Report title here

Scott Partacz, Colin Beveridge, Abbey Guilliat, Lucas Stefanic

**Introduction**

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**Data Sources**

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* Pop

**Question 1**

**Question 2**

**A Cross-Comparison of Industries: Health + Finance**

To build off previous questions, we also wanted to provide a more comprehensive analysis for two distinct industries, exploring how limiting factors vary between the health and finance sectors for specialized software, AI, and cloud-based technologies. Additionally, in exploring the data for these sectors, we hope to shed light on the prevalence of limitations within each industry and measure the urgency for technological development within each respective sector. We decided to focus on the health and financial sectors as they are essential to our modern way of life and over the years, have experienced rapid growth and change. By highlighting the limitations within these specific industries, we hope to target any major issues impeding the further growth and development of these fields.

We begin our analysis by considering the limiting factors that exist within each sphere: factors relating to expenses, security concerns, skepticism surrounding the reliability of the technologies, etc. Health and finance firms responded to the ABS by considering the list of technologies and indicating whether any of the listed limiting factors were applicable to their business.

Our initial explorations revealed that ‘Technology was too expensive’ was, by far, the greatest limiting factor for both the health and finance sectors across all the technologies of interest: specialized software, AI, and cloud-based. For this reason, we decided to first isolate the expense variable and compare it against all other limiting factors for each of the industries. We include the following two pie charts to illustrate our results.

A screenshot of a computer

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From these visuals, we see clearly that expense seems to be the greatest limiting factor accounting got ~39% of business firm responses and ~47% of health firm responses. While we expected for the expenses of technology to take up a larger proportion of the responses, we were surprised to see how prevalent and pervasive this limiting factor really is, particularly for the health sector as it makes up almost half of the limiting factor reports. This suggests that firms in the health and finance industries are perhaps not so skeptical of new developing technologies but are more so unable to implement them due to insufficient funding and resources.

From here, we wanted to also consider the distributions of less frequent, but still obstructive factors impeding the technological development of the health and finance sectors. To do this, we have removed the ‘Too expensive’ factor from this analysis and consider only the remaining limiting factors which we have previously grouped as ‘Other’. The following two bar charts display our results.

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From these, we find relatively similar distributions for both sectors. Notably, we find higher concerns for security and regulation of cloud-based technologies in both sectors. We also see a spike in AI technology for each of the industries, highlighting a concern that the technology is not yet matured and well-developed enough for use. Further, it is important to note the lack of responses for the improper and unreliable data factors. Once again, this suggests that the health and finance industries may be very open to the adaptation of these technologies within their fields but, are unable to do so because they do possess the required funds. Overall, from these plots, we find that two very distinct industries have reported very similarly across all the considered technologies, pointing towards an acceptance of technological integration impeded by a financial limitation.

Finally, we also wanted to consider the prevalence of technological limitations within each industry. The ABS provided firms with several options to choose to from and in addition to marking pertinent factors, firms could also select ‘Technology not applicable to this business’ or ‘No factors adversely affected the adoption of this technology’ options. By considering these fields, we hope to gauge the need for action in both the health and financial industries. To explore this, we have included two pie charts below which show the breakdowns of these two responses against all other limiting factor responses which we have previously discussed. The plots we have included are representative, showing results specifically for the specialized software data. In our exploration, we have found similar results for both the AI and cloud-based technology filtered datasets.

Chart, pie chart

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From these, we see that ~55% of health firms and ~63% of finance firms responded to the survey by stating that they experienced no limiting factors in their pursuits to adapt specialized software. This is a very positive result as the technology seems to be accessible for the majority of firms in each of the fields. Conversely, we see that only 12.5% of health firm responses and ~9% of finance firm responses were reports of limiting factors. While these numbers are encouraging, we do feel that efforts to alleviate existing obstacles should still be made. As the results have been taken from the 2019 ABS we also feel that it is important to consider the impact of more recent events and how these may have impacted both sectors but particularly health firms and businesses. To decrease the limitations of technological development within the health sector, we recommend targeting the most popularly reported limitation: expenses.

Further, we were surprised to also note the proportion of firms in each of the sectors to report: ‘Technology not applicable to this business’. For this response, we see reports by ~33% of health firms and 27.5% of finance firms. Given the rapid growth and development of modern technology, we expected to see a smaller percentage of firms in both sectors opting for this survey prompt. The health and financial industries have both had to adapt and change with the times but it seems that not all independent firms find some of these new developing technologies to be relevant for their businesses.