicating the inability to: meet unexpected expenses; pay mortgage, rental and utility bills; afford a one week holiday away from home; meat, fish or a vegetarian equivalent once every two days; afford to keep the home warm; afford a car/washing machine/phone/TV. For more information, consult Eurostat at

http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:Material_deprivation_rate

³ The de Neubourg et al (2012) working paper also provides the results for alternative thresholds. While choosing an alternative threshold has a large impact on child deprivation rates there are only minor changes in country rankings.

2009 Labour Force Survey.⁴ The Ontario deprivation indicators were developed through a community-based approach process funded by the Metcalf Foundation, Daily Bread Food Bank and the Caledon Institute of Social Policy and subsequently refined and adopted by Statistics Canada (see Matern et al 2009A; 2009B for further details).

Table 1: Survey questions related to deprivation indicators

fruit	Do you and your family eat fresh fruit and vegetables every day? ¹ <i>Comparable with Child Report Card indicator.</i>
dental	Are you and each member of your family able to get dental care if needed?
meat	Do you and your family eat meat, fish or a vegetarian equivalent at least every other day? <i>Comparable with Child Report Card indicator. Some difference in wording regarding frequency (EU-SILC: at least once a day).</i>
appliances	Are you and your family able to replace or repair broken or damaged appliances such as a vacuum or a toaster?
clothes ²	Do you and each member of your family have appropriate clothes for job interviews?
around	Are you and your family able to get around your community, either by having a car or by taking the bus or an equivalent mode of transportation?
friends	Are you and your family able to have friends or family over for a meal at least once a month? <i>Comparable with Child Report Card indicator, though no reference is made to play dates with other children and there is some difference in wording (EU-SILC: “once a month” rather than “from time to time”).</i>
pest	Is your house or apartment free of pests, such as cockroaches?
gifts	Are you and your family able to buy some small gifts for family or friends at least once a year?
hobby	Do you and each member of your family have a hobby or leisure activity? <i>Comparable with Child Report Card indicator (labeled as ‘leisure’), though some households might chose to spend resources on children’s hobbies but are then not able to afford one for one or several adults.</i>

¹ For every item, this question followed: “Is this because you cannot afford it, or for some other reason?” Respondents who answered “no” to the first question and “yes” to the affordability question are considered materially deprived.

² The “clothes” indicator was dropped because the question only refers to working age household members. Source: Statistics Canada (undated) and European Commission (2009)

The information in the OMDS survey can be used to construct ten deprivation indicators (listed in Table 1) of which nine are retained for the child deprivation analysis. The ‘clothes’ indicator was dropped because it only refers to the working age members in the household. As with the EU-SILC data, the indicators reflect whether the household cannot afford the item. Four of the Ontario deprivation indicators (fruit, meat, friends and hobby) are reasonably comparable to those used in the Child Report Card as they are based on comparable questions or the questions refer to comparable social necessities. In comparison to the European deprivation indicators the following data differences should be noted: the child deprivation analysis in Ontario will be based on nine indicators (rather than 14 in Europe); of which only four indicators are comparable to the European data; and the Ontario indicators refer to the household level while the European indicators are based on child specific questions. While the measurement methodology controls

⁴ This study uses the public use OMDS (omds_75M0012_E_2009) which is available through the ODESI data portal from the library of the University of Ottawa.

for the amount of indicators used (by virtue of using relative deprivation indicators) and both European and Ontario indicators reflect a common wellbeing dimension (generally referred to as ‘material deprivation’), differences in child deprivation between Ontario and Europe may thus also be the result of differences in the i) selection of indicators and ii) child focused indicators (or not).

Table 2: Number of observations in OMDS

	Observations
Households	10,700
Individuals	26,166
Households with children (age 0-17)	3,263
Children (age 0-17)	5,861

Table 3: Assessment of the Ontario deprivation scale applied to households with children

ONTARIO			item-test correlation	item-rest correlation	Average inter item covariance	Alpha coefficient
fruit	3263	+	0.6292	0.4848	0.2163	0.6883
dental	3257	+	0.5197	0.3515	0.236	0.7119
meat	3263	+	0.5449	0.3817	0.2314	0.7066
appliances	3248	+	0.6802	0.5496	0.207	0.6762
around	3261	+	0.4146	0.2313	0.2548	0.7323
friends	3255	+	0.6507	0.5113	0.2124	0.6833
pest	3253	+	0.4054	0.2204	0.2566	0.7342
gifts	3257	+	0.5865	0.4318	0.2239	0.6977
hobby	3251	+	0.6154	0.4675	0.2186	0.6912
Test scale					0.2286	0.7273

Note: Cronbach’s Alpha is 0.7303 if all sampled households are included (results not shown here).

