

Economic Insights

Canadians' Views on Automation and Net Job Creation in 1989: Were They Right?

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Release date: November 2, 2020



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Published by authority of the Minister responsible for Statistics Canada

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Canadians' Views on Automation and Net Job Creation in 1989: Were They Right?

René Morissette

This *Economic Insights* article examines the degree to which Canadians' views about the impact of automation on net job creation in 1989 materialized three decades later. The analysis uses the General Social Survey of 1989. The study shows that in 1989, Canadians had varying opinions about the impact of automation on future employment. Although many were optimistic about how automation would affect net job creation, considerably more held less optimistic views. This fact is a reminder that predictions regarding future employment levels carry a considerable degree of uncertainty. This is true not only in the short term—as can be seen in the wake of COVID-19—but also (and especially) in the longer term.

Introduction

Prior to the COVID-19 pandemic, advances in artificial intelligence and robotics raised concerns that automation might lead to relatively high unemployment rates in the coming years (Brynjolfsson and McAfee 2014; Acemoglu and Restrepo 2019). However, concerns that technological progress might have adverse effects on employment growth are not new.

In 1989, Statistics Canada's General Social Survey asked 9,338 respondents, "Do you agree or disagree that, on balance, computers and automation will create more jobs than they will eliminate?"

Canadians had differing views on this issue. Roughly one-third of respondents agreed (somewhat or strongly) that computers and automation would end up creating more jobs than they would destroy (Table 1). However, a greater proportion, about half, disagreed (somewhat or strongly).¹ The remaining 15% of respondents had no opinion on the issue.²

Less educated Canadians were less optimistic than their more highly educated counterparts. For example, 27% of men with no high school diploma agreed that computers and automation would create more jobs than they would destroy, compared with 50% of men with some postsecondary education.³

1. Some respondents might have disagreed (somewhat or strongly) because they thought that, on balance, computers and automation would end up creating the same number of jobs as they would eliminate. It is not possible to identify such respondents.
2. Canadian men and women aged 50 and older were twice as likely as their younger counterparts to have no opinion on the issue (Table 1).
3. The difference between these two groups remained after controlling for age.

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Table 1
Canadians' views on automation and net job creation in 1989

	Do you agree or disagree that, on balance, computers and automation will create more jobs than they will eliminate?				
	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree	No opinion / not stated
	percent				
All individuals aged 15 and older	24.4	27.9	20.4	12.5	14.8
Men					
Younger than 50 years of age	26.9	26.7	20.8	15.7	9.9
Aged 50 and older	20.4	26.6	21.4	12.5	19.0
Women					
Younger than 50 years of age	23.2	29.0	23.5	12.0	12.3
Aged 50 and older	25.4	29.1	12.4	6.6	26.5
Men					
Postsecondary education	19.7	20.6	26.0	23.5	10.2
Trades certificate or diploma	25.5	30.9	18.6	14.3	10.6
High school	24.9	25.7	23.1	15.5	10.7
Less than high school	27.4	29.4	17.4	9.7	16.1
Women					
Postsecondary education	20.9	27.4	25.3	10.7	15.7
Trades certificate or diploma	27.3	30.2	19.4	11.1	12.1
High school	23.2	31.4	21.8	11.8	11.8
Less than high school	24.9	28.1	15.3	8.5	23.2

Source: Statistics Canada, 1989 General Social Survey.

