MEASURING CHANGING HUMAN DEVELOPMENT IN FIRST NATIONS POPULATIONS: PRELIMINARY RESULTS OF THE 1981-2006 REGISTERED INDIAN HUMAN DEVELOPMENT INDEX

Martin Cooke is jointly appointed in the departments of Sociology and Health Studies and Gerontology at the University of Waterloo, where he teaches in the Master of Public Health programme. Born in Winnipeg, he studied sociology at the University of Winnipeg and sociology and demography at the University of Western Ontario. His research areas have been in the social demography and health of Aboriginal peoples and in social policy from a life course perspective. He is currently the principal investigator of a SSHRC-funded project examining First Nations and Métis life course trajectories.

Éric Guimond is a Senior Strategic Research Manager in the Strategic Research and Analysis Directorate of Indian and Northern Affairs Canada, and an Adjunct Research Professor of Sociology at the University of Western Ontario. He holds a PhD in demography from the Université de Montréal. Eric is of Mi'kmaq and French descent, and is a specialist in Aboriginal demography.

ABSTRACT / RÉSUMÉ

In previous research we have used the United Nations Human Development framework to examine the changing conditions of Aboriginal populations, and the changing gaps in health, education and income between Aboriginal populations and other Canadians. In general, that research found improvements in Aboriginal conditions between 1981 and 2001, but that improvement had slowed by the end of the period. This paper uses data from the recently released 2006 Census to investigate whether improvement continued between 2001 and 2006 for Status First Nations ("Registered Indians"). Our preliminary findings are that educational attainment continued to increase, but not enough to reduce the gap with other Canadians. Differences in average income also widened over the period, particularly because of continuing low income of on-reserve men. Although the overall Human Development Index scores improved, progress in decreasing the gap between Registered Indians and other Canadians appears to have stalled.

Au cours de recherches précédentes, nous avons utilisé le cadre relatif au développement humain des Nations Unies pour examiner les conditions changeantes des populations autochtones, ainsi que les changements dans les écarts en matière de santé, d'éducation et de revenus entre les populations autochtones et les autres Canadiens. En général, les résultats de ces recherches ont révélé des améliorations dans les conditions de vie des Autochtones entre 1981 et 2001, mais cette progression a ralenti avant la fin de cette période. Le présent document porte sur une enquête s'appuyant sur les données du recensement de 2006 récemment publiées pour déterminer si l'amélioration des conditions des membres inscrits des Premières nations (« Indiens inscrits ») s'est poursuivie entre 2001 et 2006. Nos résultats préliminaires indiquent que le niveau d'instruction continue d'augmenter, mais que cela ne suffit pas pour combler l'écart avec les autres Canadiens. L'écart relatif au revenu moyen s'est également élargi au cours de cette période, principalement à cause du maintien des faibles revenus des hommes vivant dans les réserves. Bien que dans l'ensemble l'indice du développement humain se soit amélioré, les progrès en matière de réduction de l'écart entre les Indiens inscrits et les autres Canadiens semblent stagner.

INTRODUCTION

Reducing disparities between Aboriginal peoples and other Canadians requires an understanding of how these disparities have been changing. For some time we have been using population-level measures to assess changes in the overall health and well-being of Aboriginal peoples in Canada. Using indices adapted from the United Nations Development Programme, we have tried to understand whether the broad conditions for Aboriginal populations are improving, in terms of income levels, health, and educational attainment. With our colleagues, we have examined the changing well-being of Registered Indians[1] (Cooke, Beavon, and McHardy 2004) and Inuit (Sénécal and O'Sullivan 2006) and compared Canadian Aboriginal populations to those in the US, Australia and New Zealand (Cooke et al. 2007). We have also applied the framework to examine the changing conditions of older Registered Indians and Registered Indian youth (Cooke, Guimond, McWhirter 2008; Guimond, Cooke 2008).

The picture produced by these measures has been mixed. Indeed, the overall levels of well-being of Canadian Registered Indians improved between the 1980s and the 2000s, as has been true for most of the Aboriginal populations we have studied. In particular, the differences between the Registered Indian population and the general Canadian population on the Registered Indian Human Development Index have declined (Cooke, Beavon, and McHardy 2004). This indicates progress in "closing the gaps" in human development, between Aboriginal populations and other Canadians.

