

A Commentary on Statistics Canada's Rural and Small Town Analysis Bulletin (released June 12, 2003) and its relevance to Northeastern Ontario and Greater Sudbury

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The just-released Rural and Small Town Canada Analysis Bulletin from Statistics Canada analysis demonstrates three main results:

- that rural Canada is closing the education gap with urban Canada;
- that the urban-rural education gap has not really changed; and
- that rural Canada is falling further behind urban Canada in education.

You probably think three statements are contradictory. But they are all true.

The new (Volume 4, Number 5) Rural and Small Town Canada Analysis Bulletin (RSTCAB), just released by Statistics Canada on Thursday June 12 and authored by Alessandro Alasia, describes the changes in rural and urban educational attainment from 1981 to 1996. **This is important data. Some people had conjectures about what the results would be, but now we have real information. A lot of work has gone on behind the scenes to create the data set for this, a data set that has stitched constant geographical boundaries around numbers from four different censuses.¹ It is data on trends rather than on specific points, and so is of great utility for augurers, diviners, foretellers, and crystal-ballers.**

In this commentary I examine each of the three main results. I show that the apparent contradictions reflect some underlying differences of perspective that really invite more research. I end with some suggestions for policy that go beyond the data.

Rural areas finally catching up?

Rural areas are in fact catching up with urban areas at the **bottom** of the educational scale. The good news is that the rural-urban gap for proportions of the population with just elementary education is narrowing.

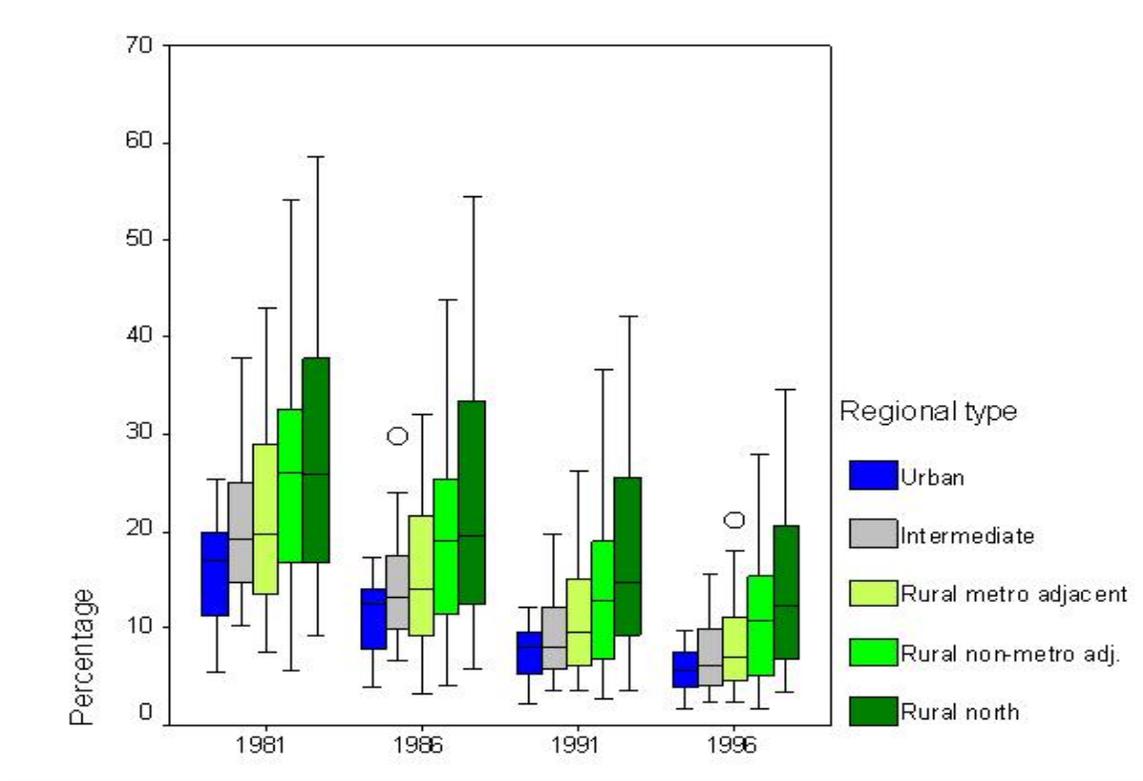
The classification used in this analysis distinguishes urban, intermediate, and rural based on population density². The rural is further subdivided into rural metro-adjacent, rural

