



**TARGETING: PERFORMANCE  
MEASUREMENT AND ASPIRE**



Part 1: concepts

# INTRODUCTION

- Effective Social Protection and Jobs (SPJ) programs are proven to make a real difference in low income and developing countries.
- However, most countries worldwide are not able to regularly estimate trends and performance indicators of SPJ programs over time due to the lack of appropriate data.
  - Administrative data ✓
  - Monitoring data (household data & Administrative)
- To inform governments, as they design comprehensive SPJ programs, there is a need to create better data for measuring basic outcomes of programs.
- HH survey have a role to play due to the improved availability and accessibility of the information.

# DATA

- **Estimation is then affected by household survey limitations and errors, so that other sources should be considered too.**
  - **Sampling error (coverage errors)** exist when an inadequate sample frame leads to indicator under or over-coverage, leading to an under representation of social programs coverage in household surveys.
  - **Non-Sampling errors** exist due to a poor question wording, definitional differences between the nature of the indicator and the way the question is asked, misunderstandings from both interviewer and interviewed, and deliberate misreporting that can also be associated to the miscomprehension of household survey and government audits/sport checks over program beneficiaries.

# INDICATORS

- **Inclusion errors:** measures the provision of benefits or services to few undesirable ones indicating wastage of resources and program inefficiency
- **Exclusion errors:** measures the exclusion of few desirable ones from receiving benefits or services errors indicating ineffectiveness of a program towards its goals

	Participants	Non-Participants	Total
Eligible	True positive - $n_{11}$	False negative $n_{12}$	$n_1$ .
Non-Eligible	False positive - $n_{21}$	True negative $n_{22}$	$n_2$ .
Total	$n_1$	$n_2$	$n$

Inclusion error is the false positive divided by the participants population:  $n_{21}/n_1$ ; Exclusion error is the false negatives divided by the eligible population:  $n_{12}/n_1$ .

- **Limitation:** policymakers often take subjective decisions when looking to these indicators, which by the way are negatively correlated; and does not account for size: small programs are often called as having high exclusion errors when desired population is larger, but this does not mean underperformance.



# INDICATORS

- **Coverage:** Share of the population or population groups covered by a program or by a combination of programs
  - **examines who is entitled to or receives a benefit or service, as an indicator.**
  - measures the provision of benefits or services to the desirable ones, which is 1-undercoverage
  - address the issue of the size of program versus size of desired population.
  - Also called **sensibility**
- **Targeting differential:** difference of the eligible and non-eligible that are covered by the program
  - the difference between the coverage and the inclusion error.

# INDICATORS

**But we still do not consider the full spectrum of indicators out of a 2x2 table.**

- **Specificity:** proportion of non-eligible ones properly classified as non-participant of a program over the total number of non-eligible population
  - High specificity indicates low errors of inclusion.
- **Positive predicted values:** measures the provision to the right ones, which is 1-inclusion errors
- **Misclassification:** sum of false matches over the population
- **Targeting success rate (TRS):** sum of main diagonal divided by the total population, which is 1-misclassification

A successful program would have a high TRS that implies in high specificity, high sensitivity, and a high positive predictive value.

# LIMITATIONS

- They mix issues related to magnitude (size) and redistribution because those indicators are not independent of the size
- More specifically:
  - Distributional information is discarded.
    - For example, (a) for a program that aims to protect all children under 5 years-old in the country, one can accept the inclusion of a child that just turned 6 than a 10 years-old; or the exclusion of a 4 years old than an exclusion of a new born or one year old;
  - Focuses only on who gets the benefits and not on how much they get
    - Size of benefit is not taken into consideration
  - Fails to address how managers/policymakers weights their choice.
    - For example, (a) in a program with limited resources, inclusion errors would not be acceptable contrary to a program with unlimited resources where exclusion errors would not be.

