



POSITION PAPER

Becas Chile Scholarship: When Bureaucracy Jeopardises Contribution.

Addressing Challenges and Opportunities in the Becas Chile Postgraduate Scholarship Program.

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Abstract

The Becas Chile scholarship programme, established to advance Chile's scientific and cultural development through graduate studies abroad, faces critical challenges in achieving its founding objectives. Despite significant investments in human capital, the programme's rigid return policy hinders the effective contribution of scholars into Chile's academic and professional ecosystems, leading to inefficiencies and underutilisation of their expertise. This position paper critiques the current framework, arguing for a flexible shift. Drawing from international best practices, such as Germany's DAAD programme and recent survey data highlighting spontaneous professional activities that could be considered contribution efforts among scholarship holders and alumni. The paper proposes comprehensive reforms. These include developing strategic reintegration plans, flexible contribution mechanisms, and retroactive policy adjustments to address systemic inequities while maximizing benefits for Chilean society. By prioritizing dynamic global collaboration over bureaucratic compliance, Becas Chile can better align with its mission to foster national development while maximising the global potential of its scholars. The proposed reforms aim to transform Becas Chile into a world-class programme, integrating global standards with localised needs to ensure equity and effectiveness in its contributions to Chile's socio-economic advancement.

Keywords

Becas Chile, brain drain, brain waste, internationalisation, human capital.

Resumen

El programa Becas Chile, creado para promover el desarrollo científico y cultural de Chile a través de estudios de posgrado en el extranjero, enfrenta desafíos críticos para lograr sus objetivos fundacionales. A pesar de las notables inversiones en capital humano, la rígida política de retorno y retribución del programa obstaculiza la contribución efectiva de los académicos a los ecosistemas profesionales de Chile, lo que genera ineficiencias y subutiliza su experiencia. Este documento de posición critica el marco actual y aboga por un cambio hacia la flexibilidad. Basándose en las mejores prácticas internacionales, como el programa DAAD de Alemania, y en datos de encuestas recientes que destacan actividades profesionales que podrían considerarse como esfuerzos de retribución voluntaria entre los becarios, el documento propone reformas integrales. Estas incluyen el desarrollo de planes estratégicos de reintegración, mecanismos de retribución flexibles y ajustes retroactivos de políticas para abordar las fallas sistémicas maximizando el aporte a la sociedad Chilena. Al priorizar la colaboración global dinámica por sobre el cumplimiento burocrático, Becas Chile puede alinearse mejor con su misión de fomentar el desarrollo nacional y, al mismo tiempo, maximizar el potencial global de sus protagonistas. Las reformas propuestas apuntan a transformar Becas Chile en un programa modelo, integrando estándares globales con necesidades localizadas para asegurar la efectividad en sus contribuciones al avance socioeconómico de Chile.

Palabras clave

Becas Chile, fuga de cerebros, desperdicio de cerebros, internacionalización, capital humano.

Introduction

The Becas Chile programme, launched in 2008 during President Michelle Bachelet's administration, and governed by the Supreme Decree 664, Ministry of Education (2009) aimed to develop advanced human capital by offering scholarships to pursue postgraduate studies abroad.¹ This initiative would enhance Chile's scientific, technological, and cultural landscape by training highly skilled researchers in top global research institutions.

The economic term "advanced human capital" used by the Chilean Ministry of Science, Technology, Knowledge, and Innovation (abbreviated in Spanish as CTCI) has no equivalent in any other programme run by other Latin American countries.² For example, the Peruvian PRONABEC through CONCYTEC, which is part of a project called "Innovation for competitiveness", aims "to work to achieve a more equitable society, pro-

¹ "Decree 664/2008 of the Ministry of Education and its modifications, is the norm that regulates the Chile Scholarships administered by ANID (CONICYT), for studies abroad". See Agencia Nacional de Investigación y Desarrollo 2023 and Biblioteca del Congreso Nacional de Chile 2022.

