



Dealing with a rare target population: out-of-school youth survey of PISA for Development in Paraguay

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Background

Population 7.052.983

Democratic period started in 1989

- Increased social investment
- Educational reforms and expansion of coverage and quality of education

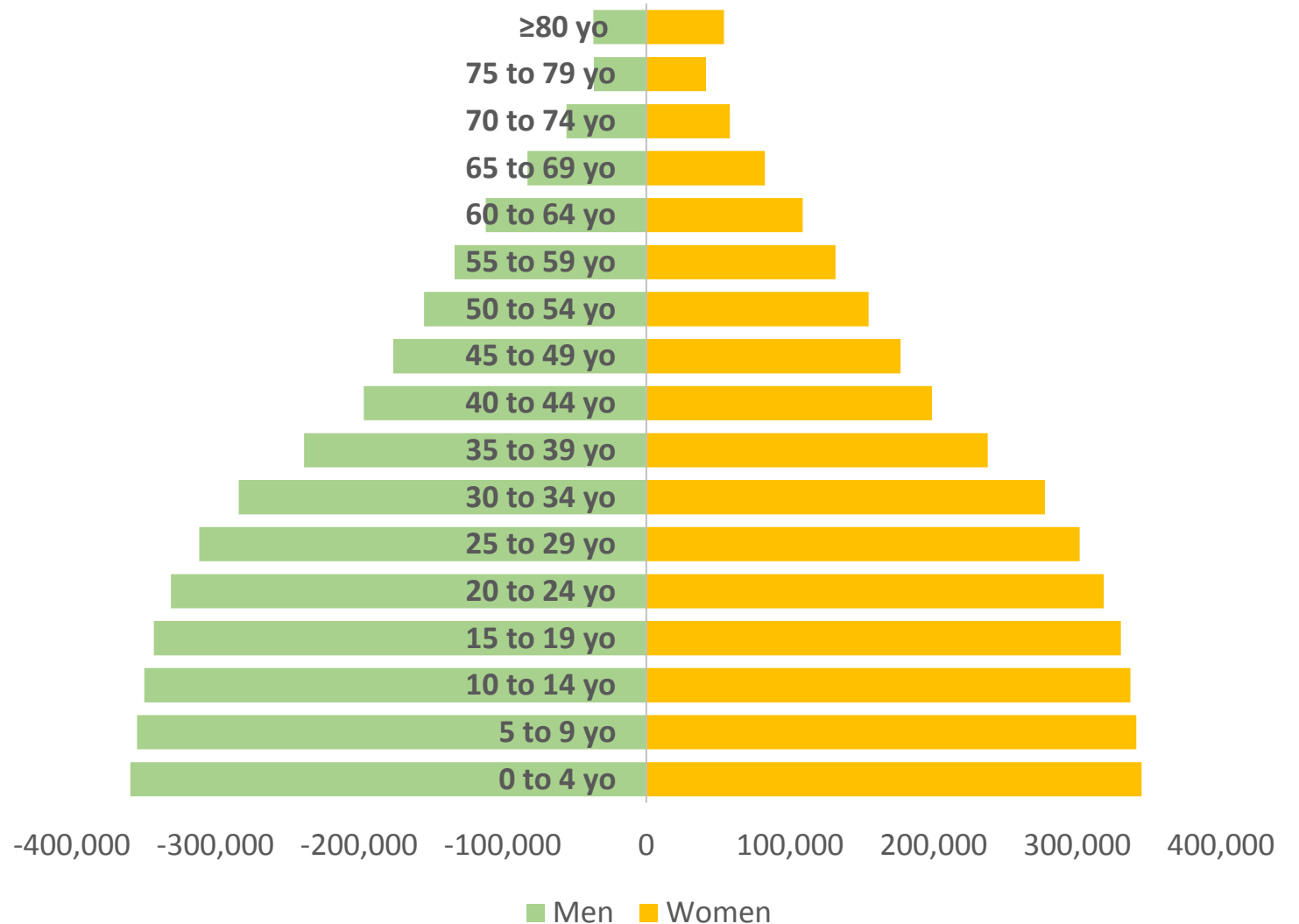


1. Background

Country profile

- Young population:
Median age 26,0 yo
(2018)
- Literacy rate 95,07 %
(2015) UNESCO
- Retention
41% graduates from
HighSchool with their
cohort.
- Paraguay scores among
the lasts Latin American
countries in UNESCO
Terce evaluations (2013)

