

# GYA surveys

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Intro - explain the difference between applied, use inspired and fundamental research. . . . insert photo of Pasteur's quadrant - likely in the Intro chapter of the overall report.

**Methods** In addition the official data presented in earlier chapters, we also developed and ran a quantitative online survey to query Canadian researchers about their perceptions of, and experiences with, funding for fundamental research. The survey gathered information about gender, discipline, career stage and year PhD was obtained for each researcher, along with detailed information oabout. . . . An important aim of the survey was to provide an understanding “of trends and central issues relevant to careers in science in a glboal context”

The online survey was open from the end of May through early August 2016. To disseminate the survey to Canadian researchers, we gathered email addresses from university websites for as many faculty members as possible and emailed them directly. The survey was also shared broadly on social media, through the Global Young Academy network, on scientific list serves, and through personal connections.

**Results** In total, 1242 Canadian researchers completed the online survey. KT: INSERT SENTENCE ABOUT GENDER Eg. X per cent of survey respondents were male and X per cent female. Almost half of the responses came from either the natural or physical sciences (49%; Figure 2). The remaining responses were spread amongst the medical and life sciences (17%), engineering (11%), interdisciplinary science and social science or humanities). KT: THIS DOES NOT ADD UP TO 100% - did many people not list their discipline?? Over half of the respondents were early career academic researchers, defined as those researchers with less than ten years expereince applying for research grants since completion of their PhD. Another one quarter were senior academic researchers. KT: Again this does not add up to 100% - what is going on?

Overall, respondents reported that 70% of their

**NOTES ON FIGURES:** PLEASE REMOVE THE GLOBAL FIGURES THROUGHOUT - THIS IS ONLY THE CANADA REPORT. MOVE GLOBAL FIGURES INTO A DIFFERENT FILE. FIGURE 1. REMOVE. FIGURE 2. ADD CATEGORY FOR ‘UNKNOWN’ OR ‘NOT STATED’. FIGURE 3. PLEASE ORDER IN ORDER OF CAREER I.E. POSTDOC THEN EARLY CAREER THEN SENIOR ACADEMIC, THEN PUT THE TWO NON-ACADEMICS TO THE RIGHT. FIGURE 4. I think this needs to be 3 frequency histogram plots since respondents reported percentages

## Summary statistics

As of Fri Jul 29 10:25:42 2016, 1978 surveys from 66 countries have been completed.

The majority of surveys were completed by researchers based in Canada (n = 1242), followed by Israel (n = 178) then by the UK (n = 133) and the USA (n = 101). 43 surveys did not identify their place of work.

##	Country_work	gender
## 1	Australia	25
## 2	Austria	2
## 3	Bangladesh	5
## 4	Belgium	6
## 5	Brazil	21
## 6	Canada	1242
## 7	Denmark	1
## 8	Finland	4

## 9	France	24
## 10	Germany	13
## 11	India	9
## 12	Israel	178
## 13	Italy	44
## 14	Japan	4
## 15	Korea, South	1
## 16	Malaysia	4
## 17	Netherlands	19
## 18	New Zealand	4
## 19	Norway	2
## 20	Poland	17
## 21	Russia	2
## 22	Spain	5
## 23	Sweden	2
## 24	Switzerland	1
## 25	Taiwan	2
## 26	Turkey	2
## 27	United Kingdom	133
## 28	United States	101
## 29	Uruguay	5

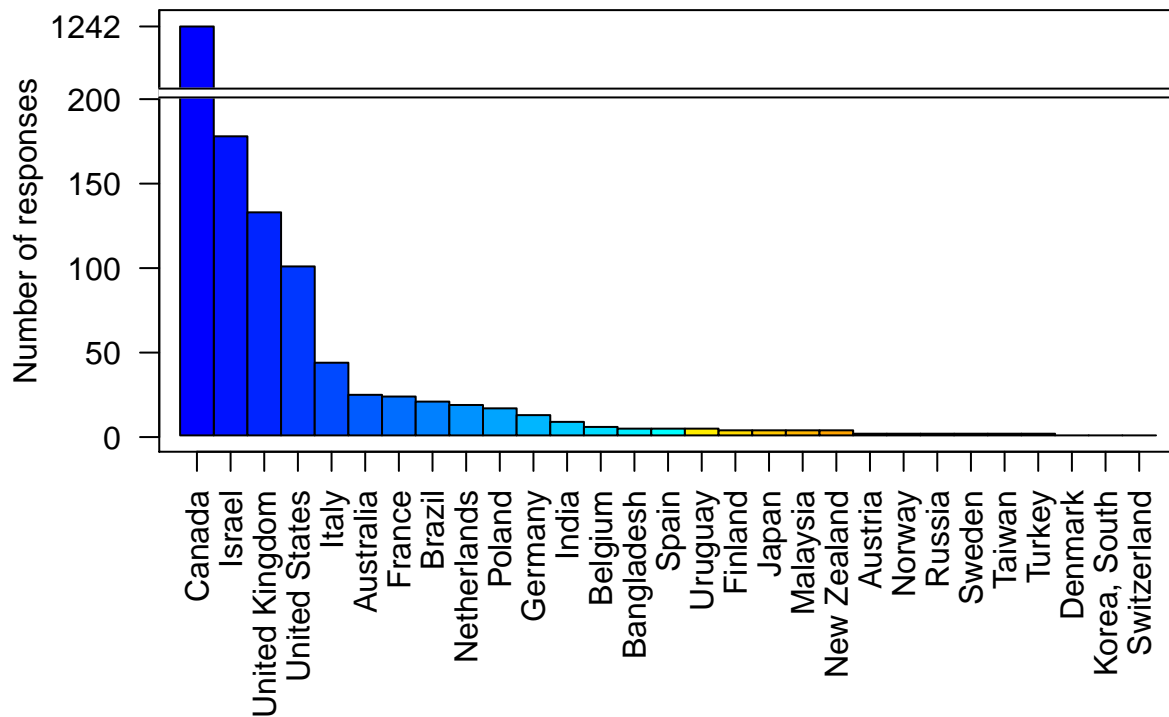


Figure 1: Survey responses of the top 20 responding countries, G8 countries, and the top spenders in R & D from OECD data