² Becas Chile is one of the top scholarship providers in Latin America. Although other Latin American scholarships share similar characteristics of offering the opportunity to study at the universities with higher ranking in the world, they vary in number and coverage, and they emphasise different objectives with similar but not equivalent purposes. I will mention some programmes here:

- COLCIENCIAS by the Colombian government and GuateFuturo by a Guatemalan non-profit foundation that support the National Government of Guatemala: this support is specified as a credit and not as a scholarship created by the state. See Gobierno de Colombia 2024 and Guatefuturo 2024.
- CONAHCYT by the Mexican government: their objective is to "strengthen the academic communities", in order to benefit the country. See Gobierno de México 2024.
- Becas del Estado Plurinacional de Bolivia: The objective of this scholarship is to "promote specialised training in order to strengthen and develop the scientific, technological and productivity of the country". See Gobierno de Bolivia 2023.
- Becas de Posgrado en el Exterior by the government of Argentina: Their objective is "to train, develop and link the scientific community" in order to consolidate the country's strategies and capacities that can meet the country's needs and priorities. This program is nowadays under reformulation. See Gobierno de Argentina 2022.
- CONACYT by the government of Paraguay: This scholarship does not have an explicit objective or purpose, but it says that is in line with the National Education Plan 2024, which considers the education of the people to be fundamental in order for them to be original and active protagonists in the construction of the socio-cultural context of contemporary Paraguay (2.5.1). See Gobierno de Paraguay 2024a and Gobierno de Paraguay 2024b.
- Other countries, such as Ecuador, Venezuela, Panama, Costa Rica, Guyana (through the Commonwealth), and Uruguay, also offer scholarships, but these are few in number and are the result of negotiations and agreements with specific universities in specific countries, and in some cases are only targeted at some specific sub-areas, rather than being part of a national plan.

moting access, permanence and completion of quality higher education for talented people with limited economic resources";³ the Brazilian CAPES programme is called Science without Frontiers, and it aims "to expand and internationalise science".⁴ The term "human capital", as emphasized by Becas Chile, reflects the perspective that training researchers represent an investment for Chile. In other words, the country invests in selected researchers expecting a return in scientific productivity (income), considered "advanced knowledge".

Recently, Chile's Ministry of CTCI presented to the DIPRES (Budget Department of Chilean Government) a requirement for reformulation of the Becas Chile programme, to enable flexibilization of the scholarship return requirements for future calls. It is important to note that under the terms of their scholarship agreements, scholar holders are currently required to return and reside in Chile (also called "return and retribution", in clause 25 in the decree 664).⁵ The document of DIPRES states the program aims to contribute to increasing the advanced human capital of the country, in alignment with the National Strategy of Science, Technology, Knowledge, and Innovation for Development of Chile. "Human capital" is considered an essential supply to sustain technological innovation and long term growth. This document also recognises the commendable efforts of the Ministry to increase the number and quality of doctoral programmes offered in Chile and the participation of doctors in the CTCI ecosystem.⁶ Nevertheless, these capabilities remain insufficient, hindered by Chile's low investment in science and technology, which amounts to just 0.36% of its gross domestic product. They argue that there is a threshold for the Ph.D. holders' population, making reaching social and economic development as a globalized country difficult.⁷ However, despite these objectives and intentions, framed economically, the Becas Chile programme faces significant challenges in leveraging its investment to boost productivity. A significant challenge is incorporating the scholar holders upon their return into Chile's professional and academic sectors, given that the national infrastructure cannot absorb the increasing supply of new, highly skilled researchers locally, like in other developing countries (Nerad 2020). The lack of insertion opportunities has been aggravated this

³ About PRONABEC, see Gobierno de Perú n.d. CONCYTEC expresses that its specific objective is "strengthening human resources capacities", see the terms and conditions of the competition at Gobierno de Perú 2024.

⁴ See Gobierno de Brasil 2023.

