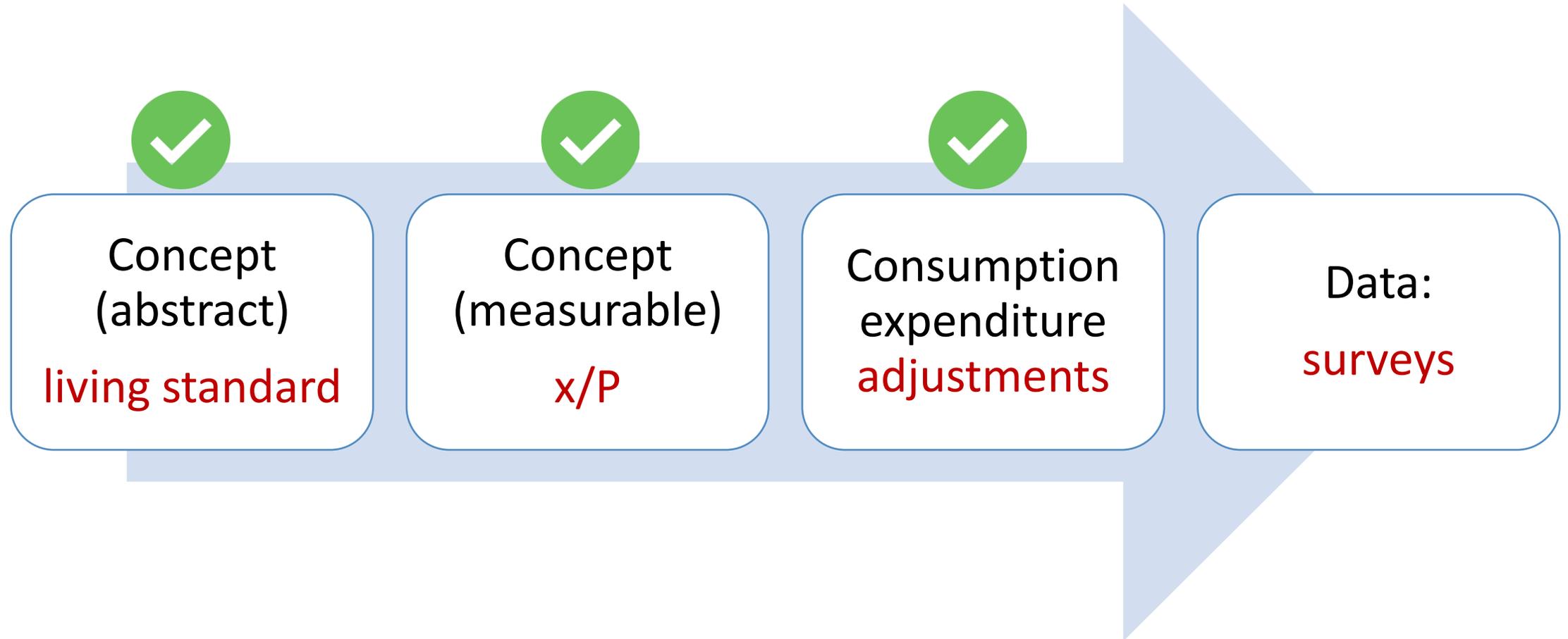


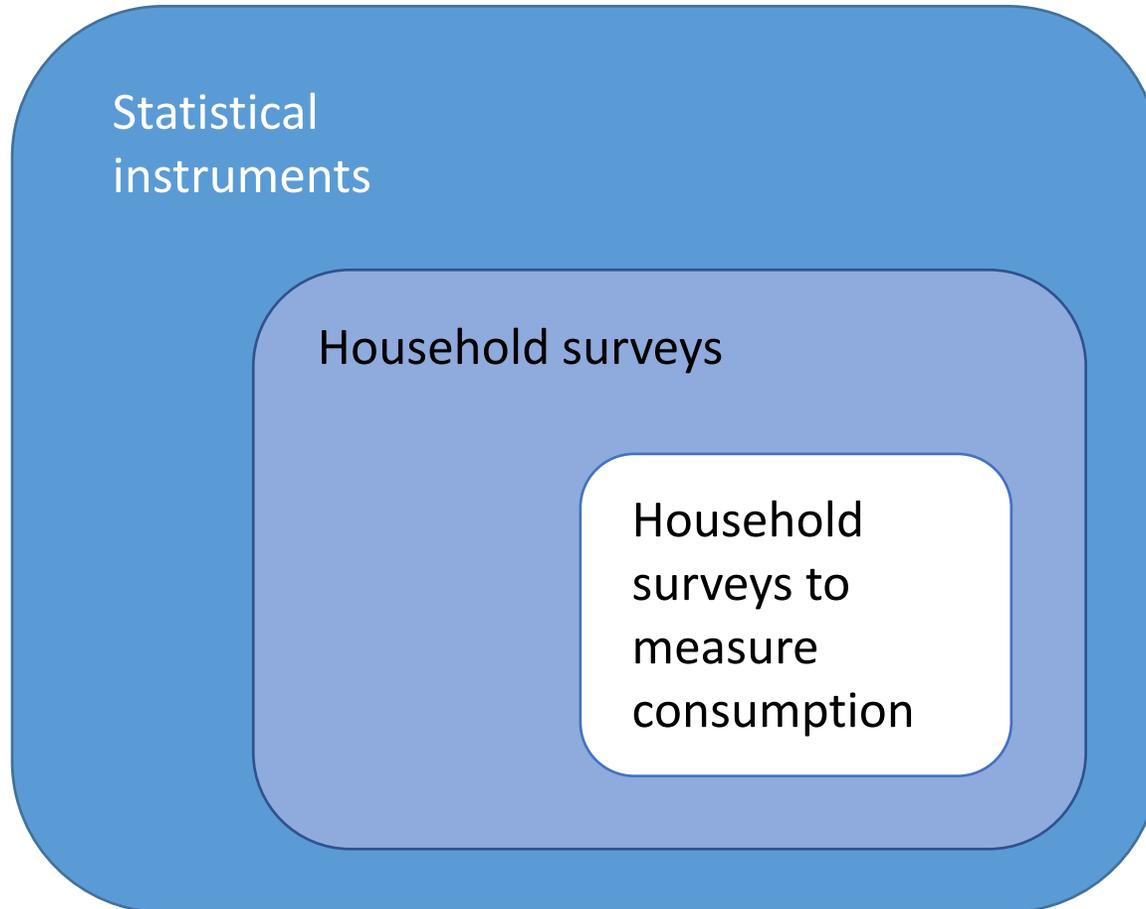
# Understanding Household Surveys

LECTURE 3

# Where we are



# Today's topics



- **Statistical instruments** that can be used to respond to an increasing demand for data;
