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Material and Social Deprivation Index (MSDI) of Canada, 2016 – Description of the variables in the correspondence table

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Content

1	Introduction	5
2	Index versions	5
2.1	National version.....	5
2.2	Regional version.....	5
2.3	Metropolitan version	5
2.4	Version for geographical zones	6
3	Dimensions	6
4	Variable description (in alphabetical order)	9
5	Colour code for maps and infographics	11

1 Introduction

This document contains a description of the variables in the correspondence table containing the values of the Material and Social Deprivation Index.

The correspondence table helps to establish a link between the Enumeration area (EA), specific geographical territories and different index versions. It includes the national version (all of Canada), the regional version (5 major Canadian regions) and two local versions: 4 Canadian geographical zones and the 3 major CMAs (Montréal, Toronto and Vancouver).

For more information about the Material and Social Deprivation Index, please refer to « [Material and social deprivation index : A summary](#) » and this [web page](#).

2 Index versions

The Material and Social Deprivation Index 2016 for Canada was created from 2016 Census data, for all DAs.

Four index versions exist for Canada.

2.1 National version

The national version for Canada covers all ten provinces and the three territories. It is used to estimate the extent and geographical distribution of material and social inequality in all of Canada. The deprivation in all DAs is considered. This means that it is possible to compare the deprivation level of individuals living in a DA in Nova Scotia to that of residents of a DA in British Columbia. The national version is created with a principal components analysis (PCA) of which the results are grouped into quintiles (groups formed by 20% of the population) from the least deprived (quintile 1) to the most deprived (quintile 5) (see section *Dimensions*). To create other groupings, use the (national) centiles of the deprivation measure in the correspondence table.

2.2 Regional version

The regional version presents the variations in deprivation within the five Canadian regions, namely the Atlantic Provinces, Québec, Ontario, the Prairies and British Columbia. The three territories are excluded from this version. The regional version is created with a separate PCA using all DAs in the each of the five regions, grouped into quintiles (groups formed by 20% of the population), from the least deprived (quintile 1) to the most deprived (quintile 5) (see section *Dimensions*).

2.3 Metropolitan version











The metropolitan version compares inequalities within each of the three largest census metropolitan areas (CMAs) which are Montreal, Toronto and Vancouver. This version is created with a separate PCA using all DAs in the each of the 3 CMAs, grouped into quintiles (groups formed by 20% of the population), from the least deprived (quintile 1) to the most deprived (quintile 5) (see section *Dimensions*).

2.4 Version for geographical zones

The version for geographical zones distinguishes four large geographical entities, i.e. the three largest CMAs (Toronto, Montreal and Vancouver) together; all the other CMAs combined (between 100 000 and one million people); all the census agglomerations (CA) combined (between 10 000 and 100 000 people) and the small towns and rural regions combined (less < 10 000 people). This version is created with a separate PCA using all DAs in the each of the 4 zones, grouped into quintiles (groups formed by 20% of the population), from the least deprived (quintile 1) to the most deprived (quintile 5) (see section *Dimensions*).

3 Dimensions

Each dimension, material and social, reveals specific aspects of deprivation. Thus, it is important to study them separately before combining them.

Material deprivation by quintile (Q)			Social deprivation by quintile (Q)		
Q1		least deprived DA	Q1		least deprived DA
Q2		less deprived DA	Q2		less deprived DA
Q3		average DA	Q3		average DA
Q4		more deprived DA	Q4		more deprived DA
Q5		most deprived DA	Q5		most deprived DA

The groupings below are combinations of material and social deprivation levels, referred to by some papers as the “combined index”.

The material and the social dimension can be combined depending on the research objectives. However, INSPQ privileges two specific quintile groupings for the reasons described below.

The adequate grouping depends on the aspect which suits the research best:

- Deprivation profiles : difference between the two extreme quintiles (grouping 1)
- Deprivation gradient : difference between all quintiles (grouping 2)

Grouping 1 – Deprivation profiles

		Most privileged → Most deprived						
Material	Social						Total material deprivation	
		Q1	Q2	Q3	Q4	Q5		
Most privileged ↓ Most deprived	Q1	C1	C1	C2	C3	C3	20%	<div>C1</div> Materially and socially privileged DA <div>C2</div> DA with average material and social deprivation <div>C3</div> Materially privileged but socially deprived DA <div>C4</div> Socially privileged but materially deprived DA <div>C5</div> Materially and socially deprived DA
	Q2	C1	C1	C2	C3	C3	20%	
	Q3	C2	C2	C2	C3	C3	20%	
	Q4	C4	C4	C4	C5	C5	20%	
	Q5	C4	C4	C4	C5	C5	20%	
Total social deprivation		20%	20%	20%	20%	20%	100%	

Advantages of grouping 1 :

- Distinguishes deprivation profiles based on both, the material and social dimension;
- Facilitates the measure of the difference between the extreme groups (C1 and C5);
- Detects inequality between extreme groups (C1 and C5) more clearly than grouping 2.