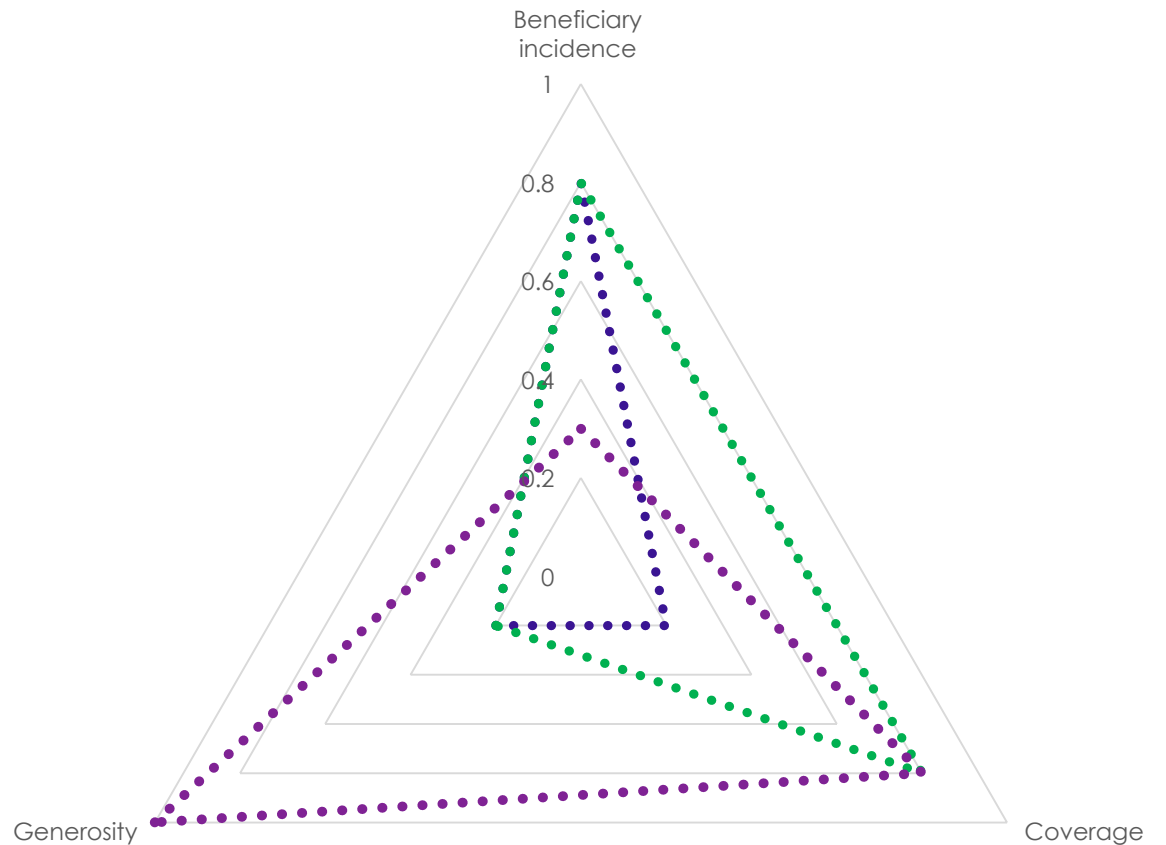


# OTHER DIMENSION INDICATORS

- The **benefit incidence indicator** is estimated as the proportion of transfers received in each group
- The **beneficiary incidence indicator** is estimated as the proportion of beneficiaries in each group
- The **relative incidence indicator** is estimated as the value of the transfers received by a group divided by the total welfare aggregate of that group
- The **generosity indicator** is estimated as the as the value of the transfers received by a group divided by the total welfare aggregate of beneficiaries in that group

# OTHER DIMENSION INDICATORS

- A performant social program
  - reaching the intended population (benefit or beneficiary incidence),
  - the size of the program to cover the intended population (coverage) and
  - the importance of transfers relative to the welfare without the program transfers (relative incidence or generosity).



# OTHER DIMENSION INDICATORS

- But still, we are not looking at the redistributive impact of transfers that (a) considers the full spectrum of households (not just certain groups); and (b) is independent of the different sizes of their budgets.
- We must compare how much better or worse are programs relative to each other *independently of the (different) sizes of their budgets* regarding the welfare distribution
- We must take into consideration the fact that people can be closer or far away from the cutoff point.
- **Distribution Characteristic Index (DCI)** assigns a welfare weight to each household in a population and on the welfare spectrum it associates greater weight to those belonging to the bottom of the welfare distribution.

