

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

**PARAGUAY**

**STRENGTHENING THE “DON CARLOS ANTONIO LÓPEZ” NATIONAL  
SCHOLARSHIP PROGRAM FOR POSTGRADUATE STUDIES ABROAD**

**(PR-L1157)**

**LOAN PROPOSAL**

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## ABBREVIATIONS

AFD	Agencia Financiera de Desarrollo [Development Finance Agency]
AHC	Advanced human capital
BCP	Banco Central de Paraguay [Central Bank of Paraguay]
BECAL	Programa Nacional de Becas de Posgrado en el Exterior “Don Carlos Antonio López” [“Don Carlos Antonio López” National Scholarship Program for Postgraduate Studies Abroad]
CONACYT	Consejo Nacional de Ciencia y Tecnología [National Science and Technology Council]
EIEP	Encuesta de Innovación Empresarial de Paraguay [Survey of Business Innovation in Paraguay]
FEEI	Fondo Fiduciario para la Excelencia de la Educación e Investigación [Trust Fund for Education and Research Excellence]
ICAS	Institutional Capacity Assessment System
ICB	International competitive bidding
IRR	Internal rate of return
LCO	Licitación por Concurso de Ofertas [Competitive bidding system]
MSMEs	Micro, small, and medium-sized enterprises
NPV	Net present value
RICYT	Science and Technology Indicators Network
SBE	Subasta a la Baja Electrónica [Electronic reverse auction]
SCSP	Sistema de Contrataciones del Sector Público de la República del Paraguay [Public Procurement System of the Republic of Paraguay]
SIAF	Sistema Integrado de Administración Financiera [Integrated Financial Administration System]
SICO	Sistema integrado de contabilidad [Integrated accounting system]
STP	Secretaría Técnica de Planificación del Desarrollo Económico y Social [Technical Secretariat for Economic and Social Development Planning]

## PROJECT SUMMARY

### PARAGUAY STRENGTHENING THE “DON CARLOS ANTONIO LÓPEZ” NATIONAL SCHOLARSHIP PROGRAM FOR POSTGRADUATE STUDIES ABROAD (PR-L1157)

Financial Terms and Conditions				
<b>Borrower:</b>			<b>Flexible Financing Facility<sup>(a)</sup></b>	
Republic of Paraguay			<b>Amortization period:</b>	24 years
<b>Executing Agency:</b>			<b>Disbursement period:</b>	6 years
The borrower, through the Ministry of Finance			<b>Grace period:</b>	6.5 years <sup>(b)</sup>
<b>Source</b>	<b>Amount (US\$)</b>	<b>%</b>	<b>Interest rate:</b>	LIBOR-based
<b>IDB (Ordinary Capital):</b>	30,000,000	100	<b>Credit fee:</b>	(c)
			<b>Inspection and supervision fee:</b>	(c)
<b>Total:</b>	30,000,000	100	<b>Weighted average life:</b>	15.23 years
			<b>Approval currency:</b>	U.S. dollar
Project at a Glance				
<p><b>Project objective/description:</b> The general objective of the project is to contribute to improving the performance of public institutions and private enterprises by incorporating advanced human capital (AHC) into their human resource endowment. The specific objectives are: (i) to increase the participation of AHC in a number of public- and private-sector institutions in Paraguay; and (ii) to enhance the sustainability of the “Don Carlos Antonio López” National Scholarship Program for Postgraduate Studies Abroad.</p>				
<p><b>Special contractual conditions precedent to the first disbursement of the loan:</b> Prior to the first disbursement, the borrower will submit evidence, to the Bank’s satisfaction, of the following: (i) the program’s strategic coordination committee has been assembled from the top authorities of the Ministry of Finance, the Ministry of Education and Culture, the National Science and Technology Council, the Technical Secretariat for Economic and Social Development Planning, and four representatives with recognized experience in AHC formation, drawn from civil society, the business sector, academia, and the scientific community (one from each sector); (ii) the program <a href="#">Operating Regulations</a> have entered into force, the content of which will conform to the terms previously agreed upon with the Bank; and (iii) the executing agency has hired or appointed the staff of the program execution unit, under the terms agreed upon with the Bank, consisting of the following core personnel: a general program coordinator, a financial specialist, a procurement specialist, and a legal advisor responsible for contracts (paragraph 3.11).</p>				
<p><b>Special contractual execution conditions:</b> Prior to capitalization of the Guarantee Fund, the borrower, acting through the executing agency, will present evidence, to the Bank’s satisfaction, that the trust agreement or other legal instrument acceptable to the Bank has been signed between the Ministry of Finance and the AFD to establish the Guarantee Fund. (paragraph 3.12).</p>				
<b>Exceptions to Bank policies:</b> None.				
Strategic Alignment				
<b>Challenges:<sup>(d)</sup></b>	SI	<input checked="" type="checkbox"/>	PI	<input checked="" type="checkbox"/>
			EI	<input type="checkbox"/>
<b>Crosscutting themes:<sup>(e)</sup></b>	GD	<input checked="" type="checkbox"/>	CC	<input type="checkbox"/>
			IC	<input checked="" type="checkbox"/>

<sup>(a)</sup> Under the terms of the Flexible Financing Facility (document FN-655-1), the borrower has the option of requesting changes to the amortization schedule as well as currency, interest rate, and commodity conversions. The Bank will take operational and risk management considerations into account when reviewing such requests.

<sup>(b)</sup> Under the flexible repayment options of the Flexible Financing Facility, changes to the grace period are permitted provided that they do not entail any extension of the original weighted average life of the loan or the last payment date as documented in the loan contract.

<sup>(c)</sup> The credit fee and the inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank’s lending charges, in accordance with the applicable policies.

<sup>(d)</sup> SI (Social Inclusion and Equality); PI (Productivity and Innovation); and EI (Economic Integration).

<sup>(e)</sup> GD (Gender Equality and Diversity); CC (Climate Change and Environmental Sustainability); and IC (Institutional Capacity and Rule of Law).



## I. DESCRIPTION AND RESULTS MONITORING

### A. Background, problem addressed, and rationale

- 1.1 Paraguay has one of the most dynamic economies in the region and a solid macroeconomic situation.<sup>1</sup> Average GDP growth of 4.7% per year in the last decade (2008-2017) is almost triple the rate of 1.6%<sup>2</sup> achieved in the previous period (1998-2007). Per capita GDP rose by 29% between 2008 and 2017, from US\$5,039 to US\$6,489.<sup>3</sup> Nonetheless, with less favorable external conditions going forward, GDP growth is expected to slow to 1.5% in 2019, a sharp decline from the 2018 rate of 3.7%.<sup>4</sup>
- 1.2 The current Paraguayan government has ratified the guidelines and objectives of the National Development Plan 2030.<sup>5</sup> To achieve these objectives, the country needs to increase the availability and use of advanced human capital (AHC) in society (see paragraph 1.22). At present, it trails the rest of the region by a significant margin, with 50% fewer graduates with master's degrees than the average for Latin America and the Caribbean, measured as the number for every 1,000 members of the economically active population.<sup>6</sup> The establishment of the Trust Fund for Education and Research Excellence (FEEI)<sup>7</sup> in 2012 and the launch of the "Don Carlos Antonio López" National Scholarship Program for Postgraduate Studies Abroad in 2015 (the BECAL program, partially financed by the Bank under loan 3491/OC-PR, known as the Becas 1 Program)<sup>8</sup> were two important initiatives to close this gap, but the strategy needs to be strengthened.
- 1.3 **Problem addressed and causal factors.** The main problem to be addressed by this program is the country's weak capacity to generate highly skilled human resources, which undermines the performance of the public and private sectors alike. In the public sector, services face challenges in terms of quality and user satisfaction; in the private sector, there is a relative deficit among Paraguayan firms in terms of productivity and innovation.
- 1.4 **Low level of productivity and innovation at firms.** The main indicators of productivity and innovation place Paraguay in a very low position in international comparisons. For example, it ranks 112th out of 137 countries in the Global Competitiveness Index (GCI) 2017-2018.<sup>9</sup> Businesses, mostly micro, small, and

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<sup>1</sup> International Monetary Fund. Paraguay: 2017 Article IV Consultation-Staff Report (July 2017).

<sup>2</sup> Central Bank of Paraguay (BCP), *Informe Económico* (May 2018).

<sup>3</sup> Ibid.

<sup>4</sup> BCP, *Indicadores Económicos* (August 2019).

<sup>5</sup> Approved by Decree 2794/2014.

<sup>6</sup> Authors' estimates based on data from the Ibero-American Science and Technology Indicators Network (RICYT) (<http://www.ricyt.org/>).

<sup>7</sup> The FEEI is a public entity with civil society participation which helps fund programs that aim to raise the quality of education and promote research and development. It was created in 2012 by [Law 4758/2012](#) and is financed with funds obtained from energy sales to Brazil. Using FEEI resources, the BECAL program was financed through a percentage allocation earmarked by law. These resources, in turn, were used for the counterpart contribution accompanying loan 3491/OC-PR (Becas 1 Program), issued by the Bank for the BECAL program.

<sup>8</sup> Currently in execution.

<sup>9</sup> It ranks 89th out of 126 in the Global Innovation Index 2018. [www.globalinnovationindex.org](http://www.globalinnovationindex.org).

medium-sized enterprises (MSMEs), lag far behind in terms of productivity<sup>10</sup> and show little capacity to innovate (45.4% of firms undertake some form of innovation activity).<sup>11</sup> On average, Paraguayan firms spend 65.8% of what their Uruguayan counterparts invest in innovation activities.

- 1.5 **Poor quality of services provided by public institutions and low level of satisfaction.** Recent measurements score the level of service quality and user satisfaction of public institutions in Paraguay at 4.1 and 4.7 points, respectively, on a scale from 0 to 10. For comparison, countries such as Chile and Uruguay score 7 and 5, respectively, on these indicators.<sup>12</sup> To meet the public's expectations, it is essential that government agencies and entities have competent staff, as the basis for providing quality public services.
- 1.6 **Relative scarcity of advanced human capital.** The shortage of advanced human capital (AHC) is one of the causes of productivity problems in the public and private sectors. Paraguay ranks 131st out of 137 countries worldwide in terms of the availability of scientists and engineers,<sup>13</sup> and only 1.1% of company employees hold master's or doctoral degrees.<sup>14</sup> Moreover, the lack of AHC is a major obstacle to innovation for 47.2% of firms.<sup>15</sup> Various factors explain this relative scarcity: (i) limited capacity for AHC formation in the local university system; (ii) short supply of scholarships for postgraduate studies at international centers of excellence; (iii) a financial market that is insufficiently developed to support postgraduate studies; and (iv) shortcomings in the management of instruments to support AHC formation.<sup>16</sup>
- 1.7 **Limited capacity for AHC formation in the local university system.** In 2016, there were 0.3 master's degree graduates for every 1,000 members of the economically active population, and just 0.087 in science and technology areas, compared with regional averages of 0.59 and 0.19, respectively.<sup>17</sup> Data from the Ibero-American Science and Technology Network (RICYT) show that of a total of 1,009 master's degree graduates in 2016, only 27.5% (279) were in science and technology disciplines, while 72.5% (730) were in social sciences and humanities. These indicators reflect a meager local supply of accredited postgraduate programs: out of 175 postgraduate programs offered, only 24 were evaluated by entities such as the National Science and Technology Council (CONACYT).<sup>18</sup> Although there has been a slight improvement of late in the training of human

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<sup>10</sup> Productivity is 34% of that of United States firms. Data from the National Economic Census (CNE) 2011 and Survey of Business Owner and Self-Employed Persons, U.S. Census (2012).

