



## **GENDER AND PUBLIC PERCEPTION OF SCIENCE AND TECHNOLOGY REPORT**

.....

Survey on Public Perception of  
Science and Technology 2015

*Developed by the Department of Strategic Studies and Management  
National Commission for Scientific and Technological Research  
(CONICYT by its acronym in Spanish)*

---

*March 2017*

## Content

Summary .....	1
I. What comes to mind regarding Science and Technology? .....	3
II. Cultural Habits, Interests and Level of Information .....	5
III. Development, Usefulness, Benefits and Risks.....	9
IV. Knowledge of the Science and Technology System .....	12

## Summary

The National Commission for Scientific and Technological Research (CONICYT by its acronym in Spanish), commissioned the development of the First National Survey on Public Perception of Science and Technology in Chile, administered between October 2015 and January 2016<sup>1</sup> to a sample of 7,637 people, 15 years or older, in the 15 regions of the country.

Based on the compiled information, it was possible to perform two prior analyses: the first analysis summarizes at the national level the overall background of the First National Survey, the second, undertakes an international comparison with results of Public Perception of Science surveys conducted in Argentina, Brazil, Colombia, Spain, the United States and the United Kingdom.<sup>2</sup>

This report is the third output of results and it analyses information that has been disaggregated according to the gender of respondent. It consists of statistical comparisons between the responses given by men and women for selected questions, representing the four dimensions addressed by the analysis of the survey.

The results presented seek to provide information and background regarding the level of perception of science and technology of men and women throughout the country, thus aiming to contribute to the science-society relation debate, with a gender approach, as well as to strengthen strategies to bring people closer to science and technology activities in which the gender perspective can be included.

The main findings of the results for men and women give signs of a greater proximity of men rather than women to science and technology. It is observed that only 13.3% of men responds “nothing” or does not answer the question “When I talk about “science”, what comes to mind?”, while this is the case for 18.2% of women. Regarding technology, the difference is smaller, since 9.4% of men responds “nothing” or does not answer the question, compared to 12.1% of women.

The level of interest and information the interviewees perceive they have is linked to their proximity to the topics. In other words, it is concluded that men feel significantly more interested and informed than women on science and technology (with a difference of approximately 10 percentage points). Likewise, differences are revealed in their cultural habits. Men more frequently practice activities such as reading books, magazines or news about science and technology and talking to their friends about science and technology than women (with differences ranging from 4 to 7 percentage points). Nevertheless, activities like visiting museums, zoos, libraries and national parks are equally practiced by men and women.

Another important finding is that, even though men show greater interest, level of information and more habits related to science and technology than women, the practices linked to the appropriation of these topics into daily life are performed significantly more by women than men.

---

<sup>1</sup> The design of the questionnaire, its administration in the field and its analysis were all performed by the Social Studies Department (DESUC by its acronym in Spanish) of the Pontifical Catholic University of Chile.

<sup>2</sup> The documents are available at: <http://www.conicyt.cl/documentos-y-estadisticas/publicaciones/panorama-general-en-cyt/>

These activities are: Following medical opinion on an illness (74.2% versus 68.4% declare doing this always or most of the time); following medical opinion on a diet (58% versus 50.1%); reading patient package inserts (54.4% versus 42.9%); and reading the labels of food products (47.3% versus 37.5%).

Regarding the development, usefulness, risks and benefits that science and technology have and will bring about, the results describe a more positive view among men towards the benefits, since men declare significantly more than women that scientific and technological development will bring about many or several benefits (88% versus 81.9%). However, both men and women, perceive risks similarly, with 70% considering that this will bring about many or several risks.

The usefulness of scientific knowledge is also perceived differently by men and women. While 75.1% of men considers it very or quite useful for understanding the world, this is true for only 68.7% of women. The same trend is revealed when asked about its usefulness for their profession or job: 62.5% of men perceives it as very or quite useful, in contrast to only 51.5% of women.

On the other hand, the knowledge that both groups have regarding the Science and Technology Institutional System is quite similar. When asked to identify the main source of funding for scientific and technological research in Chile, both men and women said the State as their first reference (29%), followed by the universities (21%). Likewise, a similar percentage of men and women identifies CONICYT and the Explora Program (between 8 and 11% declares knowing about them). However, the situation is different regarding the knowledge of institutions focused on conducting scientific and technological research. While 21.2% of men state knowing about one, this is so for only 13.1% of women, revealing a significantly lower knowledge about these institutions among women.

Finally, when asked about the main sectors on which public investment should increase (without considering education, public safety and health), it is observed that both men and women agree that the environment is their main priority, with approximately 20% in the two groups. The following relevant issues reveal differences between men and women, with justice ranking second among women, with nearly 18%, while for men the second priority is public works, with almost 19%.

## I. What comes to mind regarding Science and Technology?

In order to establish an image of what people think about science, they were asked an open-ended question whose results indicate that women omit their responses significantly more than men (18.2% versus 13.3%) (**Figure 1**).

