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Income and employment characteristics associated with women's first birth, 2017 to 2023

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Income and employment characteristics associated with women's first birth, 2017 to 2023

by **Nora Galbraith** (Centre for Demography, Statistics Canada)

Overview of the study

This study examines the association between women's income and employment characteristics and the likelihood of first birth. Specifically, it examines this association among women aged 22 to 39 who were childless, employed and living with a married spouse or common-law partner during the period 2017 to 2023.

Highlights

- **Women's likelihood of first birth rises steadily with family income.**

  From 2017 to 2023, among women aged 22 to 39 who were childless, employed and in a couple, those with higher family income were consistently more likely to have a first birth than those with lower family income.

- **Income-related differences in the likelihood of first birth have widened over time.**

  In 2017, women in the highest family income group were 2.1 times as likely to have their first child as those in the lowest-income group. By 2023, this ratio had widened to 2.5.

- **Women's employment characteristics are associated with the likelihood of first birth.**

  Regardless of income level, women employed in the public sector or in unionized jobs were more likely to have a first birth than other employed women.

- **Family resources matter more than women's individual earnings.**

  While higher-earning women were more likely to have a first birth than lower-earning women, differences by family income were larger and widened more over time.

- **COVID-19-era increases in first births were driven by women in higher-income families.**

  In 2021, the likelihood of first birth rose among women in the highest-income families but declined slightly among those in the lowest-income families.

Introduction and research questions

Canada's total fertility rate (TFR) declined sharply over the last two decades, reaching a record low of 1.25 children per woman in 2024 (Statistics Canada, 2025). At the same time, childlessness is becoming more prevalent,[1] and a substantial share of women who are currently childless intend to remain so.[2] This decline in fertility has led to increased interest in the factors that influence the decision to have children, particularly the role of financial considerations amid economic uncertainty and the rising cost of living.

For much of the 20th century, fertility was negatively associated with income, especially women's income (Doepke et al., 2022). Within traditional economic frameworks, this relationship was interpreted as reflecting the higher opportunity costs of childbearing for those with greater earning potential, particularly mothers who faced wage penalties when interrupting employment (Mincer and Polachek,1974; Becker, 1992).

However, evidence from the past several decades suggests that these associations are changing in high-income countries. As high labour force participation and educational attainment among women have become the norm, opportunity-cost explanations alone appear insufficient to account for observed fertility patterns (Goldstein, Sobotka and Jasilioniene, 2009; Myrskylä, Kohler and Billari, 2009). Recent international research indicates that the negative relationship between income and fertility has weakened or reversed in some high-income contexts, particularly when considering first births (Jalovaara and Miettinen, 2013; Hart, 2015; van Wijk, de Valk and Liefbroer, 2021). Also in these contexts, women's stable employment and secure labour market attachment are increasingly associated with higher rather than lower fertility (Andersson and Scott, 2007; Kreyenfeld and Andersson, 2014; Miettinen and Jalovaara, 2020; Matysiak and Vignoli, 2026). These patterns may reflect broader institutional conditions that shape the compatibility of paid work and family life, influencing the extent to which employment and earnings facilitate, rather than hinder, entry into parenthood (McDonald, 2006; Esping-Andersen and Billari, 2015).

Alongside the reversal in the relationship between economic characteristics and fertility, recent studies of high-income countries show that fertility differences by income are widening. In particular, lower-income women are becoming increasingly unlikely to enter parenthood (van Wijk and Billari, 2024; van Wijk, 2024; Brini, Guetto and Vignoli, 2025), suggesting that financial constraints are growing in importance as a barrier to family formation. In contemporary societies, financial barriers to parenthood may stem from increased perceived economic requirements, widening inequalities in real economic resources, or the disproportionate impacts of macroeconomic shocks on those with lower socioeconomic status, among other factors (Adserà and Menéndez, 2011; Comolli, 2017; Doepke et al., 2022; Matysiak and Vignoli, 2023).

Whether these evolving relationships between income, employment and fertility are present in Canada remains largely unknown. Research in the Canadian context has been limited, as addressing these questions requires data that simultaneously capture women's demographic, economic, employment, and family characteristics over time. Contemporary data sources typically capture these dimensions separately, cross-sectionally, or may lack sufficient sample sizes to examine detailed subpopulations.

To address this information gap, this study uses linked census and administrative data to examine how economic characteristics—specifically, family income, individual income, within-couple income distribution and employment characteristics—are associated with the likelihood of first birth among childless women[3] aged 22 to 39 who are employed and in a couple. Specifically, it asks: Does the likelihood of having a first child vary by women's income and employment characteristics, and did these patterns change from 2017 to 2023?

Analytical design and file construction

This study estimates differences in the likelihood of a first birth according to various economic characteristics of interest. Births and time-varying covariates are observed in annual intervals using logistic regression applied to

1. In Canada, the proportion of women aged 50 and older who had no biological children increased from 14.1% in 1990 to 17.0% in 2024. Sources: General Social Survey, 1990 and Canadian Social Survey – Quality of Life, Housing and Trust, 2024 (custom tabulations).
2. Among childless women aged 20 to 49 in 2024 who were asked about their intentions to have children in the future, 31.1% answered "definitely not" or "probably not" (Statistics Canada, 2026).
3. This study examines fertility, a phenomenon closely linked to biological processes. The analysis in this study is based on individuals of childbearing age who were recorded as female based on the question on sex in the 2016 Census. For ease of reading, the term "women" is used throughout to refer to this population.

person-year data. Each observation represents one year of exposure to the risk of having a first birth, and women contribute one person-year for each year in which they meet the inclusion criteria (described below in the "Sample construction and description" section).

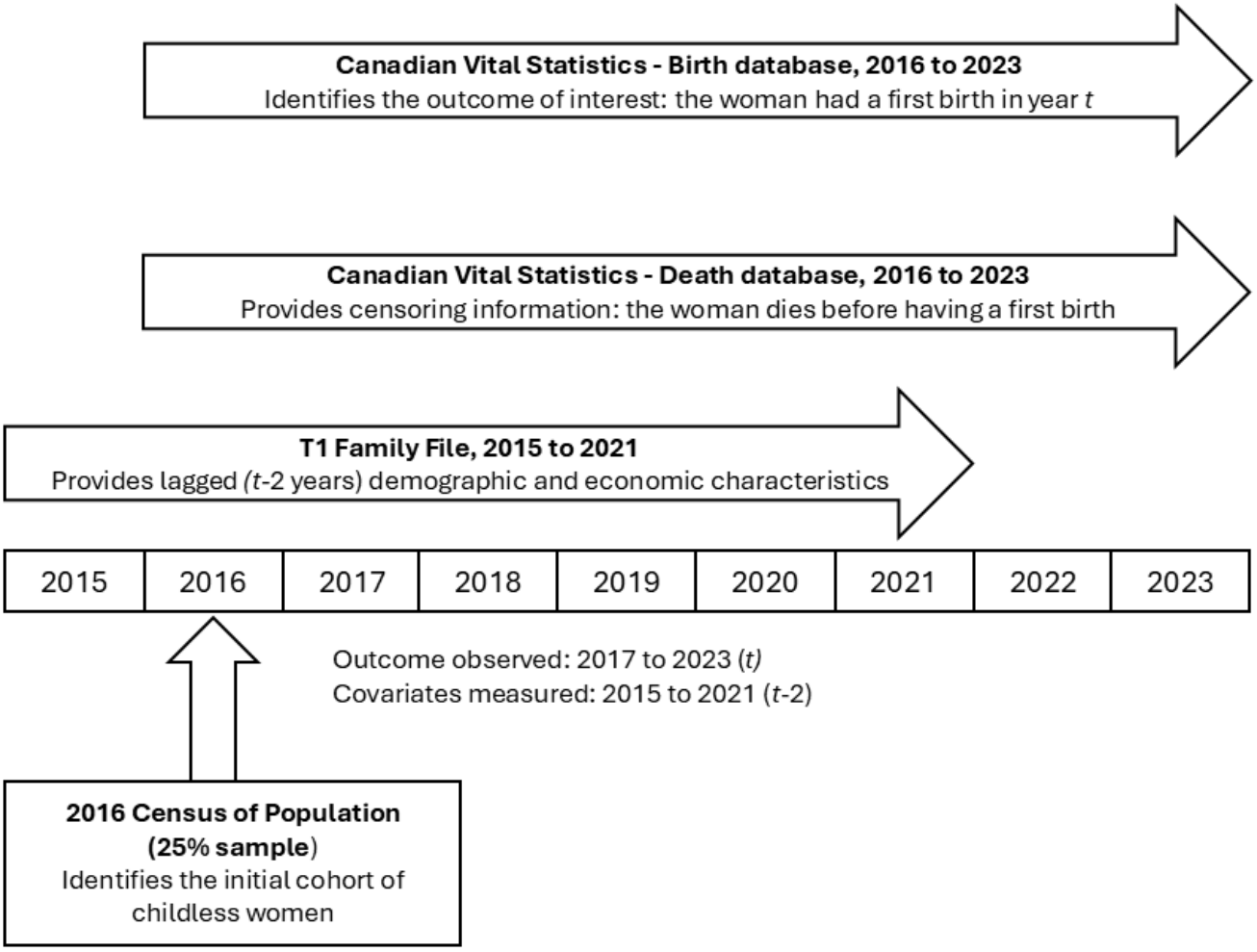
The analytical approach broadly follows van Wijk (2024), facilitating international comparison. As in that study, lagged (*t*-2 years) measures of women's economic characteristics are linked to the predicted probability of first birth in year *t*. A two-year lag structure was selected to ensure that economic and family characteristics were measured prior to conception, consistent with the typical timing of conception[4] and gestation.[5] While childbearing intentions cannot be observed directly with the data sources used here, a two-year lag captures women's circumstances at a point when decisions about childbearing are plausibly made, rather than during pregnancy or after birth.

