Assessing Elderly Welfare and Pension Performance with Survey Data

Social Protection & Labor

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Session objectives

- <u>Objective</u>: learn how survey data can be used to improve *evidence-based* pension policy

  - Why: Surveys provide different and often more rich data compared to administrative data

- <u>Secondary objective</u>: Solve elderly poverty and income smoothing in your country (today)!
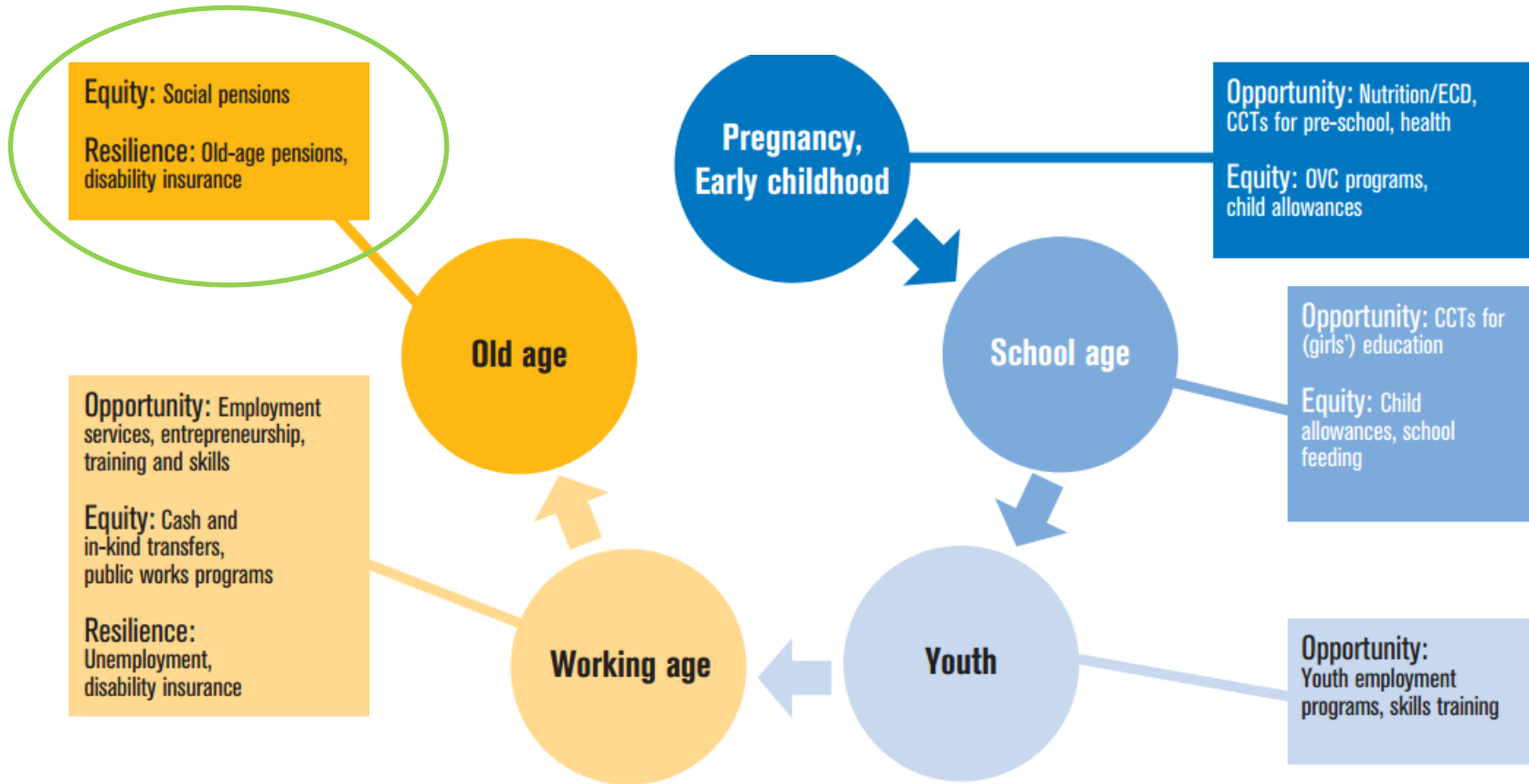
Outline

- (1) Overview of survey data & social protection concepts
- Why use survey data for pensions
  - Application to elderly and pensions
  - Pensions framework applied to survey data
  - Understanding survey data strengths and weaknesses

- (2) Application: Survey data for elderly welfare and pensions analysis
  - Environment - Living arrangements, Poverty
  - Performance - Coverage, Adequacy, Poverty impact, Program overlap
- (3) Ongoing Country Collaboration

(1) SP Context & Concepts Applied to Household Surveys

SPL over the life cycle

Equity: Social pensions

Resilience: Old-age pensions, disability insurance

Old age

Opportunity: Employment services, entrepreneurship, training and skills

Equity: Cash and in-kind transfers, public works programs

Resilience: Unemployment, disability insurance

Working age

Pregnancy, Early childhood

Opportunity: Nutrition/ECD, CCTs for pre-school, health

Equity: OVC programs, child allowances

School age

Opportunity: CCTs for (girls') education

Equity: Child allowances, school feeding

Youth

Opportunity: Youth employment programs, skills training

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Classification of programs

SA	• Social assistance (Social Safety Nets)
LM	• Labor Market Programs (active and passive)
SI	• Social Insurance