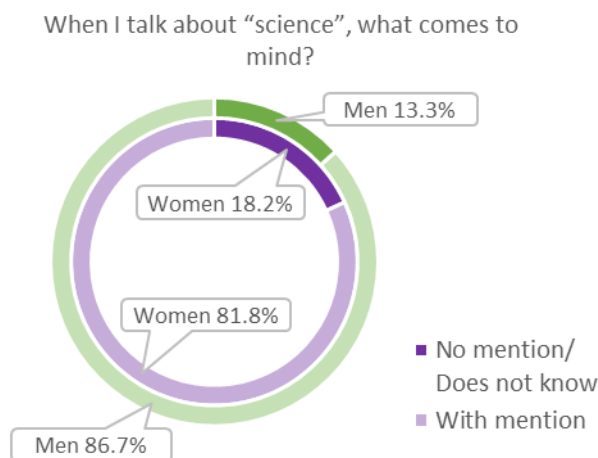
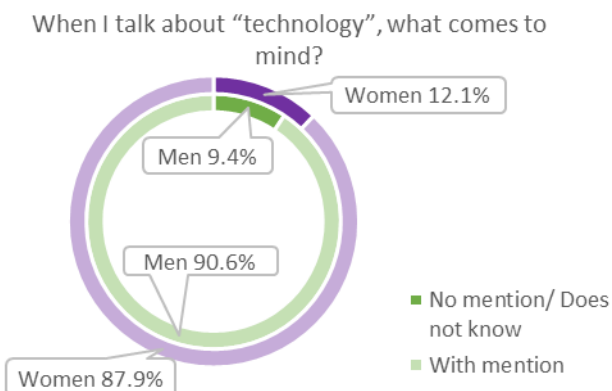


Figure1: Q7: When I talk about "science", what comes to mind?  
Source: Department of Strategic Studies and Management, CONICYT.



A similar response is obtained when asking about technology. While only 9.4% of men does not know what to answer to this question, 12.1% of women declares not knowing or does not respond (**Figure 2**).

Figure 2: Q8: When I talk about "technology", what comes to mind?  
Source: Department of Strategic Studies and Management, CONICYT.

When disaggregating responses about what they spontaneously think about science and technology according to gender, women seem to have much more concrete ideas than men do. For technology, out of the total number of women, 47.2% provides specific technological items in their responses, such as technological devices, objects, appliances, computers, tablets, internet, etc. In contrast, among men the responses in this category reach a lower percentage (38.9%), thus generating a significant difference of 8 percentage points between the perception of men and women. The remaining categories, for both technology and science, do not present statistically significant differences between men and women (**Figure 3 and Figure 4**).

## a. Science



Figure 3: Q7: When I talk about "science", what comes to mind?  
Source: Department of Strategic Studies and Management, CONICYT.

## b. Technology

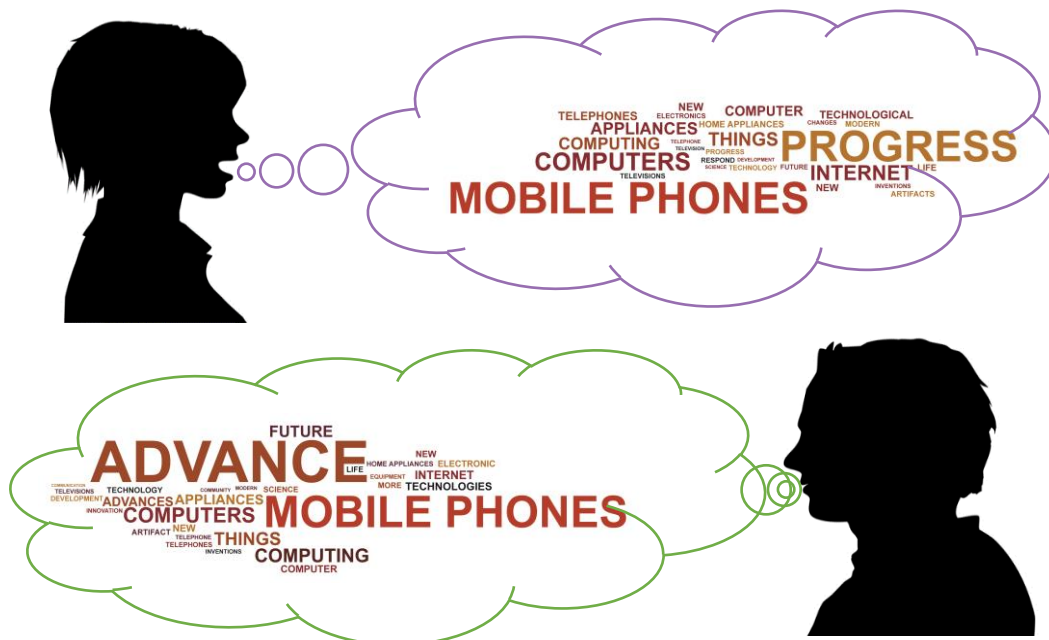


Figure 4: Q8: When I talk about "technology", what comes to mind?  
Source: Department of Strategic Studies and Management, CONICYT.

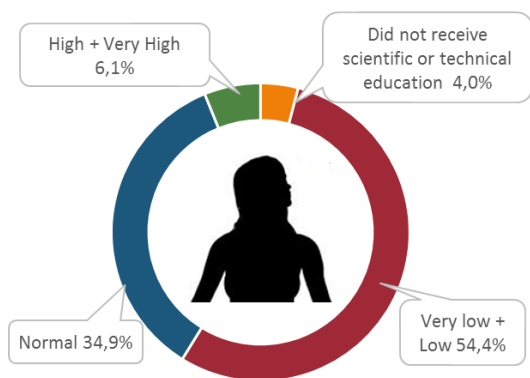


Figure 5: Q26: Would you say that the level of scientific and technical education you have received is...  
Source: Department of Strategic Studies and Management, CONICYT.

