

# Survey Evidence on Firm AI Adoption and its Implications

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## Abstract

This paper examines the adoption of artificial intelligence (AI) among firms in Canada and its expected effects on employment and capital spending. The analysis relies on special questions included in the December 2025 Business Leaders' Pulse (BLP). The results show that while personal use of AI among business leaders is widespread, adoption for production purposes remains limited. On balance, firms anticipate AI to have a positive impact on their capital expenditures over the next 12 months and a slightly more positive impact over the next 3 years. Firms anticipate limited impacts to employment over the next year but expect modest net negative impacts on employment over the next 3 years. Overall, the findings suggest that AI adoption among Canadian firms remains at an early stage, with more material economic impacts expected to emerge over time.

*Topics: Artificial intelligence, Employment, Investment, Digitalization and productivity*

*JEL codes: EO, E2, E22, E24, O33*

## Résumé

Cette étude s'intéresse à l'adoption de l'intelligence artificielle (IA) par les entreprises canadiennes et à ses effets attendus sur l'emploi et les dépenses d'investissement. L'analyse repose sur des questions spéciales incluses dans l'enquête Le Pouls des leaders d'entreprise de décembre 2025. Les résultats montrent que même si l'utilisation personnelle de l'IA est répandue chez les leaders d'entreprise, son adoption à des fins de production reste limitée. Dans l'ensemble, les entreprises s'attendent à ce que l'IA ait une incidence positive sur leurs dépenses d'investissement au cours des 12 prochains mois et une incidence un peu plus positive sur les trois prochaines années. Pour ce qui est de l'emploi, elles s'attendent à des effets limités au cours de la prochaine année, mais à de modestes effets négatifs nets sur les trois prochaines années. Globalement, les résultats donnent à penser que l'adoption de l'IA par les entreprises canadiennes en est encore à ses débuts et que des répercussions économiques plus importantes devraient se dégager au fil du temps.

*Sujets : Intelligence artificielle, Emploi, Investissement, Numérisation et productivité*

*Codes JEL : EO, E2, E22, E24, O33*

# Introduction

AI adoption by businesses is expected to impact the economy, including productivity, labour markets, investment, inflation, and price-setting behavior. As AI adoption grows, alongside the rapid introduction of new AI tools, monitoring firms' adoption patterns and the impacts from AI on key economic variables is important for understanding possible macroeconomic implications for Canada.

Statistics Canada's Canadian Survey on Business Conditions (CSBC) included AI modules in 2024 and 2025 that provide early evidence on firms' AI usage, intentions to adopt, and expected employment impacts over the next 12 months (Bryan, Sood and Johnston 2025a; 2025b).

As a complement to Statistics Canada's efforts, special AI-related questions were added to the Bank of Canada's December 2025 Business Leaders' Pulse (BLP). The BLP collects information from Canadian business leaders on a range of core topics, including sales, current business conditions, employment, and inflation expectations. Each month, a subset of participating firms is also asked topical questions that address specific information needs of the Bank. The BLP is designed to be informative for assessing aggregate economic conditions relevant to Canadian gross domestic product (GDP), rather than to produce population-representative estimates of firm-level behaviour.<sup>1,2</sup>

The BLP included questions on individual AI usage by firm leaders, operational adoption, primary applications (e.g., data processing using machine learning), reasons for non-adoption, and the expected impact on firms' employment and capital spending over the next 12 months and 3 years.<sup>3</sup> The analysis presented here is based on 314 survey responses.<sup>4</sup> The BLP defines AI broadly as the use of technologies including, but not limited to, text generation using large language models (for example, Microsoft Copilot), data or image processing using machine learning, and visual content creation.

The results show that while 70% of respondents use AI for at least some time in a typical work week, adoption for production purposes is much less prevalent. More than half of BLP firms either do not use AI and do not plan to adopt it over the next 12 months or they infrequently use it in their business today. A lack of usefulness for operations was the most-cited reason firms are not adopting AI.

Firms currently using or planning to use AI are more likely to expect impacts to their capital spending than their employment. On balance, firms anticipate AI to have a positive impact on their capital expenditures over the next 12 months and a slightly more positive impact over the next 3 years. However, among firms that are using AI,

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**1** BLP firms are recruited using regional and industry quotas based on shares of Canadian gross domestic output rather than business population quotas. Firms with fewer than 20 employees are also over-represented relative to their contribution to GDP, reflecting the prevalence of smaller firms in the Canadian economy, where businesses with fewer than 20 employees account for approximately 91% of all firms (Palmer, Tam and Johnston, 2025).

