

Measuring and Analyzing the Gender Pay Gap: A Conceptual and Methodological Overview

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Outline



Definition

What is the
gender pay gap?
Why is it important?



Methods of Estimation

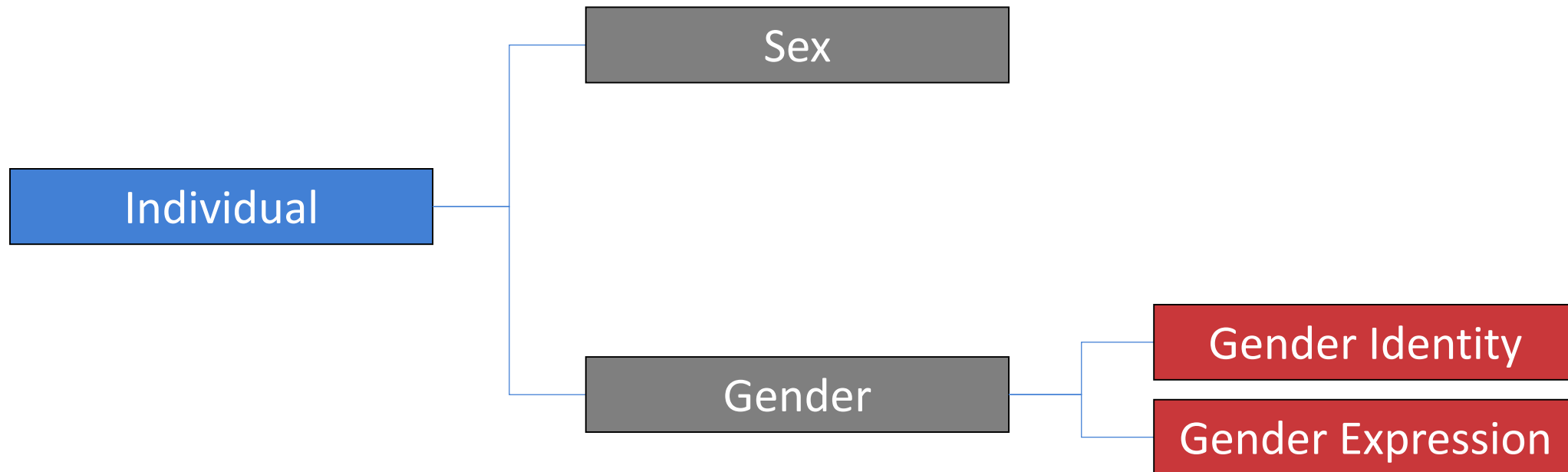
Why are there different
estimates of the
gender pay gap?
What are they?



Conclusion

Which methods are best
when estimating the
gender pay gap?

Sex vs. gender



What is the gender pay gap?

“The difference between the earnings of women and men from paid employment, expressed as a proportion of men’s earnings.”

$$\text{Gender pay ratio} = \frac{\text{Women's average or median earnings}}{\text{Men's average or median earnings}}$$

$$\text{Gender pay gap} = (1 - \text{Gender pay ratio}) * 100$$

Annual wages, salaries and commissions of employed women and men aged 16 and older, Canada, 2017



Why are there different estimates of the gender pay gap?

Who?

- Which workers are included in the sample (i.e., age and labour supply)?

What?

- What type of earnings are counted (i.e., annual earnings or hourly wages)?

How?

- How are “typical” earnings calculated (i.e., average or median)?

What are the main methods used to estimate the gender pay gap?

1

Comparing the annual earnings of all employed women and men

2

Comparing the annual earnings of women and men employed on a full-time, full-year basis

3

Comparing the hourly wages of all employed women and men

Method 1: Comparing the annual earnings of all employed women and men

- Produces the largest estimate of the gender pay gap
 - Can be considered the most inclusive estimate, as it captures differences in pay (the price of labour) *AND* in hours/weeks worked (labour supply) for all workers in all employment situations
 - Speaks to women's overall economic well-being, relative to men

Gender pay ratio:

0.69

(2017)

Gender pay gap:

31%

(2017)

Method 2: Comparing the annual earnings of women and men employed on a full-time, full-year basis

- Limits the effects of gender differences in hours and weeks worked on the gender pay gap by excluding workers employed part-time and/or part-year
 - Only partially excludes gender differences in labour supply: even among full-time, full-year workers, women often work fewer hours per week, or fewer weeks per year than men

Gender pay ratio:

0.73

(2017)

Gender pay gap:

27%

(2017)

Method 3: Comparing the hourly wages of women and men

- Produces the smallest estimate of the gender pay gap
 - Only captures the per-unit (hour) price of labour →
Unaffected by differences in the number of hours and weeks worked by women and men
- For workers paid on a salary as opposed to hourly basis, using usual work hours to calculate their hourly wage may be inaccurate
- Hourly wages do not reflect contingent or “pay-for-performance” that is included in annual earnings
- Speaks to issues of pay equity