What happened? Thanks to job creation in the services-producing sector, total employment in Canada grew by about 6 million after 1989, rising from 13.0 million in 1989 to 19.1 million in 2019 (Chart 1).⁴

Not all sectors experienced employment gains. Employment in manufacturing fell from 2.1 million in 1989 to 1.7 million in 2019, largely because of employment declines observed since the early 2000s. Employment also fell in agriculture, forestry and logging, as well as fishing, hunting, and trapping. Nevertheless, the proportion of Canadians who were employed did not fall substantially from 1989 to 2019: in 1989 and 2019, roughly 62% of individuals aged 15 and over had a job.⁵

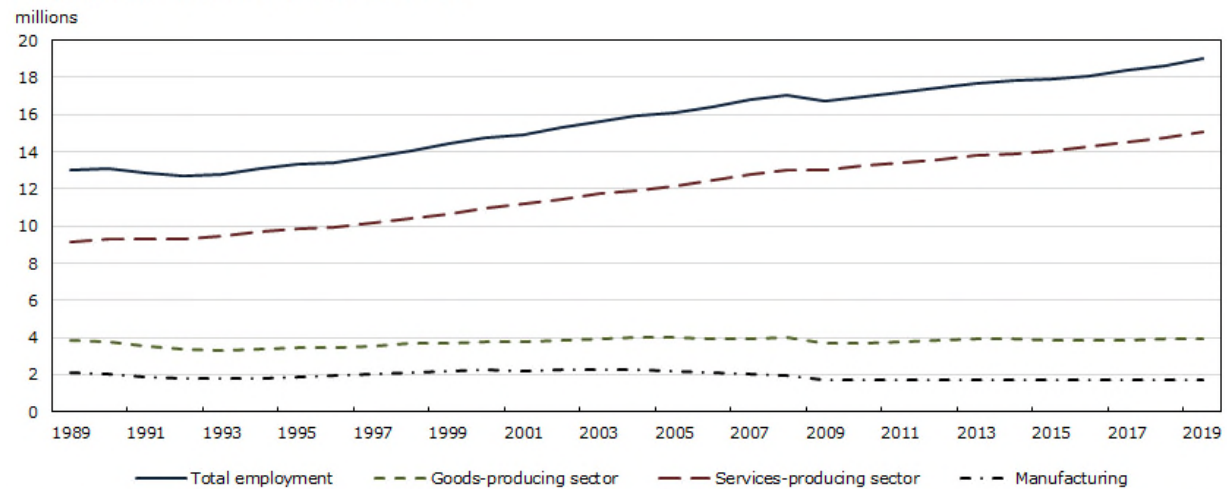
Assuming that respondents to the 1989 General Social Survey were considering “total employment” when they answered the question on automation, and assuming that employment trends since the late 1980s have been driven solely by computers and automation—a fairly restrictive assumption since many factors (e.g., growth of international trade, plant relocations abroad) likely played a role—the 24% of Canadians who strongly disagreed that computer and automation would create more jobs than they would destroy appear to have been wrong. Their counterparts who strongly held the opposite view (about 13% of respondents) appear to have been correct.

4. Paid employment in the private sector grew from 10.2 million in 1989 to 13.9 million in 2019.

5. Half of the population aged 15 and over had a full-time job in 2019, compared with roughly 52% in 1989.

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Chart 1
Employment in Canada, 1989 to 2019



Notes: The goods-producing sector includes manufacturing; construction; utilities; agriculture; forestry and logging and support activities for forestry; fishing, hunting and trapping; and mining, quarrying, and oil and gas extraction.

Source: Statistics Canada, Labour Force Survey.

Regardless of how these predictions are interpreted, it is clear that, in 1989, Canadians had varying opinions about the impact of automation on future employment. Although many were optimistic about how automation would affect net job creation, considerably more held less optimistic views.

This fact is a reminder that predictions regarding future employment levels carry a considerable degree of uncertainty. This is true not only in the short term—as can be seen in the wake of COVID-19—but also in the longer term. This fact also raises the possibility that Canadians whose predictions were wrong about the 1989-to-2019 period might end up being right when, 30 years from now, the 1989-to-2049 period is analyzed. Only time will tell.

References

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Brynjolfsson, E., and A. McAfee. 2014. *The Second Machine Age: Work Progress and Prosperity in a Time of Brilliant Technologies*. W.W. Norton & Company Publishers.