¹ You may be wondering, why is this data presented now when we have just completed the 2001 census. The reason is that Statistics Canada must change the definition of Census Divisions when political units change. The data presented in this analysis uses the 1996 Census Divisions (there are 288 of these in Canada) and has recalculated (mostly from Census Sub-Divisions) what the results from 1981, 1986, and 1991 would have been (were) using those divisions rather than the ones that were used. Clearly this will be done for the 2001 census, but don't hold your breath. It is a time-consuming and difficult task to do well, and of course Statistics Canada won't publish it until they can be confident that it has been done well.

² "Urban" means that less than 15 percent of the population resides in communities with a population density of less than 150 persons per square kilometre. "Intermediate" has between 15% and 49% residing in such communities. "Rural" has 50% or more residing there.

non-metro-adjacent, and rural northern. For example, Greater Sudbury, Thunder Bay, and Algoma count as "Intermediate", along with Kingston, the Avalon Peninsula and Halifax. The District of Sudbury is "rural metro-adjacent". Temiskaming and Parry Sound are "rural non-metro-adjacent".

Figure 1: Percentage of individuals 25-54 with less than Grade 9 (Source: RSTCAB, Vol. 4, No. 5)



This graph contains boxplots.. There are solid horizontal bars that represent the medians for the regional types in each year. The box part extends from the bottom quartile to the top quartile. The whiskers on the lines that extend above and below show the range (unless the highest or lowest observations are more than an interquartile range out, in which case extreme values are indicated with circles).

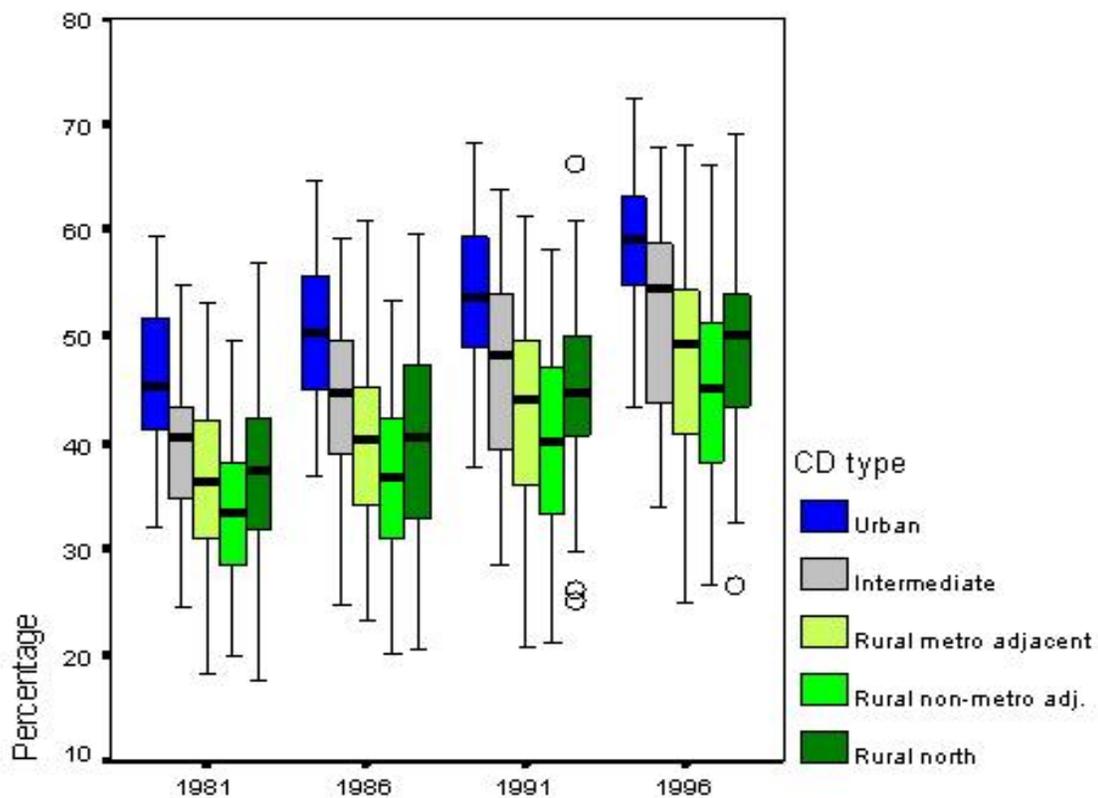
Over time, the differences among the regional types have become smaller. Percentages with less than Grade 9 education are less different in 1996 than they were in 1981. This represents a general upgrading (because the percentages with only Grade 9 education are declining) combined with a floor effect (because those percentages cannot become less

