

Presentation at Alisa Hotel, Accra

March 18, 2014

Rethinking Poverty: Some Evidence from the 2012 SADA Area PBS

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Contextualizing Poverty and Its Measurement

- Difficult of defining poverty
- More difficulty in measuring poverty
- Often discuss in terms of:
 - Capabilities
 - Economic wellbeing
 - Social Inclusion/Exclusion



Contextualizing Poverty and Its Measurement

Economic context has significant geographic challenges

- Poverty exists when resources shared with others in their household do not meet basic needs
- Resources needed by a family of two adults and two children to meet their basic needs define poverty threshold in the U.S.
- Two measures of poverty
 - Official U.S. Poverty Rate
 - Supplemental Poverty Measure



Contextualizing Poverty and Its Measurement

Official
Poverty Rate

Resources are cash income

Shared by immediate family members

Supplemental
Poverty Rate

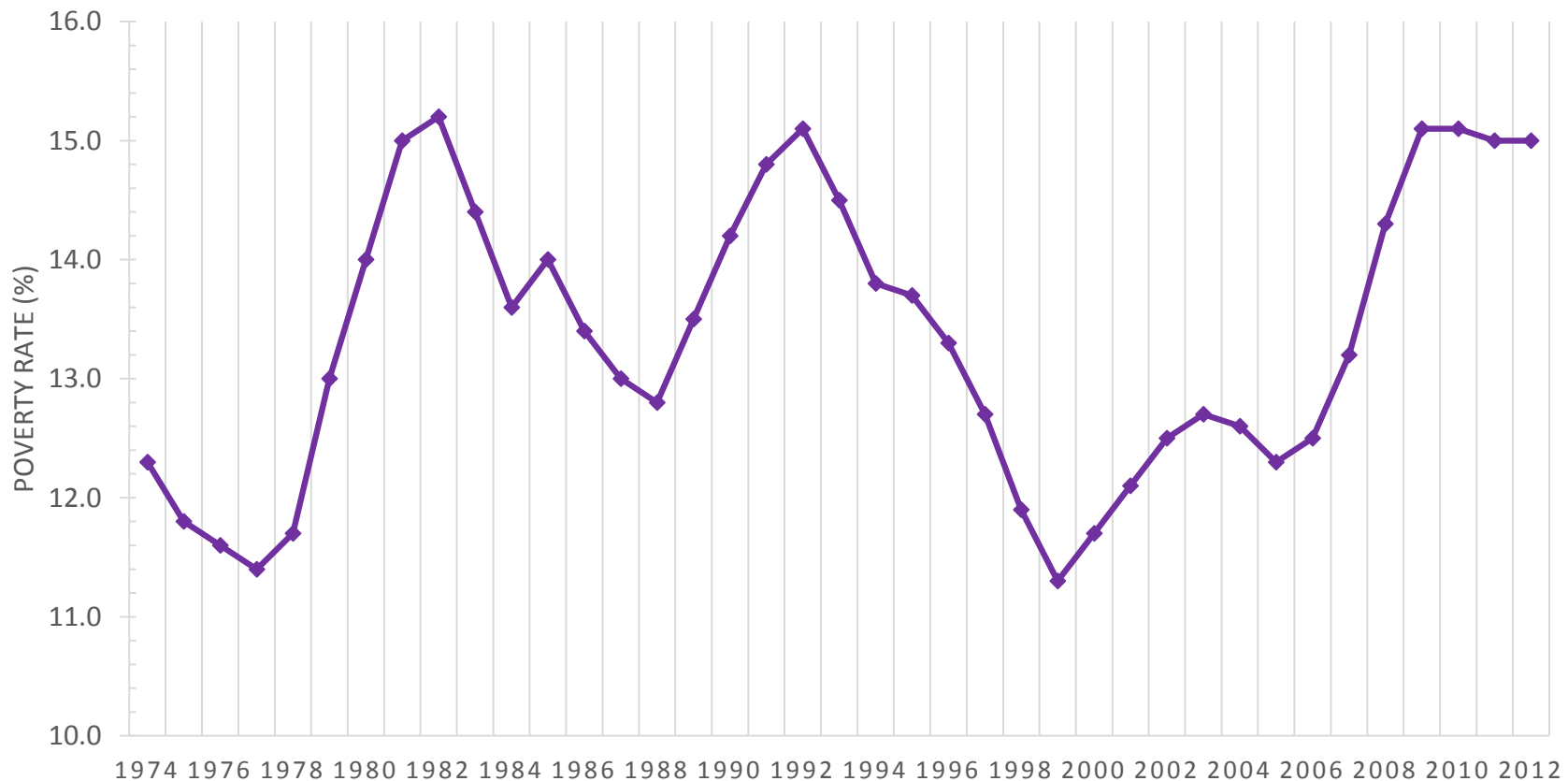
Cash and non-cash resources (including targeted government benefits) and housing

Shared by all residents of the household



Contextualizing Poverty and Its Tracking

OFFICIAL U.S. POVERTY RATE



Contextualizing Poverty and Its Non-Uniformity

- Average of 15% across the country and ranges from 7.5% in NH to 21.2% in LA
- Reason for the focus on the SADA Area is the perceived disparity between the national and the SADA Area prevalence of poverty



Contextualizing Poverty for its Timelessness and Universality

All the world's major religions encourage their adherents to take care of the poor

Judaism,
Christianity,
Islam, Hindu

And those who obey are rewarded in various ways by the Supreme Being of that Faith