At the same time, 54.4% of women versus 48.2% of men believes that the level of education received is “very low or low” in this category, with both differences being statistically significant (**Figure 5** and **Figure 6**).

Men show a more positive outlook, with a better evaluation than women of the scientific and technical education they have received.

The level of scientific and technical education received is evaluated as “normal” by 34.9% of women and by 40.3% of men.

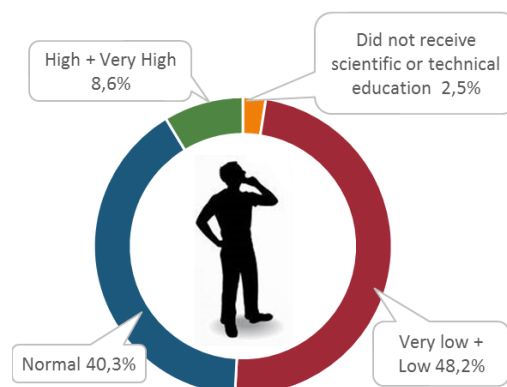


Figure 6: Q26: Would you say that the level of scientific and technical education you have received is...  
Source: Department of Strategic Studies and Management, CONICYT.

## II. Cultural Habits, Interests and Level of Information

This survey also sought to learn about people’s current cultural habits, interest and level of information. The results indicate that men perceive themselves as significantly more interested than women in science (62.7% versus 53.7%), with the same trend being observed for technology (74.2% versus 62.9%) (**Figure 7**).

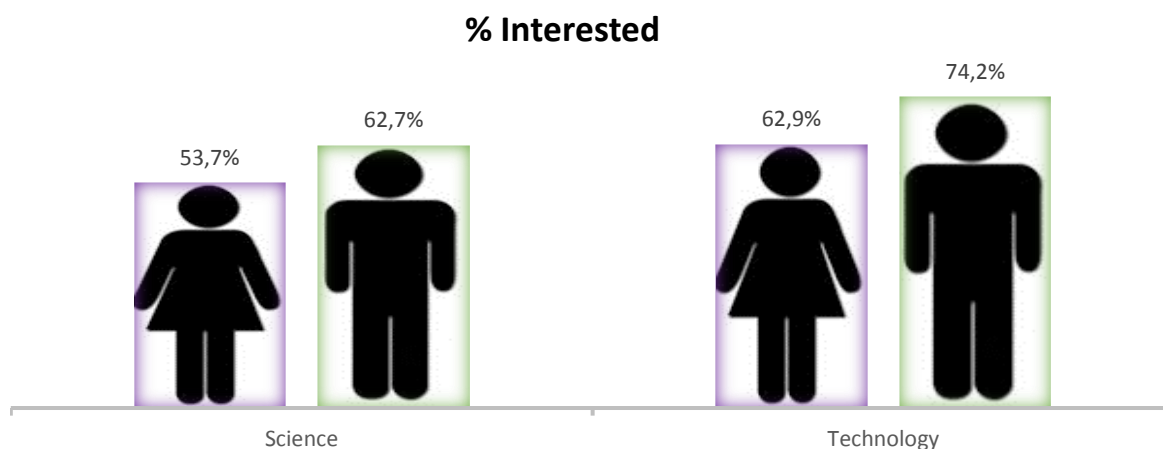


Figure 7: Q5: I would like for you to tell me whether or not you are interested in the topics I will read to you...% Interested  
Source: Department of Strategic Studies and Management, CONICYT.



In addition, men also perceive themselves as being more informed than women. Regarding science, 28% of men declares feeling “highly or well informed”, while only 17.3% of women perceive themselves that way. The difference according to gender increases for the technology topic, since 42% of men and only 26.5% of women feels “highly or well informed”, with all differences being statistically significant (**Figure 8** and **Figure 9**).

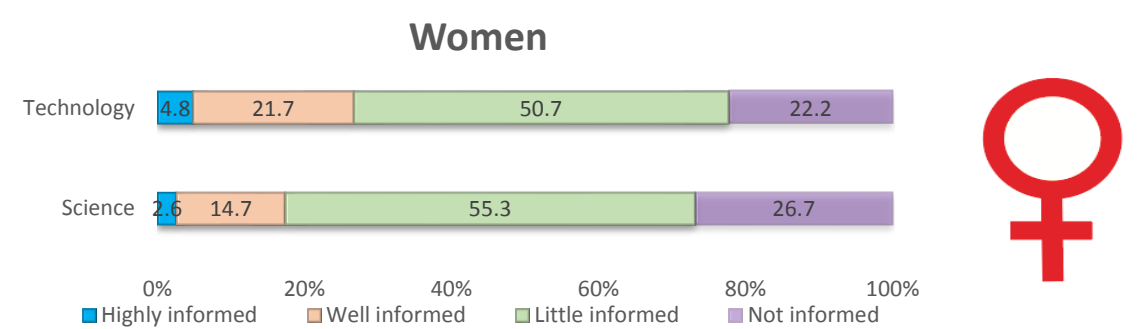


Figure 8: Q6. I would like you to tell me to what extent you feel informed about a series of topics I will read to you, Science and Technology. Responses by women.  
Source: Department of Strategic Studies and Management, CONICYT.

