



## *Article*

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# Fertility of Aboriginal<sup>1</sup> People in Canada: An Overview of Trends at the Turn of the 21st Century

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**Abstract:** *This paper aims to give an overview of trends regarding the fertility of Aboriginal people in Canada at the turn of the 21st century (mostly between 1996 and 2011). Total fertility rates and fertility rates by age group are presented for the Aboriginal population as a whole, but also for First Nations, Métis, and Inuit, as well as for the population with Registered Indian status, using various data sources (past censuses, National Household Survey, vital statistics, and Indian Register). Results of a multivariate analysis are presented. This multivariate analysis is conducted in order to improve our understanding of the dynamic behind the fertility behaviour of the Aboriginal population.*

## Introduction

In many ways, the demographic profile of the Aboriginal population in Canada differs from that of the non-Aboriginal population. For instance, the Aboriginal population is younger and growing faster than the rest of the population (Statistics Canada 2013a). From 1996 to 2011, the Aboriginal population increased from about 800,000 people (2.8 percent of the total Canadian population) to 1.4 million (4.3 percent).

Apart from changing identification—or ethnic mobility (see literature review for more details)—one of the key aspects of the differential demography of the Aboriginal population is fertility. In fact, existing studies show that fertility was higher among the Aboriginal population than the non-Aboriginal population throughout the 20th century (Romaniuk 1987; Ram 2004) and has remained so since (Statistics Canada 2015b, 2011). However, very few studies have aimed to evaluate the evolution of Aboriginal fertility trends in Canada at the turn of the 21st century. This dearth could be due in part to the limited availability of data.

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1 Recently, the term “Indigenous” has been used more and more in place of “Aboriginal.” In this paper, for consistency with the terminology of the different data sources used, the term “Aboriginal” is used throughout the text.

2 The views and opinions expressed in this article do not necessarily reflect those of Statistics Canada.

3 The views and opinions expressed in this article do not necessarily reflect those of Indigenous and Northern Affairs Canada.

The studies that were conducted recently covered only part of the Aboriginal population (e.g., Registered Indians) and did not provide a global overview of the fertility of this very diverse population. Moreover, the majority of these studies did not look at the factors associated with the fertility of the Aboriginal population. Yet a good knowledge of the fertility dynamic of the Aboriginal population seems important for better understanding the demography of this population, as well as the implications related to fertility, such as reproductive health.

The objective of this paper is to fill the knowledge gap on the fertility of the Aboriginal population at the turn of the 21st century (mostly between 1996 and 2011) by providing an up-to-date portrait<sup>4</sup> that is as complete as possible using various data sources and methods. These data sources include three censuses; the 2011 National Household Survey; the most recent Indian Register data; and, for the first time, vital statistics for Inuit residing in Nunavut and the Northwest Territories. The paper will help improve our understanding of one of the key aspects of the population dynamics particular to Aboriginal people and of the factors likely to affect future trends in this regard, using a variety of data sources.

This paper begins with a brief literature review that focuses on the fertility of Aboriginal people in Canada. Then, a description of the data sources and methods used to compute the fertility indicators is presented. Finally, the main results are presented in two distinct sections. The first includes a descriptive analysis that aims to present the fertility level of the Aboriginal population as a whole and of specific Aboriginal groups defined using either Statistics Canada Aboriginal identity classification (First Nations, Métis, and Inuit), or a classification that distinguishes between the Registered Indian and non-status Indian populations. The second section includes a multivariate analysis conducted with the objective to improve our understanding of the dynamic behind the fertility behaviour of the Aboriginal population.

### **Literature review**

The literature on the fertility of Aboriginal people in Canada is limited, largely because of data availability issues. Canadian vital statistics do not include Aboriginal identifiers at the national level, and the census has not collected information on the number of children ever born to each woman since 1991. As a consequence, most recent studies use either Indian Register data—which cover only Registered Indians—or indirect approaches to estimate fertility.

Existing studies agree on the fact that fertility has been higher among the Aboriginal population than the rest of the Canadian population for at least 100 years. Romaniuk (1987) estimated crude birth rates for “Canadian Indians” from 1900 to 1982 using data from the Department of Indian affairs (today named Indigenous and Northern Affairs Canada). He found a general trend of increasing rates from 1900 to about 1960, followed by a sharp decrease until the end of the 1970s, when rates seemed to have stabilized. During the whole period, crude birth rates remained higher than in Canada overall (Romaniuk 2008). The decrease in the fertility of Aboriginal people in the 1960s and 1970s has also been observed

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<sup>4</sup> The data sources used were the most up-to-date at the time the paper was submitted.

using census estimates (Trovato 1987; Ram 2004). Loh and George (2003) analyzed Indian Register data from 1974 to 1996 and also found consistently higher rates for Registered Indians, although they observed a converging pattern until the second half of the 1980s. For the most recent period, a study by Amorevieta-Gentil et al. (2013) for 1986 to 2008 showed that trends in the total fertility rate (TFR) of the Registered Indian population followed trends for Canada as a whole, with about one child more on average and with no sign of convergence with the rest of the population during the period. Persistent higher fertility among Aboriginal people has also been observed in Australia and New Zealand (Johnstone 2011), while in the United States American Indians' and Alaska Natives' fertility has declined in recent years (Cannon and Percheski 2017).

This persistent gap observed in Canada seems to contradict the demographic transition theory. This theory predicts that fertility will decline as social changes associated with modernization take effect, such as increasing education, economic development, and age at marriage. Johnstone (2011) highlighted the limitations of existing theories to explain the fertility of Aboriginal people and discussed the need for theories accounting for socio-historic specificities of Aboriginal people in Australia, Canada, New Zealand, and the United States. Romaniuk (2008), also recognizing limitations in theories, interpreted this persistent gap in fertility in Canada as the result of conflicting pressures on reproductive behaviours among Aboriginal people because of peculiarities of their history. On one side, there are modernization pressures and the influence of the broader society, as proposed by the demographic transition theory, and on the other, there is the maintenance of traditional views inherited from First Nations cultures. These traditional factors would have been reinforced by the relative geographic and socioeconomic isolation of some Aboriginal nations. Aboriginal people would then be, still according to Romaniuk, "between two worlds," which would be reflected in their fertility level.

Choinière and Robitaille (1988) also referred to these two broad influences in the conclusion of their study of Inuit in New Quebec<sup>5</sup> from 1931 to 1981. Interestingly, they also observed a general trend of increasing fertility rates from 1931 to 1961 and then a sharp decrease in the 1960s and 1970s. There are no studies of Inuit in New Quebec after 1981. However, data for the following period for all Inuit in Canada show fertility rates remaining at a high level, as is the case for Registered Indians (Ram 2004), with no signs of a decrease since the mid-1990s (Statistics Canada 2015b). The TFR of Inuit was estimated to be around three children per women from 1996 to 2011 (Statistics Canada 2015b).

The fertility of Métis and Non-Status Indians, however, has reached levels more comparable to those of the non-Aboriginal population in recent years. Estimates prepared by Statistics Canada in the context of Aboriginal population projections show that in 2011, the TFR of Métis and Non-Status Indians was about 1.8 and 1.5 children per woman, respectively. Estimates by Ram (2004) suggest that fertility decreased for Métis in the 1980s and 1990s. However, trends in fertility for these two groups must be interpreted with

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<sup>5</sup> New Quebec was, before 1987, the name of the actual Nunavik region in the northern part of the province of Quebec.

caution, given the contribution of ethnic mobility—changing identification patterns—to their growth. A large part of the growth of these two groups comes from people who did not identify as Métis and Non-Status Indians in past censuses but now do so (Statistics Canada 2015b; Caron-Malenfant et al. 2014). As several authors have suggested (Ram 2004; Johnstone 2011; Thornton et al. 1991), people who changed how they reported their Aboriginal identity in the census may have different fertility patterns. These patterns may be closer to those of the non-Aboriginal population.