Types of Social Protection Programs

Category I	Category II	Type of program
Pensions and other social insurance	Old age	Old age pension
		Old age civil servant pension
		Veteran's old age pension
		Early retirement pension
	Survivors	Survivors pension
		Survivors civil servant pension
	Occupational injury/sickness benefits	Occupational injury benefits/ pension
		Paid sick leave
	Disability	Disability pension
Labor market programs	Unemployment	Unemployment compensation
		Severance pay
		Early retirement for labor market reasons
	Active labor market programs	Labor market training
		Youth measures
		Subsided employment
		Employment measures for disabled
		Employment service and administration
Social safety net programs	Cash or near-cash transfers	Low income/ Last-resort program
		Non-contributory/ Social pension
		Family allowances*
		Disability benefits
		Housing allowances
		Food stamps/ Vouchers
	Conditional cash transfers	Conditional cash transfers
	In-kind food transfers	Food rations
		Supplementary feeding
		School feeding
		Energency food distribution
	Fee waivers and scholarships	Fee waivers, education
		Scholarships
		Fee waivers, health
	General subsidies	Food price subsidies
		Public distribution systems
		Energy and utility subsidies
	Public works	Public works

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Pension Assessment – i) Data, ii) Indicators and iii) Tools

Initial conditions	Information/ Data	Indicators	Tools
Elderly incomes, vulnerability & poverty	Country HH survey data ADEPT-SP x/country data	*Environment* Demographic Economic Financial Informal Support	ADEPT-SP Apex PROST ASPIRE & ext. x-country data
Mandatory & voluntary pension systems & social security schemes	*Environment* – UN Population Projections Country admin data Financial market data Macro & fiscal data (country/IMF) *System design* – Admin data/country laws WB database comparators *Performance* – Admin data/country laws WB database comparators HH survey data	*Design* Structure of pension system Qualifying conditions Parameters	
Additional state support	Administrative data from social welfare schemes, housing, health provision. HH survey data.	*Performance* Coverage Adequacy Financial sustainability	

What is survey data?

- <u>Examples</u>: HBS, LSMS, DHS, Census

- <u>Organization</u>: Household or individual level

- <u>Timing</u>: Generally collected ever 2-3 years, more frequent than census (~ 10 years)

- <u>Information</u>: Core demographics (eg age and gender), expenditure/ income, employment status, public and private transfers, etc

Example household survey

FEDERAL REPUBLIC OF NIGERIA

FEDERAL OFFICE OF STATISTICS ABUJA, NIGERIA

Questionnaire [ ] of [ ]

NIGERIA LIVING STANDARDS SURVEY (NLSS)

SEPTEMBER 2003 TO AUGUST. 2004

PART A: HOUSEHOLD QUESTIONNAIRE

STATE.................. |__|__| SURVEY MONTH .... |__|__| SURVEY YEAR ....|__|__|

SECTOR...........................   E.A. CODE....................   RIC........................   HH NO...........................

NAME OF HEAD OF HOUSEHOLD... ADDRESS HEAD OF HH...

10

		SECTION 1: HOUSEHOLD ROSTER FOR EACH PERSON				FOR EACH PERSON 12 AND MORE YEARS OLD							
1. ID	2. Sex M...1 F....2	3. Relationship to Head of Household Head..........................1 Spouse.......................2 Own Child..................3 Step Child...................4 Grandchild..................5 Brother/Sister............6 Niece/Nephew............7 Brother/Sister- in-law.......................8 Parent ....9 Parent-in-Law...........10 Other relative............11 Maid/Nanny House Servant...........12 Non-Relative.............13		4. Does he or she have a birth certificate? Yes............1 No.............2 Ask person to get birth certificate and copy the Age into Column 5.	5. How old is (NAME) Years and months if 5 or under., otherwise years only (if less than 12 years old (>> 9)	6A. What is (NAME's) present marital status? Married (Monogamous).....1 Married (Polygamous).......2 informal/Loose Union.......3 Divorced.......................4 Separated.....................5 Widowed......................6 Never Married................7 (>>9)	6B How old were you when you first got Married?	7A Does (NAME) spouse live in this househ old? IF Q6=1-3 Yes....1 (>> 8) No.....2	7B. What is the Reason for Non Union? Permanent Migration......1 Abandon-ment............2 Refugee Status..........3	8. COPY THE ID CODE OF THE SPOUSE (IF MORE THAN ONE SPOUSE THE FIRST ONE)	9 What is (NAME'S) religious denomination Christian........1 Muslim...........2 Traditional....3 Other............4 (Specify)	10. Does (NAME) father live in this household? Yes......1 No........2 (>>12)	11 COPY THE ID CODE OF THE FATHER IF HE IS RESIDENT IN THE HOUSE-HOLD
		NAME	CODE		YRS	MTS		YRS						
01													
02													
03													
04													
05													
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													

Social protection/pension questions

Section 8: Pension, Aid and Benefits
[FOR ALL HOUSEHOLD MEMBERS]

ID CODE	1. RECORD THE ID CODE FROM THE ROSTER OF THE INDIVIDUAL PROVIDING INFORMATION FOR THE RESPONDENT, IF DIFFERENT FROM THE RESPONDENT	2. Did [NAME] receive any pensions, aid or benefits in the last 12 months? 1 = Yes 2 = No >> Section 9	3. What pensions, aid or benefits did [NAME] receive? IF MORE THAN ONE, LIST UP TO 3. IF MORE THAN 3 ASK WHICH ARE THE 3 WITH THE LARGEST AMOUNT OF BENEFITS 1 = Guaranteed Minimum Income 2= Child allowance 3 = Unemployment benefit 4 = Heating allowance 5 = Disability/Social Integration Supplement 6 = Retirement pension 7 = Disability pension 8 = Survivor pension 9 = Other pension (veteran, etc.) 10 = Mother's benefit 11 = Other benefit (specify)			4. For how many months during the last 12 months, did [NAME] receive the pension, aid or benefit? IF RECEIVE PENSION, AID OR BENEFIT FOR LESS THAN 12 MONTHS, GO TO 5 IF RECEIVE ALL FOR 12 MONTHS, GO TO 6			5. Why did [NAME receive the pension, aid, or benefit for less than 12 months? 1 = Income level too high to receive benefit 2 = Non documented absence from school 3 = Because respondent started working 4 = Seasonal benefit 5 = Because benefit started less than 12 months ago 6 = Travel abroad 7 = Other 8 = Don't know			6. How much did [NAME receive in pensions, aid or benefits in the last 12 months?		
			BENEFIT 1	BENEFIT 2	BENEFIT 3	MONTHS BENEFIT 1	MONTHS BENEFIT 2	MONTHS BENEFIT 3	REASON BENEFIT 1	REASON BENEFIT 2	REASON BENEFIT 3	LEVA BENEFIT 1	LEVA BENEFIT 2	LEVA BENEFIT 3
1														
2														
3														
4														
5														
6														
7														