- Main types of **household surveys** ran by statistical institutions;
- Our ultimate focus is on surveys that are typically used for measuring **consumption**.

# 1. An overview of statistical instruments

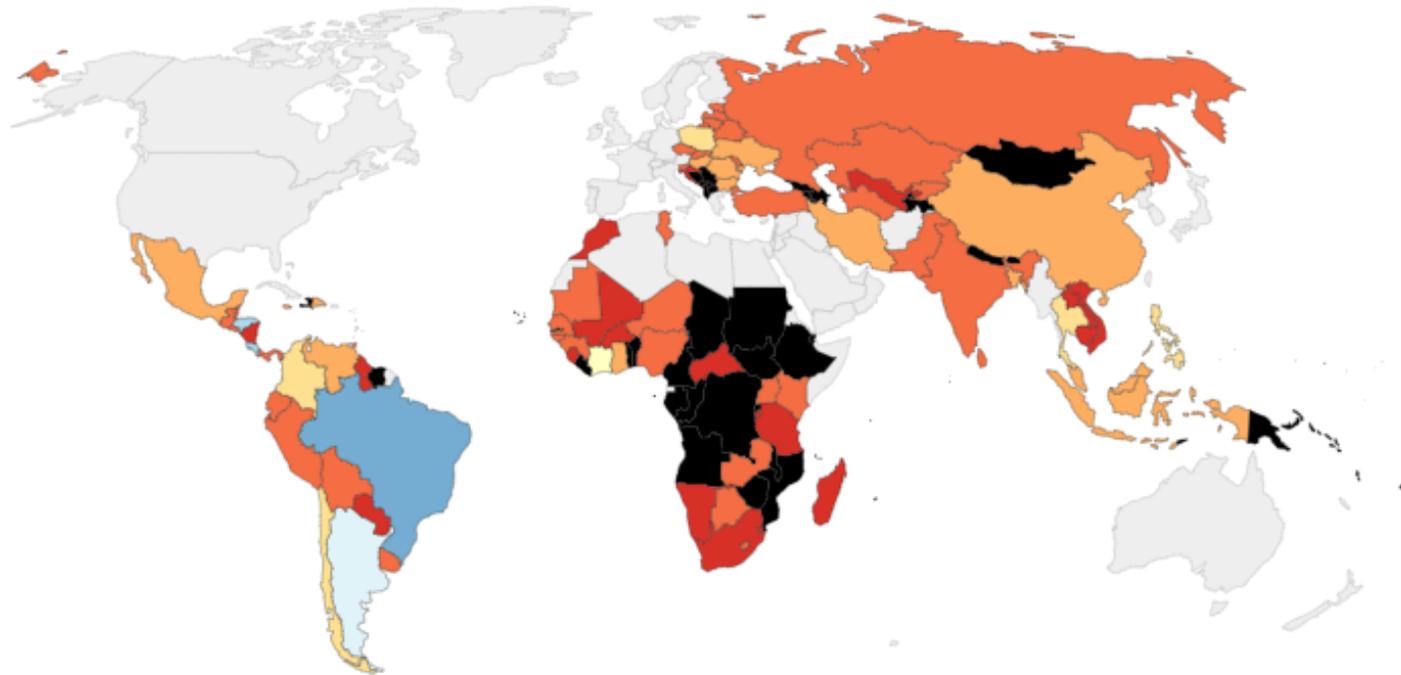
# Demand for data is increasing – 1984-1994