Four data sources were linked to construct an analytical file with repeated measures of women's demographic and economic characteristics as well as information on births to those women. The initial cohort was first identified in the 25% sample of the 2016 Census of Population. Women aged 15 to 44 were assumed to be at risk of a first birth (also referred to as childless or parity zero) if they did not usually live with at least one of their own children.[6] This census-based measure of fertility history is known to slightly overestimate true childlessness, as some women may not usually reside with their children[7] and the census may not capture all coresident parent–child relationships in certain complex households[8] (Morency, Caron Malenfant and Daignault, 2018). This limitation was partially addressed through the incorporation of additional information from subsequent data linkage.

As shown in Figure 1, records from three administrative data sources were linked to the childless women identified in the 2016 Census 25% sample data. First birth events between 2016 and 2023 were identified from the Canadian Vital Statistics – Birth database (CVSB) via the Mother-centric data linkage. Information from the Canadian Vital Statistics – Death database (CVSD) was used to remove women from the sample following death, if applicable. Finally, lagged (*t*-2 years) measures of women's annual income, employment, family and residential characteristics were obtained from the T1 Family File (T1FF).

4. The World Health Organization defines infertility as the failure to achieve a pregnancy after 12 months or more of regular unprotected sexual intercourse.
5. Gestation lasts an average of 40 weeks (The American College of Obstetricians and Gynecologist, 2013).
6. In the census data, there is no distinction between biological and adoptive parent-child relationships. As a result, it is possible that an unknown number of women of zero parity (biologically speaking) are misclassified because they live with their adopted child.
7. The census only captures parent-child relationships among individuals who share a usual place of residence. Children who split their time between two or more parental homes are captured at the home where they spend the most time, or, in cases of equal sharing, the home in which they are staying on Census Day. For more information, see the Appendix "Considerations for examining families and living arrangements with the Census of Population" in Families, Households and Marital Status Reference Guide, Census of Population, 2021.
8. The Relationship to Person 1 question allows most—but not all—coresidential parent–child relationships to be identified, depending on the household configuration and whether respondents provide write-in responses to specify relationships not involving Person 1.

Figure 1
Analytical design and file construction



Source: Galbraith, N. (2026). Income and employment characteristics associated with women's first birth, 2017 to 2023. *Demographic Documents*, Statistics Canada catalogue no. 91F0015M2026004.

Following linkage, records were reviewed and edited to resolve inconsistencies across sources based on each woman's full set of observations over the study period.[9] The resulting dataset is a longitudinal person-year file linking women's pre-conception demographic and economic circumstances to observed first birth events.

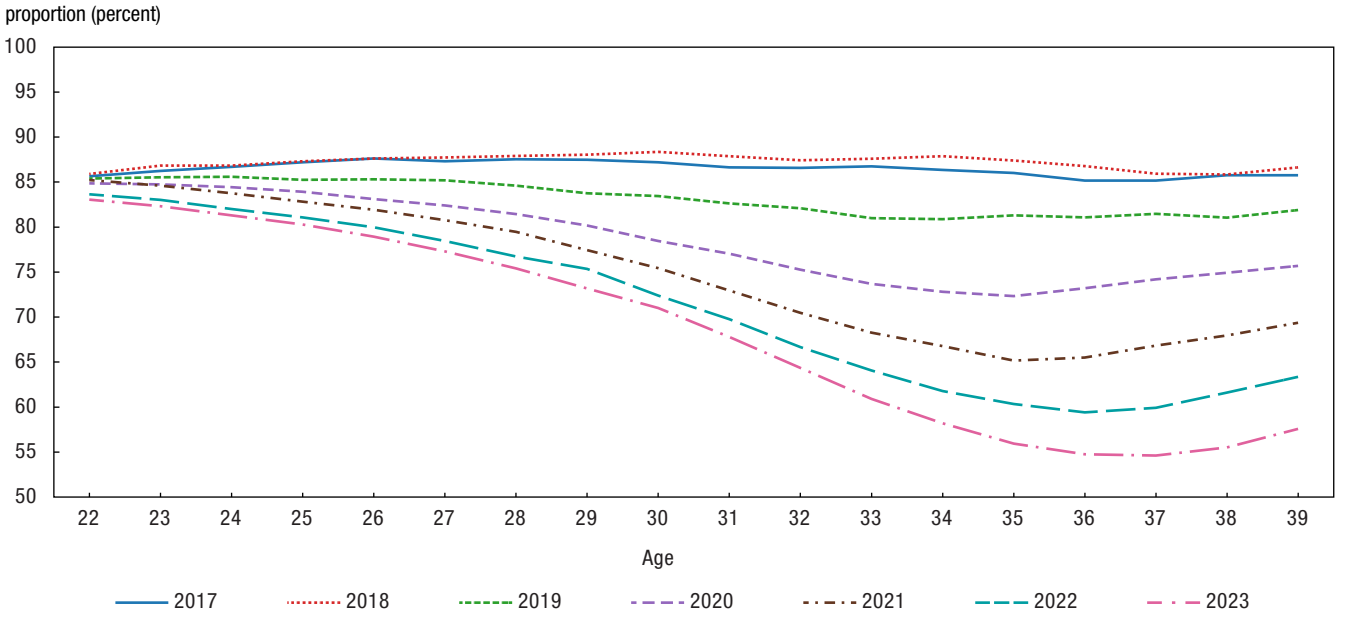
Sample construction and description

To ensure that all ages included in the analysis were consistently observed across the full study period, the sample in each year is restricted to women aged 22 to 39. The former age was the youngest one present in all years[10] (2017 to 2023) and the latter age was determined to be the most reasonable cut-off for obtaining a reliable estimation of women's parity based on household composition.[11]

9. For example, if a woman had a record of her death occurring in 2018 followed by a record of her giving birth in 2020, the death record was assumed to be erroneous and was removed. Minor variations were frequently encountered with respect to the reported age of women across the four data sources. To address this, woman's age as reported in the 2016 Census was used to determine her age in 2017 to 2023.
10. The cohort whose records were initially linked across the four data sources was restricted to women aged 15 to 44 in the 2016 long-form census data. As a result, 22 was the youngest age present in all years of the study, as women who were aged 15 in 2016 were aged 22 in 2023.
11. Initially, women aged 40 to 44 in 2016 were also considered for inclusion in the at-risk cohort but were ultimately excluded. Descriptive analysis indicated that overestimation of at-risk status was more evident among women in this age group. This is expected, as mothers in their 40s may be less likely to live with their children who were born to them in early adulthood and consequently be incorrectly assumed as childless based on household composition in the census.

Given that all economic and demographic characteristics of interest were captured in tax records, only those women who were successfully linked to a tax record in year *t*-2 were included in the analytical sample in year *t*. Among women aged 22 to 39, the rate of successful linkage decreased with temporal distance from 2016 (the year in which eligible women were identified in the census), from 86.7% in 2017 to 70.4% in 2023. This temporal decline is consistent with probabilistic linkages which rely on imperfect identifiers rather than a universal population register (St-Denis, Djomgang and Prats, 2026). As the interval between the census and administrative records grows, discrepancies in identifying information—such as changes in residence, surname, reporting inconsistencies, and missing data—are more likely to accumulate, reducing the probability of successful matches. Linkage rates also declined with women's age, but this gradient emerged only in the later years of the study (Chart 1). This pattern suggests that the processes reducing linkage quality over time disproportionately affected older women in the sample.[12]

Chart 1
Proportion of initially in-scope women who were linked to tax records in year *t*-2, by age and year (*t*)



Source: Linkage of Census of Population, 2016 (3901), T1 Family File, Canadian Vital Statistics - Birth database (3231), and Canadian Vital Statistics - Death database (3233).

The sample was further restricted to women who were employed and in a couple in year *t*-2 to facilitate a consistent comparison of economic conditions among those at risk of first birth, reflecting the joint and resource-dependent nature of childbearing decisions. As summarized in Table 1, women with employment income in year *t*-2 consistently exhibited a higher likelihood of first birth than women with income exclusively from other sources or those with no income. Additionally, women who were not living with a married spouse or common-law partner in year *t*-2 had distinctly lower likelihood of first birth in year *t* than those who were, consistent with the fundamentally different context for uncoupled women around childbearing decision-making processes.

12. The findings here contrast with evidence that younger adults are less likely to file taxes (Robson and Schwartz, 2020), implying that this age gradient reflects linkage processes rather than filing behaviour.

Table 1
Predicted probability (in percent) of first birth among initially in-scope women according to selected characteristics, 2017 to 2023

	Year (*t*)						
	2017	2018	2019	2020	2021	2022	2023
Characteristic	predicted probability (in percent)						
Reported no employment income in year *t*-2	3.8	3.5	3.1	2.7	2.8	2.7	2.3
Reported employment income in year *t*-2	5.9	5.5	5.3	5.0	5.3	4.8	4.5
Non-family person in year *t*-2	2.8	2.6	2.7	2.5	2.7	2.6	2.4
Married spouse in year *t*-2	18.2	17.4	17.1	16.3	17.3	14.9	14.4
Common-law partner in year *t*-2	7.7	7.5	7.3	7.0	7.4	7.0	6.7
Child (in a census family) in year *t*-2	2.0	2.0	1.8	1.9	2.0	2.0	1.8

Note: Predicted probability refers to the the estimated likelihood of women in a given category to have a first birth in a given year, conditional on being at-risk at the beginning of the year and averaging over the observed distribution of all other covariates in the model.
The logistic regression models from which the predicted probabilities were derived included the covariate age (modeled using a cubic spline).
In each year, initially in-scope women met the following inclusion criteria: they were captured in the 2016 Census of Population (25% sample); were aged 22 to 39, had not yet had a first birth or died and had valid tax records in year *t*-2.
Source: Linkage of Census of Population, 2016 (3901), T1 Family File, Canadian Vital Statistics - Birth database (3231), and Canadian Vital Statistics - Death database (3233).

Several additional restrictions were applied to improve comparability across years and ensure consistent exposure to risk. As childlessness was defined as of Census Day (May 10, 2016), women who experienced a first birth later in 2016 were excluded to ensure comparable exposure intervals across all years. Additionally, women residing in Yukon in year *t*–2 were excluded as births records registered in the territory between 2017 and 2022 were unavailable at the time of the data linkage.