<sup>11</sup> Survey of Business Innovation in Paraguay (EIEP), 2017.

<sup>12</sup> Pareja, A.; Fernández, C.; Blanco, B.; Theobald, K. and Martínez, A. (2016). Simplifying lives: quality and satisfaction with public services. IDB.

<sup>13</sup> Global Competitiveness Report 2017-2018. [www.weforum.org](http://www.weforum.org).

<sup>14</sup> EIEP 2017 .

<sup>15</sup> EIEP 2017.

<sup>16</sup> See *Estudio de Demanda y Oferta de CHA en Paraguay* (2018); and *Bases para una Política de Capital Humano en Paraguay* (2018).

<sup>17</sup> [www.ricyt.org/indicadores](http://www.ricyt.org/indicadores).

<sup>18</sup> CONACYT supports postgraduate studies in the areas of agricultural, medical, and health sciences, both natural and exact sciences, and also social sciences and engineering and technologies.

resources at postgraduate level, it is insufficient to meet the needs of the public and private sectors, especially in science and technology.

- 1.8 **Short supply of scholarships for postgraduate studies at international centers of excellence.** Paraguay has fewer than 1,000 students abroad for every 1,000,000 members of the economically active population, whereas the rate is over 2,000 students in countries such as Ecuador and Bolivia.<sup>19</sup> Scholarships to finance postgraduate studies are few and far between, and, until 2015, they were provided mainly by foreign foundations and governments.<sup>20</sup> The BECAL program increased the pool of scholarships for graduate studies abroad with an investment of US\$60 million between 2015 and 2019. However, to be effective, this strategy needs to grow and be sustained over the long term, to address the following challenges: (i) improve the financial viability of the support mechanism, which is currently concentrated in full scholarships financed by the public sector; and (ii) improve the BECAL program's capacities to expand its range of instruments.
- 1.9 **Credit for graduate studies is poorly developed, but there is potential for improving the financial sustainability of the AHC policy.** In Paraguay, the market for loans for postgraduate studies is new. The BECAL program took a first step in 2017 when it made arrangements with the national development bank, Banco Nacional de Fomento, to open a credit line for applicants that had a positive evaluation but were unable to obtain scholarships for budgetary reasons. Since then, US\$2 million has been issued (50 loans with a grace period of 30 months and a repayment period of 10 years). The use of postgraduate credit requires efforts to mitigate access obstacles for applicants who do not possess the collateral demanded by the financial system.<sup>21</sup> The local legal framework permits the creation of guarantee funds for specific purposes, such as postgraduate lending.<sup>22</sup> This is a favorable context for the financial sustainability strategy of the AHC policy promoted by the Government of Paraguay, which aims to reduce the burden on the public finances and increase private participation, thereby allowing workers and firms to increasingly internalize the costs of postgraduate training. The government's decision aims to complement the commercial supply of postgraduate loans with a guarantee fund that facilitates access to financing for individuals wishing to undertake studies of this type (and who do not have the necessary collateral). Between 2015 and 2019, 100% of the investment in AHC was public (FEEI and loan 3491/OC-PR). Between 2020 and 2025, the conditions for private participation will be enhanced through credit guarantees. Then, between 2025 and 2030, the private sector share is expected to rise to 50%, with public sector contributions focusing on doctorates (full scholarship) and postgraduate studies linked to science, technology, engineering, and mathematics (STEM) disciplines and innovation (partial scholarship for specializations and master's degrees).<sup>23</sup>

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<sup>19</sup> Information Systems of the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Economic Commission for Latin America and the Caribbean (ECLAC).

<sup>20</sup> The exceptions were an overseas postgraduate scholarship program for public officials and support for students on national postgraduate courses (CONACYT).

<sup>21</sup> See: [MSME Guarantee Fund](#); and <http://www.fogapy.gov.py/>.

<sup>22</sup> Article 9 of the cited Law.

<sup>23</sup> The number of scholarship recipients per year is set to rise from 350 (2015-2018) to 600 in 2025-2030.

- 1.10 **Shortcomings in the management of instruments to support AHC formation.** Several studies<sup>24</sup> have identified improvements that need to be made in the management of the BECAL program, which are necessary to operate the new instruments aimed at improving financial sustainability, as well as the increase in scale that this will generate. BECAL needs: (i) to hire staff in the program execution unit to manage new instruments for financing recipients of scholarships; (ii) a computer system for the integrated management of scholarships and tracking of applicants, beneficiaries, and individuals returning to Paraguay;<sup>25</sup> (iii) a talent scouting mechanism that stimulates future demand for the program; and (iv) agreements and exchanges with programs and agencies for the promotion of AHC abroad.
- 1.11 **Gender balance among scholarship recipients diverges from the regional pattern.** Women obtained 59% of scholarships for innovation and received 52% of scholarships for research under the Becas 1 program.<sup>26</sup> The pattern differs elsewhere in the region. In Colombia, women accounted for 47% of scholarships awarded by the Colfuturo foundation (1992-2019), with 48% in the case of master's degrees and 36% of research doctorates. In Argentina (BEC.AR program), women represented 39% of beneficiaries for specialization scholarships and 35% in the case of master's degrees. It is interesting to identify the factors that explain this gender balance.
- 1.12 **Size of the target group.** The program's potential target group consists of public- and private-sector workers.
- 1.13 According to data from the Permanent Household Survey, 11.85% of the employed population (380,345 individuals) have completed studies lasting between 16 and 18 years, and 7% of the employed population works in a professional, scientific, or intellectual activity, albeit with a wide disparity between the manufacturing sector (1.61%) and services (11.3%). At the enterprise level, 2017 data from the Survey of Business Innovation in Paraguay (EIEP) show that 14% of employees have completed university studies.
- 1.14 In the case of public-sector workers, 34% (314,546 individuals) have university or post-secondary education.<sup>27</sup> Interviews with the heads of personnel departments at 13 public institutions<sup>28</sup> identified a significant AHC deficit in two segments: (i) horizontal capacities, common to all institutions, linked to central public-sector functions (mainly planning, financial management, and evaluation and monitoring); and (ii) sector-specific capacities, linked to the missions of each institution (e.g. epidemiology, biotechnology, health center management, etc.).

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<sup>24</sup> [Final midterm evaluation report](#), and *Bases para una política de formación de Capital Humano Altamente Calificado* (2018).

<sup>25</sup> The scholarship management system is currently provided and administered by CONACYT.

<sup>26</sup> [Final midterm evaluation report](#).

<sup>27</sup> Civil Service Secretariat (May 2019).

<sup>28</sup> Namely the Ministries of Public Works, Finance, Agriculture, Industry and Commerce, Interior, Public Health and Social Welfare; the National Forestry, Agricultural Technology and Social Welfare Institutes; the National Animal Health and Disability Services and the National Public Procurement Directorate.

- 1.15 Since the start of its activities, the BECAL program has received 3,649 applications and awarded scholarships to 38.7% of them. In 2017, a budget was set for each call for applications, and it became clear that there is surplus demand (31% of students who passed the evaluation were unable to obtain a scholarship).<sup>29</sup>
- 1.16 **The Bank's prior experience in Paraguay.** The Becas 1 program (3491/OC-PR) awarded 1,531 postgraduate scholarships for study abroad between July 2015 and July 2019. Of these, 63% (967) were for master's degrees, 13% (193) for doctorates, 23% (354) for teacher training, and 1% (17) for mobility and languages (a recently implemented instrument). Social sciences account for 66% of total awards, followed by engineering and technology for 12.3%, medical sciences for 7.3%, hard sciences for 7.2%, and agricultural sciences for 5.3%. Of the respective courses, 95% are concentrated in just nine countries (Spain, France, Chile, Colombia, United Kingdom, Argentina, Australia, and the United States). While 35% of scholarship recipients are still studying abroad, the other 65% have completed their studies and returned to Paraguay, and 82% are presently employed. The dropout rate is low: only 0.56% of scholarship recipients (9 cases out of 1,531) have abandoned their studies before completion.
- 1.17 The Becas 1 program has generated both information and lessons learned. The midterm evaluation<sup>30</sup> found that: (i) scholarship targets were exceeded; (ii) the design was relevant, and management was effective and efficient; and (iii) an appropriate structure and processes were implemented.<sup>31</sup> The evaluation recommended: (i) focusing on areas of potential vacancies or impact, to facilitate reintegration; (ii) improving the management of scholarship information; (iii) increasing dissemination within the country; and (iv) exploring ways to improve resource allocation. The study conducted to propose foundations for the AHC formation policy also recommended:<sup>32</sup> (i) improving the incorporation of AHC in educational institutions, firms, and government; (ii) supplementing scholarships with credit or cofinancing for master's degrees related to science and technology disciplines<sup>33</sup> most likely to meet the requirements of productive sectors or institutions; and (iii) attracting or retaining researchers, whether returnees or those based in Paraguay.<sup>34</sup> The recommendations of both studies led to the creation of new innovative instruments that are included in the proposed operation: scholarships for public and private institutions and a guarantee fund to promote credit for postgraduate studies.

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<sup>29</sup> Data from open invitations to apply (i.e. those with no specific focus on the public or the private sector). They may therefore underestimate the demand for government institutions.

<sup>30</sup> [Final midterm evaluation report](#).

<sup>31</sup> No impact evaluations have been made of AHC programs in Paraguay. A close reference is the final evaluation of the BEC.AR Program. [Evaluación Final BEC.AR](#).

<sup>32</sup> Final Consultancy Report; María Elena Boisier Pons (July 2018); [Final midterm evaluation report](#).

<sup>33</sup> The Becas 1 program prioritizes postgraduate courses linked to science and technology activities, with no restrictions by area, except those related to business.