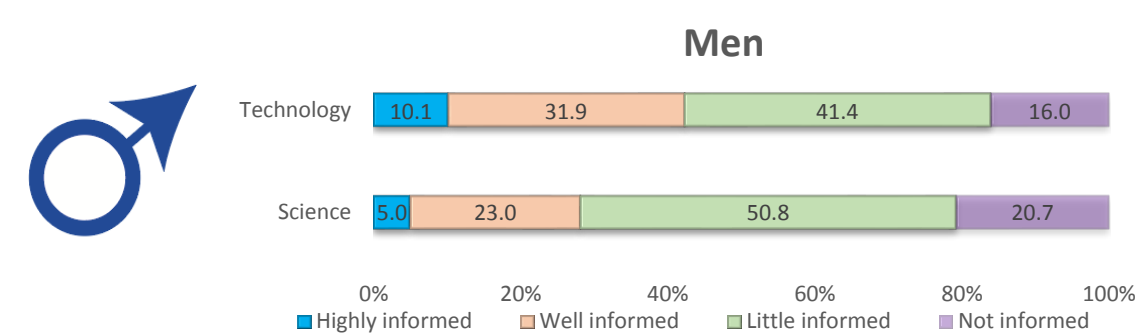


Figure 9: Q6. I would like you to tell me to what extent you feel informed about a series of topics I will read to you, Science and Technology. Responses by men.  
Source: Department of Strategic Studies and Management, CONICYT.

Cultural habits associated with the perceived interest and level of information on science and technology are also different between men and women. For most of the activities related to these topics, the proportion of men declaring that they have the habit of frequently consuming scientific and technological topics (“always or most of the time”) is significantly greater than that of women (**Figure 10**).

### Always or most of the time...

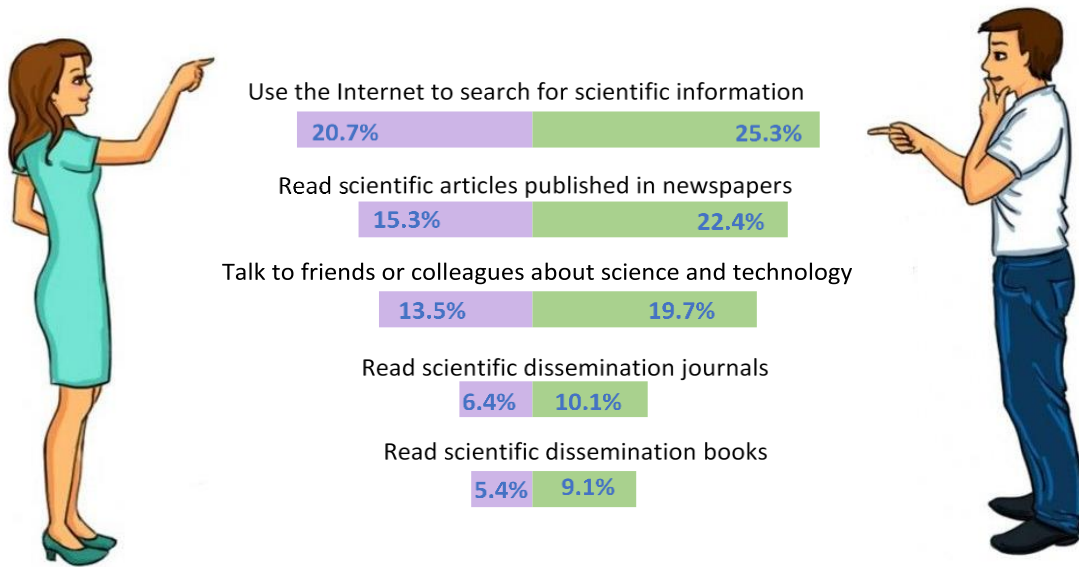
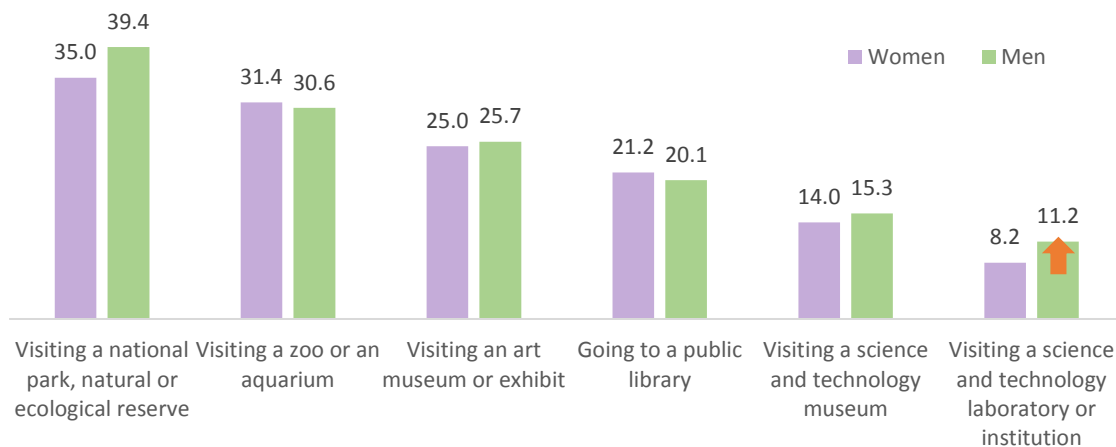


Figure 10: Q4. I will ask you to indicate the frequency with which you perform the following activities...% Always or Most of the time.