Individual Input File

Household Identification	Individual Identification	STRATA	PSU	Urban location =1; Rural location=2	Household expansion factor	Household Size	Adult equivalent scale	Head of the household	Age of the household member	Total household income	Poverty line	Amount received from old age pensions	Participation in scholarship programs	Amount received by the household from Oportunidades	Amount received by the household from Pro-Campo
id_hh	id_ind	strata	psu	urban	hhweight	hhsize	adul_eq	head	age	hh_income	pob_ing	apos	becas_	toport	tprocam
20060150282	1	1	2	2	305	3	2	1	18	2459.34	938.61		0	180.49	
20060150282	2	1	2	2	305	3	2	0	18	2459.34	938.61		0	180.49	
20060150282	3	1	2	2	305	3	2	0	1	2459.34	938.61		0	180.49	
20060150280	1	1	2	2	305	7	6	1	56	9094.69	938.61		0		334.24
20060150280	2	1	2	2	305	7	6	0	53	9094.69	938.61		0		334.24
20060150280	3	1	2	2	305	7	6	0	29	9094.69	938.61		0		334.24
20060150280	4	1	2	2	305	7	6	0	26	9094.69	938.61		0		334.24
20060150280	5	1	2	2	305	7	6	0	15	9094.69	938.61		0		334.24
20060150280	6	1	2	2	305	7	6	0	13	9094.69	938.61		0		334.24
20060150280	7	1	2	2	305	7	6	0	7	9094.69	938.61		1		334.24
20060150030	1	1	1	1	777	4	3	1	77	18183.37	938.61	1403.81	0		
20060150030	2	1	1	1	777	4	3	0	51	18183.37	938.61		0		
20060150030	3	1	1	1	777	4	3	0	43	18183.37	938.61		0		
20060150030	4	1	1	1	777	4	3	0	9	18183.37	938.61		0		
20060150040	1	1	1	1	777	1	1	1	92	4458.78	938.61	1604.35	0		
20060150050	1	1	1	1	777	2	2	1	83	6397.05	938.61	1640.45	0		
20060150050	2	1	1	1	777	2	2	0	39	6397.05	938.61		0		
20060150060	1	1	1	1	859	5	2	1	41	12988.27	938.61		0		
20060150060	2	1	1	1	859	5	2	0	32	12988.27	938.61		0		
20060150060	3	1	1	1	859	5	2	0	11	12988.27	938.61		0		
20060140410	1	1	7	1	638	10	6	1	56	10730.62	938.61		0		514.18
20060140410	2	1	7	1	638	10	6	0	58	10730.62	938.61		0		514.18
20060140410	3	1	7	1	638	10	6	0	86	10730.62	938.61	1411.48	0		514.18
20060140410	4	1	7	1	638	10	6	0	30	10730.62	938.61		0		514.18
20060140410	5	1	7	1	638	10	6	0	29	10730.62	938.61		0		514.18
20060140410	6	1	7	1	638	10	6	0	10	10730.62	938.61		0		514.18
20060140410	7	1	7	1	638	10	6	0	9	10730.62	938.61		0		514.18
20060140410	8	1	7	1	638	10	6	0	4	10730.62	938.61		0		514.18

Household Input File

Household Identification	Individual Identification	STRATA	PSU	Urban location =1; Rural location=2	Household expansion factor	Household Size	Adult equivalent scale	Head of the household	Age of the household member	Total household income	Poverty line	Amount received from old age pensions	Participation in scholarship programs	Amount received by the household from Oportunidades	Amount received by the household from Pro-Campo
id_hh	id_ind	strata	psu	urban	hhweight	hhsize	adul_eq	head	age	hh_income	pob_ing	apos	becas_	toport	tprocam
20060150282	1	1	2	2	305	3	2	1	18	2459.34	938.61		0	180.49	
20060150280	1	1	2	2	305	7	6	1	56	9094.69	938.61		1		334.24
20060150030	1	1	1	1	777	4	3	1	77	18183.37	938.61	1403.81	0		
20060150040	1	1	1	1	777	1	1	1	92	4458.78	938.61	1604.35	0		
20060150050	1	1	1	1	777	2	2	1	83	6397.05	938.61	1640.45	0		
20060150060	1	1	1	1	859	5	2	1	41	12988.27	938.61		0		
20060140410	1	1	7	1	638	10	6	1	56	10730.62	938.61	1411.48	0	514.18	

Administrative vs Household Data

Administrative data

- - Limited population coverage - only 'covered' included

- + Comprehensive data on contributors, beneficiaries

- + Cumulative (over life cycle)

- - Narrow variables (eg age, gender, contribution)

Household data

- + Entire population represented

- -/+ Generally lack data on contributors, though extensive info on recipients (and non-recipients)

- - Static (singe year, usually not panel, though can use 2+)

- + Much more comprehensive (demographic, poverty, public & private transfers)

Comparison of Household and Administrative Data

Household data – all schemes	Administrative data scheme 1	Administrative data scheme 2	Administrative data scheme 2	Administrative data scheme 3
Age	Age	Age	Age	Age
Gender	Gender	Gender	Gender	Gender
Contributions	Contributions	Contributions	Contributions	Contributions
Withdrawals	Withdrawals	Withdrawals	Withdrawals	Withdrawals
Occupation				
Rural/ Urban				
Widower				
Disabled				
Total Income				
Other public transfers				
Etc				

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Why use survey data for elderly poverty and pension assessment?