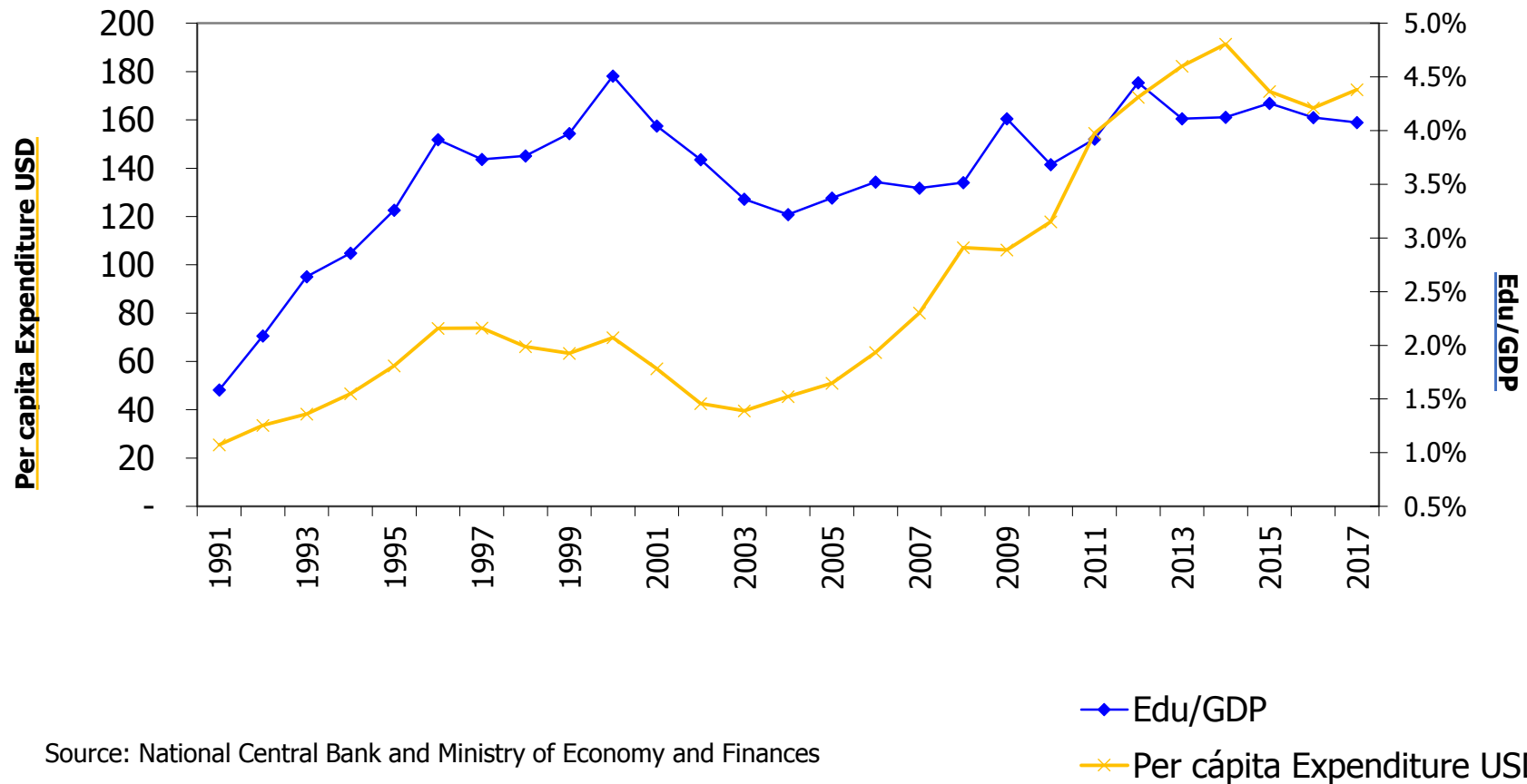
AGE PYRAMID PARAGUAY 2018



Source: National Directorate for Statistics, Surveys and Census, "Proyección 2000-2025"

