OPINION

Canada's \$2.4-billion artificial intelligence bet: a missed opportunity

JOËL BLIT

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Prime Minister Justin Trudeau visits the offices of artificial intelligence tech company Scale AI in Montreal on April 7.

EVAN BUHLER/REUTERS

Joël Blit is a professor of economics at the University of Waterloo, the chair of the Council on Innovation Policy and a senior fellow at the Centre for International Governance Innovation.

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This week's announcement of a \$2.4-billion federal artificial intelligence package is a clear signal of <u>AI's</u> importance in ensuring Canada's future prosperity. Yet, for all its zeroes and well-meaning intent, this investment is unlikely to succeed in achieving its stated goals of significantly boosting innovation and productivity. To truly leverage AI's potential, we must catalyze widespread adoption – a challenge given the prevalent perception of AI as more a threat than an opportunity.

A strategic approach to federal AI investment must evaluate which parts of the generative-AI technology stack promise the greatest value. Should Canada strive to be the developer of the fundamental AI technologies – active in the infrastructure and model development layers – or should we instead focus our efforts on the application layer?

The last big disruptive technology, the internet, suggests that most of the value is often captured in the application layer. Businesses that developed the underlying technology, such as Cisco and Nortel, made their share of profits, but almost all the major commercial successes of the internet era were applications of the technology.

Amazon leveraged the internet to reimagine retail; Facebook did the same for social networks; Uber for transportation; Netflix for entertainment; and Airbnb for accommodations. In addition, countless traditional businesses adopted internet technologies to become more productive.

Despite this, the bulk of Canada's new investment package (roughly \$2-billion of the \$2.4-billion) seems aimed at building native capacity in foundation model development.

One interpretation is that investing in the model development layer is easier. Canada already has AI research centres and businesses that will be glad recipients of the investment. Conversely, the application layer is relatively nascent and thus still devoid of big players. Ironically, this is also why the application layer is the more attractive proposition.

A second, more generous, explanation is that research on model development will spill over to the application layer through the flow of people and knowledge. This

explanation has some merit, but then we should be investing equal sums into ensuring that research is being commercialized into valuable applications.

Canada has tried this type of trickle-down AI strategy before. We have for decades been investing in AI research and it was Canadian public dollars that led to breakthrough technologies such as deep learning algorithms. Yet it is patently clear that the commercial benefits from these investments largely accrued outside of Canada. Among the leading AI companies, few, if any, are Canadian.

To ensure that we don't repeat past mistakes, Canada needs to build our country's absorptive capacity for AI technologies. This starts with investments in mass AI literacy.

We must roll out countrywide campaigns akin to the reading and writing campaigns of the late 19th and early 20th centuries. Every Canadian and every small business must understand AI and its promise. Every executive must learn how to seize its opportunities. Every would-be entrepreneur must feel inspired to leverage AI to change the world.

We must also build a culture of openness to technological change. An IPSOS survey of 28 countries found that Canadians are among the most negative toward AI – only the French fared worse. We must shift the prevailing narrative toward a more optimistic and informed perspective.

This transformation can be achieved through dialogue, education and by addressing the legitimate concerns surrounding AI, such as misinformation and job displacement. Might we envision AI townhalls in every community across the country, where regular citizens could express their concerns and have their questions answered?

Canada's \$2.4-billion investment in artificial intelligence is a bold step toward ensuring our future prosperity. Yet if we are to enjoy the AI dividend, we must not only invest in the technology, but we must also embark on an ambitious national campaign to build literacy and a culture of change.

AI is too important to be left to a handful of research centres and private enterprises. Every Canadian must be empowered to be part of the AI.

transformation.

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