# OTHER DIMENSION INDICATORS

- **Distributional characteristic index:** Measure the change in social welfare (marginal benefit) achieved by transferring a standardized budget (say, \$1) through the program. That is, it represent the marginal benefit of distributing a unit of social protection income relative to its marginal cost
- **DCI does not depend on the size and a comparison of the values of DCI across different programs allows to compare the social value of distributing income through different programs independently of the programs' budgets.**
- DCI requires using weights derives from Atkinson's (1970) constant elasticity social welfare function, so DCI is estimated for different elasticities  $\varepsilon$  that captures aversion to inequality, with aversion increasing in  $\varepsilon$ .
  - $\varepsilon = 0$  implies no aversion to inequality – a dollar has a dollar of value regardless of who receives it – so all welfare weights take on the value unity.
  - $\varepsilon = 1$  implies that if household  $h$  has twice (half) the income of household  $k$ , then the welfare weight of household  $h$  is 0.5 (2.0) but the welfare weight of household  $k$  is unity.

# OTHER DIMENSION INDICATORS

- **Distributional characteristic index can be decomposed into two other indicators: Efficiency and Redistribution.**
- ***Efficiency***: *estimate* the welfare impact of a program that divides *budget* into equal amounts and gives them to the same beneficiary Household
- ***Redistribution***: captures the welfare impact, keeping targeting constant, of deviating from uniform transfers, and it is the adjustment that needs to be made to allow for the differentiation of transfer sizing across households in a more progressive (positive value) or regressive (negative value)



# OTHER DIMENSION INDICATORS

Previous indicators as coverage, leakage, incidence are reported over population by groups, but group composition differs by countries.

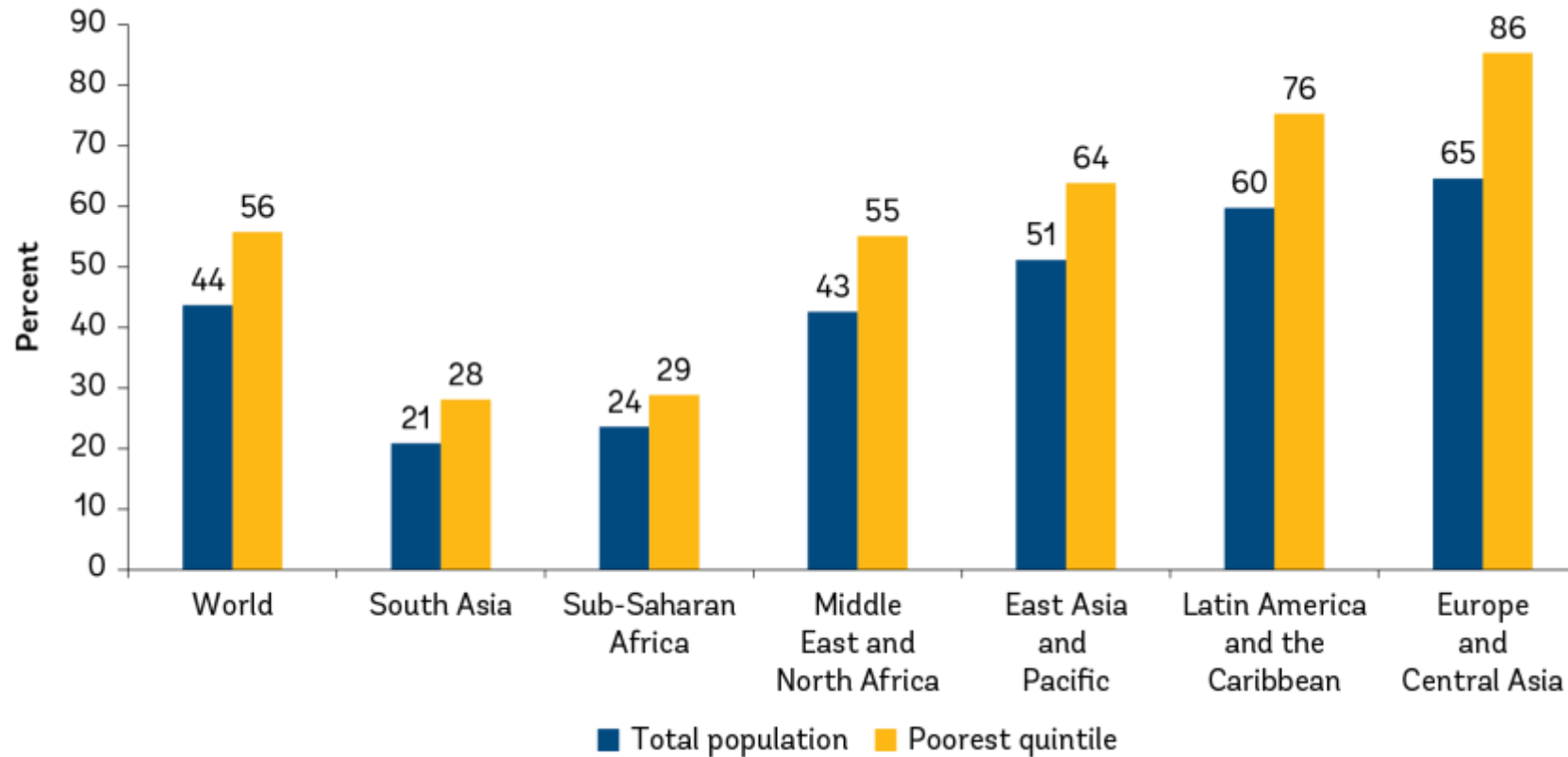
New metric to measure progressivity of the program by comparing an indicator against a simulated neutral program (universal) to remove within group and across country heterogeneity from the estimation.