**2** For more information on the BLP, see Chernis et al. (2022).

**3** See Appendix A for the full AI questionnaire.

**4** See Appendix B for more information on the region, size, and sectoral composition of these firms.

majority do not anticipate any impacts to employment over the next 12 months. Over the next 3 years, 18% of firms anticipate hiring less staff because of AI while 9% of firms anticipate hiring more staff as a result, with the remaining respondents anticipating no impacts to employment.

## Most decision-makers personally use AI

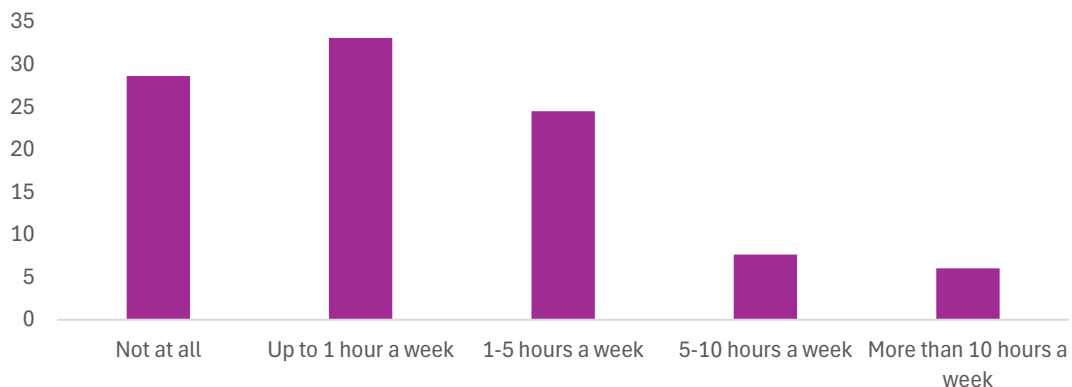
More than two-thirds of BLP decision-makers report personal usage of AI technologies at work, though the majority use it for less than 5 hours a week (**Chart 1**). This broadly holds across firm size, region, and industry. The natural resources sector is an exception, where less than half of decision makers report using AI within a work week.<sup>5</sup>

Canadian estimates of firm-level AI adoption vary widely, ranging from low adoption rates for production purposes in Statistics Canada’s CSBC (about 15%) to over 90% adoption rates in surveys capturing broader AI use, such as KPMG’s Generative AI Business Adoption Survey (Bryan, Sood and Johnston 2025a; 2025b; KPMG Canada 2025). The high variation in adoption rates likely reflects differences in survey timing, question design, sample composition, and varying definitions of AI adoption, among other factors.

Recent firm-level survey evidence from the US, UK, Germany, and Australia indicates that approximately 70% of firms report using at least one AI technology (Yotzov et al. 2026). Estimates of firm-level AI adoption also vary widely across the broader literature, ranging from single-digit adoption rates in surveys such as the U.S. Annual Business Survey and the U.K. Management and Expectations Survey to nearly 88% of organizations in McKinsey’s 2025 Global Survey on AI.

### Chart 1: Majority of decision-makers are using AI at an individual level

*On average, how frequently do you personally use AI technologies in a typical working week?*  
Share of firms (%)



<sup>5</sup> See Appendix C for additional charts by region and sector.

## AI adoption for operational use is limited

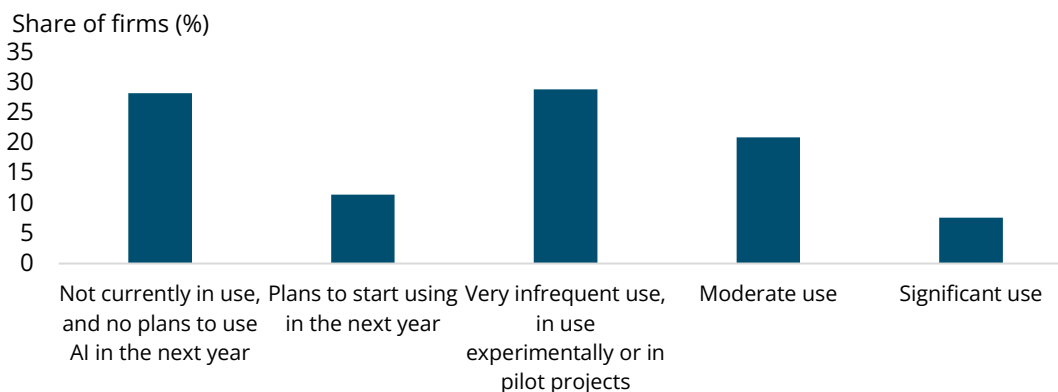
AI adoption by firms for operations is more limited, with only 8% of businesses surveyed reporting significant use (**Chart 2**). Another 21% report moderate use and 29% report infrequent use for operations, with an additional 11% of BLP firms planning to use AI for production over the next year. These results broadly align with Statistics Canada’s CSBC findings, which show that 15% of firms plan to use AI for operations over the next 12 months.<sup>6</sup>