Gender pay ratio:

0.87

(2017)

Gender pay gap:

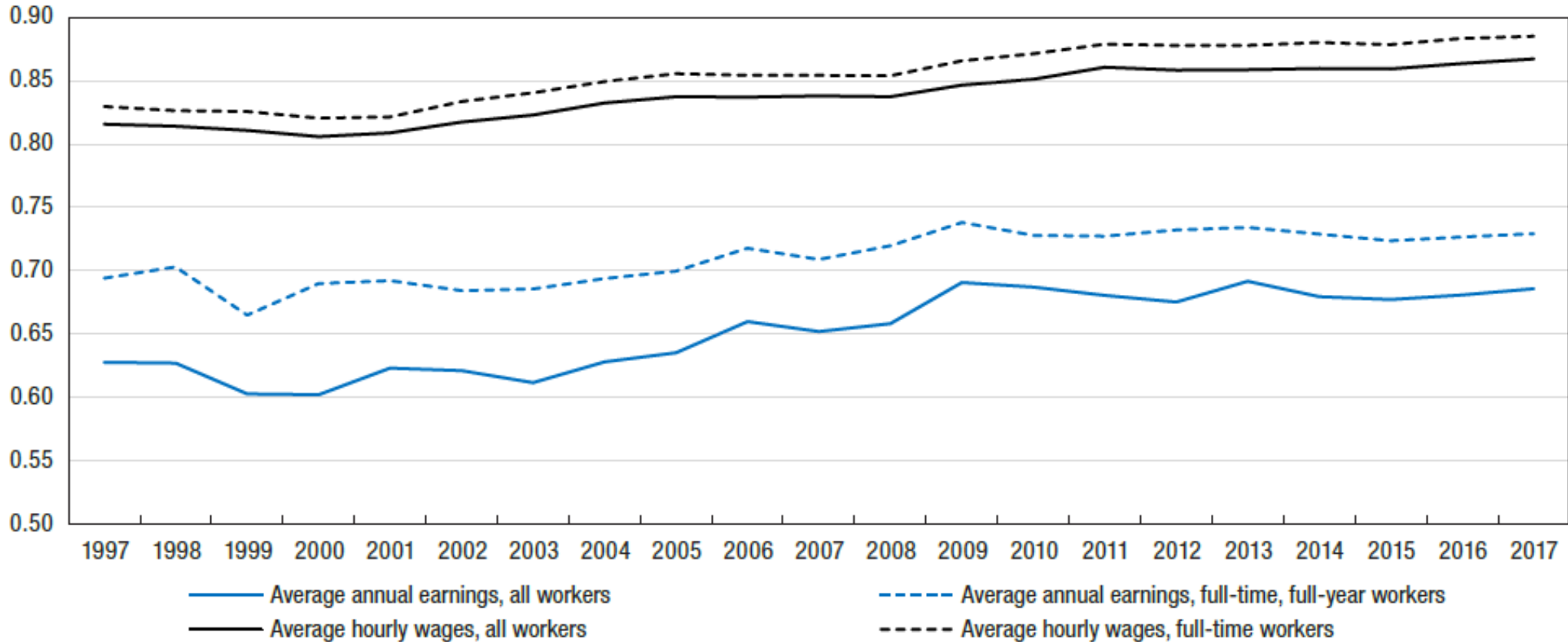
13%

(2017)

Chart 2

Gender pay ratio calculated from average annual earnings and hourly wages of employed women and men aged 15/16 years and older, Canada, 1997 to 2017

gender pay ratio (women's earnings : men's earnings)



Note: Annual earnings refer to annual income from wages, salaries and commissions before taxes among individuals whose main job was as a paid employee. Employees with zero annual earnings are excluded.

Sources: Statistics Canada, Survey of Consumer Finances, Survey of Labour and Income Dynamics, and Canadian Income Survey, custom tabulations; Statistics Canada, Labour Force Survey, Table no. 14-10-0340-02.

Mean Vs. Median

- The mean, or the average, is interpreted as the pay that each worker of a given sex would receive, if the earnings of all workers of that sex were divided evenly among them.