While data availability has limited the analysis of characteristics associated with fertility among Aboriginal people in recent years, age patterns of fertility have been studied in the literature. Two recent studies analyzed teenage fertility in the registered Indian population. Guimond and Robitaille (2009) revealed that, although regional variations could be observed, teenage fertility (among 15-to-19-year-olds) in this population was very high, about seven times the fertility rate of the total Canadian population in 2004. Furthermore, in a study on the intergenerational transmission of fertility behaviours, Amorevieta-Gentil et al. (2014) showed that registered Indian females who were born to a teenage mother were themselves more likely than other registered Indian females to become mothers during their teenage years. Ram (2004) also observed higher fertility from 1996 to 2001 among young females belonging to the registered Indian, North American Indian, Métis, and Inuit populations. More specifically, he observed higher fertility than in the total Canadian population for women younger than 30 in all of these groups. Rates were more similar to those of the general population for other ages. In a comparison of Indigenous fertility between Canada, the United States, New Zealand, and Australia, Johnstone (2011) found very similar age patterns in all four countries: higher teenage fertility, a peak from 20 to 24 years old, and relatively low fertility after age 30.

Studies of older periods also found relationships between the fertility of Aboriginal people in Canada and other characteristics likely to differ between the Aboriginal and non-Aboriginal populations. In a study using information from the 1991 Census related to children ever born, Suwal and Trovato (1998) found that socioeconomic characteristics of Aboriginal people (e.g., education and income) partly explain the differences in fertility between them and the rest of the population. The study found, among other characteristics, that being in a mixed union (i.e. with a non-Aboriginal person) was associated with lower fertility for Aboriginal people. The authors interpreted this as an indication that social integration could contribute to a convergence in fertility. This interpretation echoes the conclusion of a U.S. study by Thornton et al. (1991). This study used the 1980 U.S. Census to present fertility rates for three groups with different degrees of integration, according to the authors: (1) females reporting American Indian as their racial identification and reporting only Indian ancestry, (2) females reporting American Indian as their racial identification and reporting mixed ancestry (Indian and non-Indian), and (3) females not reporting an American Indian racial identification but reporting at least one Indian ancestor. Observing decreasing fertility from (1) to (3), the authors also interpreted the results as an indication of a relationship between fertility differences and Westernization of behaviours and norms.

## Concepts and definitions

For the purpose of this article, the concepts used to define Aboriginal populations are consistent with those used in each data source.

In the censuses and the National Household Survey (NHS), three questions enable Aboriginal people to be identified.<sup>6</sup> The first is “Is this person an Aboriginal person, that is, First Nations (North American Indian), Métis or Inuk (Inuit)?” It allows for the identification of people belonging to these three populations. The second question is “Is this person a Status Indian (Registered or Treaty Indian as defined by the *Indian Act* of Canada)?” People with a self-reported registered Indian status can be identified through this question. The third is “Is this person a member of a First Nation/Indian band?” This question allows members of a First Nation or an Indian band to be identified. If a person answered one of these questions positively (or self-identified with one of the groups), he or she is considered a person with an Aboriginal identity according to the census or NHS definition. In this paper, it is this definition of Aboriginal identity that is used to determine the Aboriginal population. Thus, people who self-reported having Aboriginal ancestry<sup>7</sup> but did not self-report having an Aboriginal identity are not considered Aboriginal people for the purpose of this paper.

The Aboriginal identity population is composed of five groups for the purpose of this article: First Nations (North American Indian) single identity; Métis single identity; Inuk (Inuit) single identity; multiple Aboriginal identities; and Aboriginal identities not included elsewhere.<sup>8</sup> Although the first three populations are analyzed specifically, the other two populations are not, because of a lack of data.<sup>9</sup>

Two other Aboriginal populations are also considered for the analysis (which are not mutually exclusive from the five presented above) based on registered Indian status: Registered Indians and Non-Status Indians (people who self-identified with the First Nations group and who did not report being Registered Indians in the census or NHS). Table 1 presents the population by Aboriginal identity and registered Indian status in the 1996, 2001, and 2006 censuses, as well as in the 2011 NHS.

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6 Although these questions were asked in the three censuses and NHS considered for this study, there were, sometimes, slight variations in the wording from one census/NHS to the other. The wording of the questions presented here is the one used in the NHS questionnaire.

7 Aboriginal ancestry is a distinct concept that is obtained from another question about ethnic or cultural origin of the ancestors of a person.

8 This last group includes persons who did not report being First Nations (North American Indian), Métis, or Inuk (Inuit) but who did report Registered or Treaty Indian status and/or membership in a First Nation or Indian band.

9 Nonetheless, they are included in the analysis of the total Aboriginal identity population.

**TABLE 1.** Population by Aboriginal identity and registered Indian status, Canada, 1996, 2001, 2006, and 2011

<b>Aboriginal identity</b>	<b>1996</b>	<b>2001</b>	<b>2006</b>	<b>2011</b>
<b>Total Aboriginal identity</b>	799,005	976,305	1,172,790	1,400,685
First Nations (North American Indian) single identity	529,040	608,850	698,025	851,560
Métis single identity	204,115	292,305	389,785	451,795
Inuk (Inuit) single identity	40,220	45,070	50,480	59,440
Multiple Aboriginal identities	6,420	6,665	7,740	11,415
Aboriginal identities not included elsewhere	19,220	23,415	26,760	26,470
<b>Registered Indians and Non-Status Indians</b>				
Registered Indians	488,040	558,175	623,780	697,510
Non-Status Indians	86,595	104,160	133,155	213,900
<b>Canadian population</b>	<b>28,528,125</b>	<b>29,639,035</b>	<b>31,241,030</b>	<b>32,852,320</b>

**Source:** Statistics Canada, 1996, 2001 and 2006 censuses and the 2011 National Household Survey.

In the two other data sources used—the Indian Register and vital statistics—information on Registered Indians and Inuit is collected differently from the census and NHS. This may cause differences in counts.

In the Indian Register, a Registered Indian is a person who has a legal Indian status, as per the *Indian Act*, and whose name appears in the Indian Register maintained by Indigenous and Northern Affairs Canada (INAC). In the census, the status is self-reported.

In vital statistics, the Inuit affiliation of females whose place of residence is Nunavut or the Northwest Territories comes from self-reported information on the birth forms of the province or territory where the birth occurred (see next section). Thus, people who self-reported being Inuit on these forms are considered Inuit for the purpose of this paper.

### **Data and methods**

As mentioned earlier, multiple data sources are used for this paper. The main sources are the 1996, 2001, and 2006 censuses, as well as the 2011 NHS. Two other data sources, the Indian Register and vital statistics, are used to complement the analysis.

#### *Censuses and the National Household Survey*

The fertility analysis uses data from the 1996, 2001, and 2006 Canadian censuses (20 percent sample) and the 2011 NHS. Because the question about children ever born was removed from the census questionnaire after 1991, it is not possible to obtain a direct estimate of fertility. For this reason, an indirect method known as the own-children method is applied to these data sources to compute fertility rates.

This method uses information on the relationship between members of census families.<sup>10</sup> The very young children enumerated in the census (children younger than one year old, i.e. those born over the last year) are linked to the woman who is most likely the mother—that is, a female in the same census family aged 15 to 49 identified as married, as in a common-law partnership, or as a lone parent. These women are considered to have given birth in the previous year. With this information, it is then possible to calculate fertility rates for various characteristics of the mothers (including Aboriginal group and registered Indian status) available in the census and NHS but usually not in other sources.<sup>11</sup> This method is well-documented (Grabill and Cho 1965; Desplanques 1993), and has been applied several times in Canada (Statistics Canada 2015b, 2011; Ram 2004; Bélanger and Gilbert 2003).

This method supposes certain conditions or assumptions. It assumes that the coverage of the population is complete. To achieve this completeness, the census and NHS data used for this paper are adjusted to take into account net undercoverage.<sup>12</sup> Furthermore, this method assumes that the young children live with their mother. This is why only the youngest children (younger than one year old) were selected, even though this choice reduces the sample size. For children not living with their mother (e.g., living only with a father, only with grandparents, or with other relatives), adjustment factors by place of residence (by census metropolitan area and rest of province or territory, with a breakdown by residence on or off reserves and in or outside Inuit regions) are applied.<sup>13</sup> The own-children method, finally, supposes that all young children and women survive until Census Day. To address this, an adjustment is made for the mortality of children and women using life tables.<sup>14</sup> The impact of these three adjustments on the TFR is quite small, as Morency and Caron-Malenfant (2014) have shown.

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10 In the census and the NHS, a census family is defined as a married couple (with or without children), a common-law couple (with or without children), or a lone-parent family (Statistics Canada 2012). In cases in which grandparents live in the same household as their child and their grandchild or grandchildren (three-generation households), these grandparents are included in one census family, while their child and their grandchild or grandchildren are included in a separate census family.