Uptake varies by region and sector. Accommodation, food and professional services firms, followed by finance, insurance, real estate, rental and leasing industry, report the highest AI usage for operations, while natural resources firms report the lowest. Notably, only around one-quarter of manufacturing firms report using AI moderately or significantly for operations, though over a third of manufacturing businesses use AI infrequently or experimentally.

Regionally, Quebec and Ontario lead adoption rates. Differences by firm size also exist. Micro firms lag small, medium and large (SML) firms in AI adoption— around two-fifths of micro firms report no current or anticipated usage over the next 12 months, compared to about one-fifth of SML firms.<sup>7</sup> However, this divergence is driven primarily by fewer experimental users among micro firms—the share of micro and SML firms reporting moderate or significant usage are broadly similar.

### Chart 2: Most firms report little to no current use of AI in their operations

*To what extent does your firm use artificial intelligence (AI) in producing goods or delivering services?*



*Note: The 'I don't know' response category is not shown in this chart.*

<sup>6</sup> Yotzov et al. (2026) did not ask firms about their intended use of AI over the next 12 months, they focused on the past 3 years and the next 3 years. We compare results where applicable.

<sup>7</sup> Micro firms are defined as firms with fewer than 20 employees. Small, medium, and large (SML) firms are defined as firms with 20 or more employees.

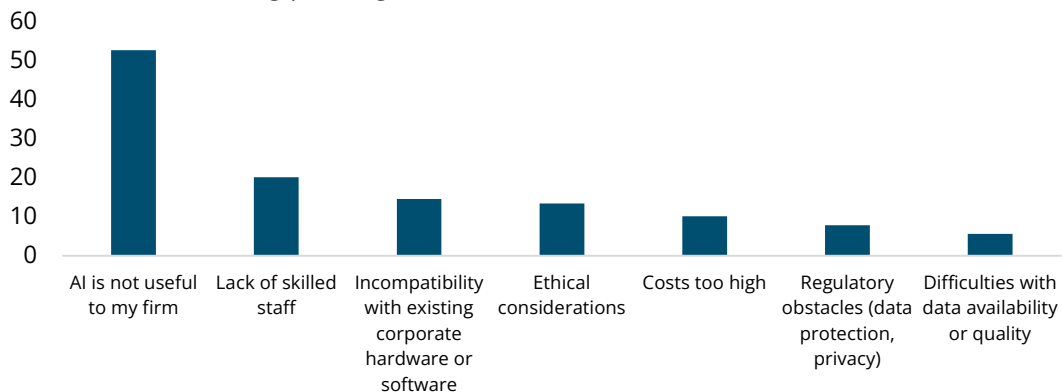
## Lack of operational relevance is the primary reason for non-adoption

Among firms that are not currently adopting AI and have no plans to do so in the next 12 months, a majority cite a lack of relevance to their operations as the reason (**Chart 3**). Other reasons include lack of skilled staff and incompatibility with existing software or hardware. This is consistent with a majority of CSBC firms not adopting or planning to adopt, who also cite lack of relevance to operations as the main barrier to adoption.

### Chart 3: Many firms not adopting AI because of lack of relevance to operations

*You said that your firm does not use or plan to use any of the mentioned AI technologies in the short term. What do you attribute this to? Select all that apply.*

Share of firms not using/planning to use AI (%)



