

# Zugänge, Barrieren und Potentiale für die internationale Mobilität von Wissenschaftlerinnen

---

Länderbericht Chile

# Country dossier Chile

---

Ana Luisa Muñoz-García

Assistant Professor

Pontificia Universidad Católica de Chile

[aumunoz@uc.cl](mailto:aumunoz@uc.cl)

## Table of Contents

1	The Context of Chilean Higher Education .....	1
1.1	Structure and Basic Characteristics.....	1
1.2	Enrollment and gender participation in higher education.....	1
2	Higher Education Research System.....	4
2.1	Research Funding and Gender Differences .....	4
2.2	Gender and Academic Career .....	5
2.3	Institutional Sexism in Higher Education .....	7
2.4	Internationalization.....	9
3	Further Remarks.....	11
	Annex 1: Tables.....	13
	Annex 2: Figures.....	20
	References .....	26
	Humboldt's template .....	30



## **1 The Context of Chilean Higher Education**

### **1.1 Structure and Basic Characteristics**

The tertiary system in Chile comprises 150 public and private institutions (SIES, 2020). The Council of University Rectors (CRUCH) is composed of 30 universities, including 18 public universities and 12 private, non-profit institutions that are referred as the G9 Group. CRUCH institutions are the oldest and leading universities in the country, created before the expansion of the education system in 1980. Private institutions have outnumbered public institutions since the 1920s, and account for 85 percent of total enrollments. However, that does not mean that private institutions are necessarily of higher quality (Muñoz-García and Bernasconi, 2020). Furthermore, there are 39 Professional Institutes (IP), and 52 Technical Training Centers (CFT), of which 42 are private (Annex 1 – Table 1). Unlike private universities, private IPs and CFTs are allowed to operate for profit.

Government expenditure on education as a percentage of gross domestic product (GDP) in Chile increased from 4.73 percent in 2014 to 5.42 percent in 2017 (UNESCO Institute for Statistics, UIS, 2020). According to the World Bank (2020b), government expenditure on education as a percentage of GDP reached 25.15 percent in 2017.

Forty percent of higher education funding comes from the government. The rest comes from private sources, mostly in the form of tuition fees paid by students and their families (Espinoza, 2017). Both private and public institutions charge tuition fees, although in the past, students from the lower deciles of family income have been eligible for scholarships. Since 2016, lower-income students have qualified for free tuition at both state and private CRUCH institutions. Tuition-free higher education emerged in Chile in response to the massive student protests of 2011 against what students argued was unaffordable tuition, high student debt, and the large concentration of enrollments in private higher education institutions. In 2018, 30 percent of undergraduate students were enrolled in the free tuition program (Delisle and Bernasconi, 2018).

### **1.2 Enrollment and gender participation in higher education**

During the last 20 years, Chilean higher education has experienced a vast expansion. In 2016, 7 out of 10 students were the first from their families to access higher education (Espinoza & González, 2015). From 1990 to 2017, the gross higher education enrollment ratio increased by more than 400 percent. In terms of raw numbers, total enrollments increased from about 249,482 students in 1990 to almost 452,325 in 2000 (Annex 1– Table 1). By 2020, the number stood at 1,221,017 (SIES, 2020). The expansion over the last two decades has been consolidated due to a progressive opening of higher education to segments of the population that were historically excluded from this educational level (Flanagan, 2017). In this context, key aspects have been the sustained increase in the resources provided by the State in terms of student aid to favor a more equitable access of the poorest quintiles to higher education, and the consequent increase in the expectations of young people and their families for

entering tertiary education (Linne, 2018). In spite of the student aid developed by the governments, the introduction of market logic has generated a high degree of loan indebtedness on the part of students and their families. This excessive indebtedness affects mainly those students from middle and lower-middle socioeconomic backgrounds who are paying for their education through loans (Espinoza & González, 2015). Controversially, this payment by families is considered a progressive policy measure in higher education, arguing that the involvement of actors, in this case students and their families, contributes to improved quality and better management of educational services (Jarpa-Arriagada, 2017).

Gross enrollment in tertiary education – that is, the ratio of total enrollment, regardless of age, to the population of the age group that corresponds to that level of education – was reported at 90.9% in Chile in 2018 (Trading Economics, 2020). The breakdown of enrollments by type of institution is as follows: 15.2 percent in public universities; 41.3 percent in private universities (including the 12 private universities that are older members of CRUCH and new private universities); 31.8 percent in professional institutes; and 11.7 percent in Technical Formation Centers. Figure 1 provides the evolution of enrollments by type of institution since 2005. It is important to mention that the explosive growth of the tertiary system described in the previous paragraph was largely absorbed by private institutions. This situation caused the transition from an elitist higher education system to one that is overcrowded and highly deregulated and that is not coherent with the country's needs (Espinoza, 2017).

The latest data on tertiary graduation rates in Chile show a ratio of 56.12 percent for men and 43.88 percent for women; these numbers represent estimated percentages of today's young men and women who are expected to complete tertiary education in their lifetime (OECD, 2020). Moreover, when we look at the data available on the overall percentage of tertiary graduates by field of study, it appears that women have a higher participation percentage in the fields of health and welfare than men (31% vs. 11% in 2018). By contrast, men seem to be overrepresented in the field of engineering, manufacturing and construction, which accounted for 32 percent of total male graduates in 2018, whereas women graduates in this field represented only 5 percent of total women graduates (Annex 1 – Table 2).

The International Standard Classification of Education (ISCED) was developed by UNESCO for assembling, compiling and presenting statistical data on education. For the Chilean population in the age group 25+ years, there was an overall increase in the number of students enrolled in tertiary education at Bachelor's, Master's and doctoral level in the five years from 2013 to 2018 (Annex 1– Table 3). Doctoral graduates (ISCED 8) accounted for 0.34 percent of all graduates from tertiary education. Between the years 2013 and 2018, there was a marginal increase – of 0.9 percentage points – in the female share of Bachelor's or equivalent level graduates (ISCED 6); the female share of Master's or equivalent level graduates (ISCED 7) increased by 1.2 percentage points during this period (Annex 1 – Table 4). According to the Gender Parity Index (GPI) for at least Bachelor's or equivalent level (ISCED 6 or higher), in 2018, the gross graduation ratio was 0.97 percent; this number represents the Chilean population aged 25+ years. Meanwhile, the male share of doctoral or equivalent degrees (ISCED 8) in 2018 was 57.4 percent; the female share (42.6 percent) was the second lowest since the 2013 peak of 45.9 percent (Annex 1 – Table 5).

Based on data from the database of the National Council of Education (CNED, 2021), in 2009, women's share of enrollment in Masters' programs was 46.8% (9,961), compared with the male share of 53.2% (11,305). A decade later, a small increase in the enrollment of women could be observed, with the female share of total enrollment in Master's programs reaching 49.5%, and the male share decreasing accordingly to 50.5%. Consequently, between 2009 and 2019 there was an increase of 2.7 percentage points, in the female share of enrollment in Master's programs. Considering the same period of time, the fields of knowledge in which women most frequently enrolled at Master's level were education, administration and commerce, social sciences, and health; in the case of men, the most popular fields were administration and commerce and technology (CNED, 2021).

The offer of doctoral programs and the number of graduates increased significantly in the past decade (Tornero, Epstein and Vicuña, 2016; Baeza, 2017). However, Walczak et al. (2017) pointed out that although the training of PhDs had increased tenfold in the last fifteen years, it was still below the average for the countries of the Organisation for Economic Co-operation and Development (OECD). At the national level, there has been sustained growth in the last decade in the enrollment of students in the country's doctoral programs in all areas of knowledge, mostly in CRUCH universities: the number of doctoral students increased from 3,738 in 2009 to 5,930 in 2018. Reviewing the areas in which doctoral programs develop, the latest data from 2017 show that the field with the highest doctoral student enrollment is natural sciences, mathematics and statistics (Annex 1 – Table 6). Historically, enrollment in doctoral programs has been dominated by men, as can be seen in Figure 2 (Annex 2). At the same time, the governments of the last decade have developed a strong promotion of doctoral scholarships abroad, through the Chile Scholarships Program (BCP), which was launched in 2008. This program aims to double Chile's PhD enrollments, as a step to strengthening the tertiary education workforce and the research capacity of the Chilean economy. It also seeks to improve the quantity and quality of human capital in Chile through scholarships abroad (Chiappa & Muñoz-García, 2015).

Since 2013, Chilean female researchers have participated in various sectors. However, between 2013 and 2017, the number of female researchers as a percentage of total researchers (in headcounts, HC) in the business enterprise sector decreased by 2.7 percentage points. The same percentage point drop was observed in the number of female researchers as a percentage of total researchers (FTE) in the government sector. By contrast, in the private non-profit sector, there was an increase of 2.7 percentage points in female researchers as a percentage of total researchers (FTE) and of 3.1 percentage points in terms of HC (Annex 1 – Table 7). The female share of teachers in higher education increased by 1.2 percentage points between 2014 and 2018 (Annex 1 – Table 8).

## 2 Higher Education Research System

### 2.1 Research Funding and Gender Differences

Between 1968 and 2019, the institution in charge of promoting and funding scientific research in Chile was the National Commission of Scientific and Technological Research (CONICYT), which was dissolved on January 1, 2020 and transformed into a new organization within the Chilean government called the National Research Agency (ANID) as part of the new Ministry of Science, Technology, Knowledge and Innovation founded in 2018 (BCN, 2018). In 2017 Chile's gross domestic expenditure on R&D as a percentage of GDP was 0.36% – far below the OECD total of 2.4% (Annex 2 – Figure 3). At the national level, the discussion has focused on the low percentage of GDP allocated to R&D, and the scarce private investment (Santelices, 2015). In the case of GERD by sector of performance, the UIS data (UIS 2020) indicate that in 2017 the lowest share of GERD was performed by the private non-profit sector, with 6.82 percent, and the highest share was performed by the higher education sector, with 45.83 percent (Annex 1 – Table 9).