Despite these positive findings, we see some worrying signs in the Canadian data. The improvements made in the Registered Indian population have mainly been seen in the educational attainment measures we have used, and there has been less progress on the health and income dimensions. Income has been especially resistant to improvement, and we have found that the income difference between Registered Indians and other Canadians actually increased slightly in the late 1990s (Cooke, Beavon, and McHardy 2004). As well, the improvements that were made in closing the gap in relative well-being from the mid-1980s to the mid-1990s appeared to have slowed in later periods, casting doubt on continued progress in reducing disparities on these indicators.

The release of the 2006 Census data provided an opportunity to see how the overall well-being of Registered Indians has recently changed, and whether the improvements we had previously found continued to be made into the 2000s. In this paper we present a preliminary update to the Registered Indian Human Development Index and use these indicators to examine how the broad health status, educational attainment, and income of Registered Indians and other Canadians have changed between 1981 and 2006.

WELL-BEING AS EXPANDING CHOICES

The framework we have been using to measure well-being is based on that presented in the United Nations Development Programme's (UNDP) *Human Development Report* (United Nations 2003). The goal of the human development paradigm has been to broaden the definition of development to include aspects beyond the purely economic dimension, recognizing that rising GDP per capita does not always result in higher quality of life. Human development is defined as a more general "expansion of choices," which does require rising material standards of living, but also long and healthy lives and access to knowledge. These are critical for political participation and citizenship and are therefore important for societies, as well as for the well-being of individuals (ul Haq 2005).

In the international context, the UNDP uses the Human Development Index (HDI) as a summary measure of progress in human development, combining life expectancy, adult literacy and school enrolment, and per capita GDP. Our previous adaptations of the HDI to the Canadian context, the Registered Indian Human Development Index, have used life expectancy estimates calculated from the Indian Register, and education and income data from the Canadian Census of population. We used the proportions 15 and older with grade nine or higher as a proxy for adult literacy, and the proportion 19 and older with high school or higher as a measure of higher education. Material well-being is measured using total per capita individual income, which is discounted using a log formula. These measures are scaled and combined as a single HDI score, following the UNDP's methodology (Cooke 2007). Of course, there are important limitations to the HDI as a framework for measuring the well-being of Aboriginal populations. It can be argued that no set of quantitative, population-level measures can realistically capture the complexity of "well-being" or "quality of life" in individual lives. Perhaps more importantly, the Registered Indian HDI has been criticized as a Western-centric framework that does not represent Aboriginal conceptions of well-being (Salée 2006; Ten Fingers 2005). Important aspects such as traditional language maintenance or access to traditional lands or activities are not part of the Human Development paradigm, which was certainly developed in a non-Aboriginal context. As well, the education measures available in the Census data capture only formal schooling, and money income ignores the importance of traditional activities such as hunting and trapping, or the sharing of resources within communities, for material well-being.