## Poverty-related surveys

Data deprivation: Number of poverty surveys per decade available via the World Bank, 1994

All values refer to the decade that ends at the shown year (e.g. 2013 refers to 2004 to 2013).

Our World  
in Data



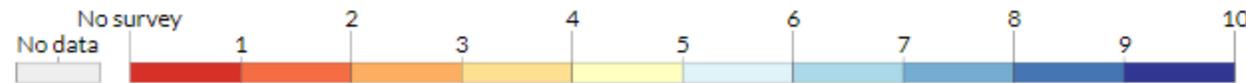
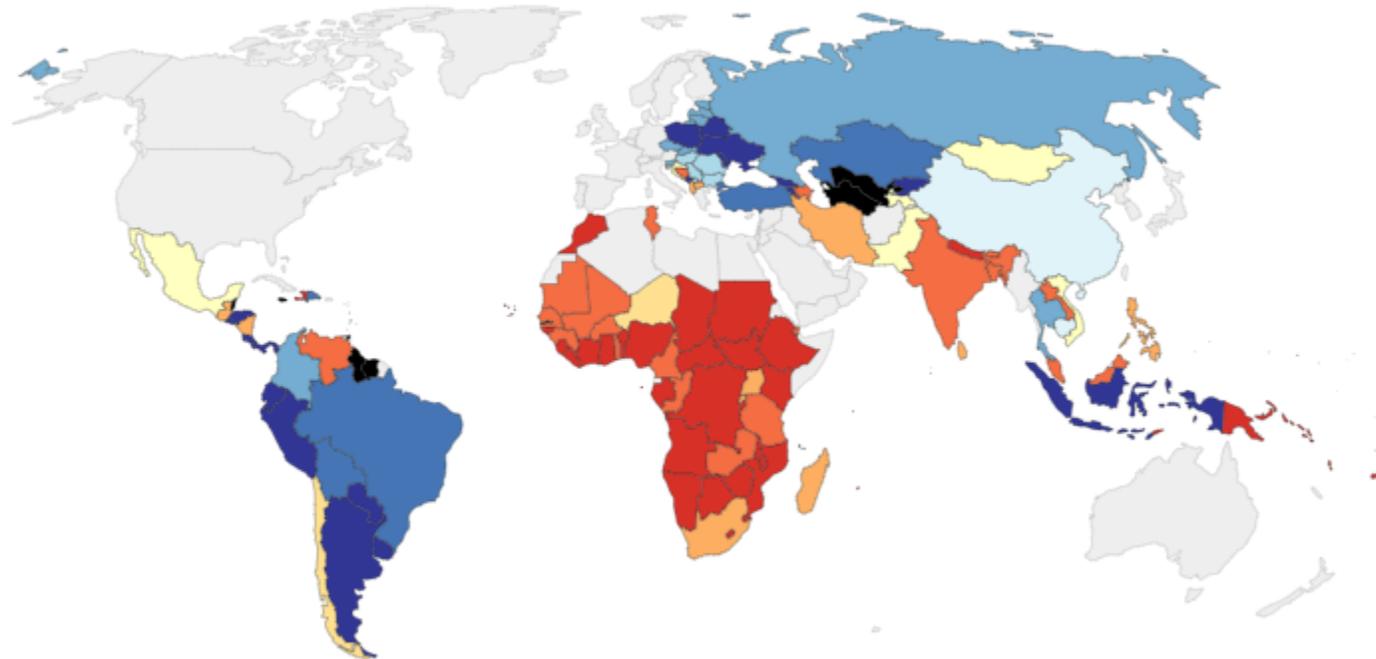
# Demand for data is increasing – 2004-2014