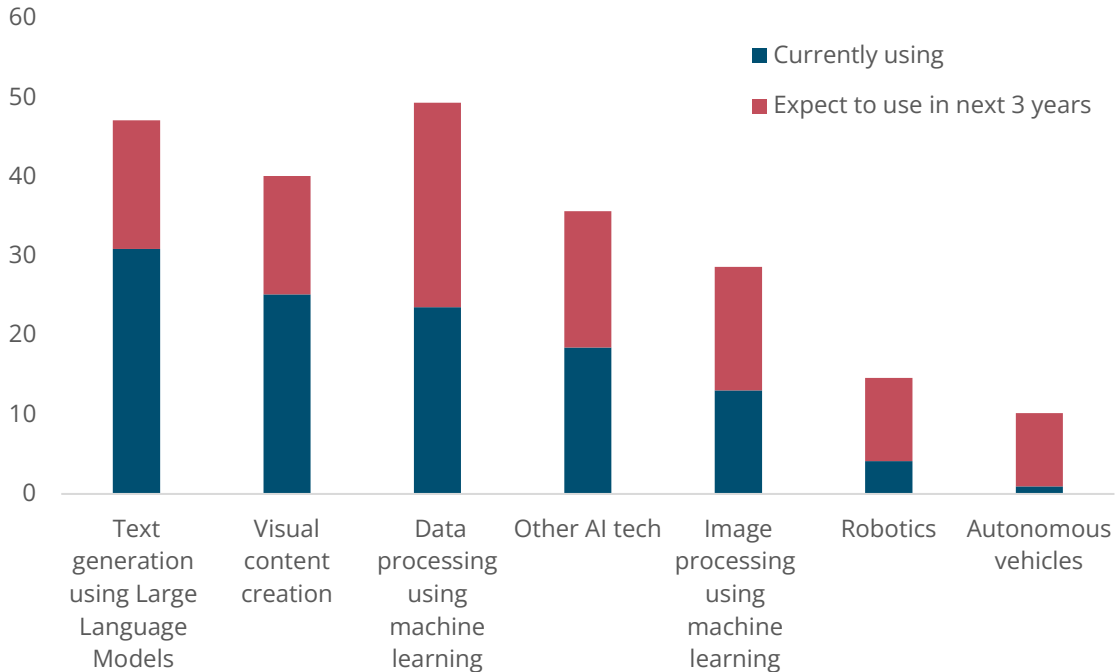
## Firms use AI primarily for text generation

Text generation is the most frequently-cited current use of AI by firms (**Chart 4**). Roughly a quarter of firms also report currently using AI for visual content creation and data processing, while robotics and autonomous vehicles are among the least commonly reported current uses of AI. Over the next 3 years, an additional quarter of firms expect to use machine-learning-based data processing, making it the most frequently cited future use. Firms also expect increased use of robotics and autonomous vehicles, with these anticipated gains primarily driven by manufacturing firms.

#### Chart 4: Firms primarily using AI for text generation, visual content creation, and data processing

Which of the following artificial intelligence (AI) technologies, if any, does your firm currently use? And which do you expect to make use of over the next three years? Select all that apply.

Share of firms (%)



#### AI-related capital spending expected to increase over the next 3 years

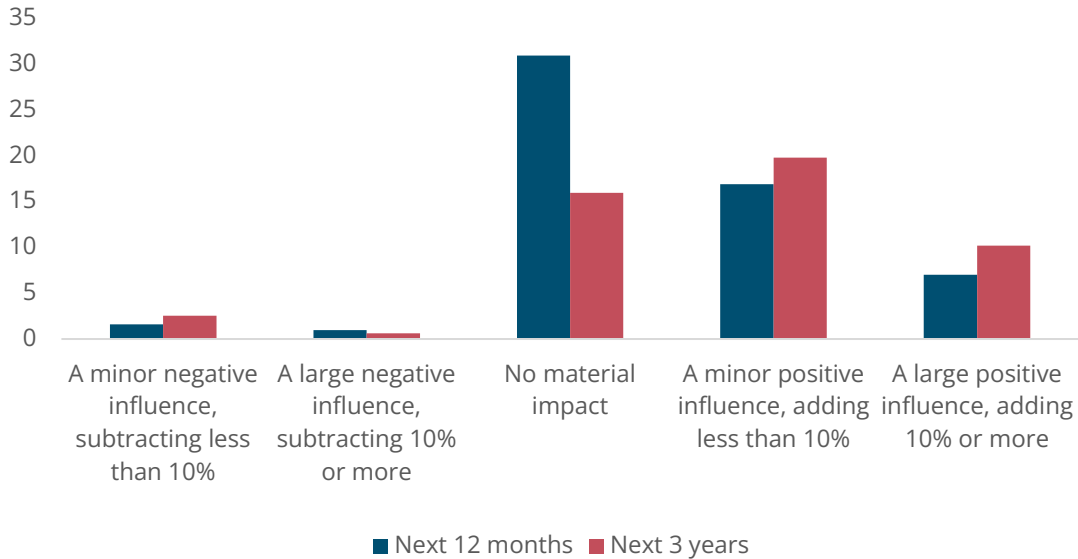
Capital spending associated with AI adoption is expected to remain modest over the next 12 months and increase over the next 3 years (**Chart 5**). Over the next year, 31% of firms do not anticipate AI will impact their capital spending, compared to only 16% over the next 3 years. About 20% of firms expect AI to have a minor positive impact on their capital expenditure in the next 3 years while 10% expect AI to have a major positive impact. Meanwhile, a much smaller share of firms anticipates minor (3%) or major (1%) negative impacts from AI adoption on their capital spending.

