



STATE OF THE SDGs
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Poor education and precarious jobs in Peru: Understanding who is left behind and why

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Abstract

The 2030 Agenda calls on governments to ensure that the Sustainable Development Goals (SDGs) are achieved for every individual. This case study uses a mixed methodological approach to provide a baseline of the 'left behind' in Peru and construct detailed profiles of the excluded. The research identifies which interest group is more at risk of being left behind on SDG 4 (quality education) and SDG 8 (decent work) and the factors influencing the resulting impacts. Moreover, the synergies and trade-off analyses conducted show the impact of educational underperformance on the employment condition. When looking at the link between issues faced by the left behind in Peru and wider global concerns related to the push for information and communication technology inclusion in education, findings reveal that marginalised groups lag behind in employment and education. Differences in performance vary widely along lines of geographic location, rurality, socioeconomic level, gender, and ethnicity.

Keywords: youth, SDGs, vulnerability, LNOB, employment, education.

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Introduction

The principle of 'Leave No One Behind' (LNOB) is a powerful aspiration of the 2030 Agenda to ensure that every individual reaches their full potential. The achievement of this commitment requires, however, that governments identify marginalised groups, considering gender, disability, geographic location, ethnicity, and other vulnerability attributes and that they implement policies that focus on facing their obstacles. The youth population is of particular interest because they experience rising risks of vulnerable transitions from education to work, and into adulthood.

In 2015, Peru received the worst scores of the region in the Programme for International Student Assessment (PISA) and in 2017 four out of five employed young people were working in the informal sector (National Institute for Statistics and Computing [INEI], 2017). Furthermore, 18% of Peru's urban young is neither in employment, education, or training (NEET). Although this condition hinders future possibilities of a successful transition into the labour market, only focusing on the NEET overlooks the precariously employed who work in survival jobs, earn inadequate incomes, and face work instability. Thus, the study looks into the challenges for Peruvian youth in accessing high quality education (SDG 4) and decent work (SDG 8), and it proposes to include the precariously employed together with the NEET when examining youth employment vulnerability in Peru. The study looks into three aspects: LNOB, synergies and trade-offs between SDGs 4 and 8, and the global systemic trends affecting these goals.

First, the study contributes to the understanding of who is left behind and why, by creating profiles of the disadvantaged, and by identifying the drivers of negative outcomes in quality education and decent employment. Although the study focuses on vulnerable youth, women, and indigenous peoples as a starting point, it aims to characterise causes of vulnerability beyond these common labels and examine other associated factors such as those related to socioeconomic status, regional context, and family background. Hence, the study constructs highly detailed profiles that identify both the main drivers of vulnerability in work and education, and how they interplay to widen inequalities in Peru.

The research looks at the synergies and trade-offs between SDGs 4 and 8. It particularly focuses on the relationship between access to quality education and youth employment vulnerability and explores how this relationship affects those left behind in Peru. This includes looking at the effects of exclusion from quality secondary and primary education on employment. We also aim to observe how belonging to four commonly marginalised groups in Peru—women, the poor, the rural populations, and indigenous peoples—affect the probability of being left behind in work and education.



In 2015, Peru received the worst scores of the region in PISA assessments.

Finally, the case study identifies global systemic trends that affect the implementation of SDG 4 and 8, such as technology changes. In particular, the research examines how the global push for the use of information and communication technology (ICT) tools may increase inequality in Peru.

The research benefits from a combination of quantitative and qualitative methods. The quantitative analysis conducted for the study relies on secondary national data sources, using disaggregation along lines of income, gender, age, ethnicity, and geographic location as a tool for identifying inequalities. The qualitative aspect of the study includes interviews with experts and stakeholders and as well as focus groups and interviews with vulnerable youth.

Research findings show how multidimensional vulnerabilities are prevalent in the lives of the left behind, who face challenges as varied as ethnic discrimination, incomplete and low-quality education, and a highly precarious labour supply. According to the authors, the probability of being left behind in education and employment dimensions is strongly determined by geographic location, rurality, socioeconomic level, gender, and ethnicity. The evidence reveals strong synergies between underperformance in education, and precarious labour conditions in early adulthood.

Box 1. SDG progress in Peru

Peru faces the challenges of SDG implementation after delivering a largely successful performance during the Millennium Development Goals (MDG) period. Concerns remained on whether improvements in development indicators were accomplished equitably.