1. Background

Country profile: Investment in education



1. Background

Description of the Study

- PISA is a widely known study, which started in 2000.
- Paraguay participates for the first time in PISA for development 2018
 - improves the instruments to measure with more accuracy lower levels of performance.
 - And incorporates a new Strand that assesses Out-of-School and Under 7th grade youth

Strand C

- Assesses 14 - 16 years old youth
 - out of school and under 7th grade.
- Target population are contacted through a household survey, in a probability sample of Primary Sampling Units; also through referrals and at Schools.
- Youth are interviewed individually at their homes to collect background data, and assessment is carried out through a self-administered test on Tablet support.
- Background questionnaires are provided to parents or caregivers to answer.
- Strata for international study: High/low concentration of target population areas

2. Implementation of the study in Paraguay

Population from 14 to 16 (2018) → 407.988

Target population for Strand C (2018) } 14 to 16 Out-of-School + Under 7th → 104.252 (25,6%)

Goal 1200 cases

- + Household Survey (30%)
- + Referrals (17%)
- + Schools (53%)

Estimated response rate 87%

2. Implementation of the study in Paraguay

Limitations of data affecting our sample

The population projection is based on the Census 2012, which only had a coverage of 74.4% (DGEEC, 2015), therefore:

- there is a limitation of the data in terms of accuracy at levels of disaggregation
- some information is not available for some levels of disaggregation (PSUs)

Paraguay Sample had these features:

- Scarce target population
 - 1,5% of general population,
 - 26% of 14-16 population
- Stratification was done at the district level
 - and it was assumed that all the PSUs within the district had the same distribution of the Strand C target population
- Outdated Strand C sampling frame