- **Coady-Grosh-Hoddinott (CGH):** Compare the portion of the transfer budget received by a population quantile divided by the portion of population in that quantile.
  - Neutral (CGH=1) indicating that all each decile of the welfare distribution receives 10 percent of the transfer budget or that each decile accounts for 10 percent of the program beneficiaries. Neutral targeting can be understood a random allocation of benefits across the population or a universal intervention in which all individuals received identical benefits.;
  - (b) Progressive (CGH>1) indicating the those in the bottom tail of welfare distribution receives more of the program than those in the upper tail; and
  - (c) Regressive (CGH<1) indicating the opposite of (b).



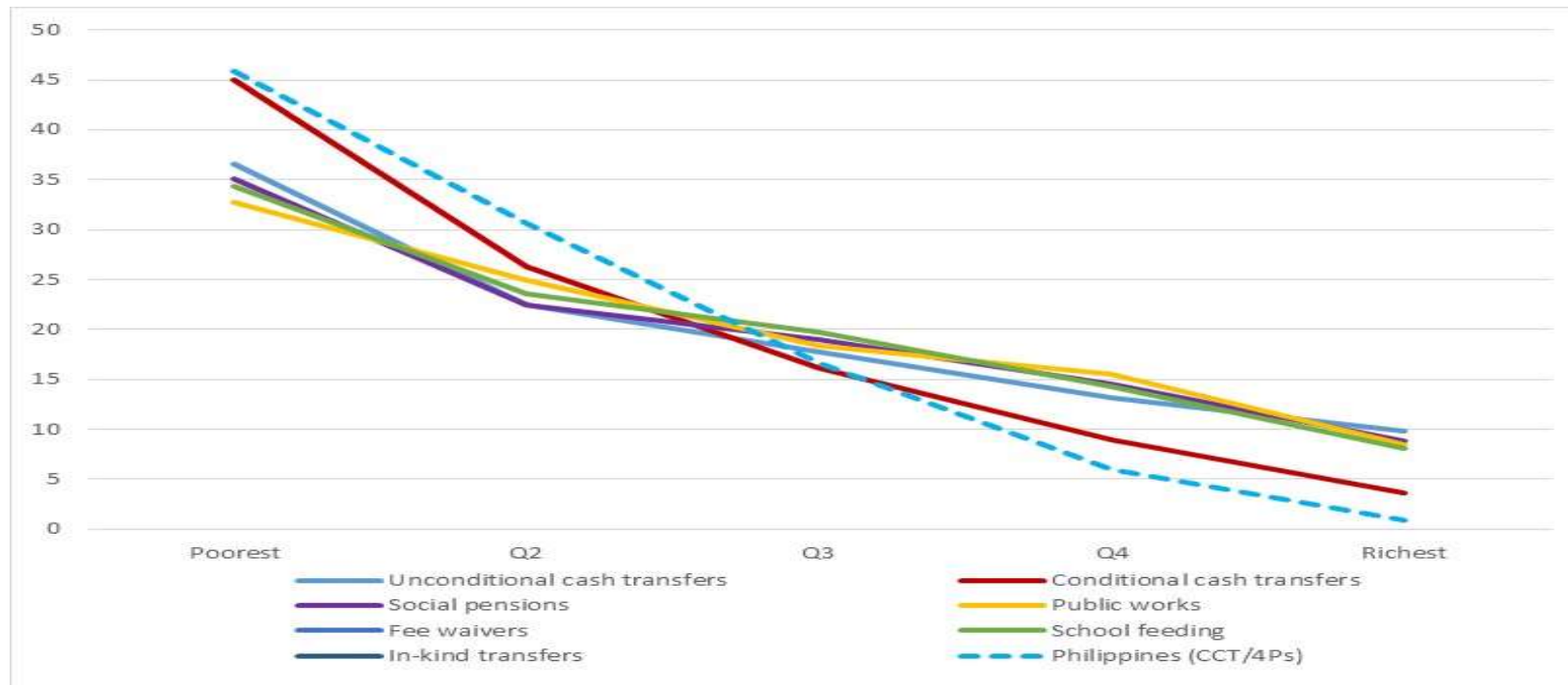
Part 2: Key facts from **ASPIRE** global data on social protection