**Salvation,
forgiveness,
blessing, return
on investment**



Contextualizing Poverty and Its Timelessness

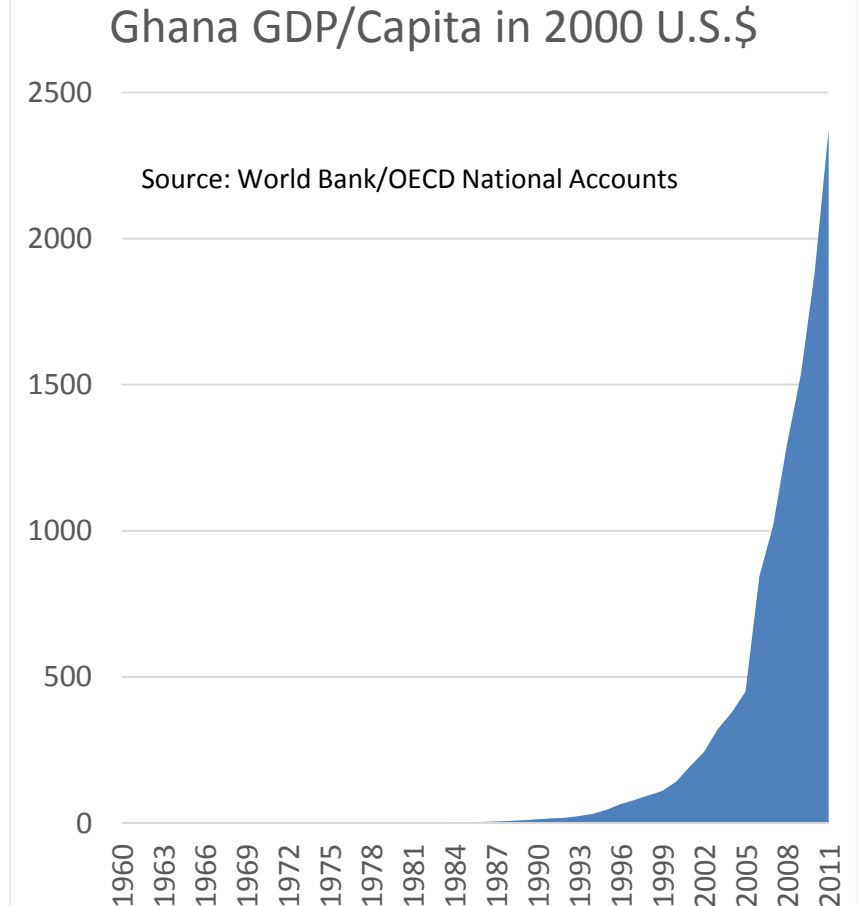
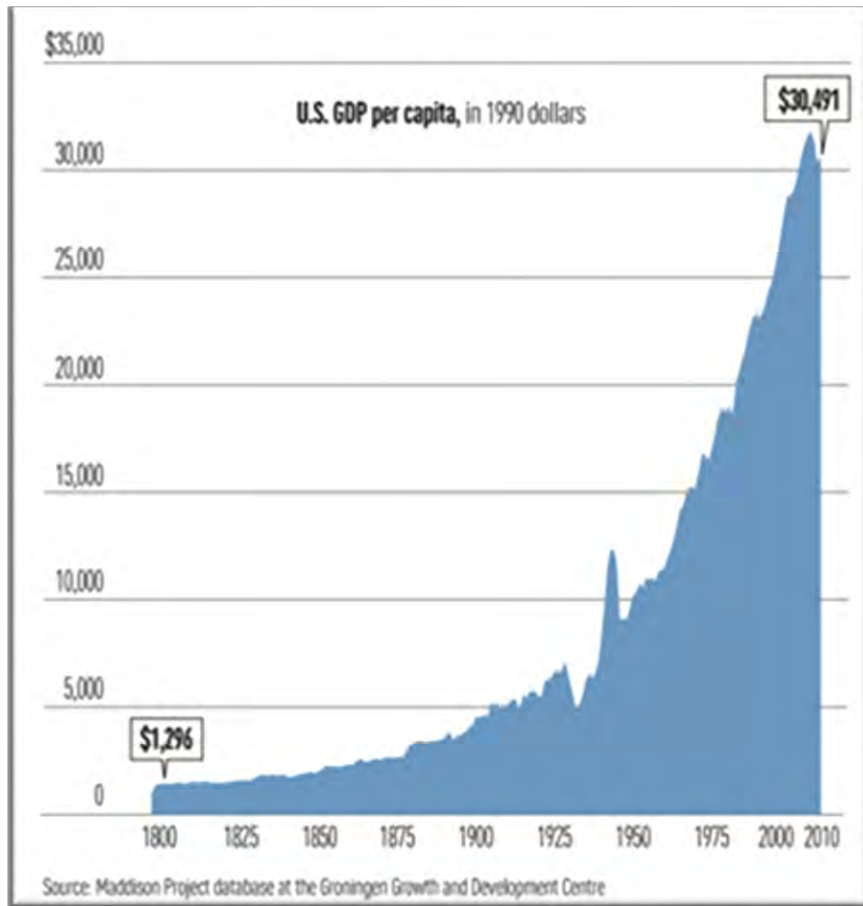
Assume an average-income U.S. family earning about \$50,000/year and define poverty level as 50% average family income

- Equivalent to \$17.12/person/day for a household of 4 people

At 2.3% annual growth rate, income doubles every generation ~31 years

Hence, the level of poverty for the children of today's [U.S. poor] will be \$50,000 in current dollars by the time they are their parents' age

This Abundance is a Recent Phenomenon



Arresting Poverty

- Unless you have a handout, *virtually* no-one self-identifies as “poor”
- So, we have resorted to imputing poverty levels in almost all countries
 - Imputed from expenditure
 - With an assumed referent poverty line



Imputing Poverty in the SADA Area

Four categories
of expenditures

Household Food Consumption

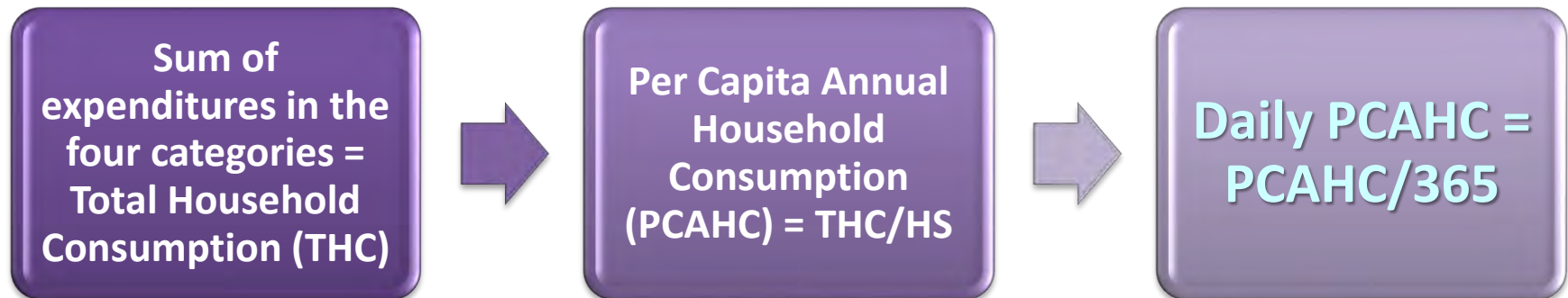
Consumer Durables

Housing

Non-Food Consumption



Imputing Poverty in the SADA Area



And our poverty line is set to one established by the World Bank - \$1.25

Imputing Poverty in the SADA Area

Daily per capita household consumption expenditure is imputed at the household level and not at the individual level

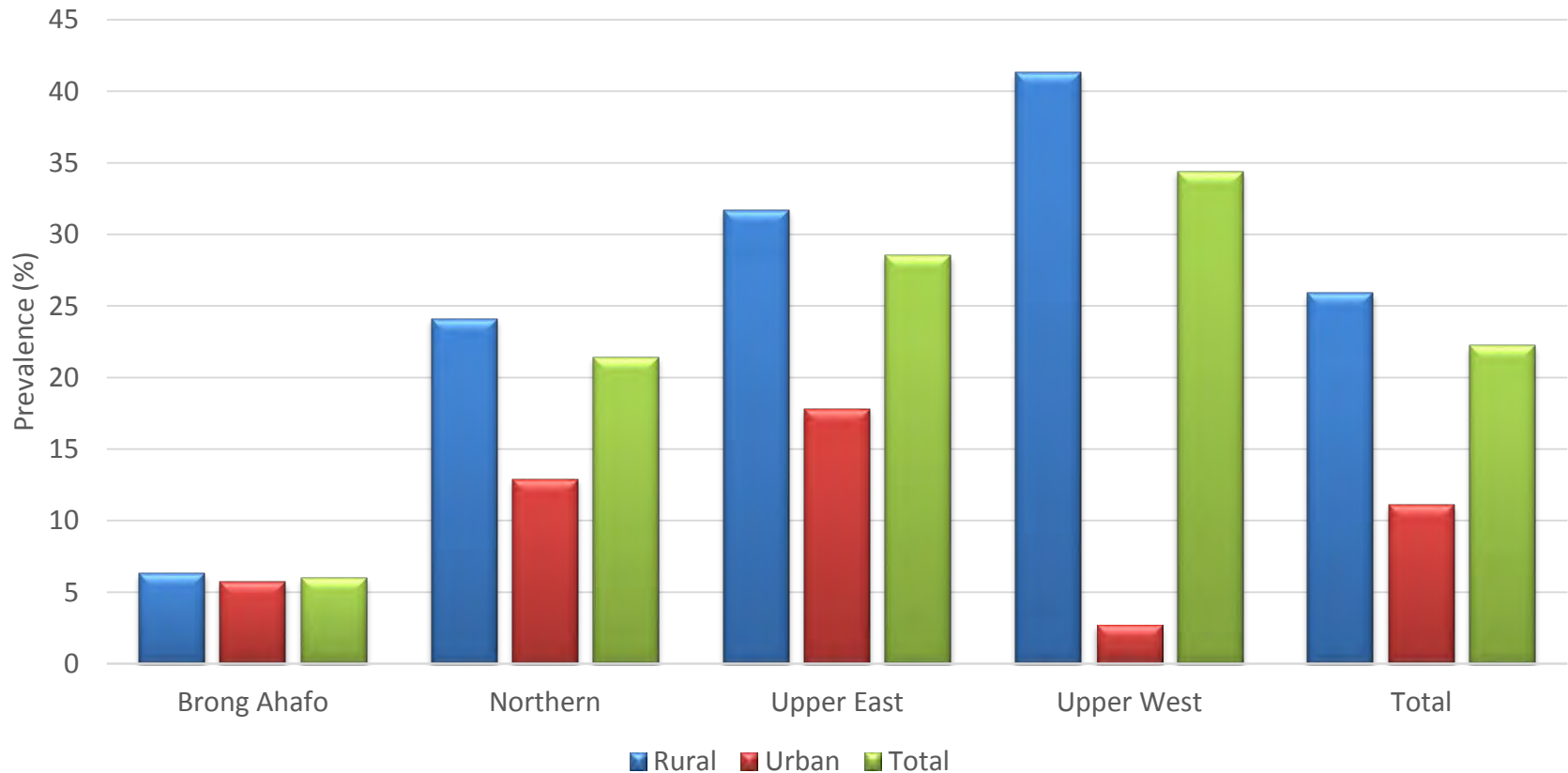
Therefore, the denominator in the average prevalence is the number of households and NOT total individual survey respondents