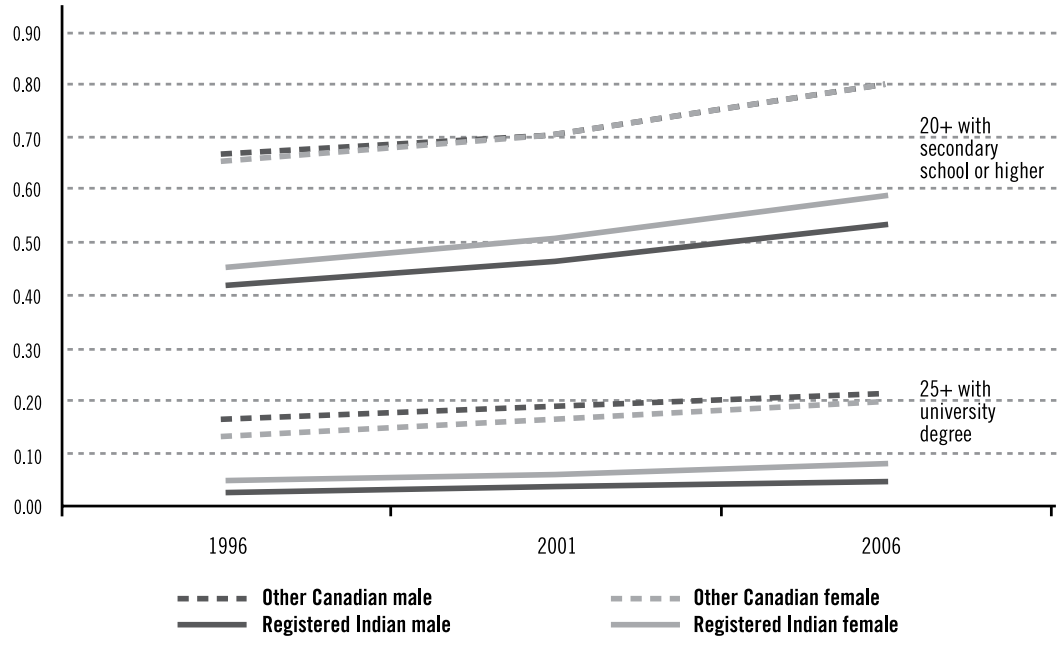
Recognizing these limitations, we nonetheless think the HDI framework is a useful one. The popularity of the international HDI as a way of ranking countries has made the Registered Indian HDI easily interpretable as an overall measure of well-being. Canada's justified pride in our continued high ranking on the international HDI puts the gap in well-being between Aboriginal populations and other Canadians into sharp contrast (Webster 2006; Assembly of First Nations 2005). Although there may be additional indicators of well-being that are specific to Aboriginal peoples, the comparative aspect of the HDI provides a useful perspective on how conditions are changing. And, despite some criticism, there are probably few who disagree that rising income, longer life expectancy, and higher educational attainment are desirable outcomes and important policy goals.

THE REGISTERED INDIAN HUMAN DEVELOPMENT INDICATORS, 1981-2006

The release of the 2006 Census data allows the extension of our time series of indicators, but it also requires some changes from our previous methodology because of changes to the education portion of the 2006 Census questionnaire. The new education data are collected using slightly different questions with a stronger focus on certification, and no longer capture partially-completed qualifications (Canada 2008). The proportion with grade nine or higher is also no longer available, on the grounds that high school completion is increasingly the lowest level of certification recognized in the Canadian labour market. As a result, we are now relying on two new education indicators: (1) the proportion of the population 20 and higher with high school or any higher certification as a measure a minimal level of education; and (2) the proportion 25 and older with a university degree as a measure higher educational attainment. These measures are combined and weighted in the same way as the previous education measures (Cooke 2007).

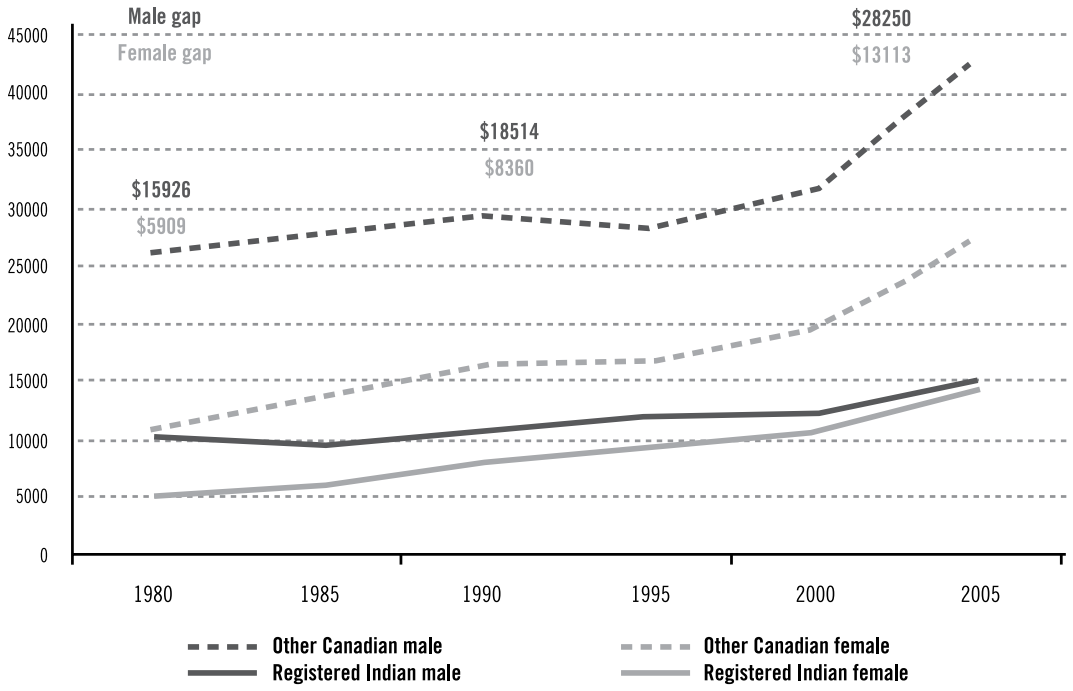
Below, we present preliminary estimates of the revised Registered Indian Human Development Index, extended to 2006. We use these measures to ask whether the overall well-being of Registered Indians has indeed continued to improve, and whether the gaps in well-being have continued to narrow.

