

Design Overview

1. Analysis

1.1 Redesign target

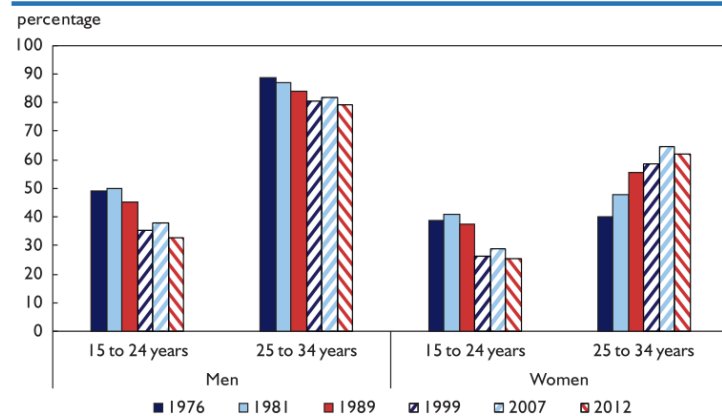
Decline in full-time employment among young people in the 1980s and 1990s

Employment and unemployment data are key indicators of the economic well-being young people, but it is also important to examine changes in employment conditions among those who are working. A key indicator in this regard is the proportion of young workers who hold a full-time job.

Even though the percentage of young people with full-time jobs has generally been on the decline since 1976, the trends vary by age, sex, region and period.

Among men and women age 15 to 24, the full-time employment rate decreased mainly during the 1980s and 1990s and has varied slightly since then (Chart 5). The same situation holds true for men age 25 to 34—their rate fell from nearly 90% in 1976 to 80% in 1999, and has remained relatively stable since then.

Chart 5 Decrease in the full-time employment rate in the 1980s and 1990s among young people, except among women age 25 to 34



Source: Statistics Canada, Labour Force Survey, 1976, 1981, 1989, 1999, 2007 and 2012.

The trend was different for young women age 25 to 34. Their full-time employment rate rose steadily from 1976 until 2007. Between 2007 and 2012, the rate dropped only slightly to 62%. However, this performance is more than a mere economic phenomenon since young women this age made many educational and professional advances.¹⁵

In addition, not all regions necessarily experienced the same trends because of the natural resources boom during the 2000s. In three provinces in particular—Alberta, Saskatchewan, and Newfoundland and Labrador—a number of young people are currently experiencing a different economic situation as a result of oil production in their province.¹⁶

1.2 Rhetorical situation

The excerpt above that includes Chart 5 appeared in a 2013 article by Statistics Canada. This article aimed to provide a “brief portrait” of the employment situation of younger Canadians and highlight how life for them was “very different than it was for their parents at their age” [1].

Broadly, the article’s conclusion is that the employment situation is better for young women and worse for young men than it had been 36 years earlier. To reach this conclusion, the article drew from the Labour Force Survey and a few other data sources and presented explanatory analyses with a mix of text, charts, and tables.

Although the article’s audience is the general public, it seems particularly applicable for people engaged in shaping and making policy.

1.3 Visual processing challenges and redesign strategies

The table below outlines five visual processing challenges of Chart 5, links them to their visual impacts, explains which Gestalt principles they are not optimizing, and suggests redesign strategies for them:

Table 1: Visual processing challenges of Chart 5.

Challenge #1: Incorrect type of chart

Description:	Bar charts are appropriate for comparing values of different categories, but they obscure trends over time, which is Chart 5's intention
Visual Impact:	Lack of clarity
Gestalt Principle:	The individually coloured bars fail to use the connection principle to guide readers to follow employment rate trends
Redesign Strategy:	Use a line graph instead of a bar chart to establish a clear connection between data points and showcase Chart 5's trends over time

Challenge #2: Excessive colours and patterns

Description:	Each of the years graphed on Chart 5 has a different colour and pattern, which makes the chart busy and muddies the data trends
Visual Impact:	Lack of conciseness and sloppy tone
Gestalt Principles:	Excessive colours break the simplicity principle, and the repeated colours produce a non-meaningful similarity between different years
Redesign Strategy:	Use fewer colours and patterns to make Chart 5 simpler, more concise, more professional in tone, and with meaningful similarities

Challenge #3: Inconsistent year intervals (X-axis)

Description:	The years plotted in Chart 5 are evenly spaced but appear in uneven intervals, suggesting years may have been cherry-picked to fit a narrative
Visual Impact:	Compromised ethos
Gestalt Principle:	Inconsistent intervals between years make a deceptive continuity
Redesign Strategy:	Graphed time on the x-axis "must be in consistent intervals" [2] to present a true and logical continuity and regain ethos