At the same time, with the creation of the new Ministry of Science, Technology, Knowledge and Innovation, the research system has been restructured, and there is a new national policy and a gender agenda in science, technology, knowledge and innovation. The institution in charge of managing and executing the policies, programs, and instruments defined by the Ministry is the National Agency of Research and Development (ANID).

According to data retrieved from the main national agency that funds research (ANID), there is vertical gender segregation in the research system. In 2018, women accounted for over 40 percent of holders of doctoral scholarships offered by that institution, and only 37 percent of postdoctoral scholarships in Chile. This number is even lower when we analyze the number of female researchers granted government funding through the National Fund of Scientific and Technological Development (FONDECYT), which reached barely 24 percent of the total in 2018 (CONICYT, 2018). Similarly, female participation in collaborative research projects barely reaches 25 percent. In 2019, 20.9 percent of leadership positions in research centers funded with regional programs, Research Center Funding for Priority Areas (FONDAP), and the Associative Research Program (PIA) CONICYT were attributed to women, 4 percent more than in 2016 (CONICYT, 2018).

The National Fund for Scientific and Technological Development, (FONDECYT) is the main instrument to stimulate and promote the development of basic scientific and technological research in the country. FONDECYT grants are considered a key to academic career advancement within the universities. Created in 1981, FONDECYT has financed more than 16,000 research projects whose impacts have benefited both the scientific community and society in general. Analyzing its database, male and female researchers' have similar tendencies each year to apply for and be awarded research funding. Nonetheless, there are some exceptions, specifically in the years 2009, 2015 and 2016, where the variation in the award rate is relevant: 8.4%, 5.6%, and 5.1%, respectively. This indicates that the number of women who were admitted to apply for a research grant differed greatly from the number of men (Annex 2 – Figure 4).



According to data retrieved from the Unit of Studies of CONICYT, in the last decade, female participation with admissible research projects has oscillated between 38.6 percent in 2008 and 45.5 percent in 2010, reaching 39.6 percent in 2017 (Annex 2 – Figure 5). The data also indicate that the number of admissible projects led by a female researcher was lower than the number of male researchers with admissible projects in the same years.<sup>1</sup> Results on admissible projects show a stabilizing tendency from 2013 to date, after a significant decrease in the year 2008; the masculinity index is the ratio of the number of men and women who have admissible or awarded projects (CONICYT, 2018) (Annex 2 – Figure 6). Between the years 2008 and 2012, there was an increase in the number of FONDECYT-funded research projects that were led by women, reaching 46.4 percent in 2012. However, in 2017 the number dropped to 39.3 percent.

According to disaggregated data categorizing projects by OECD fields of R&D classification, the FONDECYT program had a significant gender gap in 2017: 40 percent of projects awarded were concentrated in natural sciences; only 26 percent of the projects in that field had a woman as a principal investigator (Annex 2 – Figure 7). In relative terms, the percentage of women participating in innovation and development increased from 36.6 percent in 2010 to 38.9 percent in 2018 (Annex 2 – Figure 8).

According to the Women in Science fact sheet (UNESCO Institute for Statistics, 2019), overall, women account for a minority of the world's researchers. Headcounts (HC) are the total number of people employed in R&D; this includes both full-time and part-time employees. In the last five years, there has been an increase in the number of researchers as a percentage of total R&D personnel. In Chile, researchers as a percentage of total R&D personnel (FTE) was 47.7 percent in 2014 compared to 54.8 percent in 2017. Researchers as a percentage of total R&D personnel (HC) was 50.6 percent in 2014 versus 57.9 percent in 2017 (Annex 1 – Table 10). When it comes to total R&D personnel (HC) by sector of employment, the higher education sector had the highest share (55.4 percent) in 2017 (Annex 1 – Table 12).

## 2.2 Gender and Academic Career

The growth of the academic profession in Chile has been a slow but significant process (Berrios, 2015), and it has gained strength during the last decades given the development of policies for advanced human capital formation and internationalization, as well as the strengthening of leading research universities in the country (Muñoz-García & Chiappa, 2016). In Chile, based on criteria of academic merit and/or contract, the university academic career regulations are divided into two broad categories: ordinary and adjunct (or special) professorship. While ordinary staff are associated with a higher level of dedication to the university,

---

<sup>1</sup>The CONICYT evaluation process classifies research projects into different categories, depending on the phase of the application process. If a project fulfills the basic requirements, it is considered admissible for evaluation, and it advances to a peer evaluation. If a project scores high in the evaluation process it may obtain funding or be rejected. Since May 2021, the new evaluation system for FONDECYT (one of the main instruments for research funding) has three categories: (a) awarded with funding, (b) awarded without funding, and (c) rejected. The response of the academic community to this new category (awarded without funding) has been controversial, because to get a grant could imply a recognition for the tenure track within the universities but the impossibility to develop a research project with zero funding.

developing at least teaching and research tasks, adjunct or special staff are specifically hired for teaching and administration and some research activities. Likewise, during the last decade, applicants for ordinary staff positions are required to have at least a doctorate degree and to actively participate in the application processes for research funds and publications in indexed journals.

In 2019, there were a total of 89,940 scholars working in the higher education system, of whom 56% were men and 44% were women. Based on National Council of Education (CNED) data, since 2011 there has been an exponential increase in the number of women and men in higher academic staff grades, such as doctor and Master, and relative stability in the number of women and men in professional and technical grades (Annex 1 – Table 14). Academic careers in Chile have two recognized hierarchy levels: full-time and part-time. In the overall universe of academics working in the higher education system, 67.8 percent have part-time contracts<sup>2</sup> (Annex 1 – Table 15). A study by the Higher Education Information System (SIES) shows that the share of women among academic staff in higher education increased from 43 percent in 2015 to 44.5 percent in 2019. The share of women with a doctorate degree among academic staff reached 33.7% in 2019, which represents a 2.6 percentage point increase compared to 2015 (SIES, 2019). The data show two critical issues in relation to the academic profession in higher education: first, that the number of part-time staff is almost twice as high as the number of staff with full-time contracts; second, although men outnumber women at all levels of the system, in the case of people with PhDs, the number of men is almost double the number of women.

Academics who are paid on an hourly basis teach at several universities and rush from one site of work to the next are colloquially known as “*profesores taxi*” (taxi teachers). This notion embodies the devalued and exploited facets of contemporary academic work in a neoliberally regulated system of higher education (Simbürger & Neary, 2016). Similar to the numbers presented in Table 15 (Annex 1), previous studies have shown that hourly paid academics are more prevalent in private universities than in public ones (Berrios 2015, 364). The critical issue here is that although these academics would like to be involved in activities other than teaching, they are excluded from the research culture of the institution (Simbürger & Neary, 2016). Unlike in other countries, the distinctiveness of the Chilean case is that the precarization of academic work is not a recent phenomenon. According to Bernasconi (2008), hourly paid teachers have constituted the majority of the academic workforce in Latin America since the origins of the Latin American university. The Chilean evidence on the distribution by gender in universities shows an unequal reality. Previous studies have shown that the working conditions, the proportion of men and women in senior positions, the number of research projects, and the types of contracts (full- or part-time) are unequal between men and women (Mandiola, et al., 2019). For example, a study conducted by the higher education forum Aequalis (2017) found that the representation of women in leadership positions

---

<sup>2</sup> In Chile, there are three types of contracts when it comes to academic structure: full-time, part-time and fee contracts. A fee contract is usually a type of part-time contract that exempts the university from any employment relationship. For the purpose of this study, fee contracts are included in the list of part-time contracts.

at higher education institutions in Chile was lowest at the level of rector. There were only two female rectors, which represents four percent of the total. At the levels of vice-rector and dean, the study found that the share of women was significantly higher, and that participation occurred at similar rates – 25 percent and 23 percent, respectively (Aequalis 2017). Likewise, the concern was raised that[, as of 2019,] 77.8% of full professors were men and that the share of women at that level was thus only 22.2% (Mineduc, 2019). These data show that women remain significantly underrepresented in leadership positions at universities in Chile. Also, a qualitative study on women academics has indicated that academic women who work part-time find it much more difficult to think about starting a family due to the lack of economic security (Simbürger & Neary, 2016).

### **2.3 Institutional Sexism in Higher Education**

In the case of Chile, institutional sexism is the main explanation for the underrepresentation of women in higher education, mostly at the higher level of leadership but also in science. It has been a way of explaining that the problem of gender issues is structural and cannot be fully explained by the available statistics on the presence and absence of women in higher education. The gender picture in higher education in Chile is embedded in a culture of violence (misogyny) that women (and also sexual dissidents) experience within the country. Since 2018, there has been a massive feminist movement in Chile. In May 2018, students at more than 80 percent of the universities left classes and occupied campuses, demanding greater measures of protection in the wake of numerous harassment claims against professors (Muñoz-García & Lira, 2019). They demanded changes in policy, since universities in Chile were not legally required to have sexual harassment policies in place (Jackson, & Muñoz-García, 2019; Muñoz-García, Follegati, & Jackson, 2018). But what was really fueling the protests had roots that ran much deeper than the college campus issues, and this movement impacted the entire system of higher education and Chilean society. The list of demands usually included the reformulation of protocols regarding sexual abuse and harassment, the establishment of offices of gender and diversity, the registration of transgender students under their self-identified first names, and the advancement of a non-sexist education. Also, the students demanded actions, such as gender mainstreaming in university curricula, the creation of mandatory courses on gender and queer studies, affirmative action for women professors, and mentorship programs for women students. It is important to mention this feminist movement because it highlighted critical issues on gender in higher education: the horizontal and vertical segregation at universities; the many ways in which women, including researchers, are discriminated against within the system; and the sexism reproduced in the system, which is the basis for violence against women. It also exposed the lack of studies on gender issues and higher education, including research on issues of sexual harassment, science and leadership, and gender in higher education. Universities have started to take action on these issues: they have negotiated with students and pledged to advance crucial reforms. It is still too early to know whether the promised changes will lead to meaningful institutional and cultural change, but what we already know is the several changes on gender issues that are taking shape in the system of higher education. They include, for example, (a) a new law on Sexual Harassment in Higher Education; b) an agreement on gender

equality in higher education; (c) a National Policy on Gender and Science; and d) some university steps on addressing gender issues in academic spaces. While these new policies on gender in higher education do not fully explain and address the problem of gender, it helps to get a picture of the deep change the country is going through.