## GYA surveys: Canada

### Part 1 - Type of Research Conducted

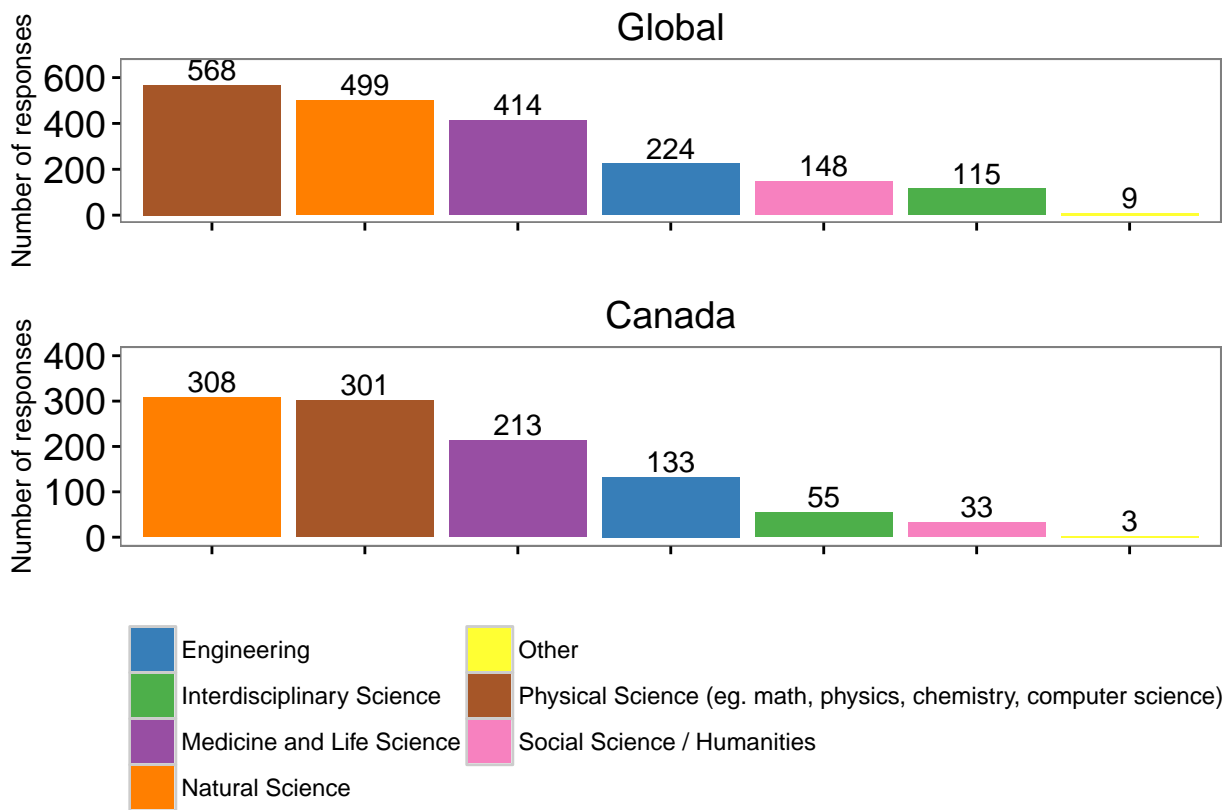


Figure 2: Survey responses by field of research (global and Canada)

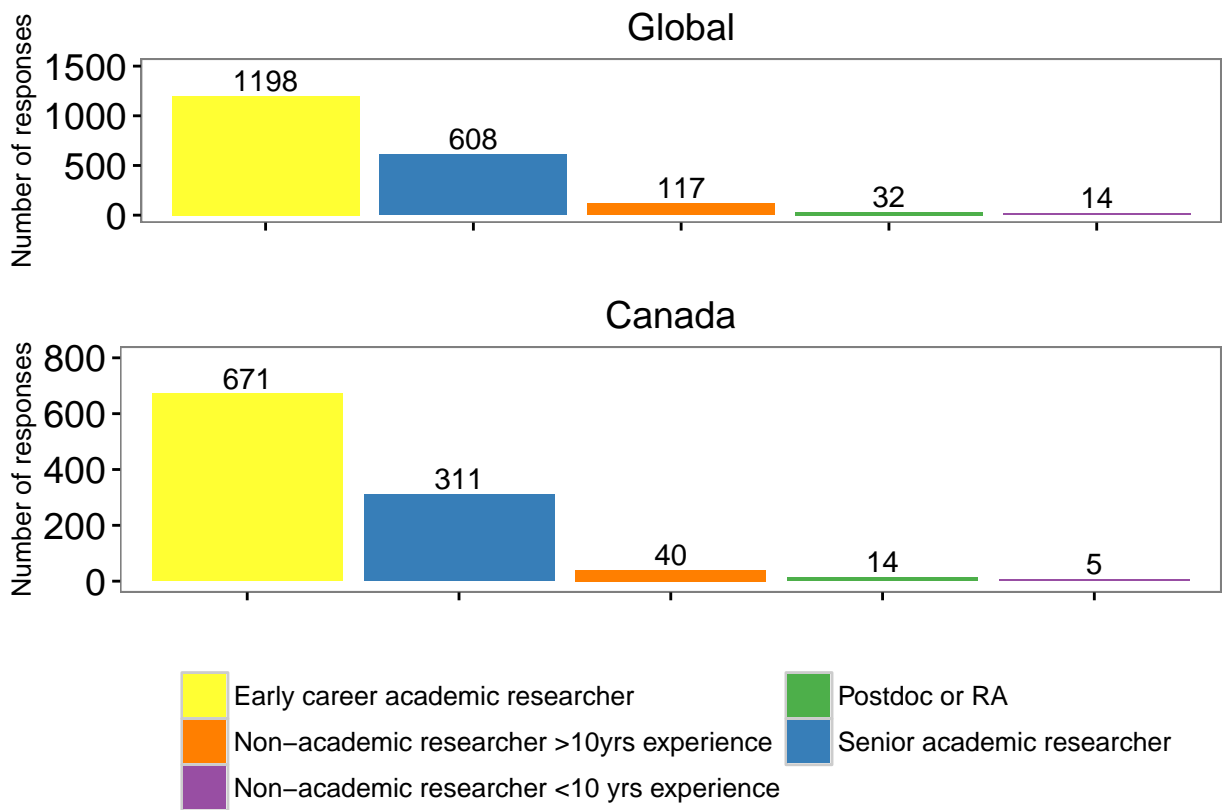


Figure 3: Survey responses by years of experience (global and Canada)

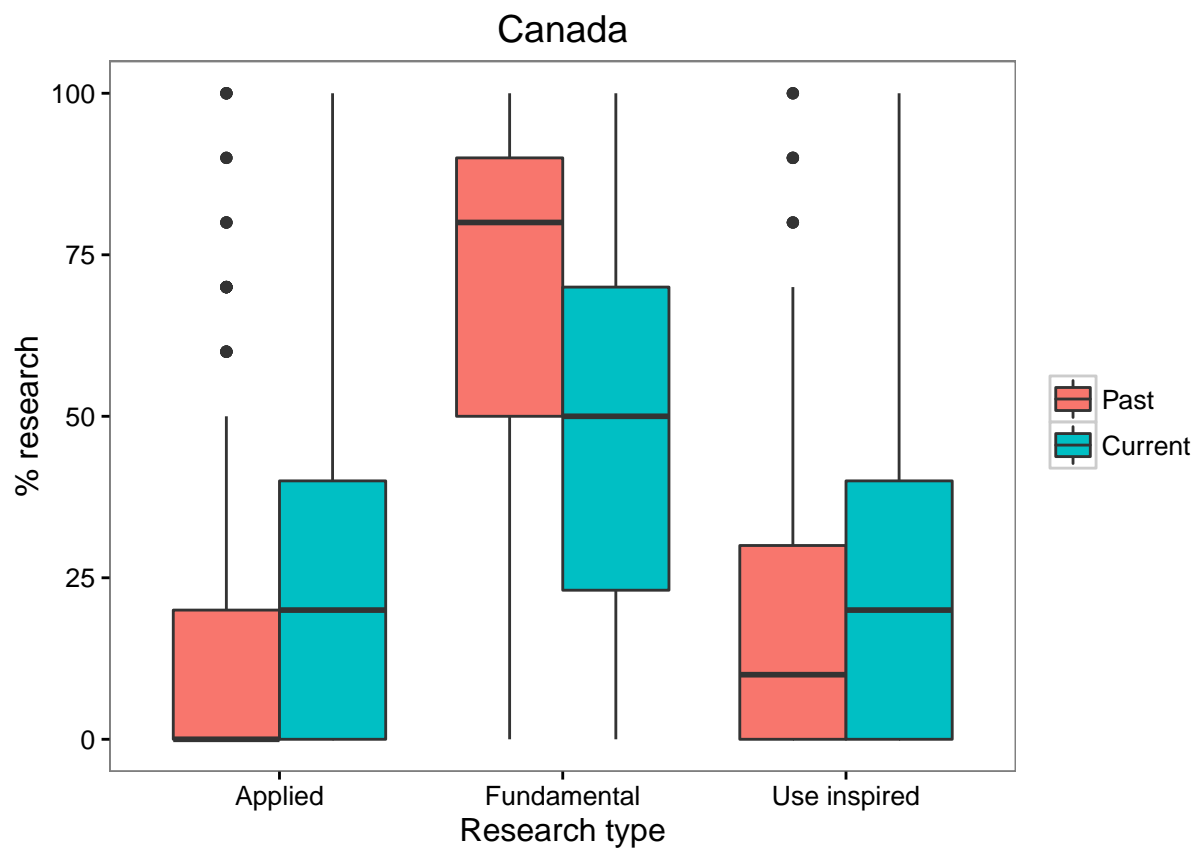


Figure 4: Current vs. past research type (Canada)