11 A data linkage between the 2011 NHS and the Indian Register provides the registered Indian status category—6(1) or 6(2)—for the registered Indian population. The linkage was successful in 66 percent of cases. For the remaining 34 percent, the information was imputed (Statistics Canada 2017). This linkage allows, for the first time, fertility rates to be computed without bias toward registered Indian women in category 6(2).

12 Some people did not respond to the census (undercoverage), while others were counted more than once (overcoverage). The difference between the undercoverage and the overcoverage is the net undercoverage.

13 This adjustment consists of a ratio of the total number of children aged younger than one year old in a region (all identities, including non-Aboriginal identity) to the number of children linked to a mother. This adjustment does not take into account the Aboriginal identity of children, as this would correspond to adding to the births in a given group the net effect of intergenerational ethnic mobility (to know more about this concept please refer to Boucher et al. [2009]).

14 The adjustment for mortality is made only by province and territory (not by Aboriginal identity or registered Indian status) using custom life tables (specific for each year under study) prepared by Statistics Canada's Demography Division.



A limitation, for which no adjustment is made, is the fact that it is not possible to identify with certainty (only with a certain degree of likelihood) which woman is the biological mother of a young child in the census and NHS (for instance, the child could have been adopted).<sup>15</sup> This limitation is caused by the questionnaire itself, which asks respondents to report own children, either biological or adopted. For this reason, some women who are not the biological mothers could be identified as such, while some biological mothers could be missed.

In addition, in the census, it is possible to know with certainty only the relationships between Person 1 (i.e. the first person listed on a census questionnaire) and the other members of the household. Information about other relationships (between people other than Person 1) is not available directly (with a few exceptions in 2011),<sup>16</sup> and can be derived only with a certain degree of likelihood. In households with more than one census family (for instance, multigenerational households), it is more difficult to establish the relationships between members, particularly for the census families that do not include Person 1.

In past censuses and the NHS, some Indian reserves and Indian settlements were incompletely enumerated, meaning that no information was available for them at certain points in time. Because the goal of this paper is to analyze the evolution of fertility from one census year to the next, it requires comparable data. All Indian reserves and Indian settlements that were once incompletely enumerated during the period under study are excluded from the analysis.<sup>17, 18</sup>

### *Indian Register*

A second data source—the Indian Register, an administrative file that is updated continuously—is used to compute fertility indicators for the registered Indian population. In this paper, a version of the register dated August 16, 2016, is used to prepare fertility indicators for the period from 1986 to 2013.

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15 With the information about the relationship between members in a census family, it is possible to avoid considering a grandmother, a sister or an aunt as the mother of a young child.

16 For 2011, some information about the relationship of other household members to Person 2 is available, but only when those people are children of Person 1 or Person 2. Otherwise, information on the relationship between Person 2 and other household members is not collected.

17 There were 78 incompletely enumerated Indian reserves and Indian settlements in 1996 (Statistics Canada 1999), 30 in 2001 (Statistics Canada 2004), 22 in 2006 (Statistics Canada 2010), and 23 in 2011. The number for 2011 excludes the 13 reserves in Northern Ontario that were hit by a natural disaster in 2011, because information about these reserves was made available later. However, it includes five Indian reserves that were enumerated in the 2011 Census but partially enumerated in the NHS (Statistics Canada 2015a).

18 While the comparability of the NHS with previous censuses may have been affected by its voluntary nature and changes of methodology, comparisons of fertility differential between this source and other censuses show similar patterns (Morency and Caron-Malenfant 2014). For more information about the NHS and its comparability with previous censuses, please refer to Statistics Canada (2013) and Statistics Canada (2014b).

In this data source, information about each registered individual—including birth date, registration date, sex, registration category (6[1] or 6[2]),<sup>19</sup> and place of residence—and the relationship between mothers and their children makes it possible to compute fertility rates for this population. An advantage of this data source is that it enables the calculation of annual fertility indicators.

Because of the transmission rules for registered Indian status, mothers registered under subsection 6(2) of the *Indian Act* who are in a union with a non-registered spouse or common-law partner cannot transmit their status to their children.<sup>20</sup> This means that some of the children born to 6(2) mothers are missing from the file, as they are not entitled to registration. Thus, to avoid bias, fertility indicators computed using the Indian Register are limited to the female population registered under subsection 6(1) of the *Indian Act*, who can transmit their status to all their children.<sup>21</sup> This approach is similar to the one used by Guimond and Robitaille (2009) and Amorevieta-Gentil et al. (2013).

As mentioned in a study by Amorevieta-Gentil et al. (2013), analyzing fertility with the Indian Register has two major limitations: under-declaration and late declaration of births. The former refers to children who died before their birth was registered and to people entitled to register who never do so. In this study, no adjustment is made to overcome this under-declaration because no data are available to measure it adequately. For this reason, fertility indicators computed using the Indian Register underestimate the fertility level. The latter limitation (that is, the late registration of births) occurs for various reasons, including administrative delays, changes in the rules of eligibility for Indian status and, particularly for the population living off-reserve, a lack of incentive to register. In this case, the annual number of births is adjusted using a standard birth registration timeline.

For this paper, birth registration timelines for four distinct birth cohorts (1986 to 1990, 1991 to 1995, 1996 to 2000, and 2001 to 2005) by place of residence (on and off reserves) were considered in order to adjust the annual number of births for late registrations. Figure 1 presents the cumulative proportion of births for registered Indian mothers in category 6(1) by delay and birth cohort for Canada as a whole.

The data show that the majority of births are registered in the first five years following the birth, and this is true for all birth cohorts. However, differences can be observed across

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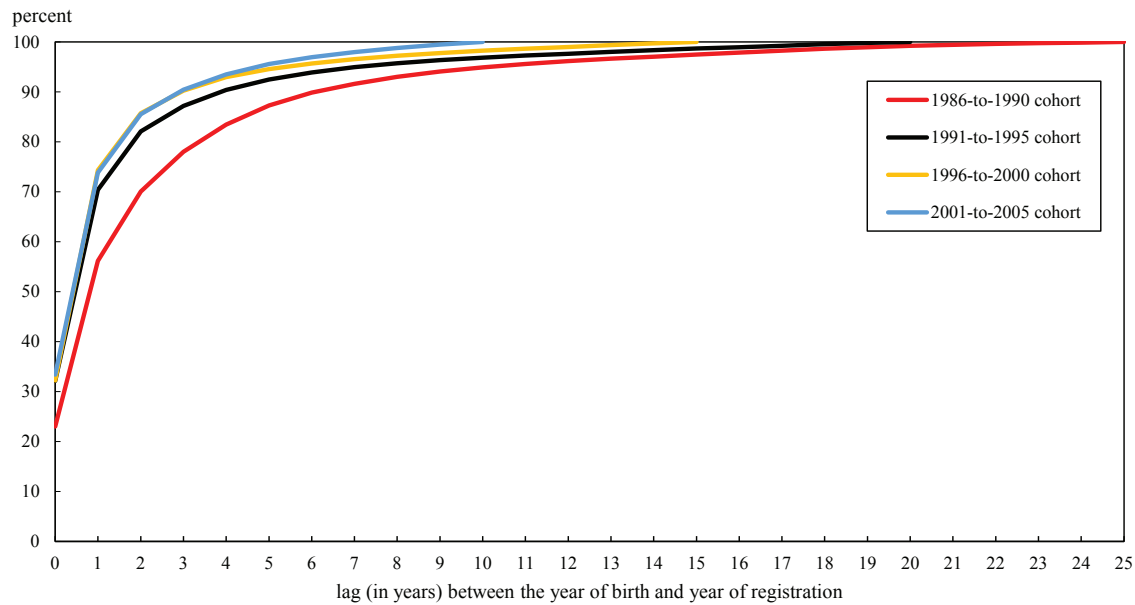
19 The registration category 6(1) or 6(2) is assigned to Registered Indians when they register on the Indian Register. The categories correspond to subsections 6(1) and 6(2) of article 6 in the 1985 *Indian Act*, under which an individual is registered. Article 6 establishes the criteria that must be met to register on the Indian Register.