Disadvantages of grouping 1 :

- Creates groups of unequal size, varying between 16 and 24 % of the population.

Grouping 2 – Deprivation gradient

		Most privileged → Most deprived							
Material	Social						Total material deprivation		
		Q1	Q2	Q3	Q4	Q5			
Most privileged	Q1	T1	T1	T1	T2	T3	20%	T1	Materially and socially privileged DA
	Q2	T1	T2	T2	T3	T4	20%	T2	DA with average material and social deprivation
	Q3	T1	T2	T3	T4	T5	20%	T3	Materially privileged but socially deprived DA
	Q4	T2	T3	T4	T4	T5	20%	T4	Socially privileged but materially deprived DA
Most deprived	Q5	T3	T4	T5	T5	T5	20%	T5	Materially and socially deprived DA
Total social deprivation		20%	20%	20%	20%	20%	100%		

Advantages of grouping 2 :

- Creates 5 groups of equal size (true quintiles) each containing 20 % of the population;
- Measures the difference between each one of the quintiles (gradient) in all population groups.

Disadvantages of grouping 2 :

- Detects less differences between the two extreme groups (T1 and T5) than grouping 1.

4 Variable description (in alphabetical order)

Variable	Description																																				
DA	Dissemination area code from Statistics Canada in numerical format.																																				
DAPOP2016	Dissemination area population. This data can be missing when the DA did not participate in the Census or show the value '0' from random rounding of the population figure.																																				
CentMat	Grouping of DAs in the national version (Canada) of the deprivation index. The material percentiles range from 1 (least deprived DA) to 100 (most deprived DA). Empty cell – Data not available.																																				
CentSoc	Grouping of DAs in the national version (Canada) of the deprivation index. The social percentiles range from 1 (least deprived DA percentile) to 100 (most deprived DA percentile). Empty cell – Data not available.																																				
CMA	<p>Census Metropolitan Area code</p> <table> <tr> <td>001 - St. John's</td><td>543 - Brantford</td></tr> <tr> <td>205 - Halifax</td><td>550 - Guelph</td></tr> <tr> <td>305 - Moncton</td><td>555 - London</td></tr> <tr> <td>310 - Saint John</td><td>559 - Windsor</td></tr> <tr> <td>408 - Saguenay</td><td>568 - Barrie</td></tr> <tr> <td>421 - Québec</td><td>580 - Greater Sudbury</td></tr> <tr> <td>433 - Sherbrooke</td><td>595 - Thunder Bay</td></tr> <tr> <td>442 - Trois-Rivières</td><td>602 - Winnipeg</td></tr> <tr> <td>462 - Montréal</td><td>705 - Regina</td></tr> <tr> <td>505 - Ottawa--Gatineau</td><td>725 - Saskatoon</td></tr> <tr> <td>521 - Kingston</td><td>810 - Lethbridge</td></tr> <tr> <td>522 - Belleville</td><td>825 - Calgary</td></tr> <tr> <td>529 - Peterborough</td><td>835 - Edmonton</td></tr> <tr> <td>532 - Oshawa</td><td>915 - Kelowna</td></tr> <tr> <td>535 - Toronto</td><td>932 - Abbotsford--Mission</td></tr> <tr> <td>537 - Hamilton</td><td>933 - Vancouver</td></tr> <tr> <td>539 - St. Catharines—Niagara</td><td>935 - Victoria</td></tr> <tr> <td>541 - Kitchener--Cambridge--Waterloo</td><td></td></tr> </table>	001 - St. John's	543 - Brantford	205 - Halifax	550 - Guelph	305 - Moncton	555 - London	310 - Saint John	559 - Windsor	408 - Saguenay	568 - Barrie	421 - Québec	580 - Greater Sudbury	433 - Sherbrooke	595 - Thunder Bay	442 - Trois-Rivières	602 - Winnipeg	462 - Montréal	705 - Regina	505 - Ottawa--Gatineau	725 - Saskatoon	521 - Kingston	810 - Lethbridge	522 - Belleville	825 - Calgary	529 - Peterborough	835 - Edmonton	532 - Oshawa	915 - Kelowna	535 - Toronto	932 - Abbotsford--Mission	537 - Hamilton	933 - Vancouver	539 - St. Catharines—Niagara	935 - Victoria	541 - Kitchener--Cambridge--Waterloo	
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CR	Canadian region: Atlantic Canada, Quebec, Ontario, Prairies, British Columbia, Territories																																				
MUNIC	Code of the municipality to which the DA belongs.																																				
NOTEMAT	Deprivation index – material factor score.																																				
NOTESOC	Deprivation index – social factor score.																																				