FIGURE 1: Proportion 20 and Older with Secondary School or Higher Certification and 25 and Older with University Degree, Registered Indian and Other Canadian 1996-2006.



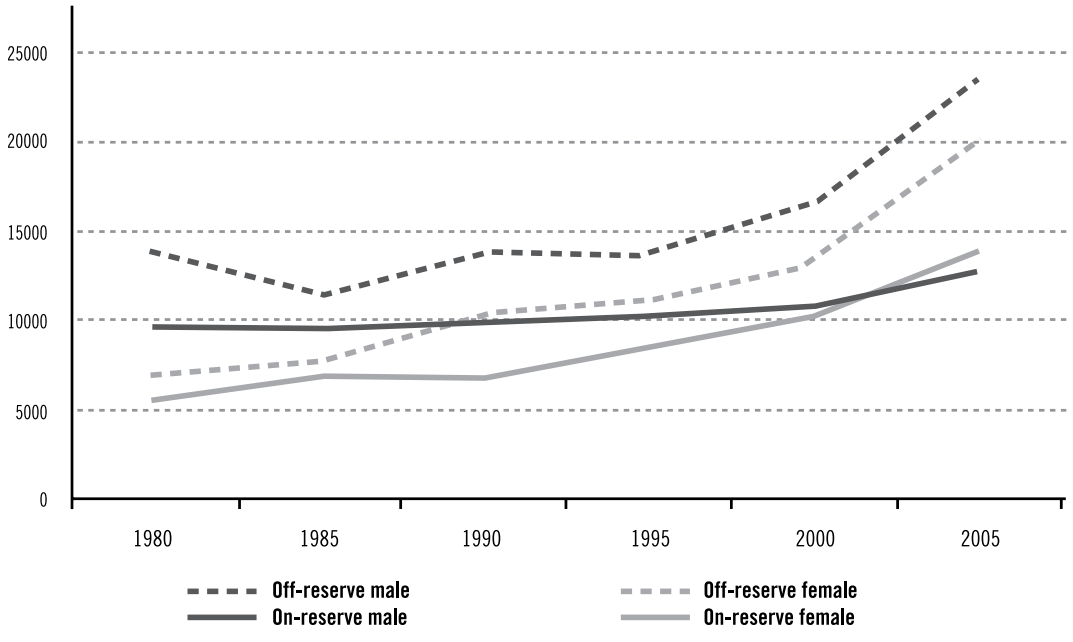
Source: Custom tabulations of 1981-2006 Census of Canada data, authors' calculations.

FIGURE 2: Per Capita Annual Income, Registered Indian and Other Canadian Males and Females, 1980-2005 (2005 dollars).



Source: Custom tabulations of 1981-2006 Census of Canada data, authors' calculations.

FIGURE 3: Per Capita Annual Income, Registered Indian Males and Females by Residence, 1980-2005 (2005 dollars).