<sup>34</sup> The design of the present operation draws on these lessons: support for students with formal employment in firms and public institutions, partial scholarships for master's degrees, a guarantee fund to promote credit, and improvement of the scholarship management platform.

- 1.18 Lastly, as relevant local background information, the project completion report for the Program to Support the Development of Science, Technology, and Innovation (PROCIT) (1698/OC-PR) financed by the Bank, which awarded postgraduate scholarships in science and technology areas, highlights the high rates of graduation and job placement among the scholarship recipients.<sup>35</sup>
- 1.19 **The Bank's regional experience.** The Bank has previously financed AHC formation programs, both in other countries in the region and in Paraguay: in Argentina (2437/OC-AR), Chile (1286/OC-CH), Colombia (2335/OC-CO), Panama (1987/OC-PN), Uruguay (2004/OC-UR) and Paraguay (1698/OC-PR and 3491/OC-PR). The Latin America and the Caribbean region also has institutions (both public and private) that finance postgraduate studies through a combination of scholarships and credit (Colfuturo in Colombia and the National Education Loan Commission (CONAPE) in Costa Rica).
- 1.20 **Results, impact, and evaluability.** The economics literature reports productivity improvements in organizations that incorporate AHC;<sup>36</sup> and studies conducted in the region report positive outcomes and impacts on the income and employability of participating scholarship recipients.<sup>37</sup> Two impact assessments performed on the BEC.AR program in Argentina, for the period 2012-2014,<sup>38</sup> emphasize that the training provided by the scholarship contributed to rapid job placement, higher income (on average) than the control group, increased responsibilities in the posts held, and greater satisfaction with tasks performed. In the case of innovation grants, the employment rate increased because "in most cases the beneficiaries took the courses under leave-of-absence arrangements that allowed them to return to their pre-departure occupations" (the employment rate rose from 73.4% at the time of registration to 86.1% at the time of the evaluation, compared with 77.5% and 75.2%, respectively, for the control group; both groups include public and corporate employees).
- 1.21 **Lessons learned.** The main lessons learned in similar programs (some of which were supported by the Bank; see paragraph 1.19), and which were incorporated in the design of the present operation, include the following: (i) programs to support AHC formation attracted extra funds from pre-existing institutions (the Becas 1 program generated additional scholarships from foreign agencies working in Paraguay); (ii) adequate management of the scholarship portfolio reduces the number of failures and improves the chances of returning to the local labor market (the BECAL program has an area devoted to each phase of the scholarship cycle); (iii) private sector involvement in governance, or as a grant placement agent, complements the public initiative (the program's strategic coordination

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<sup>35</sup> Project completion report for the PROCIT program (loan [1698/OC-PR](#)) 2014.

<sup>36</sup> For a bibliography on this subject, see the [Monitoring and evaluation plan](#).

<sup>37</sup> *Evaluación de Impacto del Programa de Formación de Científicos y Tecnólogos 1997-2006*, Centro Redes, 2008; Evaluation of the Canadian Francophonie Scholarship Program, 1987-2005, Canadian International Development Agency, December 2005; Evaluation Commonwealth Scholarships in the United Kingdom, Computer Sciences Corporation, March 2012; Measuring the economic impact of Commonwealth Scholarships: Identifying Methodologies for Cost Benefit Analysis and Value for Money, Nef Consulting, October 2012; *Informe de Evaluación Ex Post Becas de Posgrados Nacionales*; National Research and Innovation Agency (ANII) Uruguay, 2014.

<sup>38</sup> Impact Evaluation of the BEC.AR Program (loan [2777/OC-AR](#)), 2016.

committee is a response to this recommendation); and (iv) the design should clearly reflect local regulations, public and private roles, and environmental factors such as the abundance or scarcity of evaluators.

- 1.22 **Strategic framework of the program.** This program is aligned with two of the three main lines of action of the National Development Plan 2030: (i) inclusive economic growth; and (ii) Paraguay's global integration. The program also contributes to the objectives of advanced training of researchers and technologists as defined in the Science, Technology, and Innovation Policy.<sup>39</sup>
- 1.23 In terms of economic rationale, the program seeks to correct information deficiencies in two areas: (i) those faced by institutions and firms that could benefit from AHC formation but are unaware of its positive impact on performance; and (ii) those related to the difficulties firms encounter in financing AHC formation, as opposed to financial institutions that are unaware of the specifics of this market niche and need to adapt their supply.
- 1.24 **Complementarity with other IDB Group programs.** The preparation and implementation of this program will be coordinated with the Paraguayan Business Innovation Project (3602/OC-PR) and the Digital Agenda Support Program (4650/OC-PR). In the first of these, the executing agency of the BECAL program will act as subexecuting agency, pursuant to the terms of the agreement to be signed between the Ministry of Finance and the Ministry of Industry and Commerce; in the second and third cases, steps will be taken to ensure that innovative firms employ scholarship recipients returning to the country. In terms of coordination with IDB Lab, the Open Innovation Project in Paraguay (currently in preparation) envisages human capital development activities, and the possibility of cooperation between the two initiatives will be explored.
- 1.25 **Strategic alignment.** The operation is aligned with the Update to the Institutional Strategy 2010-2020 (document AB-3008) through the challenges of increasing productivity and innovation, inasmuch as it will help promote knowledge generation and innovation activities in firms and public institutions, and of promoting social inclusion and equality through the Guarantee Fund, which will reduce the access to financing barrier for postgraduate applicants. The program is also aligned with the crosscutting themes of: (i) gender equity and diversity, inasmuch as it will maintain its open policy of opportunities that makes it possible to target scholarships to women, and (ii) institutional capacity and rule of law, inasmuch as it will help strengthen institutional capacities by awarding scholarships to civil servants and thus improve the quality of State-provided services. The operation contributes to indicators set out in the Corporate Results Framework 2016-2019 (document GN-2727-6), specifically the indicators of students benefited by education projects; micro/small/medium enterprises provided with nonfinancial support; government agencies benefited by projects that strengthen technological and managerial tools to improve public service delivery; and beneficiaries of improved access to formal financial services. It is also consistent with the guidelines in the updated Innovation, Science, and Technology Sector Framework Document (document GN-2791-8) with respect to the formation of advanced human capital, and it is aligned with the priority area of the Sector Strategy on Institutions for Growth and

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<sup>39</sup> CONACYT (2018) [www.conacyt.gov.py](http://www.conacyt.gov.py).

Social Welfare (document GN-2587-2) in terms of strengthening institutional capacities to implement innovation policies. The operation is likewise consistent with the dimension of “better labor market outcomes for women” of the Gender and Diversity Sector Framework Document (document GN-2800-8) inasmuch as it provides postgraduate training. In addition, this program is aligned with the Bank’s Country Strategy with Paraguay 2019-2023 (document GN-2958) through the strategic objective of strengthening public management capabilities. The operation is included in the Update of the Annex III of the 2019 Operational Program Report (GN-2948-2).

- 1.26 **Gender issues.** In terms of gender balance, the guidelines stipulated in the Bank’s Operational Policy on Gender Equality in Development (document GN-2531-10) will be met. The BECAL program has a gender balance better than the regional average (paragraph 1.11), and the plan is to maintain and continue with the incentives promoting gender-equal access to scholarships.

## **B. Objectives, components, and cost**

- 1.27 The general objective of the project is to contribute to improving the performance of public institutions and private enterprises by incorporating advanced human capital (AHC) into their human resource endowment. The specific objectives are: (i) to increase the participation of AHC in a number of public- and private-sector institutions in Paraguay;<sup>40</sup> and (ii) to enhance the sustainability of the “Don Carlos Antonio López” National Scholarship Program for Postgraduate Studies Abroad. To achieve these objectives, the project has the following components:

- 1.28 **Component 1. AHC formation in the public and private sectors (US\$24,150,000).** The objective of this component is to enhance the performance of public institutions and firms by providing postgraduate training to enhance their human capital.<sup>41</sup> This component aims to meet the training needs of public institutions and firms that satisfy the strategic guidelines of the BECAL program prioritizing the strengthening of innovation capacities. It will also foster collaboration with international organizations engaged in the financing and development of AHC. The following subcomponents will be financed:

- a. **Subcomponent 1.1. AHC formation in the public sector (US\$12,310,000).** Public-sector workers will receive financing to take postgraduate courses, with a view to meeting training needs in crosscutting strategic areas (e.g. budget management and public procurement) and in mission-related issues (specific topics such as public health, security, and infrastructure).<sup>42</sup> Activities include: (i) award and follow-up of scholarships enabling public-sector workers to pursue master’s studies abroad; (ii) award and follow-up of

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<sup>40</sup> In the case of public institutions, AHC training will be provided to meet both cross-cutting and mission-statement needs. The first case will involve workers from a wide range of institutions, while the second will be restricted to a small number of institutions. Workshops to identify needs will facilitate management of this process.

<sup>41</sup> The program will provide postgraduate training to workers who are formally employed in public institutions or firms; they will return to their jobs after completing their studies. This will strengthen the AHC’s reintegration process into the economy.

<sup>42</sup> The crosscutting demands are relatively homogeneous and independent of the areas of action. The vertical demands are closely linked to the strategic areas defined by each institution. The workshops will validate strategic areas and allow for AHC demand plans for each institution.

scholarships for public-sector workers to pursue doctoral studies abroad; (iii) award and follow-up of scholarships for public-sector workers to pursue master's studies in Paraguay; (iv) award and follow-up of scholarships for public-sector workers to undertake specialization training in Paraguay; and (v) workshops to identify priority AHC needs in the public sector.

- b. **Subcomponent 1.2. AHC formation in the private sector (US\$10,090,000).** Postgraduate studies will be partially financed for private-sector workers to meet training needs related to the development of innovation activities and new businesses. Activities include: (i) award and follow-up of scholarships enabling private-sector workers to pursue master's studies abroad; (ii) award and follow-up of scholarships for private-sector workers to pursue doctoral studies abroad; (iii) award and follow-up of scholarships for private-sector workers to pursue master's studies in Paraguay; (iv) award and follow-up of scholarships for private-sector workers to undertake specialization training in Paraguay; and (v) workshops to identify priority AHC needs in the private sector.
  - c. **Subcomponent 1.3. National doctoral training (US\$1,000,000).** Full-time scholarships will be awarded to finance doctoral studies at Paraguayan universities that are recognized for their track record and drawing power. The selection criteria will be specified in the program [Operating Regulations](#). The beneficiaries will be public- or private-sector workers or researchers. The incentives will be equivalent to those granted to graduate students abroad.
  - d. **Subcomponent 1.4. Improvement of the AHC formation system (US\$750,000).** The following activities will be financed: (i) operation of a digital platform for scholarship management; (ii) early identification and awareness-raising activities for candidates for postgraduate training; and (iii) activities and events to develop links and collaboration with international organizations engaged in the funding and development of talent.<sup>43</sup>
- 1.29 **Criteria for awarding scholarships.** To be eligible for a scholarship, applicants must: (i) have Paraguayan citizenship; and (ii) hold a degree and certificate of studies recognized by the Ministry of Education. The following additional criteria will be used to select scholarship recipients: (i) academic performance; (ii) level of excellence of the university at which the applicant is applying or has been accepted; (iii) work experience; (iv) formal employment in the public sector or a private firm (or a researcher in the case of doctoral scholarships in Paraguay); and (v) the applicant's family income. Beneficiaries will be selected through public, transparent, and competitive processes. These will be widely publicized in the country and will emphasize conditions ensuring gender-balanced participation in order to attract women. The scholarships will be allocated to programs at universities among the top 300 in international rankings. Where other universities are chosen, the applicant must demonstrate the excellence of the program in question through other international classifications.