⁵ In Spanish, the term used for return and contribution to the country is "retribución", which is similar to the English word "retribution". However the English meaning of "retribution" is not exactly the same as the Spanish "retribución". Therefore, in this paper, we will use the term "contribution" or "return" instead of "retribution", even though these terms are not entirely synonymous with the Spanish word "retribución".

⁶ As formulated by the Min CTCI (2024) to the Budget Department of the Government of Chile in the section 2 of the document of reformulation of the decree Number 664 that regulates Becas Chile programme. See DIPRES-Gobierno de Chile 2024.

⁷ *ibid.*

year due to the large number of dismissals in major universities resulting from a financial crisis in superior education establishments.⁸

This position paper, which represents the point of view of a group of scholarship holders and alumni gathered within the initiative "Investigador@s Becas Chile",⁹ highlights the opportunity for the Ministry of CTCI and the National Agency for Research and Development (ANID) to refine its policy adjustments, recently discussed in the DIPRES and presented to the Chilean Congress, ensuring they effectively address the reintegration challenges and to better support researchers in their mission of contributing to national development. We state that the absence of a comprehensive return plan essentially undermines the programme's initial purpose of harvesting advanced knowledge that can be applied along with the programme for Productive Sustainable Development. Furthermore, we propose to use the capacity installed abroad by current fellows and alumni as a platform to foster internationalisation without sacrificing their potential. Current legislation assumes that the mere return of fellows to the geographical boundaries of the country for a specified period of time will automatically lead to development. However, the enforcement of a forced return and its accompanying mobility restrictions, as well as the inflexible requirement for retribution, undermine the programme's objectives. This requirement, evidenced solely by a Chilean Police Arrival/Departure Record, lacks mechanisms to ensure minimum conditions and resources that will enable researchers to make an effective contribution to the country's advanced knowledge (Chiappa and Rowe 2016).

Counter Arguments from Policymakers

Proponents of the current policies argue that prioritizing return obligations prevents the so-called "brain drain", a phenomenon in which highly qualified professionals migrate abroad and fail to contribute to national development (British Council and DAAD 2014; Perna et al. 2014). Additionally, the increasing number of national PhD programmes aligns with the OECD's recommendation to raise the proportion of PhD holders within the Chilean population. While the "brain drain" is a documented concern in various Latin American countries, there is no clear evidence to affirm it reflects the current reality of Chilean demographics and needs. On the other hand, the growing PhD holders population is not accompanied by corresponding legislation to ensure a proportional increase in academic and industrial positions, resulting in an increase of unemployment among highly qualified professionals and, therefore, in a significant waste of public investment.¹⁰ To address this current issue, ANID has emphasised its efforts to implement incremental improvements, such as establishing a Department of Reinser-

⁸ Emol 2024; Tercera 2024

⁹ Investigador@s Becas Chile 2024

¹⁰ In 2018, Ciper Chile denounced the lack of a serious mechanism to measure the rate of unemployment in the academic sector. Currently, this situation has not changed, but the crisis has been revealed by

tion and Retribution, developing a monitoring mechanism to ensure compliance with scholarship requirements,¹¹ which, in the case of Becas Chile, is solely focused on the return and residency in Chile. Nevertheless, recent OECD (2024) figures show that Chile invests just 0.36% of its gross domestic product in science and technology (S&T), positioning it among the lowest investors in this sector within the OECD.

The recently formed Ministry of Science and Technology has defended its current policies by affirming that: 1) the existing framework fulfills its contractual obligations; 2) the return and residency requirement is essential to ensuring Chile benefits from its investment in advanced human capital; 3) to maintain the integrity of the process, new policies can only be applied prospectively, not retroactively.¹²

Our Position

While the concern about "brain drain" translated into limited mobility of Becas Chile beneficiaries is valid (Feld 2021), this statement reinforces a territorial and geographical view of human capital's contribution that is completely outdated. It assumes that contributions to Chile's development, such as knowledge exchange, research impact and advancement, are territorially bound and limited to geographic borders. Adopting a borderless and flexible approach to the contribution of human capital to Chile's development is crucial for three reasons: 1) because of the globalised nature of research; 2) due to a lacking regulatory body to support reinsertion, combined with the country's limited investment in research and innovation; 3) due to social and demographic shifts in careers and employment patterns.