***A new law on sexual harassment in higher education.*** On August 2019, Chile's Senate approved a bill requiring state-supported higher education institutions to create detailed protocols to respond to sexual harassment. The initiative "*recognizes and protects the right of everyone to work in spaces free of violence and gender discrimination.*" The bill was originally created by the Chilean Network of Women Researchers (RedI), an advocacy group of women researchers that promotes gender equality in science and research in Chile. Under the proposed law, universities would be required to adopt a concrete definition of harassment and establish consistent punishments for harassers, or risk losing state accreditation and funding.

***An agreement on gender equality in higher education.*** As one of the consequences of the feminist May 2018 mobilizations, the Council of Rectors of Chilean Universities (CRUCH) created the Gender Equality Commission to evaluate the development and implementation of gender policies in its universities. Among one of the first diagnoses that this commission developed in 2018 was the absence of institutions that address gender inequality in universities. Only seven of the 30 universities that belong to CRUCH had a gender office, and, as mentioned above, the fact that [in 2018] almost 80 percent of full professors were men raised concern about gender differences in the academic career path.

In addition to the Gender Equality Commission, a ***national agreement*** was created in 2018; all higher education institutions, including Technical Training Centers (CFT) and Professional Institutes (IP), were invited to sign it. To date, the agreement has been signed by 24 institutions: 15 IP and CFT and 9 universities. The objective of this national agreement is to promote gender equality, facilitating the creation of institutional policies that seek to promote the participation and representation of women in higher education institutions. It comprises inter alia agreements (a) to establish the commitment of the institutions to adopt measures and implement programs towards the inclusion and participation of women in the academic sphere and in institutional management; (b) to ensure the eradication of barriers that disadvantage the development of women in academia; (c) to guarantee equal opportunities; and (d) to incorporate affirmative action measures whose purpose is to encourage higher education institutions to achieve a minimum percentage of female presence among their authorities. The national agreement is a mechanism that will promote and accelerate gender parity in this area (Mineduc 2019).

***A national policy on gender and science.*** In 2013, the National Commission for Scientific and Technological Research of Chile, (formerly CONICYT, today ANID), prepared its first version of the Institutional Equity Policy with the aim of establishing a series of actions aimed at advancing in granting equal opportunities to women in the field of research, science, technology, education and innovation. In 2016, however, it was deemed necessary to update and deepen the definitions established therein, in consideration of the new challenges of materializing in a more concrete and transversal way. In this way, the Institutional Gender Policy

(2017–2025) was created. It proposed a diagnosis, the strategic axes and objectives aimed at transforming barriers, gaps and gender inequities in science and technology, an Annual Action Plan and a Policy Monitoring and Follow-up System (CONICYT, 2017).

During 2020, one priority of the new Ministry of Sciences, Technology, Knowledge and Innovation (CTCI) was the design of a new institutional framework for the national system that aims to expand and strengthen the capacity to generate research in Chile. Among the guiding principles of the CTCI National Policy are excellence and adaptability, associativity, openness and transparency, ethics and diversity. The latter seeks to ensure equal opportunities, gender equity, and inclusive views to participate in the generation and use of knowledge, technology and innovation. This document is accompanied by the construction of a **National Policy on Gender Equality** that will be presented in May 2021.

**University steps to address gender.** Since 2018, new gender units have been established at 21 of the 60 universities in Chile. The gender units in higher education are created to strengthen university institutions in matters of gender equity (or equality) and diversity, promoting university anti-discrimination policies that guarantee equal rights and opportunities for all. Through these gender units, the universities aim to guarantee safe spaces, free from discrimination and gender violence within academia. In addition, these units promote spaces for reflection, dissemination and dialogue on these issues. In some institutions, the current measures also address social co-responsibility and the implementation of activities, courses and academic content with a gender perspective. It should be noted that, through their service offices, these units are also in charge of receiving and following the due process associated with complaints about acts of gender violence, aggression and/or discrimination. In interviews with heads of gender units at various universities in the country, the predominant – mainly patriarchal – sociocultural structure in Chile was identified as the main challenge these offices have faced since their creation. This issue is relevant not only because it hinders the development of women in all aspects of life – economic, professional, personal, academic, sexual, etc. – but also because it impacts the advancement of institutional policies that address gender issues. One example is the fact that the mechanisms to address gender issues within universities have emerged mainly as reactive measures to the demands of academics and students, rather than as a structural approach aimed at improving the conditions of the community. In this sense, the lack of structural policies that treat gender as a variable that affects society as a whole – including the academic spaces – prevents women from developing their potential and contributing to the spaces in which they decide to work.

## 2.4 Internationalization

Internationalization policy has been raised in Chile as a priority issue for the country and has been established as one of the four central axes of Chilean higher education (OECD & World Bank, 2010). Although internationalization processes have been scarcely promoted at the undergraduate education level (Geldres et al., 2013), a strong initiative for postgraduate scholarships abroad has been stimulated within the framework of an advanced human capital training policy (appointment). As a way of responding to the low number of doctorates in the country, the Chile Scholarship Program (BCP) has been enhanced since 2008, granting

thousands of scholarships abroad at universities ranked among the 100 best higher education institutions, according to the Academic Ranking of World Universities (ARWU), also known as the Shanghai Ranking (Chiappa & Mejias, 2019). Undoubtedly, the requirement that the Shanghai Ranking be used to choose an institution has oriented international movement toward universities in the global rankings, and has directed doctoral scholarship holders toward specific countries such as the United States and England. Currently, the funds for scholarships abroad have been redirected to the budget of the employment sector, which means that this benefit is suspended for the period 2021. Scholars who studied abroad and who were interviewed for this dossier consider that the cutting of funding has a direct impact on the decision to study abroad and affects the possibilities of forming advanced human capital, considering that the current global economic situation has already truncated the expectations of many researchers.

According to data provided by the National Agency of Research and Development (ANID, 2021), the Chile Scholarship Program awarded 14,355 scholarships between 2008 and 2018 – 7,916 in the Master's scholarship program and 6,439 in the doctorate scholarship program. During this period, the host countries with the highest number of recipients of these scholarships were: England (4,701), United States (2,414), Spain (2,142), and Australia (1709). Looking at the doctoral scholarship program in 2008, the main host country was Spain (59 scholarships), followed by England (47). In 2018, the main host country was England, which received 111 Chilean scholars, followed by Spain, which received 83. In the case of Master's scholarships in 2008, the main host country was Australia (91), followed by England (89). In 2018, the main host country was England, which received 115 scholars, followed by Spain, which hosted 43 scholars.

A total of eight women who work in different spaces related to higher education were interviewed for this dossier. Four of the interviewees work in gender units at different universities throughout the country. The fifth interviewee is a policymaker who works at the Ministry of Science, Knowledge, Technology and Innovation in the design of a national gender agenda; the sixth is vice chancellor of internationalization of a metropolitan university; the seventh is the coordinator of a program in higher education; and, finally, the eighth interviewee works as director of an organization of Chilean women researchers. Considering the context of the COVID-19 pandemic, the interviews were conducted and recorded via a digital video conferencing platform. To recruit the participants, non-probabilistic convenience sampling was used, since one of the main difficulties was linked to the availability of subjects who could be part of the study. The criteria for selecting the interviewees included, first, that they should have an external perspective on the Alexander von Humboldt Foundation network; and second that they should work in an institution or organization whose focus is research, science, internationalization, or gender themes in higher education. Because of the new creation of gender units at universities, four of the interviewees are in charge of such units and also participated in their creation. Among the topics discussed were gender and research issues, the new national policy on gender in science, and the main challenges and opportunities in the Chilean context in relation to gender issues and internationalization.

The interviews with the policymakers in the area of science and internationalization and with the women researchers who have done their doctorates and/or postdocs abroad,

revealed that they consider academic mobility to be a prerequisite for developing a successful career in research in Chile. For this reason, studying or doing internships abroad becomes a relevant aspect of academic career advancement. Most of the interviewees addressed the maternity issue as fundamental in the analysis of their decision to study abroad. The scholarships provide for an amount per child; however, this is too low to study as a mother and without the support of family networks available to them in their home country. According to the interviewees, "*these scholarships are designed for people without children; therefore, the option is for women to delay maternity, or [the scholarships] are created to be awarded mostly to men.*" Likewise, another issue that emerged were the class barriers that impact the possibilities of international mobility. The requirement that host universities should rank among the most important in the world obliges scholars to be fluent in English and to have networks that allow researchers to be accepted in the best universities in the world. Previous studies in this area have highlighted not only the tensions that the Chile Scholarship Program has had from its design, but also the imbalances in its implementation (Chiappa & Muñoz-García, 2016).

In the particular case of Germany, there have been at least four different scholarships offered to Chilean students sponsored by Germany and/or German foundations (Annex 1 – Table 16). Based on data from the database of the ANID (2021), in 2008 there were 16 Master's and doctorate scholarship holders (5 women and 11 men). Of the 13 doctoral scholarship holders, five were women (two in natural sciences, one in social sciences, and two in humanities) and eight were men (one in medical and health sciences, two in natural sciences, two in social sciences, two in humanities, and one in engineering and technology). There were three Master's scholarship holders, all of whom were men. In 2018, six doctorate scholarships and three Master's scholarships were awarded. Three of the doctorate scholarship holders were women (all three were studying natural sciences) and three were men (one in agricultural sciences, one in social sciences, and one in humanities). All three Master's scholarship holders were men.