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<sup>43</sup> These activities, and those included in subcomponent 2.2 (see paragraph 1.32b) address the weaknesses in the management of AHC support mentioned in paragraph 1.10. The increase in staffing at the program execution unit for the BECAL program will be covered by administration funds from the loan.

- 1.30 Applications that meet the specified requirements will be assessed by an Evaluation Committee consisting of representatives from the Ministry of Finance, CONACYT, and the Technical Secretariat for Economic and Social Development Planning (STP), along with experts, academics, researchers, and professionals of outstanding curriculum and recognized prestige specializing in the relevant disciplines. The program’s strategic coordination committee will validate the evaluation and decide how to allocate the funds to the scholarship recipients.
- 1.31 Table 1 shows the amounts and timeframes of scholarships to be funded under this component. The amounts awarded will cover tuition, travel, living expenses, and medical insurance, except for postgraduate scholarships in Paraguay, which will only cover travel and living expenses in the case of doctorates. Full scholarships will be awarded for doctoral studies to employees of public institutions or firms, or to researchers (national doctorates only). The private sector will contribute up to 30% of the costs of master’s programs and specialization courses.<sup>44</sup>

**Table 1. Amounts and timeframes by type of scholarship**

Type of scholarship and duration	Percentage of scholarship by sector		Amount (US\$)	Required return period (years) <sup>45</sup>
	Public	Private		
Doctorate (4 years)	100	100	up to 90,000	5
Master’s (2 years)	100	70	up to 50,000	Twice the duration of the studies
Specialization (1 year)	100	70	up to 8,000	1

- 1.32 **Component 2. Support for the sustainability of the AHC formation system (US\$3,865,000).** The objective of this component is to improve the financial sustainability of the BECAL program by developing an instrument to promote lending to fund postgraduate studies abroad. The following subcomponents will be financed for this purpose:

<sup>44</sup> The private contribution may be sourced from the firm’s own resources or from educational credit, and will be specified in the agreement that the program will sign with each student and firm. The private funds will be deposited in the bank account to be created by the program for each scholarship holder.

<sup>45</sup> The program execution unit is responsible for overseeing these deadlines (it has an area dedicated to monitoring scholarship holders). The program execution unit first initiates administrative actions to ensure fulfillment of the required period of permanency Paraguay. If no agreement is reached, the program execution unit refers the case to the Treasury Attorney’s Office for legal action.

- a. **Subcomponent 2.1. Guarantee Fund (US\$3,760,000).** The creation and operation of a Guarantee Fund (with capital of US\$3,600,000) will be financed to promote the supply of loans for postgraduate studies abroad.<sup>46</sup> This fund will be governed by Law 5.628/2016, which specifies the conditions for the creation of a Guarantee Fund for a specific purpose (such as the scholarship program); the administrative body established by law is the development finance agency Agencia Financiera de Desarrollo (AFD). The planned activities are: (i) structuring of the Guarantee Fund; (ii) issuance of credit guarantees; and (iii) signing of the trust agreement (paragraphs 3.7 and 3.12). The Guarantee Fund will operate as described in paragraph 3.9. To apply for a guarantee, the basic requirements are: (i) Paraguayan citizenship; (ii) a degree and certificate of studies recognized by the Ministry of Education; (iii) a letter of acceptance to a postgraduate program at a university of excellence (among the top 300 in international rankings); (iv) work experience; and (v) declaration of the applicant's family income.
  - b. **Subcomponent 2.2. Strengthening of the BECAL program (US\$105,000).** Financing will be provided for activities related to: (i) studies to design a sustainable financing strategy for the BECAL program; (ii) events to share knowledge with similar experiences; and (iii) a diagnostic study on gender participation and diversity in the Becas 1 program (3491/OC-PR).
- 1.33 **Program administration.** The costs of operation, administration, and monitoring and evaluation will be US\$1,500,000.
- 1.34 **Beneficiaries.** The direct beneficiaries of the program will be workers from the public and private sectors (an estimated 3,543) who receive a scholarship to pursue postgraduate studies. The indirect beneficiaries of the program will be private-sector firms and organizations and entities of the State of Paraguay. Beneficiaries in the public sector will receive full scholarships, whereas employees in the private sector will receive partial scholarships (except in the case of doctoral studies). The partial awards will need to be complemented with contributions from the firms (sourced either from their own funds or through the educational credit lines available in the market).
- C. Key results indicators**
- 1.35 **Expected impacts.** The program is expected to contribute to improving the quality of, and satisfaction with, the service provided by public institutions that employ former program scholarship recipients on their professional staff (measured through a quality indicator and a satisfaction indicator); and to increase the productivity of firms (measured through average annual value added) through the formation of AHC. The expected outcomes are: (i) an increase in the participation of workers with postgraduate degrees on the payroll of public institutions, measured through: (a) the percentage of workers with postgraduate qualifications

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<sup>46</sup> In setting up the Guarantee Fund, lessons were drawn from positive experiences in Paraguay (loan 3354/OC-PR), Chile, Colombia, and Peru. In Chile, Guarantee Fund beneficiaries were 14% more likely than the control group to obtain funding. Juan José Llisteri et al, IDB, *Sistema de garantías de crédito en América Latina: orientaciones operativas*, 2006. In Colombia, beneficiary SMEs increased their sales by 6% and employment by 3.7% compared with the control group (Arraíz, Meléndez, Stucchi, OVE, IDB, "Partial credit guarantee and firm performance: evidence from the Colombian National Guarantee Fund", 2012.

who are not program beneficiaries relative to total payroll of employees in public institutions employing program scholarship beneficiaries; and (b) an increase in the average monthly wage of public-sector workers who acquire advanced human capital; (ii) an increase in the participation of AHC in firms, measured through: (a) percentage of workers with postgraduate qualifications who are not program beneficiaries relative to the total payroll of employees at firms employing program scholarship beneficiaries; and (b) an increase in the average wage of private-sector workers who acquire advanced human capital; (iii) an increase in business sales, measured in terms of average annual sales per worker in firms employing former scholarship beneficiaries; and (iv) an increase in the proportion of scholarships that are funded, measured as the percentage of total scholarships that receive funding in a given year.

- 1.36 **Economic analysis.** An economic analysis was conducted of the main project interventions, to estimate their potential benefits and costs. The results suggest that the base scenario would achieve a positive social net present value (NPV) of US\$18.4 million, using a discount rate of 12%. The internal rate of return (IRR) is 26.8%. Sensitivity analysis shows that the variables that have the greatest impact on the NPV and IRR results are the percentage wage increase received by the scholarship recipients and the program dropout rate, i.e., the proportion of recipients who do not finish their studies and withdraw from the program. Given the impact, suitable precautions should be taken to keep the dropout rate as low as possible (see [economic analysis](#)).

## II. FINANCING STRUCTURE AND MAIN RISKS

### A. Financing instruments

- 2.1 This program is a specific investment loan operation. Its total cost of US\$30 million, which will be fully financed by the Bank from its Ordinary Capital resources over a disbursement period of six years (see Table 3).
- 2.2 The six-year disbursement period is based on the historical performance of the Paraguay portfolio; the technical characteristics of this program, which has two components with rigid postgraduate cycles (doctorates require four years) and a guarantee fund that must be constituted and achieve operational maturity; and the recommendation by the Office of Evaluation and Oversight (OVE, 2018) to build in the additional time required in the design of Paraguay operations, taking into account the dynamics of legislative ratification in the country.

**Table 2. Program cost (US\$)\***

<b>Components</b>	<b>IDB</b>	<b>%</b>
<b>Component 1. AHC formation in the public and private sectors</b>	<b>24,150,000</b>	<b>80</b>
Subcomponent 1.1 AHC formation in the public sector	12,310,000	40.8
Subcomponent 1.2 AHC formation in the private sector	10,090,000	33.4
Subcomponent 1.3 National doctoral training	1,000,000	3.3
Subcomponent 1.4 Improvement of the AHC formation system	750,000	2.5
<b>Component 2. Support for the sustainability of the AHC formation system</b>	<b>3,865,000</b>	<b>13</b>
Subcomponent 2.1 Guarantee Fund	3,760,000	12.6
Subcomponent 2.2 Strengthening of the BECAL program	105,000	0.36
<b>Administration and supervision</b>	<b>1,500,000</b>	<b>5</b>
<b>Contingencies</b>	<b>485,000</b>	<b>2</b>
<b>TOTAL</b>	<b>30,000,000</b>	<b>100</b>

\* The amounts provided in the table of costs and financing include local taxes, in accordance with the Bank's policies.

**Table 3. Disbursement schedule (US\$)**

<b>Source</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Total</b>
<b>IDB</b>	2,646,471	7,992,127	6,075,072	8,266,829	3,573,482	1,446,019	30,000,000
<b>%</b>	8.8	26.6	20.3	27.6	11.9	4.8	100

**B. Environmental and social risks**

2.3 In accordance with the Bank's Environment and Safeguards Compliance Policy (OP-703), this program is classified as a Category "C" operation. Inasmuch as it will finance human resource development activities, no negative environmental or social impacts are anticipated.

**C. Other key issues and risks**

2.4 **Development.** The following high-level development risks were identified: (i) absence of a talent development policy, compounded by selection and reintegration processes that make it difficult to identify training priorities, which will be mitigated by convening workshops to identify AHC training priorities and needs and conducting, through the BECAL program, processes for invitations to apply, evaluation, selection, and award of scholarships (linked to subcomponents 1.1 and 1.2, as set out in paragraphs 1.28(a) and (b)); and (ii) an unwillingness among firms to invest in AHC formation, on the grounds that there are no underlying priority projects or demands, which will be mitigated through early consulting assignments to identify training needs (linked to subcomponent 1.2, paragraph 1.28(b)). Two medium-level risks were also identified: (i) discontinuity in the nationally funded AHC policy, owing to changes of priorities in government plans; and (ii) discontinuity of the FEEI when the current legal framework expires 2023. These risks will be mitigated through actions by the program execution unit to publicize the positive results of the BECAL program, targeting public and civil society institutions that participate in educational policy generally and in AHC formation in particular, as well as legislators.