First, with regard to the globalised nature of research and innovation, the focus on compulsory physical return undermines the evolving nature of work and employment in contemporary academic and professional research settings. The current requirement to return, along with significant restrictions on mobility, is outdated in terms of new technologically mediated work paradigms such as teleworking, mobile working and digital work experiences (Meret et al. 2011). This view also overlooks the potential benefit of remote collaboration and, more importantly, undermines a fundamental aspect of healthy scientific activity: the mobility to collaborate and generate new ideas for the common benefit of societies. Sugimoto et al. (2017) highlight that "brain circulation"—the mobility of academics and researchers—does not cut ties with their country of origin. On the contrary, this helps them to create networks and strengthen professional affiliations, enhancing their relationship to their country, and encouraging future return. Evidence shows that researchers living abroad receive 40% more citations than

the media through the many scandals of dismissals in institutions (Emol 2024). Also see Ciper Chile 2018.

¹¹ Gobierno de Chile 2024

¹² *ibid.*

those who remain in their home country (OECD 2016) thereby increasing the visibility of Chile's economic and technological interests and integrating its scientific and cultural activities into global networks. Furthermore, effective collaboration among researchers with diverse backgrounds and from multiple settings is key for research and innovation (Bailey et al. 2018). In other words, diversity and international collaboration are pivotal for development.

Our second argument, focused on regulation and investment, exposes that the current policy fails to account for global best practices in reintegration policies. This is particularly relevant as evidence from studies on migration suggests that, due to an absence of institutional, regulatory, and systemic support, highly skilled individuals are often relegated to low-skilled jobs despite their advanced qualifications (Subedi and Rosenberg 2016). This issue is exacerbated by Chile's limited investment in science, technology, research and innovation, underscoring a significant challenge in the absorption of "human capital". From this perspective, Chile's problem is not "brain drain" but "brain waste". Therefore, new policies should address this issue and promote the exchange of Chilean nationals with the international research community, as demonstrated by Germany's KAAD and DAAD international programmes (Krannich and Hunger 2024). Moreover, ANID's newly proposed policies exclude past beneficiaries, creating an inequitable system that disregards those who have significantly contributed to establishing and expanding Chile's international scientific networks.

A 2024 survey of 645 Becas Chile scholarship holders and alumni revealed that over 95% of respondents voluntarily engaged in contribution activities. These activities included securing international research funding, fostering collaborations with Chilean institutions, and promoting Chilean academic presence abroad. These findings highlight a critical shortcoming of current policies, which fail to effectively integrate Chilean scientific contribution and public interest into global networks. Instead, ANID, concerning this programme, primarily functions as an administrative entity that prioritizes bureaucratic control and the obligation to reside on national soil over fostering organic and dynamic contributions. In addition, this survey showed that Becas Chile beneficiaries abroad have conducted over 9,000 giving-back activities (Pérez Martínez et al. 2024).

Third, from the perspective of sustainable work and employment, the current limited mobility approach is based on assumptions about linear careers development (O'Neill and Jepsen 2019), where human capital specialises abroad and returns within a time-frame. Such an outdated and rigid approach fails to recognise the dynamic nature of innovation and S&T careers, as well as the growing significance of postdoctoral roles, which are characterised by mobility, cooperation and research development spans that can last years, if not decades. Moreover, from the perspective of social inequalities, such a restrictive approach unequally impacts minorities and traditionally underprivileged groups, such as women and people with caring responsibilities. The evidence from the 2024 survey for Becas Chile scholarship holders and alumni revealed that 53.9% of the

