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Notes on Spatially Disaggregated Income Distribution Indicators in Canada

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Meeting of providers of OECD income distribution data
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Outline

- Spatially disaggregated indicators
 - Quality measures
 - Regional price adjustments

Relevance in Canada

- Spatially disaggregated income distribution and poverty measures are common in Canada
 - Provinces play a major role in delivery of services
 - Canadian Health and Social Transfer (CHST)
 - Equalization payments for comparable services
 - Provincial poverty reduction initiatives
 - Regional branches of NGOs
 - Long history of provincial cooperation in Statistics (Focal Points)
 - StatCan maintains regional offices

Existing Sub-National Micro Income Statistics

- Poverty
 - Low Income (headcount and gap)
 - SLID – Province and large Census Metropolitan Areas
 - Census – For small communities CT
 - T1FF – LIM on Census Families for small areas
- Inequality
 - Quintile shares, Gini – Province
 - High Income
 - Thresholds, shares..... – Province and CMA

SPSD/M sample sizes (SLID)

	Individuals		Households		Ratio
	Population	Sample	Population	Sample	
Newfoundland	507	2,728	213	1,152	0.5%
P.E.I.	140	1,734	58	708	1.2%
Nova Scotia	915	3,660	402	1,662	0.4%
New Brunswick	742	3,585	324	1,621	0.5%
Quebec	7,750	11,695	3,493	5,305	0.2%
Ontario	12,912	18,226	5,120	7,567	0.1%
Manitoba	1,123	4,298	477	1,873	0.4%
Saskatchewan	957	4,733	411	2,121	0.5%
Alberta	3,583	6,383	1,420	2,655	0.2%
B.C.	4,347	6,095	1,840	2,710	0.1%
All	32,976	63,137	13,757	27,374	

Sub-National Micro Income Distribution Statistics

- Using SLID data, StatCan can complete the OECD inequality questionnaire for all Canadian provinces
 - Smaller sample sizes will add limitations
 - Local vs. national thresholds (or both)
 - Significant suppression of smaller cells
 - Quality indicators very desirable

Quality Measures

- SLID uses bootstrap weights to generate CV's
 - 1,000 bootstrap weights
 - Can take a lot of processing time
- LAD uses a linearization method, using a unified estimating equations approach
- Census
 - No quality measures but certification process and suppressions performed
 - i.e. When imputation within geographic area hits 50%

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Quality Indicator Levels Vary by Survey

		SEPH	Health	SLID
Excellent	A	0-5		0-2
very good	B	5-10		2-4
Good	C	10-15		4-8
Acceptable	D	15-25		8-16
Use with caution	E	25-35	15.6-33.3	16+
Suppressed/unacceptable	F	35+	33.3+	

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Current Initiatives

- There are currently discussions about new standards for quality indicators that would involve confidence intervals
- Household Survey's Methodology Division
 - Christian Nadeau
- Statistics Canada's Quality Secretariat
 - Claude Julien

Spatial Price Differences

- Statistics Canada collects limited information on spatial differences in price levels (e.g. regional price indexes)
- Useful for cross-province comparisons of material living conditions.
- Zhang IARIW paper
 - 11-City spatial price index – experimental
 - Local LIMs
 - MBM basket pricing (47 regions)
 - Local LIMs approximate price adjusted LIMs