A small number of women had tax records indicating their (self-reported) place of residence in year *t*–2 was outside Canada; these women were excluded from the sample. However, it is expected that this adjustment underestimates the true level of emigration among the sample during the study period, as emigration was difficult to identify comprehensively with tax records.[13]

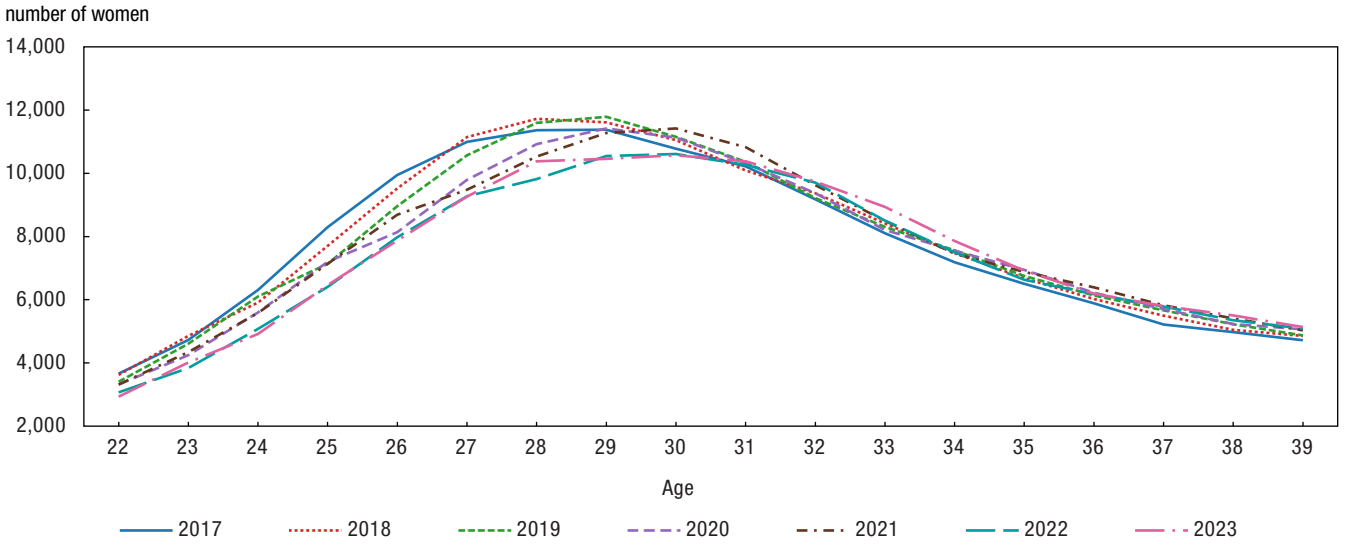
Lastly, further exclusions addressed remaining misclassification of childlessness, where post-2016 administrative records indicated that a woman had children prior to an observed birth. This adjustment occurred in two cases: firstly, if a woman's first birth event observed post-2016 indicated a previous birth (based on parity information on the birth record), and secondly, if family status information on tax records indicated she was already a parent.[14]

Following these adjustments, the sample is a dynamic (time-varying) group of women drawn from those observed in the 2016 Census and linked administrative data. In each study year *t*, women were included (contributed one person-year) only if they met all of the following criteria: they were aged 22 to 39, had not yet given birth or died, had valid tax records in year *t*–2, were living with a married spouse or common-law partner in year *t*–2, and reported employment income in year *t*–2. In turn, a given woman could enter, exit and then re-enter the sample from year to year as their age, family, employment or tax record availability situation changed. In total, 958,407 person-years of exposure to first-birth risk were observed between 2017 and 2023, during which 113,414 women[15] experienced a first birth, a rate of 118.3 births per 1,000 women at risk of first birth.

As shown in Chart 2, the sample became older over the study period. The total size of the sample ranged from a high of 140,576 women in 2018 to a low of 131,607 women in 2022. These year-to-year shifts in the size and composition of the sample reflect both the removal of women after they have a first birth and changes in the age profile of women meeting the inclusion criteria. In particular, the decline in the number of women at younger ages and their growing representation at older ages from 2017 to 2023 indicate that entry into co-residential unions and paid employment—and therefore into the sample—occurred at later ages over time. As a result, fewer women enter the sample at younger ages, shifting the age distribution to the right.

13. In addition to place of residence, the T1FF includes an indicator of the date that a resident of Canada left the country, when declared for tax purposes. Among the population of women who met initial criteria for inclusion in the analytical population, a date of emigration was present in 0.1% of tax records for the years 2015 to 2021. Among the women who had a reported date of emigration over the period 2015 to 2021, 4.1% had a birth in Canada in a subsequent year of the study. This indicated that the departure date as declared in the T1FF was not a reliable indicator of censoring in the context of the research questions of this study. Alternative approaches, such as excluding women after five consecutive years without tax records, were also found to be unsuitable, as some of these women reappeared in later study years.
14. T1FF variables FFLAG and FCMP can be used to identify parents in one-parent families. However, these variables do not distinguish parent status for persons in in married or common-law couples. Although it would be possible to identify parenthood among women in a couple through additional linkage of tax records within census families, this extension was beyond the scope of the present analysis. As a result, adjustments to the at-risk population were limited to parents in one-parent families.
15. For brevity, "women" hereafter refers to women aged 22 to 39 who are employed and living with a married spouse or common-law partner, unless otherwise specified.

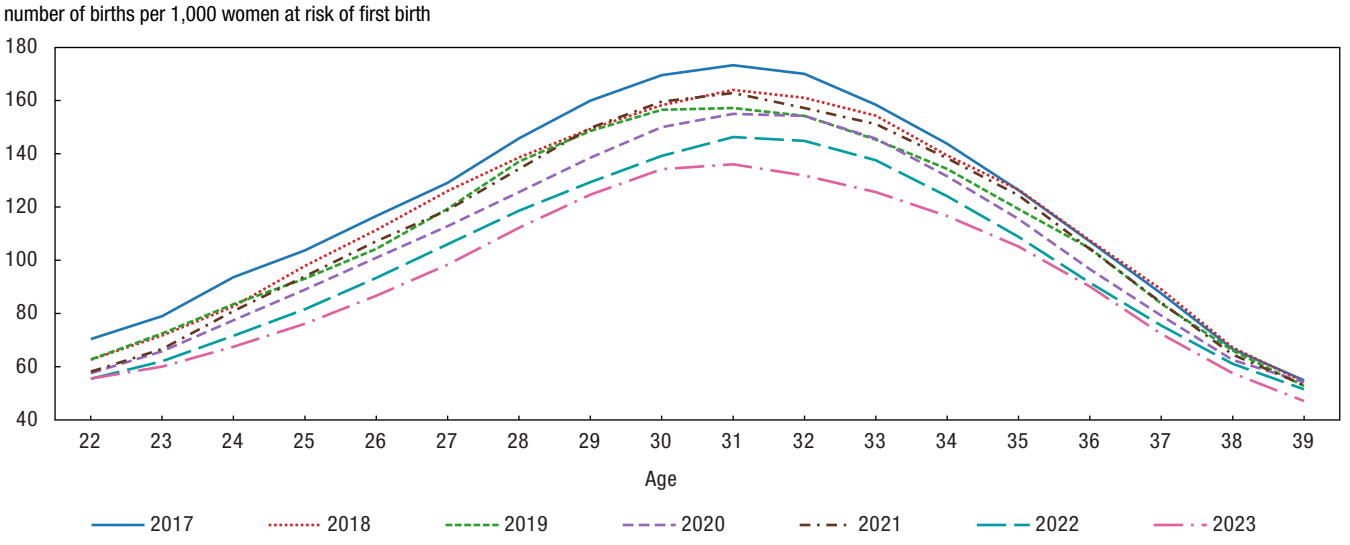
Chart 2
Number of women in the sample, by age and year



Note: In each year, the sample is restricted to women who met the following inclusion criteria: they were captured in the 2016 Census of Population (25% sample); were aged 22 to 39, had not yet had a first birth or died, had valid tax records in year *t*-2, were living with a married spouse or common-law partner in year *t*-2 and reported employment income in year *t*-2.
Source: Linkage of Census of Population, 2016 (3901), T1 Family File, Canadian Vital Statistics - Birth database (3231), and Canadian Vital Statistics - Death database (3233).

Age-specific first-birth rates generally declined between 2017 and 2023, with the exception of 2021, when they increased across all ages (Chart 3). The absence of an apparent postponement trend should be interpreted with caution, as the sample is restricted to women who were both co-residing with a married spouse or common-law partner as well as employed—statuses that are themselves increasingly postponed to older ages over time.

Chart 3
Age-specific first-birth rates for women in the sample, 2017 to 2023



Note: Age-specific values have been smoothed through application of a 3-year moving average.
In each year, the sample is restricted to women who met the following inclusion criteria: they were captured in the 2016 Census of Population (25% sample); were aged 22 to 39, had not yet had a first birth or died, had valid tax records in year *t*-2, were living with a married spouse or common-law partner in year *t*-2 and reported employment income in year *t*-2.
Source: Linkage of Census of Population, 2016 (3901), T1 Family File, Canadian Vital Statistics - Birth database (3231), and Canadian Vital Statistics - Death database (3233).

Other key demographic and economic characteristics of the sample are summarized in Tables 2 and 3.