645 survey respondents are female. Moreover, 197 respondents (almost 30% of the total) have or had caring responsibilities (Pérez Martínez et al. 2024). This data unveils their diverse demographic characteristics. A geographically and chronologically restricted approach assumes that human capital is homogenous and shares similar life patterns. Regulations and social policies that overlook demographic and personal differences not only neglect these key issues but have also been proven to be structurally discriminatory for these groups. This results in genuine barriers to individual career progression and hinders the broader goal of achieving decent work and socially just, sustainable and equitable societies (Rodriguez and Scurry 2014; Yerby 2020).

Conclusion

Scientific evidence shows that the current model of return and contribution, which relies solely on the obligation for scholars to return and reside within national territory, wastes the program's economic and technological value by limiting its capacity to generate income through advanced knowledge. This approach risks the loss or under-utilisation of the value generated by the international networking of past, present and future scholars ("brain waste"), rather than causing a "brain drain" argued by the Ministry.

Currently, the lack of a comprehensive reintegration plan, the enforcement of a rigid return policy, and the disregard for global collaboration potential of Becas Chile researchers severely undermine the effectiveness of the Becas Chile programme and its contribution to the country's development. In other words, the program launched in 2008, including its return policy, exhibits weaknesses that hinder the achievement of its objectives, together with a lack of recognition of the globalised nature of research, a limited regulatory framework and investment in research and innovation, and the neglect of modern professional, demographic, and labor practices.

Sending scholars abroad without establishing pathways for meaningful integration into academic or governmental institutions and industries after completing their programs creates a misalignment between the specific goal of the program and its impact in Chilean society. The absence of a specific mechanism to facilitate reintegration of these scholars into the Chilean labor market or the Science, Technology, and Innovation sector forces them to face significant barriers when integrating their expertise upon returning, resulting in wasted potential and economic inefficiencies. Furthermore, this model exacerbates inequalities for traditionally excluded groups, such as women and caregivers, by assuming that the group of beneficiaries is homogeneous and must follow the same upward professional and life path. This approach fails to account for factors such as maternity and paternity leave, unemployment, illness, and other life circumstances.

The spontaneous and voluntary scientific and cultural activities carried out by Becas Chile scholars, as reported in the 2024 survey, demonstrate that ANID could, with a minimal investment, effectively implement an alternative and innovative approach to obtain impactful benefits from the international scientific and cultural community fostered by the Becas Chile program. This could be achieved by internationalising Chile's national scientific community and expanding its economic and scientific interests through the global networks established by its international Becas Chile scholars.

Therefore, we believe it is essential to first establish a solid retribution plan that prioritises the development of professional careers in a context where knowledge, science, and technology are in continuous evolution. Taking this into account, these new policies should be applied retroactively to include current Becas Chile beneficiaries and alumni. This approach would ensure equity and, more importantly, harness the contributions of scholars already integrated into some of the world's best ranked institutions in their corresponding fields, thereby increasing the program's impact on society. Additionally, it is necessary to implement a system that allows for the identification and evaluation of scholars' contributions in the short and long term, focusing on measurable outcomes, regardless of whether the researcher is located within national territory or abroad. This would replace the current inflexible retribution system, which is sustained by bureaucracy and primarily focused on restricting the mobility of researchers.

By implementing these measures, Chile can transform the Becas Chile program into a driving force for global collaboration, capitalizing on the expertise of its scholars while simultaneously fostering national development.

To date, the strict adherence to historical regulations fails to account for the evolving and dynamic nature of international academic practices. Notably, previous amendments to the original decree have successfully addressed changing circumstances, showing the practicality and legitimacy of the implementing retroactive policy adjustments. Expanding such measures to include reintegration policies would promote equity and enhance the overall effectiveness of the program. This perspective does not call for the elimination of the obligations but advocates for the introduction of alternative retribution mechanisms and the modernisation of an otherwise outdated framework.

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