Comparing international mobility in the region, data for 2015–2016 obtained from the *Wissenschaft weltoffen* report 2019 (German Academic Exchange Service, DAAD, 2019) show that there was a percentage variance of 2.8% in the number of Chilean students abroad. The corresponding figures for Colombia and Mexico were 3.5% and 9.8%, respectively (Annex 1 – Table 17). The mobility balances of academics in countries such as Chile show a larger percentage of academic authors entering the country (55 percent) than leaving (45 percent).

### **3 Further Remarks**

The Chilean higher education system has expanded and diversified during the past decades. Consequently, female participation in higher education has increased at all levels of the system, including science and research. However, the data collected from the documents, databases, and interviews show that this growth has not been accompanied by policies that address the historical gender discrimination and promote academic spaces without violence. Similar to other Latin American countries, women participate in the higher education system, but their conditions differ from those of their male colleagues. The data indicate that

women's participation decreases at the level of Master's and doctoral degrees. Although women participate as teachers in universities, their participation decreases at higher levels of the academic hierarchy – as of 2019, only 22% of full professors were women. Consistent with these data, women receive less research funding than their male colleagues, either when participating in research projects or leading them.

In the case of Chile, beyond the numbers presented, the greatest challenge on gender issues in the country has been violence and discrimination for reasons of gender. In May 2018, the feminist movement began exposing these issues, and since then the universities and institutions related to the system of higher education, such as the Ministry of Science, Knowledge, Technology and Innovation and the Council of University Rectors (CRUCH) have created new policies to address gender issues and to develop (and reimagine) academic spaces from a gender perspective. It is important to mention that these new laws and institutional policies under construction are connected with reforms at the national level, such as the creation of a new constitution for the country, with gender parity and a strong feminist movement that it is changing not only the political scene but also moving the fence of the possible in the system of higher education and society as whole.



## Annex 1: Tables

**Table 1 Gross Enrollment (Undergraduate and Postgraduate) in Higher Education by Type of Institution**

		University	Professional In-stitute	Technical College	Total
2005	F	465,494	122,786	72,050	660,330
	%	70.5	18.6	10.9	100
2007	F	505,316	146,327	83,993	735,636
	%	68.7	19.9	11.4	100
2009	F	564,793	182,381	101,085	848,259
	%	66.6	21.5	11.9	100
2011	F	650,175	252,160	134,877	1,037,212
	%	62.7	24.3	13.0	100
2013	F	681,130	318,582	137,224	1,136,936
	%	59.9	28.0	12.1	100
2015	F	703,262	370,132	141,477	1,214,871
	%	57.9	30.5	11.6	100
2017	F	724,238	372,385	133,263	1,229,886
	%	58.9	30.3	10.8	100
2019	F	737,903	382,327	134,234	1,254,464
	%	58.8	30.5	10.7	100

Source: Gross Enrollment in the Higher Education System (CNED, 2021) <https://www.cned.cl/indicadores/matricula-sistema-de-educacion-superior>

**Table 2 Share of Tertiary Graduates in 2018 by Field of Study and Sex (%)**

Field of study	Total by area	Women	Men
Education	14	21	6
Arts and humanities	3	3	3
Social sciences, journalism and information	4	5	3
Business, administration and law	25	25	24
Natural sciences, mathematics and statistics	1	1	1

Information and Communication Technologies	3	1	6
Engineering, manufacturing and construction	17	5	32
Agriculture, forestry, fisheries and veterinary	2	1	2
Health and welfare	22	31	11
Services	9	8	11
<b>Total</b>	<b>100%</b>		

Source: OECD, 2020.

**Table 3 Enrollment in Tertiary Education in ISCED Programs**

Enrollment in tertiary education, both sexes	2014	2015	2016	2017	2018
ISCED 6: Bachelor's or equivalent	764133	770904	782588	789643	805053
ISCED 7: Master's or equivalent	89093	86658	89992	92962	96620
ISCED 8: Doctoral or equivalent	4775	5003	5354	5381	5789

Source: UNESCO Institute for Statistics (UIS), 2020.

**Table 4 Tertiary Graduates (ISCED 6 and 7) by Sex and Level of Education**

	Sex	2013	2014	2015	2016	2017	2018
<b>Bachelor's or equivalent level (ISCED 2011 level 6)</b>	Women	54.3	53.3	54.4	54.9	55.2	55.2
	Men	45.7	46.7	45.6	45.1	44.8	44.8
<b>Master's or equivalent level (ISCED 2011 level 7)</b>	Women	55.5	55.2	55.6	56.5	58.3	56.7
	Men	44.5	44.8	44.4	43.5	41.7	43.3

Source: OECD, 2020.

**Table 5 Doctoral Degrees (ISCED 8) by Sex**

	2013	2014	2015	2016	2017	2018
<b>Women</b>	45.9	45.5	45.0	41.0	43.9	42.6
<b>Men</b>	54.1	54.5	55.0	59.0	56.1	57.4

Source: OECD, 2020.

**Table 6 Enrollment in Doctoral Programs by Field of Knowledge in Chile**

Field of knowledge	2013	2014	2015	2016	2017
Education	216	235	244	223	244
Arts and Humanities	653	695	634	742	749
Social Sciences, Journalism and Information	462	489	476	479	467
Business, Administration and Law	138	192	174	251	247
<b>Natural Sciences, Mathematics and Statistics</b>	<b>1598</b>	<b>1569</b>	<b>1695</b>	<b>2022</b>	<b>2019</b>
Information and Communication Technologies	62	70	78	78	84
Engineering, Manufacturing and Construction	719	730	805	759	791
Agriculture, Forestry, Fisheries and Veterinary	331	363	381	363	355
Health and Welfare	293	427	512	433	412

Source: OECD, 2020.

**Table 7 Female Researchers as a Percentage of Total Researchers, by Sector of Employment (FTE and HC)**

		2013	2014	2015	2016	2017
<b>Female researchers as a percentage of total researchers - Business enterprise</b>	<b>FTE</b>	33.0	26.9	27.2	28.7	31.4
	<b>HC</b>	32.6	25.8	26.3	28.1	29.9
<b>Female researchers as a percentage of total researchers - Government</b>	<b>FTE</b>	42.1	37.0	41.6	40.3	39.4
	<b>HC</b>	41.8	37.7	41.9	41.8	40.5
<b>Female researchers as a percentage of total researchers - Higher education</b>	<b>FTE</b>	33.5	32.4	33.2	32.3	34.4
	<b>HC</b>	33.2	32.6	33.4	32.6	34.4
<b>Female researchers as a percentage of total researchers - Private non-profit</b>	<b>FTE</b>	38.4	35.3	36.9	42.0	41.1
	<b>HC</b>	39.1	34.1	37.6	42.3	42.2

Source: UNESCO, 2020.

**Table 8 Percentage of Female Teachers in Tertiary Education**

	2014	2015	2016	2017	2018
<b>Percentage of female teachers in tertiary education</b>	42.4	42.5	42.8	43.0	43.6

Source: National Council of Education (CNED, 2020).

**Table 9 GERD by Sector of Performance (%)**

Chile	2009	2010	2011	2012	2013	2014	2015	2016	2017
Business enterprise	29.32	29.62	34.04	34.43	35	33.38	34.3	37.69	34.24
Government	3.34	3.69	3.97	4.08	8.4	8.14	7.81	12.9	13.11
Higher education	39.81	38.53	32.41	34.27	39.32	38.96	38.53	43.06	<b>45.83</b>
Private non-profit	27.53	28.16	29.57	27.23	17.28	19.52	19.35	6.36	<b>6.82</b>
Not specified	-	-	-	-	-	-	-	-	-

Source: UNESCO Institute for Statistics (UIS), 2020

**Table 10 Researchers as percentage of R&D personnel**

Indicator	2013	2014	2015	2016	2017
<b>Researchers as a percentage of total R&amp;D personnel (FTE)</b>	<b>44.5</b>	<b>47.7</b>	<b>53.6</b>	<b>54.0</b>	<b>54.8</b>
<b>Researchers as a percentage of total R&amp;D personnel (HC)</b>	<b>50.4</b>	<b>51.9</b>	<b>57.2</b>	<b>56.8</b>	<b>57.9</b>

**Table 11 Researchers per Million Inhabitants, per Thousand Labor Force and per Thousand Total Employment (FTE and HC)**

	2013	2014	2015	2016	2017

Total R&D personnel per million inhabitants (FTE) <sup>*3</sup>	752.8	894.6	849.3	913.0	899.8
Total R&D personnel per million inhabitants (HC) <sup>*</sup>	1105.3	1335.9	1267.1	1371.1	1348.7
Total R&D personnel per thousand labor force (FTE) <sup>**4</sup>	1.5	1,8	1.7	1.8	1.8
Total R&D personnel per thousand labor (HC) <sup>**</sup>	2.3	2.7	2.6	2.8	2.7
Total R&D personnel per thousand total employment (FTE) <sup>***5</sup>	1.6	2.0	1.8	2.0	1.9
Total R&D personnel per thousand total employment (HC) <sup>***</sup>	2.4	2.9	2.7	3.0	2,.

Source: CEWS Template/UIS.

**Table 12 Total R&D Personnel by Sector of Employment (%)**

		2013	2014	2015	2016	2017
Total R&D personnel - Business enterprise	<b>FTE</b>	29.5	32.0	28.8	29.8	27.3
	<b>HC</b>	25.2	27.7	24.7	26.9	24.6
Total R&D personnel - Government	<b>FTE</b>	10.5	8.6	9.8	13.4	13.8
	<b>HC</b>	10.2	7.9	9.3	11.6	11.9
Total R&D personnel - Higher education	<b>FTE</b>	50.4	46.3	47.1	48.5	49.5
	<b>HC</b>	56.9	53.8	53.4	53.8	55.4
Total R&D personnel - Private non profit	<b>FTE</b>	9.6	13.0	14.3	8.4	9.4
	<b>HC</b>	7.7	10.6	12.7	7.8	8.0

Source: UNESCO Institute for Statistics (UIS), 2020.