Source: Department of Strategic Studies and Management, CONICYT.

It is worth highlighting that no significant statistical differences are observed between the participation of men and women in activities such as “watching shows on science and technology or nature on television”, “listening to radio shows on science and technology”, and “visiting scientific and technology museums, centers or exhibits”.

### % Yes, did perform the activity in the last year



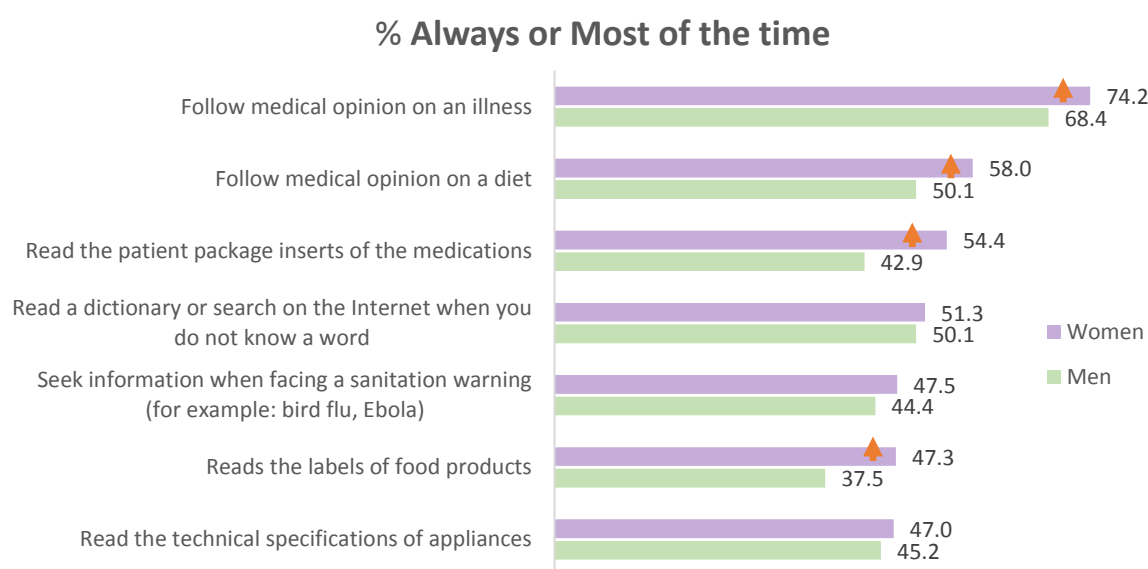
The arrow shows that the percentage of women is significantly higher than that of men.

Figure 1: Q3. Could you tell me if you performed any of the following activities over the past year (the past 12 months)? % Yes.

Source: Department of Strategic Studies and Management, CONICYT.

Regarding other activities performed over the past year, 11 out of every 100 men declare having visited a laboratory or science and technology institution, while this is the case for only 8 out of 100 women. However, there are no significant differences between the participation of both groups in other activities related to nature, arts and studies (**Figure 11**).

It is worth noting that daily life habits linked to science and technology, such as following medical opinion on an illness or a diet, reading patient package inserts and labels of food products, are practiced significantly more by women than men. In contrast, habits like seeking information when facing a sanitation warning or searching for a word they do not know in a dictionary or on the internet and reading the technical specifications of appliances are equally frequent among men and women, without showing statistical differences (**Figure 12**).



The arrows show that the percentage of women is significantly higher than that of men.

**Figure 12:** Q2. Tell me how frequently you... % Always or Most of the time  
 Source: Department of Strategic Studies and Management, CONICYT.

### III. Development, Usefulness, Benefits and Risks

Men and women have the same perception of the level of risks that scientific and technological development will bring about over the next 20 years. However, there is a distinctive and significant difference in their perception of its benefits, since men show a more positive outlook than women, with 88% of them considering that benefits will be “many or several”, while among women this proportion reaches 81.9% (**Figure 13**).

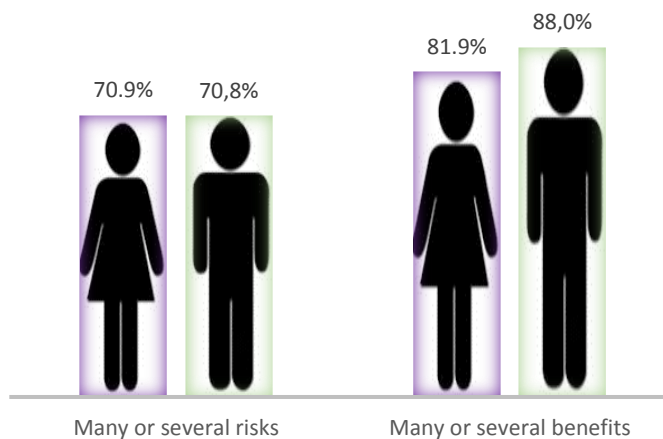


Figure 13: Q11 and Q12. Do you believe that over the next twenty years the development of science and technology will bring about many, several, few or no benefits/ risks to our world?  
Source: Department of Strategic Studies and Management.

Differences are also observed in the perception of the usefulness of scientific and technological knowledge in different aspects of each interviewee's life.