Source: Custom tabulations of 1981-2006 Census of Canada data, authors' calculations.

RISING EDUCATIONAL ATTAINMENT, ESPECIALLY FOR WOMEN

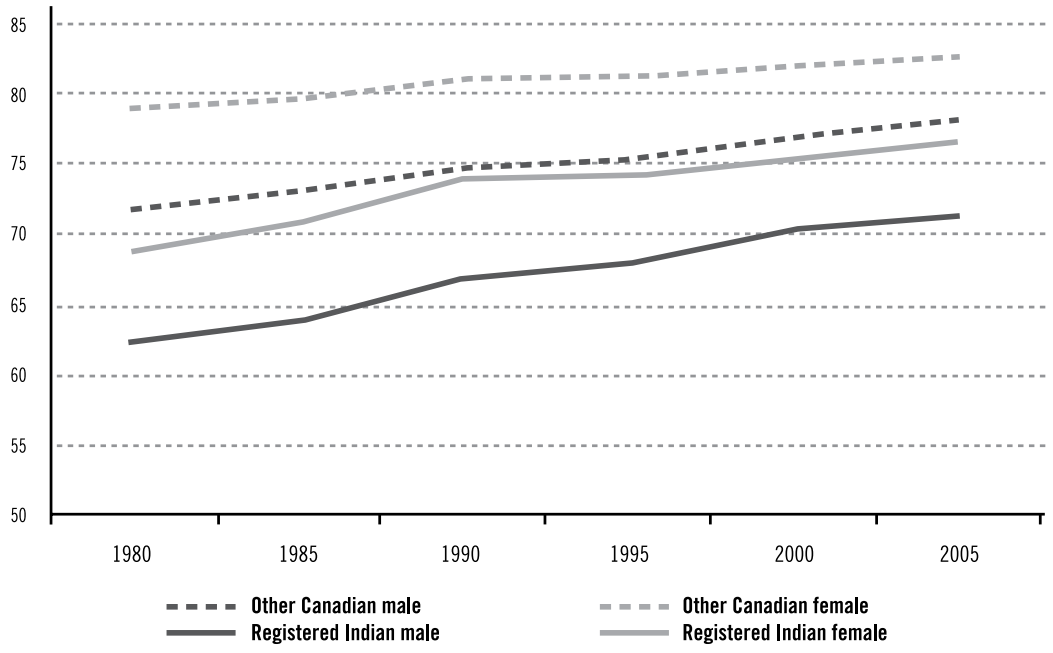
Figure 1 presents the two new HDI educational attainment indicators and shows how these educational attainment measures have changed in the most recent census periods for Registered Indians and other Canadians. Registered Indian scores on both education indicators increased between 1996 and 2006, so that nearly 60% of Registered Indians aged 20 and older had high school or higher and about 5% of those 25 and older had a university degree by 2006. This is compared to 80% of other Canadians with high school or higher and 20% of other Canadians with a university degree. Importantly, Registered Indian women's educational advantage over Registered Indian men continued to widen between 2001 and 2006.

It appears from Figure 1 that the difference between Registered Indians and other Canadians on educational attainment had also widened, rather than decreased, between 1996 and 2006. However, it is possible that some of the sharp increase in high school attainment for the general Canadian population was related to changes in the census questions and their interpretation. This requires further investigation, but it does seem clear that the increase in university attainment in the Registered Indian population was slightly less than that in the general Canadian population, resulting in a slight widening of the university gap.