## SPL PROGRAMS GLOBALLY COVER 44% OF THE TOTAL POPULATION, AND 56% OF THE POOREST QUINTILE



Source: ASPIRE database.

# GLOBALLY, ALL TYPES OF SSN INSTRUMENTS ARE GENERALLY PROGRESSIVE (BENEFICIARY INCIDENCE FAVORS THE BOTTOM 2 QUINTILES)

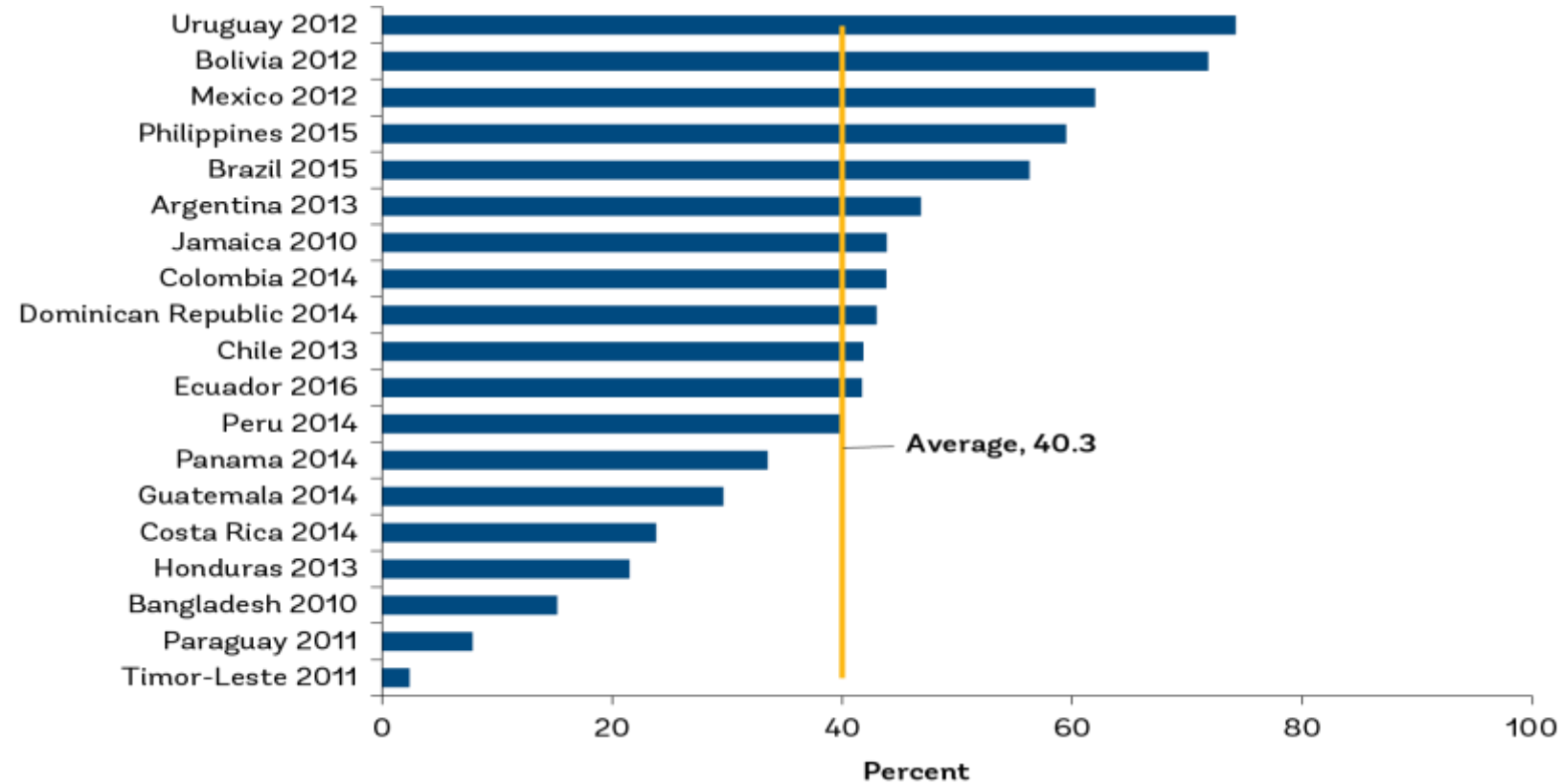


Source: ASPIRE database.



# SIGNIFICANT VARIATIONS IN BENEFIT INCIDENCE ACROSS COUNTRIES/PROGRAMS

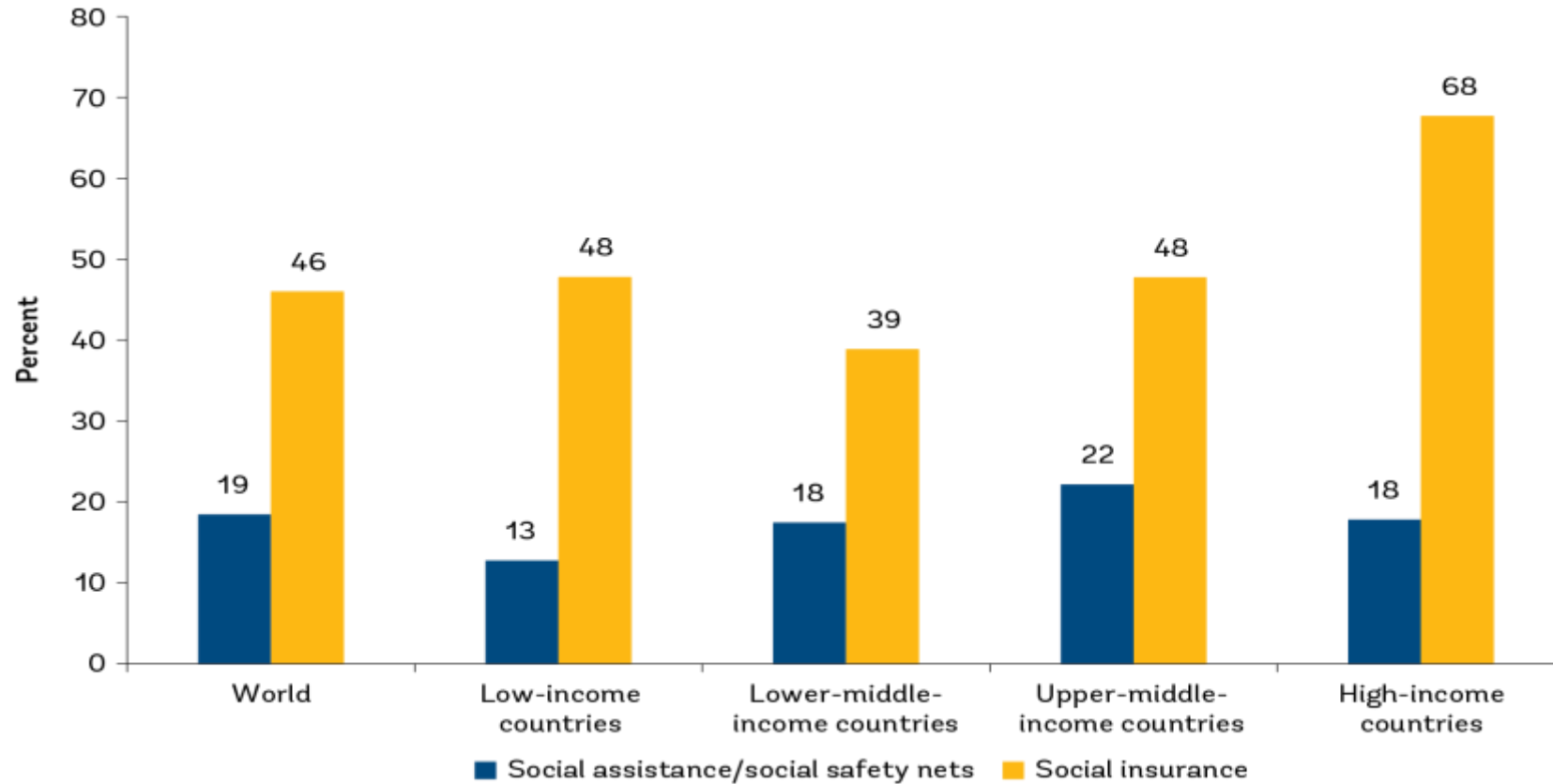
(NOTE: % OF CCT PROGRAM BENEFICIARIES FROM THE POOREST QUINTILE)