than zero and there are just fewer and fewer people with this little education). Note however that as one drives out of the cities the biggest percentage increase in low-education people comes as one passes into the non-metro-adjacent regions (compare the lime green with the yellow).

That rural-urban differences are declining is a good result. It shows that rural regions are catching up. However, the other data is not quite so optimistic.

The urban-rural education gap stays the same

Figure 2: Percentage of individuals 25-54 with some post-secondary education: quartile distribution by regional type, 1981 – 1996 (Source: RSTCAB, Vol. 4, No. 5)



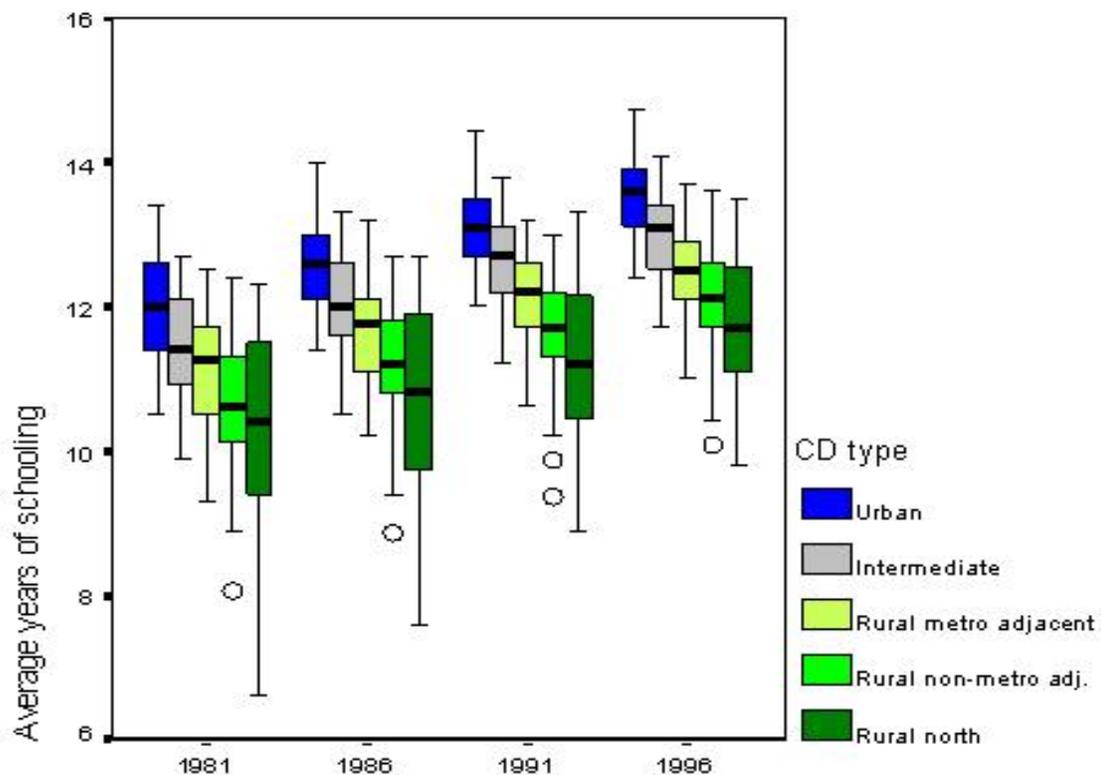
On the bad side, the rural-urban education gap is not closing at all when we refer to the proportion of the population with some post-secondary education. Although this proportion increases consistently over time, rural people are just as far behind urban people in 1996 as they were in 1981. The mean distances between contiguous pairs of groups have stayed approximately equal over the period.