<sup>3</sup> Number of R&D personnel during a given year divided by the total population (using mid-year population as reference) and multiplied by 1,000,000.

<sup>4</sup> Number of R&D personnel during a given year divided by the total labor force and multiplied by 1,000.

<sup>5</sup> Number of R&D personnel during a given year divided by the total number of employed people and multiplied by 1,000.

**Table 13 Student Structure by Sex**

Year	University			IP			CFT			Total		
	Women	Men	Percentage of women	Women	Men	Percentage of women	Women	Men	Percentage of women	Women	Men	Percentage of women
2009	21071	34189	38.1%	2287	3503	39.5%	2134	2704	44.1%	25492	40396	38.7%
2011	21271	31330	40.4%	5738	9471	37.7%	2176	2350	48.1%	29185	43151	40.3%
2013	26095	36886	41.4%	3882	5308	42.2%	2560	2368	51.9%	32537	44562	42.2%
2015	28287	39078	42.0%	6103	8522	41.7%	2960	3121	48.7%	37450	50721	42.5%
2017	29862	39513	43.0%	6927	10097	40.7%	2720	2687	50.3%	39509	52297	43.0%
2019	29748	38032	43.9%	6956	9568	42.1%	2964	2672	52.6%	39668	50272	44.1%

Source: National Council of Education (CNED, 2020).

**Table 14 Academic Staff Grade or Postdoctoral Researcher in Academia by Sex**

Academic staff grade	Sex	2011	2012	2013	2014	2015	2016	2017	2018
Doctor	Women	1.721	2.052	2.512	2.769	3.017	3.321	3.616	4.025
	Men	4.647	5.260	6.123	6.524	6.793	7.183	7.564	8.121
	Percentage of women	27.0%	28.1%	29.1%	29.8%	30.8%	31.6%	32.3%	33.1%
Master's	Women	5.584	6.535	7.493	8.964	9.536	10.480	10.815	11.609
	Men	8.249	9.163	10.272	11.978	12.635	13.452	13.873	14.241
	Percentage of women	40.4%	41.6%	42.2%	42.8%	43.0%	43.8%	43.8%	44.9%
Medical specialties	Women	1.244	1.226	1.506	1.752	1.803	2.115	2.168	2.269
	Men	2.221	1.946	2.416	2.802	2.936	3.277	3.314	3.404
	Percentage of women	35.9%	38.7%	38.4%	38.5%	38.0%	39.2%	39.5%	40.0%
Professional	Women	19.521	20.703	20.030	21.237	22.152	22.769	21.751	21.346
	Men	26.190	25.096	24.239	25.553	26.619	27.368	25.645	24.475
	Percentage of women	42.7%	45.2%	45.2%	45.4%	45.4%	45.4%	45.9%	46.6%
Technical	Women	735	636	460	690	739	839	737	746
	Men	1.169	1.292	830	1.302	1.425	1.609	1.448	1.346
	Percentage of women	38.6%	33.0%	35.7%	34.6%	34.1%	34.3%	33.7%	35.7%
Other	Women	380	895	536	460	203	659	422	187
	Men	675	1.180	682	635	313	799	453	289
	Percentage of women	36.0%	43.1%	44.0%	42.0%	39.3%	45.2%	48.2%	39.3%

Source: CNED, 2020.

**Table 15 Type of Contract in Universities**

Hierarchy level	Women	Percentage of women	Men	Total	% of total
Full-time	9.366	42.9%	12.465	21.831	32.2
Part-time	20.382	44.4%	25.561	45.943	67.8

Source: CNED, 2020.

**Table 16 International Agreements with Germany**

	2011	2012	2013
Competition for scientific exchange and collaboration projects CONICYT/DAAD	✓	✓	✓
Competition for scientific exchange and collaboration projects CONICYT/BMBF	✓	✓	✓
Competition for scientific exchange and collaboration projects CONICYT/DFG	✓	✓	✓
Thematic areas exchange contest - Helmholtz	-	✓	-

Source: Statistical compendium of CONICYT competitions, 2011–2013.

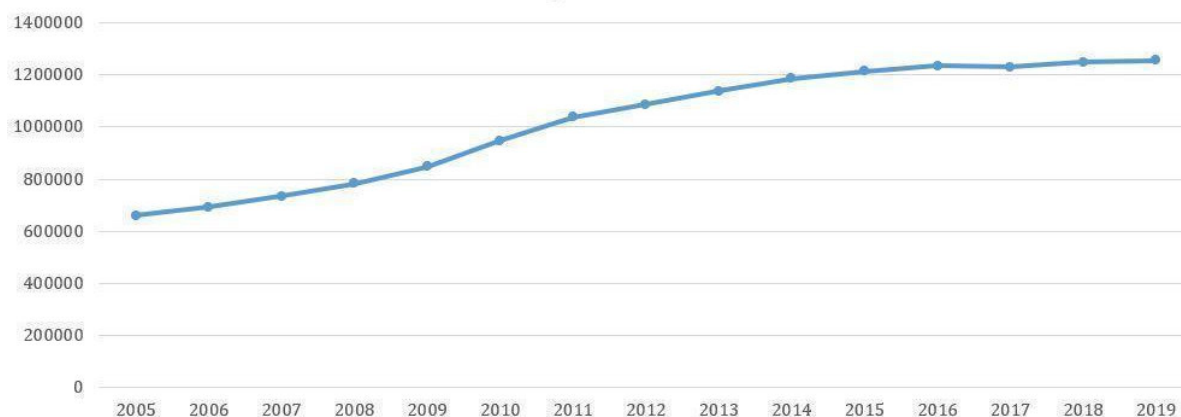
**Table 17 Development of the Number of Students Abroad in the Countries of Origin with the Greatest Increases and Decreases, 2015–2016**

	2015	2016	Variance in %
Country of origin	Frequency	Frequency	
Chile	13.679	14.067	2,8
Colombia	35.424	36.656	3,5
Mexico	30.699	33.693	9,8

Source: *Wissenschaft weltoffen* [Science open to the world] (German Academic Exchange Service, DAAD, 2019)

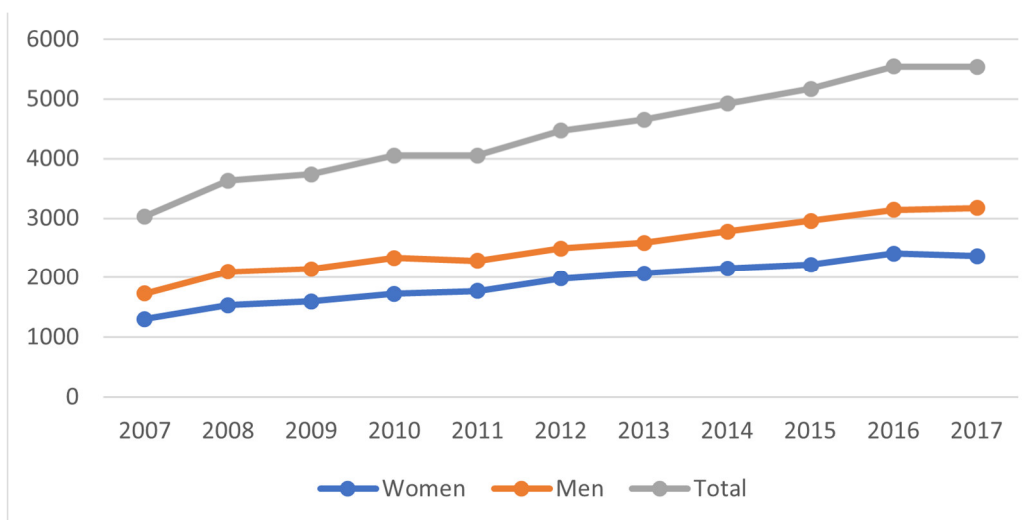
## Annex 2: Figures

**Figure 1 Enrollments in Chilean Higher Education 2005 - 2019**



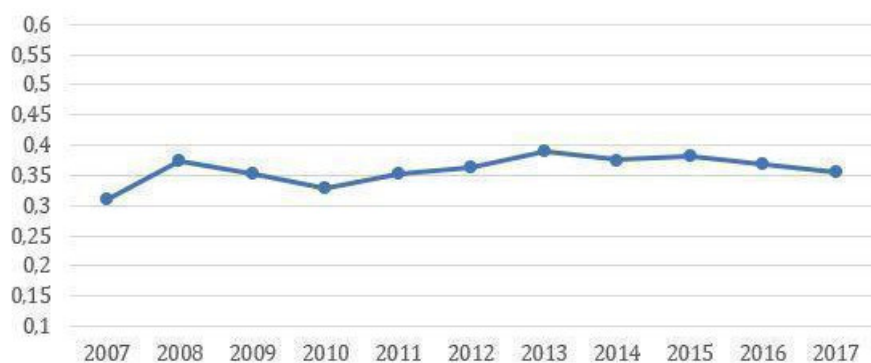
Source: National Council of Education (CNED, 2020).

**Figure 2 Doctoral Program Enrollment by Sex 2007 - 2017**



Source: Study Center, Mineduc, 2018.

