How Can Paraguay Promote Skills through Korea TVET ODA?

Como o Paraguai pode promover competências por meio da APD TVET da Coreia?

DOI: 10.46814/lajdv5n2-022

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ABSTRACT
Korea has continued steady growth in its official development assistance volume. Korea provided USD 2.2 billion, representing 0.14 percent of its gross national income (GNI) in 2020. Korea’s ODA budget has grown steadily. The Korean ODA project is expected to continue to increase in the field of TVET (technical vocational education and training) for developing countries. In early stage, the ODA project has been centered on Asian developing countries, but it is gradually expanding to Latin America and Africa. This paper analyzes the economy and ODA support status of Bolivia, Colombia, Paraguay, and Peru which are Korea's key ODA partners. Among the four countries, Paraguay's TVET and ODA current status are intensively focused. Through this, a plan for improving ODA performance and establishing a vocational education and training system is suggested. Suggestions for the improvement policies are as establishment of goal, vision and strategy for national TVET policy, establishment of comprehensive coordination mechanism between the government and the private sector, and establishment, promotion of TVET system and program.

Keywords: ODA, TVET, latin america, skills, policy.

RESUMO
A Coreia continuou a crescer de forma constante no seu volume de ajuda oficial ao desenvolvimento. A Coreia forneceu 2,2 mil milhões de dólares, representando 0,14 por cento do seu rendimento nacional bruto (RNB) em 2020. O orçamento da APD da Coreia tem crescido de forma constante. Espera-se que o projecto coreano de APD continue a aumentar no domínio do TVET (ensino e formação técnico-profissional) para os países em desenvolvimento. Numa fase inicial, o projecto de APD centrou-se nos países asiáticos em desenvolvimento, mas está a expandir-se gradualmente para a América Latina e África. Este artigo analisa a economia e a situação do apoio à APD da Bolívia, Colômbia, Paraguai e Peru, que são os principais parceiros da APD da Coreia. Entre os quatro países, a situação atual de TVET e APD do Paraguai está intensamente focada. Através disto, é sugerido um plano para melhorar o desempenho da APD e estabelecer um sistema de ensino e formação profissional. As sugestões para as políticas de melhoria são o estabelecimento de objectivos, visão e estratégia para a política nacional.
de TVET, o estabelecimento de um mecanismo de coordenação abrangente entre o governo e o setor privado, e o estabelecimento e promoção de um sistema e programa de TVET.

**Palavras-chave:** AOD, TVET, América Latina, competências, política.

### 1 INTRODUCTION

Korea is a country that has transformed from a recipient country to a donor country of foreign aid within a short period of time. Korea continues to provide policy advice on economic and social development of developing countries by utilizing factors of comparative advantage (Lee, 2015). Many developing countries are increasingly interested in Korea's economic and social development. In particular, Latin American countries want to learn policies for rapid economic growth in a short period of time by contributing to Korea's human capital. Developing countries in Latin America regard Korea's economic growth and the development of various systems such as education and training as major research subjects and as a role model. Recently the Korean government also selected Bolivia, Colombia, Paraguay, and Peru as key ODA partners among Latin American countries. ODA support fields differ by country.

Human capital, such as technical vocational education and training (hereafter ‘TVET’), is a key means of flexibly adapting to the future society and the world of work and increasing employability, and is the basis for social integration and innovative growth. However, Latin American countries are not well prepared to respond to a paradigm shift in jobs, such as changes in production and working methods and job polarization.

By the end of 2020, average employment rate of the Latin America and the Caribbean (hereafter ‘LAC’) had fallen from 57.4 percent to 51.7 percent, a sharp drop equated to the loss of around 26 million jobs (ILO, 2021). The unemployment of formal work shortages became more apparent to certain types of workers such as women and adults with lower qualifications groups that traditionally experience greater difficulties in accessing formal employment. LAC countries are struggling to address the economic and labor market impacts of the pandemic. The way to upgrading skills to effectively cope with the labor market is through TVET for workers throughout their lives.

This study analyzes the current status of TVET and ODA in Paraguay among Latin American countries. The purpose of this paper is to present policy suggestions to improve Paraguay's ODA performance and to establish an efficient TVET system through this study. This paper is organized as follows. Section II mentions about the methods of this research. Section III analyzes the economic situation of Latin America in four countries such as Bolivia, Colombia, Paraguay, and Peru. Section IV identifies the ODA legal framework of the Korean government, current status and performance of
Korea's ODA support for four Latin American countries. Also, this Section examines the status of ODA support in Paraguay by type and size of ODA and the current status of support in the education sector. Section V looks at ODA in the field of TVET and investigates the current situations, significances, current status, characteristics, problems of the VET market in Paraguay. Section VI suggests the improvement policies of TVET are presented. The last Section is the conclusion of this paper.

2 RESEARCH METHODS

The methods for this study are analysis of literatures and related data, an expert advisory meeting, interviews with public officials (MLESS, SNPP, SINAFOCAL, MEC) and experts in the field of TVET at Paraguay shared research contents, and policy debates for verifying the validity of current status and policy recommendations.

3 LATIN AMERICAN ECONOMY

Table 1 compares and explains population, area, GDP per capita, and foreign debt of four key partner countries. Colombia (50 million) has the most population among the four countries, followed by the Peru (33 million), Bolivia (12 million) and Paraguay (7 million). Peru is the largest and Paraguay is the smallest of the four countries in terms of territory. In GDP per capita, Peru ($7,047) was the highest, followed by Colombia ($6,508), Paraguay ($5,692) and Bolivia ($3,671). As for foreign debt, Colombia ($165,630 million) had the most burden among the four countries, followed by Peru ($78,431 million), Paraguay ($16,182 million) and Bolivia ($15,679 million).