The Peruvian SDG implementation strategy is managed by three entities: The National Centre for Strategic Planning (CEPLAN), the National Institute for Statistics and Computing (INEI), and the National Working Group for the Fight Against Poverty (MCLCP). CEPLAN, a technical advisory body serving under Peru's council of ministers, is the focal entity overseeing SDG implementation and is responsible for aligning strategic plans to the SDGs. The INEI is responsible for constructing and reporting on SDG indicators and administers the System for the Monitoring of Indicators of the SDGs. At the time of writing, INEI has provided 118 out of the 244 SDG indicators detailed in the 2030 Agenda. The MCLCP, a space for dialogue and discussion on Peruvian policies, serves as the officially mandated accountability mechanism for SDG implementation.

Although Peru has declared its strategy to achieve the SDGs, the country faces a number of challenges in aligning its policies with the 2030 Agenda. CEPLAN's decision to aggregate the SDG Agenda into the national Vision for the Future might emphasise a greater focus on internal policy practices at a cost to SDG visibility. There is currently an absence of SDG-related discourse in public policy, and little knowledge of SDGs has percolated down into programme implementation.

Peru's SDG strategy puts little emphasis on fulfilling the LNOB commitment. Although some SDG indicators are disaggregated by gender and region, the government is not using the data to monitor the status of marginalised groups. In spite of the large heterogeneities in access to education, public services, and decent employment, policies specifically targeting the left behind are not being implemented. Fulfilling the LNOB commitment might thus become Peru's largest challenge to SDG implementation.

Research methodology and results

The study uses a mixed-method approach. The quantitative analysis relied on three secondary data sources to construct detailed profiles of the left behind: the Peruvian National Household Survey (ENAHO), the Student Evaluation Census (ECE), and the Young Lives Longitudinal Study on Child Poverty.

First, a benchmark of underperformance was created to characterise those left behind. Then, non-linear logistic regressions were conducted to identify the determinants of the left behind condition. Finally, longitudinal data was used to observe the synergies between education and work.

As part of the qualitative analysis a community-based participatory exercise was carried out on a sample of 39 NEET or precariously employed youths. In-depth interviews were conducted to construct life stories, which were used to complement the study's quantitative analysis. Literature reviews were also used in the last section of the study, which explores the effects of global trends on inequalities that might affect the left behind.

The left behind in quality education were defined as individuals scoring below a benchmark of performance in standardised testing. Our associated factor analysis on the "left behind" condition yielded the LNOB profiles in Table 1².

2 Only the LNOB profiles in education yielded by ECE data have been included in this summary.

Table 1. LNOB profiles in education

Category	Profile	Compound probability of being left behind (versus reference group)
Reading in primary	Boys in the lowest socioeconomic level, attending single-teacher schools, in rural areas of the Amazon rainforest.	31.7%
Mathematics in primary	Girls in the lowest socioeconomic level, attending single-teacher private schools, in rural areas of the Amazon rainforest.	63.6%
Reading in secondary	Indigenous boys in the lowest socioeconomic level, who did not attend preschool, with parents with incomplete primary attending rural public schools in the Amazon rainforest.	85.6%
Mathematics in secondary	Indigenous girls in the lowest socioeconomic level, who did not attend preschool, with parents with incomplete primary attending rural public schools in the Amazon rainforest.	90.6%

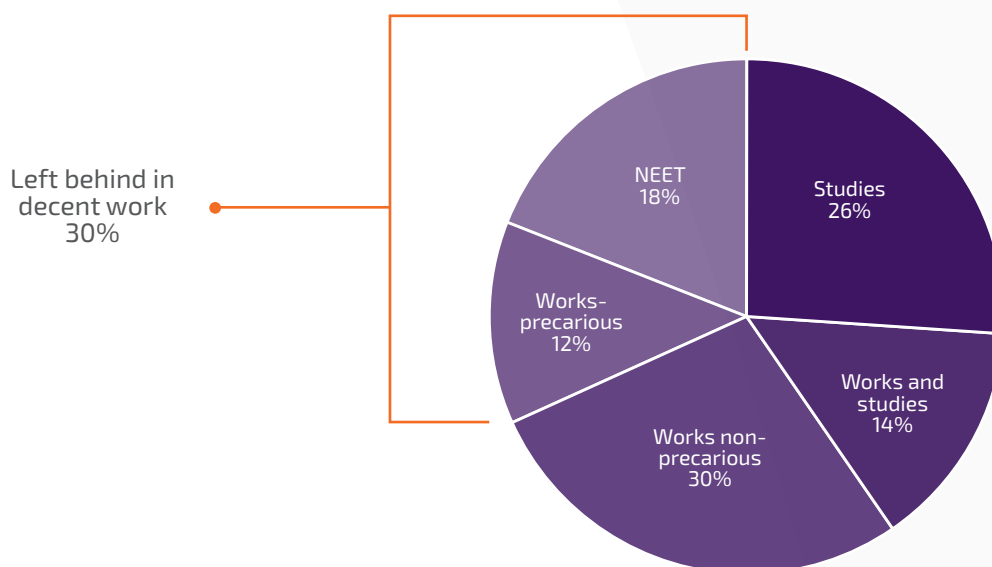
Source: Ministerio de Educación, ECE (2016); elaborated by the authors.