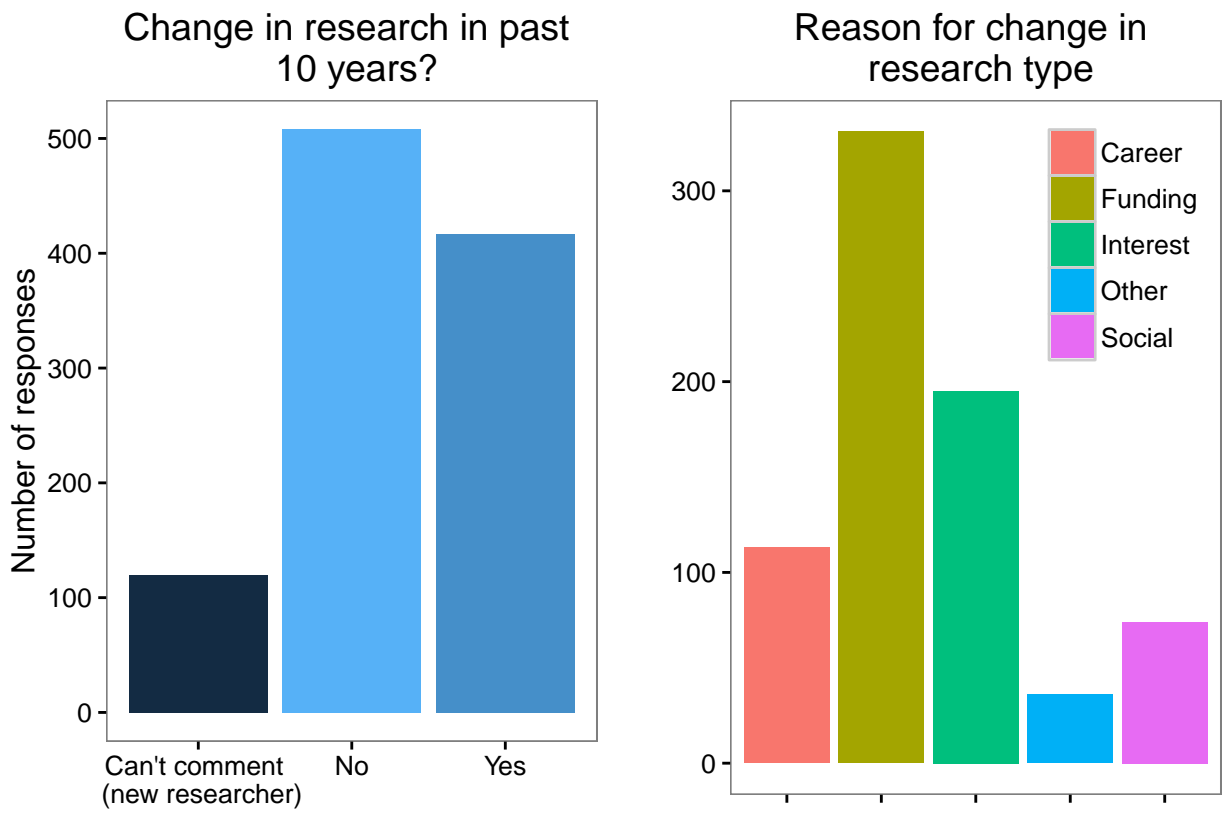


Figure 5: Reason for change in research over past 10 years (Canada)

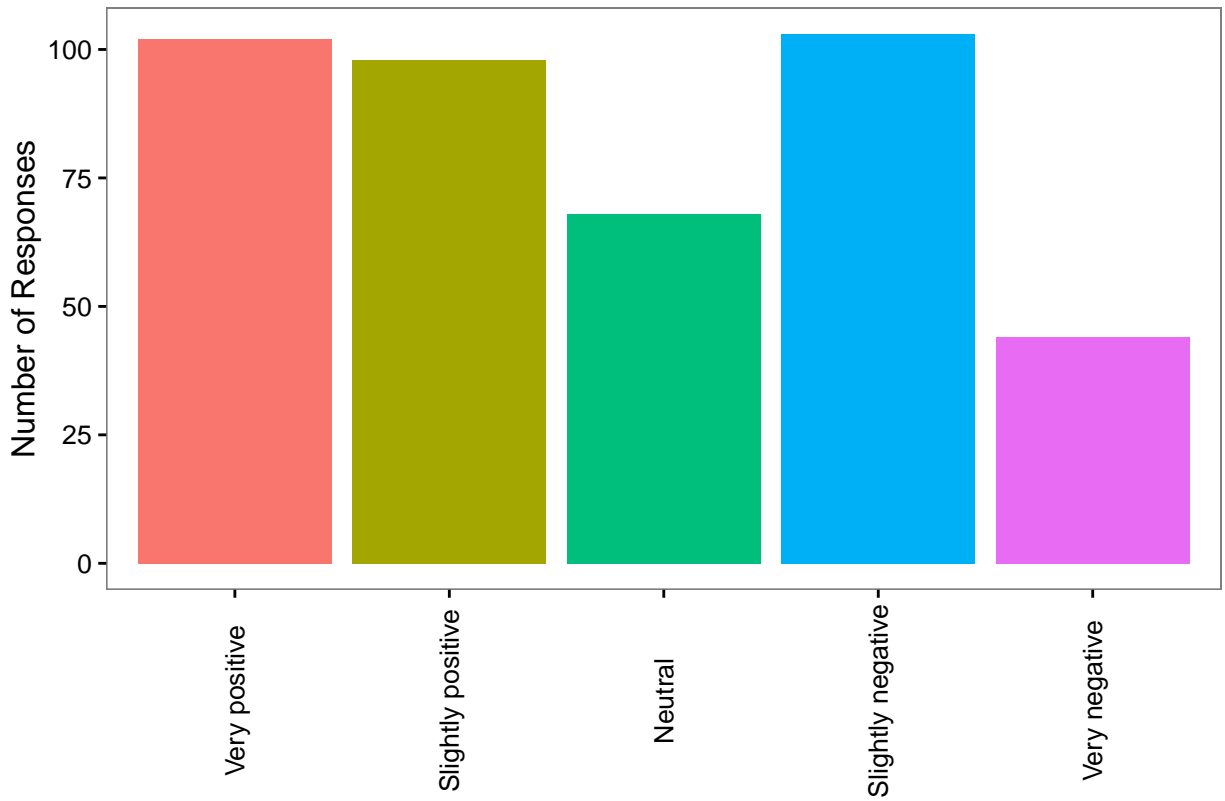


Figure 6: View of change in research over past 10 years (Canada)