Firms in accommodation, food and professional services, finance and insurance (excluding real estate/rental), and manufacturing report higher expected AI-related capital expenditures over both the 12-month and 3-year horizons, while natural resource firms report the weakest expectations. More small, medium, and large firms compared to micro firms expect capital expenditures to increase because of AI, both in the near and medium term.

### Chart 5: Firms expect AI to have little impact on capital spending in the near-term

*How do you expect this to affect the capital expenditure of your firm over the next 12 months and the next 3 years?*

Share of firms (%)



### Near-term employment impacts from AI expected to remain limited

Firms anticipate AI will have little net impact on their employment levels in 2026 but a slightly negative net impact over the next 3 years (**Chart 6**). Roughly 11% of firms anticipate employment declines and about 8% expect increases over the next 12 months. Similarly, CSBC firms expect limited impacts of AI on employment levels over the next 12 months. Over the next 3 years, firms anticipate slightly larger impacts on employment, with 18% expecting AI to have a negative impact on their employment and 9% anticipating a positive impact. These results are consistent with findings in the US, UK, Germany, and Australia, where 37% of firms expect employment effects over the next 3 years, with more firms expecting negative impacts (26%) than positive impacts (11%) (Yotzov et al. 2026). A mix of firms anticipating positive and negative impacts on employment is consistent with the broader literature, which suggests that employment-level impacts will depend on whether firms use AI for task augmentation or task automation (Brault et al. 2026).

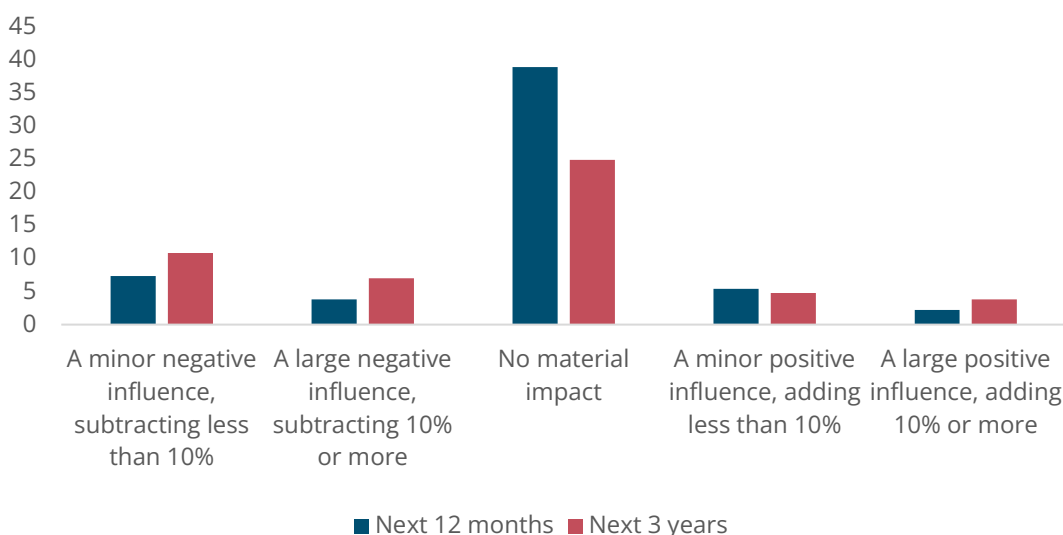
Perceived employment impacts differ by firm characteristics. A similar share of micro firms expects positive effects as negative effects over both the next 12 months and the next 3 years, suggesting little net expected impact on employment. By contrast, the proportion of small, medium, and large firms anticipating employment declines nearly doubles from 10% in 2026 to 21% over the next 3 years, while the share expecting

increases remains roughly unchanged. This suggests some downside risk to employment from AI over the next 3 years. By sector, accommodation, food and professional services firms and finance, insurance, real estate, rental and leasing firms expect net employment decreases at the 12-month and 3-year horizons. Construction firms expect little to no change at either horizon.