<table>
<thead>
<tr>
<th>Country</th>
<th>Population (million)</th>
<th>Area (km²)</th>
<th>Per GDP (dollar)</th>
<th>Foreign debt (million dollar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolivia</td>
<td>12</td>
<td>1,099</td>
<td>3,671</td>
<td>15,679</td>
</tr>
<tr>
<td>Colombia</td>
<td>50</td>
<td>1,139</td>
<td>6,508</td>
<td>165,630</td>
</tr>
<tr>
<td>Paraguay</td>
<td>7</td>
<td>407</td>
<td>5,692</td>
<td>16,182</td>
</tr>
<tr>
<td>Peru</td>
<td>33</td>
<td>1,285</td>
<td>7,047</td>
<td>78,431</td>
</tr>
</tbody>
</table>

Table 1 Overview of Key Partner Countries (2019)


Table 2 describes the priority sectors and implementation strategies of the four key partner countries. Bolivia's key support areas are health and sanitation, rural development, transport, energy, and Columbia's areas are a regional development, transport, industry, and space building. Paraguay's

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1 Ministry of Labor, Employment and Social Security in Paraguay.
2 Servicio Nacional de Promoción Profesional is in charge of public training institutions controlled by the MLESS.
3 Paraguay Sistema Nacional de Formación y Capacitación Laboral is in charge of accrediting courses and allocating budgets to private training institutions by the MLESS.
4 Ministry of Education and Science.
areas are public administration, transport, health care, regional development and Peru's areas are health, public administration, transport, environmental protection.

The priority sectors of key partner countries were determined after reviewed by the International Development Cooperation Committee in Korea government. This committee was established in January 2006 under the jurisdiction of the Prime Minister in accordance with the ‘International Development Committee Regulations.’

Table 2 Priority Sectors and Implementation Strategies

<table>
<thead>
<tr>
<th>Country</th>
<th>Areas of Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolivia</td>
<td>Health and Sanitation, Rural development, Transport, Energy</td>
</tr>
<tr>
<td>Colombia</td>
<td>Regional development, Transport, Industry, Space Building</td>
</tr>
<tr>
<td>Paraguay</td>
<td>Public administration, Transport, Health care, Regional Development</td>
</tr>
<tr>
<td>Peru</td>
<td>Health, Public Administration, Transport, Environmental Protection</td>
</tr>
</tbody>
</table>


Table 3 compares and explains the economic outlook of four countries from 2018 to 2022. ECLAC is forecasted 2.1 percent GDP growth rate in the LAC region in 2022. The average GDP growth rate of the country was the highest in Paraguay (3.8 percent), followed by Columbia (3.7 percent), Bolivia (3.2 percent), Peru (3.0 percent) in 2022.

Table 3 Latin America’s 2021 Economic Outlook (Unit: Percentages)

<table>
<thead>
<tr>
<th>Country</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolivia</td>
<td>4.4</td>
<td>3.0</td>
<td>-8.0</td>
<td>5.1</td>
<td>3.2</td>
</tr>
<tr>
<td>Colombia</td>
<td>2.7</td>
<td>3.2</td>
<td>-7.0</td>
<td>5.0</td>
<td>3.7</td>
</tr>
<tr>
<td>Paraguay</td>
<td>4.2</td>
<td>3.0</td>
<td>-1.6</td>
<td>3.5</td>
<td>3.8</td>
</tr>
<tr>
<td>Peru</td>
<td>3.8</td>
<td>3.2</td>
<td>-12.9</td>
<td>9.0</td>
<td>3.0</td>
</tr>
</tbody>
</table>


Table 4 compares and explains the labor participation rates, employment rates, and unemployment rates of Bolivia, Colombia, Paraguay, and Peru in 2020. During the same period, labor participation rates were higher in Bolivia (60.9 percent), Colombia (54.8 percent), and Paraguay (66.7 percent) than the averages of LAC countries (53.2 percent). Also, employment rates were higher in Paraguay (61.6 percent) and Bolivia (55.8 percent) than the averages of LAC countries (47.4 percent), but Colombia (43.7 percent) and Peru (41.3 percent) were lower than the averages of LAC countries (47.4 percent). On the other hand, in terms of unemployment rate, Bolivia (8.4 percent), Paraguay (7.6 percent), and Peru (8.8 percent) were lower than the average of LAC countries (11.0 percent), but Colombia (18.3 percent) showed a higher level. In the comparison of men and women, labor force participation and employment account for a high proportion of men in all countries. However, in terms
of unemployment rate, women have a higher population than men in Colombia (21.6 percent) and Paraguay (8.8 percent).