The profiles suggest that individual and family characteristics have the strongest effects on the probability of being left behind in quality of education. For example, the factors most strongly associated with being left behind in secondary-level reading are being at the lowest socioeconomic level (11%), living in rural areas (14%), and being indigenous (18%).

The individuals described in the profiles are 31.7% to 90.6% more likely to be left behind compared to a reference group of better-off students. These compound probabilities of marginalisation illustrate massive multidimensional performance gaps in Peruvian schools.

Two types of marginalisation for decent work were defined. First, the NEET, which included 18% of Peru's youth, and secondly those who work in extremely precarious situations, without access to benefits, job stability, and living wages (Alcázar et al., 2018; Miranda, 2015; Furlong, 2006). Evidence shows that 12% of youth were working precariously, meaning that 30% of Peru's young are left behind in the goal of obtaining decent work (see Figure 1).

Figure 1. Share of peruvian youth (15-29) by work-education dimension and LNOB status



Source: Ministerio de Educación, ECE (2016); elaborated by the authors.

The profiles on decent work yielded by the econometrics are shown in Table 2. As with the education profiles, identity markers related to conditions of exclusion have very strong impacts on the probability of being left behind in the goal of obtaining decent work.

Table 2. LNOB profiles in decent work

Category	Profile	Compound probability of being left behind (versus reference group)
NEET	Women who live with a child aged five or younger, are not the head of household, are married or cohabitating, did not complete primary education, live in situations of extreme poverty in urban Lima, are disabled, and non-indigenous.	90.8%
Precarious worker	Women who live with a child aged five or younger, are not the head of household, are married or cohabitating, did not complete primary education, live in situations of extreme poverty in rural areas of the Andes, are disabled, have experienced a health-related shock in the last month, and are indigenous.	63.6%

Source: INEI, ENAHO (2017); elaborated by the authors.



Marginalized groups such as indigenous youths have a higher probability of being left behind in work and education.

This means that discrimination related to gender, ethnicity, and disability is prevalent in Peru's labour market. The factors that have the strongest impact on both the NEET and precariously employed conditions are being a woman and living with a child younger than five (a proxy for motherhood), being disabled, and being indigenous.

The associated factor analysis in this section suggests substantial differences between the NEET and the precariously employed, even as both are considered to be left behind. The NEET conditions are largely urban, while job precarity was 14.8% more likely in rural areas. While indigeneity decreases the probability of being NEET by 3.2%, it increases the probability of precarious employment by 2.7%.

Results for synergies and trade-offs show a strong and significant relationship between being left behind in education and being left behind in decent work. For instance, children who underperformed in cognitive testing at 15 in mathematics and reading are respectively 7.1% and 8.4% more likely to be NEET once they entered young adulthood.

The study sheds light on synergies between SDGs 4 and 8 and marginalized groups related to other SDGs (see column 1 in Table 3). For example, individuals left behind in SDG 1 (end poverty) have higher probabilities of being left behind across all work and education indicators for this study. In terms of SDG 10 (reduced inequalities), marginalized groups such as indigenous youths have a higher probability of being left behind in work and education. Gender disparities are large and significant in the decent work dimension, although girls outperform or do as well as boys in cognitive testing.