**Chart 6: Most BLP firms do not project near-term employment changes due to AI**

*How do you expect this to affect the number of employees of your firm over the next 12 months and the next 3 years?*

Share of firms (%)



**Conclusion and Implications**

Taken together, the December 2025 BLP results suggest that AI adoption among Canadian firms remains at an early stage, with usage concentrated in experimentation and task-level applications rather than broad integration into production processes. However, the results indicate that AI adoption and its perceived economic impacts are expected to intensify over time, pointing to a gradual adjustment process in which experimentation with AI precedes more material operational changes and a potential restructuring of the Canadian economy. The stronger expected impacts on employment and capital spending over the 3-year horizon are also consistent with theoretical perspectives that emphasize lags between adoption and economic effects for general-purpose technologies, reflecting learning, adjustment costs, and the need for complementary investments before impacts become more pronounced.<sup>8</sup>

<sup>8</sup> See Brault et. Al (2026).

# Appendix A: Business Leaders' Pulse December 2025 AI questionnaire

**Preamble:** The Bank of Canada is interested in learning more about the use of artificial intelligence (AI) among firms in Canada.

Among other things, AI technologies could include text generation using large language models (e.g., Microsoft Copilot), data or image processing using machine learning, and visual content creation.

**1. On average, how frequently do you personally use AI technologies in a typical working week?**

- More than 10 hours a week
- 5-10 hours a week
- 1-5 hours a week
- Up to 1 hour a week
- Not at all

**2. To what extent does your firm use artificial intelligence (AI) in producing goods or delivering services?**

- Not currently in use, and no plans to use AI in the next year
- Not currently in use, but there are plans to start using it over the next 12 months
- Very infrequent use, in use experimentally or in pilot projects
- Moderate use
- Significant use
- I don't know

If Question 2 not "Not currently in use, and no plans to use AI in the next year" or "I don't know"

**3. Which of the following artificial intelligence (AI) technologies, if any, does your firm currently use? And which do you expect to make use of over the next three years?**

*Select all that apply.*

*Currently using / Expect to use in next 3 years*

- Autonomous vehicles
- Image processing using machine learning
- Data processing using machine learning
- Robotics
- Text generation using Large Language Models

<ul style="list-style-type: none"> <li>- Visual content creation</li> <li>- Other AI technology</li> </ul>
<p>IF Question 2 not "Not currently in use, and no plans to use AI in the next year" or "I don't know"</p> <p><b>4. How do you expect this to affect the capital expenditure of your firm over the next 12 months and the next 3 years?</b></p> <p><i>Next 12 months / Next 3 years</i></p> <ul style="list-style-type: none"> <li>- A large positive influence, adding 10% or more</li> <li>- A minor positive influence, adding less than 10%</li> <li>- No material impact</li> <li>- A minor negative influence, subtracting less than 10%</li> <li>- A large negative influence, subtracting 10% or more</li> </ul>
<p>IF Question 2 not "Not currently in use, and no plans to use AI in the next year" or "I don't know"</p> <p><b>5. How do you expect this to affect the number of employees of your firm over the next 12 months and the next 3 years?</b></p> <p><i>Next 12 months / Next 3 years</i></p> <ul style="list-style-type: none"> <li>- A large positive influence, adding 5% or more</li> <li>- A minor positive influence, adding less than 5%</li> <li>- No material impact</li> <li>- A minor negative influence, subtracting less than 5%</li> <li>- A large negative influence, subtracting 5% or more</li> </ul>
<p>If Question 2 "Not currently in use, and no plans to use AI in the next year"</p> <p><b>6. You said that your firm does not use or plan to use any of the mentioned AI technologies in the short term. What do you attribute this to?</b></p> <p><i>Select all that apply.</i></p> <ul style="list-style-type: none"> <li>- Lack of skilled staff</li> <li>- Costs too high</li> <li>- Difficulties with data availability or quality</li> <li>- Regulatory obstacles (data protection, privacy)</li> <li>- Incompatibility with existing corporate hardware or software</li> <li>- Ethical considerations</li> <li>- AI is not useful to my firm</li> <li>- Other</li> <li>- I don't know</li> </ul>
<p><b>Please feel free to provide any additional information you think may help us better understand how your firm is adopting AI.</b></p>