**Part 2 - External Partnerships**

**Part 3 - Grant Application History**

**Part 4 - Funding Trends**

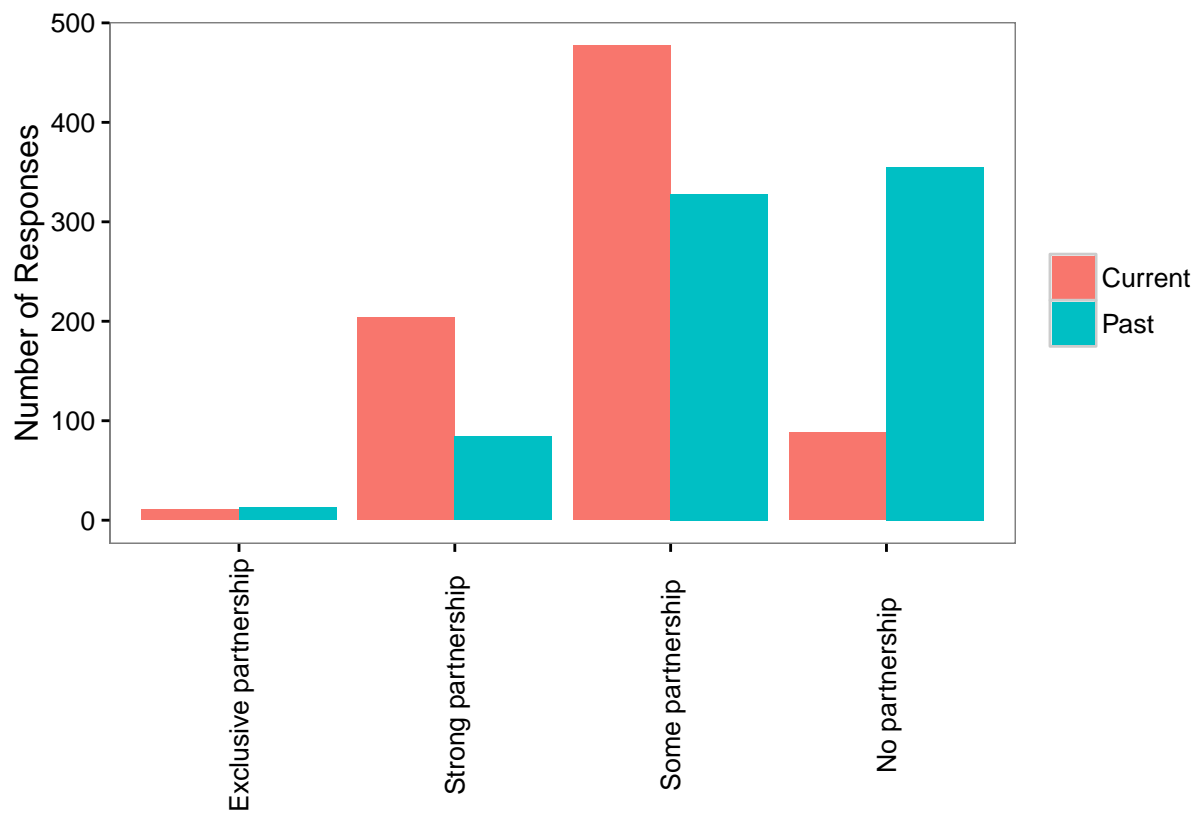


Figure 7: Current vs past level of partnership outside of academia (Canada)



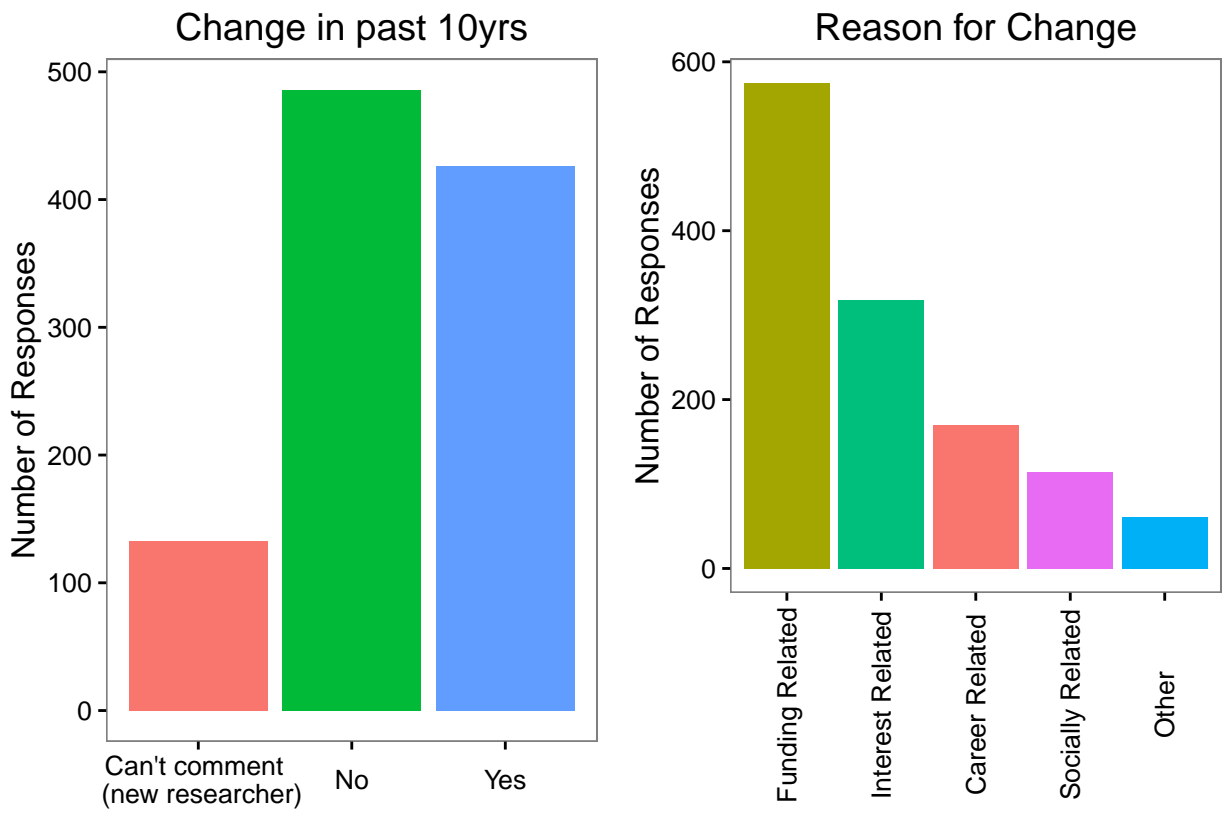


Figure 8: Reason for change over the past 10 years (Canada)

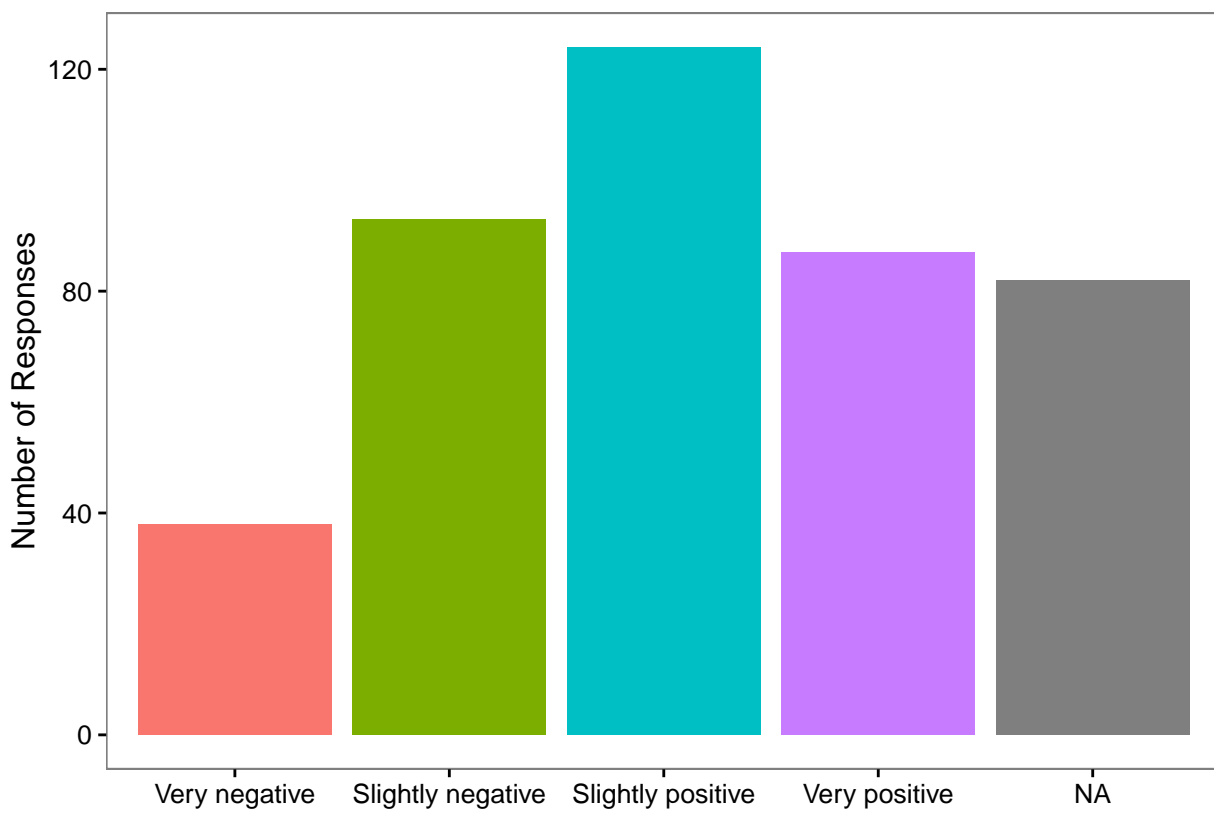


Figure 9: View of Change in partnership (Canada)

