



INTRODUCTION

Context: Automated technologies, increased digitalization, and international events, such as COVID-19, are putting pressure on national and local economies to adapt or face rising unemployment and economic downturn. Rural communities are particularly impacted by these pressures as their economies are often built around a common industry, and the lack of access to training opportunities and reliable broadband create significant barriers.

We conducted a localized assessment of how businesses in a community of 19,000 in central Alberta view the scale, nature and impacts of automation. The Albertan economy is particularly susceptible to automation because of the high concentration of the workforce in resource extraction. In Alberta, many rural communities have strong economic connections to both conventional economic activities (agriculture, retail, services) and resource extraction, and may be particularly vulnerable to shifts in technology.

Research Questions:

The primary questions guiding this research:

- What are the implications of automation for labour in rural Canada?
- How prepared are rural businesses for change?
- What policy options are available to address the challenges resulting from the adoption of automated technologies?



Methods: Data was collected in 2019. An emphasis was placed upon the larger employers in key sectors in the community. The three largest sectors are services, construction, and retail. Participant recruitment of local businesses was conducted by telephone and in-person. Of the 336 businesses contacted, 60 were successfully interviewed, providing a response rate of 17.86%. The interviews were recorded, transcribed, and analyzed with SPSS, Excel, and NVivo software.

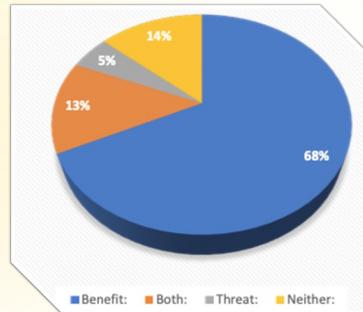
Interviews followed a semi-structured model, with a combination of defined and probing questions focused on the interviewees' business background, business forecasting (including skill sets and staffing needs), and their perceptions and adoption of automation and new technologies in the workplace.

RESULTS

Across sectors, most businesses (38, or 68%) think of automation as a benefit. Participants noted improved efficiency as a primary benefit of automation and most respondents recognized that the adoption of automated technologies requires adaptability and preparedness.

The most prevalent concerns with the adoption of automated technologies were the cost, the need to stay constantly up-to-date with new technologies, and potential job loss.

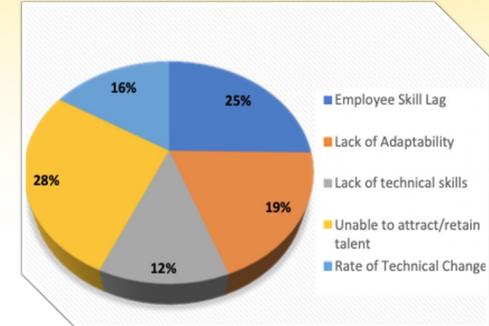
Perceptions of Automation as a Threat or Benefit



When asked what their business skill needs in the future was, the biggest concern was that employees' skills would not be able to keep up with the new automated technologies and that businesses would not be able to attract or retain good employees. Businesses worried that if they cannot find a viable solution to the concerns mentioned above, they would be unable to grow and expand their business and would suffer financially.

Businesses were also wary of the changes that technology will bring to their business environment. Many participants expressed concern that their staff would not be able to work with the new technology, which would ultimately lead to a decrease in quality of service.

Future Skills Concerns of Businesses



POLICY RECOMMENDATIONS

Our results demonstrate that businesses typically prefer the status quo in regards to valued employee skill sets, relationships with educational institutions, and technological adoption. Thus, they are less likely to be prepared for or innovate in response to coming challenges related to automation. While the majority of respondents (58%) predicted that they would be early to adopt new technologies, many could not identify what these technologies are or how they would implement them.

In response to these findings, there are policy changes that can be made to assist rural peoples and places with the impacts of automation. While the majority of the recommendations below are directed at federal and/or provincial governments, in many instances, all levels of government and the wider business community should be involved in either working towards, or advocating for, these options.

Limiting the Digital Divide: Policies need to be put in place to address the digital divide between urban and rural Canada.

Tax Policy Innovation: Federal policy changes, alongside international cooperation, are needed to maintain a broad national tax base.

Inter-Governmental Collaboration: All Gov'ts need to collaborate to make education, training, and reskilling opportunities available in rural areas.

Expanding Social Policy: Governments need to adapt and expand the social safety net and worker protections.

Ensure Competition: The federal government should monitor the capability of tech firms to form monopolies and amend competition policies.

Access, Transparency, and Protection of Data: Data governance standards must be improved as data collection expands.