## Appendix B: Additional details on sample composition

Table B1: Sample composition of the December 2025 AI survey by industry, firm size, and region

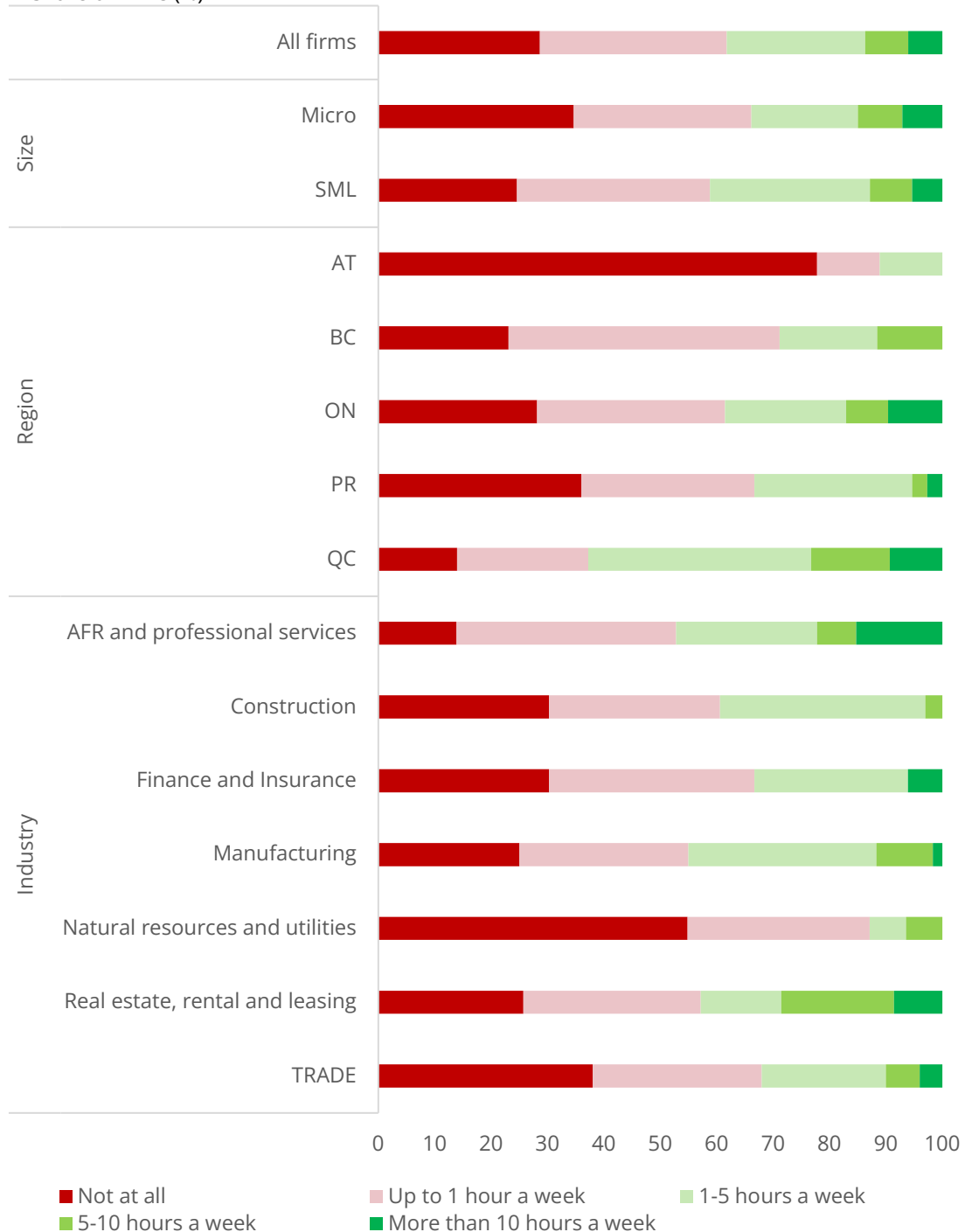
		Share of firms (%)
Industry	Accommodation, food and professional services	23
	Manufacturing	19
	TRADE	16
	Real estate, rental and leasing	11
	Construction	11
	Finance and Insurance	11
	Natural resources and utilities	10
Firm size	Small, medium, and large	59
	Micro	41
Region	Ontario	43
	Prairies	24
	British Columbia	17
	Quebec	14
	Atlantic	3