2. Implementation of the study in Paraguay

Sample size

Strata → High conc. /low conc. areas;
urban/rural áreas

Sample 6,958 households in 137 PSU

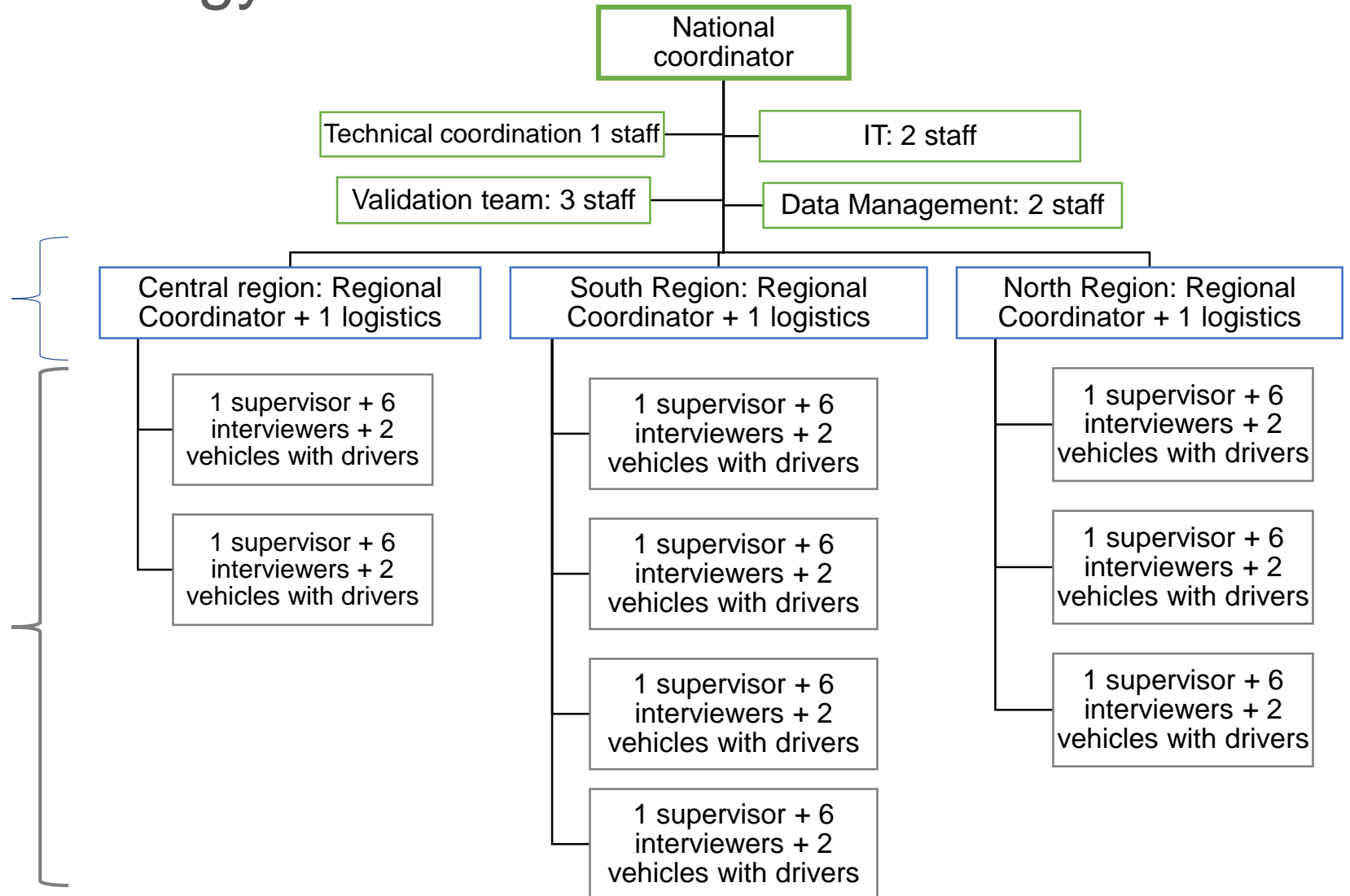
- Initial sample 105 PSU
+ reserve sample 32 PSU

Number of PSU per Stratum			
	LOW Conc.	HIGH Conc.	Total
RURAL	9	92	101
URBAN	12	24	36
Total	21	116	137

2. Implementation of the study in Paraguay

Field Trial field strategy

- Duration 11 weeks:
Monday to Saturday
- 3 regional offices:
North, South-east,
Central areas.
- Total 9 teams:
54 Interviewers +
9 team supervisors +
18 vehicles & drivers



3. Results

Approach		Expected	Completed	%
Probabilistic	Households	6,958 in 137 PSU	5,082 in 137 PSU	73,0 %
Probabilistic	Youth	360	264	73,3 %
Non Prob - Referrals		200	24	12,0 %
Non Prob - Schools		640	399	62,3 %
Total Youth		1,200	687	57,3 %

Response rates per stage/instrument

- Screener 69% → eligible youth 9,6% + ineligible youth 59,3%
- Youth Interview 91,4% → 276 YI eligible / 302 Screener eligible youth
- Assessment 91% → 251 assessed youth / 276 eligible youth

3. Results

Household survey (73% reached)

The main reasons for not reaching the expected number of cases:

- i. error in the assumptions used to estimate the sample size.
 - the scarcity of this population + outdated sampling frame/cartographic information + lack of information at the PSU level
- ii. no consideration of Strand C target population as a population that commutes and/or migrates a lot for working purposes
- iii. lack of previous information about the study and its purpose

Additionally

- unexpected situations with safety risks for interviewers
- field work organization affected both the FT timing and costs:
 - a) routes were too rigid, which prevented teams from adjusting quickly
 - b) the team size larger than needed per PSU
 - c) interviewers could not move ahead from their teams, the distance between PSUs was big and commuting was difficult.