Table 2
Proportion (in percent) of the sample with selected characteristics, 2017 to 2023

	Year (*t*)						
	2017	2018	2019	2020	2021	2022	2023
Characteristic	proportion (in percent)						
Had first birth during year *t*	13.0	12.5	12.1	11.6	12.2	10.9	10.3
Died during year *t*	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Living with married spouse in year *t*-2	41.1	39.9	39.3	39.5	38.4	35.4	34.0
Living with common-law partner in year *t*-2	58.9	60.1	60.7	60.5	61.6	64.6	66.0
Contributed less than 25% of total family after-tax income in year *t*-2	12.3	11.8	11.2	10.4	10.0	6.9	7.9
Contributed between 25% to 49% of total family after-tax income in year *t*-2	48.3	48.2	48.6	49.0	49.0	50.9	49.7
Contributed between 50% to 74% of total family after-tax income in year *t*-2	28.8	29.6	30.0	30.6	31.1	34.4	33.5
Contributed 75% or more of total family after-tax income in year *t*-2	10.6	10.4	10.2	10.0	9.8	7.9	8.9
Employed in public administration, education or health industry in year *t*-2	34.0	34.3	35.3	36.0	36.9	37.9	39.4
Employed in private professional, finance or knowledge services industry in year *t*-2	17.2	17.2	17.6	17.7	17.9	18.1	18.8
Employed in administrative, support or consumer-facing services industry in year *t*-2	30.1	29.7	28.4	27.5	26.4	25.2	23.3
Employed in logistics or production of goods industry in year *t*-2	12.3	12.0	12.1	12.6	12.4	12.4	12.2
Industry not reported but employment income reported in year *t*-2	6.4	6.8	6.7	6.2	6.3	6.5	6.4
Member of a labour union in year *t*-2	32.9	33.2	34.0	34.5	35.0	35.5	36.9
Reported self-employment income in year *t*-2	9.5	10.0	10.3	10.4	10.9	10.7	11.3

Note: In each year, the sample is restricted to women who met the following inclusion criteria: they were captured in the 2016 Census of Population (25% sample); were aged 22 to 39, had not yet had a first birth or died, had valid tax records in year *t*-2, were living with a married spouse or common-law partner in year *t*-2 and reported employment income in year *t*-2.
Source: Linkage of Census of Population, 2016 (3901), T1 Family File, Canadian Vital Statistics - Birth database (3231), and Canadian Vital Statistics - Death database (3233).

Table 3
Median after-tax family income (*t*-2) among women aged 30 in the sample, by family income quintile (*t*-2), 2017 to 2023

	Year (*t*)						
	2017	2018	2019	2020	2021	2022	2023
Family after-tax income quintile in year *t*-2	median after-tax family income in year *t*-2 in Canadian dollars						
Quintile 1	36,781	38,762	42,040	44,295	46,443	54,185	54,968
Quintile 2	61,351	62,731	66,268	69,330	71,448	77,109	80,813
Quintile 3	80,134	81,118	85,087	88,229	91,193	95,322	101,442
Quintile 4	100,760	102,180	106,520	109,376	112,211	115,287	122,942
Quintile 5	135,377	134,895	142,363	144,805	146,743	151,152	162,271

Note: After-tax income values exclude capital gains or losses and are unadjusted for inflation.
In each year, the sample is restricted to women who met the following inclusion criteria: they were captured in the 2016 Census of Population (25% sample); were aged 22 to 39, had not yet had a first birth or died, had valid tax records in year *t*-2, were living with a married spouse or common-law partner in year *t*-2 and reported employment income in year *t*-2.
Source: Linkage of Census of Population, 2016 (3901), T1 Family File, Canadian Vital Statistics - Birth database (3231), and Canadian Vital Statistics - Death database (3233).

Modeling strategy and specification of variables

Year-specific logistic regression models were estimated to assess the association between women's income and employment characteristics and the likelihood of a first birth. Logistic regression was selected given the discrete-time structure of the data and the binary outcome of interest, that is, whether the woman had her first child within the year. Predicted probabilities were then derived post-estimation to facilitate comparisons across ages, years, and other subgroups, with associated measures of uncertainty (standard errors and confidence intervals) based on robust (Huber–White) variance estimation.[16]

All models control for women's age, province of residence in year *t*–2 and type of couple in year *t*–2. Specifically:

- Age was controlled flexibly using a cubic spline to account for the strong and non-linear association between age and fertility. The spline allows the relationship between age and first-birth risk to vary smoothly with age in a non-linear manner.[17]
- Province or territory of residence in year *t*–2 is included to account for differences in policy environments and other unobserved contextual factors specific to each jurisdiction that may influence childbearing

16. In addition to predicted probabilities, average marginal effects (AMEs) were estimated for all models to assess absolute differences on the probability scale. AMEs showed similar effect sizes and time trends as the predicted probability differences and were therefore omitted for brevity.
17. The age spline was defined by five knots placed at selected percentiles of the age distribution (5th, 27.5th, 50th, 72.5th and 95th) in each year. The four resulting spline variables included in each model allow the curve to 'bend' at those knots. The spline coefficients themselves were not substantively interpreted but serve to account for age-related differences in first-birth risk.

decisions.[18] Appendix 1 summarizes variations in first-birth likelihood by women's province or territory of residence in year *t*-2.

- Although all women in the sample were in a couple, the type of couple (married or common-law) in year *t*-2 was controlled for as it was consistently associated with large differences in first-birth likelihood. This was the case even in Quebec where common-law couples are more prominent. For more details on Quebec-specific findings, see Appendix 2.

Family income, individual income, within-couple income distribution and employment characteristics—all measured in year *t*-2—were the economic characteristics of interest examined in separate models. Specifically:

- Women's family income and individual income were analyzed separately. In both cases, after-tax income quintiles (excluding capital gains or losses) were defined within the (at-risk) sample by age and year to reflect women's relative income position among peers, that is, relative to other childless, coupled and employed women of the same age. The use of income quintiles also facilitates comparisons across age and time and allows for non-linear income gradients.
- To capture the organization of economic resources within couples, women's share of total family income was included as a categorical variable (less than 25%, 25 to 49%, 50 to 74%, and 75% or more), distinguishing situations in which the division of family earnings was highly concentrated or more balanced.
- Three employment characteristics were modeled: industry, labour union membership, and self-employment status. Industry[19] was grouped into four categories capturing broad differences in job stability, scheduling arrangements, access to employer-provided benefits and income predictability that may influence childbearing decisions: administrative, support or consumer-facing services; public administration, education or health; private professional, finance or knowledge services; logistics or production of goods; and unreported industry. Labour union membership.[20] serves mainly as a proxy for job protections, while self-employment reflects a distinct combination of greater scheduling flexibility and higher income volatility.

Additional sociodemographic characteristics reported in the 2016 Census—such as country of birth, generation status, ethnic or cultural origin and Indigenous identity—were assessed but excluded from the final models due to their negligible impact on the estimates related to economic characteristics and their volatility in disaggregated models. While educational attainment is known to correlate with fertility (Jalovaara et al., 2019, Vasireddy et al., 2023), its measurement in the census was insufficient given that for much of the sample, this status was collected during late adolescence or early adulthood, when schooling is often ongoing and final attainment remains undetermined, potentially leading to misclassification.

Census sampling weights were not applied, as they reflect the original survey design and do not account for additional selection introduced through linkage and analytic restrictions. As a result, women living on Indian reserves, in remote or northern areas, and in other hard-to-reach locations are overrepresented in the sample. This is because these areas were fully enumerated in the long-form census using canvasser interviews, whereas in other areas only a subsample of dwellings was included (Statistics Canada, 2017).

Table 4 summarizes the design of each logistic regression model and its correspondence to the study's research questions.

18. Although maternal and parental employment insurance benefits are governed federally (with the exception of Quebec), the provinces and territories vary with respect to their broader family policy and program settings, including provisions related to parental leave, public childcare, and early childhood education.
19. Industry groupings were based on the North American Industry Classification System code (NAICS) assigned to the main industry of the individual's employer. NAICS codes were harmonized to 2-digit sectors across years in order to create condensed industry groupings.
20. Union membership was assumed if the woman reported any union, professional or other dues during the tax year.

Table 4
Overview of logistic regression models

Model	Economic characteristics of interest	Measure(s)	Strata
1	Family income	Family after-tax income (age-specific) quintile in year *t*-2	Year (*t*)
2	Individual income	Individual after-tax income (age-specific) quintile in year *t*-2	Year (*t*)
3	Within-couple distribution of income	Women's share of total family income in year *t*-2	Year (*t*) Family after-tax income quintile in year *t*-2
4	Employment characteristics	Industry in year *t*-2 Union membership in year *t*-2 Self-employment in year *t*-2	Year (*t*) Family after-tax income quintile in year *t*-2

Note: In all models, in each year, the sample is restricted to women who met the following inclusion criteria: they were captured in the 2016 Census of Population (25% sample); were aged 22 to 39, had not yet had a first birth or died, had valid tax records in year *t*-2, were living with a married spouse or common-law partner in year *t*-2 and reported employment income in year *t*-2.
All models included the following covariates: age (modeled using a cubic spline); union type (married or common-law) in year *t*-2; and province or territory of residence in year *t*-2.

Results

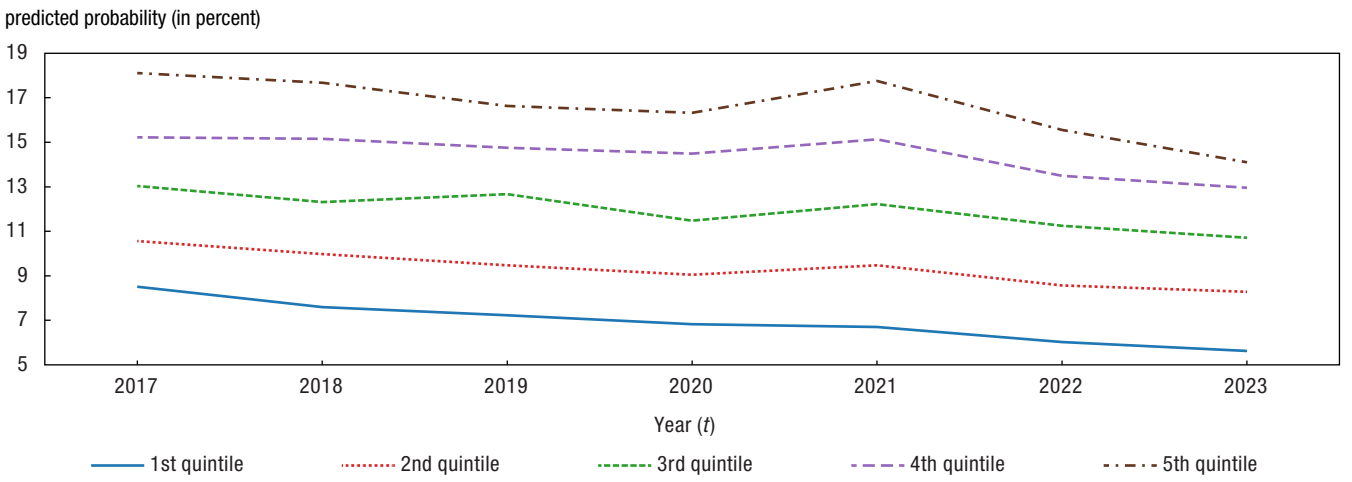
Given the large sample sizes involved, estimates are associated with relatively small standard errors, and observed differences can be interpreted with a high degree of precision. The analysis therefore emphasizes the magnitude and substantive interpretation of differences across groups. For clarity of presentation, confidence intervals are not shown in tables and charts; however, all estimates incorporate robust variance estimation, and measures of uncertainty are available upon request.