Table 2 lists the number of observations in the OMDS while Table 3 lists the results for Cronbach’s coefficient of reliability: the Alpha is 0.7273 which is above the reliability threshold indicating that the nine indicators are appropriated to be used to scale the underlying concept of (material) deprivation.⁵

3. Ontario Child Deprivation Index

Following the methodology of the Child Report Card, this section constructs the Ontario Child Deprivation Index. Table 4 lists the deprivation rates of the indicators to be included in the Ontario index as well as those of the comparable indicators used for the European index (Table A3 in the appendix summarizes the rates for all 14 European indicators). The deprivation rates in Ontario vary considerably among indicators (varying from 0.6% to 11.9%). Another observation

⁵ Table 3 also shows that the Alpha could only slightly be improved to 0.7342 with the exclusion of the ‘pest’ indicator.

is that Ontarian children are typically somewhat more likely to be living in deprived households in comparison to the Ontario population, a phenomenon which is also found when studying poverty and deprivation in most developed and developing countries. How does Ontario compare to Europe? The Europe-29 deprivation rates reflect the average deprivation levels across the 32 countries in the European sample which include high income West-European countries as well as middle income East-European countries. With the exception of the fruit indicator, Ontario's deprivation rates are below the Europe-29 average. However, as Ontario is more similar to Western Europe in terms of average living standards, this study also includes the results for eight West-European countries.⁶ Depending on the indicator, Ontario's deprivation levels are similar to countries such as France (FR), Belgium (BE), Germany (DE) and the United Kingdom (UK). Within this European sub-sample, these countries tend to be the ones with the higher deprivation levels. Countries such as Denmark (DK), Finland (FI), Netherlands (NL) and Sweden (SE) tend to have the lowest deprivation rates.

Table 4: proportion of children lacking each item in Ontario and Europe (%)

	Fruit	Dental	Meat	Appliances	Around	Friends	Pest	Gifts	Hobby/Leisure
Ontario									
Children ¹	5.9	10.7	1.5	11.9	0.6	4.6	0.8	2.3	7.6
Population	5.4	10.1	1.5	9.4	0.7	4.2	0.6	2.2	5.6
Europe²									
Age ³	1-16		2-16			3-16			2-16
Europe-92	4.2	-	4.5	-	-	6.1	-	-	11.1
BE	1.6	-	2.7	-	-	3.0	-	-	7.2
DE	2.4	-	4.9	-	-	2.7	-	-	6.7
DK	0.5	-	0.5	-	-	1.4	-	-	2.5
FI	0.5	-	0.0	-	-	0.0	-	-	1.3
FR	4.7	-	2.1	-	-	3.0	-	-	6.7
NL	0.6	-	0.7	-	-	0.6	-	-	3.3
SE	0.1	-	0.1	-	-	0.7	-	-	1.1
UK	1.0	-	1.8	-	-	1.5	-	-	6.5

¹ Children aged 0 to 17. The public use file of the OMDS data only provides information about the number of children in the household the 0-17 age category.

² Table A3 in the appendix summarizes the proportions for all 14 European indicators.

³ As the European indicators are child specific, some questions are only relevant to children in certain age groups. Source: own calculations OMDS (2009) and de Neubourg et al (2012, p.9)

To obtain the Ontario Child Deprivation Index⁷ the number of items a child is lacking is added and a deprivation threshold is set: as the Child Report Card sets the European threshold at 2 deprivations we will also use this as a benchmark for Ontario. While there are some guidelines (see for instance Alkire and Santos, 2009), ultimately, the choice for a specific threshold remains arbitrary and it is therefore considered good practice to assess to what degree the overall findings

⁶ Table A2 in the appendix lists the GDP per capita (in PPP).

⁷ While both indices use a threshold of two or more deprivations, the Ontario Child Deprivation Index used in this study is based on nine deprivation indicators while the Ontario Deprivation Index that is used to monitor progress on Ontario's poverty reduction strategy is based on all ten indicators (as listed in Table 1); as a consequence the child deprivation level differs slightly from 11.7% in this study versus 12.5% in the 2011 annual report (Government of Ontario, undated).

are sensitive to alternative thresholds. Table 5 shows that, were the threshold set at one or more deprivations, 22% of the Ontarian children are deprived. This number drops to 11.7% when we use the same threshold as in the Child Report Card (2 or more deprivations) and continues to fall rapidly for higher thresholds. In comparison to the average Ontarian, children are more likely to be counted as deprived irrespective of the threshold used.

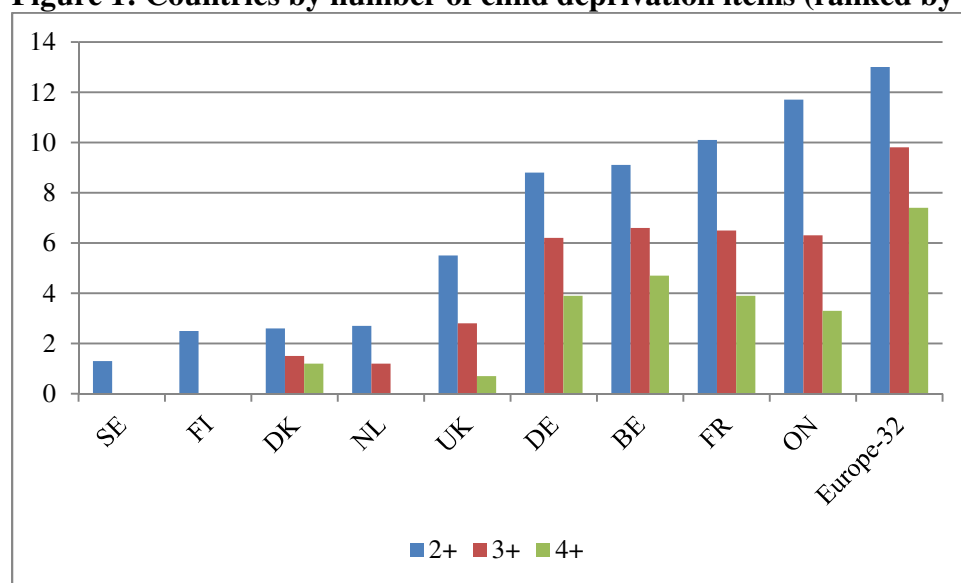
Table 5: Distribution of items lacking in Ontario and Europe (%)