This is also the approach used in the Supplemental Poverty Measure (SPM)



Imputing Poverty in the SADA Area

Prevalence of Household Poverty (PL=\$1.25)



Research Question

- What are the factors that explain poverty in the SADA Area?
- How does knowing these factors help in the development of sustainable *poverty reduction policies and programs* for the SADA Area?



Model

Endogenous

- Daily Per Capita Household Expenditure

Exogenous

- Household Size
- Age of Household Head
- Marital Status (Unmarried = 0; Married = 1)
- Education of Household Head (0=None; 1=Some)
- Gender (Female=0; Male=1)
- Locale of Residence (0=Rural; 1 = Urban)
- Wealth Proxy – Cell phone, transportation, house, ag and non-ag Land (Owns=1)
- Region

Model Estimation

Employed a Tobit Model and assessed both left and right censoring at the poverty line

Right censoring provided information on people below the poverty line

Left censoring provided information on people above the poverty line



Hypotheses

- Locale and gender
- Education and gender
- Region and locale
- Marital status and gender
- Household size



Summary Stats

| Variable | PL > \$1.25 | PL <= \$1.25 |
|----------------|-------------|--------------|
| DHPCE | 4.88 | 0.97 |
| Household Size | 4.93 | 7.47 |
| Age | 44.38 | 47.56 |
| Married | 0.77 | 0.86 |
| Gender | 0.80 | 0.84 |
| Education | 0.44 | 0.32 |
| Locale | 0.29 | 0.13 |
| Own AgLand | 0.82 | 0.91 |
| Own Non-AgLand | 0.18 | 0.09 |
| Own Transport | 0.74 | 0.70 |
| Own Cell | 0.67 | 0.47 |
| Own Dwelling | 0.45 | 0.46 |



Right Censored Tobit Model Results

Uncensored N = 779
 $\sigma = 0.52$; $z = 2.35$; $P > z = 0.02$
 $F(24, 204) = 17.79$

| Variables | dy/dx | SE | z | P>z | Sig. |
|------------------------|--------------|-------------|---------------|-------------|------------|
| Household Size | -0.07 | 0.00 | -15.07 | 0.00 | *** |
| Age | 0.00 | 0.00 | 0.41 | 0.68 | |
| Married | -0.04 | 0.05 | -0.99 | 0.32 | |
| Male | -0.02 | 0.05 | -0.53 | 0.59 | |
| Some Education | 0.10 | 0.04 | 2.56 | 0.01 | *** |
| Urban | 0.21 | 0.06 | 3.54 | 0.00 | *** |
| Northern | -0.26 | 0.07 | -3.68 | 0.00 | *** |
| Upper East | -0.47 | 0.08 | -6.20 | 0.00 | *** |
| Upper West | -0.35 | 0.09 | -3.92 | 0.00 | *** |
| OwnAgLand | -0.01 | 0.05 | -0.29 | 0.77 | |
| Own Non-Ag Land | 0.20 | 0.05 | 4.06 | 0.00 | *** |
| Own Transport | 0.20 | 0.05 | 3.93 | 0.00 | *** |
| Own Cell | 0.22 | 0.04 | 5.16 | 0.00 | *** |
| Own House | 0.03 | 0.04 | 0.70 | 0.48 | |
| Poor Dwelling | 0.08 | 0.07 | 1.16 | 0.25 | |
| Moderate Dwelling | 0.15 | 0.07 | 2.07 | 0.04 | ** |
| Good Dwelling | 0.24 | 0.07 | 3.31 | 0.00 | *** |
| Excellent Dwelling | 0.29 | 0.12 | 2.35 | 0.02 | ** |



Left Censored Tobit Model Results

Uncensored N = 3490
 $\sigma = 6.09$; $z = 3.42$; $P > z = 0.00$
 $F(24, 204) = 12.62$

| Variables | dy/dx | SE | z | P>z | Sig |
|------------------------|-------------|-------------|-------------|-------------|------------|
| Household Size | -0.70 | 0.06 | -10.88 | 0.00 | *** |
| Age | 0.00 | 0.01 | 0.82 | 0.41 | |
| Married | -1.68 | 0.41 | -4.08 | 0.00 | *** |
| Male | 0.82 | 0.27 | 3.07 | 0.00 | *** |
| Some Education | 0.78 | 0.21 | 3.75 | 0.00 | *** |
| Urban | 1.45 | 0.38 | 3.79 | 0.00 | *** |
| Northern | -1.62 | 0.51 | -3.18 | 0.00 | *** |
| Upper East | -3.01 | 0.61 | -4.93 | 0.00 | *** |
| Upper West | -2.86 | 0.62 | -4.58 | 0.00 | *** |
| Own Ag Land | -0.34 | 0.48 | -0.71 | 0.48 | |
| Own Non-Ag Land | 1.24 | 0.44 | 2.84 | 0.01 | *** |
| Own Transport | 1.18 | 0.36 | 3.27 | 0.00 | *** |
| Own Cell | 1.58 | 0.29 | 5.53 | 0.00 | *** |
| Own House | 0.36 | 0.24 | 1.50 | 0.13 | |
| Poor Dwelling | 0.86 | 0.36 | 2.37 | 0.02 | ** |
| Moderate Dwelling | 1.48 | 0.38 | 3.91 | 0.00 | *** |
| Good Dwelling | 1.93 | 0.42 | 4.55 | 0.00 | *** |
| Excellent Dwelling | 7.30 | 2.13 | 3.42 | 0.00 | *** |



Rethinking Poverty

- We have been talking about poverty for decades
 - Poverty reduction/alleviation; Pro-poor development; HIPC
- Despite significant efforts to reduce poverty, our track record is not very good
 - Not just in developing countries but everywhere



Rethinking Poverty

Policies and efforts have not been tracking because of a number of issues . . . Some self-inflicted

Self non-identification

Non-market initiatives (public goods)