- <u>Environment</u> – 1) Understand who is rich and poor by key characteristics (eg gender, pension receipt), 2) living arrangements, 3) employment status

- Design – N/A

- <u>Performance</u> – coverage, poverty impact, adequacy, targeting, etc
    - Cross-tabulate by key characteristics, eg geography, gender, age, income

- More breadth of information on individuals and households

How poverty is commonly measured

- Individuals or households are ranked by income or consumption

- The measure of income or consumption is referred to as the 'welfare aggregate'

- Poverty lines are then set either on a relative or absolute basis, often based on an extreme and basic standard of living

- Those with income or consumption (welfare aggregate) below a given poverty line are considered poor

Based on DEC presentation

Poverty measures

- **Poverty headcount** (FGT0) - % of individuals or households with welfare below the poverty line

- **Poverty gap** (FGT1) - mean shortfall of poor from the poverty line, expressed as a percentage of the poverty line

- **Poverty severity** (FGT2) – average of squared poverty gap ratio

% Below line

Avg distance below line
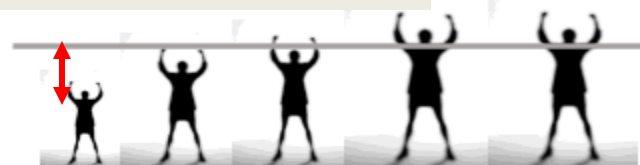
Distance squared
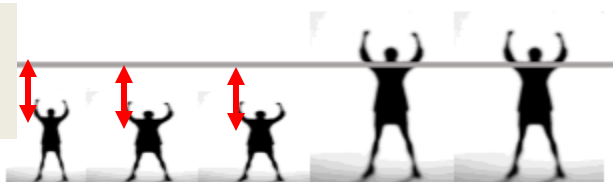
Diagnostic Assessment – Tools

Tools			
ADEPT-SP	**PROST**	**APEX**	**WB Database & External X-Country Data**
▪ Elderly welfare ▪ Elderly poverty ▪ Co-residence ▪ Elderly income generation ▪ Comparisons of welfare, poverty across elderly, non-elderly & household types.	**Baseline**. Long-term projections of *financing gap* for existing schemes + *replacement rates* for current and future retirees **Reform scenarios**. Long-term projections *financing gap + replacement rates* for parametric and/or structural reforms Outputs to simulate *other instruments* (social pensions, voluntary savings)	Evaluation of individual level benefits across instruments + for different income groups. Individual replacement rates Replacement of average wage Pension wealth	*Cross-country comparisons* ▪ Demographics ▪ Coverage ▪ Adequacy ▪ Affordability ▪ Sustainability

(2) Surveys specifically for Elderly Welfare and Pension Analysis

Why use survey data for elderly poverty and pensions?

- Ability to answer new and different policy questions
  - (i) Environment – poverty, distribution of income/consumption, living arrangements, key demographics
  - Design – N/A
  - (ii) Performance – coverage (receipt), poverty impact, adequacy, targeting, etc
    - Cross-tabulate by key characteristics, eg geography, gender, age, income
- More breadth of information on individuals and households

Some practical uses of survey data

- Understand <u>characteristics of elderly and non-elderly population</u> (e.g demographics, living arrangements and welfare)

- Produce <u>*e*vidence- based</u> findings on pension and other programs, such as coverage, adequacy, poverty impact, etc

- Provide snapshot of <u>income by sources</u> (public, private) for different age groups

Pensions Survey Work

- East Asia and the Pacific (EAP) – 7 countries, Eastern Europe and Central Asia (ECA)– 20 countries, Latin America and Caribbean (LAC) – 20 countries, Middle East and Northern Africa (MNA) – 5 countries, South Asia (SAR) – 7 countries. The surveys vary in size from approximately 15,000 in Albania to 600,000 individuals in India.

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Living Arrangements

- <u>What</u> – the structure of households by age, gender, size

- <u>Main indicator</u> – Co-residence rate (elderly living with non-elderly)

- <u>Why</u> – proxy for informal support by non-elderly, 'voluntary pillar' of family support can complement formal pension systems

Co-residence

- <u>Correlates of co-residence in existing studies</u> - lower welfare, living in urban areas, widowers, higher country level GDP per capita)

- <u>Initial findings</u>
  - Co-residence more likely for: urban, not receiving a pension, not receiving remittances, lower welfare deciles, lower income countries
  - Wide variation between, and within some regions (eg ECA)