20 For more information about the transmission rules of registered Indian status in Canada, please refer to the *Indian Act* (an explanation of the transmission rules is also provided by Guimond and Robitaille [2009]).

21 Women registered following the legal recognition of the Qalipu Mi'kmaq First Nation (which entitled several thousand people to register on the Indian Register under subsection 6[1]) are excluded because a large number of their children are not registered. Moreover, women who were reclassified from registration category 6(2) to 6(1) following the enactment of Bill C-3 in 2011 are also excluded, since this information has not been updated on the Indian Register for all women entitled to this change.

cohorts.<sup>22</sup> For the oldest cohort (1986 to 1990), the registration pattern is slower than for the younger ones. This could be because of a backlog generated by the 1985 modifications to the *Indian Act* that entitled many people to register or to change their status. In addition, the data show that even 25 years after birth (the longest delay considered in this paper), some people are still registering, mainly because of legislative changes. This indicates that even after long delays, new people will probably continue to register. Thus, the longer the delay considered, the greater the adjustment for late registration will be.<sup>23</sup>

**FIGURE 1.** Cumulative proportion of births for registered Indian mothers in category 6(1), by delay in registering and birth cohort, Canada



**Sources:** Authors' calculations based on the 2016 Indian Register

For the three most recent cohorts, the patterns of registration delay are much more similar. This means that using any of the three late registration timelines to adjust the number of births would give similar outcomes.

This relative stability observed recently in the registration pattern is interesting, because it could indicate that the future pattern could look the same. On the other hand, it is impossible to know with certainty whether the registration pattern observed recently will continue in the

<sup>22</sup> For this reason, the fertility indicators presented in this paper for the more recent years are more prone to uncertainty, because an important proportion of births comes from the adjustment factor. Even though it was technically possible to compute rates until 2015, it was decided to stop in 2013.

<sup>23</sup> The adjustment for late registration is made only to the numerators of the rates. In some cases, when the delay considered for late registration is longer than 15 years, the adjustment for births could also be applied to parts of the denominators (because the new registered person added following the adjustment could be a woman of reproductive age). For this paper, this adjustment to the denominator was not made.

future. To take into account this uncertainty related to registration delays in the Indian Register, a range of results is provided when presenting fertility indicators using the Indian Register.

### *Vital statistics*

A third data source, vital statistics, from which information about births is available, is used to compute fertility indicators for Inuit whose usual place of residence is Nunavut or the Northwest Territories. It is the first time that this data source has been used for this purpose.

Information about the mother's place of residence and age is available in the birth declaration forms of all provinces and territories in Canada. In the three territories and Saskatchewan, the form also captures explicitly the group with which mothers and fathers identify (First Nations, Métis, Inuit, or Registered Indian) through a specific question (although the wording is different in Saskatchewan and the territories).<sup>24</sup> This makes it possible to identify Inuit mothers. For women who give birth in another province, information about the group is not collected. The database was created by adding to the vital statistics file information obtained through a special data capture funded jointly by INAC and Statistics Canada.

Data include all births of children in Canada to a mother with Nunavut or the Northwest Territories as her usual place of residence for the periods from 2000 to 2002, 2005 to 2007, and 2010 to 2011.<sup>25</sup> In about 72 percent of cases, information about the mother's group was available, the majority of mothers having given birth in Nunavut or the Northwest Territories.

When information about the mother's group was not available, it was imputed probabilistically based on distributions of mothers who gave birth in Nunavut or the Northwest Territories, by group (Inuit or non-Inuit), age group (13 to 24 years, 25 to 34 years, and 35 to 49 years) and period (2000 to 2002, 2005 to 2007, and 2010 to 2011). One of the main limitations of this data source is that it is impossible to know whether the characteristics of women who give birth outside their territory of residence are similar to those of women who do not (for instance, non-Aboriginal women may be more prone to giving birth outside these two territories).

Thus, vital statistics provide the number of Inuit women living in Nunavut or the Northwest Territories who gave birth to a child, and their age. For this study, the average number of births by year of age for the periods from 2000 to 2002, 2005 to 2007, and 2010 to 2011 (doubling the number of births in 2011 because the 2012 data were not available)<sup>26</sup> is calculated around the census years (2001, 2006, and 2011). The denominators of the fertility rates (that is, the population of Inuit women living in Nunavut and the Northwest Territories) are obtained from the 2001 and 2006 censuses and the 2011 NHS, adjusted for net undercoverage. The inconsistency between the numerator and denominator constitutes a limitation.

24 In the Northwest Territories and Nunavut, this section of the form is labelled "Ethnic group: Treaty Indians, Metis, Eskimo, other (specify)." In Saskatchewan, the question is worded as "Are you Indian, Métis or Inuit?" In Yukon, the wording is "Ethnic group: First Nation (registry number), Inuit, Caucasian, other (specify)."

25 Data for 1999, 2003, 2004, 2005, and 2009 are also available, but not used in this paper.

26 An average of three years is used to reduce the impact of annual fluctuations on the results.

## Analysis of results

### *Descriptive analysis*

#### Fertility among the Aboriginal identity population

From 1995/1996 to 2010/2011, the TFR of the Aboriginal identity population as a whole remained above the replacement level (about 2.1 children per woman for the total Canadian population). It decreased from 2.41 children per woman in 1996 to 2.18 in 2001, and remained stable thereafter according to past censuses and the NHS (Table 2).

**TABLE 2.** Total fertility rate of the Aboriginal population, by various data sources, Canada

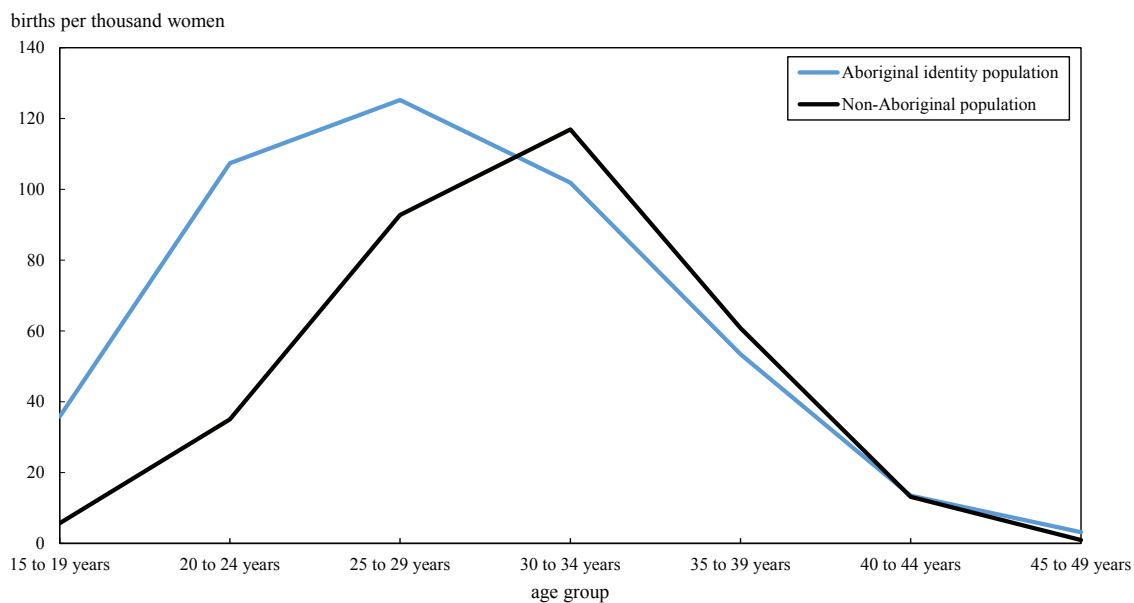
Data source	1995/1996	2000/2001	2005/2006	2010/2011
	Total fertility rate (children per woman)			
Census or National Household Survey				
Aboriginal identity	2.41	2.18	2.15	2.20
First Nations	2.58	2.41	2.36	2.40
Métis	1.86	1.70	1.74	1.81
Inuit (all)	3.28	2.65	2.66	2.75
Inuit (Nunavut and Northwest Territories)	..	3.00	2.93	3.20
Registered Indian population (all)	2.68	2.49	2.41	2.63
On reserves	3.27	2.80	2.80	3.25
Off reserves	2.31	2.26	2.14	2.20
Category 6(1)	..	..	..	2.85
Category 6(2)	..	..	..	2.16
Non-Status Indians	1.77	1.62	1.81	1.47
Non-Aboriginal identity	1.66	1.51	1.59	1.63
Indian Register - Registered Indians in category 6(1)				
Adjustment for late registration - 1986 to 1990 cohort (25 years)	2.82	2.65	2.81	2.86
Adjustment for late registration - 1991 to 1995 cohort (20 years)	2.79	2.62	2.75	2.67
Adjustment for late registration - 1996 to 2000 cohort (15 years)	2.79	2.58	2.71	2.60
Adjustment for late registration - 2001 to 2005 cohort (10 years)	2.79	2.58	2.66	2.58
Vital statistics		2001	2006	2011
Inuit (Nunavut and Northwest Territories)		3.28	3.09	3.02

**Sources:** Statistics Canada, authors' calculations using the 1996, 2001 and 2006 censuses, the 2011 National Household Survey (adjusted), vital statistics and the Indian Register.