- 2.5 **Sustainability.** The country has demonstrated its commitment to the formation of advanced human capital, using the BECAL program to contribute to achieving the priority goals defined in the National Development Plan 2030. While the BECAL program was launched and consolidated with public funds; the government's financial sustainability strategy restricts the amount of public funding available and fosters the growth of private financing through the Guarantee Fund (paragraphs 1.9 and 1.32). The formation and reintegration into the job market of advanced human capital of excellence (paragraph 1.29) is a strategic investment for Paraguay.<sup>47</sup> Effective public-private coordination through the strategic coordination committee (paragraph 3.4) seeks to ensure the successful training and employment of scholarship beneficiaries in the firms and the public institutions that participate in the program.

### III. IMPLEMENTATION AND MANAGEMENT PLAN

#### A. Summary of implementation arrangements

- 3.1 The Republic of Paraguay will serve as borrower and executing agency, acting through its Ministry of Finance. The Ministry of Finance has experience in managing scholarship programs (3491/OC-PR and technical cooperation ATN/OC-15125-PR) that fund scholarships for graduate study abroad for citizens and civil servants, respectively.
- 3.2 The Ministry of Finance, in turn, will act through the program execution unit, which will maintain its current structure as defined in the framework of the Becas 1 program.<sup>48</sup> For purposes of this operation, the core structure required for the program execution unit is: a general coordinator, a financial specialist, a procurement specialist, and a legal advisor responsible for contracts. The program execution unit's functions will encompass the following: operational management, international relations, dissemination, monitoring and evaluation, procurements and financial administration, etc. The external network of expert evaluators that has already been assembled will be used, and support from international agencies specialized in scholarship management will be able to continue conducting applicant selection, placement, and follow-up processes.
- 3.3 The program execution unit will also formalize the relationship with the scholarship recipients through a contract to be signed by the corresponding institution or firm. This will define benefits, duties, and obligations (in particular those related to the beneficiaries' return to the country upon completion of their studies), timeframes, and resources provided by each of the parties.
- 3.4 **Coordination mechanism.** The strategic coordination committee will coordinate with areas related to AHC formation (promotion of research and development, CONACYT; university training, Ministry of Education; and compatibility with the

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<sup>47</sup> Complementarily, the loan establishes obligatory periods of residence in the country for former scholarship recipients, with the duration depending on the type of study (see Table 1).

<sup>48</sup> The current structure of the program execution unit includes a general coordination unit and nine work areas: institutional planning and relations, monitoring and follow-up, self-managed scholarships, assisted scholarships and languages, return, sustainability, communication, information management, and administration and finance.

- National Development Plan 2030, STP). The strategic coordination committee is tasked with approving the following: (i) the program's guiding principles, in line with the program documents; (ii) the international engagement strategy; and (iii) the communication strategy. It will also serve as liaison between the program authorities and the scientific community, the business sector, the public sector, and civil society.
- 3.5 Coordination with other Bank programs will be facilitated by shared institutional mechanisms such as the BECAL program's strategic coordination committee; the CONACYT board, which is executing the Business Innovation Program (3602-OC-PR); or the board for the Digital Agenda Support Program (4650/OC-PR).
- 3.6 **Program Operating Regulations.** The amounts and conditions applicable to funding the different types of scholarships and activities to be financed by the program, together with the beneficiary eligibility and selection criteria, will be specified in the program [Operating Regulations](#). These will describe the role of the institutions and firms where the scholarship applicants work, how the firms should make their contributions (up to 30%), the model contract that will link the program with scholarship recipients and their institutions and firms, and the conditions governing their return to Paraguay upon completion of their postgraduate studies. In the case of Component 2, the operating manual for the Guarantee Fund will be included as an annex to the program [Operating Regulations](#).
- 3.7 **Guarantee Fund.** The Guarantee Fund will be capitalized from the loan proceeds. The AFD will serve as its administrator and will be responsible for executing the guarantees to the eligible financial institutions. Initially, the size of the Guarantee Fund is expected to be three times its capital, while experience is being gained. Before reaching an agreement on the operating manual for the Guarantee Fund, the Ministry of Finance and the AFD will enter into a trust arrangement in which both parties agree on the terms and conditions under which the Ministry of Finance will transfer the funds needed to establish the Guarantee Fund, as well as the AFD's obligations and rights in the administration thereof.
- 3.8 To access the Guarantee Fund, the financial institutions must register with the AFD. The control and audit mechanisms will be those established in Law 5628/2016, together with those specified in the Guarantee Fund manual. Guarantees will apply individually (not to loan packages).
- 3.9 The credits for postgraduate studies will be offered under market conditions by financial institutions recognized by the Central Bank, and the financial institutions in question will evaluate applicants according to their own policies and criteria.<sup>49</sup> The educational credit provider will be chosen by the individuals intending to pursue postgraduate studies. If the individual in question cannot provide the collateral required by the financial institution, the latter may request a guarantee from the

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<sup>49</sup> The BECAL program will evaluate scholarship applicants. Partial scholarship applicants may cover the shortfall with their own capital or funding. The beneficiaries will make their own arrangements to obtain credit. Financial institutions will select credit subjects according to their own criteria (pursuant to local financial regulations and their own policies). Thus, the program and the financial institutions will apply their own separate evaluation processes and criteria. With the experience acquired, financial institutions may also select students applying BECAL program criteria.

fund. Financial institutions may also request guarantees in respect of postgraduate students who, without having applied to the BECAL program, need funding for their studies and cannot provide the necessary collateral.<sup>50,51</sup> The Guarantee Fund will support other graduate students with the same eligibility criteria and amounts as the BECAL program (paragraphs 1.30 and 1.32b).

- 3.10 **Guarantee Fund manual.** As executing agency of the loan operation, the Ministry of Finance will agree with the AFD on a manual for the operation of the Guarantee Fund, which will be included as an annex to the program [Operating Regulations](#), and as such, will require the Bank's no objection. The Guarantee Fund manual will specify the internal approval process, the criteria for supervision, auditing, evaluation, accreditation, and registration of participating financial institutions, the student eligibility criteria, the eligible financing, the mechanics and criteria for issuing the guarantee, the release of the guarantee, the claim to the guarantee and collection thereof, monitoring and evaluation requirements, and the operational and contractual relationships between the parties involved.
- 3.11 **Special contractual conditions precedent to the first disbursement of the loan.** Prior to the first disbursement, the borrower will submit evidence, to the Bank's satisfaction, of the following: (i) the program's strategic coordination committee has been assembled from the top authorities of the Ministry of Finance, the Ministry of Education and Culture, the National Science and Technology Council, the Technical Secretariat for Economic and Social Development Planning, and four representatives with recognized experience in AHC formation, drawn from civil society, the business sector, academia, and the scientific community (one from each sector); (ii) the program [Operating Regulations](#) have entered into force, the content of which will conform to the terms previously agreed upon with the Bank; and (iii) the executing agency has hired or appointed the staff of the program execution unit, under the terms agreed upon with the Bank, consisting of the following core personnel: a general program coordinator, a financial specialist, a procurement specialist, and a legal advisor responsible for contracts. These conditions are justified because: (i) they constitute governance of the program and ensure compliance with its principles and its coordination with other institutions; (ii) they establish the execution and fiduciary conditions necessary for program execution; and (iii) the program execution unit implements the program's central processes and executes the activities envisaged in the programming.
- 3.12 **Special contractual execution condition.** Prior to capitalization of the Guarantee Fund, the borrower, acting through the executing agency, will present evidence, to the Bank's satisfaction, that the trust agreement or other legal instrument acceptable to the Bank has been signed between the Ministry of Finance and the AFD to establish the Guarantee Fund. This condition is justified because it

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<sup>50</sup> The evaluation of the applicant and the university by the BECAL program is expected to be useful to the financial institutions.

<sup>51</sup> The credit guarantee aims to facilitate access for those who do not have the income, co-borrowers, or other collateral. Legislation in Paraguay requires guarantee fund coverage to be less than 100%; the program proposes 90% coverage by the Guarantee Fund. See National Development Bank (BNF) <https://www.bnf.gov.py/prestamos/linea-de-credito-para-estudios-superiores-en-el-exterior->.

establishes the specific regulatory framework enabling the structuring and operation of the Guarantee Fund.

- 3.13 **Financial and fiduciary management.** Procurements and financial administration will be conducted in accordance with the Bank's procurement policies set out in documents GN-2349-9 and GN-2350-9 and as specified in the fiduciary agreements and requirements contained in Annex III. Since the program primarily consists of financial assistance to individuals only, it is expected to process a small number of procurements, which will be included in the [procurement plan](#) approved by the Bank, pursuant to the provisions of the loan contract.
- 3.14 **Financial statements and external audit.** Both annually and at the end of the program, the Ministry of Finance will present the program's financial statements and an audit report thereon. The reports will be submitted within 120 days after the end of the fiscal year (31 December), and the final report will be submitted within 120 days after the last disbursement in accordance with the Financial Management Guidelines for IDB-financed Projects (OP-273-12). The external audit will be performed by an entity acceptable to the Bank and will include the semiannual and annual financial statements and reports on the internal control system.

#### **B. Summary of arrangements for monitoring results**

- 3.15 **Monitoring.** As the entity in charge of evaluation and monitoring of the program, the executing agency will be responsible for: the preparation of the annual work plan, the periodic evaluation of the program's management and results indicators, including the collection and maintenance of the corresponding indicators (and baseline), and the preparation of terms of reference and supervision of consultants hired for evaluation purposes. The Ministry of Finance will act through the program execution unit. The key instruments used for program monitoring by the executing agency are: the [multiyear execution plan](#), the [annual work plan](#), and the [procurement plan](#). The Bank will also prepare and publish progress monitoring reports.
- 3.16 The attainment of results will chiefly be monitored through information contained in the reports generated by the Ministry of Finance. These reports will be submitted by the Ministry within 60 days after the end of each six-month calendar period or such other period as may be agreed upon. The reports will make it possible to visualize progress and solve problems in a timely manner. The compilation and monitoring of the indicators in the results matrix will provide the information needed to evaluate the results of the operation.
- 3.17 Both annually and at the end of the program, the Ministry of Finance will present the program's financial statements and an audit report thereon. The reports will be submitted within 120 days after the end of the fiscal year (31 December), and the final report will be submitted within 120 days after the last disbursement in accordance with the Financial Management Guidelines for IDB-financed Projects (OP-273-12). The external audit will be performed by an entity acceptable to the Bank and will include the semiannual and annual financial statements and reports on the internal control system.