Higher family income is associated with a greater likelihood of first birth

Across all years examined, the likelihood of first birth followed a clear family income gradient: women in the top family income quintile consistently had the highest predicted probabilities of a first birth, while those in the bottom quintile had the lowest (Chart 4). In 2023, women in the top family income quintile had a 14.1% probability of experiencing a first birth, more than double the probability among women in the bottom quintile (5.6%).

Across the family income distribution, predicted probabilities of first birth generally declined between 2017 and 2023. The main exception occurred in 2021, when predicted probabilities temporarily increased for women in all family income quintiles except the bottom quintile. This rebound was most pronounced among women in the top family income quintile: between 2020 and 2021, their predicted probability of first birth rose 8.8% (from 16.3% to 17.8%). In contrast, first-birth probabilities among women in the bottom quintile declined by 2.0% over the same period, from 6.8% to 6.7%.

Chart 4
Women's predicted probability of first birth by family income quintile in year *t*-2, 2017 to 2023

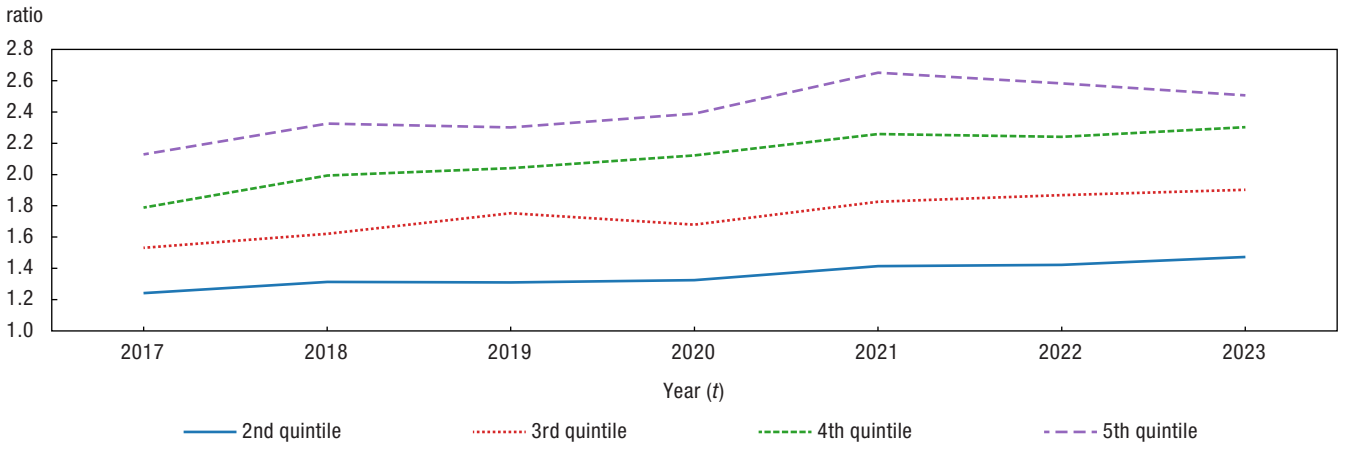


Note: Predicted probability refers to the estimated likelihood of women in a given category to experience a first birth in a given year, conditional on being at-risk at the beginning of the year and averaging over the observed distribution of all other covariates in the model.
The logistic regression models from which the predicted probabilities were derived also included the following covariates: age (modeled using a cubic spline); type of couple (married or common-law) in year *t*-2; and province or territory of residence in year *t*-2.
In each year, the sample is restricted to women who met the following inclusion criteria: they were captured in the 2016 Census of Population (25% sample); were aged 22 to 39, had not yet had a first birth or died, had valid tax records in year *t*-2, were living with a married spouse or common-law partner in year *t*-2 and reported employment income in year *t*-2.
Source: Linkage of Census of Population, 2016 (3901), T1 Family File, Canadian Vital Statistics - Birth database (3231), and Canadian Vital Statistics - Death database (3233).

The association between income and first-birth likelihood has grown stronger

From 2017 to 2023, relative differences in the likelihood of first birth increased between the extremes of the family income distribution (Chart 5), owing to steeper proportional declines among women in the bottom family income quintile relative to those in the top quintile. In 2017, women in the top family income quintile were 2.1 times (or 210%) more likely to have a first birth than women in the bottom quintile, holding other factors constant. This ratio increased to 2.7 in 2021, before easing slightly to 2.5 in 2023.

Chart 5
Ratio of women's predicted probability of first birth relative to women in the 1st family income quintile in year *t*-2, by family income quintile in year *t*-2, 2017 to 2023

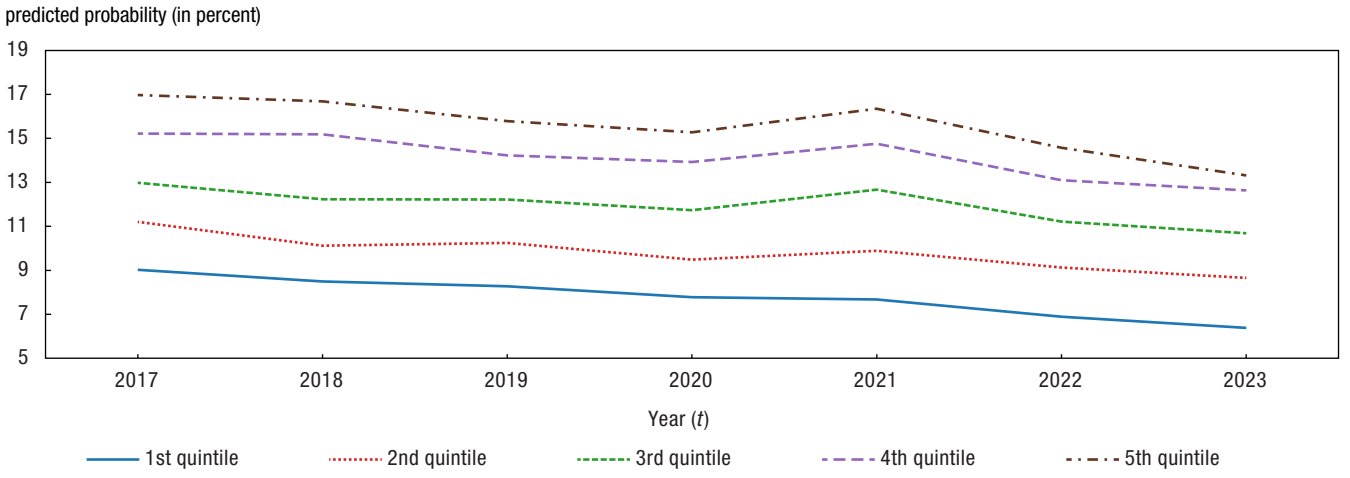


Note: Predicted probability refers to the estimated likelihood of women in a given category to experience a first birth in a given year, conditional on being at-risk at the beginning of the year and averaging over the observed distribution of all other covariates in the model.
The logistic regression models from which the predicted probabilities were derived also included the following covariates: age (modeled using a cubic spline); type of couple (married or common-law) in year *t*-2; and province or territory of residence in year *t*-2.
In each year, the sample is restricted to women who met the following inclusion criteria: they were captured in the 2016 Census of Population (25% sample); were aged 22 to 39, had not yet had a first birth or died, had valid tax records in year *t*-2, were living with a married spouse or common-law partner in year *t*-2 and reported employment income in year *t*-2.
Source: Linkage of Census of Population, 2016 (3901), T1 Family File, Canadian Vital Statistics - Birth database (3231), and Canadian Vital Statistics - Death database (3233).

In contrast, the relative gap in first-birth likelihood between women in the fourth and fifth family income quintiles diminished over the period, from 19.0% in 2017 to 8.8% in 2023.

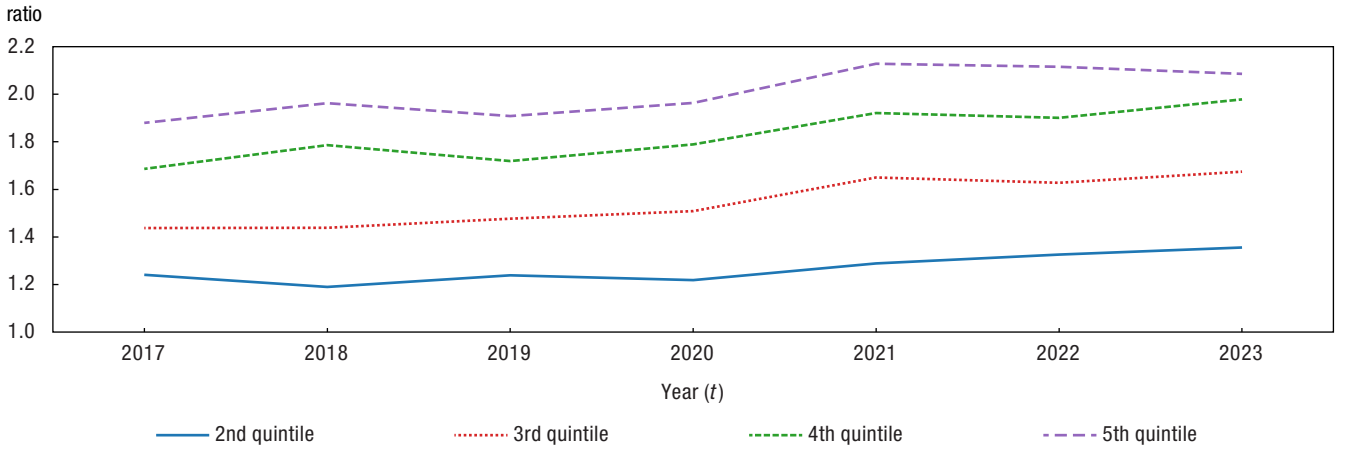
Patterns with respect to women's individual income were broadly similar to those for family income, but less pronounced. After holding other characteristics constant, women with higher personal incomes were more likely to have a first birth (Chart 6) and the relative gap in this regard between the highest-and lowest-income women widened over time (Chart 7). As with family income, this gap widened because women in the bottom individual income quintile saw larger proportional declines (-29.3%) in the predicted probability of first birth than those in the top income quintile (-21.5%).