When the TFR of the Aboriginal population is compared with that of the non-Aboriginal population, data from past censuses and the NHS from 1996 to 2011 show that the Aboriginal population consistently had a higher fertility rate. During this period, the Aboriginal population had between 0.6 and 0.8 more children per woman than the non-Aboriginal population.

The comparison of the age patterns of these two populations can help understand better the higher fertility rate observed among Aboriginal people. Figure 2 shows, for 2010/2011 (the results are similar for 1995/1996, 2000/2001, and 2005/2006), the age-specific fertility rates by age group for the Aboriginal and non-Aboriginal populations. For the younger age groups (15 to 19 years, 20 to 24 years, and 25 to 29 years), fertility rates were much higher among the Aboriginal population. For the older age groups (30 to 34 years, 35 to 39 years, 40 to 44 years, and 45 to 49 years), the two populations had similar fertility rates. Thus, the differences observed between the TFRs of the Aboriginal population and the non-Aboriginal population are due to higher fertility rates at younger ages among the Aboriginal population. These results are consistent with the literature.

**FIGURE 2.** Fertility rates by five-year age groups for the Aboriginal identity and non-Aboriginal populations, Canada, 2010/2011



**Sources:** Statistics Canada, authors' calculations using the 2011 National Household Survey (adjusted).

#### Fertility among the Aboriginal groups (First Nations, Métis and Inuit)

Among the three self-reported Aboriginal groups in the census and NHS (First Nations, Métis, and Inuit), the results reveal that Métis had the lowest TFR in all periods considered

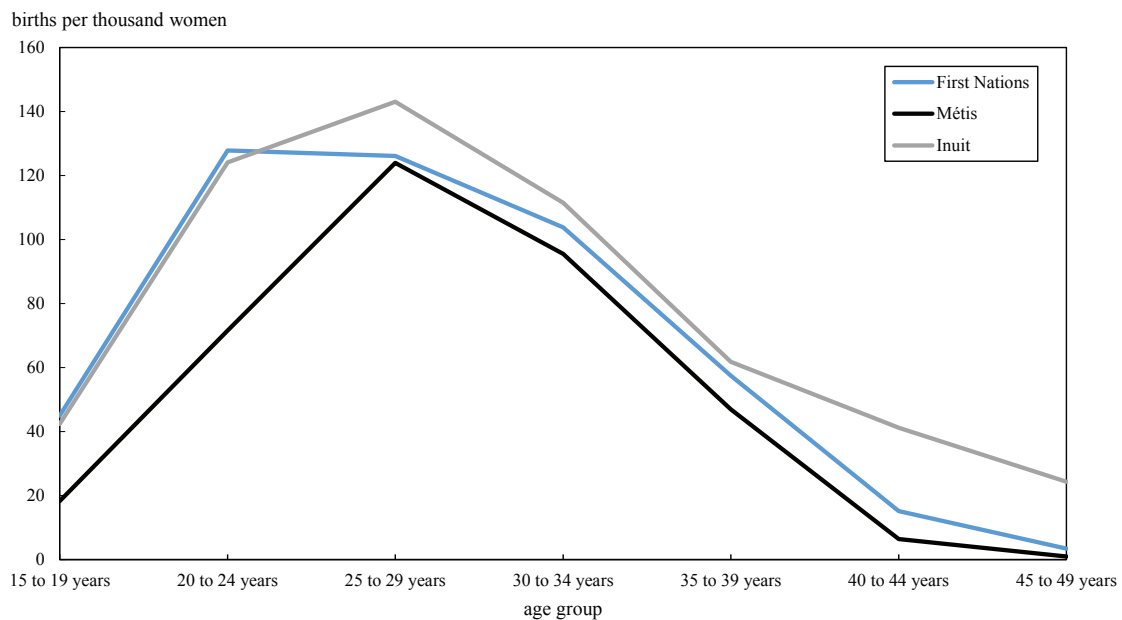
(Table 2). Their TFR, which was 1.86 children per woman in 1995/1996, decreased to 1.70 in 2000/2001 and then increased slightly to reach 1.81 in 2010/2011. The fertility of Métis was closer to that of the non-Aboriginal population than to that of the two other Aboriginal groups. These results are also consistent with the literature.

For First Nations, the TFR has remained stable at about 2.40 children per woman since 2000/2001, while it was slightly higher in 1995/1996 (2.58). In all cases, the fertility level of this group was significantly higher than that of the Métis population.

Inuit had the highest TFR among the three Aboriginal groups from 1995/1996 to 2010/2011. The Inuit TFR fluctuated during this period, dropping from 3.26 children per woman in 1995/1996 to 2.65 in 2001. It then increased slightly to reach 2.75 in 2010/2011.

The fertility rates by five-year age group for the three Aboriginal groups in 2010/2011 are presented in Figure 3. In all age groups, particularly the youngest ones (15 to 19 years and 20 to 24 years), the fertility rates of Métis were much lower than those of First Nations and Inuit. In other words, Métis had considerably fewer children at younger ages, and even at older ages their propensity to give birth was lower. As for First Nations and Inuit, their fertility age structures were very similar, although Inuit had slightly higher rates in every age group older than 20 to 24 years. The fertility rates of these two groups were particularly high in the youngest age groups (15 to 19 years and 20 to 24 years) when compared with the Métis and non-Aboriginal populations.

**FIGURE 3.** Fertility rates by five-year age group and Aboriginal group, Canada,



**Sources:** Statistics Canada, authors' calculations using the 2011 National Household Survey (adjusted).

### Fertility of Inuit using vital statistics

The use of vital statistics, an alternative data source to the census and the NHS, enables comparisons of the TFR and fertility age structure of Inuit living in Nunavut and the Northwest Territories for 2001, 2006, and 2011 (Table 2).

According to the vital statistics data, the TFR of Inuit living either in Nunavut or in the Northwest Territories decreased from 3.28 children per woman in 2001 to 3.09 in 2006 and 3.02 in 2011. According to the census and NHS data, the TFR of Inuit residing in Nunavut and the Northwest Territories decreased from 3.00 children per woman in 2000/2001 to 2.93 in 2005/2006, and then increased to 3.20 in 2010/2011. Although the two sources are broadly similar at around three children per woman, they show differences over time that raise questions related to limitations of the data sources used.

The first reaction may be to question the NHS data. However, an analysis conducted by Morency and Caron-Malenfant (2014) showed that the TFRs for each province and territory obtained using the own-children method applied to the 2011 NHS were very consistent with the 2011 vital statistics data. In Nunavut, in particular, the TFRs obtained from both sources (3.00 children per woman with vital statistics versus 2.98 with the NHS) were almost the same.

The gap observed between estimates from vital statistics and the NHS in 2011 emerges when fertility rates are computed for the Inuit population living in Nunavut or the Northwest Territories. Even though the NHS data may not be perfect, the most likely explanation of this gap relates to limitations in the rates computed with vital statistics. As a reminder, for about 30 percent of births to mothers residing in Nunavut or the Northwest Territories, the mother's group was unknown. This may bias the results. Furthermore, inconsistency between the numerators (coming from vital statistics) and the denominators (coming from the NHS) may also affect the results. This inconsistency does not exist when only the census or the NHS is used to compute fertility rates.