- 3.18 **Program evaluations.** There will be a midterm and a final evaluation. The former will be performed 24 months after the start of execution or when 50% of the funds have been disbursed, whichever occurs first. The final evaluation will be commissioned when 90% of the funds have been executed.
- 3.19 The midterm evaluation will include surveys of quality and satisfaction indicators at participating public institutions. It is expected to deliver the following: (i) an analysis of selection processes, allocation, and follow-up of scholarships, relative to the conditions specified in the contract and program Operating Regulations; (ii) a description of outputs achieved by the program and any deviation from multiyear planning; (iii) the degree of execution of resources relative to what was planned; and (iv) the percentage of scholarship recipients who are employed in the public and private sectors. For the final evaluation, different methodologies will be considered given the sources of information available for each of the indicators. A reflexive analysis (before and after)<sup>52</sup> will be used to measure the impact indicator of improvement in the quality and satisfaction of the service provided by public institutions that employ former program scholarship recipients as professionals and the percentage of employees with postgraduate degrees (who are not scholarship recipients) in the total payroll of the public institutions, while the panel data method will be used for the impact and outcome indicators at the firm level. Indicators measured with respect to the direct beneficiaries (workers who are scholarship beneficiaries) will be identified by regression discontinuity. This evaluation will be coordinated with the work to prepare the project completion report (see [monitoring and evaluation plan](#)).

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<sup>52</sup> For this group, surveys will be made of quality and satisfaction indicators in participating public institutions.

Development Effectiveness Matrix		
Summary		PR-L1157
<b>I. Corporate and Country Priorities</b>		
<b>1. IDB Development Objectives</b>		
Development Challenges & Cross-cutting Themes	-Social Inclusion and Equality -Productivity and Innovation -Gender Equality and Diversity -Institutional Capacity and the Rule of Law	
Country Development Results Indicators	-Students benefited by education projects (#)* -Beneficiaries of improved access to formal financial services (#)*	
<b>2. Country Development Objectives</b>		
Country Strategy Results Matrix	GN-2958	Strengthen public management capabilities
Country Program Results Matrix	GN-2948-2	The intervention is included in the 2019 Operational Program.
Relevance of this project to country development challenges (If not aligned to country strategy or country program)		
<b>II. Development Outcomes - Evaluability</b>		Evaluable
<b>3. Evidence-based Assessment &amp; Solution</b>		8.3
3.1 Program Diagnosis		1.8
3.2 Proposed Interventions or Solutions		4.0
3.3 Results Matrix Quality		2.5
<b>4. Ex ante Economic Analysis</b>		9.0
4.1 Program has an ERR/NPV, or key outcomes identified for CEA		3.0
4.2 Identified and Quantified Benefits and Costs		3.0
4.3 Reasonable Assumptions		1.0
4.4 Sensitivity Analysis		2.0
4.5 Consistency with results matrix		0.0
<b>5. Monitoring and Evaluation</b>		9.3
5.1 Monitoring Mechanisms		2.5
5.2 Evaluation Plan		6.8
<b>III. Risks &amp; Mitigation Monitoring Matrix</b>		
Overall risks rate = magnitude of risks*likelihood		Medium
Identified risks have been rated for magnitude and likelihood		Yes
Mitigation measures have been identified for major risks		Yes
Mitigation measures have indicators for tracking their implementation		Yes
Environmental & social risk classification		C
<b>IV. IDB's Role - Additionality</b>		
The project relies on the use of country systems		
Fiduciary (VPC/FMP Criteria)	Yes	Procurement: Information System, Price Comparison.
Non-Fiduciary	Yes	Strategic Planning National System.
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:		
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project	Yes	Several consultancies were financed to improve EU work processes and to diagnose the system that the program uses to manage fellows and scholarships.

Note: (\*) Indicates contribution to the corresponding CRF's Country Development Results Indicator.

The project "Strengthening of the national program of postgraduate scholarships abroad Don Carlos Antonio López (PR-L1157)" has as a general objective to contribute to improving the performance of public institutions and private companies by incorporating advanced human capital (CHA) into its human resources endowment. The specific objectives are: (i) to increase the share of CHA in public and private sector institutions in the country; and (ii) promote the sustainability of the National Program of Postgraduate Scholarships Abroad "Don Carlos Antonio López". The project aims to provide scholarships for postgraduate studies to employees of private firms and public institutions, as well as improve the sustainability of the national scholarship program.

The project identifies the low share of workers with graduate degrees as one of the key causes of the low levels of productivity and innovation of firms as well as the low quality of and satisfaction with services provided by public institutions. According to the diagnostic, the lack of such workers is due to the scarcity of advanced degree programs in Paraguay and the difficulty of obtaining financing for studies, those in the country and even more so abroad. However, in some cases there is a lack of characterization and quantification of the determinants of some of the identified problems. The program includes indicators to measure the achievement of the two specific objectives. However, some targets of the outcome indicators are not supported with evidence and might be ambitious.

The cost-benefit analysis of the program is solid and based on reasonable assumptions, and suggests the program has a positive net present value. A sensitivity analysis is included, which shows that this value remains positive under most, though not all, scenarios. However, there is a lack of consistency between the baseline and target values for one of the main outcome indicators in the results matrix and the CBA. Given the lack of relevant evidence for the effectiveness of this type of program in the region, the project includes an impact evaluation, which relies on a quasi experimental methodology to evaluate the first specific objective.

**RESULTS MATRIX**

<b>Project objective:</b>	The general objective of the project is to contribute to improving the performance of public institutions and private enterprises by incorporating advanced human capital (AHC) into their human resource endowment. The specific objectives are: (i) to increase the participation of AHC in a number of public- and private-sector institutions in Paraguay; and (ii) to enhance the sustainability of the “Don Carlos Antonio López” National Scholarship Program for Postgraduate Studies Abroad.
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**EXPECTED IMPACT**

Indicators	Unit of measure	Baseline	Base-line year	Final target	Final target year	Means of verification	Comments
<b>IMPACT 1:</b> Improvement in the quality of, and satisfaction with, <sup>1</sup> the service provided by public institutions that employee former program scholarship recipients on their professional staff							
<b>IM.1</b> Quality Indicator	Points	4.1	2016	5	2027	Study “Simplifying Lives” (Pareja, A. et al)	The scale ranges from 0 to 10 points and is measured over a period of 12 years. The study focuses on analyzing the quality management systems, i.e. the institutional structures, policies, and business processes (including the resources and technologies applied in their execution), that each institution defines with the aim of providing high-quality services and products, i.e. highly adapted to citizens’ needs. The plan is to repeat this study to obtain the values for the final year at least.
<b>IM.2</b> Satisfaction Indicator	Points	4.7	2016	6	2027	Study “Simplifying Lives” (Pareja, A. et al)	The scale ranges from 0 to 10 points and is measured over a period of 12 years. The study defines three satisfaction variables: explicit, implicit, and predicted. The first is the level of satisfaction that each informant claims to have in response to the following direct question: “In general, how do you rate the degree of satisfaction of the experience you had with the service” (question PG_3).The second is obtained by averaging explicit satisfaction with the distance that citizens perceive between their experience and what they consider an ideal service. The plan is to repeat this study to obtain the values for the final year at least. This concept (distance to ideal) is

<sup>1</sup> Quality is defined as the “degree of fitness of a product or service for the use or purpose expected by customers”. Satisfaction is the “valuation that customers make of their experience on receiving a product or service”, which “may or may not include price, the purchase transaction, delivery, performance once in use or consumed, [...]” Alejandro Pareja, *Simplifying Lives*, IDB (2016).

							summarized in question PG_6: “The quality of service could be improved...”. Based on the way the question was structured. Predicted satisfaction is the output of the predictor model built into this project, which predicts the satisfaction there would be for different driver scenarios. The indicator uses implicit satisfaction.
<b>IMPACT 2:</b> Increase in the productivity of firms through AHC formation <sup>2</sup>							
<b>IM.3</b> Average annual value added by firms	US\$000	63.83 (to be updated)	2018	76.3	2027	Survey of Business Innovation in Paraguay (EIEP) <sup>3</sup>	As productivity is a measure of efficiency that relates the value of production to the costs incurred in generating it, the indicator represents average annual value-added (sales minus operating costs) of firms that employ former program scholarship recipients. The baseline value will be updated from the successive rounds of the Survey of Business Innovation in Paraguay (EIEP), to be undertaken in 2020, including questions to obtain this indicator. The target value is consistent with the productivity gains expected as a result of increasing the density of AHC, as reported in the literature (Konings and Vanormelingen (2015), Grip and Sauermann (2012), and López-Acevedo et al (2005); and it is consistent with the detailed benefit calculations contained in the <a href="#">economic analysis</a> and in the <a href="#">monitoring and evaluation plan</a> . The baseline indicator is obtained from the 2011 Economic Census, updated to 2018 by applying the country’s actual growth rates. Value added was calculated as the difference between revenue obtained from the sale of goods and services and the payments made in respect of payroll and operating expenses. The value will be updated with the new EIEP.

<sup>2</sup> This refers to the firms benefited by the program.

<sup>3</sup> The PROINNOVA Program (3602/OC-PR) will finance the next three innovation surveys (2020, 2022, and 2025).