Sum of earnings of all workers of a given sex

Number of workers of a given sex

- To calculate the median, the earnings of all workers of a given sex are put in ascending/descending order, and the middle of that earnings distribution is identified. The median separates the half of workers who earn less than that amount from the other half of workers who earn more

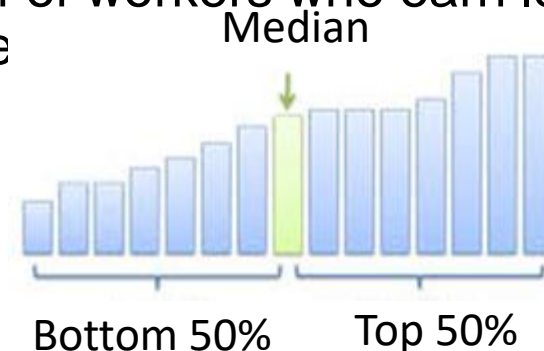
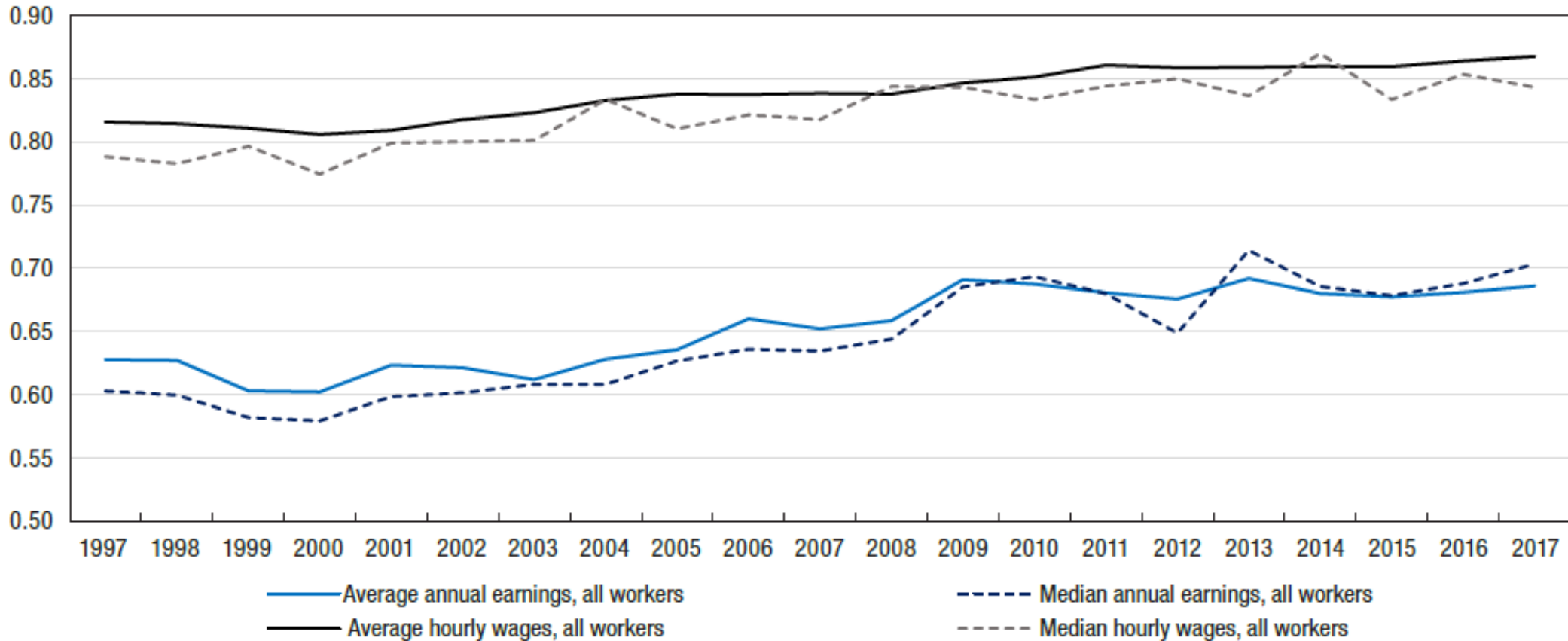




Chart 3

Average and median annual earnings and hourly wages of employed women and men aged 15/16 and older, Canada, 1997 to 2017

gender pay ratio (women's earnings : men's earnings)



Note: Annual earnings refer to annual income from wages, salaries and commissions before taxes among those whose main job was as a paid employee. Employees with zero annual earnings are excluded.

Sources: Statistics Canada, Survey of Consumer Finances, Survey of Labour and Income Dynamics, and Canadian Income Survey, custom tabulations; Statistics Canada, Labour Force Survey, Table no. 14-10-0340-02.

Which method is best?

- It depends on the question being addressed
- Pay equity legislation – the gender pay gap in hourly wages is most relevant
- To examine the effect gender has on inequality in pay and purchasing power – the gender pay gap in annual earnings of all workers, regardless of how much they work, is the most relevant measure
- To monitor progress toward gender equality, as per the Government of Canada's Gender Results Framework, 2 measures are recommended:
 - One based on annual earnings of all workers
 - One based on hourly wages of all workers

Thank you!

For more information, please visit:

Publication *Studies on Gender and Intersecting Identities:*

- “Measuring and Analyzing the Gender Pay Gap: A Conceptual and Methodological Overview”

Gender, Diversity and Inclusion Statistics Hub,

www.statcan.gc.ca/eng/topics-start/gender_diversity_and_inclusion

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