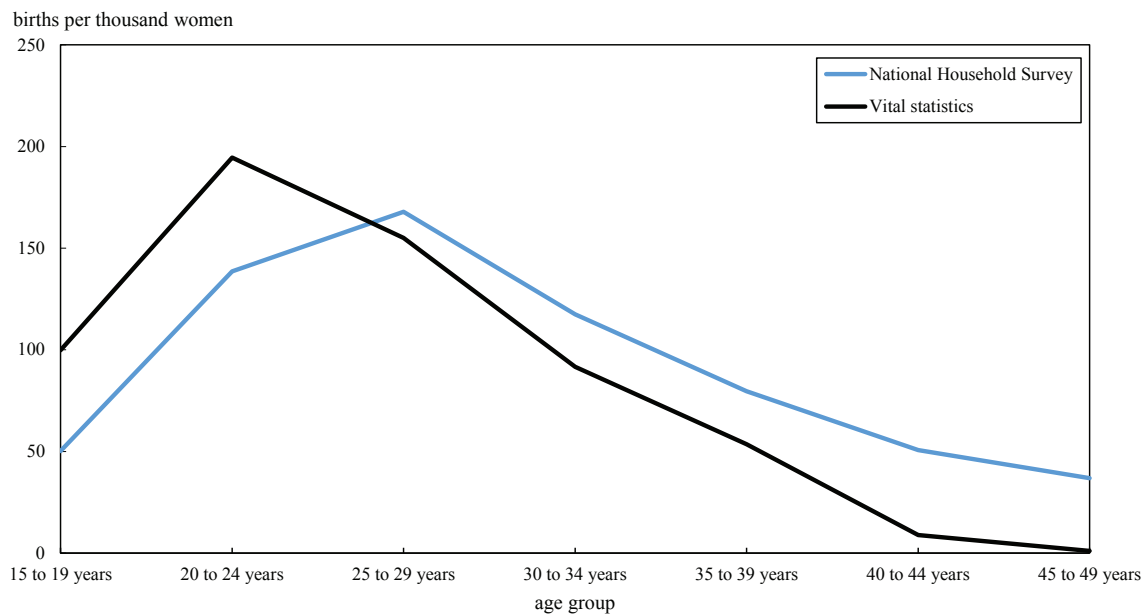
Other differences appear when the fertility age structures from the same two sources are compared (Figure 4).

It appears that in younger age groups (15 to 19 years and 20 to 24 years), the fertility rates computed using vital statistics data are higher than those computed using the census and NHS data. The opposite is the case for older age groups (30 to 34 years, 35 to 39 years, 40 to 44 years, and 45 to 49 years). Comparisons in the literature between the fertility age structure in the census and in vital statistics for the general Canadian population show a more comparable age structure (Morency and Caron-Malenfant 2014).

The difference may be related to methodological differences between sources. First of all, as mentioned earlier, information on the biological mother is available directly in the vital statistics, while the mothers identified in the census and the NHS can be either biological or adoptive. This could be a particular issue for Inuit, since adoption (particularly customary adoption practices [Tam et al. 2017]) of young children is a normalized practice in many Inuit regions. Because of that, an unknown proportion of young children in the census or NHS is linked to an adoptive mother who is older than the biological mother.



**FIGURE 4.** Fertility rates by five-year age group for Inuit living in Nunavut and the Northwest Territories, by data source, Canada, 2011



**Sources:** Statistics Canada, authors' calculations using the 2011 National Household Survey (adjusted).

Furthermore, an analysis of data from past censuses and the NHS has shown that Inuit children are more likely to live in households with more than one census family (Statistics Canada 2008). As mentioned earlier, relationships among members of a census family are more difficult to establish in such households. One of the possible consequences of this difficulty is that when the own-children method is applied to census data, the probability of linking young children to a woman who is not their mother increases.

#### Fertility among the registered Indian and non-status Indian populations

The last two populations considered in this fertility analysis are the registered Indian population (composed mostly of First Nations individuals with registered Indian status) and the non-status Indian population (composed of First Nations individuals without registered Indian status).

From 1995/1996 to 2010/2011, the TFR of the non-status Indian population fluctuated without a clear long-term trend, but remained relatively low. In 1995/1996, the TFR was 1.77 children per woman. It decreased thereafter to 1.62 in 2000/2001, then increased to 1.81 in 2005/2006, and finally dropped to 1.47 in 2010/2011, below the TFR of the non-Aboriginal population.

This fluctuation of the TFR of the non-status Indian population could be related to the rapid transformation of this population over the past 20 years. During this period,

this population grew rapidly because of ethnic mobility (many people changed how they report their Aboriginal identity in the census, from non-Aboriginal to First Nations) (Caron-Malenfant et al. 2014) and because of the addition of children who cannot receive status from their registered Indian parents in category 6(2). This population was reduced by changes in the law (Bill C-31 and Bill C-3) that gave people, including some Non-Status Indians, the right to register on the Indian Register (Statistics Canada 2015b). All these changes that had an impact on the composition of this population over time may have played a role in its fluctuating TFR.

Compared with the fertility rate of Non-Status Indians, the fertility rate of Registered Indians remained much higher during this period, even though it fluctuated following a parabolic pattern. The TFR of Registered Indians, which was at 2.68 children per woman in 1995/1996, decreased slightly to 2.49 in 2000/2001 and 2.41 in 2005/2006. It then increased to reach 2.63 in 2010/2011, a level similar to that estimated for 1995/1996.

The results also show that the TFR of Registered Indians was consistently higher for the population living on-reserve than for that living off-reserve. In 2011, the TFR of the registered Indian population living on-reserve surpassed that of Inuit, at 3.27 children per woman.

A data linkage between the NHS and the Indian Register for 2011 allows the TFR for registered Indian women in categories 6(1) and 6(2) to be computed. According to this data source, the TFR of Registered Indians in category 6(1) was 2.85 children per woman in 2010/2011, compared with 2.16 for those in category 6(2), a gap of 0.7 children per woman.

#### Fertility of Registered Indians using the Indian Register

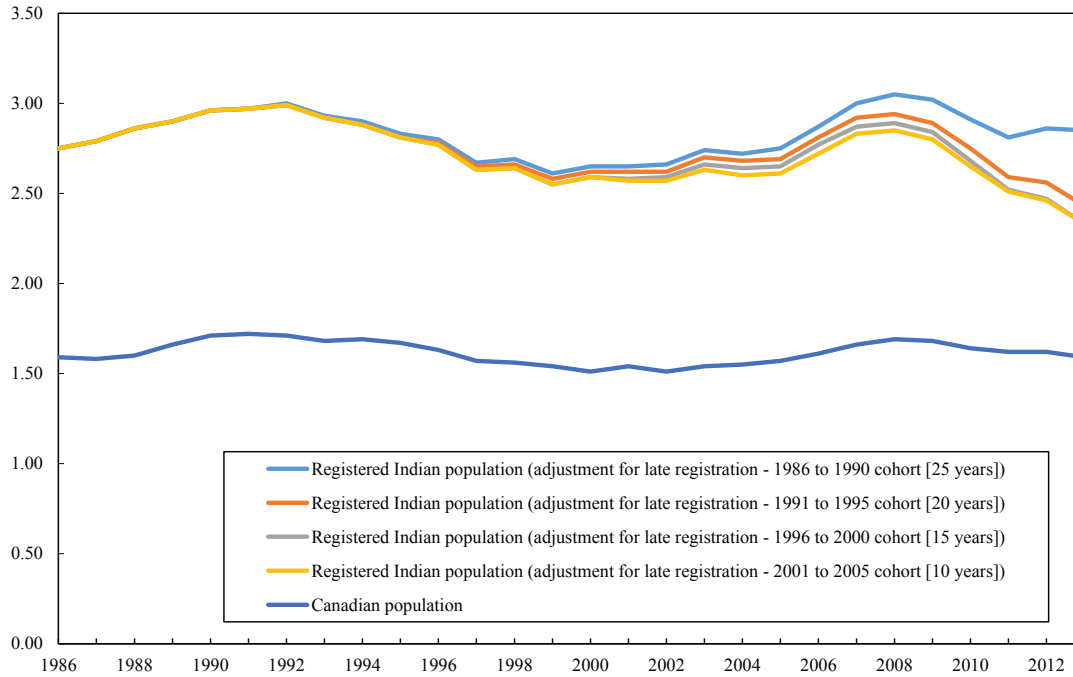
According to the Indian Register, from 1986 to 2010, the TFR of Registered Indians in category 6(1) tended to follow closely the year-to-year fluctuations observed among the Canadian population. In other words, there was no sign of fertility convergence between the two populations during this period, and this remains true when different adjustment timelines are used for late registrations (Figure 5). During this period, the gap observed between the two populations was about one child per woman.