	1+	2+	3+	4+	5+	6+	7+	8+	9+	10+
Children Ontario (max. 9 items)	22.0	11.7	6.3	3.3	1.5					
Population Ontario (max. 9 items)	19.3	9.9	5.3	2.8	1.3					
Children Europe-29 (max. 14 items)	22.0	13.3	9.8	7.4	5.8	4.5	3.4	2.4	1.8	1.3
BE	18.6	9.1	6.6	4.7	3.1	2.3	1.6	1.1		
DE	16.0	8.8	6.2	3.9	2.8	2.0	1.1			
DK	5.9	2.6	1.5	1.2						
FI	6.9	2.5								
FR	19.9	10.1	6.5	3.9	2.6	1.5	1.1			
NL	8.2	2.7	1.2							
SE	2.7	1.3								
UK	13.4	5.5	2.8	1.7	1.3					

Notes: values below 1% are not shown.

Source: own calculations OMDS (2009) and de Neubourg et al (2012, p. 11)

Figure 1: Countries by number of child deprivation items (ranked by 2+ deprivations)



Source: own calculations OMDS (2009) and de Neubourg et al (2012, p. 11)

Comparing child deprivation levels between Ontario and Europe (Table 5 and Figure 1), Ontario is the weakest performer relative to the sample of West-European countries. Even though Ontario performs above average relative to the Europe-29 deprivation rate it would rank 19th out of 30 if it were included in UNICEF's league table (UNICEF Innocenti Research Centre, 2012). However, when thresholds of 3 or more deprivations are used Ontario outperforms France, Belgium and Germany (Table 6). Unfortunately, it is not possible to assess whether these

rankings would also hold if all deprivation indicators were comparable but this would be the most likely scenario because the rankings in Table 6 are consistent with the relative deprivation levels for the comparable single indicators in Table 4 where Ontario has deprivation levels similar to those in Belgium, France, Germany and the UK.

Table 6: Re-rankings of countries on the deprivation scale using different thresholds

1+	2+	3+	4+	5+
SE	SE	SE	SE	SE
DK	FI	FI	FI	FI
FI	DK	NL	NL	NL
NL	NL	DK	UK	DK
UK	UK	UK	DK	UK
DE	DE	DE	ON	ON
BE	BE	ON	DE	FR
FR	FR	FR	FR	DE
ON	ON	BE	BE	BE
Europe-29	Europe-29	Europe-29	Europe-29	Europe-29

Source: own calculations OMDS (2009) and de Neubourg et al (2012, p. 11)

4. Characteristics of deprived children

Table 7 shows that, just like with income poverty, Ontario children are more likely to be deprived than the Ontarian population (11.7% versus 9.9%). Furthermore, it shows the characteristics of children and individuals are associated with having a higher likelihood of lacking two or more items. For instance, whereas an average of one in ten children (11.7%) is deprived in Ontario, nearly three in ten children living in a rented dwelling are deprived (28.8%).⁸ Other high risk of deprivation characteristics are living in a non-dual earner family, having an unemployed household member, having a main earner of the family with a low level of education, having migrated to Canada less than 10 years ago, having non-wage income as the main income source and having an income below the poverty line.

As some of these characteristics may overlap however, Table 8 displays the results of a simple logistic regression estimating the odds of lacking more than two items for all characteristics simultaneously. After controlling for all other characteristics, having migrated to Canada less than 10 years ago and having a non-wage income as the main income source do not further explain the odds of being deprived. Thus, even though children of recent immigrants are more likely to be deprived, their situation is associated with other family characteristics such as low education, fewer earners in the family, unemployed family members and low income rather than the duration of their residence in Canada.

In comparison to the Ontario population as a whole (3rd column Table 7), and deprived children in Europe, the high risk characteristics for Ontario children are generally the same: households with lone parents, low education, low income and fewer employed household members are also found to be high risk characteristics in Europe (de Neubourg, 2012, p. 13-15). The results,

⁸ Or, as table A3 in the appendix shows, while only 20% of the children live in a rented dwelling these children constitute 52% of deprived children.

however, also show that there is quite some heterogeneity among Ontario and the European countries.

Firstly, these countries have different demographic structures which may affect the incidence of children lacking more than two items as well as the composition of deprived children. For instance, Table 9 shows that Ontario, Denmark and France have a relatively high share of children living in households where the highest income earner did not finish secondary school (34-35%). Also, together with Germany these countries also have a higher share of children living in lone parent households (20-24%). Given that lone parenthood and low education are high risk of deprivation characteristics, it is therefore not surprising that Ontario children with these characteristics represent a large share of deprived children (38% of deprived children are living in lone parent households and 25% in low education households; see Table A4).

Secondly, there is also heterogeneity across countries in the degree to which a particular characteristic is associated with an increased risk of deprivation. Table 10 shows that the deprivation rates of children living in lone parent, low education and recent landed immigrant households in the province of Ontario fall are among the highest in comparison to the eight European countries. As this poor performance can in part be explained by the overall higher deprivation levels in Ontario, Table 10 also shows the degree to which children living in such households are more at risk of deprivation relative to the average child in Ontario. For instance, while lone parent households are clearly at an above average risk in all countries, Table 10 shows that the deprivation risk for lone parents in Denmark and the Netherlands is much more elevated above the average risk (around four to five times) than in Ontario, France and the UK (around two times). Moreover, while children living in migrant families also typically have an above average risk, the discrepancy between non-migrant and migrant children varies greatly across countries: just like Ontario, the discrepancy is relatively low in countries such as Germany, Sweden and the UK (two times or less) but particularly high in countries such as Belgium, the Netherlands, Denmark and Finland (for every non-migrant child four or more migrant children are lacking two or more items). For Ontario, the discrepancy in deprivation incidence for children living in low education or unemployed / low work intensity households with the average incidence is low in comparison to the European countries.