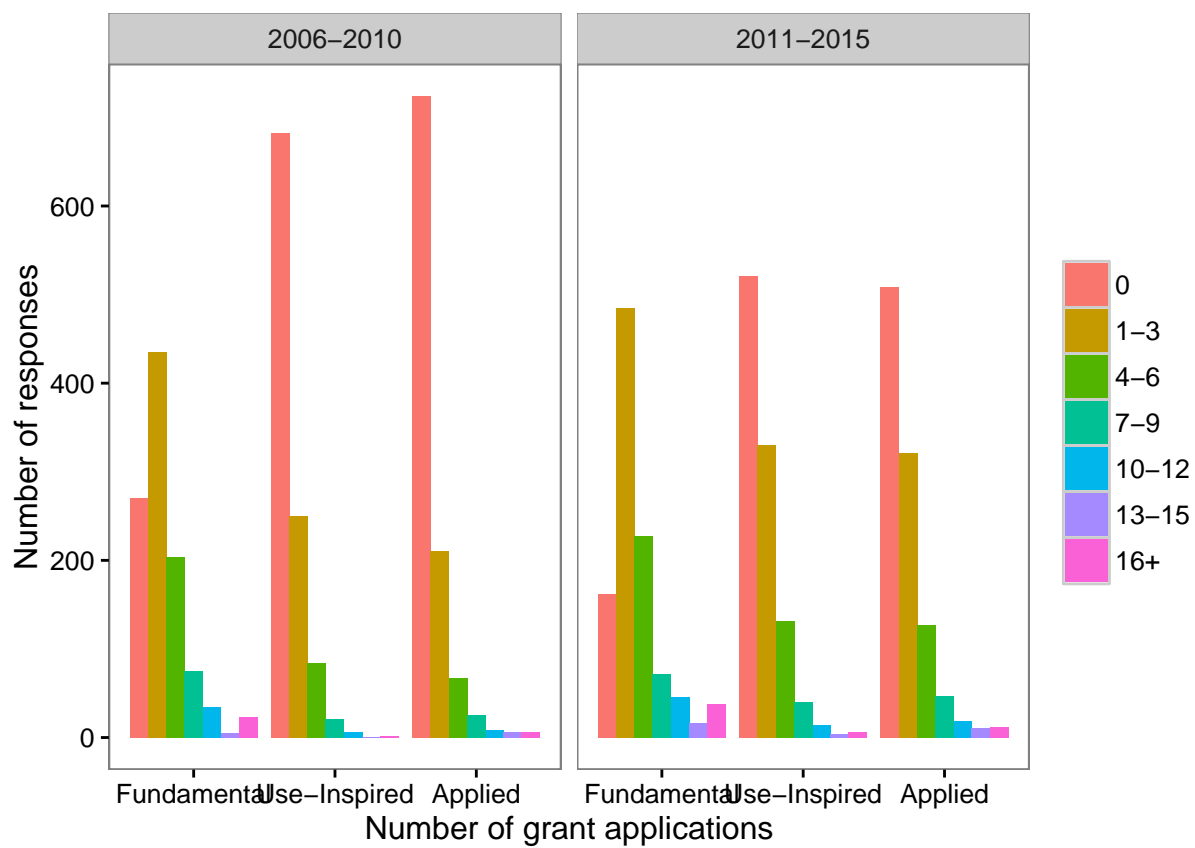


Figure 10: Number of external research grant applications (Canada)

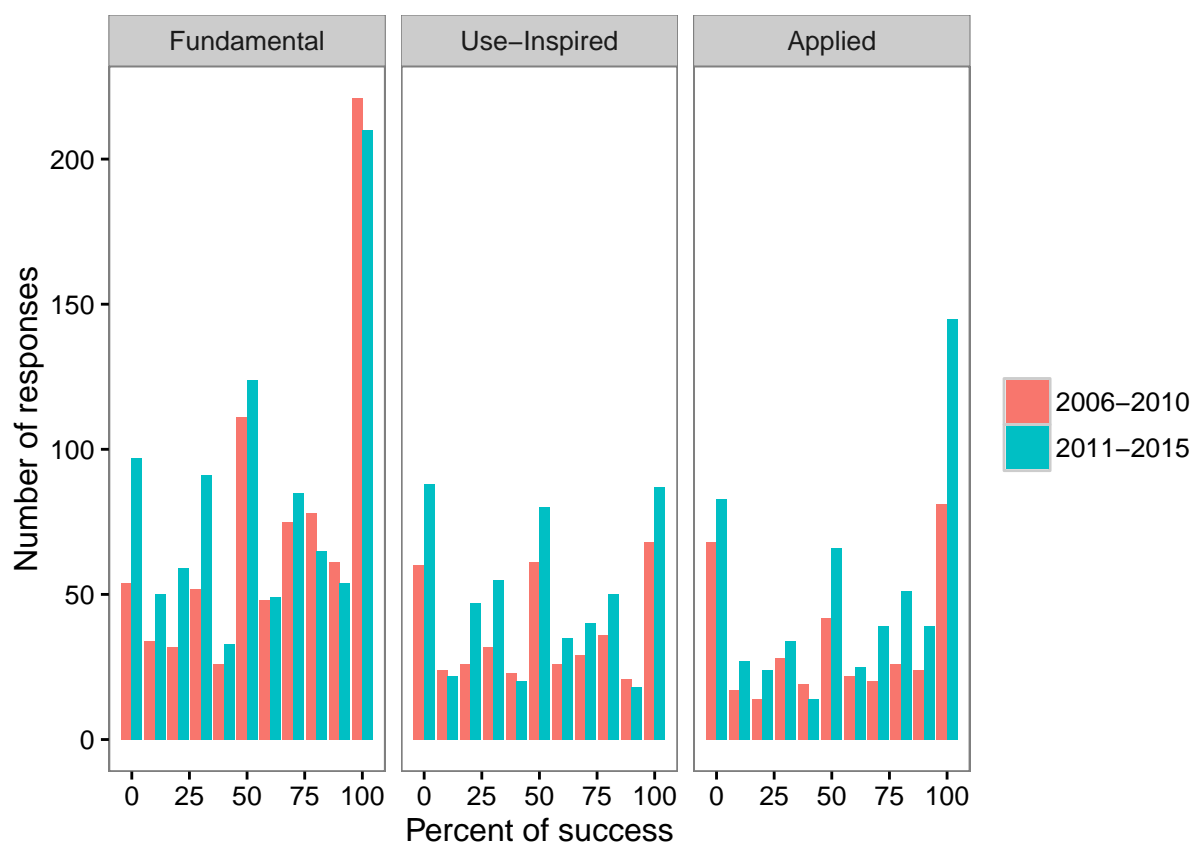


Figure 11: Percentage of research grant application success (Canada)