Co-residence rate, by region

GNI per capita and co-residence rate

$R^2 = 0.509$
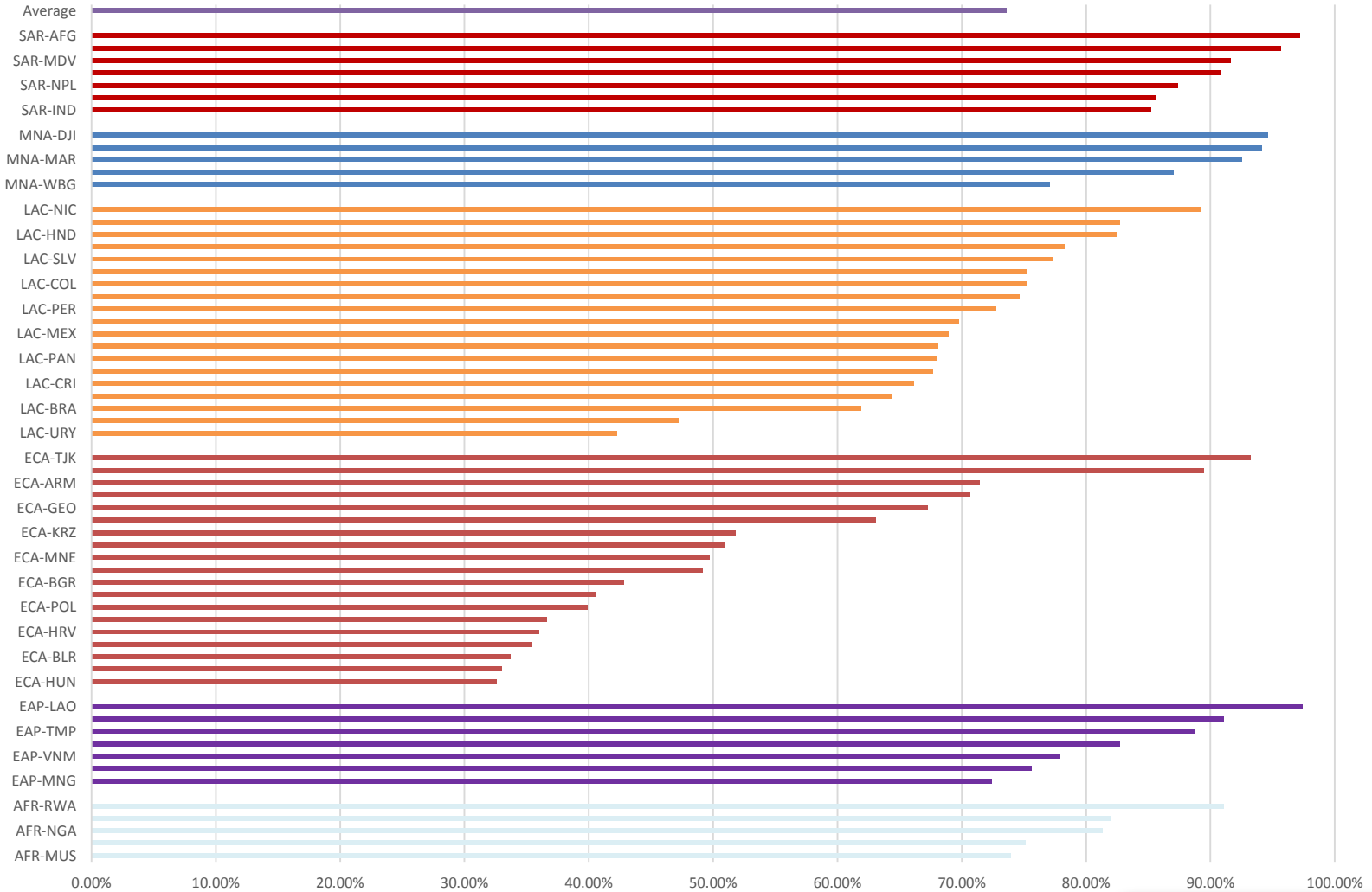
# Coresidence rate by key characteristics- country level
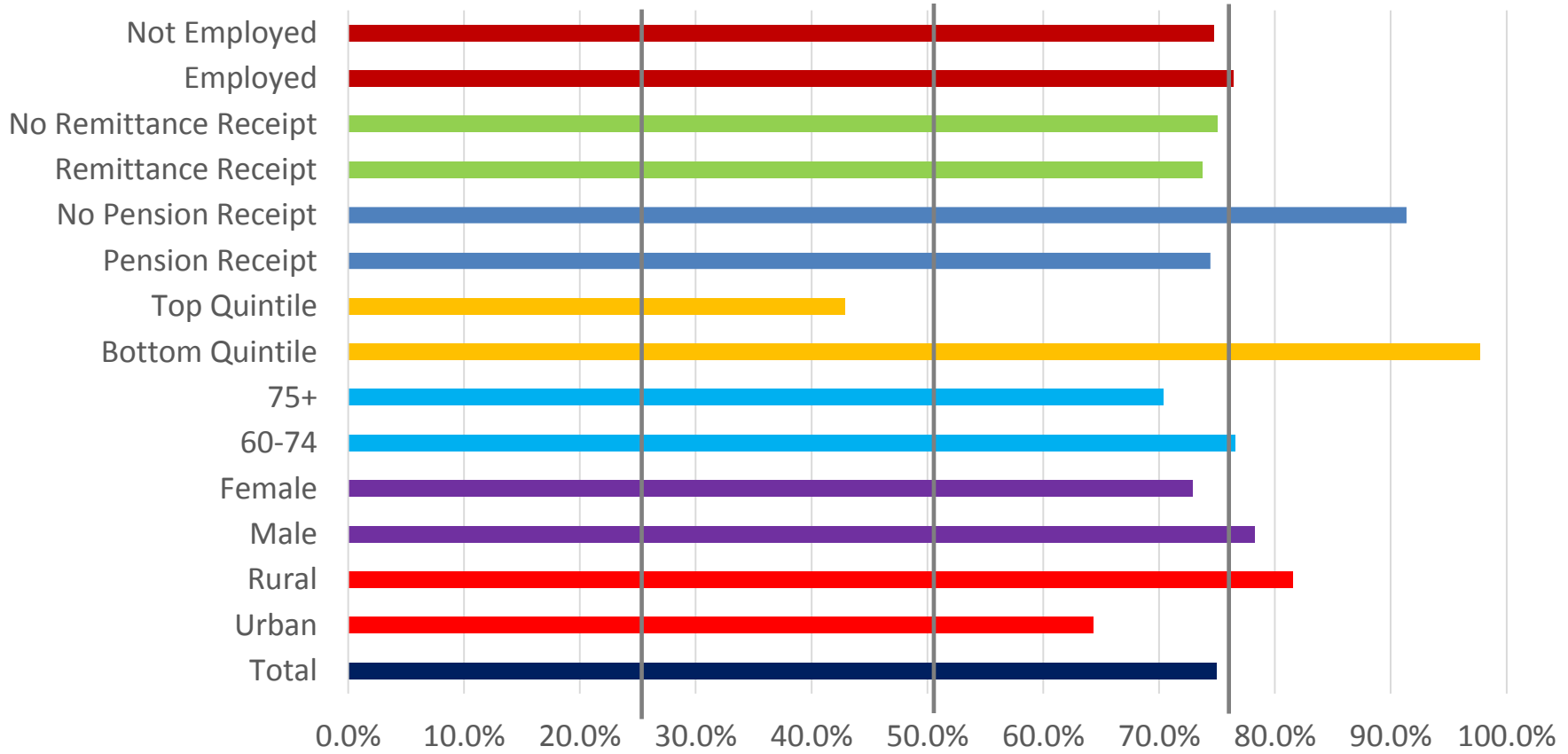
Poverty of elderly