WIDENING INCOME GAPS, CHANGING GENDER PATTERNS

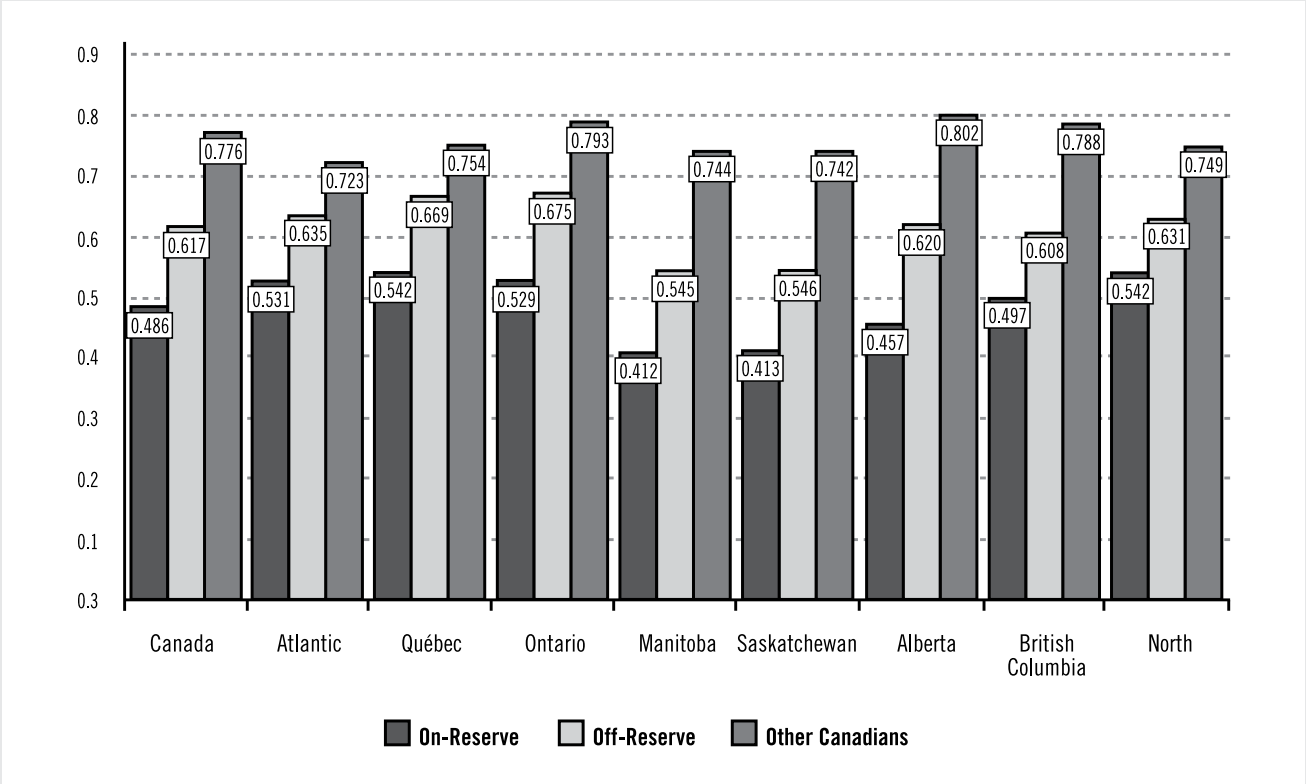
We had previously observed that the increase in educational attainment by Registered Indians had not been reflected in higher per capita income. The 2006 income data show a greater improvement over previous census periods, but also that Registered Indian income fell further behind that of other Canadians. In 2005 constant dollars, the per capita income of Registered Indian men rose from $7,850 to $8,870 between 1980 and 2000, but jumped to $10,460 in 2005 (Figure 2). However, the average income of other Canadian men rose much more rapidly, resulting in an average difference that widened from about $16,000 in 1980 to more than $28,000 in 2005. The per capita income of Registered Indian women increased more consistently over the entire period, partly reflecting a general increase in labour force participation among women. By 2006, Registered Indian women had an

FIGURE 4: Estimated Life Expectancy at Birth, Registered Indians and Other Canadian Males and Females, 1981-2001.



Source: Registered Indian mortality estimates are taken from estimates produced by Statistics Canada for the purpose of Registered Indian population projections. Life expectancies for other Canadians are calculated from Statistics Canada (Canada 2006). See Cooke (2007) for details.

FIGURE 5: Registered Indian Human Development Scores for Registered Indians On- and Off-reserve and Other Canadians by Province/Region, 2006.