Table 4 Indicators of Labor Market by Gender (2020, second quarter) (Unit: Percentages)

<table>
<thead>
<tr>
<th>Country</th>
<th>Labor Force Participation</th>
<th>Employment</th>
<th>Unemployment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Whole</td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td>Bolivia</td>
<td>60.9</td>
<td>69.2</td>
<td>52.8</td>
</tr>
<tr>
<td>Colombia</td>
<td>54.8</td>
<td>66.2</td>
<td>43.9</td>
</tr>
<tr>
<td>Paraguay</td>
<td>66.7</td>
<td>81.3</td>
<td>52.6</td>
</tr>
<tr>
<td>Peru</td>
<td>45.3</td>
<td>54.7</td>
<td>36.1</td>
</tr>
<tr>
<td>LAC Average</td>
<td>53.2</td>
<td>64.5</td>
<td>43.0</td>
</tr>
</tbody>
</table>


4 KOREA'S ODA SUPPORT FOR FOUR LATIN AMERICAN COUNTRIES

4.1 ODA LEGAL FRAMEWORK OF THE KOREAN GOVERNMENT

The Korean government's ODA support project is being carried out in accordance with the ‘Framework Act on International Development Cooperation.’ This Act stipulates basic matters regarding international development cooperation to enhance the appropriateness and efficiency of international development cooperation policies and to effectively achieve the policy goals of international development cooperation. It aims to contribute to the promotion of common prosperity and world peace.

The Korean development co-operation policy sits with MOFA (Ministry of Foreign and Affairs) and the MOEF (Ministry of Economy and Finance) delivered by their respective implementing agencies, KOICA (Korea International Cooperation Agency) for grants and the Export-Import Bank of Korea (Korea EXIM Bank) for concessional loans. Together these two ministries manage most of Korea’s ODA budget, with the balance spread over a large number of government departments and institutions. The Committee for International Development Cooperation (CIDC), chaired by the Prime Minister, oversees Korea’s development co-operation. The CIDC makes an effort to enhance development effectiveness through better co-ordination across ministries.

The KOICA was founded as a government agency on April 1, 1991, to maximize the effectiveness of South Korea's grant aid programs for developing countries by implementing the government's grant aid and technical cooperation programs. However, some government-related ministries and agencies, such as the Ministry of Education, the Ministry of Science and Technology, and the Ministry of Information and Communication, are also partially providing grants for technological cooperation.
The Government of Korea established the Economic Development Cooperation Fund (EDCF) on June 1, 1987 with the purpose of promoting economic cooperation between Korea and developing countries. Entrusted by the MOSF (Ministry of Strategy and Finance; former English name of MOEF), the Korea Eximbank is responsible for the administrative operation of the EDCF, including appraisal of projects, execution of the loan agreements, and loan disbursements. Other duties include principal and interest payments collection, project supervision, and ex-post evaluation of project operations (Korea Eximbank, 2020).

In November 2020, the fully amended ‘Framework Act on International Development Cooperation’ came into force. Since its first enactment in 2010, the ‘Framework Act’ has functioned as a legal basis for the Korean ODA system, with this revision coming 10 years into its operation. The core contents of the revised Framework Act aim to further strengthen the authority and role of two major implementing ministries, that is, the MOFA and MOEF, and embassies in partner countries, centering on the CIDC. It is hoped that Korea's ODA will truly grow in its effectiveness as the CIDC becomes an ultimate decision-making body in the planning and budgeting process. There are three points to be considered for this.

First, the CIDC should not micromanage individual projects but focus on more comprehensive, national-level strategies such as the strategic plan and CPSs (Country Partnership Strategy). Second, strategic evaluation must be performed, based not on the results of individual projects but on the outcomes and indicators developed for the strategies in advance. Third, global development agenda must be identified to present strategic directions. The CIDC needs to come up with a strategic direction for matters in which no ministry in charge has been specified, such as responding to COVID-19 in developing countries (Jung, 2021).

4.2 KOREA’S ODA SUPPORT STATUS AND PERFORMANCE

4.2.1 Size of ODA

Korea’s ODA has grown steadily since joining the DAC (Development Assistance Committee), but ODA budgets and projections remain well below internationally agreed targets. Korea’s ODA in 2019 increased by $160 million from the year 2018, due to an increase in bilateral assistance. According to the OECD (2019), the combined amount of ODA from the DAC member states stood at $152.8 billion, and the ODA/GNI ratio, the indicator of the level of aid relative to the size of the economy, was 0.30 percent on average.

Korea’s ODA/GNI ratio was 0.15 percent, a 0.01 percentage point increase from the previous year (0.14 percent). The average annual increase rate of the Korea’s ODA from 2010 to 2019 is 11.9 percent, the highest among the member states. The Korea’s ODA more than doubled from 2010 ($1.17
billion) to 2019 ($2.52 billion). The largest ODA provider among the DAC members is the United States, followed by Germany. Korea provided $2.52 billion of ODA in 2019, the 15th largest among the member states of the OECD’s DAC (OECD, 2019). The provision statistics, in 2022, among the 4,042.5 billion won of ODA, bilateral aid was 3,219.9 billion won (79.7 percent) and multilateral aid was 822.6 billion won (20.3 percent) (Consolidation Ministries, 2022.01.27, p. 36).

4.2.2 ODA flows by region

In 2019, Korea’s bilateral ODA was primarily focused on Asia. $1.0 billion was allocated to Asia and $516.3 million to Africa, accounting respectively for 49.0 percent and 25.2 percent of gross bilateral ODA. Asia and Africa were also the main regional recipients of Korea’s earmarked contributions to multilateral organizations, in line with the policy priorities of its overall strategy. 10 percent of gross bilateral ODA was unspecified by region in 2019 (OECD, 2021). Compared to 2021, the share of ODA in Asia decreased from 38.4 percent to 37.0 percent and, Latin America from 8.1 percent to 7.7 percent. However, the proportion of Africa increased from 18.6 percent to 18.8 percent (Consolidation Ministries, 2022.01.27, p.37.).