Table 7: Ontario Child Deprivation Index (% lacking 2+) by household characteristics

	Children	Population
Ontario (Child) Deprivation Index	11.7	9.9
Dwelling		
- Dwelling owned	6.8	6.2
- Dwelling rented	28.8	24.0
Type of economic family		
- Unattached individual	-	15.1
- Husband-wife, dual earner couple	3.5	3.7
- Husband-wife, single earner couple	14.4	11.2
- Single-parent family	22.8	22.2
- Other family types	33.0	13.6
# unemployed persons		
- None	9.5	8.3
- One	23.9	20.2
Education highest earner		
- Some secondary or lower	28.4	18.1
- Grade 11 to 13, graduate	13.7	11.3
- Some post-secondary education	13.3	10.6
- Post-secondary certificate or diploma	10.8	9.8
- University bachelor's degree	4.1	4.0
- University graduate degree	4.7	3.4
Major earner's immigration status		
- Landed in 1999 or later	20.5	22.1
- Landed before 1999 or has never been a landed immigrant	11.1	9.4
Population of urban areas		
- Rural areas	7.4	6.9
- Urban, population to 99,999	13.3	10.8
- Urban, population of 100,000 to 499,999	12.0	9.9
- Urban, population of 500,000 or more	12.0	10.2
Main source of income		
- Wages and salaries	9.2	8.2
- Income from self-employment	8.1	7.8
- GST and HST Credit or other government transfers	43.9	46.4
- All Other	25.1	8.9
Income poverty / Low income		
- Less than LICO	37.9	34.3
- More than LICO	6.6	6.5

Source: own calculations OMDS (2009)

Table 8: Odds of lacking 2+ deprivation items (Y=1 is deprived)

	Odds ratio	Robust SE	p-value
Dwelling			
- Dwelling owned	Omitted		
- Dwelling rented	2.044	0.369	0.000
Type of economic family			
- Husband-wife, dual earner couple			
- Husband-wife, single earner couple	2.886	0.616	0.000
- Single-parent family	2.869	0.621	0.000
- Other family types	3.672	1.024	0.000
# unemployed persons			
- None	Omitted		
- One or more	1.714	0.314	0.003
Education highest earner			
- Some secondary or lower	3.759	1.426	0.000
- Grade 11 to 13, graduate	2.830	1.009	0.004
- Some post-secondary education	2.771	1.139	0.013
- Post-secondary certificate or diploma	3.085	1.032	0.001
- University bachelor's degree	0.990	0.410	0.981
- University graduate degree	Omitted		
Major earner's immigration status			
- Landed in 1999 or later	1.295	0.408	0.411
- Landed before 1999 or has never been a landed immigrant	Omitted		
Population of urban areas			
- Rural areas	Omitted		
- Urban, population to 99,999	1.067	0.383	0.857
- Urban, population of 100,000 to 499,999	1.104	0.364	0.765
-Urban, population of 500,000 or more	1.205	0.406	0.580
Main source of income			
-Wages and salaries	Omitted		
- Income from self-employment	1.019	0.283	0.945
- GST and HST Credit or other government transfers	1.017	0.419	0.968
- All Other	1.230	0.431	0.555
Income poverty / Low income			
- Less than LICO	3.988	0.728	0.000
- More than LICO	Omitted		

Notes: logistic regression with deprivation status (1/0) as independent variable.

Source: own calculations OMDS (2009)

Table 9: Children living in high risk of deprivation households (as a % of all children)

	Some secondary or lower	One unemployed person	Lone parent	Recent migrant (major earner landed after 1999)
ON	33.9	30.0	19.5	6.8
	Some secondary or lower	Low work intensity (working 30% or less of full-time equivalent)	Lone parent	Migrant (at least one foreign born parent)
BE	26.7	40.6	20.0	17.9
DE	35.6	41.5	23.8	16.7
DK	11.7	22.5	10.1	7.9
FI	2.5	21.3	6.8	11.8
FR	34.0	42.2	21.5	20.5
NL	13.8	23.7	14.9	7.8
SE	6.5	14.2	4.3	2.7
UK	19.3	13.3	12.2	7.4

Notes: While likely to capture a sub-group of children living in similar circumstances, due to differences in the definitions for the high deprivation risk characteristics in columns 3 and 5 the population shares between the European and Ontario data are not fully comparable. Particularly for the immigration variable, the population share of children from migrant households is likely to be much higher if the European definition would be used.

Source: own calculations OMDS (2009) and de Neubourg et al (2012, p. 18)

This heterogeneity in relative deprivation risks of vulnerable groups between countries could be attributed to differences in economic opportunities such as the availability of low skilled or flexible jobs. But, it is also likely that policies play a role in attenuating or increasing risks of deprivation for households with particular characteristics (such as the availability of low cost child care, minimum wage policies and income transfers to families with children and lone parents specifically). The degree to which each of these factors are playing a role in explaining the risk of deprivation is a relevant topic for further research.