- Are elderly household more poor then non-elderly households?

- Are elderly individuals more poor then non-elderly?

- Preliminary findings (point estimates robust, though less for s.e.)

  – By household type (any elderly, only elderly, some elderly, no elderly)

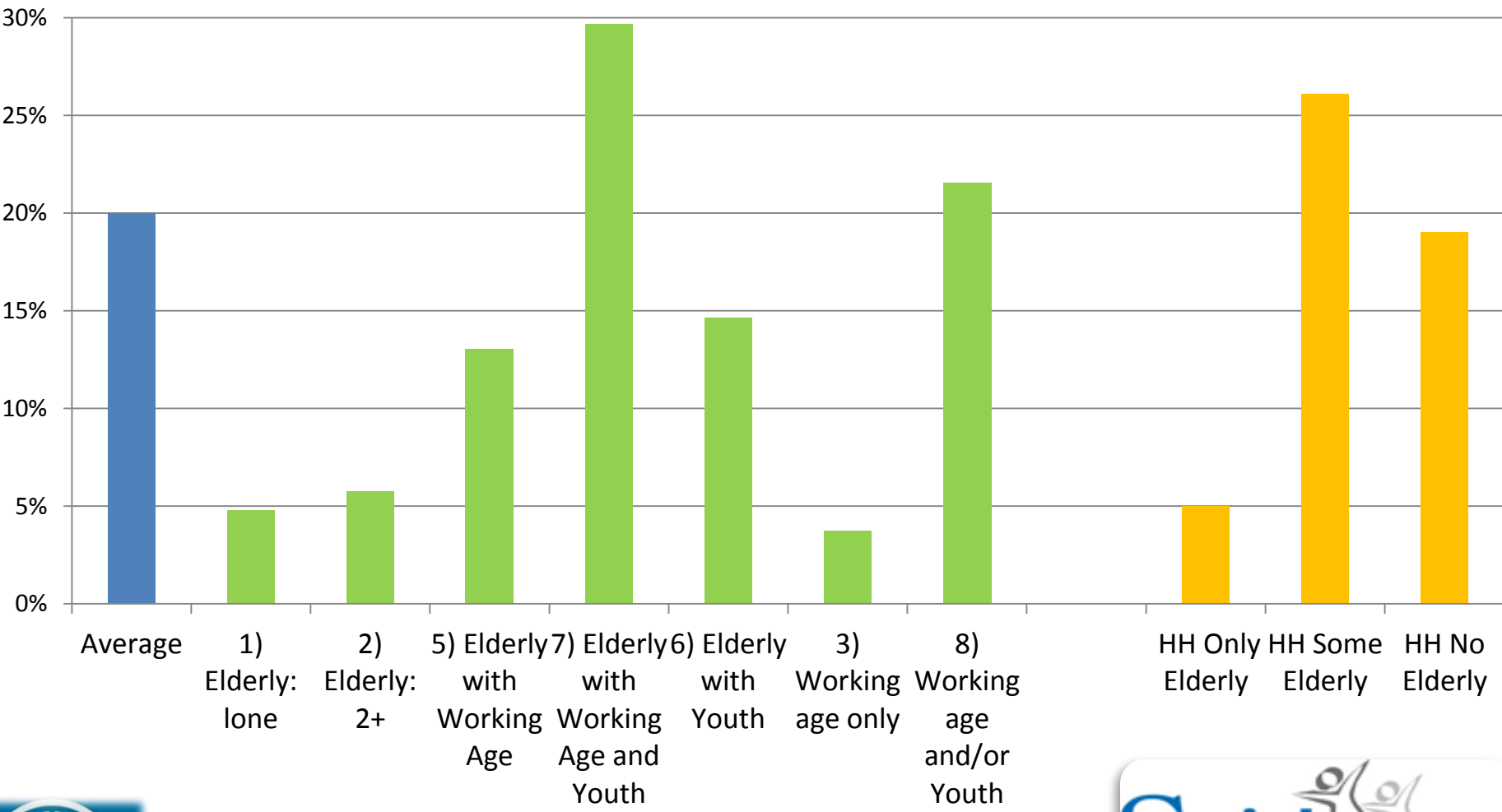 – By individual – youth, working age, elderly