## Poverty-related surveys

Data deprivation: Number of poverty surveys per decade available via the World Bank, 2014

All values refer to the decade that ends at the shown year (e.g. 2013 refers to 2004 to 2013).

Our World  
in Data



Source: Number of survey observations in Povcal per decade - OWID (2017)

CC BY

# Demand for data is increasing

- **Perception vs. evidence**

Data is always in demand for policymakers, donors, academics, researchers, civil society, citizens, and anyone who wants evidence to support their ideas.

- **Evidence-based policy making**

Is the public sector delivering good services? Are they properly targeted? Are government policies, donor-funded development plans reducing poverty?

- **Monitoring social indicators**

Sustainable Development Goals (SDGs) comprise more than 200 indicators: need for understanding progress (or lack of thereof) in each indicator

# Collecting data

There is a wide range of statistical instruments:

- **Case studies**  
Detailed, up-close and in-depth study of a particular person, group or situation
- **Qualitative/participatory assessments**  
Subjective methods of data collection through interviews, focus groups and community meetings
- **Administrative data**  
routinely collected through government processes, such as school attendance records, birth registries, tax information, etc.
- **Censuses**
  - **Household surveys**

# A useful classification

- How to make sense of the multitude of data collection efforts that are in use?
- A convenient starting point is to consider two criteria:
  1. Representativeness
  2. Objectivity

# Representativeness

- By representativeness we mean the degree to which one can extrapolate to the **full population** or universe of interest.
- Two extremes:
  - **Case study**: cannot extrapolate beyond the group actually interviewed
  - **Census**: includes everyone in the population