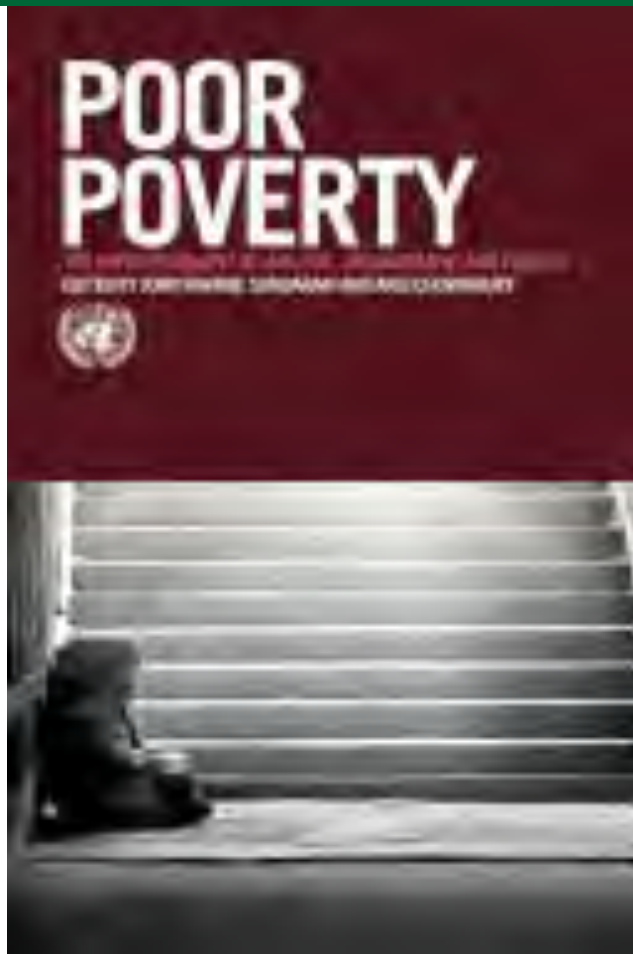
Unclear operational objectives

Fragmented execution

Lack of dedication to sustainable programs and initiatives



“Poor Poverty”



- Sundaram and Chowdhury (2011)
 - “Silver bullets”
 - Micro-credits
 - Land ownership
 - Cash transfers
 - Democratization
 - Empowerment

Research Question

What demographic and household characteristics have the highest probability of defining who is in the “middle class”?

The “middle class” may be termed the ‘consumer class’ . . . [with] income elasticity for consumer durables and services that is greater than unity.”

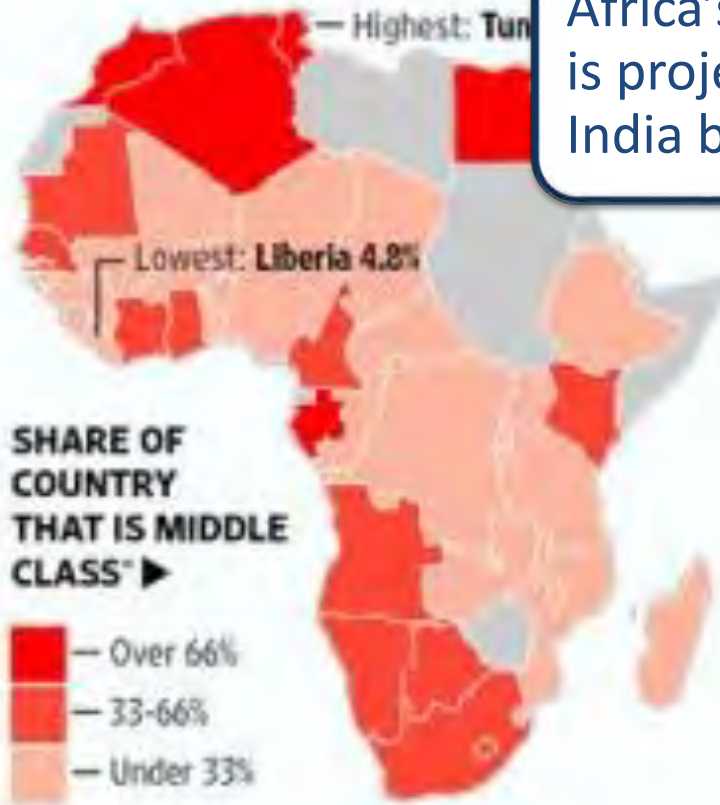
Middle Class Chatter Getting Louder

- African Development Bank (2011)
 - Kharas and Gertz (2010)
 - Asian development Bank (2010)
 - McKinsey Global Institute (2007)
- This is changing our focus from poverty to wealth creation
 - Wealth is more tractable and decision-maker driven
 - Help is appreciated not expected



A growing middle class is providing insurance against slippage

Africa's middle class, mostly in urban areas, is projected to exceed that of China and India by 2050

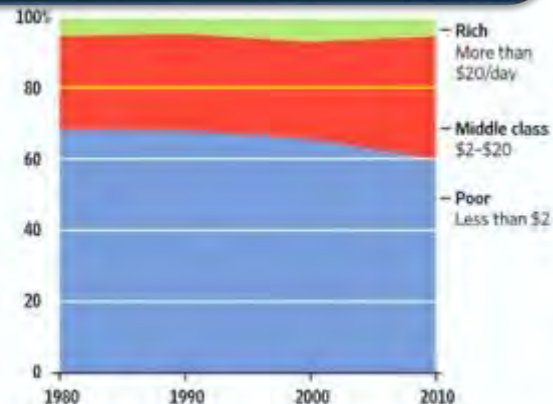


Buying in

Africa's middle class has risen to 34% of the population, expanding to 313 million people.