Welfare distribution by age group – individual level
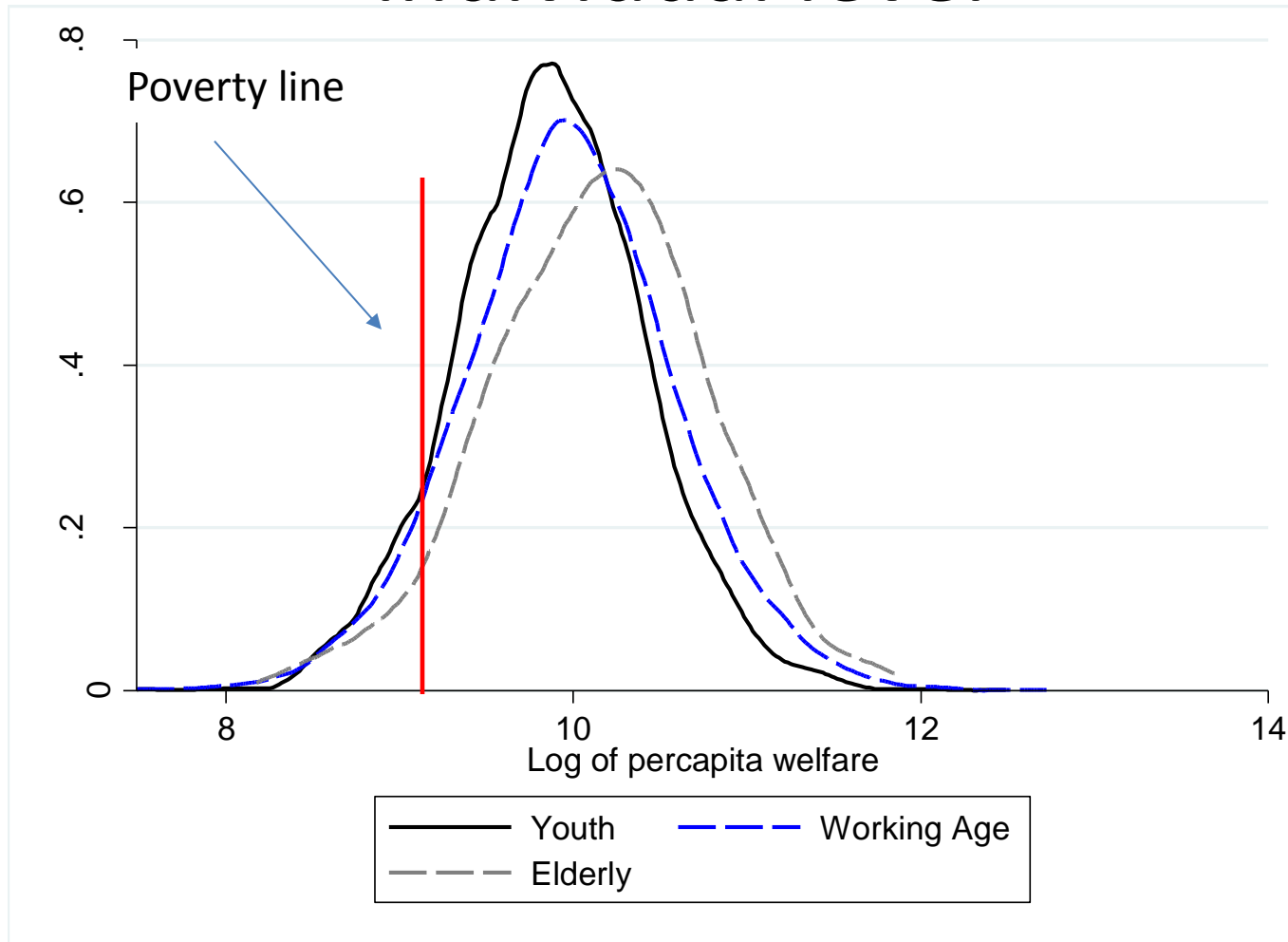
Poverty rate by age and gender
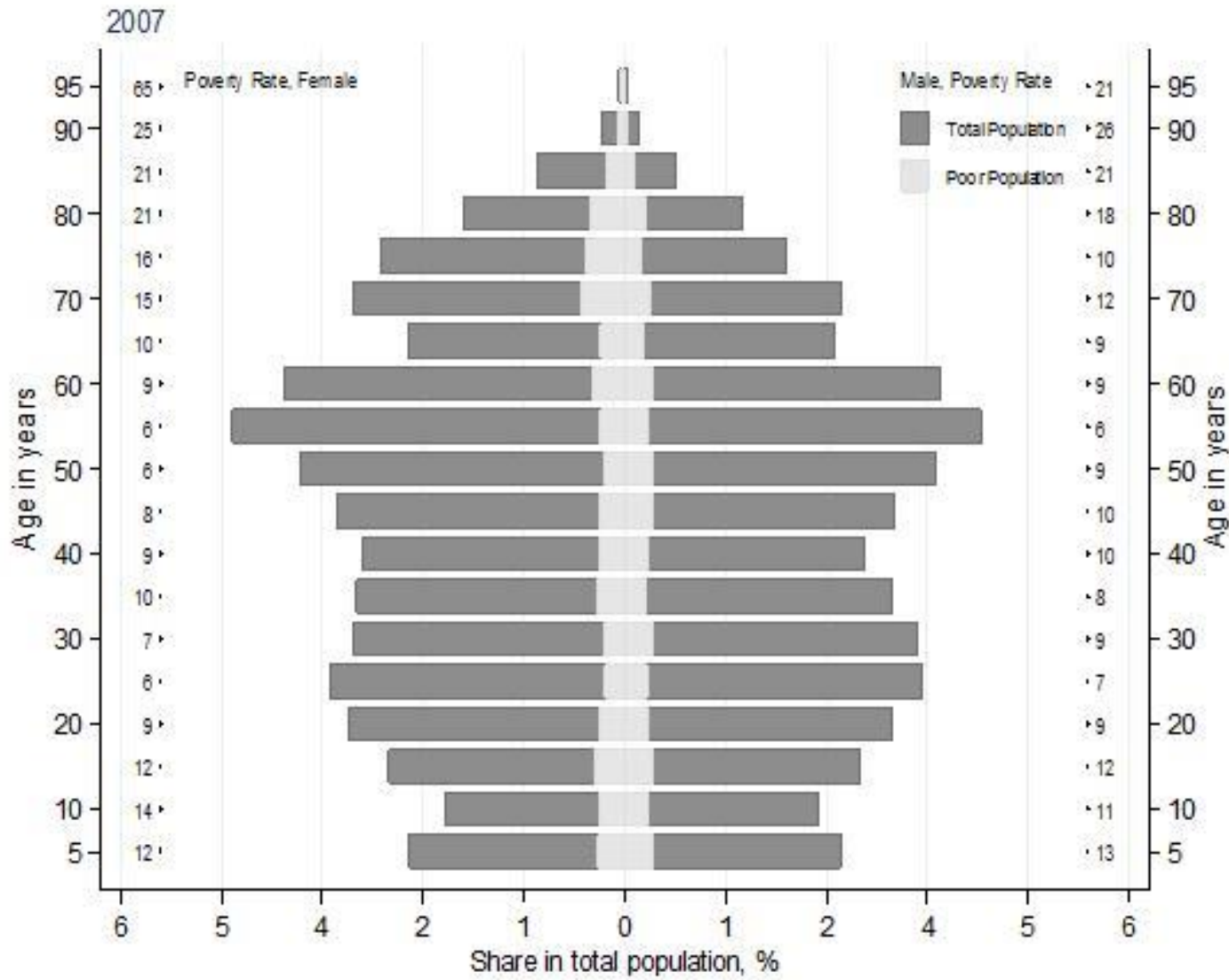
Poverty Headcount by Household Type