The more recent period (2010 to 2013) shows more uncertainty. Depending on the adjustment timeline for late registrations considered, the TFR of Registered Indians in category 6(1) followed one of two trends. Either it declined and converged toward the TFR of the total Canadian population (when an adjustment for declaration delays based on the pattern observed for the 1991-to-1995, 1996-to-2000, or 2001-to-2005 cohort was used), or it increased slightly and evolved in almost the same way as the TFR of the Canadian population (when an adjustment based on the pattern observed for the 1986-to-1990 cohort was used). At this point, it is too early to ascertain the recent trend. If a convergence really occurred, it would mark a major change in the fertility behaviour of the registered Indian population.

It is possible to compare the TFR of Registered Indians in category 6(1) in 2010/2011 measured from the Indian Register with that measured from the NHS (linked to the Indian Register). With the NHS data, the TFR of Registered Indians in category 6(1) was 2.85 children

per woman, while it ranged between 2.58 (with the more conservative adjustments for late registrations) and 2.86 (with the more aggressive adjustments) with the Indian Register. Thus, the TFR computed with the NHS is either equal or higher than the Indian Register.

**FIGURE 5.** Total fertility rate for the Registered Indian population in category 6(1), by various adjustments for late birth declaration, and for the Canadian population, Canada, children per woman



**Sources:** Statistics Canada, authors' calculations using the 2016 Indian Register; and Statistics Canada, Demography Division

Considering that some children of women in category 6(1) will never register on the Indian Register, while NHS data include all children of women in category 6(1) even if the children are not registered, one would expect to have higher TFR using the NHS than the Indian Register. This is verified for all adjustments for late birth registration considered with the exception of the 25-years adjustments based on the 1986-1990 cohort late birth registration patterns. This could be an indication that these latter adjustments are too strong when applied to more recent years. This is not surprising considering that the late birth registration pattern for the 1986-to-1990 cohort is much slower (maybe because of a backlog generated by the 1985 modifications to the *Indian Act* that entitled many people to register or to change their status) than for the three most recent cohorts (1991-to-1995, 1996-to-2000, 2001-2005) which are very similar to each other.

Furthermore, part of the differences observed in the TFR of women in category 6(1) between the NHS and the Indian Register could also be due to the imputation of the

registration category of about 34 percent of Registered Indians in the NHS, which could have biased the results either up or down, although this is impossible to assess.

### *Multivariate analysis*

Previous results show that the Aboriginal population generally had a higher fertility rate than the rest of the population. They also reveal that the fertility rate and the fertility age structure varied significantly from one group to another. These results, although they give a high-level overview of the fertility situation of Aboriginal people, cannot be used to determine whether the differences in fertility rates observed between Aboriginal groups are due to differences in the sociodemographic or socioeconomic composition of these populations. To understand the dynamic behind the fertility behaviour of the Aboriginal population better, a logistic regression model is used to conduct a multivariate analysis.

The data source used to conduct this analysis is the 2011 NHS, to which the own-children method is applied. The population considered in the regression is the complete female Aboriginal population aged 15 to 49 years, and the dependent variable is having given birth or not in the year prior to the NHS.

Five categories of covariates are used in the regression. The first includes the Aboriginal groups (First Nations, Métis, Inuit [split between living in and outside Inuit Nunangat], and other Aboriginal people). The second category of variables includes basic demographic variables closely related to fertility: age group, parity,<sup>27</sup> and marital status. The third category includes two socioeconomic variables: highest level of education and household low-income cut-off.<sup>28</sup> Suwal and Trovato (1998) have already mentioned that education and income explained part of the gap in fertility between the Aboriginal population and non-Aboriginal population. This explanation may hold when comparing the different Aboriginal populations. The fourth category includes two variables that give supplementary information on the Aboriginal background: Aboriginal ancestry (Aboriginal ancestry only, mixed ancestry, or non-Aboriginal ancestry only), and the Registered Indian status combined with the registration category (Registered Indian in category 6[1], Registered Indian in category 6[2], and non-Registered Indian). These variables provide information on the mixed or non-mixed nature of the background. Ancestry gives information on the ethnic or cultural group of the ancestors, as collected in the census through a direct question. Registration category indicates whether a person has two registered Indian parents (6[1]), one registered Indian parent (6[2]), or two non-registered parents. According to the literature, a mixed background is associated with a lower level of fertility among Aboriginal people (Thornton et al. 1991). The fifth category of variables includes geographical variables such as living in or outside a census metropolitan area, living in the eastern or western part of the country, and living on or off an Indian reserve. An appendix table shows the population distribution according to the selected characteristics.

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27 Parity is derived using the number of own children at home and age of children. The information on the number of children at home is obtained from the relationship between mothers and children in the census family.

28 Information about low-income cut-off on Indian reserves and the territories is not available from the NHS. For this reason, a variable combining the place of residence and the household low-income cut-off was created.

TABLE 3. Odds ratios for Aboriginal women aged 15 to 49 to give birth to a child, Canada, 2010/2011

Characteristics	Odds ratios (95% Wald confidence limits)
<b>Aboriginal group</b>	
First Nations	<i>Reference</i>
Métis	1.05 (0.98 to 1.13)
Inuit living in Inuit Nunangat	1.40 (1.17 to 1.68)***
Inuit living outside Inuit Nunangat	0.85 (0.66 to 1.10)
Other Aboriginal people	0.99 (0.82 to 1.20)
<b>Age group</b>	
15 to 19 years	0.89 (0.79 to 0.99)*
20 to 24 years	1.72 (1.59 to 1.87)***
25 to 29 years	1.53 (1.43 to 1.65)***
30 to 34 years	<i>Reference</i>
35 to 39 years	0.46 (0.42 to 0.51)***
40 to 44 years	0.11 (0.10 to 0.13)***
45 to 49 years	0.03 (0.02 to 0.03)***
<b>Parity</b>	
No children	<i>Reference</i>
One child	2.35 (2.20 to 2.51)***
Two children or more	1.43 (1.34 to 1.53)***
<b>Marital status</b>	
Married	<i>Reference</i>
Common-law union	0.93 (0.87 to 0.99)*
Not in a union	0.25 (0.23 to 0.27)***
<b>Highest level of education</b>	
No diploma	1.14 (1.07 to 1.22)***
High school diploma	1.00 (0.94 to 1.07)
Postsecondary diploma	<i>Reference</i>
<b>Place of residence and household income</b>	
On an Indian reserve	1.46 (1.34 to 1.58)***
In territories but off Indian reserves	0.88 (0.75 to 1.04)
Off Indian reserve, outside territories and in a low-income household	1.88 (1.76 to 2.01)***
Off Indian reserve, outside territories and not in a low-income household	<i>Reference</i>
<b>Registered Indian status and registration category</b>	
Registered Indian in category 6(1)	1.22 (1.12 to 1.33)***
Registered Indian in category 6(2)	1.21 (1.12 to 1.32)***
Non-registered population	<i>Reference</i>
<b>Aboriginal ancestry</b>	
Aboriginal ancestry only	1.15 (1.07 to 1.23)***
Mixed ancestry	<i>Reference</i>
Non-Aboriginal ancestry only	0.99 (0.91 to 1.08)
<b>Place of residence (in or outside census metropolitan areas)</b>	
In a census metropolitan area	1.00 (0.94 to 1.05)
Outside census metropolitan areas	<i>Reference</i>
<b>Province or territory of residence</b>	
East (Atlantic provinces, Quebec and Ontario)	0.78 (0.74 to 0.82)***
West (Prairie provinces, British Columbia and the territories)	<i>Reference</i>

Significantly different from reference category: \*(p < 0.05). \*\* (p < 0.01), \*\*\* (p < 0.001)

Source: Statistics Canada, 2011 National Household Survey (adjusted).

The results of the regression model are presented in Table 3. This table presents odds ratios, as well as the 95 percent Wald confidence limits in parentheses.