Table 3. Predicted probabilities of being left behind in SDGs 4 and 8 by marginalised group, from ECE & ENAHO LNOB profiles

Disadvantaged group	Left behind in primary reading (ECE)	Left behind in primary mathematics (ECE)	Left behind in secondary reading (ECE)	Left behind in secondary mathematics (ECE)	Left behind in work: NEET (ENAHO)	Left behind in work: Precarious work (ENAHO)
Women	-0.9%***	0.1%	-1.3%***	3.8%***	10.7%***	12.5%***
Lowest socioeconomic level	5.0%***	16.1%***	10.2%***	10.2%***	7.3%***	27.4%***
Indigenous	N/A	N/A	15.1%***	18.1%***	-3.2%***	2.7%***
Rural	4.1%***	11.8%***	14.0%***	14.3%***	-5.0%***	14.7%***

Note. Significance: *** p<0.01, ** p<0.05, * p<0.1.

Source: INEI, ENAHO (2017) and Ministerio de Educación, The Student Evaluation Census (2016); elaborated by the authors.



Low productivity in Peru results from an inadequate level of human capital and a lack of skills – such as technological literacy.

The analysis of ICT trends in education in Peru suggests large inequalities in access to ICT in Peruvian schools. For example, only 28% of rural secondary schools had internet, versus 73% of urban secondary schools. This ICT access gap between Peruvian rural and urban schools has increased in the last ten years (MINEDU, 2015), affecting the Peruvian labour market. Inadequate ICT education and human capital development have led to very low productivity levels in the Peruvian labour force. This problem of low productivity prevents the complete structural reorganisation of the Peruvian economy, which is influenced by the changing nature of work worldwide, catching the country in a middle-income trap. Vulnerable groups—women, indigenous peoples, the poor, and rural individuals—are disproportionately affected.

Conclusions and implications

Peru is faring relatively well in SDG implementation when compared with other developing countries. In spite of this, findings from this study suggest that Peru continues to face very large inequalities in access to decent work and quality education. Alleviating these inequalities is perhaps Peru's greatest challenge in implementing the 2030 Agenda.

In terms of LNOB in Peru, findings show that marginalised groups are lagging behind in both the employment and education dimensions. Differences in academic performance (SDG 4) for those left behind are strongly associated with markers of social exclusion and vary strongly along lines of geographic location, rurality, socioeconomic level, gender, and ethnicity. Taking the example of secondary level maths, rural students are 14.3% more likely to be left behind in performance than their urban peers. Students in the Amazon rainforest region are 15.6% more likely to be left behind than their peers in Lima. The poorest students are 11.2% more likely to be left behind than the more affluent ones, and girls are 3.8% more likely to severely underperform than boys. Indigeneity increases the probability of underperforming in secondary-level mathematics by 18.1%. For children belonging to all of the marginalised groups outlined above, a highly vulnerable outcome is almost certain: 90.6% of them will be left behind in access to education.

Observing the performance of these marginalised groups in the labour market suggested that they face similar inequalities in their ability to access decent work. Looking at precarious employment, rural youths are 14% more likely to be left behind than urban youths. Individuals living in the Andean highlands are 20.5% more likely to be in work of a precarious nature than inhabitants of Lima. Youths living in extreme poverty are 27.5% more likely to be working precariously than those living outside of the risk of poverty, and women are 12% more



Although girls show lesser or equal probabilities of being left behind in basic schooling, they are much more likely to be left behind once they enter the labour market.

likely than men to be left behind in the goal of obtaining decent work. Indigeneity is associated with a 2.7% increase in the probability of being in work of a precarious nature. When all of these forms of exclusion are faced by a single individual, women are 97% more likely to be in work of a precarious nature than individuals with an opposite profile.

The connections between being left behind in education and being left behind in obtaining decent work were also made apparent in this study, suggesting strong synergies between SDG 4 and SDG 8 for vulnerable Peruvians. Individuals who had been left behind in mathematics at secondary level, for instance, were 9.1% more likely to be in work of a precarious nature in their early twenties. Such findings highlight the cyclical nature of vulnerability in marginalised populations in Peru: initial conditions relating to identity, household context, and community characteristics can severely hinder performance in basic education, which in turn limits an individual's chances of a positive transition into decent employment, and into adulthood more generally.

Synergies between SDGs 4 and 8 and other SDGs were found while looking into how socioeconomic status, indigeneity, and gender affected the probability of being left behind. Individuals left behind in SDG 1 (no poverty) had higher probabilities of being left behind across all work and education indicators. Looking at SDG 10 (reduced inequalities), indigenous youths had a greater probability of being left behind in work and education wherever ethnicity was observable.