Coverage

	Total	Area of residence		Region			Ethnicity		
		Urban	Rural	Sofia city	Sofia region	Haskovo	Bulgaria	Turks	Roma
Direct and indirect beneficiaries									
All social protection	70.5	66.1	80.3	55.6	66.2	71.1	69.0	75.6	81.2
All social insurance	54.5	52.3	65.3	47.5	55.9	49.0	56.7	54.2	38.5
Old age pension	46.5	44.0	58.4	40.9	50.4	42.9	50.3	43.0	21.1
Disability pension/allowance	16.2	16.3	17.0	15.7	13.8	12.2	15.5	18.7	20.9
Survivorship pension	8.5	7.9	10.9	5.9	8.1	4.3	8.9	9.3	5.6
All labor market programs	2.2	2.0	2.8	0.9	1.0	3.6	2.4	3.4	0.0
Unemployment benefit	2.2	2.0	2.8	0.9	1.0	3.6	2.4	3.4	0.0
All social assistance	27.5	23.1	30.4	12.4	20.8	37.0	20.9	41.8	68.5
Social assistance	0.7	0.7	0.9	0.3	0.9	0.3	0.6	0.6	1.9
Child allowance, up to 2 yo	5.9	4.5	4.7	3.5	6.0	7.7	4.0	10.1	18.1
Other family allowances	0.8	0.7	0.6	0.6	0.0	0.0	0.8	0.8	1.2
Monthly child allowance	20.7	17.2	21.8	7.0	13.8	31.5	15.4	33.8	50.4
Heating allowance	4.2	2.6	7.3	1.5	3.1	3.0	1.8	7.7	21.8
Guaranteed minimum income	3.8	2.6	5.1	0.9	3.9	3.2	0.6	4.5	32.8
Other sa benefits	1.8	1.7	2.2	0.5	2.3	1.5	1.7	3.0	1.3
All remittances	4.3	4.0	4.5	2.5	2.5	7.5	3.5	8.4	7.4
Remittances	4.3	4.0	4.5	2.5	2.5	7.5	3.5	8.4	7.4

Adequacy

	Total	Poverty Status		
		XP	MP	NP
All social protection	29.5	69.7	67.6	27.4
All social insurance	33.8	71.9	72.5	31.7
Old age pension	34.0	71.4	72.0	32.0
Disability pension/allowance	12.9	33.9	26.2	12.0
Survivorship pension	5.9	14.2	14.6	5.4
All labor market programs	8.2	84.5	29.9	7.7
Unemployment benefit	8.2	84.5	29.9	7.7
All social assistance	7.8	33.0	21.0	6.5
Social assistance	14.0	15.8	21.2	12.6
Child allowance, up to 2 yo	13.6	30.9	29.0	12.5
Other family allowances	11.7	5.0	57.5	11.4
Monthly child allowance	3.0	12.2	8.2	2.6
Heating allowance	5.5	8.2	8.3	4.1
Guaranteed minimum income	14.5	27.9	20.5	9.8
Other sa benefits	6.2	45.4	5.4	6.1
All remittances	51.5	58.8	45.6	51.6
Remittances	51.5	58.8	45.6	51.6

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Simulated poverty impact (% poor)

	With pensions income	No pension income
Individual level		
Population	0.5077	0.5878
Youth (0-14)	0.6196	0.6651
Working Age (15-60)	0.4718	0.5248
Elderly (60+)	0.3502	0.7611
Elderly (60-74)	0.3562	0.7380
Elderly (75+)	0.3331	0.8279
Non-Elderly (0-59)	0.5218	0.5723
Household level		
Elderly-only households	0.0410	0.8512
Some elderly households	0.4817	0.7283
Non-Elderly Households	0.4325	0.4550
Total	0.4197	0.5321

(3) Ongoing Work

Pipeline work

- Using survey data for 70+ countries for country pension work

- Regional and cross-regional comparison
  - Poverty by age – are the elderly really the most poor?
  - Living arrangements/ informal support
  - Coverage
  - Adequacy
  - Income sources over life cycle
  - More to come...

ADePT Training

- Regional and country workshops on survey analysis

- Topics include pensions, social safety nets, labor market, and poverty analysis

- There will be a hands-on computer training later today for those interested.

Thank you!

- If your country is interested in survey training on Pensions, Social Safety Nets, Poverty, and/or Labor (1/2 day to 3 day courses):
  - Please contact **Mr. Ruslan Yemtsov, ryemstov@worldbank.org Mr. Robert Palacions rpalacios@worldbank.org or Mr. Brooks Evans bevans2@worldbank.org**