When all the characteristics mentioned above are controlled for, only Inuit living in Inuit Nunangat appear to have a higher probability of giving birth than First Nations. For the other Aboriginal populations (Métis, Inuit living outside Inuit Nunangat, and other Aboriginal people), the differences were not statistically significant. This means that except for Inuit living in Inuit Nunangat, the differences in fertility levels observed between these populations in the descriptive analysis could be due mainly to differences in socioeconomic composition instead of to differences in the fertility behaviours themselves.

Among the factors considered, living in a low-income household (off Indian reserves and outside the territories), living on an Indian reserve, and having no diploma tended to increase the probability of an Aboriginal person giving birth to a child. In other words, these results seem to reveal that if, in the future, the level of education of the Aboriginal population were to increase and the share of the population living in a low-income household or on an Indian reserve to decrease, the fertility of this population should decrease as a result of a compositional effect.

When all the characteristics selected in the regression model are controlled for, the probability of having a child was higher among Registered Indians, but was about the same for those in categories 6(1) and 6(2). It seems that the overall difference in the TFR observed in 2010/2011 (2.85 children per woman for those in category 6[1] and 2.16 for those in category 6[2]) was not the result of different fertility behaviours, but rather the result of differences in other characteristics. In this case, these were differences in the composition of Aboriginal ancestry (more registered Indian women in category 6[2] tend to have mixed Aboriginal ancestry than 6[1] women); differences in distribution on and off Indian reserves; and, to a lesser extent, differences in the average level of education.

Finally, the results show that the probability of Aboriginal women giving birth to a child was higher for those living in remote regions, such as on Indian reserves<sup>29</sup> and in Inuit Nunangat (particularly for Inuit). They do not contradict the assumption that geographic remoteness contributes to the maintenance of a distinct culture or tradition that gives more importance to family and children (Romaniuk 2008).<sup>30</sup> The fact that Aboriginal women with only Aboriginal ancestry were more likely to have children may also be considered consistent with this assumption. These women may have been raised in an environment where the cultural influence was more child-oriented and less shaped by “Western” procreative norms (which are less child-oriented).

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<sup>29</sup> Even if this is not the case for all reserves, most are located outside large metropolitan areas.

<sup>30</sup> Geographic remoteness may also be associated with other situations for which the data cannot account explicitly, such as limited access to health services (including access to birth control) or higher unemployment in the Indian reserves.

## Conclusion

The objective of this paper was to fill the gap in knowledge about the recent fertility of the Aboriginal population in Canada. To do so, various data sources (past censuses; the NHS; the Indian Register; and a new source, a special data capture of Inuit status in vital statistics) were used. The study discusses extensively the advantages and limitations of each data source for computing fertility indicators for the Aboriginal population.

A great advantage of census and NHS data is that they allow fertility indicators to be computed for various Aboriginal populations (First Nations, Métis, and Inuit), as well as for the registered Indian and non-status Indian populations, using an indirect method (the own-children method). While the own-children method works well when applied to census or NHS data, it remains an indirect approach with limitations for computing fertility indicators in populations that live more frequently in households with more than one census family or where adoption is more prevalent.

The Indian Register has the advantages of including information about the complete registered Indian population and allowing annual fertility indicators to be computed. It also provides information about the link between biological mothers and their children. However, the Indian Register has limitations when it comes to conducting fertility analyses. Some children of registered Indian mothers in category 6(2) are not listed in the Indian Register because they are not allowed to register. In other words, the fertility indicators can be computed without bias only for the registered Indian women in category 6(1), because they can transmit their status to all their children. The Indian Register data suffer from people entitled to registration who will never register and from late birth registrations, which have an impact on the computation of fertility indicators mainly for recent years. Adjustments can be made to overcome the latter issue, but they are affected by a certain degree of uncertainty.

A great advantage of the vital statistics is that information about the biological mother is taken from the birth declaration forms. On the other hand, this data source contains limited population characteristics, including Aboriginal characteristics. In some cases, information about the group with which mothers identify (First Nations, Métis, Inuit, or Registered Indian) is available, but only in Nunavut, the Northwest Territories, Yukon, and Saskatchewan. This limitation impedes the calculation of fertility indicators for various Aboriginal populations for Canada as a whole. Because of this, only fertility indicators for Inuit mothers whose usual place of residence was Nunavut or the Northwest Territories were considered for this analysis. The information about the mother's group was available following a special data capture in about 70 percent of cases. For the remaining 30 percent, the mother's group was imputed, and this constitutes a limitation. Another limitation with using vital statistics to compute fertility indicators is the need to use an alternative data source to obtain the number of women by age. This may cause inconsistencies.

Despite these differences, which have been discussed throughout the analysis, a quite consistent portrait emerges. First of all, from 1995/1996 to 2010/2011, the results show that the Aboriginal identity population had a higher TFR than the non-Aboriginal population,

as was the case in past periods. The results also show that during the same period, Aboriginal women had their children at a younger age than non-Aboriginal women. This is consistent with the literature (Johnstone 2011). The fertility rates of Aboriginal women, when compared with those of non-Aboriginal women, were higher before age 30 but similar after age 30. Additional research in this area could improve our understanding of reasons for this higher fertility of Aboriginal females before age 30.

According to all the data sources considered, Inuit and Registered Indians had the highest TFRs during this period. At the other end of the spectrum, the fertility of the Métis and non-status Indian populations was the lowest among all the Aboriginal populations considered. All these results are consistent with the literature.

A multivariate analysis also showed that the differences in fertility observed in the descriptive analysis between the Aboriginal populations often disappeared when sociodemographic variables such as education and income were factored in. The results also showed that having a registered Indian status and having only Aboriginal ancestry (two variables that indicate the Aboriginal background of a person) were associated positively with fertility.

Finally, this paper focused on fertility levels and factors associated with fertility among the Aboriginal population in Canada, but it did not look at other facets of fertility, such as reproductive health, infant mortality, and preterm births. These could be the subjects of further research.



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Appendix Table Distribution of the female Aboriginal population aged 15 to 49, by selected characteristics, Canada, 2011

Characteristics	Number Distribution	
	in thousands	percent
<b>Aboriginal group</b>		
First Nations	237.6	60.5
Métis	129.5	32.9
Inuit living in Inuit Nunangat	12.3	3.1
Inuit living outside Inuit Nunangat	4.5	1.1
Other Aboriginal people	9.1	2.3
Total	393.1	100.0
<b>Age group</b>		
15 to 19 years	70.9	18.0
20 to 24 years	63.9	16.3
25 to 29 years	56.9	14.5
30 to 34 years	51.0	13.0
35 to 39 years	48.0	12.2
40 to 44 years	50.2	12.8
45 to 49 years	52.1	13.3
Total	393.1	100.0
<b>Parity</b>		
No children	203.3	51.7
One child	70.1	17.8
Two children or more	119.6	30.4
Total	393.1	100.0
<b>Marital status</b>		
Married	93.7	23.8
Common-law union	78.8	20.0
Not in a union	220.6	56.1
Total	393.1	100.0
<b>Highest level of education</b>		
No diploma	149.8	38.1
High school diploma	104.1	26.5
Postsecondary diploma	139.2	35.4
Total	393.1	100.0
<b>Place of residence and household income</b>		
On an Indian reserve	85.6	21.8
In territories but off Indian reserve	15.9	4.0
Off Indian reserve, outside territories and in a low-income household	75.5	19.2
Off Indian reserve, outside territories and not in a low-income household	216.2	55.0
Total	393.1	100.0
<b>Registered Indian status and registration category</b>		
Registered Indian in category 6(1)	137.7	35.0
Registered Indian in category 6(2)	57.6	14.7
Non-registered population	197.8	50.3
Total	393.1	100.0
<b>Aboriginal ancestry</b>		
Aboriginal ancestry only	166.4	42.3
Mixed ancestry	180.4	45.9
Non-Aboriginal ancestry only	46.3	11.8
Total	393.1	100.0
<b>Place of residence (in or outside census metropolitan areas)</b>		
In a census metropolitan area	157.6	40.1
Outside census metropolitan areas	235.4	59.9
Total	393.1	100.0
<b>Province or territory of residence</b>		
East (Atlantic provinces, Quebec and Ontario)	149.6	38.1
West (Prairie provinces, British Columbia and the territories)	243.4	61.9
Total	393.1	100.0

Source: Statistics Canada, 2011 National Household Survey (adjusted).