4.2.3 ODA flows by sector

In 2022, the proportion of ODA by sector was 13.2 percent of health, 13.1 percent for transportation, 9.1 percent for education, 9.8 percent for humanitarian aid, 7.7 percent for public administration, 7.7 percent for agriculture and fishery, 7.7 percent for water resource and hygiene, 5.9 percent for energy, 3.1 percent for industry, 2.6 percent for environment protection, 0.7 percent for telecommunication and 20.2 percent for others (Consolidation Ministries, 2022.01.27, p.38.).

Private finance mobilized by Korea in 2018~19 mainly related to activities in the education (41 percent), health and reproductive health (19 percent) and agriculture, forestry and fishing (9 percent) sectors. Moreover, Korea’s private mobilization for climate change mitigation and/or adaptation over 2018~19 accounted for 9 percent of its total private finance mobilized over the same period (OECD, 2021).

4.2.4 ODA flows by type

In 2022, ODA by type is supported in various types such as a project, a training program, dispatch of volunteers, developing a consultant, private public cooperation. In 2022, the proportion of ODA was 68.4 percent for projects, 4.9 percent for a training program, 3.7 percent for dispatch of volunteers (Consolidation Ministries, 2022.01.27, p.38.).
4.2.5 ODA support status of four key partner countries

Table 5 is a comparative explanation of the size of ODA (based on a fixed amount) by four key partner countries in 2020 and 2021. In the case of bilateral grant in 2020, Colombia was the highest with 27.151 billion won, followed by Paraguay with 16.61 billion won, Bolivia with 10.94 billion won, and Peru with 10.55 billion won. However, in the case of bilateral awards in 2021, Paraguay was the largest in the order of 21.25 billion won, followed by Colombia with 17.43 billion won, Bolivia with 10.85 billion won, and Peru with 10.05 billion won. In the case of bilateral loan in 2021, Bolivia was 9.99 billion won and Paraguay was 7.68 billion won.

<table>
<thead>
<tr>
<th>Countries</th>
<th>2020 Bilateral grants</th>
<th>2020 Bilateral loans</th>
<th>2020 Total</th>
<th>2021 Bilateral grants</th>
<th>2021 Bilateral loans</th>
<th>2021 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paraguay</td>
<td>16.61</td>
<td>n/a</td>
<td>16.61</td>
<td>21.25</td>
<td>7.68</td>
<td>28.93</td>
</tr>
<tr>
<td>Peru</td>
<td>10.55</td>
<td>n/a</td>
<td>10.57</td>
<td>10.05</td>
<td>n/a</td>
<td>10.05</td>
</tr>
<tr>
<td>Colombia</td>
<td>27.15</td>
<td>n/a</td>
<td>27.15</td>
<td>17.43</td>
<td>n/a</td>
<td>17.43</td>
</tr>
</tbody>
</table>

Note: 1) KRW; Korea won. 2) Exchange rate as of 2021: 1: 1,143 (U.S dollar: KRW. August, 5, 2021). 3) n/a; no data.

Table 6 compares the figures of ODA support by sector in Bolivia, Colombia, Paraguay and Peru, and from 1991 to 2019. During the same period, Peru was the largest with 127.92 million dollars, followed by Paraguay 115.647 million dollars, Bolivia 83.397 million dollars, and Colombia 78.316 million dollars.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Whole LAC</th>
<th>Colombia</th>
<th>Bolivia</th>
<th>Paraguay</th>
<th>Peru</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Medical</td>
<td>211,911</td>
<td>19,664</td>
<td>43,884</td>
<td>33,548</td>
<td>55,993</td>
</tr>
<tr>
<td>Education</td>
<td>191,534</td>
<td>11,560</td>
<td>7,858</td>
<td>34,449</td>
<td>33,279</td>
</tr>
<tr>
<td>Public Administration</td>
<td>201,427</td>
<td>19,302</td>
<td>13,575</td>
<td>24,168</td>
<td>27,455</td>
</tr>
<tr>
<td>Agriculture-Forestry-Fisheries</td>
<td>83,484</td>
<td>14,813</td>
<td>18,253</td>
<td>6,716</td>
<td>3,952</td>
</tr>
<tr>
<td>Technology-Environment-Energy</td>
<td>142,178</td>
<td>20,214</td>
<td>8,684</td>
<td>27,057</td>
<td>17,640</td>
</tr>
<tr>
<td>Emergency Aid</td>
<td>17,627</td>
<td>962</td>
<td>69</td>
<td>1,427</td>
<td>1,321</td>
</tr>
<tr>
<td>Others</td>
<td>22,571</td>
<td>1,166</td>
<td>796</td>
<td>921</td>
<td>1,794</td>
</tr>
<tr>
<td>Total</td>
<td>870,734 ($785,463,397)</td>
<td>87,681 ($78,316,879)</td>
<td>93,119 ($83,397,824)</td>
<td>128,286 ($115,647,396)</td>
<td>141,435 ($127,920,896)</td>
</tr>
</tbody>
</table>

Note: 1) KRW; Korea won. 2) Exchange rate as of 2021: 1: 1,143 (U.S dollar: KRW. August, 5, 2021).
Source: CIDC. 2020.1. 34th Committee for International Development Cooperation.
4.2.6 Status analysis of ODA support in Paraguay

According to the 2020 country monitoring results of the Ministry of Foreign Affairs, Korea’s ODA policies for Paraguay are consistent with the development needs of Paraguay, high-level development policies of Korea’s ODA and international priority issues. Therefore, they are highly relevant (Ministry of Foreign Affairs, 2021.07.07.). Korea’s aid has achieved certain level of outcomes. It contributed to improvement of livelihood of the poor, social services, economic, social infrastructure and public administration capacity of central and local government. Also, Korea’s ODA policies for Paraguay have been formulated through appropriate process.