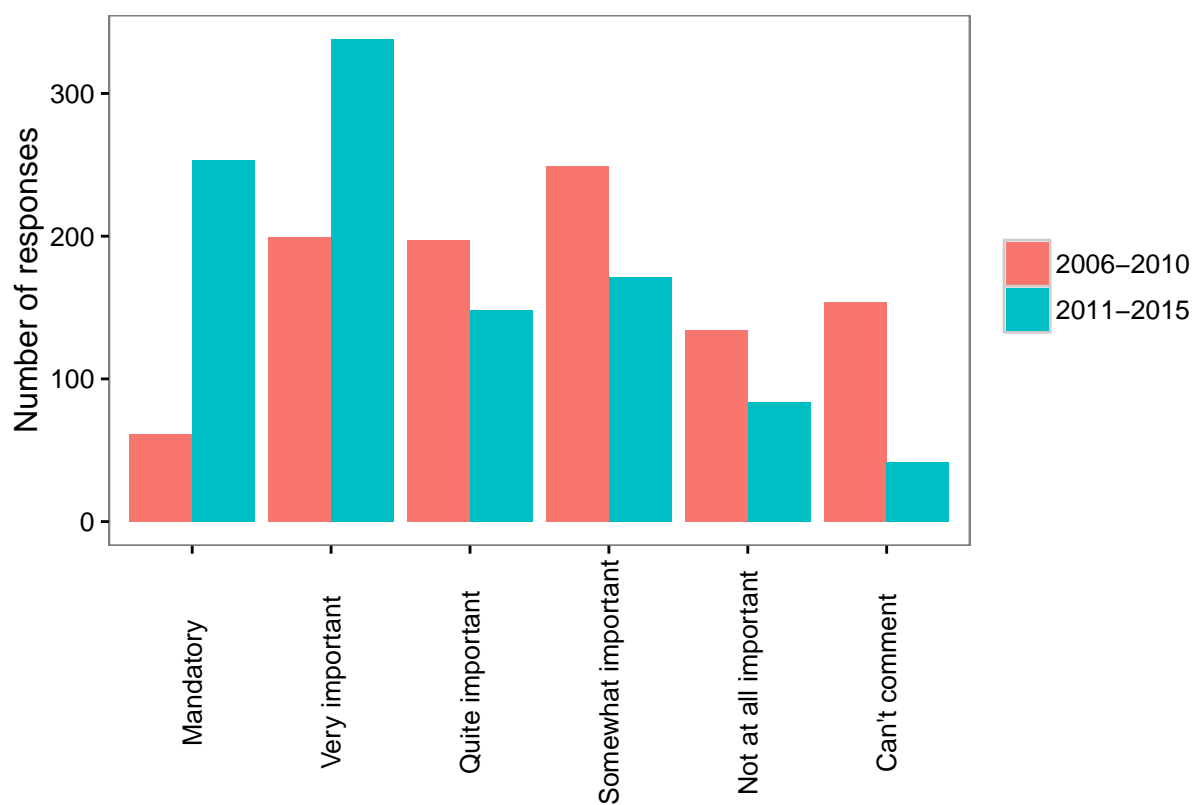


Figure 12: Importance of suggesting practical applications of the research for the grant to be successful (Canada)

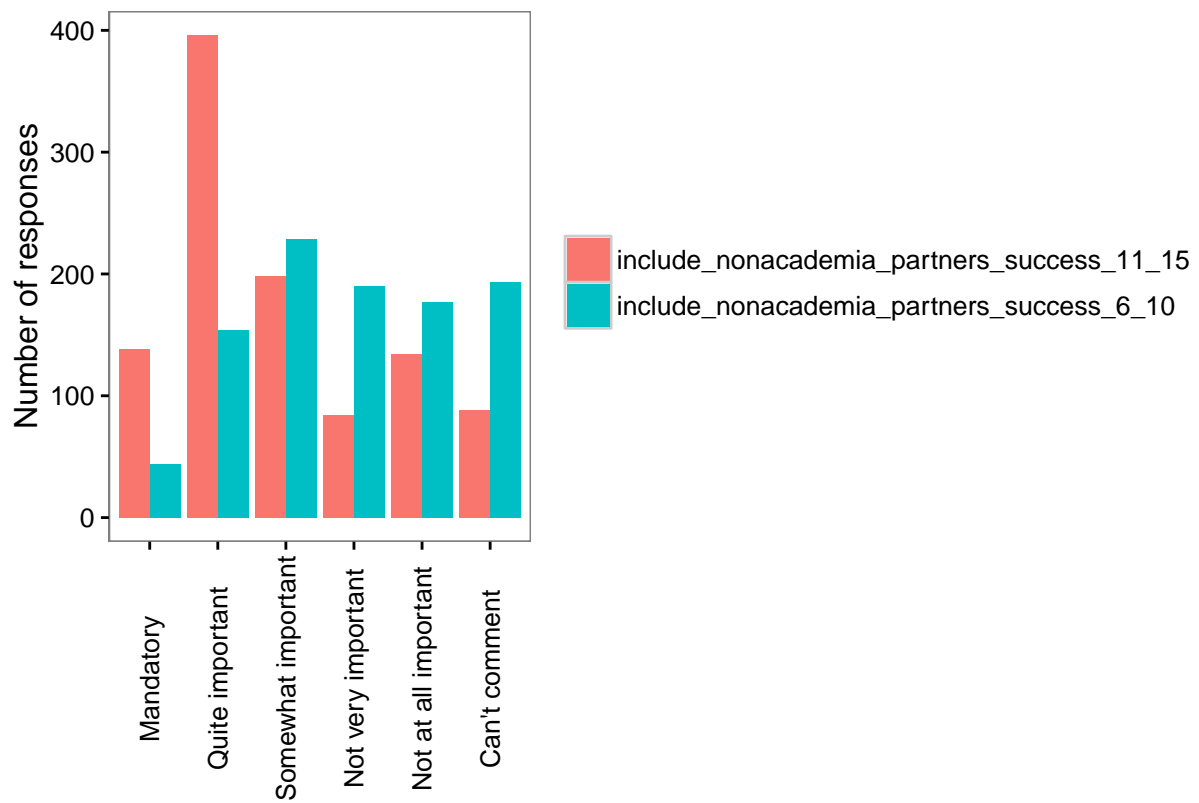


Figure 13: Importance of including partners from for-profit or non-governmental sectors in grant success (Canada)

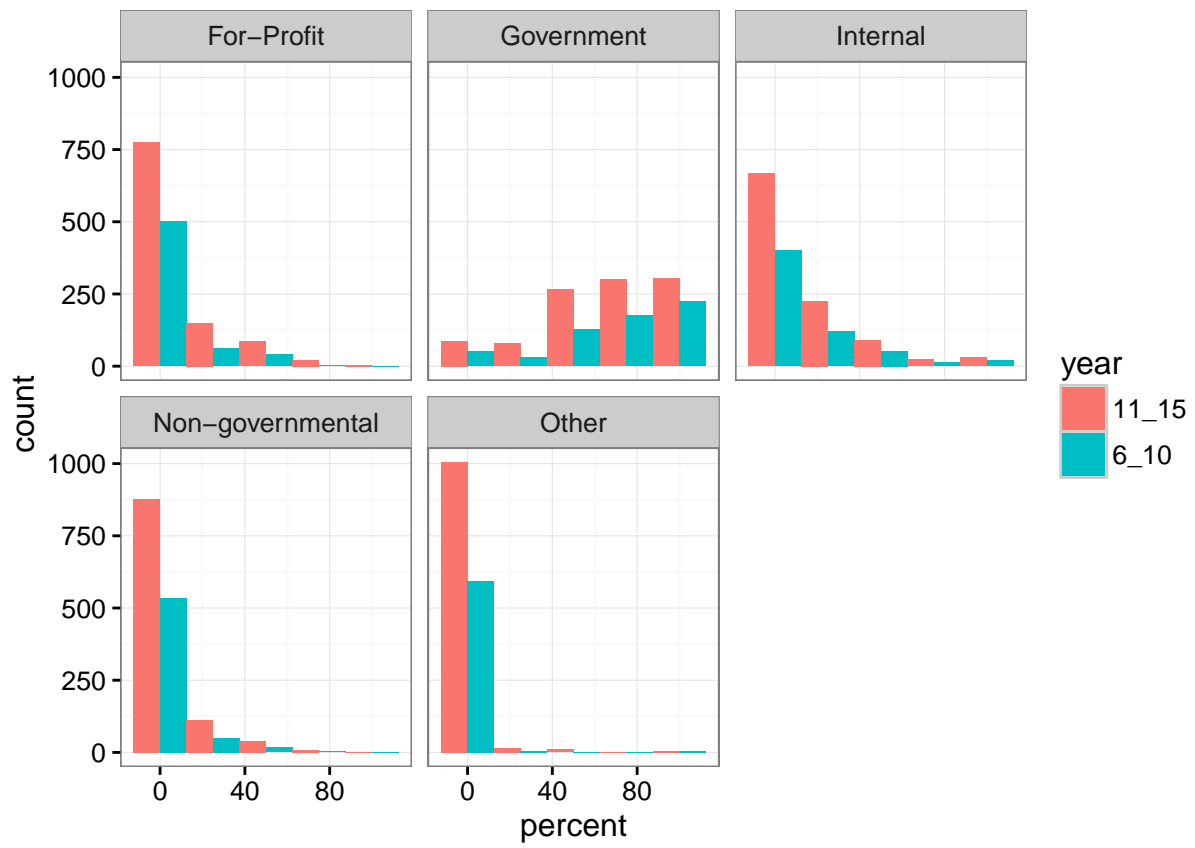


Figure 14: Distribution of research funding (Canada)