Findings throughout the study show synergies between SDG 5 (gender equality) and SDGs 4 and 8. Although girls show lesser or equal probabilities of being left behind in basic schooling (with the exception of secondary maths) they are much more likely to be left behind once they enter the labour market. Furthermore, results of the study show that fewer years of schooling are associated with increased probabilities of being left behind for both men and women. The magnitude of the effects, however, was considerably greater for precariously employed women. These results suggest that women are punished more harshly than men for having comparably low levels of education in the Peruvian labour market.

The study has provided strong evidence of the importance of improving access to and quality of education for the left behind in Peru and of ensuring that those affected are prepared to face the challenges of the labour market. Rampant gaps in the access to ICT tools in schools along lines of rurality and socioeconomic level suggest that students most left behind are also those less likely to receive adequate digital literacy training in school. Such gaps become particularly problematic against the background of technology-related change and automation brought by global systemic trends.

The global concerns section of the study also highlights the effects of the digital revolution and the changing nature of work in Peru's labour market. Low productivity in Peru results from an inadequate level of human capital and a lack of skills—such as technological literacy. As productivity remains low, Peru fails to transition towards the high-skilled, high-productivity industries incentivised by global trends, and it is thus caught in a middle-income trap of unsustainable growth. This process disproportionately affects the vulnerable groups characterised in the LNOB sections of this study, who are more likely to be employed in repetitive manual jobs that are easy prey to short-term automation processes.

Recommendations

The study has outlined strong synergies between under-performance in education and precarious labour conditions in early adulthood. The following policies and programmes, designed to target vulnerability in schools, can have strong effects on outcomes once students enter the labour market.

Address the left behind in education through policies specifically designed to boost their educational performance from early education. The passing of a new plan for rural education in 2018, which addresses issues in access to and quality of education, including improvements in access to ICT tools, shows potential to meet this need (MINEDU, 2018). Assigning more resources to rural and poor settings is also required, including more funding and pedagogical support for Peru's Bilingual Education Programme, for indigenous children.

Implement the JEC (Complete School Hours) programme, which provides longer school hours, higher budgets, and more access to technology for secondary schools, in rural areas. The programme currently has a strong urban focus, and although nationwide implementation is scheduled for 2021, concerns remain about whether this is achievable.

Include gender-specific programming in Peruvian schools. Current programmes that promote gender equality in the education system have led to backlash from majorly conservative sectors of the population, and their continuous adaptation into the public-school system must be defended. Policies meant to combat teen pregnancy, such as improved sexual education programmes, or to help teenage mothers continue their education through scholarships and guidance, should be pursued.

Implement policies to improve access to the internet and ICT in remote, rural, and underprivileged schools. Strengthening ICT training at schools is extremely important to ensuring that Peruvian students graduate with the skills required by the shifting digital economy.

In terms of the implementation of SDG 8, this study has found that ensuring decent work for all in Peru requires turning away from basic vocational training and skilling programmes. Instead, policies tackling

youth vulnerability should be designed to address complex and long-lasting deprivations.

Addressing the incredibly high rate of informality affecting youth in the labour market and ensuring workers' rights must become a priority for Peru. The Peruvian government should place informality high on the governmental agenda.

Strong gender disparities in the incidence of NEET and precarious employment point towards the need to implement vocational programmes with a gender focus. Policies providing child care in vocational training and during working hours are still absent in Peru.

The LNOB profiles are useful tools in the design of policies aimed at improving outcomes for the left behind, and should be used by decision makers in targeting SDG-related interventions. They also provide a baseline against which academics can compare advances in SDG indicators, thus enhancing SDG monitoring and accountability.

A final contribution stems from the study's inclusion of precarious work within its characterisation of youth employment. The findings suggest that the use of the NEET rate falls short in describing work marginalisation in Peru. The inclusion of an aggregate indicator for youth labour precarity in this framework would aid in efforts to adequately monitor youth vulnerability.

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The 'State of the SDGs' is a conceptually innovative, policy relevant empirical research initiative. The initiative unpacks some of the critical relationships underpinning the 2030 Agenda. The aim is to identify those who are 'left behind' within diverse contextual realities, to reveal the complex relationship of trade-offs and synergies among specific SDGs, and to explore the global governance factors affecting implementation within a country.

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