Paraguay has recently been focused on public administration, transport, health care, regional development. In this session, education-related support has been analyzed. Table 7 analyzes the status of ODA support in the VET sector from 1996 to 2022.

Table 7 TVET ODA Status by Education in Paraguay (1996-2022) (Unit: USD)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Amount</th>
<th>Name of Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>345,000</td>
<td>Construction project of Alto Parana school (formation project)</td>
</tr>
<tr>
<td>2007</td>
<td>144,194</td>
<td>Korean school education environment improvement project</td>
</tr>
<tr>
<td>2007</td>
<td>59,158</td>
<td>Vulnerable children and youth rehabilitation training center construction project (2008~2010)</td>
</tr>
<tr>
<td>2008</td>
<td>507,245</td>
<td>Vulnerable children and youth rehabilitation training center construction project (2008~2010)</td>
</tr>
<tr>
<td>2008</td>
<td>1,167,990</td>
<td>Vulnerable children and youth rehabilitation training center construction project (2008~2010)</td>
</tr>
<tr>
<td>2010</td>
<td>5,580,000</td>
<td>Higher vocational training center construction project (2010~2015)</td>
</tr>
<tr>
<td>2010</td>
<td>26,517</td>
<td>Asuncion city vocational training center construction project</td>
</tr>
<tr>
<td>2011</td>
<td>2,800,000</td>
<td>Protection and rehabilitation training for vulnerable children and adolescents in Alto Parana Province (2011~2013)</td>
</tr>
<tr>
<td>2021</td>
<td>9,000,000</td>
<td>Improving delivery of and access to education through establishment of multi-media education center in Paraguay (2021~2024)</td>
</tr>
</tbody>
</table>

Note: Based on total expenditure.

In 2022, the Korean government is currently promoting two education-related projects for the Paraguayan government and universities; project to enhance ICT competency through establishment of P-K innovation center in UNA (duration: 2022-2026/ 5 years, total budget: US$ 9.6million by KOICA, US$ 2.4million by UNA) and Paraguay educational accessibility enhancement project through the establishment of multi-media education support center (Duration: 2021-2024/ 4 years, total budget: US$ 9.0million by KOICA) (KOICA, 2022).
5 TECHNICAL VOCATIONAL EDUCATION AND TRAINING IN PARAGUAY

5.1 EDUCATION SYSTEM

Paraguay’s education system is a 9-year compulsory course consisting of 6 years of elementary school and 3 years of secondary school, and then progresses to high school. High school is classified into the following three categories: general high course, bachilleratos tecnicos, formacion professional media. The ‘bachilleratos técnicos’ lasts 3 years and leads to the “bachiller técnico” which grants a direct access to tertiary education. The ‘formación profesional media’ is less academic and aims at a direct integration to the world of work after graduation. People who have left the education system sooner can nevertheless join professional training programmes handled by the ministry of education and culture, provided sufficient results at an entrance examination. Graduates from those programmes and of the ‘formacion profesional media’ have to pass the academic competency assessment Test (ACAT) to eventually pursue into tertiary education. Finally, students can join the ‘técnicos superiores’ curriculum (post-secondary education) offered by 287 institutions (88 percent are private) and which grants an ‘advanced technician’ degree after 3 years.

Out of the formal education system, a curriculum exists for people over 15 years old: vocational training, initial professional training, professional training, with various entry requirements and programmes, offered by both public and private institutions. The ministry of Justice also provides education and training through the national service for professional promotion (SNPP: Servicio Nacional de Promoción Profesional de Paraguay). The ‘SNPP’ offers classes in computer programme, distance training programme, apprenticeship programme for young people, business development programme, and instructors training programme. The students are mainly young adults. Other public institutions (Ministry of agriculture, Ministry of health, the Paraguayan Chamber of Construction, the Paraguayan Centre of Productivity and Quality etc.) handle besides vocational and technical programmes. Informal education also has some importance in Paraguay, albeit hard to measure.

5.2 TVET-RELATED GOVERNMENT AGENCIES AND INSTITUTIONS

TVET in Paraguay is a multitude of public and private professional-training providers. The main players are the Ministry of Education and the Ministry of Labour, Employment and Social Security (MLESS). The Ministry of Education offers formal TVET in secondary schools, but also a set of non-formal programmes that include vocational training options. The MTESS, in turn, offers courses through the National Professional Promotion Service (SNPP) and manages the private supply of training through SINAFOCAL. However, it also offers advanced technical training. Other ministries also offer training programmes, especially the Ministry of Agriculture and Livestock Farming. Table 8 describes the TVET-related government agencies and roles of the Paraguayan government.
In 2019, the number of VET institutions was 223. In the division of cities and rural sectors, all 223 institutions were located in cities. Institutos tecnico superiores (technical higher institutes) included 34 public and 137 private institutions, institutos superior (higher institutes) included three public and 17 private institutions, and universidades con tecnicaturas (universities with technical degrees) comprised six public and 26 private institutions (MEC, 2019).