Challenge #4: Lack of meaningful pre-attentive attributes

Description:	There are no meaningful pre-attentive attributes that direct readers to follow the story of the dramatic rise of female employment
Visual Impact:	Lack of emphasis on critical data
Gestalt Principle:	Clouded relationship between figure and ground
Redesign Strategy:	Highlight key data while muting all else in shades of gray to create a figure/ground relationship that emphasizes the graph's main story

Challenge #5: Bit of clutter

Description:	Chart 5 is mostly clean-looking but it does still have some visual fat that can be trimmed
Visual Impact:	Optimizable conciseness
Gestalt Principle:	Greater simplicity can lead to better visual processing
Redesign Strategy:	Remove chart border, legend, and y-axis, and label data points directly to make the chart simpler and more concise

1.4 Data update

Since the original article is ten years old, a redesign of the chart might as well involve the inclusion of more up-to-date data from Statistics Canada [3] so that the graph's story can be refined and re-contextualized for our times. This means the original text surrounding Chart 5 also needs to be revised.

1.5 References

- [1] D. Galarneau, R. Morissette and J. Usalcas, "Insights on Canadian society: What has changed for young people in Canada?," Statistics Canada, July 2013. Available:

<https://www150.statcan.gc.ca/n1/pub/75-006-x/2013001/article/11847-eng.htm>. Accessed: 27 October, 2023.

- [2] C. Nussbaumer Knaflic, “Storytelling with data,” 2015, Hoboken, NJ: Wiley.
- [3] Statistics Canada, “Unemployment rate, participation rate and employment rate by sex, annual,” website. Available: <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410032702>. Accessed: 27 October, 2023.

2. Redesign

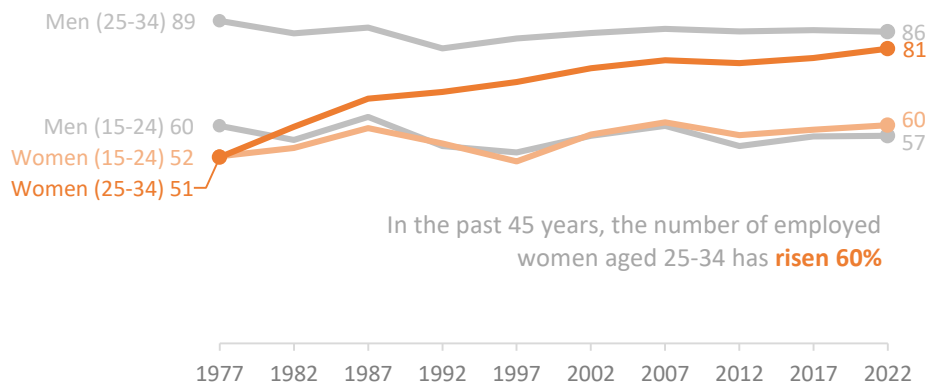
Dramatic rise in full-time employment among young women in the past 45 years

In the past 45 years, many events have negatively affected the percentage of young Canadians with full-time jobs: the early 1990s recession, the Global Financial Crisis of 2007-2008, and most recently the COVID pandemic. One group of people, however, has continued to make gains in the Canadian labour force throughout the years in spite of these crises: women aged 25-34 (Chart 5).

Chart 5 Variations in the employment rate have affected men and women differently

Employment rate by sex (1977-2022)

Percentage of Canadians aged 15-34 active in the labour force



Note: Percentages rounded to the nearest unit.

Source: Labour Force Survey, Statistics Canada

Since peaking in the late 1980s at 64.8%, the full-time employment rate of young men aged 15-24 has largely declined, reaching 57.3% last year. Likewise, men aged 25-34 have been on a slight but long-term downward trend since the first Labour Force Survey in 1976, going from 90.3% then to 86.2% now.

The situation has been different for women. Young women aged 15-24 lived through similar fluctuations as their male counterparts, but ended up overtaking them in the 2010s, making it to a 60.2% employment rate in 2022. For women aged 25-34, the growth has been uninterrupted and much more dramatic: a 60% increase in employment rate between 1977 and 2022, from 50.8% to 81.1%.

This performance is more than a mere economic phenomenon and has to do with the many educational and professional advances women in these age groups have made in the past half century as well as evolving norms regarding the role of women in society.