3. Results

Referral (12% reached)

Only 59 referred cases in 25 PSUs → only 29 were valid cases (24 ass.)

The rest were discarded due to:

- (a) inaccuracy of information about the referred youth's address (24 cases)
- (b) the fact that people did not know precisely whether the child was within the age range of interest or their schooling condition (6 cases).

In school (62,3% reached)

Main problem was the inaccuracy of the students' records at the Ministry of Education.

- All students' lists were confirmed & updated with each School principal
- 72 Schools were selected, with 675 listed students
- But during test administration:
 - 29% of the 675 confirmed students were absent (i.e. dropped out, intermittent attendance)
 - 12% were absent for different reasons (i.e. health, work, family issues)

3. Results

Obstacles and challenges

Issues regarding the management of data collected through computer equipment.

- a) National Center staff and hired interviewers more experienced on paper-based data collection: Tablet supported procedures were a challenge
- b) Limited functioning of the platform → it was being adjusted “on the go”
 - several software updates were carried out to improve software
 - caused untimely access to data bases
- c) Connectivity was an issue.
 - caused delays in the submission of cases information (not possible or inefficient)
 - affected the reception of new cases by interviewers.

3. Results

Obstacles and challenges

Issues regarding the management of data collected through computer equipment.

- d) To prevent data losses due to technical issues interviewers used flash drives as backup,
 - But, there was no easy way to transfer the information from the backup to the data base: some information was lost or late.
- e) Some tablet features combined with the interview environment:
 - Screen brightness: make it hard to use when the interview was conducted in the front or back yard,
 - Screen size: too small which complicated reading, typing and tapping category selection,
 - Memory: after several week, tablets would have problems to handle and transfer a big amount of data,
 - Battery: it did not last for more than 4 hours and charging time in the field compromised coverage & impacted budget.

3. Results

Obstacles and challenges

Issues related the Paraguayan team for data collection and IT support.

- Hard to find qualified interviewers: there are no pool of experienced interviewers to recruit.
- Harder when combined with the format of data collection: IT was a challenge.
- There was insufficient technical support at the National Center: more IT support was needed.

3. Results

Obstacles and challenges

Issues with data monitoring and validation processes

The expected level of quality control was not reached, because

- (a) validation process was not implemented as designed, due to inaccessibility of data base on time due to ongoing adjustments to the system,
- (b) data gathered were insufficient to do quality control through phone calls (i.e., screener respondents' phone number was not collected), and
- (c) more staff were required to conduct the quality control.

3. Results. Strategies used to solve obstacles

■ Close follow up and ongoing consultation from regional coordinators to team leaders.	To compensate for unexperienced
■ A few re-training sessions, and ongoing discussions and Q&A	interviewers
■ Close daily troubleshooting with interviewers regarding data collection with tablets and cases management (IT & data bases team)	To solve unforeseen data collection issues & IT problems
■ Extra support to regional teams: frequent visits from National Center staff for monitoring and IT updates.	
■ App for monitoring: to track interviewers and teams, registering HH coordinates and checking in.	Real time Monitoring: to track daily work and coverage, to be informed in case of safety issues and to solve difficulties with cartography To prevent visiting same house twice
■ Included data collection on paper (phone numbers) to do some validation	To compensate the difficulties to carry out
■ Defined one alternative validation process for HH without contact: done by team leader	planned validation

4. Lessons learned

Looking towards Main Survey

Some of the improvements to consider for Main Survey include:

- Planning time enough for intensive / thorough testing of software and all procedures in the field.
- Smaller interviewers' teams and more flexible routes.
 - + One specific team for under 7th youth at Schools.
- Special survey hours: interviewers visits include weekend and early night hours.
- More meticulous planning of field work, to prevent National Centre teams from excessive work load, and therefore provide optimal support for data collections teams.
 - more human resources for quality control and validation
 - trained IT and logistics staff at regional offices
- Communication with local police offices can provide key local information, and prevent safety issues during the household survey.
- Communication through local radios can improve cooperation from families, enhance interest from youth and prevent eventual refusals.

PISA-D National Center

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