Chart 6
Women's predicted probability of first birth by individual income quintile in year *t*-2, 2017 to 2023



Note: Predicted probability refers to the estimated likelihood of women in a given category to experience a first birth in a given year, conditional on being at-risk at the beginning of the year and averaging over the observed distribution of all other covariates in the model.
The logistic regression models from which the predicted probabilities were derived also included the following covariates: age (modeled using a cubic spline); type of couple (married or common-law) in year *t*-2; and province or territory of residence in year *t*-2.
In each year, the sample is restricted to women who met the following inclusion criteria: they were captured in the 2016 Census of Population (25% sample); were aged 22 to 39, had not yet had a first birth or died, had valid tax records in year *t*-2, were living with a married spouse or common-law partner in year *t*-2 and reported employment income in year *t*-2.
Source: Linkage of Census of Population, 2016 (3901), T1 Family File, Canadian Vital Statistics - Birth database (3231), and Canadian Vital Statistics - Death database (3233).

Chart 7
Ratio of women's predicted probability of first birth relative to women in the 1st individual income quintile, by individual income quintile, 2017 to 2023



Note: Predicted probability refers to the estimated likelihood of women in a given category to experience a first birth in a given year, conditional on being at-risk at the beginning of the year and averaging over the observed distribution of all other covariates in the model.
The logistic regression models from which the predicted probabilities were derived also included the following covariates: age (modeled using a cubic spline); type of couple (married or common-law) in year *t*-2; and province or territory of residence in year *t*-2.
In each year, the sample is restricted to women who met the following inclusion criteria: they were captured in the 2016 Census of Population (25% sample); were aged 22 to 39, had not yet had a first birth or died, had valid tax records in year *t*-2, were living with a married spouse or common-law partner in year *t*-2 and reported employment income in year *t*-2.
Source: Linkage of Census of Population, 2016 (3901), T1 Family File, Canadian Vital Statistics - Birth database (3231), and Canadian Vital Statistics - Death database (3233).

Within-couple income distribution has an inconsistent association with the likelihood of first birth

Relative to women contributing less than one-quarter of total family income, those with higher contributions tended to have higher predicted probabilities of first birth (Table 5). However, there was considerable fluctuation in both direction and magnitude of effects over time when broken down by family income quintile, particularly among women in the bottom and top family income quintiles.

Table 5
Ratio of predicted first-birth probabilities by women's contribution to family income in year *t*-2, relative to the reference group, 2017 to 2023

		Year (*t*)						
		2017	2018	2019	2020	2021	2022	2023
Strata group	Women's contribution to family income in year *t*-2	ratio of predicted probability						
Total - all family income quintiles	Less than 25% (reference group)	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	25 to 49%	1.187	1.145	1.187	1.193	1.143	1.233	1.211
	50 to 74%	1.179	1.182	1.196	1.182	1.177	1.239	1.226
	75% or more	1.177	1.150	1.177	1.206	1.116	1.188	1.255
1st family income quintile	Less than 25% (reference group)	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	25 to 49%	1.098	1.037	1.130	1.183	0.884	0.939	1.058
	50 to 74%	1.089	0.993	1.166	1.164	1.012	0.985	1.174
	75% or more	1.086	1.002	1.141	1.247	0.943	0.987	1.242
2nd family income quintile	Less than 25% (reference group)	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	25 to 49%	1.195	1.068	1.125	1.126	1.022	1.130	1.093
	50 to 74%	1.187	1.139	1.110	1.118	1.111	1.181	1.144
	75% or more	1.216	1.262	1.159	1.117	1.155	1.010	1.306
3rd family income quintile	Less than 25% (reference group)	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	25 to 49%	1.261	1.132	1.326	1.078	1.217	1.266	1.204
	50 to 74%	1.240	1.238	1.337	1.142	1.289	1.284	1.204
	75% or more	1.168	1.051	1.274	1.047	1.038	1.229	1.018
4th family income quintile	Less than 25% (reference group)	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	25 to 49%	1.268	1.285	1.127	1.248	1.288	1.455	1.329
	50 to 74%	1.403	1.369	1.170	1.250	1.289	1.463	1.367
	75% or more	1.101	1.181	1.114	1.140	1.047	1.341	1.099
5th family income quintile	Less than 25% (reference group)	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	25 to 49%	1.138	1.175	1.216	1.278	1.185	1.276	1.258
	50 to 74%	1.037	1.155	1.216	1.199	1.172	1.238	1.229
	75% or more	1.181	0.964	0.914	1.193	1.071	0.989	0.995

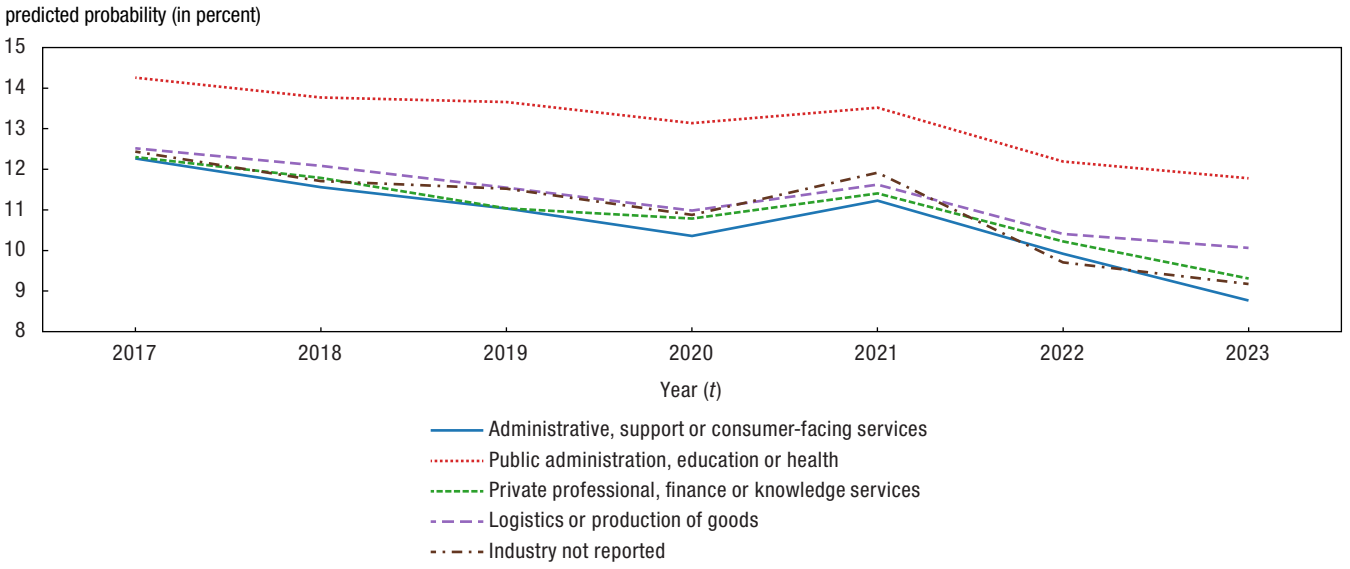
Note: Predicted probability refers to the estimated likelihood of women in a given category to experience a first birth in a given year, conditional on being at-risk at the beginning of the year and averaging over the observed distribution of all other covariates in the model.
The logistic regression models from which the predicted probabilities were derived also included the following covariates: age (modeled using a cubic spline); type of couple (married or common-law) in year *t*-2; and province or territory of residence in year *t*-2. The model for all family income quintiles combined also included family income quintile in year *t*-2.
In each year, the sample is restricted to women who met the following inclusion criteria: they were captured in the 2016 Census of Population (25% sample); were aged 22 to 39, had not yet had a first birth or died, had valid tax records in year *t*-2, were living with a married spouse or common-law partner in year *t*-2 and reported employment income in year *t*-2.
Source: Linkage of Census of Population, 2016 (3901), T1 Family File, Canadian Vital Statistics - Birth database (3231), and Canadian Vital Statistics - Death database (3233).

Women employed in the public sector have a consistently higher likelihood of first birth

Among the employment characteristics examined, industry of employment showed the strongest and most stable relationship with women's likelihood of a first birth. From 2017 to 2023, women employed in the public sector—that is, public administration, education or health—had consistently higher predicted probabilities of first birth than those in other industries (Chart 8). Differences among the remaining industries were negligible.

The relative gap between public sector workers and others also widened over time. For example, in 2017, women in the public sector had a 16.3% higher predicted probability of first birth than their counterparts employed in administrative, support or consumer-facing service industries. By 2023, this difference had grown to 34.3%. This widening gap occurred because women employed in non-public sector industries saw stronger proportional declines in first-birth likelihood over the study period than public sector workers. Models stratified by women's family income quintile yielded similar patterns. The size of this difference did not vary systematically by income quintile and showed no evidence of time trend.