# Appendix C: Additional results by region, firm size, and industry

**Chart C1: Most decision makers use AI at an individual level**

*On average, how frequently do you personally use AI technologies in a typical working week?*

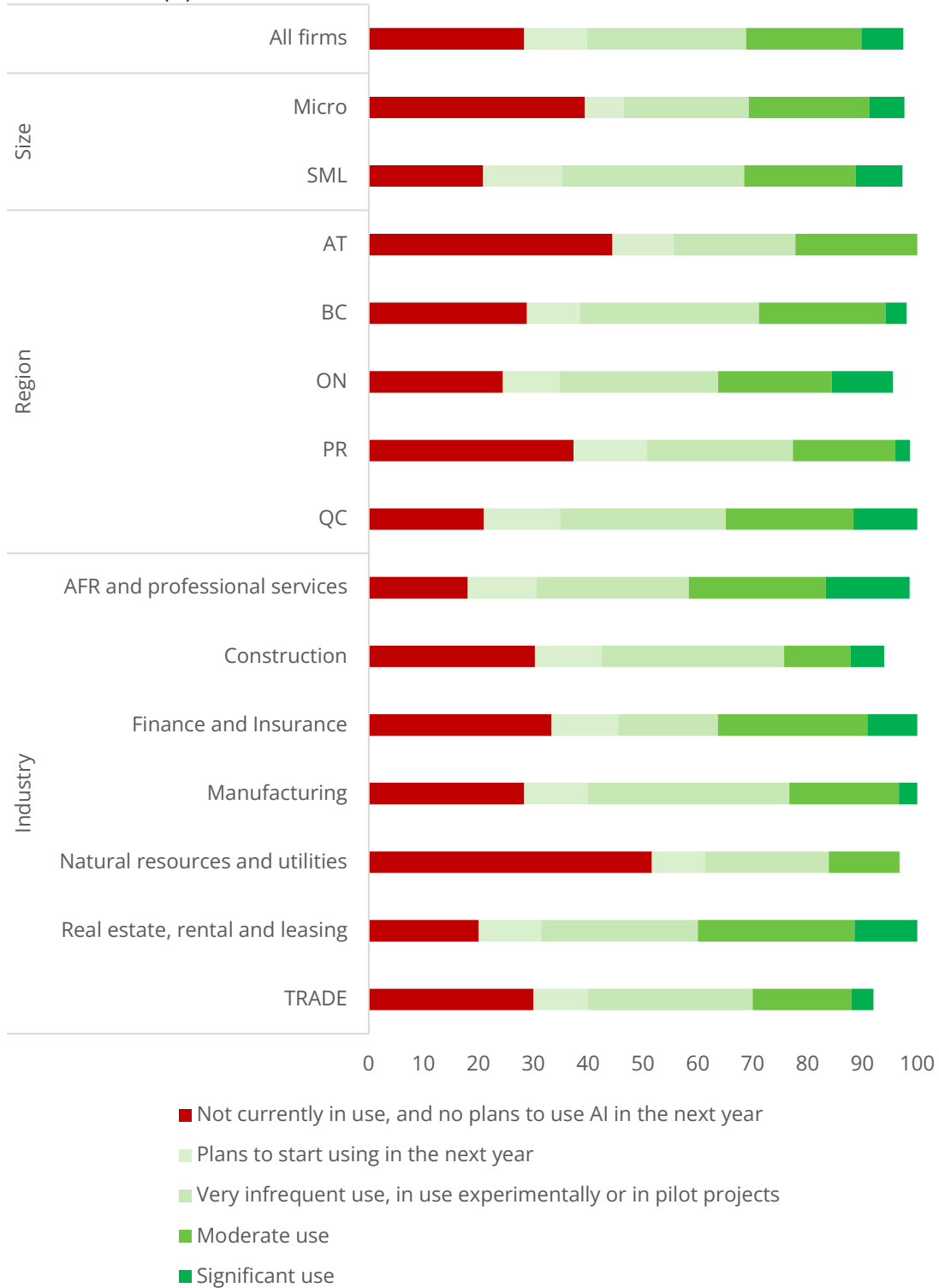
Share of firms (%)



### Chart C2: Adoption of AI for operations varies by region and industry

To what extent does your firm use artificial intelligence (AI) in producing goods or delivering services?

Share of firms (%)



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