5.3 CURRENT STATUS OF TVET IN PARAGUAY

TVET can play a critical role in preparing people for jobs in Paraguay. TVET has a strong potential as a mechanism to help people get skills that are better aligned to the labour market needs. TVET is highly fragmented in Paraguay with many providers and multiple modalities that limit its
potential as a strong, integrated system of professional training. The main pillars of TVET in Paraguay are broadly organized as follows.

First, there is formal TVET, which falls under the responsibility of the Ministry of Education and Science (MEC). At the level of educación media it is provided through bachilleratos técnicos as well as by the formación profesional media (professional training), which is more clearly oriented towards direct labour market insertion. At the level of higher, non-university education, TVET is provided in the institutos técnicos superiores. In addition to this, there are modalities of permanent education for young people and adults. Historical data shows that traditionally around 25 percent of students following a bachillerato enrol in bachillerato técnico. And recent data from MEC shows that only a small fraction enrol in formación profesional media, while around a third of students enrolled in educación permanente are following a TVET programme in one of its modalities.

Second, there is non-formal TVET, which is usually under the supervision of the Ministry of Labour, Employment, and Social Security (MLESS) and is mainly provided through the Sistema Nacional de Promoción Profesional (SNPP) and the Sistema Nacional de Formación y Capacitación Laboral (SINAFOCAL).

Finally, there are many other forms of TVET offered by other ministries and bodies in specific areas like agriculture, health or construction. TVET in Paraguay is highly fragmented, with multiple training options being offered by a plethora of actors. While there have been successful TVET experiences and programmes in Paraguay, they have grown in a dispersed and uncoordinated manner. They are usually planned by different bodies with a focus on specific groups or very specific needs.

6 SIGNIFICANCES, CHARACTERISTICS AND PROBLEMS OF TVET IN PARAGUAY

6.1 SIGNIFICANCE OF TVET

6.1.1 Personal significance

TVET supports one's ability to develop competence in a desired field and obtain a job. In addition, TVET contributes to self-actualization and leading a happy life. Work and occupation go beyond the traditional meaning of livelihood and emerge as an important factor in pursuing the meaning and value of individuals' diverse lives.

6.1.2 Social significance

TVET contributes to the realization of a healthy society and fostering of democratic citizens by supporting them to have a job and earn a living. Having a proper job and getting a fair wage are the best welfare, and in this sense. TVET is one of the important welfare means. In addition, it contributes
to social cohesion by enabling citizens to have a proper work view and occupational consciousness, and by supporting the successful performance of social roles.

6.1.3 Economic significance

TVET contributes to the national economic development by fostering the manpower required in the field in accordance with the national industrial and economic development. Human resources are a key factor in economic development as a source of added value. Unlike natural resources, there is no limit to their use, so advanced countries are making efforts to possess high-quality human resources. TVET plays an important role in raising the quantity and quality of labor by cultivating manpower necessary for industrial development and supporting continuous competency development.

In the process of rapid growth in developing countries, TVET is working as an important driving force for national economic development. With TVET innovation in preparation for future changes, it can contribute to innovative growth by nurturing excellent manpower required in the field in line with industrial and economic development.

The transitions from school to work are difficult in Paraguay with more than half of students leaving the education system to join inactivity, unemployment or informality. Yearly out-of-school transitions rates show that among urban youth (ages 15~29) in Paraguay, around 30 percent of males enter inactivity when they leave school, while almost 10 percent join informal jobs, and 25 percent become unemployed. The remaining percentage joins formal jobs. Especially the transition from school to work is difficult for the most disadvantaged socioeconomic groups (OECD, 2022). Paraguay has several characteristics and problems in the TVET field.

6.2 CHARACTERISTICS AND PROBLEMS OF TVET

6.2.1 Insufficient governance operation

Paraguay has a wide and resource-rich TVET system, but so far its activities have not been structured and have produced uncertain results. Paraguay lacks a collaboration system for the performance of the related vocational education and training ministries. As a result, a lot of overlapping roles take place between executioners. CNET (Council of Education and Labor) and UTI (Inter-ministerial Technical Unit), which are inter-ministerial interest coordination organizations, were established, but their actual roles and functions were insufficient for coordinating.

Recently, as part of Paraguay's 2030 Development Plan, the MLESS is promoting an inclusive employment, training, and qualification policy to increase employability and coordinate in terms of TVET among the underprivileged organization circumstances.
6.2.2 Lacks an integrated system of TVET

Paraguay lacks an integrated system of TVET operating system. In recent years, efforts have been made to better coordinate TVET programs and engage with the general public at the national level. However, it did not work to establish an integrated national TVET system. ‘The Plan Nacional de Mejoramiento de la Educación Técnica y Profesional 2011~2013’ represented an effort to expand the TVET offer and improve its quality by strengthening public-private collaboration and raising funds.

The law that was discussed in 2012 to regulate and articulate TVET did not come to fruition. The new statutes of the Ministry of Education and Sciences in 2017, establish the functions of an advisory body called ‘Consejo Nacional de Educación y Trabajo’ (CNET), which operates in a tripartite scheme where one of its objectives is to propose and approve a strategic plan for TVET, fostering coordination with the various sectors involved in the execution of public policies related to education and work.