Source: Custom tabulations of 2006 Census of Canada data, Registered Indian and Canadian life expectancy estimates. Authors' calculations.

average income that was virtually equal to that of Registered Indian men. But although Registered Indian women closed the income gap with men, the average difference between theirs and other Canadian women's income increased to more than $13,000 in 2005, as other Canadian women's incomes also rose more rapidly (Figure 2).

Geography is clearly important, and the lack of progress in closing the income gap has been due largely to the stagnant incomes of Registered Indian men living on-reserve, between 1980 and 2000. Although on-reserve men's average income rose from $10,800 in 2000 to nearly $13,000 in 2005, there was much greater improvement in the average income of off-reserve men, who had a per capita income of $23,500 in 2005 (Figure 3).

The average income of women living on-reserve rose more consistently than that of men. The new Census data show that on-reserve women's income again improved between 2000 and 2005, and was higher than those of men in 2005 for the first time since 1981 (Figure 3). Nonetheless, on-reserve women's income remained considerably lower than that of off-reserve women, and this gap widened between 2000 and 2005.

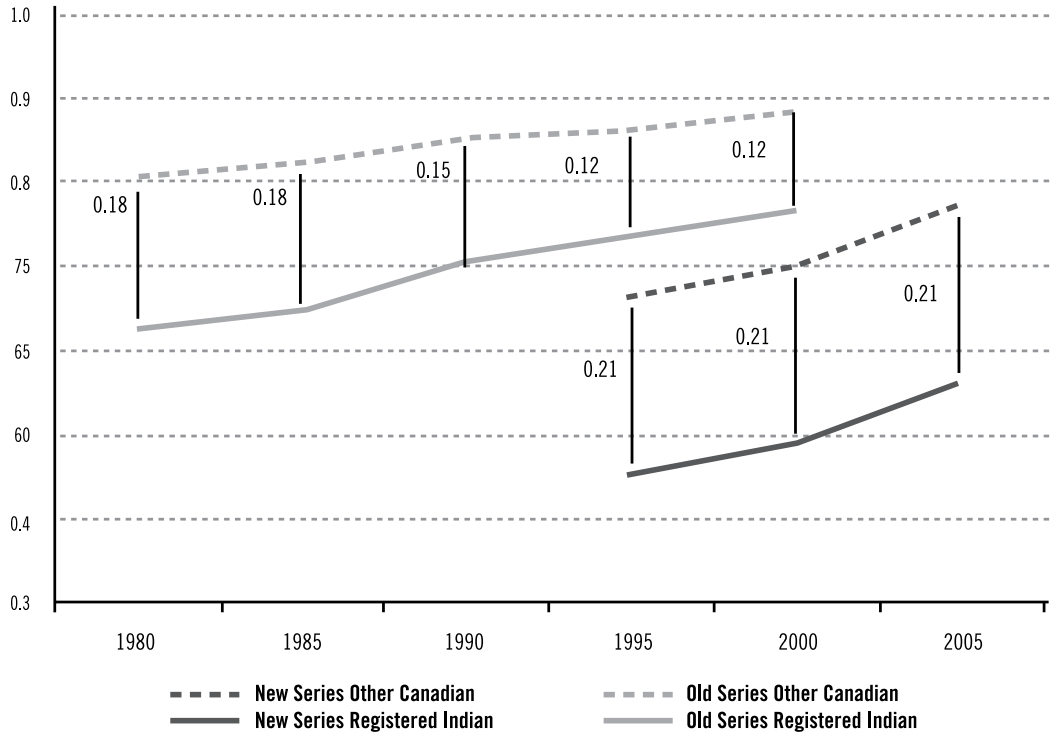
RISING LIFE EXPECTANCY

Issues relating to the late- and under-reporting of events (i.e., births, deaths) in the Indian Register make the calculation of life expectancy at birth for Registered Indians most challenging (Cooke 2007). As we have shown for the previous HDI time series, the current best estimates of life expectancy show a continuing gradual improvement in Registered Indian life expectancy. For Registered Indian men, estimated life expectancy at birth has increased from 62.4 years in 1981 to 71.3 years in 2006. For women, the improvement over that period was from 68.9 years to 76.5 years. This has resulted in a reduction in the gap between Registered Indians and other Canadians from about 10 years in 1981 to just over six years in 2006 (Figure 4). As in the general Canadian population, the advantage in longevity that women have over men declined slightly in the Registered Indian population, to about five years in 2006.