PR	Province																																				
QuintMat	<p>Grouping of DAs in the national version (Canada) of the deprivation index. The material quintiles range from 1 (least deprived DAs) to 5 (most deprived DAs).</p> <table> <tr> <td>1 – DA in least deprived quintile</td><td>4 – DA in more deprived quintile</td></tr> <tr> <td>2 – DA in less deprived quintile</td><td>5 – DA in most deprived quintile</td></tr> <tr> <td>3 – DA in average quintile</td><td>empty – Data not available</td></tr> </table>	1 – DA in least deprived quintile	4 – DA in more deprived quintile	2 – DA in less deprived quintile	5 – DA in most deprived quintile	3 – DA in average quintile	empty – Data not available																														
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Variable	Description
QUINTMATCR	Grouping of DAs in the Canadian region version of the deprivation index. The material quintiles range from 1 (least deprived DAs) to 5 (most deprived DAs). 1 – DA in least deprived quintile 2 – DA in less deprived quintile 3 – DA in average quintile 4 – DA in more deprived quintile 5 – DA in most deprived quintile empty – Data not available
QUINTSOCCR	Grouping of DAs in the Canadian region version of the deprivation index. The social quintiles range from 1 (least deprived DAs) to 5 (most deprived DAs). 1 – DA in least deprived quintile 2 – DA in less deprived quintile 3 – DA in average quintile 4 – DA in more deprived quintile 5 – DA in most deprived quintile empty – Data not available
QUINTMATZONE	Grouping of DAs in the Canadian zones version of the deprivation index. The material quintiles range from 1 (least deprived DAs) to 5 (most deprived DAs). 1 – DA in least deprived quintile 2 – DA in less deprived quintile 3 – DA in average quintile 4 – DA in more deprived quintile 5 – DA in most deprived quintile empty – Data not available
QUINTSOCZONE	Grouping of DAs in the Canadian zones version of the deprivation index. The social quintiles range from 1 (least deprived DAs) to 5 (most deprived DAs). 1 – DA in least deprived quintile 2 – DA in less deprived quintile 3 – DA in average quintile 4 – DA in more deprived quintile 5 – DA in most deprived quintile empty – Data not available
QuintMat	Grouping of DAs in the national version (Canada) of the deprivation index. The material quintiles range from 1 (least deprived DAs) to 5 (most deprived DAs). 1 – DA in least deprived quintile 2 – DA in less deprived quintile 3 – DA in average quintile 4 – DA in more deprived quintile 5 – DA in most deprived quintile empty – Data not available
QuintSoc	Grouping of DAs in the national version (Canada) of the deprivation index. The social quintiles range from 1 (least deprived DAs) to 5 (most deprived DAs). 1 – DA in least deprived quintile 2 – DA in less deprived quintile 3 – DA in average quintile 4 – DA in more deprived quintile 5 – DA in most deprived quintile empty – Data not available
SCOREMAT	Deprivation index - Material factor score
SCORESOC	Deprivation index - Social factor score
ZIM	Census Metropolitan influenced zones (MIZ) 1. Census Metropolitan Area 2. Census agglomeration with at least on Census tract 3. Census agglomeration without Census tract 4. Strong metropolitan influenced zone 5. Moderate metropolitan influenced zone 6. Weak metropolitan influenced zone 7. No metropolitan influenced zone 8. Territories (outside CAs)
Zone	Geographical zone 1. Three largest CMAs (Toronto, Montréal and Vancouver) 2. All other CMAs (between 100 000 and one million individuals) 3. All census agglomerations (between 10 000 and 100 000 individuals) 4. Small towns and rural regions (< de 10 000 individuals)

5 Colour code for maps and infographics

	R	G	B	Colour
	255	255	255	White (missing value ¹)
	204	204	204	Gray (Valeur 0 ²)
	110	161	101	Dark green
	176	231	176	Light green
	255	236	176	Yellow
	135	174	192	Light blue
	68	126	163	Dark blue
	236	189	158	Light orange
	235	133	93	Dark orange
	162	110	166	Light purple
	122	70	130	Dark purple

¹ DA without index value (collective households, Indian reserves).

² Maps : no assignation could be done ; wrong or missing postal code or too recent to be included in the file.