Among the functions of the CNET, an inter-ministerial technical unit is created, which is responsible for installing and keeping updated the ‘Sistema Nacional de Cualificaciones Profesionales,’ whose activities have been carried out since 2014 with a working team of both ministries of education and labour. This should be a relevant stepping stone to move towards an integrated TVET. Demands broad, ambitious efforts, that must be complemented with specific actions that deal with the main challenges of TVET at different levels such as upper-secondary, post-secondary, permanent and non-formal education and in terms of quality, relevance, and coherence/efficiency of the system.

6.2.3 Labor market polarization

Paraguay is experiencing serious labor market polarization due to severe income inequality and resulting educational inequality. Low-educated workers are not employed in the formal sector and are absorbed into the informal sector economy, creating a vicious cycle of continuing income inequality.

Paraguay is emphasizing TVET as a way to increase the productivity of these informal sector workers and convert them into formal sector workers. Therefore, the demand for TVET for vulnerable groups tends to be high. Paraguay must solve the problem of polarization in the labor force to increase the overall labor productivity of the country and use it as a driving force for economic development.

6.2.4 Lack of industrial manpower supply and mismatch between industry and TVET

Paraguay has a plan to foster key industries for economic development. However, the manpower required in these industries is not being smoothly supplied. Therefore, it is necessary to
develop a TVET program to nurture industrial technical manpower suitable for Paraguay's industrial needs.

In particular, in Paraguay, the participation rate of young people in the non-regular labor market is increasing due to the high dropout of regular education. Low basic job skills due to dropping out of regular education have a negative impact on the productivity of the labor market and the national socioeconomic development. In addition, the participation of young people in public TVET is restricted due to the qualifications for admission to public vocational training, which is only for those who have completed regular education. Although many TVET programs are currently being conducted in Paraguay, there is also a problem that the educational content of vocational training does not sufficiently reflect the needs of the industry. It is necessary to improve the contents of TVET-related programs.

6.2.5 Absence of TVET programs and low quality

The Government of Paraguay (SINAFOCAL) has established the ‘Systemic Strategic Plan of the National Training and Vocational Training System (2019~2023).’ In the SWOT analysis of the plan, the lack of national employment plans and vocational training and insufficiency of professional training are pointed out as the underestimation and weakness of vocational training as a threat factor (SINAFOCAL, 2019).

In global competitiveness report of the world economic forum, each country's level of competitiveness in higher education and vocational training was indexed and announced. Higher education and vocational training are important criteria for measuring labor productivity, as the demand for educated workers increases as the global economy grows. The indices of the higher education and vocational training in this report were measured as evaluation criteria such as the enrollment rates of secondary and tertiary educational institutions, the quality of education evaluated by companies, and job education of workers.

A total of 144 countries were surveyed, and the index has a value between the lowest 1 and the highest 7 points. Analyzing at the indices of the seven countries analyzed in this report, Bolivia, Colombia, Ecuador, El Salvador, Honduras, Paraguay, and Peru. Paraguay had the lowest index of 3.32 and Colombia was analyzed the highest with 4.27. In the ranking, Colombia ranked 67th and Paraguay 112th out of 144 countries. Higher education and vocational training levels in seven countries ranked below the middle in the world (WEF, 2012, pp. 18-19).
7 SUGGESTIONS FOR THE IMPROVEMENT POLICIES

7.1 ESTABLISHMENT OF GOAL, VISION AND STRATEGY FOR NATIONAL TVET POLICY

Based on the establishment of a unified human resource development strategy, financial support and the deployment of professional manpower should be made. So that it can become a practical organization operation according to the establishment of the governance of a systematic TVET system for each ministry to implement it. The MEC and the MLESS need a structure that clearly defines the roles of TVET. They should coordinate the TVET system with the common purpose of the national level. In Korea, the Ministry of Education provides vocational education and the Ministry of Employment and Labor conduct vocational training, but the two ministries are working to establish a cooperative system for the national lifelong TVET. Establishing of quality management in Korea’s national TVET governance will be practical help to Paraguay's for building up of the TVET system.

7.2 ESTABLISHMENT OF COMPREHENSIVE COORDINATION MECHANISM BETWEEN THE GOVERNMENT AND THE PRIVATE SECTOR

For effective planning and implementation of policies, it is necessary to disperse policies by industry and government. In addition, a policy coordination and management system in which the government and the private sector participate is needed for future-oriented and comprehensive human resource policy reform. To this end, it is critical to organize vocational programmes adapted to economic changes and needs with more mechanisms to facilitate dialogue between educators, unions and firm associations and adapt curricula to these evolving needs (Lee, 2017).

The MEC and the MLESS are affiliated with comprehensive education and training for all adults, including university education and lifelong education, vocational competency development projects, and other lifelong learning. It is necessary to expand participation in TVET in response to the increase in the population of young people who participate in the labor market with the high dropout rate of regular education and insufficient basic job skills in Paraguay.

In addition, TVET is needed to respond to changes in industries and jobs resulting from technological change, climate change, immigration, urbanization, and demographic change. Paraguay has a plan to foster strategic industries for national development. Strategic industries are not traditional industries, but industries that require advanced science and technology. Therefore, it is necessary to run the appropriate TVET program.
7.3 ESTABLISHMENT, PROMOTION OF TVET SYSTEM AND PROGRAM

7.3.1 Strengthen the TVET system

Paraguay must move towards a national and integrated TVET system that supports quality and relevance, favors the transparency of learning outcomes and the transferability of qualifications, and provides clear career pathways. The multiple modalities of TVET represent a challenge to guarantee their quality and relevance across the country.