SHARE OF AFRICA'S POPULATION, BY CLASS

* Data not available for all countries; Source: African Development Bank Group



Operationalizing the Middle Class

World Bank

\$2-\$13/person/day

African
Development
Bank

\$2-\$20/person/day

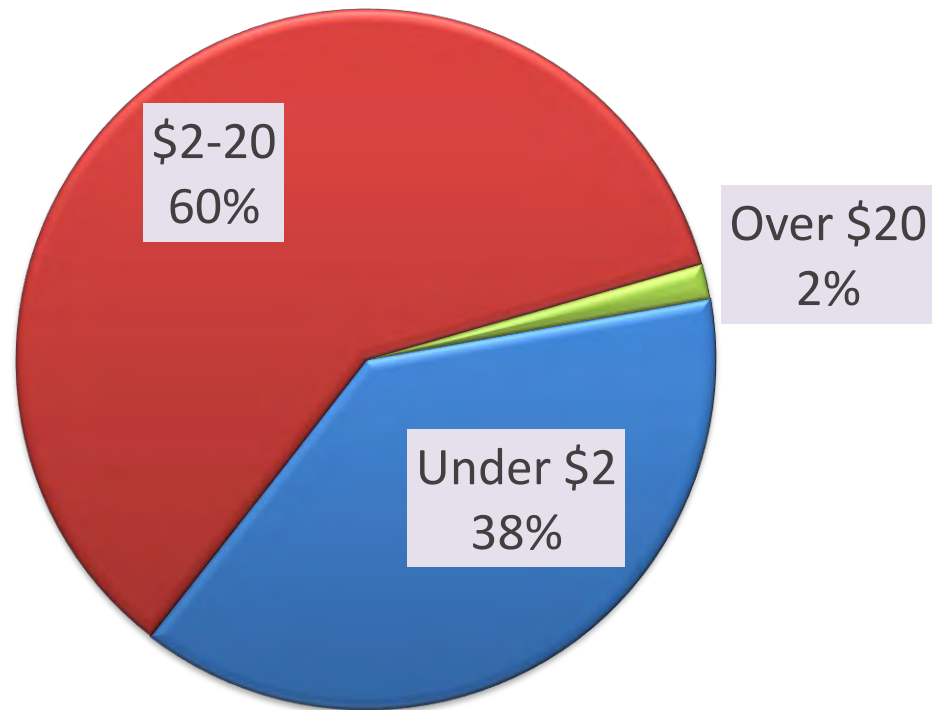
Kharas

\$10-\$100/person/day



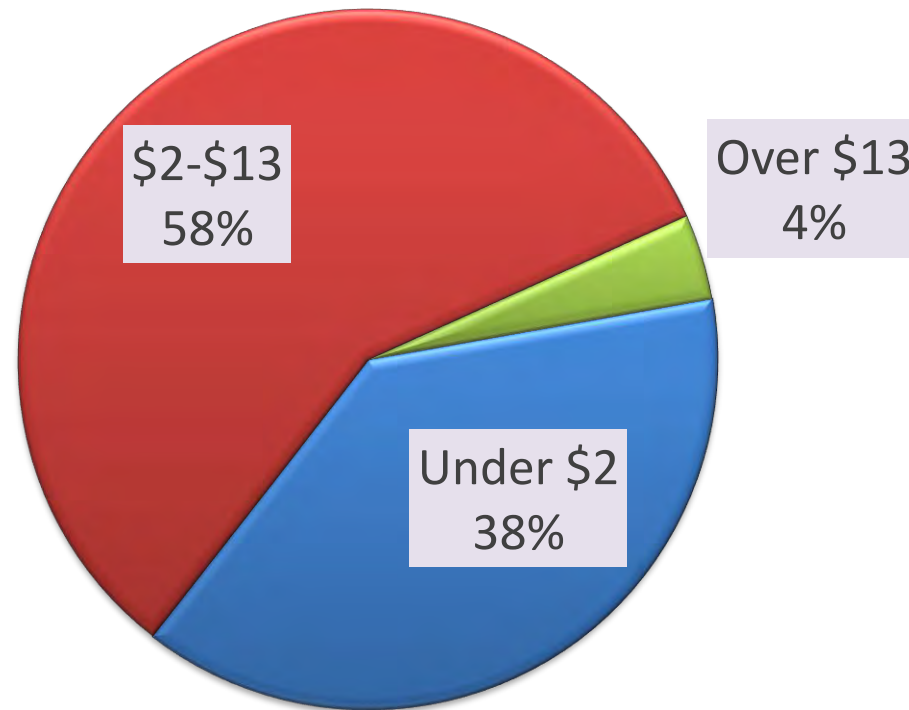
Distribution in the SADA Zone

Distribution of Households by AfDB Definition



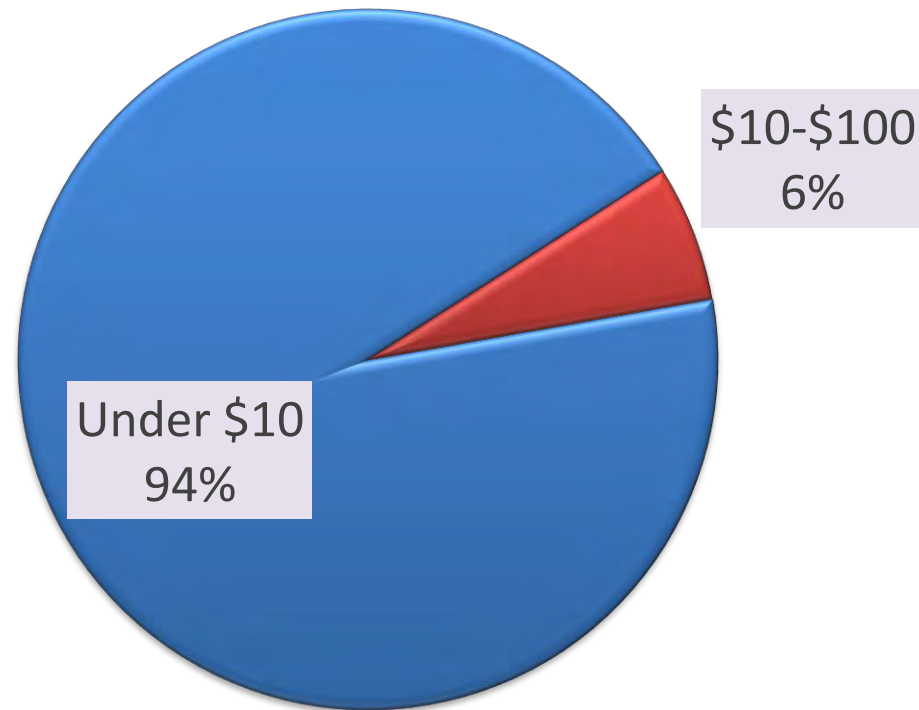
Distribution in the SADA Zone

Distribution of Households by World Bank's Definition



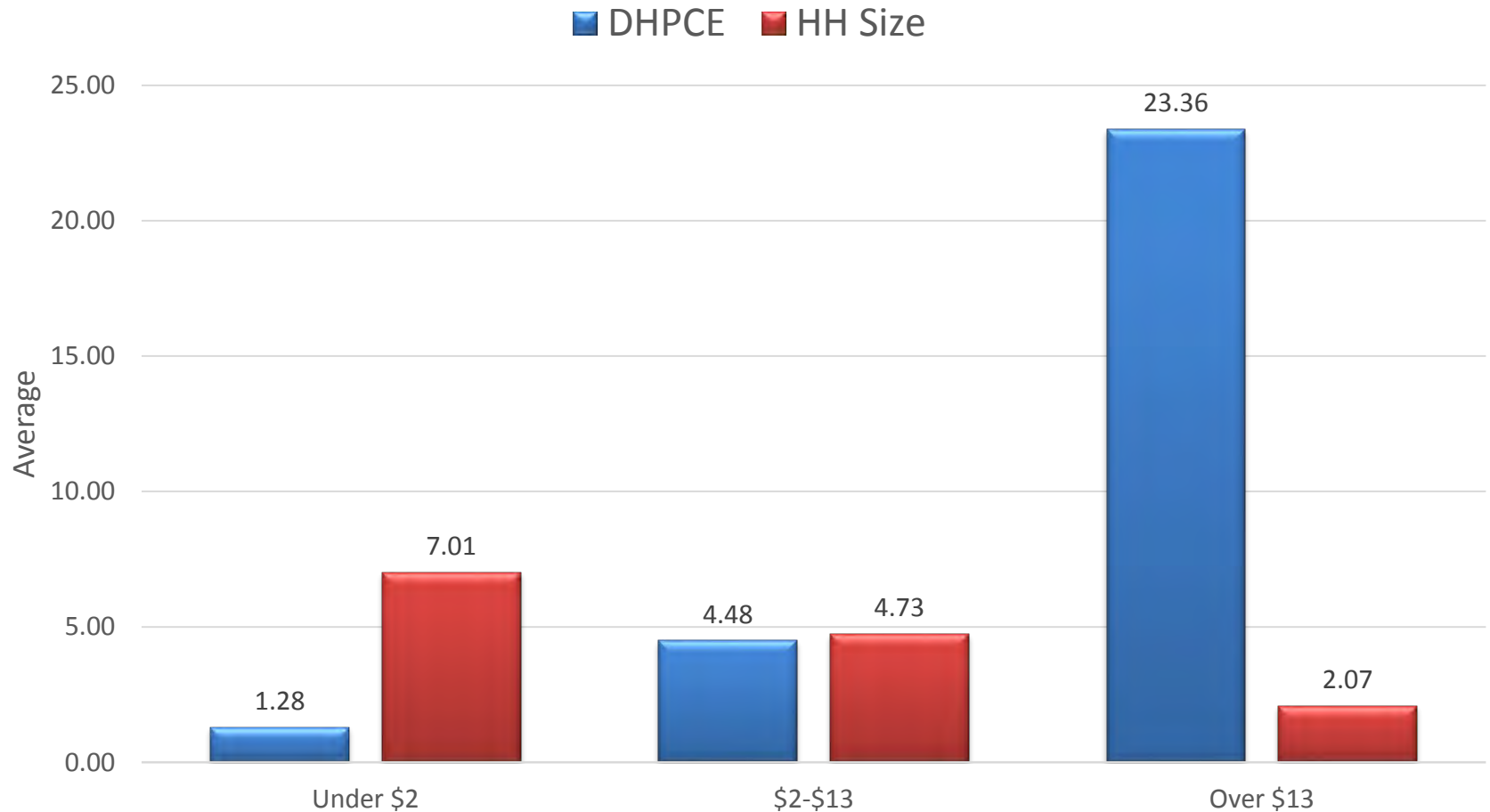
Distribution in the SADA Zone

Distribution of Households by Kharas' Definition



Summary Stats

(World Bank Definition)