Concluding, Ontario has higher child deprivation rates than the eight European countries and Ontarian children living in vulnerable households such as households with lone parents, low education, low income and fewer employed household members also typically have among the highest deprivation rates. However, despite the high levels of deprivation the disadvantage of Ontarian children living in vulnerable households in comparison to that of the average child is lower than the disadvantage experienced by their peers in the eight European countries (in other words, the gap in poverty risk between vulnerable groups and the average child is smaller in Ontario).

Table 10: Deprivation rates of children with a high risk characteristic (discrepancy of high characteristic deprivation rated relative to the average deprivation rate)

	Some secondary or lower	One unemployed person	Lone parent	Recent migrant (major earner landed after 1999)
ON	28.4 (1.6)	23.9 (2.0)	22.8 (2.0)	20.5 (1.8)
	Some secondary or lower	Low work intensity (working 30% or less of full-time equivalent)	Lone parent	Migrant (at least one foreign born parent)
BE	26.7 (2.9)	40.6 (4.5)	20.0 (2.2)	19.6 (2.2)
DE	35.6 (4.1)	41.5 (4.7)	23.8 (2.7)	16.7 (1.9)
DK	11.7 (4.5)	22.5 (8.7)	10.1 (3.9)	7.9 (3.0)
FI	2.5 (1.0)	21.3 (8.5)	6.8 (2.7)	11.8 (4.7)
FR	34.0 (3.4)	42.2 (4.2)	21.5 (2.1)	20.5 (2.0)
NL	13.8 (5.1)	23.7 (8.8)	14.9 (5.5)	7.8 (2.9)
SE	6.5 (5.0)	14.2 (10.9)	4.3 (3.3)	2.7 (2.1)
UK	19.3 (3.5)	13.3 (2.4)	12.2 (2.2)	7.4 (1.4)

Notes: Calculated by dividing the deprivation incidence of the subgroup by the average incidence. While likely to capture a sub-group of children living in similar circumstances, due to differences in the definitions for the high deprivation risk characteristics in columns 3 and 5 the population shares between the European and Ontario data are not fully comparable.

Source: own calculations OMDS (2009) and de Neubourg et al (2012, p. 11, 16-17)

5. Decomposition of the Adjusted Ontario Child Deprivation Index

The Ontario Child Deprivation Index (OCDI) lists the percentage of children lacking two or more items but it does not distinguish between children lacking two, three, four or more items while children lacking many items, i) are likely to be faring worse than those lacking a few and ii) may have different and more severe issues / problems than those of deprived children in general.

This study therefore presents the results of an alternative index that also takes the number of items into account (as explained in section 2) and is here referred to as the Adjusted Ontario Child Deprivation Index. Table 11 compares the results of the OCDI with the adjusted OCDI for children in Ontario in general and for different groups of children. A higher adjusted OCDI score implies that children, on average, have more deprivations: the score for Ontario children as a whole is 5.1% and the adjusted OCDI scores by household characteristic suggest that the same

groups of children are at an elevated risk as the OCDI.⁹ In short, in the case of Ontario the indicators tell a similar story.

Another feature of the adjusted OCDI is that it can be decomposed to show the relative contribution of each deprivation item (Table 12). The largest contributions in the adjusted deprivation index come from dental (23%), appliances (26%) and hobby's (17%). On the one hand this information can point at policy areas in which efforts have the potential to reduce overall deprivation most. Improving access to dental care coverage or subsidized local leisure activities for children, for instance, is likely to reduce deprivation rates in Ontario.

On the other hand, such interpretations are subject to a few important caveats. Firstly, the deprivation items are simply "indicative" of larger issues than are measured (de Neubourg et al, 2012, p. 28). In the case of Ontario, the dental variable likely not only reflects the difficulty in affording necessary dental care but all health services that are not covered by the Ontario Health Insurance Program (OHIP). Secondly, given that the OMDS data do not tell which person in the household is lacking these items, thus we cannot know whether it are predominantly the adults, the children or both not taking part in leisure activities for financial reasons. Thirdly, improving a family's income generating abilities will also reduce overall deprivation levels; this, however, does not tell us in which ways policy can influence this (best).

⁹ Because they measure different things, the scores for the OCDI and adjusted OCDI cannot be directly compared. Comparing the discrepancies of subgroup scores relative to the average score in the child population indicates that the relative risk of each characteristic hardly varies between the two indices (not shown here).

Table 11: The (Adjusted) Ontario Child Deprivation Index (OCDI)

	OCDI	Adjusted OCDI
All children	11.7	5.1
Dwelling		
- Dwelling owned	6.8	2.9
- Dwelling rented	28.8	12.8
Type of economic family		
- Husband-wife, dual earner couple	3.5	1.7
- Husband-wife, single earner couple	14.4	6.3
- Single-parent family	22.8	9.4
- Other family types	33.0	14.1
# unemployed persons		
- None	9.5	4.2
- One	23.9	10.0
Education highest earner		
- Some secondary or lower	28.4	11.7
- Grade 11 to 13, graduate	13.7	6.3
- Some post-secondary education	13.3	6.4
- Post-secondary certificate or diploma	10.8	4.5
- University bachelor's degree	4.1	1.7
- University graduate degree	4.7	2.2
Major earner's immigration status		
- Landed in 1999 or later	20.5	9.8
- Landed before 1999 or has never been a landed immigrant	11.1	4.7
Population of urban areas		
- Rural areas	7.4	3.3
- Urban, population to 99,999	13.3	5.0
- Urban, population of 100,000 to 499,999	12.0	5.3
- Urban, population of 500,000 or more	12.0	5.2
Main source of income		
- Wages and salaries	9.2	4.1
- Income from self-employment	8.1	4.2
- GST and HST Credit or other government transfers	43.9	17.3
- All Other	25.1	9.7
Income poverty		
- Less than LICO	37.9	15.7
- More than LICO	6.6	3.0