Note that the rural north on this measure scores equal to or better than the other rural types. On the Grade 9 measure, it scored worst.

Rural people are falling behind in education

When we look at **average** years of education, the result is even more negative for rural areas. The difference in averages shown in the following graph has slightly widened over the period.

Figure 3: Average years of schooling: quartile distribution by regional type, 1981 – 1996 (Source: RSTCAB, Vol. 4, No. 5)

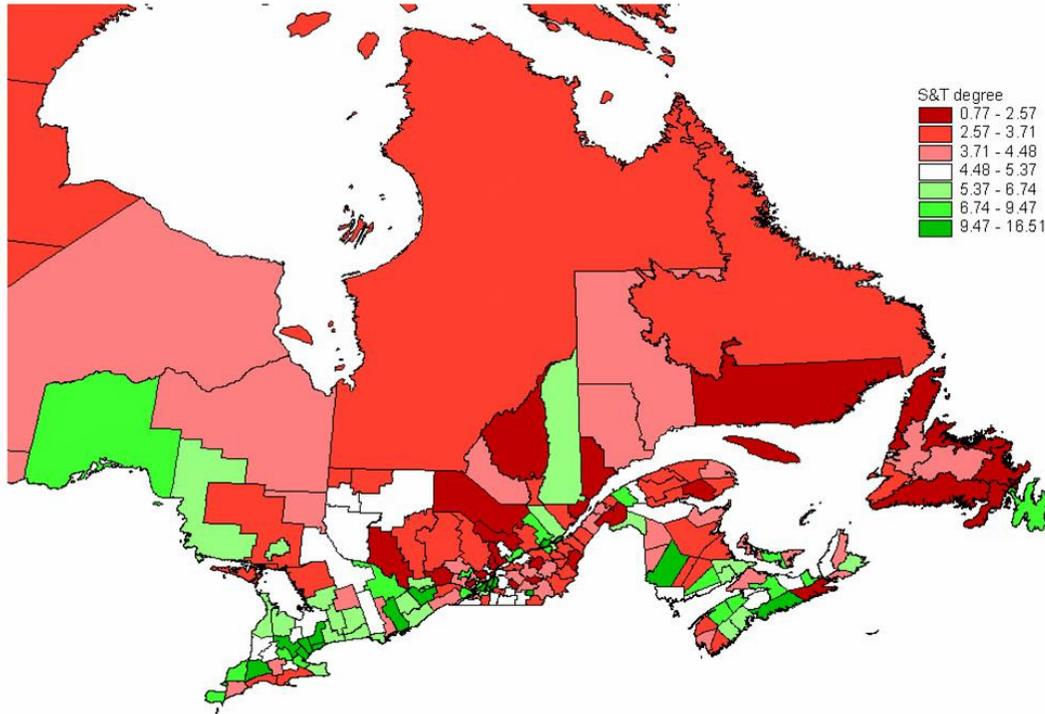


Note that the gap between intermediate and rural metro adjacent has been getting larger and the difference between metro adjacency and non-metro adjacency has been declining over the period. The average education in intermediate areas is moving towards that for urban areas.

One reason education matters is that it leads to the adoption of new technology and thus shifts the frontier of economic production. That is likely to be most important for the economy in the long term. The RSTCAB article does present data on educational specializations in the different regional types of CD, but only for 1996. Figure 4: : Science & Technology post-secondary degree as percentage of population 25-54, 1996

(Source: Alasia & Bollman, 2003) taken from Alasia and Bollman³ shows the proportions of the workforce that have some training in science and technology.

Figure 4: : Science & Technology post-secondary degree as percentage of population 25-54, 1996
(Source: Alasia & Bollman, 2003)



Note that rural areas and northern areas are generally relatively low. The highest places in Northeastern Ontario are Thunder Bay, Algoma, and the City of Greater Sudbury (and Muskoka if it be included). It is clear that the heart of the technology cluster is strongest in the golden horseshoe of southern Ontario.