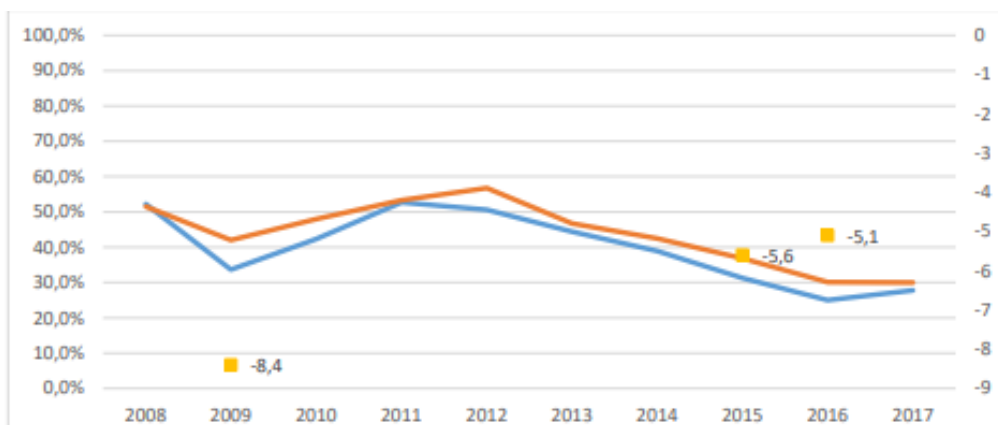
**Figure 3 Gross Domestic Expenditure on R&D (GERD) as a Percentage of GDP in Chile, 2007 - 2017**



Source: World Bank, 2020.



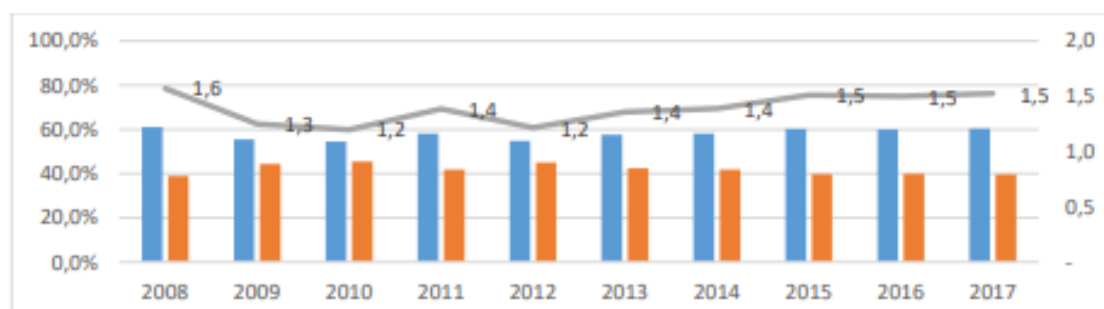
**Figure 4 Annual Awarded Rate between Men and Women and Significant Gaps in FONDECYT (%) 2008 - 2017**



MMM % Women MMM % Men — Significant Gap

Source: Unit of Studies, CONICYT (2018).

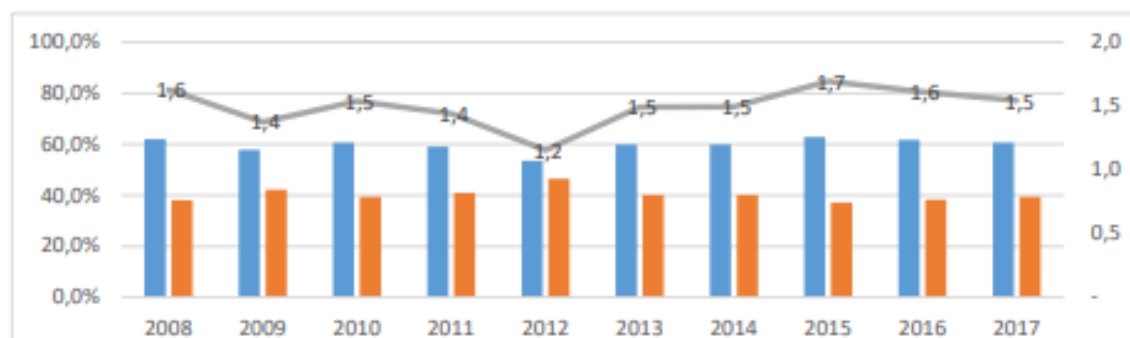
**Figure 5 Percentage of Female Participation in Admissible Research Projects and Masculinity Index**



MMM % Men MMM % Women ----- Masculinity index

Source: Unit of Studies, CONICYT (2018).

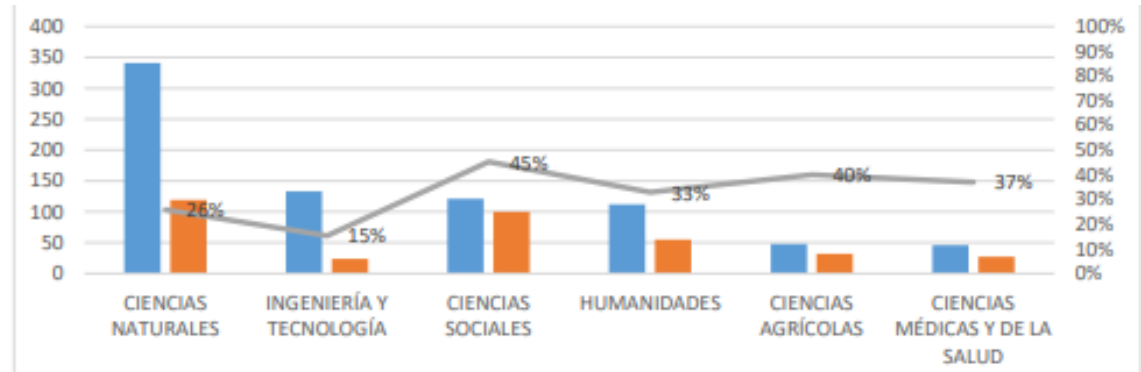
**Figure 6 Percentage of Female Participation in Awarded Research Projects and Masculinity Index**



MMM % Men MMM % Women — Masculinity index

Source: Unit of Studies, CONICYT (2018).

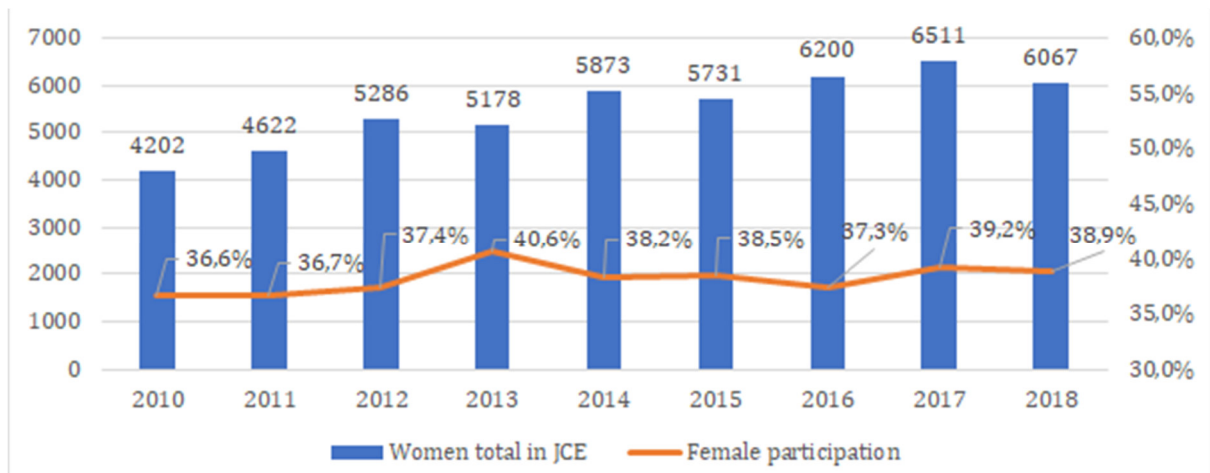
**Figure 7 Awarded Grants by Sex and Female Participation in FONDECYT (%) by OCDE area 2017**



MMM % Men MMM % Women — Female participation in awarded research projects 2017

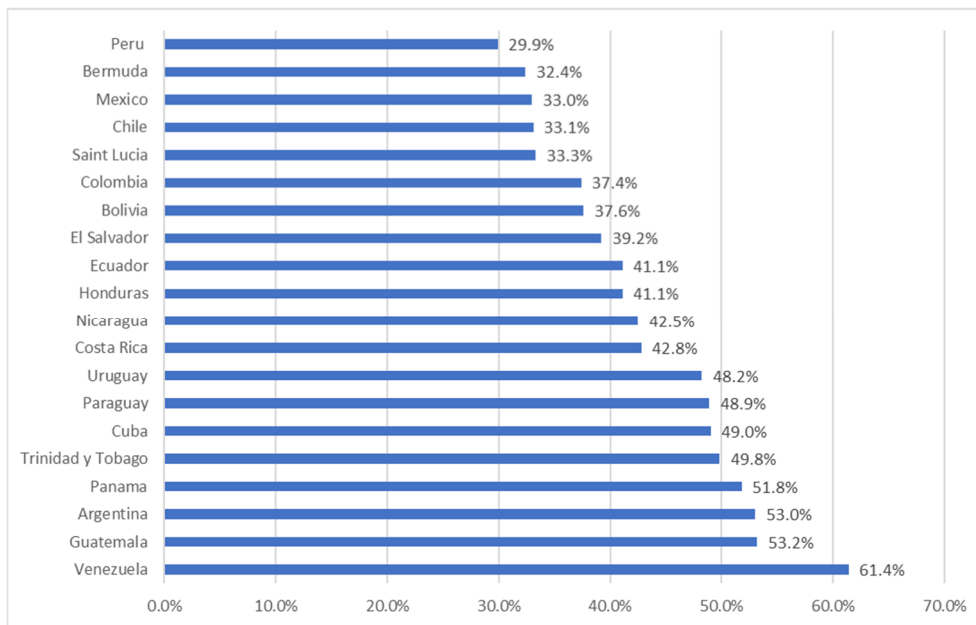
Source: Unit of Studies, CONICYT (2018).