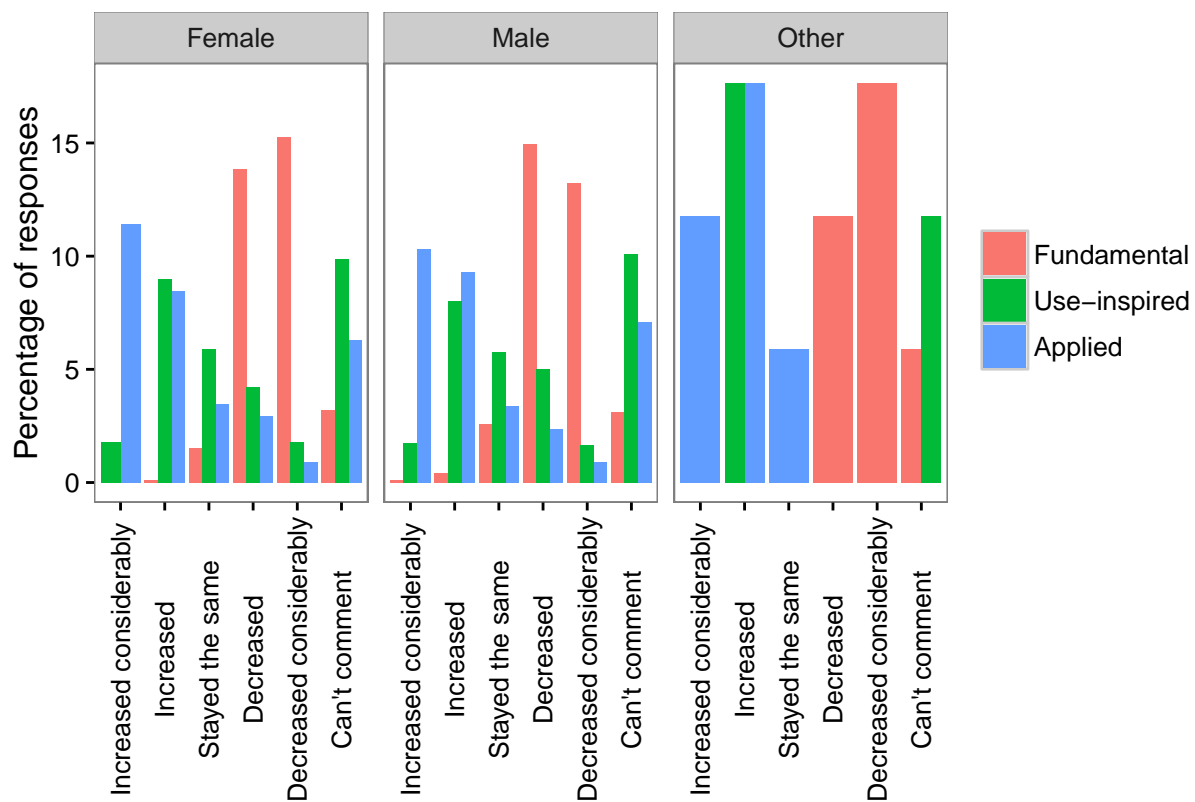


Figure 15: Grant success rates change over the past 10 years (Canada)