Source: ASPIRE database.



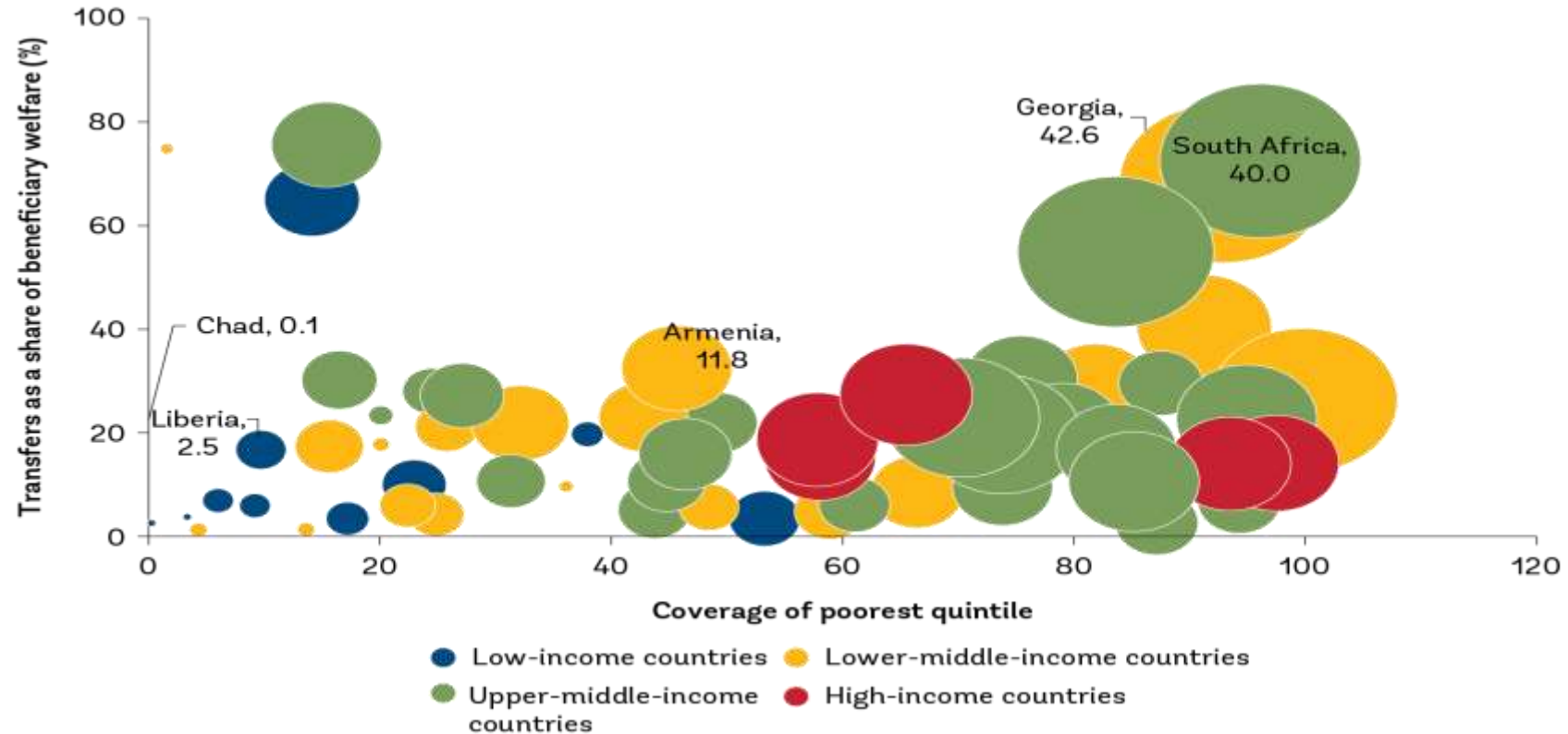
## SSN/SA TRANSFERS ACCOUNT ON AVERAGE FOR 19% OF THE WELFARE OF THE POOREST QUINTILE (GENEROSITY OR ADEQUACY INDEX)