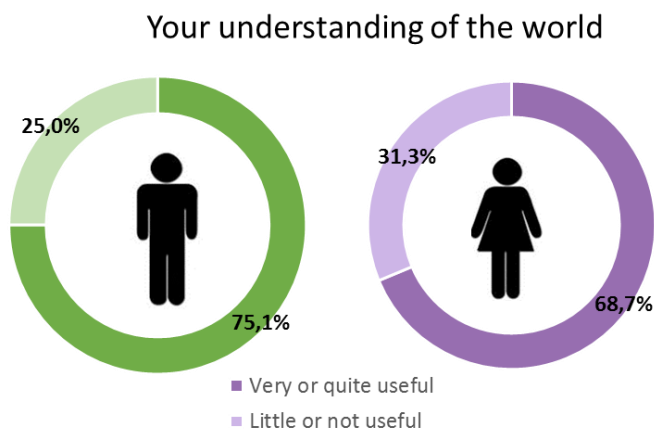


Figure 14: Q15A. To what extent would you say that scientific and technological knowledge is useful in the following specific areas of life?  
Source: Department of Strategic Studies and Management, CONICYT.

Significantly more men than women consider that scientific knowledge is “very or quite” useful for understanding the world (with a difference of 6 percentage points) and for their profession or job (with a difference of 11 percentage points) (**Figure 14** and **Figure 15**).

### Your profession or job

In other areas of life, such as “health care and disease prevention” (87% versus 84%), “caring for the surroundings and the environment” (70% versus 66%), “making decisions as a consumer” (61% versus 57%) and “shaping political and social opinions” (42% versus 40%), no significant differences are observed between the results for men and women.

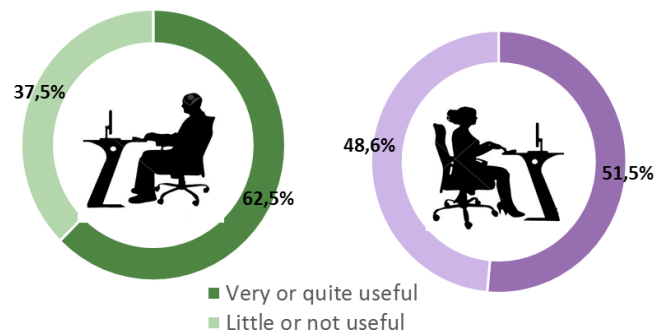
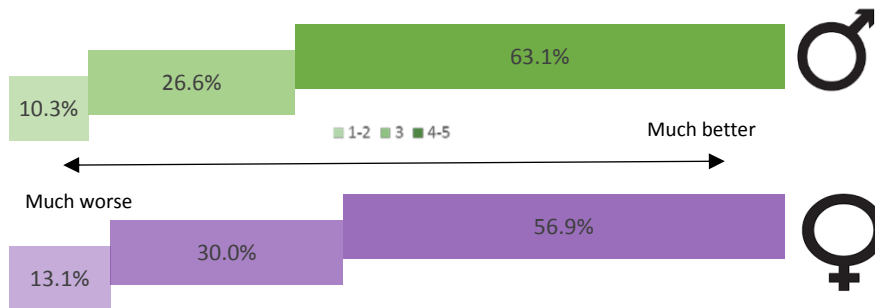


Figure 15: Q15F. To what extent would you say that scientific and technological knowledge is useful in the following specific areas of life?  
Source: Department of Strategic Studies and Management, CONICYT.

### Would you say that Chile is worse or better off thanks to science and technology?



Regarding the perception on whether or not the country is improving thanks to science and technology, there are significant differences in the opinions of both groups (**Figure 16**).

Figure 16: Q14A. On a scale from 1 to 5, where 1 is “much worse” and 5 is “much better”...  
Source: Department of Strategic Studies and Management, CONICYT.

Men have a more positive image than women on the contribution of science and technology to the country and their region, with 63.1% versus 56.9% believing that the country is better off thanks to science and technology (**Figure 16**) and 54% versus 48.7% stating the same regarding their region (**Figure 17**).

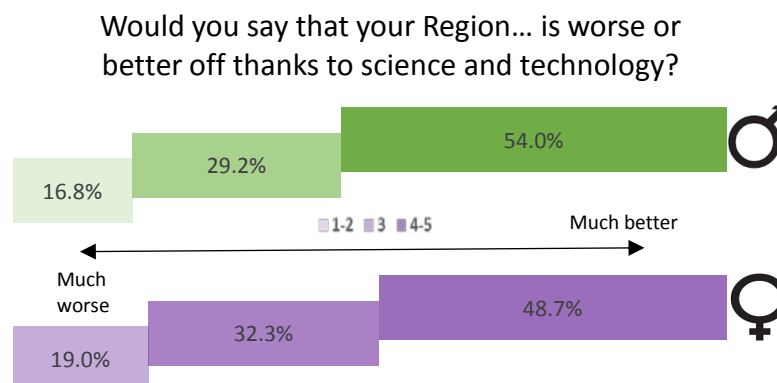
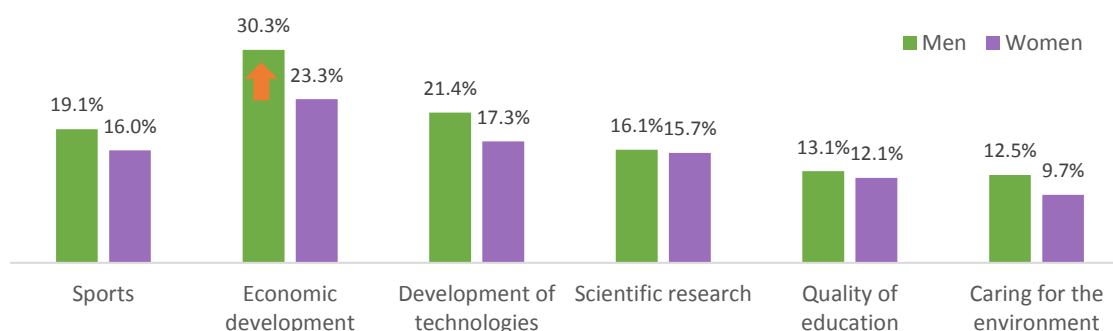


Figure 17: Q14B. On a scale from 1 to 5, where 1 is “much worse” and 5 is “much better”...