Source: own calculations OMDS (2009)

Table 12: Contribution of each item to Adjusted Ontario Child Deprivation Index

	Share (%)
fruit	12.9
dental	23.4
meat	3.3
appliances	25.8
around	1.3
friends	9.9
pest	1.8
gifts	5.1
hobby	16.5
Total	100

Source: own calculations OMDS (2009)

6. Overlap between Child Income Poverty and the Child Deprivation Index

While information on income is routinely collected in Canada, efforts to collect information on deprivation have started only recently with the pioneering work of the Daily Bread Food Bank and the Caledon Institute for Social Policy on material deprivation in Ontario in 2009 (Matern et al, 2009A; 2009B). It is therefore not surprising that up until now income has been the main source for assessing poverty, and thus also child poverty, in Canada. There are however, strong arguments for assessing a child's poverty status not just by means of her family's resources but also on the degree to which her needs are met (see discussion in section 2 on access to (semi)publicly provided goods, the intra-household distribution of resources and consumer sovereignty). With the annual collection of both income and (household level) material deprivation in the Canadian Household Panel Survey started end 2011, Canada is now following in the footsteps of the European Union where collection of such data has been common place since the mid-nineties. This opens up the opportunity to investigate to what extent income poverty and deprivation statistics overlap.

While being conceptually distinct indicators, there is a close relationship between indicators of income poverty (i.e. lack of financial resources) and material deprivation (i.e. unmet needs / social necessities) in the sense that each attempts to assess poverty. Since both are merely indicative of this broader and more intuitive notion of poverty, they can only be partially successful in identifying persons experiencing poverty. On the one hand, it is therefore reasonable to expect that children living in a low income family are also more likely to experience some degree of material deprivation; something which is confirmed by the deprivation profile in section 4. On the other hand, one cannot expect that a perfect overlap exists between children living in income poor and children living in deprived families. A lack of private financial resources may be less of a hurdle when public policy provides (low-cost) access to certain services. And albeit very important, families may have access to other resources than income to meet their needs (such as savings and (non-)financial assistance from family, friends and the like). There is also a dynamic aspect to the relation between low income and material deprivation; while a family's resources may suffice to prevent deprivation during an episode of

low income, a sustained period of low income may not. Alternatively, even when income has picked up recently, it may take the family a while before all basic needs can be met. Likewise, high costs of housing, debt servicing or child care may explain why children in above poverty line income families are experiencing deprivation. Finally, there is a range of measurement related reasons leading to measurement errors in both income and deprivation indicators that would explain a partial overlap between these indicators.¹⁰

Table 13: Overlap Child Deprivation Index and Child Income Poverty (% of all children)

	Neither	Deprived only lacking 2+	Income poor only (LICO)	Deprived and income poor
Ontario	78.1	5.5	10.1	6.2
	Neither	Deprived only lacking 2+	Income poor only (<60% median)	Deprived and income poor
Europe-29	73.2	7.1	13.1	6.7
BE	81.2	3.8	9.7	5.3
DE	80.7	5.1	10.4	3.8
DK	88.3	1.2	9.1	1.5
FI	87.0	1.1	10.5	1.4
FR	78.6	4.8	11.3	5.3
NL	83.5	0.9	13.8	1.8
SE	87.1	0.7	11.4	0.8
UK	76.8	2.5	17.7	3.0

Source: own calculations OMDS (2009) and de Neubourg et al (2012, p. 32)

This study compares the overlap between the Ontario Child Deprivation Index and Canada's official low income measure (LICO). The LICO is a hybrid between an absolute and a relative poverty measure as the income threshold depends on the expected income share a family will spend on necessities such as food, shelter and clothing in comparison that of the average family.¹¹ If a family's 2008 income before taxes falls below the LICO threshold all members are counted as poor. In 2008, 15.8% of all Ontarians and 16.3% of all Ontarian children lived in families with an income below the LICO (own calculations with OMDS data). The results are displayed in Table 13, which also shows the overlap results for the European countries calculated using the EU's official "At-risk-of-poverty" rates which are based on a relative income threshold set at 60% of national median income (after-tax income).¹²

¹⁰ To name a few: despite following best practices in data collection, income poverty statistics may suffer from underreporting and not all sources of income may be adequately included; and deprivation indicators may partially reflect a family's priorities and choices rather than an enforced lack of the item.

¹¹ For more information see Statistics Canada: <http://www12.statcan.ca/census-recensement/2006/ref/dict/fam020-eng.cfm> (accessed 23 May 2012).

¹² It was not possible to use the same threshold for the Ontario and European data because the public use file of the OMDS does not provide the level of detail needed for such calculations. Given that Canada's 60% of median poverty rate (21.9% in 2009) is 11 percentage points higher than the LICO rate (9.6% in 2009) and is 7 percentage points higher than LIM rate (13.3% in 2009) and that Ontario's LICO rate (10.1% in 2009) and LIM rate (13.1% in 2009) are at similar levels as Canada's, it is expected that applying the EU threshold to Ontario data would also yield a poverty rate that could be 11% percentage points above that of the LICO (UNICEF Innocenti Research Centre, 2012, Fig. 5; Murphy et al, 2012, Fig. 2.1 and Fig. 4.1). This large difference could affect the overlap results

In comparison to the Nordic countries, Ontario has fewer children in the “neither” category and more in the “deprived only” and “deprived and poor” categories. The Ontario overlap patterns are more comparable to those of the Central-West European countries and they are most similar to those of France: about 5-6% of the children is both income poor and deprived; 5% is deprived only, 10-11% is income poor only while 78% is neither income poor or deprived. These results show that Canada’s official low income standard fails to capture a still substantial population group experiencing hardship (5%) while about 10% of the children live in families that despite having a low income avoid such hardship.