Source: ASPIRE database.

# EXPANDED COVERAGE PAIRED WITH HIGH BENEFIT LEVELS LEADS TO BETTER (POVERTY REDUCTION) OUTCOMES

(NOTE: BUBBLE SIZE = POVERTY HEADCOUNT REDUCTION)



Source: ASPIRE database.



Part 3: exercise/illustrations

## HOW TO EVALUATE THE IMPACTS OF SP?

- Moreover, each SP program has a specific target population.
  - So are they adequately served?
  - Are the benefits reaching the right population?
  - Is the program achieving its objectives and being effective?
  - Is the program generating the desired distributional impacts?
  - Is the program effective to reduce poverty and inequality?
    - Some programs are not designed for such objective but policymakers may be happier with a program that also reduces poverty among the population of interest.



## **WHICH PROGRAM IS MORE EFFICIENT FOR POVERTY REDUCTION?**

*Question :*

For these 3 programs, identify the one that is more likely to have a large impact on poverty.





*Question 1:*

Second:

- We must use standard techniques/indicators to assess program performance
- We must rely only on the existing Household Surveys information
- Household surveys may have limited information on benefits from SP programs

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	Coverage
(U or C)Cash transfer programs	
Program A	4%
Program B	20%
Program C	20%

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Coverage: proportion of beneficiaries in each population group

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	Coverage	Leakage of beneficiaires
(U or C)Cash transfer programs		
Program A	4%	41%
Program B	20%	83%
Program C	20%	51%

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Leakage: share of individuals that receive transfer and are not among the poor

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	Coverage	Leakage of beneficiaires	Targeting accuracy
<hr/> (U or C)Cash transfer programs <hr/>			
Program A	4%	41%	75%
Program B	20%	83%	27%
Program C	20%	51%	45%

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Targeting accuracy: Share of transfers received by the poor

(U or C)Cash transfer programs	Coverage	Leakage of beneficiaires	Targeting accuracy	Generosity
Program A	4%	41%	75%	29%
Program B	20%	83%	27%	12%
Program C	20%	51%	45%	26%

Generosity: the value of the transfers received by the poor divided by the total consumption or income of the poor



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(U or C)Cash transfer programs	Coverage	Leakage of beneficiaires	Targeting accuracy	Generosity	Poverty Impact
Program A	4%	41%	75%	29%	2%
Program B	20%	83%	27%	12%	5%
Program C	20%	51%	45%	26%	8%

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Poverty impact: the simulated impact of discontinuing a program or combination of programs on poverty headcount

(U or C)Cash transfer programs	Coverage	Leakage of beneficiaires	Targeting accuracy	Generosity	Poverty Impact	Cost-Benefit
Program A	4%	41%	75%	29%	2%	0.88
Program B	20%	83%	27%	12%	5%	0.47
Program C	20%	51%	45%	26%	8%	0.51

Cost-benefit: indicates the reduction in poverty gap obtained for each \$1 spent in the program.

(U or C)Cash transfer programs	Coverage	Leakage of beneficiaires	Targeting accuracy	Generosity	Poverty Impact	<b>Gini Impact</b>
GMI	4%	41%	75%	29%	2%	<b>4.1%</b>
Child allowances	20%	83%	27%	12%	5%	<b>2.5%</b>

Gini impact: the simulated impact of discontinuing a program or combination of programs on Gini inequality



THANKS