EXPECTED OUTCOMES

Indicators	Unit of measure	Baseline	Year Baseline	Final target	Final target year	Means of verification	Comments
<b>SPECIFIC OBJECTIVE I:</b> To increase the participation of AHC in a number of public- and private-sector institutions in Paraguay							
<b>OUTCOME 1:</b> Increased proportion of employees with postgraduate degrees on the payroll of public institutions							
<b>R1.1</b> Percentage of workers with post-graduate qualifications who are not program beneficiaries relative to total payroll of employees in public institutions that employ program scholarship beneficiaries	%	1.4	2019	8.4	2025	Executing agency report recording the number of staff with postgraduate degrees	This indicator measures the proportion of non-program-beneficiary postgraduate staff (i.e. master's and doctorate degree holders) in the total number of employees of public entities employing program scholarship beneficiaries. It is an indicator of the "additional AHC attraction" of institutions that signal (through scholarships, wages, etc.) their interest in having AHC. The baseline value was approximated from sample data taken from Paraguay's 2018 Permanent Household Survey. The ratio shows the total number of workers who report their main occupation as working in the public sector and who claim to have a master's or doctorate degree. Subsequently, this information will be updated based on the executing agency's report, which records the number of civil servants with and without postgraduate degrees in benefited public institutions. The target value, which has been defined by the authority, is consistent with the experience of Chile's Production Development Corporation (CORFO), in which this ratio rose by 7 percentage points in a period similar to the one to be evaluated (Angelelli and Luna (2017)). The effect of the program will be identified by reflexive comparison.
<b>R1.2</b> Average monthly wage of public-sector workers acquiring AHC	US\$	889	2018	1,250	2025	Permanent Continuous Household Survey	The baseline corresponds to the monthly average of wages reported in Paraguay's 2018 Permanent Continuous Household Survey by heads of household who report their main occupation as working in the public sector and who do not have advanced education (i.e. any education level except postgraduate). The follow-up will verify educational status of the treatment and control groups (members of the control group will not have AHC, those in the treatment group will have AHC). The exchange rate data, obtained from the Central Bank of Paraguay (BCP), corresponds to the monthly average of the quoted retail exchange rate. The target is projected from impacts calculated for similar programs in Chile. The program's effect will be identified through quasi-experimental comparison with regression discontinuity design.

Indicators	Unit of measure	Baseline	Year Baseline	Final target	Final target year	Means of verification	Comments
<b>OUTCOME 2:</b> Increased participation of AHC in firms <sup>4</sup>							
<b>R2.1</b> Percentage of workers with postgraduate qualifications who are not program beneficiaries relative to the total payroll of employees at firms employing program scholarship beneficiaries	%	0.78	2015	5	2025	EIEP	This indicator measures the proportion of non-beneficiary postgraduate staff (holders of master's and doctoral degrees) as a percentage of the total number of employees in public entities employing program scholarship beneficiaries. It is an indicator of the "additional AHC attraction" of institutions that signal (through scholarships, wages, etc.) their interest in having AHC. The baseline is obtained from EIEP16. The target value is consistent with penetration curves of employees with postgraduate degrees, as reported in the literature (Cota and Pereyra, 2014), and also with the parameters considered in the program's <a href="#">economic analysis</a> and <a href="#">monitoring and evaluation plan</a> . In Chile this ratio is 5% according to the research and development survey. The program's effect will be identified by the regression methodology using panel data with fixed effects.
<b>R2.2</b> Average monthly wage of private-sector workers who acquire AHC	US\$	641	2018	900	2025	Permanent Continuous Household Survey	The baseline corresponds to the monthly average of wages reported in Paraguay's 2018 Permanent Continuous Household Survey for heads of household who report their main occupation as working in the public sector and who do not have advanced education (i.e. any education level except postgraduate). The follow-up will verify educational status of the treatment and control groups (members of the control group will not have AHC, those in the treatment group will have AHC). The exchange rate data, obtained from the BCP, corresponds to the monthly average of the quoted retail exchange rate. The target is projected from impacts calculated for similar programs in Chile. The program's effect will be identified through quasi-experimental comparison with regression discontinuity design.

<sup>4</sup> This refers to the firms benefited by the program.

Indicators	Unit of measure	Baseline	Year Baseline	Final target	Final target year	Means of verification	Comments
<b>OUTCOME 3:</b> Increase in business sales <sup>5</sup>							
<b>R3.1</b> Average annual sales per worker in firms employing scholarship beneficiaries	US\$ (tho usand)	33	2015	37	2025	EIEP	This indicator measures average annual sales per worker in firms employing program scholarship beneficiaries. The baseline is obtained from EIEP16. The exchange rate data is obtained from the BCP and corresponds to the monthly average of the quoted retail exchange rate. The target value is consistent with those reported in the literature for firms that incorporated new advanced human capital (Román et al, 2000) as well as with the parameters considered in the program's <a href="#">economic analysis</a> and <a href="#">monitoring and evaluation plan</a> . The program's effect will be identified by the regression methodology using panel data with fixed effects.
<b>SPECIFIC OBJECTIVE II:</b> To enhance the sustainability of the “Don Carlos Antonio López” National Scholarship Program for Postgraduate Studies Abroad.							
<b>OUTCOME 4:</b> Larger proportion of scholarships funded							
<b>R4.1</b> Proportion of all scholarships awarded in a year that are funded	%	0	2018	35	2025	Executing agency performance report	This indicator measures the percentage of all scholarships awarded in a given year that are financed by guarantees under the BECAL II program. The objective is to achieve an increasing share of the funding for students, basically in master's degree and specialization courses, with a target of 35% set for the period 2020-2025 and 50% by 2025-2030. The target for 2020-2025 is related to the excess demand for scholarships registered by the program in its three most recent rounds (31% of the eligible candidates did not receive scholarships owing to the budget limit). The program's effect will be identified by reflexive comparison.

<sup>5</sup> This refers to the firms benefited by the program.

OUTPUTS

Output	Unit of measure	Baseline	Baseline year	2020	2021	2022	2023	2024	2025	Final target	Means of verification
<b>Component 1. AHC formation in the public and private sector</b>											
<b>Subcomponent 1.1. AHC formation in the public sector</b>											
1. Scholarships awarded for public-sector workers to study for a master's degree abroad	Number of scholarships awarded	188	2018	17	17	17	17	17	0	273	Semiannual program progress report
2. Scholarships awarded for public-sector workers to study for a doctorate abroad	Number of scholarships awarded	2	2018	3	2	0	0	0	0	7	
3. Scholarships awarded for public-sector workers to study for a master's degree in Paraguay	Number of scholarships awarded	0	2019	36	36	36	36	36	0	180	
4. Scholarships awarded for public-sector workers to take specialization courses in Paraguay	Number of scholarships awarded	0	2019	66	66	66	66	66	70	400	
5. Workshops held to identify priority AHC needs in the public sector	Number of workshops held	0	2019	2	4	4	0	0	0	10	
<b>Subcomponent 1.2. AHC formation in the private sector</b>											
6. Scholarships awarded for private-sector workers to study for a master's degree abroad	Number of scholarships awarded	174	2019	26	25	23	23	23	0	294	Semiannual program progress report
7. Scholarships awarded for public-sector workers to study for a doctorate abroad	Number of scholarships awarded	3	2019	3	2	0	0	0	0	8	

Output	Unit of measure	Baseline	Baseline year	2020	2021	2022	2023	2024	2025	Final target	Means of verification
8. Scholarships awarded for private-sector workers to study for a master's degree in Paraguay	Number of scholarships awarded	0	2019	50	50	50	50	50	0	250	
9. Scholarships awarded for private-sector workers to take specialization courses in Paraguay	Number of scholarships awarded	0	2019	58	58	58	58	58	60	350	
10. Workshops held to identify priority AHC needs in the private sector	Number of workshops held	0	2019	4	5	5	4	2	0	20	
<b>Subcomponent 1.3. National doctoral training</b>											
11. Full-time scholarships awarded for doctoral studies at Paraguayan universities	Number of scholarships awarded	0	2019	10	10	0	0	0	0	20	Semiannual program progress report
<b>Subcomponent 1.4. Improvement of the AHC formation system</b>											
12. Digital platform operating for the management of scholarships	Number of operational digital platforms	0	2019	1	0	0	0	0	0	1	Platform delivery report
13. Events held for early identification and awareness-raising among candidates for postgraduate studies	Number of events held	0	2019	0	1	1	0	0	0	2	Consulting report
14. Events held to develop links and collaboration with international organizations engaged in the financing and development of talent.	Number of events held	0	2019	0	1	1	1	1	0	4	Semiannual project progress report

Output	Unit of measure	Baseline	Baseline year	2020	2021	2022	2023	2024	2025	Final target	Means of verification
<b>Component 2. Support for the sustainability of the AHC formation system</b>											
<b>Subcomponent 2.1. Guarantee Fund</b>											
15. Consulting service provided to structure the Guarantee Fund	Number of consultancies undertaken	0	2019	0	1	0	0	0	0	1	Consulting report
16. Credit guarantees issued	Number of loans guaranteed	0	2019	151	646	141	623	141	59	1,761	Trust fund reports
17. Guarantee Trust Fund contract signed	Number of contracts signed	0	2019	1	0	0	0	0	0	1	Trust fund reports
<b>Subcomponent 2.2. Strengthening of the BECAL program</b>											
18. Studies conducted for the design of a sustainable AHC financing strategy	Number of consulting assignments conducted	0	2019	2	1	0	0	0	0	3	Semiannual project progress report
19. Events held for exchange of knowledge from similar experiences	Number of events held	0	2019	1	0	0	0	0	0	1	Semiannual project progress report
20. Diagnostic study made of gender participation and diversity in BECAL I	Number of studies made	0	2019	1	0	0	0	0	0	1	Pro-gender consulting report

## FIDUCIARY AGREEMENTS AND REQUIREMENT

<b>Country</b>	Paraguay
<b>Project number:</b>	PR-L1157
<b>Name:</b>	Strengthening the “Don Carlos Antonio López” National Scholarship Program for Postgraduate Studies Abroad
<b>Executing agency:</b>	The Borrower, through its Ministry of Finance
<b>Fiduciary team:</b>	Fernando Glasman, Jorge Seigneur, and Jorge Luis González (VPC/FMP)

### I. EXECUTIVE SUMMARY

- 1.1 The institutional assessment for fiduciary management was conducted jointly by the Bank’s fiduciary team and officials from the administrative-financial and procurement areas of the Ministry of Finance. It was supplemented by the findings of the Ministry of Finance’s May 2019 Institutional Capacity Assessment System (ICAS) and the program’s risk matrix. Preparation of the fiduciary agreements has been based on these inputs.

### II. FIDUCIARY CONTEXT OF THE COUNTRY

- 2.1 In general, the country systems used for financial management have a medium level of development. For the purposes of specific financial reports and external control when executing projects financed by the Bank, the systems in question need to be supplemented by auxiliary accounting systems and the contracting of private audit firms acceptable to the Bank. Financial control tools such as the Integrated Financial Administration System (SIAF), the Integrated Accounting System (SICO), and other subsystems allow executing agencies to transfer payments to suppliers of goods and services through the Central Bank. In the future, when these systems are integrated it will be possible for audited financial statements for the program or project to be produced by the SIAF. Meanwhile, parallel systems will be used.
- 2.2 In Paraguay’s Public-sector Procurement System (SCSP), the National Public Procurement Information System, which is already being made full use of in the Bank’s operations, will be supplemented by the national electronic reverse auction (SBE) and competitive bidding (LCO) subsystems, for the amounts and categories specified in the agreement for their use signed between the country and the Bank on 17 June 2014.