Source: Department of Strategic Studies and Management, CONICYT.

When asked about their perception of Chile in comparison to other countries of the region, such as Argentina, Brazil and Mexico, on different topics, there are significant differences between the perception of men and women regarding whether the country is more advanced than the rest in most of the topics. The only exception is economic development, for which the percentage of men who believe that Chile is more advanced is 9 percentage points greater than that of women (**Figure 18**).

### In your opinion, what do you believe is Chile’s level of development in comparison to Argentina, Mexico and Brazil in the following areas?



The arrow shows that the percentage of men is significantly higher than that of women

Figure 18: Q20. In your opinion, what do you believe is Chile’s level of development in comparison to Argentina, Mexico and Brazil in the following areas?

Source: Department of Strategic Studies and Management, CONICYT.

## IV. Knowledge of the Science and Technology System

Men and women have similar knowledge of the Science and Technology System, and they equally identify the different sources of funding and the priority sectors for investment. In addition, they do not present differences between the proportion that knows government institutions like CONICYT and the Explora Program. However, differences are observed in their knowledge of institutions focused on conducting scientific and technological research.

Thus, both men and women identify the State as the main source of funding (29%), followed by the universities (21%), private foundations (17%), companies (15%) and foreign institutions (12%), with no significant differences among them (**Figure 19**).

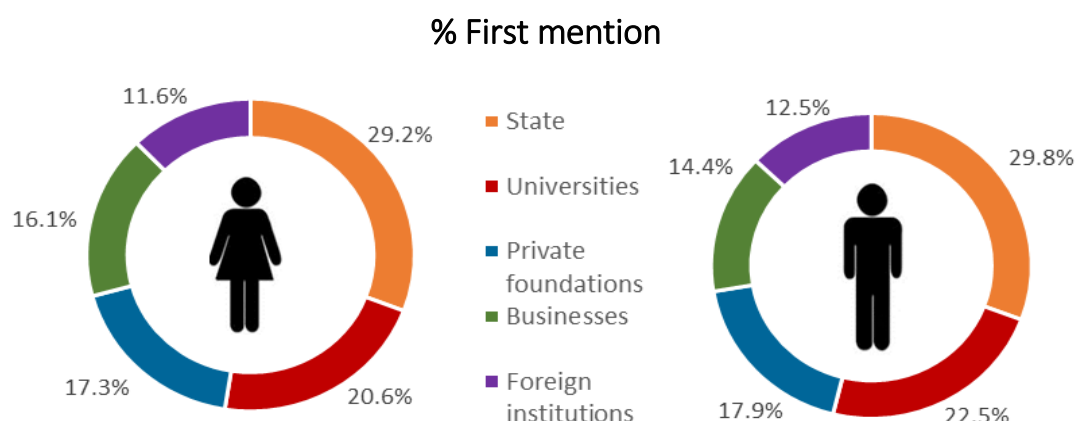


Figure 19: Q19. Who do you think contributes more money for scientific and technological research in the country?

Source: Department of Strategic Studies and Management, CONICYT.

Regarding the sectors that people identified as priority for increasing public investment (not considering education, safety and public health), men and women indicate the environment as being the most relevant. However, for women, the two sectors that follow in importance are justice and transportation, while for men they are public works and justice. Science is a very low priority for both genders: women rank it last (ninth place) and men rank it eighth. The priority of public investment in technology ranks sixth for women and fifth for men (**Figure 20**).

In which of the following sectors, besides education, public safety and health, would you increase public investment?