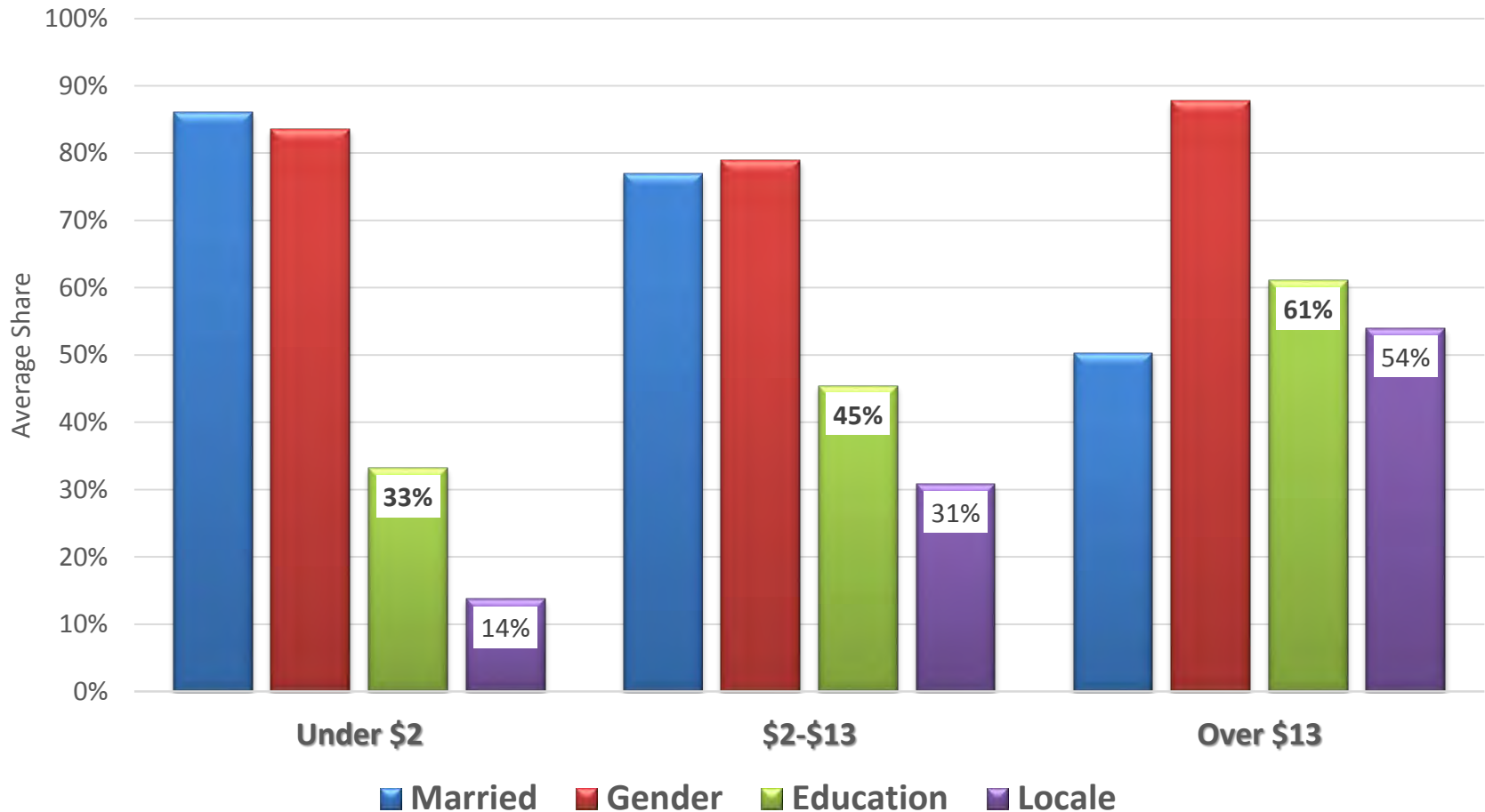


Summary Stats

U.S.
Average
= 2.55

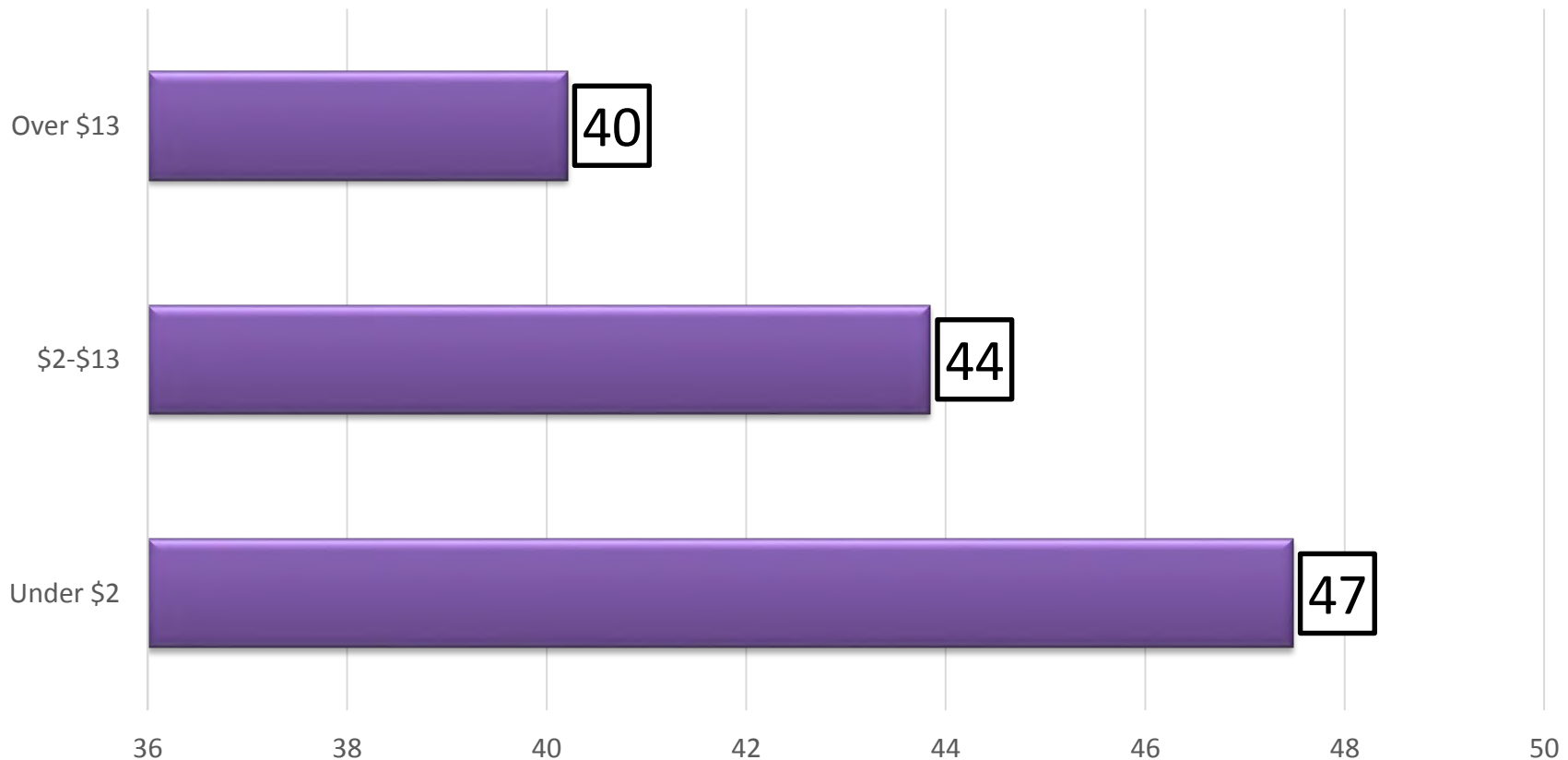
Average household size of Low Income Class (7.01) is 3.4X that of the High Income Class (2.07), and 2.3X that of the Middle Income Class (4.73)