**Figure 8 Women Total and Female Participation in I+D - Full Time (2010 - 2018)**



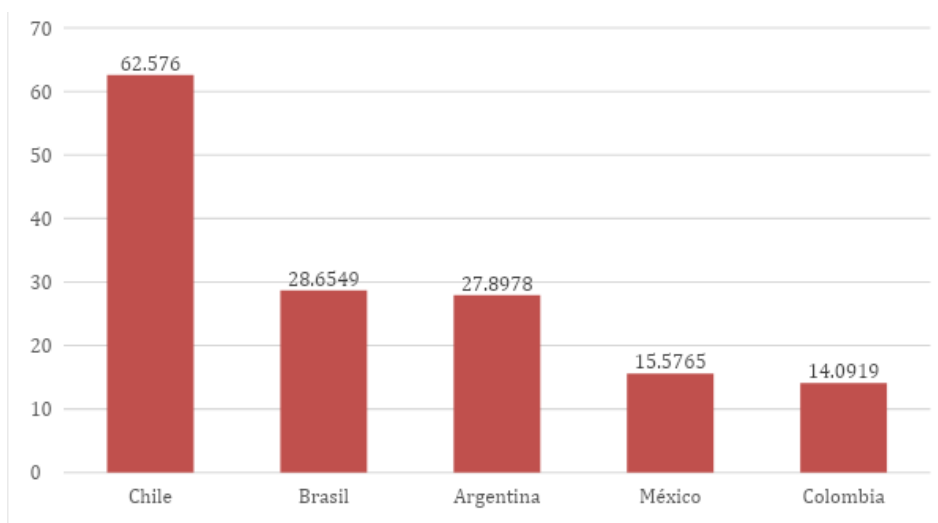
Source: Studies and Statistics, Ministry of Science, Technology, Knowledge and Innovation, 2020.

**Figure 9 Participation of Female Researchers in the Americas**

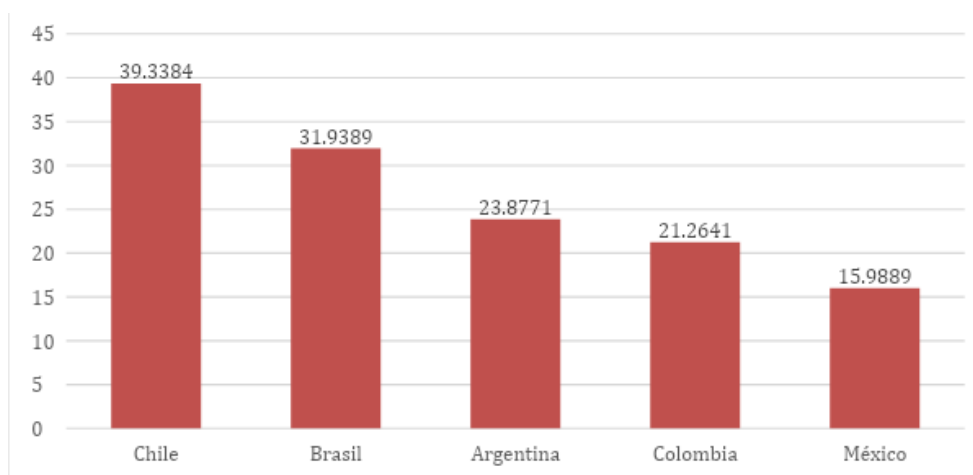


Source: UNESCO, 2019.

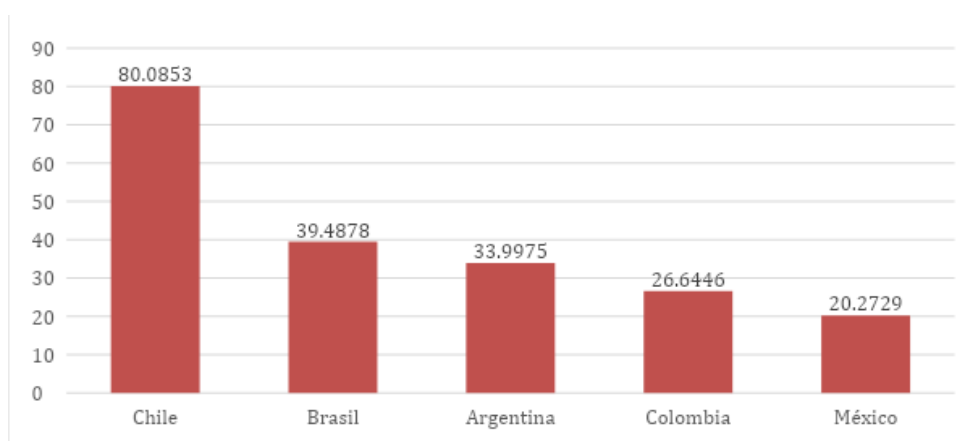
**Figure 10 Number of Articles per Inhabitant SCI, 2018**



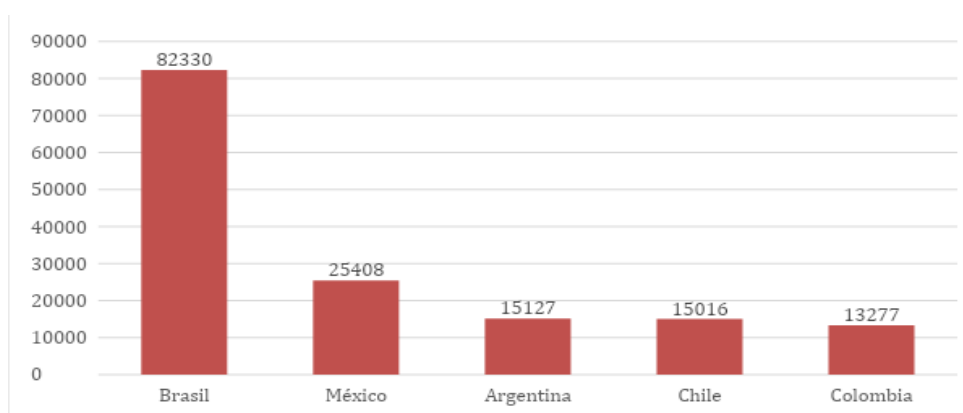
Source: Network for Science and Technology Indicators - Ibero-American and Inter-American - (RICYT), 2020.

**Figure 11** Number of Articles by GDP SCI, 2018

Source: Network for Science and Technology Indicators - Ibero-American and Inter-American - (RICYT), 2020.

**Figure 12** Number of Articles per Inhabitant SCOPUS, 2018

Source: Network for Science and Technology Indicators - Ibero-American and Inter-American - (RICYT), 2020.

**Figure 13** Number of Articles per Country SCOPUS, 2018

Source: Network for Science and Technology Indicators - Ibero-American and Inter-American - (RICYT), 2020.



## References

- Aequalis (2017) Participación femenina en cargos directivos en instituciones de educación superior chilena. Nota Técnica. Retrieved from <http://www.aequalis.cl/wp-content/uploads/2017/08/Participaci%C3%B3n-femenina-en-cargos-directivos-IES4.pdf>
- Baeza, P. (2017). Diversidad y diversificación en la oferta de programas de doctorado en Chile. *Calidad en la Educación*, (47), 179-214. <http://dx.doi.org/10.4067/S0718-45652017000200179>.
- Bernasconi, A. (2008). La profesionalización de la academia en Chile. *Calidad en la Educación*, (28), 15-27.
- Berrios, Paulina (2015) La profesionalización académica en Chile: crecimiento y profesionalización, In Bernasconi (ed.), *La Educación Superior de Chile. Transformación, Desarrollo y Crisis*, Ediciones UC: 345-370.
- Chiappa, R., & Muñoz-García, A. L. (2015). Equidad y capital humano avanzado: Análisis sobre las políticas de formación de doctorado en Chile. *Psicoperspectivas, Individuo y Sociedad*, 14(3), 17-30.
- Chiappa, R., & Mejías, P. (2019). Unfolding the direct and indirect effects of social class of origin on faculty income. *Higher Education*, 78(3), 529-555
- CNED (2020). *Índices Educación Superior: Planta Académica*. Consejo Nacional de Educación. Retrieved from: <https://www.cned.cl/indices/planta-academica>
- CONICYT (2014). Compendio estadístico: Concursos Conicyt 2011 - 2013. Retrieved from: <https://www.conicyt.cl/wp-content/uploads/2014/12/Compendio-Estad%C3%ADstico-2011-2013.pdf>
- CONICYT (2017) Política Institucional de Equidad de Género en Ciencia y Tecnología Período 2017-2025. Retrieved from: [https://www.conicyt.cl/wp-content/uploads/2015/03/Politica-Institucional-Equidad-de-Genero-en-CyT-Periodo-2017\\_2025.pdf](https://www.conicyt.cl/wp-content/uploads/2015/03/Politica-Institucional-Equidad-de-Genero-en-CyT-Periodo-2017_2025.pdf)
- CONICYT (2018). *Participación femenina en programas CONICYT 2017*. Comisión Nacional de Investigación Científica y Tecnológica, Unidad de Estudios. Retrieved from: <https://www.conicyt.cl/wp-content/uploads/2015/03/REPORTE-DE-PARTICIPACION-FEMENINA-2017-op-1.pdf>
- CONICYT (2020) Datos 2005 – 2019 [Base de datos] Obtenido de Coordinación de Transparencia y Lobby ANID
- Delisle, J. and Bernasconi, A. (2018). *Lessons from Chile's Transition to Free College*. Evidence Speaks Reports, Vol 2, #43. Economic Studies at Brookings. Retrieved from: <https://www.brookings.edu/wp-content/uploads/2018/03/delisle-and-bernasconi-report.pdf>