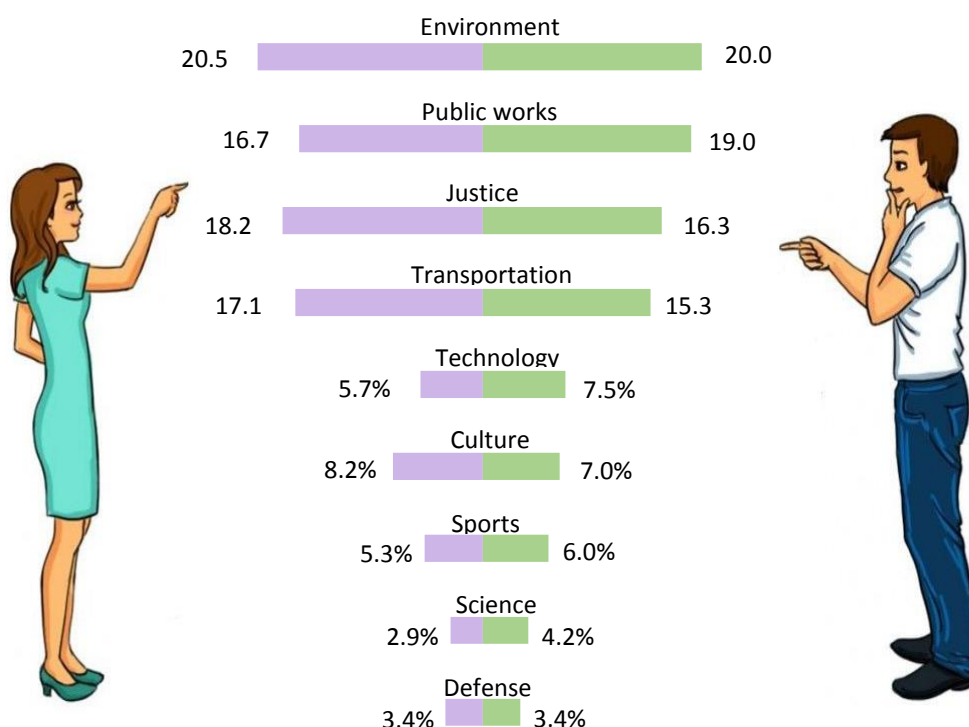


Figure 20: Q17. In which of the following sectors, besides education, public safety and health, would you increase public investment?

Source: Department of Strategic Studies and Management, CONICYT.

Do you know any institution focused on conducting scientific and technological research in our country?

When asked about their knowledge of some institution focused on conducting scientific and technological research, significantly more men than women declare knowing about one (21.2% versus 13.1%) (**Figure 21**).

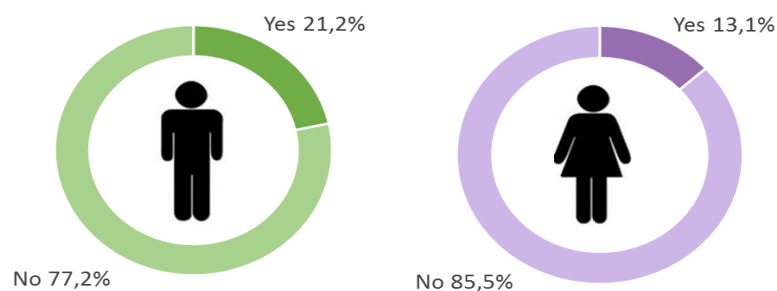
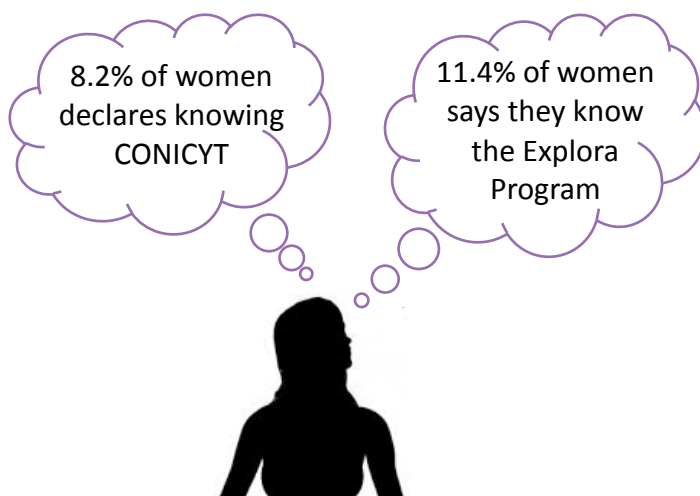


Figure 21: Q27. Do you know any institution focused on conducting scientific and technological research in our country?

Source: Department of Strategic Studies and Management, CONICYT.



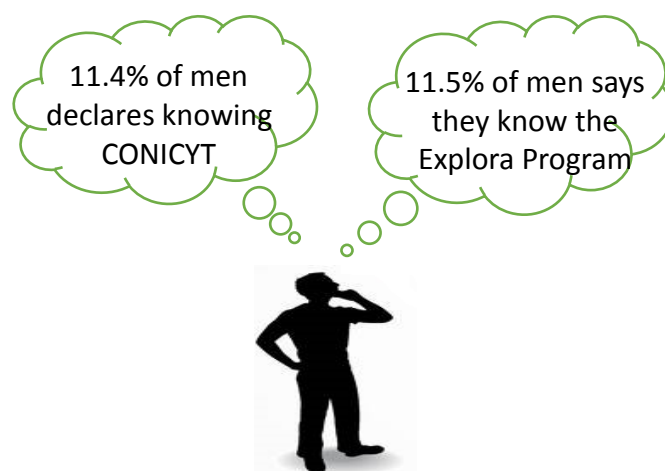


Finally, the responses of men and women reveal an equally low knowledge of both CONICYT, the agency responsible for managing funds for scientific and technological research, and its Explora Program, which is in charge of disseminating science.

*Figure 22: Q29 and Q31. Knowledge of CONICYT and the Explora Program. Responses by women.*

*Source: Department of Strategic Studies and Management, CONICYT.*

A difference of only 3 percentage points -in favor of men- is observed between men and women regarding their knowledge of CONICYT. As for the Explora Program, this difference is even smaller (just 0.1 percentage point in favor of men). None of these differences are statistically significant (**Figure 22** and **Figure 23**).



*Figure 23: Q29 and Q31. Knowledge of CONICYT and the Explora Program. Responses by men.*

*Source: Department of Strategic Studies and Management, CONICYT.*