Thus rural areas are falling behind on average education and are lagging in science-and-technology education

Catching up, Staying behind, Lagging further – What matters?

There's a deeper question underlying this contradictory-appearing categorization. This is the question of whom to educate. And here is where social justice advocates sometimes conflict with advocates of economic development. We could concentrate on raising the

³ Spatial variation of skills/educational attainment and community innovation capacity, presented to the Rural Secretariat Agriculture and Agri-Food Canada in Ottawa on January 23, 2003

floor and making sure everyone gets at least Grade 9. We could concentrate on raising the average. We could concentrate on getting more people with post-secondary education.

Each concentration would lead to some beneficial economic consequences that would need to be costed out (with further research). Raising the floor level of education might lead, for example, to better overall health, and fewer traffic accidents. Raising the percentage with higher education might lead to increased patents and innovative technologies. Raising the average education might lead to better communication within organizations and more efficient workplaces.

Unfortunately, current arguments about the innovation gap would seem to favour emphasizing averages and ceilings⁴. And these are precisely where rural areas are doing worst.

Greater Sudbury and Northeastern Ontario and vice versa

These education data provide additional support for a policy proposal that I think would benefit both intermediate and rural metro adjacent areas. Three background experiences inform the proposal.

First I have spent six years collaborating with 11 academics from across Canada on The New Rural Economy (NRE) project directed by Dr. William Reimer from Concordia University. One of our conclusions is that rural communities do not have the resources and skills and influence to succeed on their own. This education data in effect confirms this insight. NRE researchers have focused on the idea of getting metropolitan support for rural Canada.

Second I have worked at the Institute of Northern Research and Development with Dr. David Robinson on ways in which social and economic research could assist in Sudbury's economic development. We argued for the English Teachers' College at Laurentian, set up the New City Colloquium, described the important role of retirees in economic stabilization, and I have followed with enthusiasm his advocacy of an expanded Mining Supply and Services Sector as a top priority for the City. I also worked with City officials on the tax-incentive-zone proposal that the City submitted to the province and saw first-hand the importance of political collaboration in developing and lobbying for this proposal.

Third, Laurentian University has been struggling to increase its share of building grants from the Province and research grants from the Federal Government. Over time, demonstrating on-going partnerships with other groups in the community has increasingly become one of the criteria for success in these grants.

⁴ Clearly this is an area that cries out for research. It may well be that the balance of education that maximizes output and or technological development will vary depending on circumstances. But it should be possible to develop some generalizations about this relationship.

These three different needs – the need of rural areas for urban support, the need of intermediate regions for greater political influence, and the need of the university and its researchers for partners – come together to suggest that there be some more regularized form of collaboration.

Sudbury can benefit from championing the surrounding region. It could lead to both increasing trade and increasing political support. A similar role might probably be played by many regional cities that are classed by Statistics Canada as intermediate. Their fortunes can be furthered by support and liaison with the region they are in, and vice versa. Cities probably underestimate the political importance of a united regional front.

The clear association of education with universities as well as the evident connection of science and technology graduates with regions that include universities argues that they are important, not just for urban and intermediate regions, but for the rural regions that are adjacent to them. Thus it appears that there is an important role for regional universities. They support rural regions. It is therefore important for rural regions to support the universities that serve them. This is especially true for universities and colleges with science and technology programs. Since there is a symbiotic relationship in the economic and developmental realm, it makes sense for rural regions and universities to support each other politically. For this to happen, universities should be more proactive in supporting surrounding regions and request more explicit political support and participation from them.

Imagine if the City of Greater Sudbury and Laurentian University were to champion the smaller more rural regions of Northeastern Ontario. There'd be some economic benefit. But there would also be an important political benefit because we would get increased support from other areas in lobbying provincial and federal governments. The lesson from today's Statistics Canada scripture reading is the necessity of rural-urban collaboration. And we could make a start on intermediate – rural-metro-adjacent collaboration right here in Northeastern Ontario.