Summary Statistics



Summary Statistics

Average Age



Results of Middle Class v. Low Class

N = 4324.00
 LR Chi-Sq (28) = 1591.30
 Prob > Chi-Sq = 0.00
 Pseudo-R-Sq = 0.23

| Middle Class | RRR | SE | z | P>z | Sig |
|-----------------|------|------|--------|------|-----|
| Household Size | 0.75 | 0.01 | -19.42 | 0.00 | *** |
| Age | 1.00 | 0.00 | 0.30 | 0.76 | |
| Married | 0.76 | 0.08 | -2.54 | 0.01 | *** |
| Male | 1.07 | 0.11 | 0.66 | 0.51 | |
| Some Education | 1.47 | 0.11 | 4.97 | 0.00 | *** |
| Urban | 1.81 | 0.18 | 5.86 | 0.00 | *** |
| Northern | 0.56 | 0.07 | -4.47 | 0.00 | *** |
| Upper East | 0.27 | 0.04 | -9.24 | 0.00 | *** |
| Upper West | 0.20 | 0.03 | -10.91 | 0.00 | *** |
| Own Ag Land | 0.62 | 0.08 | -3.85 | 0.00 | *** |
| Own Non-Ag Land | 1.75 | 0.19 | 5.15 | 0.00 | *** |
| Own Transport | 1.63 | 0.16 | 5.15 | 0.00 | *** |
| Own Cell | 2.16 | 0.18 | 9.50 | 0.00 | *** |
| Own House | 1.21 | 0.09 | 2.50 | 0.01 | *** |
| Intercept | 8.48 | 1.75 | 10.35 | 0.00 | |

Results of High Class v. Low Class

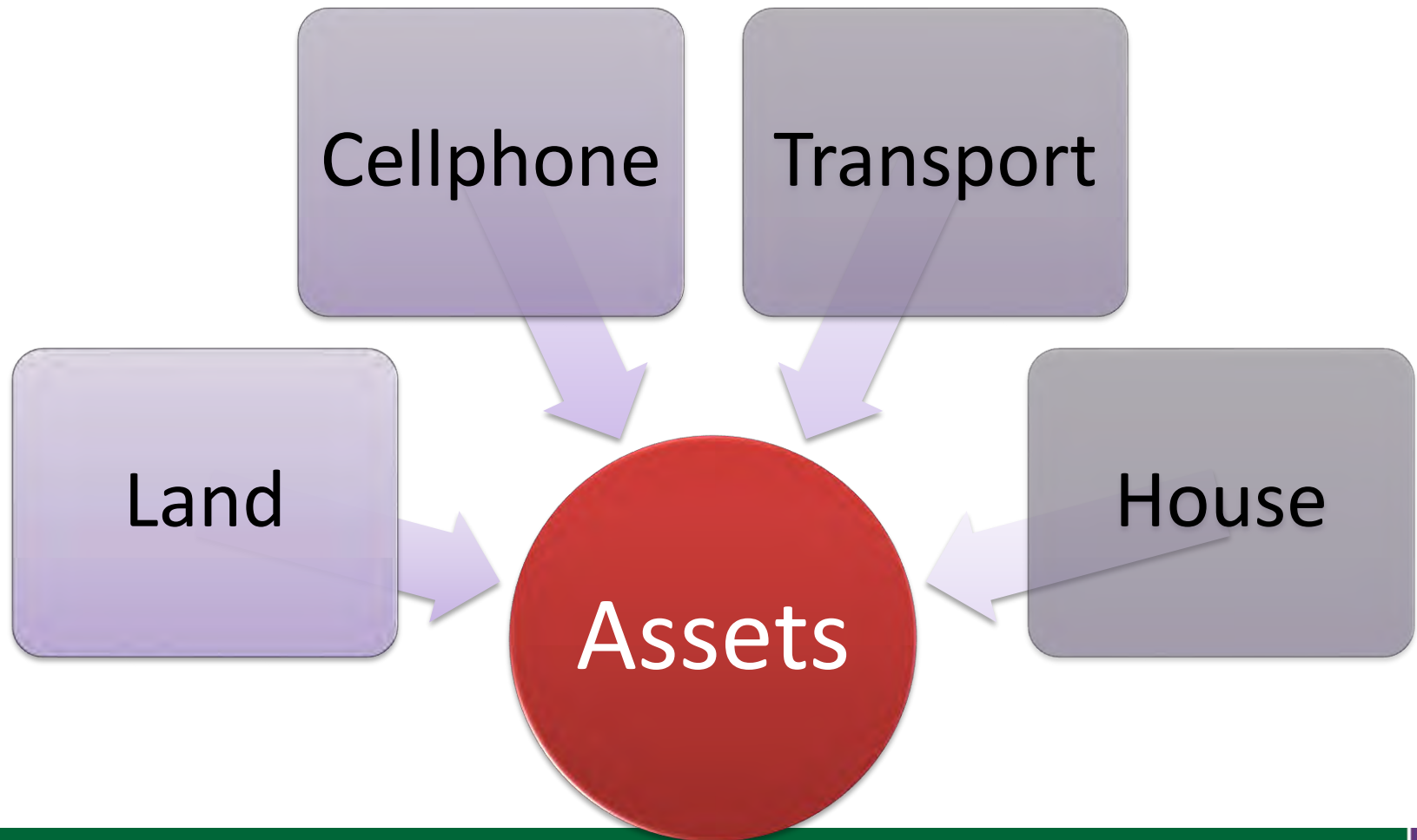
N = 4324.00
 LR Chi-Sq (28) = 1591.30
 Prob > Chi-Sq = 0.00
 Pseudo-R-Sq = 0.23

| | Middle Class | RRR | SE | z | P>z | Sig |
|---|-----------------|-------------|-------------|-------------|-------------|-----|
| | Household Size | 0.35 | 0.03 | -14.28 | 0.00 | *** |
| | Age | 1.01 | 0.01 | 1.03 | 0.31 | |
| | Married | 0.62 | 0.14 | -2.05 | 0.04 | *** |
| ● | Male | 2.51 | 0.71 | 3.26 | 0.00 | *** |
| ● | Some Education | 1.87 | 0.37 | 3.19 | 0.00 | *** |
| ● | Urban | 2.78 | 0.60 | 4.75 | 0.00 | *** |
| | Northern | 0.33 | 0.08 | -4.44 | 0.00 | *** |
| | Upper East | 0.15 | 0.05 | -5.98 | 0.00 | *** |
| | Upper West | 0.22 | 0.07 | -5.00 | 0.00 | *** |
| | Own Ag Land | 0.31 | 0.07 | -5.03 | 0.00 | *** |
| ● | Own Non-Ag Land | 4.18 | 0.96 | 6.19 | 0.00 | *** |
| ● | Own Transport | 2.97 | 0.70 | 4.61 | 0.00 | *** |
| ● | Own Cell | 4.44 | 1.11 | 5.95 | 0.00 | *** |
| ● | Own House | 1.86 | 0.39 | 2.97 | 0.00 | *** |
| | Intercept | 1.23 | 0.62 | 0.41 | 0.68 | |