- Espinoza, O. (2017). Privatización de la educación superior en Chile: consecuencias y lecciones aprendidas, *EccoS Revista Científica*, 44, pp. 175-202.
- Espinoza, O.; Gonzalez (2015), L.E. Equidad en el Sistema de Educación Superior en Chile: Acceso, Permanencia, Desempeño y Resultados. In: Bernasconi A. (Ed.). *La Educación Superior de Chile: Transformación, Desarrollo y Crisis* (Capítulo XII). Santiago: Ediciones de la Universidad Católica de Chile, p.517-580.
- Flanagan, A. (2017). Experiencias de estudiantes de primera generación en universidades chilenas: realidades y desafíos. August 2017 *Revista de la Educación Superior (RESU)* 46(183).
- Geldres, V., Vásquez, F., Ramos, H. (2013) Internacionalización de la educación superior en Chile. Movilidad internacional de estudiantes en la Universidad de La Frontera *Revista Iberoamericana de Ciencia, Tecnología y Sociedad - CTS*, 8 (24), pp. 45-62
- German Academic Exchange Service (DAAD). (2019). Wissenschaft weltoffen 2019. DAAD. [http://www.wissenschaftweltoffen.de/publikation/wiwe\\_2019\\_verlinkt.pdf](http://www.wissenschaftweltoffen.de/publikation/wiwe_2019_verlinkt.pdf)
- Jackson, L., & Muñoz-García, A. L. (2019). Reaction is Not Enough: Decreasing Gendered Harassment in Academic Contexts in Chile, Hong Kong, and the United States. *Educational Theory*, 69(1).
- Jarpa-Arriagada, C; Rodríguez-Garcés, C. (2017). Segmentación y exclusión en Chile: El caso de los Jóvenes Primera Generación en Educación Superior, *Revista Latinoamericana de Ciencias Sociales, Niñez y Juventud*, 15 (1), pp. 327-34
- Lemarchand, G. A. (2012), The long-term dynamics of co- authorship scientific networks: Iberoamerican countries (1973–2010), *Research Policy*, 41: 291-305.
- Linne, Joaquín (2018). El Deseo de Ser Primera Generación Universitaria. Ingreso y Graduación en Jóvenes de Sectores Populares. *Revista Latinoamericana de Educación Inclusiva* 12 (1), pp.129-147.
- Mandiola, M., Ríos, N., & Varas, A. (2019). “Hay un tema que no hemos conversado” La casata como organización académica generizada en las universidades chilenas. *Pensamiento Educativo. Revista de Investigación Educativa Latinoamericana*, 56(1), 1-16.
- Mineduc (2021). *Bases de datos de oferta académica*. Subsecretaría de Educación Superior del Ministerio de Educación. Retrieved from: <https://www.mifuturo.cl/bases-de-datos-de-oferta-academica/>
- Mineduc (n.d.). Consejo de Rectores: ¿Qué es el Consejo de Rectores? Retrieved from: <https://www.ayudamineduc.cl/ficha/consejo-de-rectores-5>
- Mineduc. (2019). *Hacia la equidad de género en órganos directivos de la educación superior*. Santiago, Chile Retrieved from <https://equidaddegenero.mineduc.cl/>
- MinCiencia. (2020). Política Nacional de Ciencia, Tecnología, Conocimiento e Innovación. Santiago, Chile, Retrieved from: <https://www.minciencia.gob.cl/politicactci/>

- Ministry of Science, Technology, Knowledge and Innovation (2020). *Encuesta de I+D: Resultados año de referencia 2018 y mejoras a futuro*. Gobierno de Chile. Retrieved from: <http://ctie.economia.cl/wp-content/uploads/2020/03/Webinar-Resultados-ID-20200507.pdf>
- Muñoz-García, A. L., & Bernasconi, A. (2020). Reassessing the Progress of Doctoral Education in Chile. In M. Yudkevich, P. G. Altbach, & H. d. Wit (Eds.), *Trends and Issues in Doctoral Education: A Global Perspective*: Sage.
- Munoz-Garcia, A. L., & Chiappa, R. (2016). Stretching the academic harness: knowledge construction in the process of academic mobility in Chile. *Globalisation, Societies and Education*, 14(4), 1-13.
- Munoz-Garcia, A. L., & Lira, A. (2019). Teorización feminista y la interrupción del status quo en la construcción de conocimiento en Chile. In A. Carrasco & L. Flores (Eds.), *De la Reforma a la Transformación: Capacidades, innovaciones y regulación de la educación chilena* (pp. 299-322). Santiago: Ediciones UC.
- Muñoz-García, A. L., Follegati, L., & Jackson, L. (2018). Protocolos de acoso sexual en universidades chilenas: Una deuda pendiente. *Policy Briefs*(20), 1-6.
- OECD. (2017). *Education at a Glance 2017: OECD Indicators*.
- OECD, & World-Bank. (2010). *Reviews of National Policies for Education: Becas Chile scholarship program*. Paris: OECD.
- Santelices, B. (2015). Estado actual del desarrollo de la investigación científico-tecnológica y la innovación en las universidades chilenas. Chile: CPU-Maval Ltda.
- SIES (2020). *Informe 2020: Matrícula en Educación Superior, Julio 2020*. Santiago, Chile: Mineduc. Retrieved from: [https://www.mifuturo.cl/wp-content/uploads/2020/07/Informe-matricula\\_2020\\_SIES.pdf](https://www.mifuturo.cl/wp-content/uploads/2020/07/Informe-matricula_2020_SIES.pdf)
- SIES (2019). *Informe Personal Académico en Educación Superior 2019*. Sistema de Información de Educación Superior, Ministerio de Educación, Chile. Retrieved from [https://www.mifuturo.cl/wp-content/uploads/2019/11/Informe-Personal-Academico-2019\\_SIES-1.pdf](https://www.mifuturo.cl/wp-content/uploads/2019/11/Informe-Personal-Academico-2019_SIES-1.pdf)
- Simbürger, E. y Neary, M. (2016) Taxi Professors: Academic Labour in Chile, a critical-practical response to the politics of worker identity. *Workplace: A Journal for Academic Labour* 28: 48-73.
- Tornero, B., Epstein, L. y Vicuña, M. I. (2016). Consistencia entre percepciones de estudiantes sobre la calidad de sus doctorados y la evaluación de CNA. Cuadernos de investigación. Aseguramiento de la calidad en Educación Superior (3). Santiago de Chile: Comisión Nacional de Acreditación (CNA). Recuperado de: [https://www.cnachile.cl/Biblioteca%20Documentos%20de%20Interes/Cuaderno%203\\_Tornero-Digital.pdf](https://www.cnachile.cl/Biblioteca%20Documentos%20de%20Interes/Cuaderno%203_Tornero-Digital.pdf).



Trading Economics (2020). *Chile - School Enrollment, Tertiary (% Gross)*. Retrieved from: <https://tradingeconomics.com/chile/school-enrollment-tertiary-percent-gross-wb-data.html>

Walczak, M., Detmer, A., Zapata, G., Lange, M. y Reyes, M. (2017). Acreditación de doctorados vinculados a la industria: análisis de buenas prácticas internacionales y lineamientos para su desarrollo en Chile. Cuadernos de investigación. Aseguramiento de la calidad en Educación Superior (8). Santiago de Chile: Comisión Nacional de Acreditación (CNA). Recuperado de: [https://www.cnachile.cl/Biblioteca%20Documentos%20de%20Interes/Cuaderno\\_Walczak.pdf](https://www.cnachile.cl/Biblioteca%20Documentos%20de%20Interes/Cuaderno_Walczak.pdf).

UNESCO Institute for Statistics (UIS) (2019). *Women in Science*. Fact Sheet No. 60

June 2020 FS/2020/SCI/60. Retrieved from <http://uis.unesco.org/sites/default/files/documents/fs60-women-in-science-2020-en.pdf>

UNESCO Institute for Statistics (UIS) (2020). *Chile - Science, Technology and Innovation*. Retrieved from: <http://uis.unesco.org/en/country/cl?theme=science-technology-and-innovation>

World Bank (2020). *Expenditure on tertiary education (% of government expenditure on education) - Chile, Colombia*. Retrieved from: <https://data.worldbank.org/indicator/SE.XPD.TERT.ZS?locations=CL-CO>

## Humboldt's template

	<i>Indicador</i>	<i>Chile</i>	<i>Colom- bia</i>	<i>Mexico</i>
1	Gross domestic expenditure on R&D (GERD) as a percentage of GDP	✓	✓	✓
2	GERD by sector of performance	✓	✓	✓
3	Government expenditure on education as a percentage of GDP	✓	✓	✓
4	Expenditure for tertiary education as a percentage of total government expenditure on education	✓	✓	✓
5	Population (25+ years) by at least bachelor or equivalent (ISCED 6 or higher)	✓	✓	✓
6	Doctoral degrees (ISCED 8) as percentage of all graduates from tertiary education	✓	✓	✓
7	Total R&D personnel per millions inhabitants, per thousand labor force and/or per thousand total employment	✓	<i>No data</i>	✓
8	Researchers as percentage of R&D personnel	✓	<i>No data</i>	✓
9	Total R&D personnel by sector of employment	✓	<i>No data</i>	✓
10	Tertiary graduates (ISCED 6+7) by sex and level of education	✓	✓	✓
11	Tertiary graduates by field of study and sex	✓	✓	✓
12	Gender Parity Index (GPI) at least bachelor's or equivalent (ISCED 6 or higher), population 25+ years, gender parity index (GPI)	✓	✓	✓
13	Doctoral degrees (ISCED 8) by sex	✓	✓	✓
14	Percentage of female teachers in higher education	✓	✓	<i>No data</i>
15	Percentage of female researchers by sector of employment	✓	✓	<i>No data</i>
16	Academic staff grade or postdoctoral researcher in academia (R2 or Grade C) by sex	✓	✓	<i>No data</i>
17	Senior academic staff (grade A/R4), by field of science and sex	<i>No data</i>	<i>No data</i>	<i>No data</i>