Chart 8
Women's predicted probability of first birth by main industry of employment in year *t*-2, 2017 to 2023



Note: Predicted probability refers to the estimated likelihood of women in a given category to experience a first birth in a given year, conditional on being at-risk at the beginning of the year and averaging over the observed distribution of all other covariates in the model.
The logistic regression models from which the predicted probabilities were derived also included the covariates age (modeled using a cubic spline); type of couple (married or common-law) in year *t*-2; province or territory of residence in year *t*-2, family after-tax income quintile in year *t*-2, membership in a labour union in year *t*-2 and self-employed status in year *t*-2.
In each year, the sample is restricted to women who met the following inclusion criteria: they were captured in the 2016 Census of Population (25% sample); were aged 22 to 39, had not yet had a first birth or died, had valid tax records in year *t*-2, were living with a married spouse or common-law partner in year *t*-2 and reported employment income in year *t*-2.
Source: Linkage of Census of Population, 2016 (3901), T1 Family File, Canadian Vital Statistics - Birth database (3231), and Canadian Vital Statistics - Death database (3233).

Women in unionized jobs have a higher likelihood of first birth

Women who belonged to a labour union had a higher predicted probability of birth than other women in all years (Table 6). However, these differences by union membership status were small relative to those observed with respect to income quintile and industry of employment, ranging from 4.6% higher (2017 and 2023) to 8.4% higher likelihood (2018). Moreover, unlike results for family income quintile and industry of employment, there was no time trend observed over the study period with respect to the predicted probability of first birth by union membership. Additional models stratified by family income quintile showed no evidence of an interactive effect of union membership and first-birth likelihood by family income quintile.

Table 6
Ratio of the predicted probability of first birth among women who belonged to a labour union in year *t*-2 relative to other women, by family income quintile in year *t*-2, 2017 to 2023

	Year (*t*)						
	2017	2018	2019	2020	2021	2022	2023
Family income quintile in year *t*-2	ratio						
Total - all family income quintiles	1.046	1.084	1.050	1.055	1.068	1.070	1.046
1st quintile	1.046	1.071	1.003	1.239	1.077	1.102	0.973
2nd quintile	1.021	1.110	1.038	1.011	1.036	1.075	1.107
3rd quintile	1.001	1.109	1.056	1.001	1.122	1.051	1.074
4th quintile	1.109	1.110	1.091	1.083	1.034	1.087	1.047
5th quintile	1.023	1.024	1.012	1.060	1.081	1.053	1.006

Notes: Predicted probability refers to the estimated likelihood of women in a given category to experience a first birth in a given year, conditional on being at-risk at the beginning of the year and averaging over the observed distribution of all other covariates in the model.
The logistic regression models from which the predicted probabilities were derived also included the following covariates: age (modeled using a cubic spline); type of couple (married or common-law) in year *t*-2; province or territory of residence in year *t*-2, industry of employment in year *t*-2 and self-employment status in year *t*-2. The model for all family income quintiles combined also included family income quintile in year *t*-2.
In each year, the sample is restricted to women who met the following inclusion criteria: they were captured in the 2016 Census of Population (25% sample); were aged 22 to 39, had not yet had a first birth or died, had valid tax records in year *t*-2, were living with a married spouse or common-law partner in year *t*-2 and reported employment income in year *t*-2.
Source: Linkage of Census of Population, 2016 (3901), T1 Family File, Canadian Vital Statistics - Birth database (3231), and Canadian Vital Statistics - Death database (3233).

Women who were self-employed had a slightly higher predicted probability of first birth than other women in the global model (that is, when combining women of all family income quintiles). However, these patterns were less consistent when examining women in each family income quintile separately (Table 7). Stratified results showed considerable variation in both direction and magnitude, with some quintiles exhibiting values below one in certain years and others showing relatively large positive deviations.

Table 7
Ratio of the predicted probability of first birth among women who were self-employed in year *t*-2 relative to other women, by family income quintile in year *t*-2, 2017 to 2023

	Year (*t*)						
	2017	2018	2019	2020	2021	2022	2023
Family income quintile in year *t*-2	ratio						
Total - all family income quintiles	1.029	1.013	1.033	1.028	1.046	1.040	1.071
1st quintile	1.096	0.980	0.877	0.888	1.047	1.035	1.209
2nd quintile	1.116	1.038	1.055	1.033	1.010	1.064	1.104
3rd quintile	0.990	0.995	1.036	1.114	1.033	1.077	1.040
4th quintile	0.917	0.990	1.015	1.045	1.140	1.055	0.973
5th quintile	1.051	1.057	1.141	1.052	1.024	0.996	1.089

Note: Predicted probability refers to the estimated likelihood of women in a given category to experience a first birth in a given year, conditional on being at-risk at the beginning of the year and averaging over the observed distribution of all other covariates in the model.
The logistic regression models from which the predicted probabilities were derived also included the following covariates: age (modeled using a cubic spline); type of couple (married or common-law) in year *t*-2; province or territory of residence in year *t*-2, industry of employment in year *t*-2 and labour union membership status in year *t*-2. The model for all family income quintiles combined also included family income quintile in year *t*-2.
In each year, the sample is restricted to women who met the following inclusion criteria: they were captured in the 2016 Census of Population (25% sample); were aged 22 to 39, had not yet had a first birth or died, had valid tax records in year *t*-2, were living with a married spouse or common-law partner in year *t*-2 and reported employment income in year *t*-2.
Source: Linkage of Census of Population, 2016 (3901), T1 Family File, Canadian Vital Statistics - Birth database (3231), and Canadian Vital Statistics - Death database (3233).

Discussion

This study provides new evidence about the relationship between women's economic characteristics and the likelihood of becoming a parent during a period of historically low fertility and rising childlessness in Canada. The results show a clear and widening gradient by income, with women in higher-income families consistently more likely to have a first birth than those in lower-income families. These findings align with recent evidence from other high-income countries (van Wijk, 2024; Brini, Guetto and Vignoli, 2025) and therefore situate Canada squarely within a broader international pattern in which parenthood is increasingly associated with economic advantage.

Income-related differences in first-birth likelihood may reflect either variation in fertility intentions across income groups or differences in the capacity to realize those intentions. Fertility intentions could not be directly observed in the present study; however, prior research suggests that desired family sizes vary little by socioeconomic status or economic conditions, while more pronounced differences have been found in the realization of those intentions (Sobotka and Beaujouan, 2014; Beaujouan and Berghammer, 2019; Behrman et al., 2026). In this context, the income-related differences in entry into parenthood observed here are consistent with the role of financial barriers related to economic insecurity and the perceived feasibility of family formation, as well as broader economic uncertainty, which have been shown to influence both the timing and likelihood of childbearing (Schneider and Hastings, 2015; Comolli, 2023).

In 2021, Canada recorded a rare year-over-year increase in its total fertility rate (TFR), the first such rise since 2008. Similar short-lived fertility rebounds were observed across many high-income countries and have been interpreted as temporary disruptions associated with the COVID-19 pandemic (Provencher and Galbraith, 2024; Sobotka et al., 2024). Within Canada, prior research showed the increase was driven primarily by births to Canadian-born, rather than foreign-born, women (Provencher, 2025). The present analysis extends this evidence by showing that increases in first-birth likelihood that year were concentrated among women in the highest-income families. This pattern aligns with international findings that fertility responses to periods of uncertainty are uneven and selective, reflecting disparities in economic security (Luppi, Arpino & Rosina, 2022; Comolli, 2023; Bloom, Kuhn & Prettner, 2024).

After taking into account the family's overall income position, the division of income within the couple was associated with small and inconsistent differences in first-birth likelihood. This finding underscores that in the contemporary

Canadian context—where most couples are dual-earner[21] and more than three-quarters of employed women work full-time[22]—access to sufficient and stable economic resources could be more consequential for entry into parenthood than the precise division of those resources within the couple.

Women's employment characteristics were also strongly associated with the likelihood of first birth. Women employed in the public sector consistently exhibited higher likelihoods of first birth than women in other industries, as did those who belonged to a labour union. These patterns are well documented internationally and are commonly linked to employment attributes such as greater job security and stability (Adserà, 2011; Hsu, 2023) and more family-friendly working conditions (Fluchtmann, van Veen and Adema, 2023; OECD, 2024). Moreover, the persistence of these industry differences across the income distribution suggests that women's employment context is independently associated with entry into parenthood, net of women's economic resources.

Unlike industry or union membership, self-employment did not have a stable association with entry into parenthood. The absence of a coherent pattern by family income quintile suggests that the relationship between self-employment and first-birth likelihood is context-dependent, potentially varying with macroeconomic conditions and the specific nature of women's self-employment. Furthermore, these findings suggest that while some employment characteristics may support family formation, job flexibility alone does not necessarily provide a stable pathway into parenthood in the absence of economic security and institutional protections.[23]

Several limitations should be considered when interpreting these findings. First, the study did not include information about fertility intentions, relationship quality, health status (including infertility), or preferences regarding work–family balance, all of which may mediate the observed relationships between income, employment characteristics, and entry into parenthood.

Second, economic resources were measured using cross-sectional income and lacked information about longer-term income trajectories or wealth, which may also influence childbearing decisions. Moreover, income quintiles were defined within the sample rather than the broader population, capturing relative differences within this group but not necessarily individuals' broader economic reference points and context.

Third, features of the data and sample design may affect representativeness. Higher census undercoverage among young adults (Statistics Canada, 2019), combined with the exclusion of recent immigrants and non-tax-filers—who are more likely to be young and have lower incomes (Robson and Schwartz, 2020; St-Denis, Djomgang and Prats, 2025)— may bias the sample toward more economically advantaged populations. Additional restrictions, including limiting the analysis to women aged 22 to 39 who were both in a couple and employed, may further reduce generalizability—especially given that income itself may influence the likelihood of being in a stable co-residential union (Ferraretto, Hiekel and Vitali, 2025). Finally, because sample inclusion depended on successful record linkage and linkage success is not random, there is additional potential for selection bias. Taken together, these features likely led to an underrepresentation of lower-income populations, suggesting that the overall role of income in first-birth likelihood is likely understated in this analysis.

Despite these limitations, the consistency of the findings with recent evidence from other high-income countries suggests that the observed patterns reflect broader structural changes in the relationship between economic resources and entry into parenthood rather than artifacts of the data.