### **III. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY**

- 3.1 The Republic of Paraguay will serve as both borrower and executing agency, acting through its Ministry of Finance. The Ministry of Finance has experience managing programs that fund scholarships for postgraduate study abroad for both citizens and civil servants (loan 3491/OCPR and technical cooperation ATN/OC-15125-PR, respectively).
- 3.2 For purposes of this operation, the core structure required for the program execution unit<sup>1</sup> consists of a general coordinator, a financial specialist, a procurement specialist, and a legal advisor responsible for contracts. The program execution unit's functions will encompass operational management, international relations, dissemination, monitoring and evaluation, procurement, financial administration, etc.
- 3.3 The program execution unit of the Becas 1 program (3491/OC-PR) and technical cooperation operation ATN/OC-15125-PR, which will also execute this program, has the capacity needed to fulfill the following functions: operational management, international relations, management of the language leveling program, dissemination, monitoring and evaluation, procurement, financial administration, etc.

### **IV. FIDUCIARY RISK EVALUATION**

- 4.1 The evaluations performed show that although the risks identified have been rated as low, a number of opportunities for improvement have been identified, as follows:
  - a. Implementation of a continuous training plan for the program execution unit team, which will be responsible for program management and execution;
  - b. Implementation of the program Operating Regulations;
  - c. Strengthening of the accounting and internal control areas in terms of the Bank's financial management policies through relevant courses and training;
  - d. Strengthening of the procurement area in terms of the Bank's procurement policies.

### **V. CONSIDERATIONS FOR THE SPECIAL PROVISIONS OF THE CONTRACT**

- 5.1 The following agreements and requirements should be considered in the special provisions:
  - a. For purposes of Article 4.10 of the General Conditions, the Parties agree that the applicable exchange rate will be as indicated in subparagraph (b)(i) of said Article. For those purposes, the exchange rate agreed upon will be the

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<sup>1</sup> The current structure of the program execution unit includes a general coordination unit and the following nine work areas: institutional planning and relations, monitoring and follow-up, self-managed scholarships, assisted scholarships and languages, return, sustainability, communication, information management, and administration and finance. It also has two bodies associated with the management of scholarships: an evaluation committee and an advisory technical team.

exchange rate on the effective date on which the borrower, the executing agency, or any other natural or legal person to whom the authority to incur expenses has been delegated, makes the respective payments in favor of the contractor, supplier, or beneficiary.

- b. The program's annual financial statements must be submitted 120 days after the fiscal year-end (31 December); and the final financial statements must be submitted 120 days after the date of the final disbursement.

## VI. FIDUCIARY AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION

- 6.1 The procurement policies applicable to this loan are those contained in documents GN-2349-9 and GN-2350-9 or subsequent updates thereof. In addition, the Bank's Board of Executive Directors approved (document GN-2538-11) the use of the SBE and LCO subsystems of Paraguay's public procurement system (Law 2051/03). Other country systems approved subsequent to project approval will be automatically applicable and will be indicated in the [procurement plan](#).

### A. Procurement execution

- 6.2 **Procurement of works, goods and nonconsulting services.** Contracts for works, goods and nonconsulting services<sup>2</sup> subject to international competitive bidding (ICB) will use the standard bidding documents issued by the Bank. Procurement subject to national competitive bidding (NCB) will use national bidding documents as agreed with the Bank. Procurement technical specifications will be reviewed by the project's sector specialist when the selection processes are being prepared.
- 6.3 **Selection and contracting of consultants.** Consulting service contracts generated under the project will be executed using the standard request for proposals issued by, or agreed on with, the Bank. The terms of reference for contracting consulting services will be reviewed by the project's sector specialist.
- 6.4 **Selection of individual consultants.** No individual consultants are expected to be hired.
- 6.5 **Use of country system.** Pursuant to document GN-2538 of October 2013, the use of the SBE and LCO subsystems of the SCSP in Bank-financed operations will be applicable to: (i) all contracts for goods and nonconsulting services assigned to the SBE by the SCSP, where the amount in question is below the threshold set by the Bank for use of the shopping method in respect of off-the-shelf goods (referentially US\$250,000); (ii) all works contracts for amounts below the threshold set by the Bank for application of the shopping method for custom goods (referentially US\$250,000), and contracts for goods and nonconsulting services up to the amount specified by the Bank for application of the shopping method for custom goods and services (referentially US\$50,000); and (iii) contracts for amounts equal to or greater than those mentioned above will be governed by the Bank's procurement policies (document GN-2349-9). Section 1 of the Bank's policies (document GN-2349-9) will apply in all contracts executed, irrespective of the amount or procurement modality in question. Any system or subsystem that

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<sup>2</sup> Policies for the Procurement of Goods and Works Financed by the Inter-American Development Bank (document GN-2349-9) paragraph 1.1: Nonconsulting services are treated as goods.

may be approved subsequently will also be applicable to the operation. The operation's procurement plan and its updates will identify contracts to be executed through the approved country systems. Should the Bank validate another system or subsystem, this will also be applicable to the operation, pursuant to the provisions of the Loan Contract.<sup>3</sup>

6.6 **Recurrent costs.** To ensure that the program execution unit has the conditions needed to fulfill its functions, all public utility and communication expenses, translations, bank charges, office supplies, advertising expenses, photocopies, mail, etc. will be financed by the project from the loan proceeds, within the annual budget approved by the Bank. The expenses in question will be subject to the executing agency's procedures, which have been reviewed and accepted by the Bank, provided they do not violate the fundamental principles of competition, efficiency, and economy. However, operating costs do not include the wages of current civil servants.<sup>4</sup>

6.7 **National preference.** None foreseen.

**Table 1. Thresholds for international competitive bidding and international shortlists**

Method	ICB works	ICB goods and nonconsulting services	International shortlist for consulting services
<b>Threshold</b>	US\$3,000,000	US\$250,000	US\$200,000

**Table 2. Procurement by contracting segment<sup>5</sup>**

Segment	Amount (US\$)
Total works	-
Total goods	46,800
Total nonconsulting services	484,200
Total consulting firms	1,020,000
Total individual consultants	1,004,000
Total training actions	-
<b>TOTAL PROCUREMENT PLAN</b>	<b>2,555,000</b>

<sup>3</sup> Should the Bank validate another system or subsystem, it will also be applicable to the operation, pursuant to the provisions of the loan agreement.

<sup>4</sup> On an exceptional basis, incremental staff costs incurred by the executing agency and specifically linked to project implementation will also be financed (document [GN-2331-5](#) Annex I 1.7. C.c.1.22).

<sup>5</sup> The detail of the procurements can be viewed in the [procurement plan](#).

- 6.8 **Procurement supervision.** All procurement and/or contracting processes governed by the Bank's procurement policies (documents GN-2349-9 and GN-2350-9) will be reviewed by the Bank ex ante, taking the government's opinion on the matter into account. All procurement and/or contracting processes using the SCSP's SBE and LCO subsystems (document GN-2538-11) will be supervised through the country system. Supervision can be supplemented by project audits.
- 6.9 **Special provisions.** No special provisions are foreseen, other than those mentioned in paragraph 5V of this Annex.
- 6.10 **Records and files.** Project reports should be prepared and filed using the formats or procedures that have been agreed upon, as described in the Project Functions and Procedures Fiduciary Manual.

## VII. FIDUCIARY AGREEMENTS AND REQUIREMENTS FOR FINANCIAL EXECUTION

### A. Financial management

- 7.1 **Programming and budget.** The Ministry of Finance will centralize project execution through a program execution unit, which will receive logistical support from the other units of the Ministry of Finance. The Ministry will provide the program execution unit with the following services: legal advisory services on regulations and procedures, information technology services, personnel management, and logistical support.
- 7.2 **Accounting.** The program's accounts will be kept on an accrual basis; however, the accountability process for projects partly financed by the Bank operates on a cash basis. The SIAF is the principal manager of budget and accounting transactions, and is connected to the SICO as an accounting subsystem, along with other subsystems that enable the downloading of information and the preparation of reports accessible to the Bank and other financing sources, such as the integrated invoicing, disbursements, and accounting system.
- 7.3 **Information systems.** The executing agency will: (i) update the scholarship management computer system to monitor output and outcome indicators for each call for applications, and the number of scholarships awarded, financed and/or cancelled, disbursements made, accountability by specialized agencies, and online submission, evaluation and follow-up of scholarship applications and scholarship recipients; and (ii) maintain and update the financial and accounting information system, to make it possible to: (a) generate reliable financial information for preparation of the financial statements and other reports; and (b) provide the details needed to identify the goods procured and services contracted.
- 7.4 **Disbursements and cash flow.** Disbursements will be made through advances of funds, which must be corroborated by presenting a detailed monthly financial plan covering a six-month period. This will make it possible to determine the real demand of the program that is derived from the multiyear execution plan, the annual work plan, and the procurement plan. The second and subsequent disbursements will require justification of 80% of previous advances of funds, during program execution, governed by the Financial Management Guidelines for IDB-financed Projects (document OP-273-12) and accompanying documents.

- 7.5 **Internal control and internal audit.** To address the observations made on the internal control system in the ICAS evaluation, it was agreed to: (i) formalize procedures to identify the control activities within each major process that is designed for the project; (ii) acquire an information system to adequately support the development of internal audit operations; and (iii) design manuals on information security procedures, equipment, and the communications structure.
- 7.6 **External control and reports.** The executing agency, acting through the program execution unit, will file annual audit reports for the program, describing the activities financed by the Bank's loan. The audits will be performed by an independent firm of auditors acceptable to the Bank, under terms of reference previously approved by it. The external audit reports will be published in accordance with the Access to Information Policy.
- 7.7 **Financial supervision plan.** Financial supervision may be adjusted in response to project execution and audit reports. This will happen in three ways.

**Table 3. Financial supervision plan**

Nature/scope	Frequency
Financial audit and presentation of financial statements	Annual
Review of disbursement requests and annexed reports	2 or 3 times per year
Inspection visit/analysis of internal controls and control environment in the executing agency	Annual

- 7.8 **Execution mechanism.** As defined in Section III.A. of the main proposal.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-\_\_\_/19

Paraguay. Loan \_\_\_\_/OC-PR to the Republic of Paraguay. Strengthening the National “Don Carlos Antonio López” Scholarship Program for Postgraduate Studies Abroad

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Republic of Paraguay, as borrower, for the purpose of granting it a financing to cooperate in the execution of the project Strengthening the National “Don Carlos Antonio López” Scholarship Program for Postgraduate Studies Abroad. Such financing will be for an amount of up to US\$30,000,000 from the Ordinary Capital resources of the Bank, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on \_\_\_\_ 2019)

LEG/SGO/CSC/EZSHARE-746870777-12113  
PR-L1157