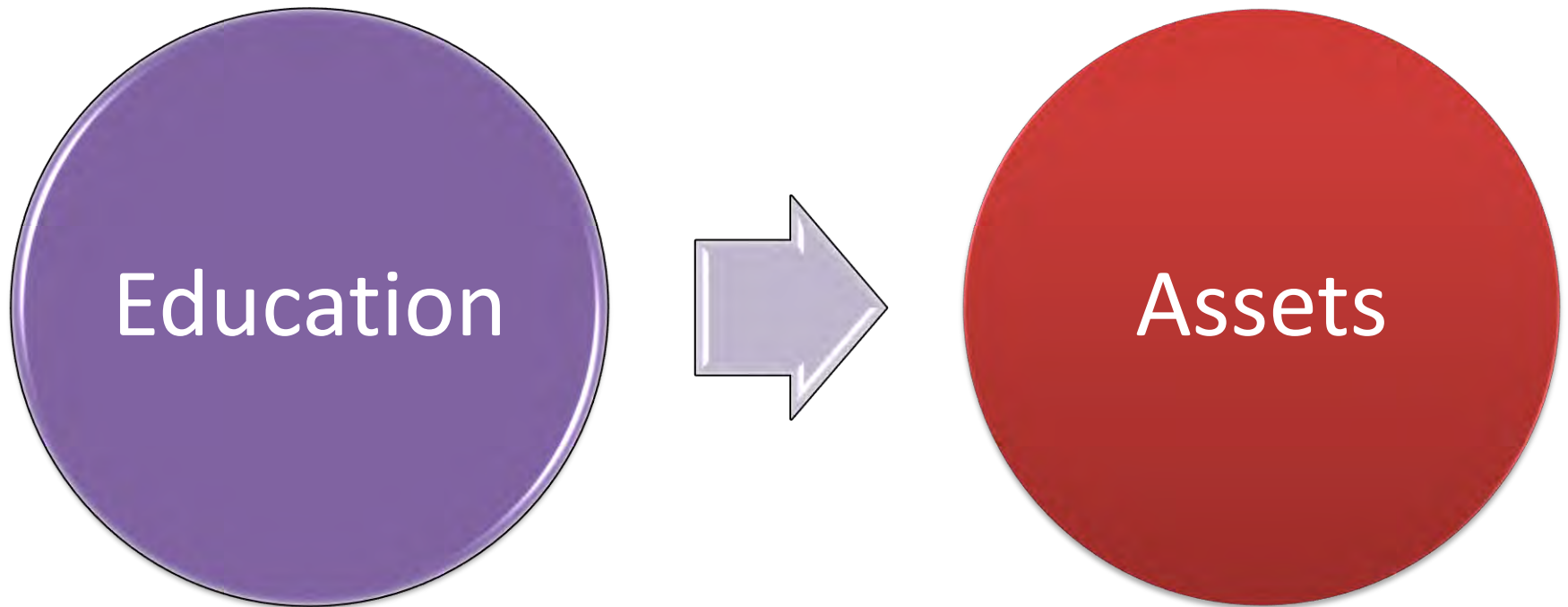
Policy Implications for Sustainable Development



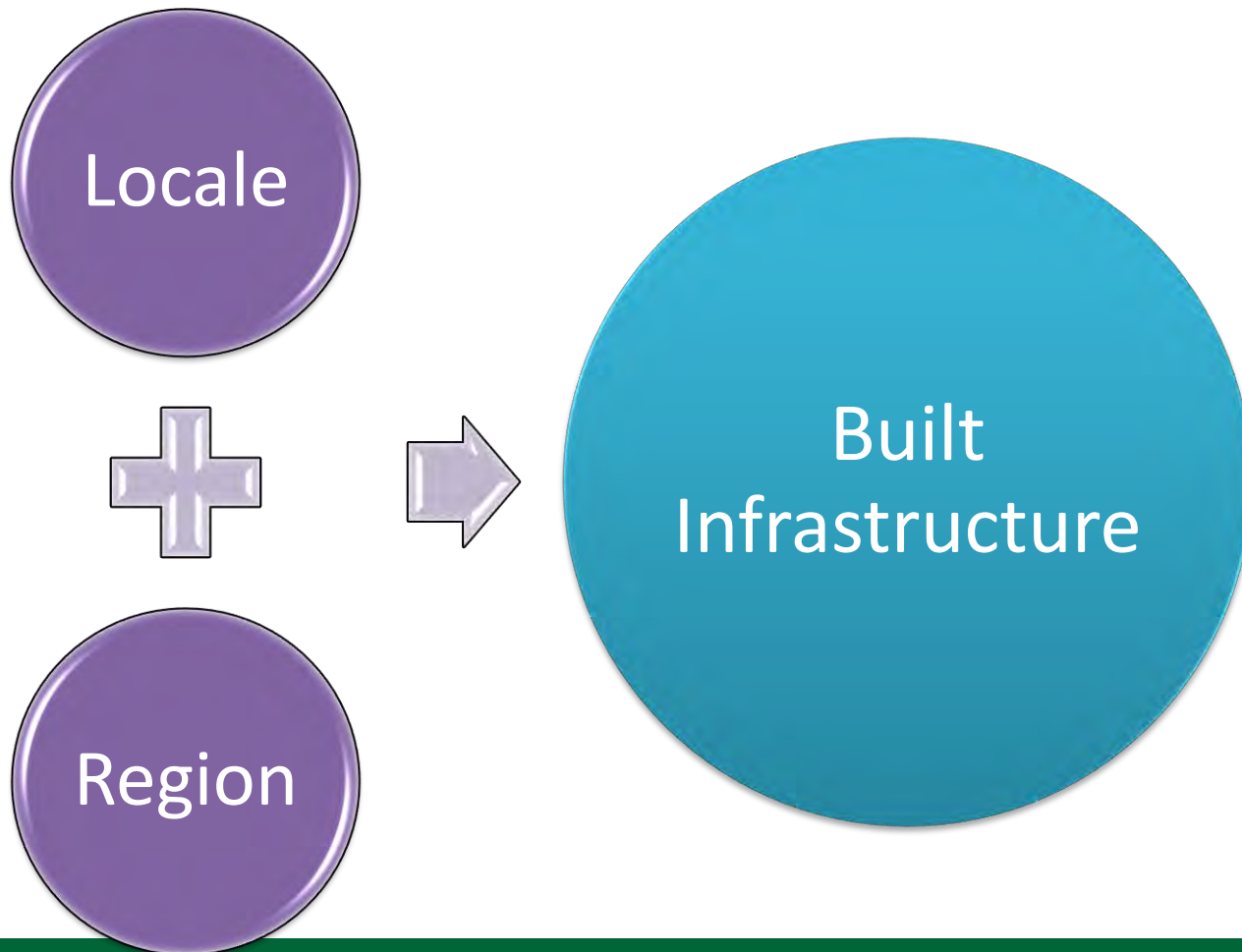
Implications for Action



Implications for Action



Implications for Action



Implications for Action

Depressed Accessibility to Built Infrastructure in Rural Areas



Rapid Urbanization



Increased Social Costs in Urban Areas

What Next?

- Knowledge, they say, is power
- Knowledge comes from information transformed into action
- Information comes from data organized into stories
- Stories come from the questions that keep us awake at night about what we care about (as individuals)



What Next?

- In the end, what is driving every policy decision I am privileged to make?
- How do I leave my signature on this space and these resources that I'm using?
- How do I become a better steward of our limited resources?
- And can I dance into the sunset when I'm done?



Thank You, Akpe, Ndase,
Nkpe, Taa Paya

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