Future research could extend this work by examining transitions to second and higher-order births; analyzing income trajectories over longer periods prior to parenthood; and exploring geographic variation in greater detail—for example, by distinguishing urban and rural areas within provinces or accounting for differences in housing costs and childcare availability across major population centres. Extending the analysis to men's transitions[24] to parenthood and to women's post-birth income and employment trajectories would also provide a more complete picture of economic and fertility dynamics in Canada.

21. Statistics Canada. Table 11-10-0028-01 Single-earner and dual-earner census families by number of children.
22. Statistics Canada. Table 14-10-0327-03 Proportion of workers in full-time and part-time jobs by gender, annual.
23. Self-employed individuals can access Employment Insurance maternity and parental benefits, but only if they voluntarily enroll (and pay premiums) in advance, at least 12 months before claiming benefits.
24. Such an analysis would need to account for the known undercoverage of fathers in the CVSB (Shapiro et al., 2016).

Conclusion

This study found that from 2017 to 2023—a period of rapidly declining fertility in Canada— women's likelihood of becoming a parent differed by income. Among coupled, employed women, those with higher family incomes were consistently more likely to have a first birth than those with lower family incomes. This income-related gap widened over the period, despite declining first-birth probabilities across the income distribution, because women in the lowest-income families experienced larger declines than their higher-income counterparts.

In addition to income, employment characteristics were linked to the likelihood of first birth. Women employed in jobs offering greater security, benefits and more predictable working conditions were more likely to have a first birth, regardless of income level.

Together, these findings indicate that economic resources and security played an important and growing role in women's transition to parenthood in Canada in recent years. At the same time, first-birth probabilities declined over the study period across all income and employment groups. This pattern suggests that additional factors beyond the economic characteristics examined in this study also contributed to recent fertility trends.

From a methodological perspective, this study combined census, tax, and vital statistics data to produce novel micro-level evidence of the association between women's economic circumstances and the likelihood of becoming a parent. These findings highlight the value of linked administrative data for advancing understanding of fertility in Canada.

Appendices

Appendix 1: Differences in first-birth likelihood by province of residence

Table A1 presents the predicted probability of first birth by women's province of residence in year *t*-2. Women residing in Quebec consistently held the highest predicted probability of first birth from 2017 to 2023, despite declining from 18.1% in 2017 to 14.5% in 2023. In contrast, Newfoundland and Labrador, Nova Scotia, Alberta, and British Columbia generally recorded the lowest predicted probabilities throughout. The size of provincial differences remained stable over time: in 2023, the highest probability was 77.2% greater than the lowest, similar to the gap observed in 2017 (78.1%).

Table A1
Predicted probability (in percent) of first birth among initially in-scope women according to their province of residence in year *t*-2, 2017 to 2023

	Year (*t*)						
	2017	2018	2019	2020	2021	2022	2023
Province of residence in year *t*-2	predicted probability (in percent)						
Newfoundland and Labrador	10.2	10.9	9.9	10.7	10.8	10.1	9.6
Prince Edward Island	13.0	12.6	12.3	12.6	15.2	13.6	10.5
Nova Scotia	11.0	11.3	11.2	10.1	9.9	9.6	9.3
New Brunswick	13.2	12.7	12.2	11.0	11.9	10.7	10.1
Quebec	18.1	17.3	17.0	16.7	17.5	15.8	14.5
Ontario	12.8	12.2	11.9	11.3	11.6	10.3	9.8
Manitoba	13.0	12.4	11.4	11.0	12.3	10.7	10.6
Saskatchewan	12.1	12.4	11.3	10.2	12.5	11.2	9.7
Alberta	10.6	10.0	9.8	9.4	10.2	9.2	8.7
British Columbia	11.1	10.5	9.8	9.3	10.2	8.6	8.2

Note: Predicted probability refers to the estimated likelihood of women in a given category to experience a first birth in a given year, conditional on being at-risk at the beginning of the year and averaging over the observed distribution of all other covariates in the model.
The logistic regression models from which the predicted probabilities were derived included the following covariates: age (modeled using a cubic spline); type of couple (married or common-law) in year *t*-2; and (province-specific) family income quintile in year *t*-2.
In each year, initially in-scope women met the following inclusion criteria: they were captured in the 2016 Census of Population (25% sample); were aged 22 to 39, had not yet had a first birth or died and had valid tax records.
Due to the unavailability of births records registered in Yukon from 2017 to 2022 at the time of data linkage, women residing in Yukon in year t–2 were excluded from the sample.
Owing to small samples and a low number of observed first-birth events, the predicted probabilities for the Northwest Territories and Nunavut are subject to substantial statistical uncertainty and year-to-year instability and are therefore not presented in this table.
Source: Linkage of Census of Population, 2016 (3901), T1 Family File, Canadian Vital Statistics - Birth database (3231), and Canadian Vital Statistics - Death database (3233).

Provincial rankings of first-birth probabilities differ from those based on the total fertility rate (TFR). For example, although Saskatchewan had the highest TFR in 2023, it ranked sixth in estimated first-birth likelihood among women in this sample. This difference occurs because the two measures capture distinct aspects of fertility and are based on populations with different compositions. The TFR summarizes overall fertility across all ages and birth orders, whereas the estimates presented here measure entry into parenthood among childless, employed and coupled women aged 22 to 39 while controlling for several sociodemographic characteristics. Provincial variation may therefore reflect both differences in fertility behaviour and differences in the share of women who are childless, coupled, and employed. In addition, provinces may have relatively high TFRs due to earlier timing of childbearing, higher-order births, or higher shares of births to unpartnered or unemployed women, even when first-birth likelihood within this sample is comparatively low.

Appendix 2: Quebec-specific findings

Quebec represents a distinct institutional and social context within Canada, characterized by a unique family policy regime that includes provincial maternal and parental benefits, subsidized early childhood education and care, and family benefits. Assessing the combined impact of these policies on fertility behaviour remains challenging, given variation across studies in the policy mechanisms examined, methodological approaches, comparison groups, and outcome measures. At the same time, Quebec has long exhibited family-formation patterns that differ from those elsewhere in Canada, particularly the greater prevalence of common-law unions and childbearing within these unions.[25]

Against this backdrop, it was hypothesized that the relationships between women's socioeconomic position, union type and first-birth likelihood would differ between Quebec and the rest of Canada. To examine this, separate logistic regression models were estimated for women residing in Quebec and for those living elsewhere in Canada.

As shown in Table A2, the predicted probability of first birth followed a consistent income gradient in both regions over the study period. For example, in 2023, Quebec women in the top family income quintile were 2.8 times more likely to have a first birth than their counterparts in the bottom quintile, while the same ratio was 2.5 among women living elsewhere in Canada. From 2017 to 2023, the relative size of the gap between the highest and lowest income families widened to a similar degree among women living in Quebec (+22.7%) and those living elsewhere in Canada (+21.9%). These results indicate that despite Quebec's distinct policy environment, income-related differences in the transition to parenthood are prominent in the province and have widened in recent years.

Table A2
Ratio of the predicted probability of first birth for women with selected characteristics relative to the reference group, by place of residence in year *t*-2, 2017 to 2023

			Year (*t*)						
			2017	2018	2019	2020	2021	2022	2023
Place of residence in year *t*-2	**Characteristic**	**Group**	ratio						
Quebec	Family income quintile in year *t*-2	1st quintile (reference category)	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		2nd quintile	1.31	1.37	1.42	1.42	1.56	1.45	1.65
		3rd quintile	1.55	1.76	1.94	1.87	2.09	1.87	2.03
		4th quintile	1.97	2.33	2.33	2.27	2.56	2.37	2.52
		5th quintile	2.27	2.50	2.58	2.58	2.91	2.69	2.79
	Type of couple in year *t*-2	Common-law (reference category)	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Married	1.64	1.72	1.66	1.59	1.54	1.40	1.45
Outside Quebec	Family income quintile in year *t*-2	1st quintile (reference category)	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		2nd quintile	1.17	1.24	1.23	1.25	1.32	1.39	1.38
		3rd quintile	1.45	1.49	1.60	1.59	1.71	1.77	1.78
		4th quintile	1.71	1.84	1.86	2.00	2.08	2.12	2.11
		5th quintile	1.93	2.14	2.09	2.22	2.49	2.45	2.35
	Type of couple in year *t*-2	Common-law (reference category)	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Married	2.68	2.59	2.67	2.64	2.66	2.45	2.46

Note: Predicted probability refers to the estimated likelihood of women in a given category to experience a first birth in a given year, conditional on being at-risk at the beginning of the year and averaging over the observed distribution of all other covariates in the model.
This table combines the results from two separate logistic regression models, one restricted to women whose place of residence in year *t*-2 was Quebec, the other restricted to women whose place of residence in year *t*-2 was outside Quebec.
The logistic regression models from which the predicted probabilities were derived included age, modeled using a cubic spline.
In each year, the sample is restricted to women who met the following inclusion criteria: they were captured in the 2016 Census of Population (25% sample); were aged 22 to 39, had not yet had a first birth or died, had valid tax records in year *t*-2, were living with a married spouse or common-law partner in year *t*-2 and reported employment income in year *t*-2.
Source: Linkage of Census of Population, 2016 (3901), T1 Family File, Canadian Vital Statistics - Birth database (3231), and Canadian Vital Statistics - Death database (3233).

25. In 2021, Quebec was the sole province in which the majority (52%) of couples were common-law as opposed to married. It was also the only province where common-law couples with children outnumbered married couples with children.

In both Quebec and the rest of Canada, married women had higher probabilities of first birth than those in common-law unions in all years. However, these differences were consistently smaller in Quebec. Moreover, although the relative advantage associated with marriage diminished between 2017 and 2023 in both regions, the decrease was more pronounced in Quebec. In sum, while marriage continues to differentiate first-birth likelihoods among coupled women across Canada, its role is weaker in Quebec. This finding is consistent with previous evidence showing that the close link between marriage and parenthood diminishes in contexts where non-marital unions are prevalent and widely accepted as a setting for childbearing (Le Bourdais and Lapierre-Adamcyk, 2004; Hiekel and Castro-Martin, 2014; Laplante and Fostik, 2015).

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