Concluding, these overlap results should be seen as an encouragement to collect both income and deprivation information on a continuous basis. This will, for instance, allow research to further assess whether one can consider that group of 10% low income – non-deprived children as an indicator of policy success (ensuring that children in low income families have low cost access to services and benefit from income support measures) or failure (low income simply indicates a high chance that future hardship just around the corner).

7. Concluding discussion

This study set out to assess how child deprivation in Ontario compares to that of Ontario’s population in general and that of children in European high-income countries. This research has been motivated by the publication of UNICEF’s 10th Child Report Card in May 2012 which monitors child poverty in developed countries, including European countries, Canada, the United States, Australia, New Zealand and Japan. Unlike previous report cards, this one not only measures child poverty by relative income but it also introduces a Child Deprivation Index that serves as a more direct measure of children’s living standards than a family’s income. Due to lacking data, the report card only compares child deprivation for the European countries collecting data under the European Union Statistics on Income and Living Conditions (EU-SILC) as such information is less routinely collected in these other countries. For Canada this is about to change, but nationally representative data will only be made available earliest end 2013. For Ontario, however, deprivation information was available in the 2009 Ontario Material Deprivation Survey data. Being a province that tends to be close to Canada’s average socio-economic performance, replicating the report card methodology allowed exploring how child deprivation in Ontario, and possibly in Canada, compares to that in European countries.

The findings of this study should be interpreted with care. The main limitation that this research faces is that the deprivation information used Child Deprivation Index for Ontario and the European countries is only partially comparable. In both cases, the nationally representative survey data have been collected in 2009 and for four deprivation items the survey questions are the same or very similar. There are two big differences: firstly, the remaining five (Ontario) and ten (Europe) deprivation items cover different aspects of material deprivation; secondly, the Ontario data are collected at the household level reflecting items that one or more members lack while the European data are collected at the household level but reflecting child specific items

possibly moving Ontario’s results more towards those of the UK which has similar relative poverty levels at 60% of the median (20.8%; UNICEF Innocenti Research Centre, 2012, Fig. 5).

that one or more of the children in the household lack. In sum, differences in deprivation can thus also be due to differences in the data.

However, the high correspondence in results between findings from the information that is reasonably comparable and those that are not leads me to believe that a comparison based on better data will yield similar results. While moderate shifts should be expected, Canada's or Ontario's ranking on the Child Deprivation Index will not change from the top of the bottom third (as this study finds) to the top third.

This study finds that Children in Ontario have somewhat higher deprivation levels (11.7%) than the Ontario population as a whole (9.9%). In comparison to the eight European countries, Ontario also has higher child deprivation levels, ranking right after France which has the highest deprivation rates and 19th out of 30 countries. Just like their European peers, Ontario children are more likely to live in households with lone parents, low education, low income and fewer employed household members and the deprivation rates for children living in these families are again among the highest. Nevertheless, the relative disadvantage that such children in Ontario are facing seems smaller than in the European countries: the discrepancy between the average child deprivation rate and those of children with high risk characteristics is smaller.

Furthermore, when comparing the overlap between children living in low income families (LICO) and those living in deprived families this study finds that about 6% of the children is both income poor and deprived; 6% is deprived only and 10% is income poor only (78% is neither income poor or deprived). These results show that Canada's official low income standard fails to capture a still substantial population group experiencing hardship (5%) while about 10% of the children live in families that despite having a low income avoid such hardship.

Thus, rather than resembling the Nordic countries, patterns of child deprivation in Ontario resemble more like those in Central-West European countries such as Belgium, Germany, United Kingdom and especially France.

Comparing the findings of this study with those for Canada in UNICEF's 10th Child Report Card (2012) it can further be seen that Ontario's ranking in terms of child deprivation is consistent with that of Canada's ranking in terms of relative income poverty (measured at 50% of median income), namely top of the bottom third. Furthermore, just like Ontario's deprivation levels, children's income poverty rates in Canada are roughly 2 percentage points above the population poverty rate (13.3 versus 11.4%) while in 10 out of 35 countries child poverty rates are below population poverty rates (among others Germany, Finland and Sweden). Figures such as these are supportive of the decision of Ontario's government to attribute priority to children and youth in the Poverty Reduction Strategy initiated in 2008 as policy efforts can not only reduce poverty levels in general but they can also influence the gap between child and population poverty.

The findings from the income poverty – deprivation overlap analysis should firstly be taken as an encouragement to collect deprivation information in Canada as the groups of income-poor and deprived only partially overlap. Given that both are merely proxies of poverty, using both income poverty and deprivation indicators will allow for a better identification of population groups experiencing a low living standard (in comparison to what is considered normal in Canada). This, secondly, informs policy: while income support measures represent a key instrument for the Ontario and Canadian governments to support the less well off, the lack in

overlap between income poor and deprived could be a reason to reassess these now relatively narrowly targeted measures to so-called 'low income' households; many of these measures are phased out quite rapidly or decrease significantly in size as family's income increases but might therewith not provide adequate resources for deprived households.