Thus, a national policy for TVET must be designed to coordinate the existing offer, enhance the transparency of learning outcomes, and set qualifications that are easy to interpret both for students and employers, uniform across the country and accompanied by rigorous assessments. It can also facilitate transitions from non-formal training to formal options.

7.3.2 Promotion of TVET programs related to employment and start-ups

In order to increase the effectiveness of TVET aid, trainees who have received education and training should be employed by related companies or start-ups to engage in economic activities. The TVET project for employed people, education and training programs should result in improved labor productivity. If the TVET project is performed without reflecting the industry and labor demand of the recipient country, even if the TVET is completed, there may be a problem that it cannot be linked to actual employment. The match between the supply and demand of skills and competency must be improved to help better employability (Lee, 2021).

Improving the transition from school to work and fostering better employability demands efforts that go beyond the education and skills system and include mechanisms to better match these skills with the actual demands from the economy. Policy emphasis placed on improving the relevance of skills should thus be complemented by more information and better programmes to effectively make the match between workers and job vacancies.

7.3.3 Competency reinforcement project of TVET teachers

One of the problems in the current vocational training projects in Paraguay is that the contents of TVET do not include the knowledge required by the industry as a whole. Thus, there is a gap between TVET and industry. It is necessary for teachers to have the knowledge and capabilities of the latest technologies to reflect the needs of the industry in TVET. To this end, it is necessary to implement a competency-building project for teachers who conduct TVET.

In cooperation with industry, teachers should be trained on the latest professional skills on a regular basis. Teachers should have strong teaching skills and up-to-date industry knowledge and experience. This entails promoting flexible arrangements to facilitate the hiring of practitioners directly
from industry or to establish part-time arrangements. In addition, it is necessary to consider intensive education that invited teachers to Korea in the program to promote ODA projects and plans to dispatch Korean TVET experts to Paraguay for training.

7.3.4 Establishment of national technical qualification system

In Korea, the national technical qualification system significantly contributed to government driven economic development in the initial step of industrialization during the 1970s. Korea’s national technical qualification system has played pivotal roles in national economic development by responding flexibly to changes in the domestic and non-domestic environment, supplying certified human resources to the labor market, and more. It is necessary to develop the grades and items of qualification by reflecting industrial needs according to the level of economic development.

Qualification requirements for teaching at this level should be adapted to reflect the desired merge of requirements such as academic, pedagogical and practical skills. Also, the curriculum must reflect a mix of technical and job-specific skills as well as basic skills.

7.3.5 Establishment of evaluation system

One of the main limitations of assessment practices in the Paraguay’s TVET system is the dominance of non-systemic assessment. It is necessary to establish a performance evaluation system for the TVET implemented by each ministry in Paraguay. To this end, since various interests are intertwined between ministries, the process of mediation and consultation should carry out within a sufficient period of time.

In the field of TVET, it is necessary to establish a governance system and strengthen cooperation between the implementing ministries so that the MLESS can coordinate and evaluate the TVET of each government department.

7.3.6 Strengthen digital online TVET

Due to the COVID-19 pandemic, TVET is being replaced by non-face-to-face long-distance training. In line with this situation, the need for various online TVET is increasing. In addition, digital online TVET should be provided to those who are not able to receive TVET due to poor educational infrastructure and local residents.

The imbalance in TVET opportunities due to regional and income disparities should be alleviated by establishing and promoting the use of a digital online TVET system. It is possible to increase productivity at the corporate and national level by nurturing high-quality productive
manpower through digital online TVET targeting young Paraguayans with a high secondary school dropout rate.

Information of digital online TVET should be provided with customized information service, learning history management, and learning diagnosis so that anyone can easily use it anytime and anywhere. The digital online courses of TVET should be diversified so that trainees can be learned the desired training (Lee, 2020).

Currently, the field of digital online TVET courses in Paraguay is limited. As a way to improve the performance of online TVET, it is necessary to operate blended learning that combines offline and online TVET. A national digital and online education strategy should be developed in relation to TVET, together with practical guidelines for schools, including a governance model defining clear roles and responsibilities, objectives, support infrastructure and resources. It is necessary to improve educational accessibility and actively utilize online TVET through the establishment of Paraguay multimedia education support center currently being carry out by supporting the Korea government (KOICA, 2022).

8 CONCLUSIONS

Korea is recognized as a good case of a successful transition from a recipient country to a major donor country in a short period of time. In particular, Korea has a comparative advantage over other DAC donor countries because it has developed knowledge and development experience based on the actual experience of the recipient country among developing countries.

Korea shares its ODA experience in TVET development with developing countries and serves as a bridge between developing and developed countries. Korea has already established a number of TVET institutions in developing countries and is steadily promoting various policy advice. In the TVET field, there is a growing demand for international development cooperation from developing countries, but various projects other than the invited training program have not been properly implemented.

In Paraguay, it is difficult to analyze the demand for technical manpower in the labor market, lack of systems involved in the TVET system and operation, and insufficient response to the demands of TVET programs. However, Paraguay has a relatively high proportion of younger age groups, so they have high growth potential and high geopolitical value.

Korea is in a position to serve as a bridge between Paraguay, and is a key partner country that supports economic and social development in Paraguay. Recently, Paraguay is increasingly interested in Korea's economic development and TVET success stories. At this point, Korea should actively promote ODA capabilities and actively promote TVET development cooperation in Paraguay.
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