REGISTERED INDIAN HDI TRENDS

Although it may be that the changes in the individual indicators tell us more information about the

FIGURE 6: Registered Indian Human Development Index Scores for Registered Indians and Other Canadians, 1981-2001 and 1996-2006.



Source: Custom tabulations of 2006 Census of Canada data, Registered Indian and Canadian life expectancy estimates. Authors' calculations.

current conditions of Registered Indians, the combined HDI scores provide a snapshot of overall well-being that is useful for comparisons. Figure 5 presents the 2006 HDI scores by on- and off-reserve residence for provinces and regions. Registered Indians living on-reserve communities had lower scores on all indicators, in all regions. As we had found previously, this was particularly the case on the prairies, where the on-reserve HDI scores were lowest. On-reserve HDI scores were the highest in Ontario and Québec, as were off-reserve HDI scores.

As described at the outset, the pattern observed between 1981 and 2001 was one of improving well-being of Registered Indians, but that this improvement had slowed by the end of the period. The addition of the 2006 data confirms that, while the Registered Indian HDI scores continued to improve, the gap with other Canadians did not appreciably narrow. Figure 6 presents the previously published 1981-2001 HDI trends, as well as the new HDI series from 1996 to 2001[2], calculated with the new education indicators. Notwithstanding the comparability issues with the 2006 high school indicator, the widening gaps in income and university attainment lead us to conclude that there was no meaningful closure of the HDI gap between 2001 and 2006 (Figure 6).

CONCLUSIONS: CONCERN FOR THE FUTURE?

In this paper we have presented estimates of the Registered Indian Human Development Index, extending the previous time series to 2006. The estimates we have presented here are preliminary, and future work will include revised estimates of life expectancy. However, the general picture seems to be fairly clear, confirming some of the concerns raised by the 1981-2001 series. The per capita income and educational attainment of the Registered Indian population continued to improve between 2001 and 2006, but not enough to close the gap with other Canadians on these measures.

The measures presented here raise further concerns, not only that the disparities between Registered Indians and other Canadians have not been reduced in recent years, but



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that there may be growing inequalities between segments of the Registered Indian population. Men's educational attainment continues to fall behind that of women and on-reserve women's average incomes are now higher than those of men. The income advantage of those living off-reserve, compared to those on-reserve, continued to grow.

We have been careful to note that the picture presented by these population-level measures do not give a comprehensive image of well-being in First Nations populations and communities. They do, however, reflect changing patterns in formal schooling, money income and life expectancy. These are important measures even if the picture they present is partial. Although one could argue for additional measures of Aboriginal well-being, we argue that the disparities between First Nations populations and other Canadians on these measures are important indicators of the general progress that has been made in improving the social, economic, and health conditions for First Nations. Other indicators of well-being may also be important, but certainly the gaps in education, life expectancy, and income should be closing.

The reasons for these continuing gaps, and for the lack of improvement in the most recent period, are of course extremely difficult to ascertain and well beyond the scope of this paper. They are likely related to a large number of diverse policy areas, including education and training, public health and health care, economic development, and others. What these results do tell us, though, is that the relatively good economic conditions Canada experienced in the early 2000s have not appeared to result in significantly improved conditions for First Nations, relative to the Canadian average. Moreover, they direct us to consider the structural conditions and relationships that underlie the ongoing disparity between Aboriginal populations and other Canadians, as well as those within Aboriginal populations.

NOTE

* The views expressed in this article are those of the authors and do not reflect those of Indian and Northern Affairs Canada or the Government of Canada.

FOOTNOTES

[1] The Registered Indian population is legally defined as people who are registered under the Indian Act of Canada, and is also known as the "Status" *First Nations population.*

[2] Readers may suspect that the 1986-1991 improvement was due to additions to the Registered Indian population because of Bill C-31. An analysis using the 1991 Aboriginal Peoples Survey has confirmed that only part of this improvement was due to C-31 (Cooke and Lesar, forthcoming).

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