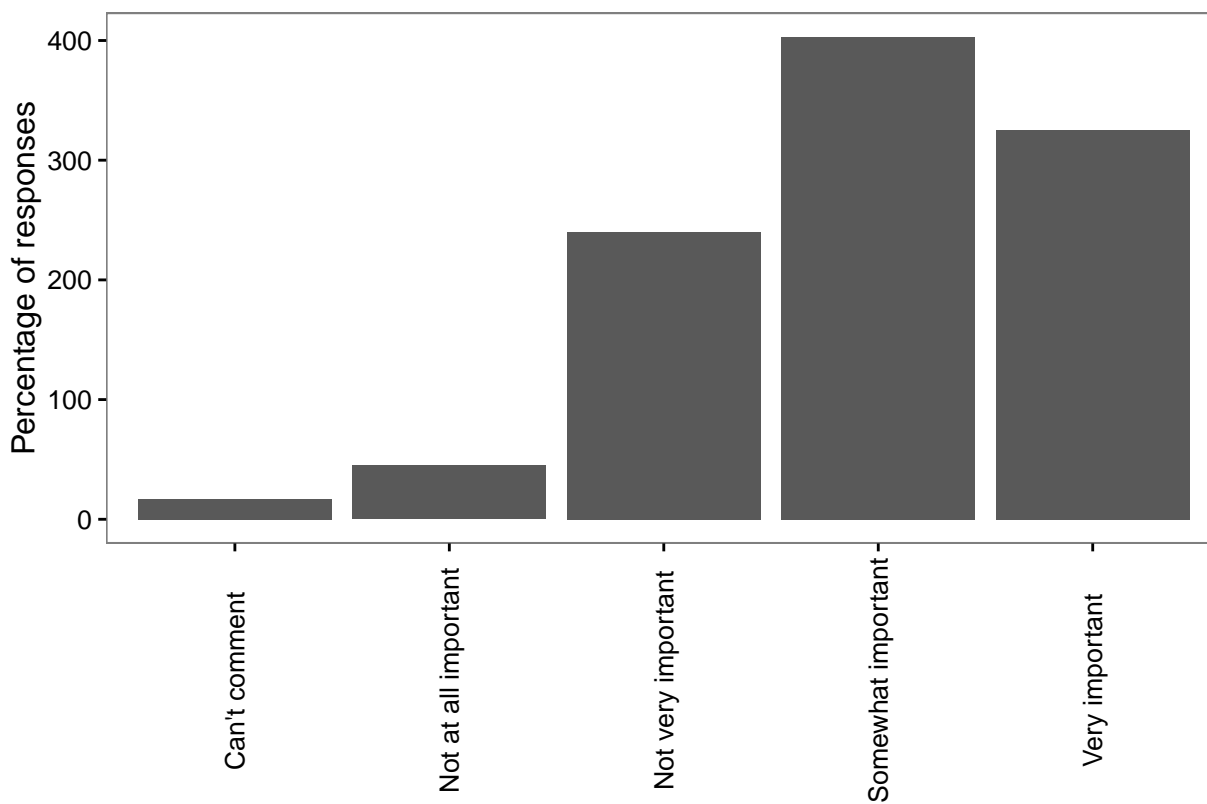


Figure 16: Perceived importance of fundamental research to Canada

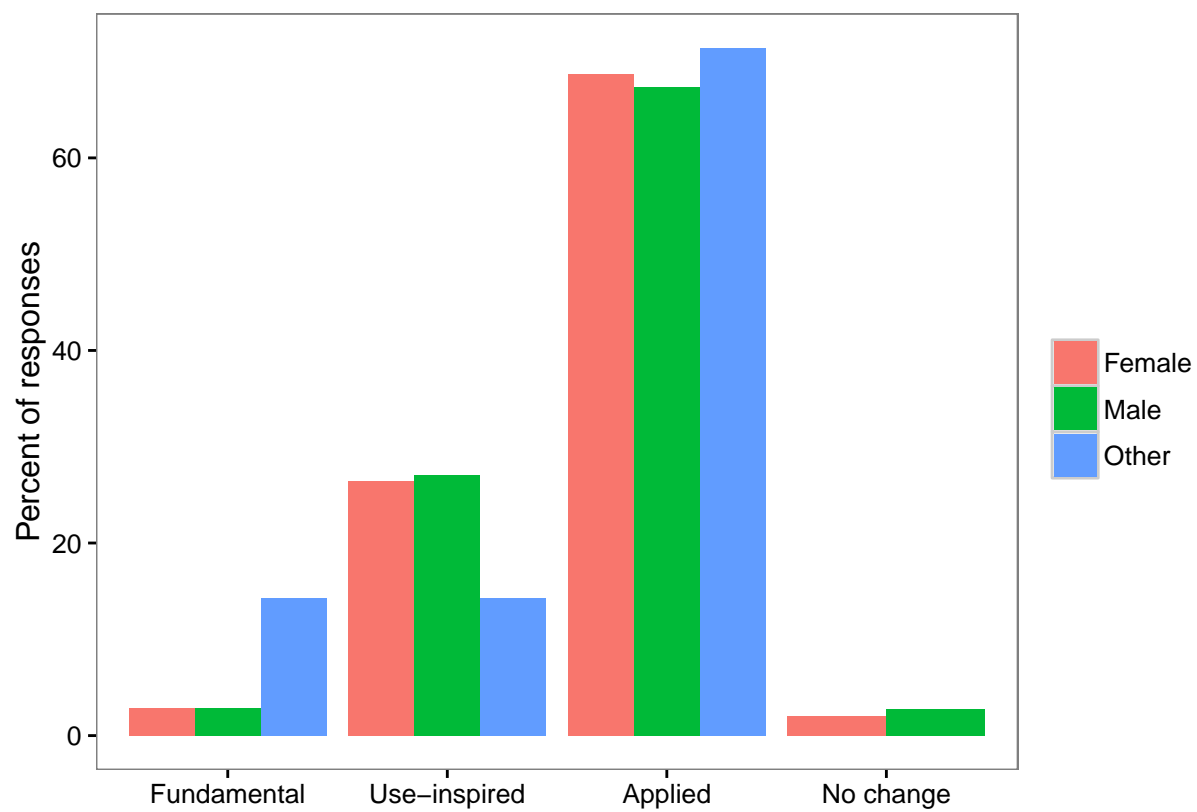


Figure 17: Perceived change in research priority by Canadian government

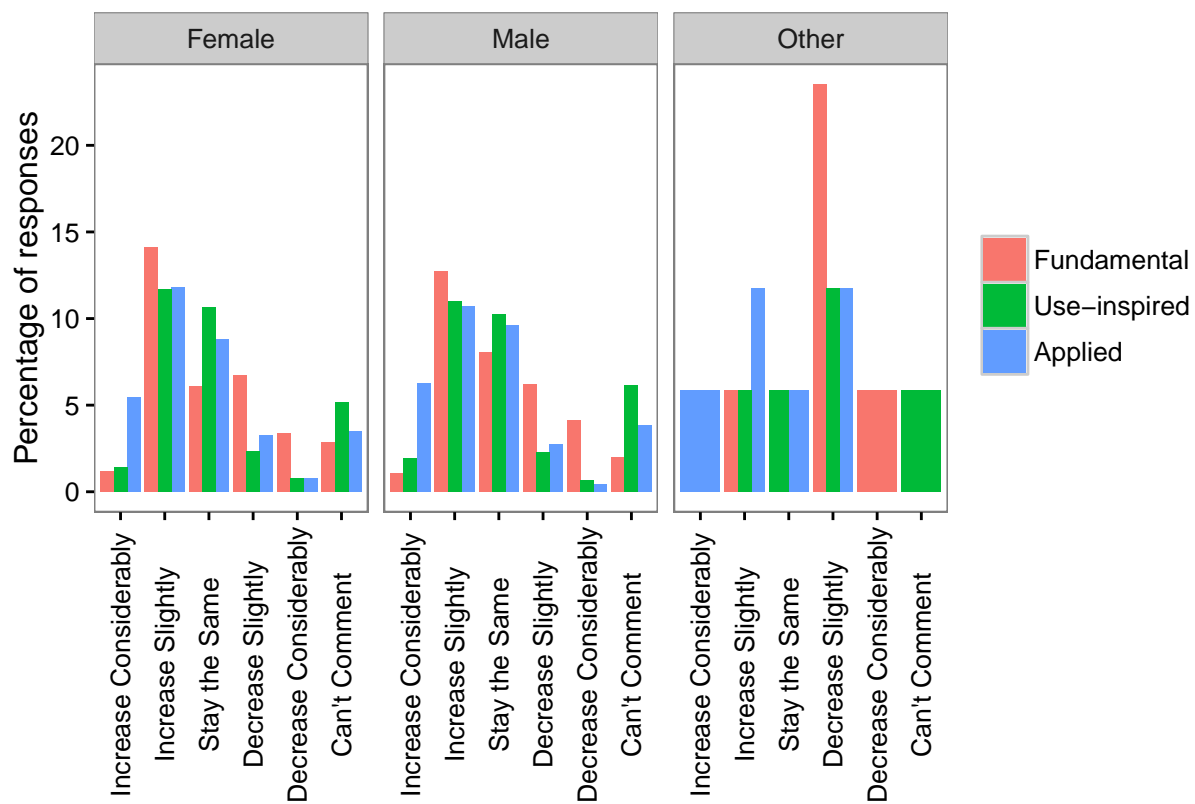


Figure 18: Anticipated change in research funding in next 5 years in Canada

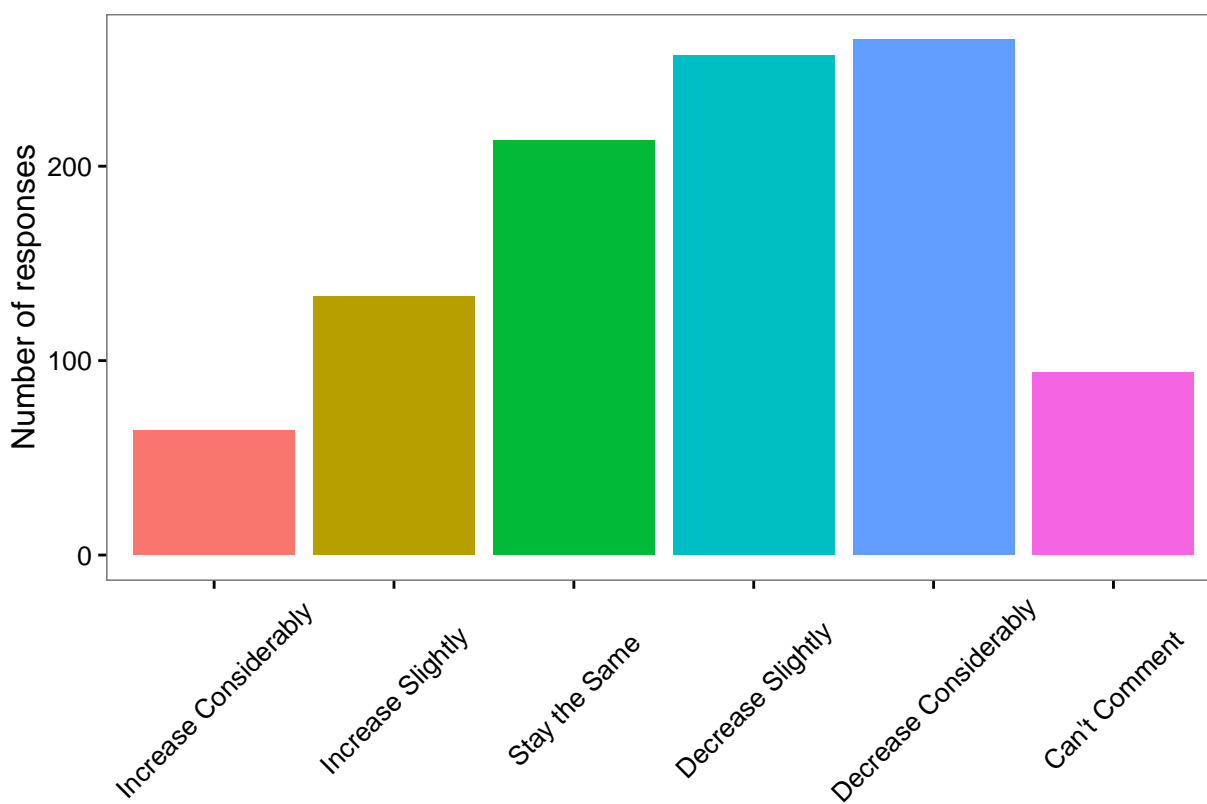


Figure 19: Effect of change in research funding on research careers of next generation (Canada)