Finally, at this point Ontario monitors its progress on the poverty reduction targets (i.e. reducing the number of children living in poverty by 25%) by using (household) income poverty and (household) deprivation indicators household (Government of Ontario, undated).¹³ The discussion in this research (notably section two) points out that in order to monitor child poverty there is also a need to collect child specific indicators such as child relevant items of material deprivation.

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¹³ In addition to indicators related to education and birth weight.

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9. Appendix

Table A1: Selected indicators for child deprivation index in 10th Child Report Card

Clothes	Some new (not second-hand) clothes
Shoes	Two pairs of properly fitting shoes (including a pair of all-weather shoes)
Fruit	Fresh fruit and vegetables once a day
Meals	Three meals a day
Meat	One meal with meat, chicken or fish (or vegetarian equivalent) at least once a day
Books	Books at home suitable for their age
Internet	Internet connection
Leisure	Regular leisure activity (swimming, playing an instrument, youth organization etc.)
Equipment	Outdoor leisure equipment (bicycle, roller skates, etc.)
Games	Indoor games (educational baby toys, building blocks, board games, etc.)
Festivity	Festivity on special occasions (birthdays, name days, religious events, etc.)
Friends	Invite friends around to play and eat from time to time
School trips	Participate in school trips and school events that cost money
Homework	Suitable place to study or do homework

Source: de Neubourg et al (2012, p. 4-7).

Table A2: GDP per capita (2009, based on purchasing-power-parity (PPP))

Canada ¹	37,947
BE	35,534
DE	34,387
DK	35,828
FI	33,445
FR	33,434
NL	39,877
SE	35,951
UK	34,388

¹ Comparable Ontario data are not available but in 2008/9 Canada's GDP per capita (current prices, CAD\$) was 46,447 and Ontario's was 44,726 (Statistics Canada, <http://www.statcan.gc.ca/pub/81-595-m/2011095/tbl/tbla.34-eng.htm>). Ontario's average living standard is thus close to Canada's average living standard. Source: International Monetary Fund (IMF), World Economic Outlook Database, October 2010, on line available at <http://www.imf.org/external/pubs/ft/weo/2010/02/weodata/index.aspx>

Table A3: Proportion of children lacking each item by country

	fruit	three meals	meat	clothes	shoes	internet	books	homework	festivity	friends	school trips	equipment	leisure	games
Age	1-16	2-16	2-16	1-16	2-16	6-16	3-16	6-16	1-16	3-16	6-16	2-16	2-16	1-16
Europe32	4.2	0.9	4.5	5.6	4.3	7.6	4.6	5.1	5.4	6.1	6.3	6.0	11.1	4.8
BE	1.6	2.1	2.7	5.9	3.4	5.4	3.2	5.1	3.0	3.0	2.8	3.2	7.2	1.8
DE	2.4	1.1	4.9	3.1	3.7	3.0	2.4	4.4	2.6	2.7	2.1	2.3	6.7	0.9
DK	0.5	0.1	0.5	1.6	1.0	0.5	0.8	2.2	0.4	1.4	0.7	1.4	2.5	0.6
FI	0.5	0.1	0.0	3.2	0.9	0.4	0.3	2.0	0.0	0.0	1.0	0.7	1.3	0.3
FR	4.7	0.3	2.1	5.2	5.5	4.9	2.0	3.1	3.0	3.0	4.1	2.0	6.7	1.1
NL	0.6	0.1	0.7	1.4	2.5	0.4	0.2	2.7	0.5	0.6	0.2	0.4	3.3	0.2
SE	0.1	0.1	0.1	0.4	0.9	0.2	0.3	1.6	0.6	0.7	0.4	0.6	1.1	0.2
UK	1.0	0.3	0.5	1.8	2.5	4.6	0.4	2.2	0.9	1.5	2.2	1.4	6.5	0.7

Source: de Neubourg et al (2012, p.9)

Table A4: Composition of deprived children (2+) by profile characteristics (%)

	Share of deprived children	Share of child population
Dwelling		
- Dwelling owned	47.8	79.5
- Dwelling rented	52.2	20.5
Type of economic family		
- Husband-wife, dual earner couple	15.4	51.0
- Husband-wife, single earner couple	28.1	22.8
- Single-parent family	37.8	19.5
- Other family types	18.6	6.6
# unemployed persons		
- None	69.8	85.2
- One	30.2	14.8
Education highest earner		
- Some secondary or lower	25.3	10.2
- Grade 11 to 13, graduate	22.2	18.5
- Some post-secondary education	6.0	5.2
- Post-secondary certificate or diploma	36.2	38.5
- University bachelor's degree	6.1	17.4
- University graduate degree	4.2	10.3
Major earner's immigration status		
- Landed in 1999 or later	11.9	6.8
- Landed before 1999 or has never been a landed immigrant	88.1	93.2
Population of urban areas		
- Rural areas	5.2	8.3
- Urban, population to 99,999	21.1	18.7
- Urban, population of 100,000 to 499,999	41.8	41.3
-Urban, population of 500,000 or more	31.9	31.6
Main source of income		
-Wages and salaries	62.8	79.4
- Income from self-employment	8.0	11.5
- GST and HST Credit or other government transfers	22.4	5.9
- All Other	6.8	3.1
Income poverty / Low income		
- Less than LICO	52.8	16.3
- More than LICO	47.2	83.7

Note: children comprise 22.4% of the population.

Source: own calculations OMDS (2009)