Low representativeness

High representativeness

# Objectivity

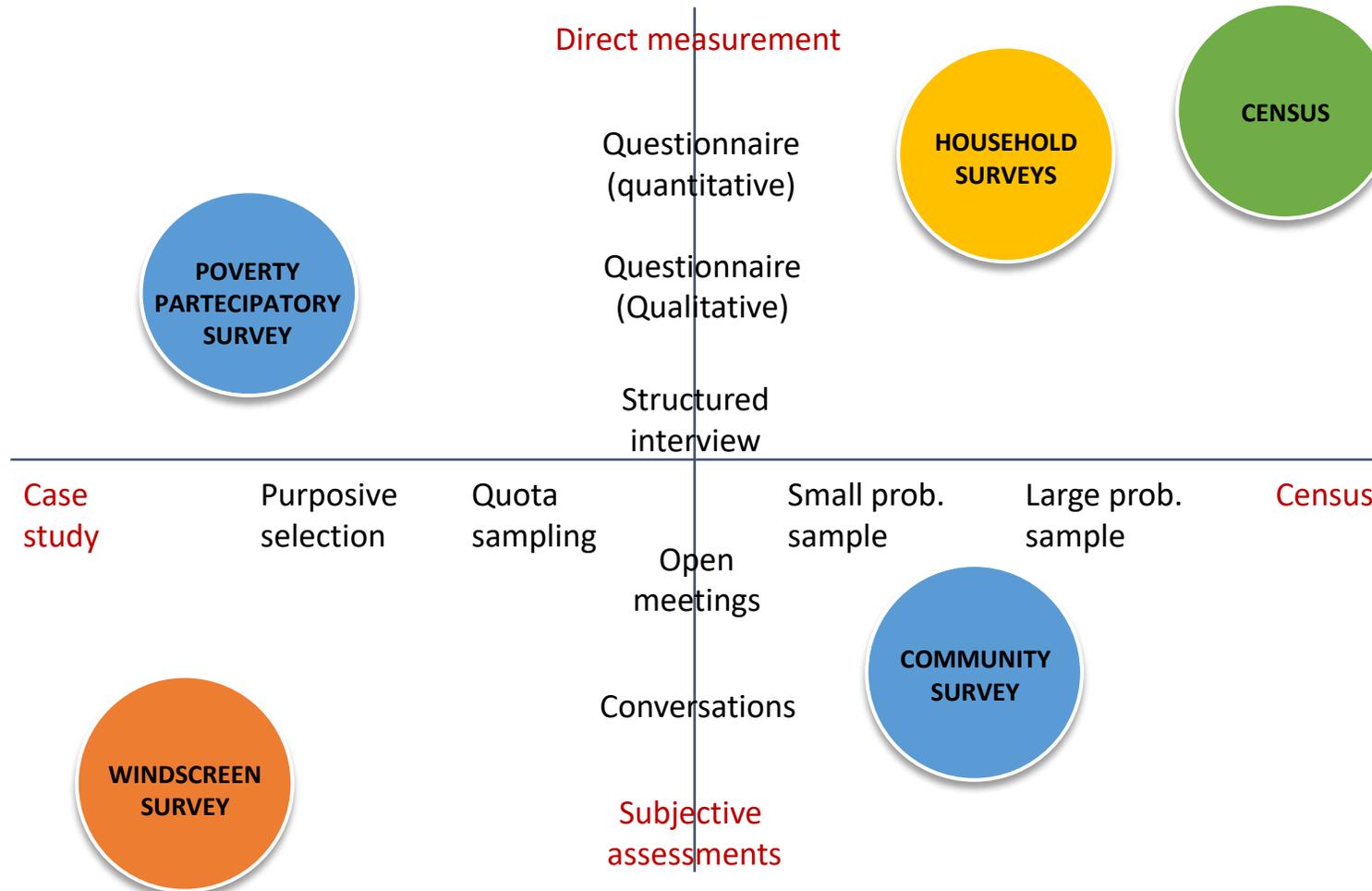
- The degree to which measures are based on **facts**, as opposed to personal **beliefs** or **feelings**
- Two extremes:
  - Subjective assessments: e.g., interviewer assesses the quality of housing
  - Objective assessments: e.g., direct measurement of anthropometrics, data from electricity or water bills



Low objectivity

High objectivity

# A taxonomy of statistical instruments



# Restricting the focus

- **Household surveys** are in upper-right corner, that is, they score well in terms of both **representativeness** and **objectivity**
- Once agreed on this, we can narrow them down further, based on which types of surveys are **relevant** for our purposes

## 2. An overview of household surveys

# Historical background

- Modern household surveys begin after World War II (1940s)
- If interested, read Stigler (1954), Deaton (1997: ch 1), Chianese and Vecchi (2017), A'Hearn et al. (2016), ...
- Also check the Historical Household Budget (HHB) Project website: <http://www.hhbproject.com>

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Number 2

THE EARLY HISTORY OF EMPIRICAL STUDIES  
OF CONSUMER BEHAVIOR

GEORGE J. STIGLER  
Columbia University

UNTIL recent times economists have studied consumer behavior chiefly through the theory of utility-maximizing individuals. The alternative approach—the establishment of generalizations on the basis of observed behavior—was also initiated and developed in its early stages chiefly by economists, but not by any economists prominent in the traditional history of our science.

My purpose in examining the early empirical work on consumer behavior is not to appraise the relative fruitfulness of the two approaches. Their scientific roles are, of course, complementary, and the utility theorists as a class have always expressed the greatest enthusiasm for empirical work compatible with abstinence from it. Rather, my purpose is to examine the relationship of the empirical work to the theoretical work. The quantitative analysis of the effects of income on consumer behavior developed fully seventy years before income became an important variable in the formal theory, while the formal theory of demand was developed forty years before empirical work on demand curves began

in earnest. These sequences and lags pose the central problem of this paper.

I. INCOME THEORY

The differences in consumption of poor and rich families excited attention and often compassion, but apparently never quantitative analysis, for many centuries. Finally, in England in the 1790's, two very different investigators made extensive compilations of workmen's budgets. Both were stimulated to this task by the distress of the working classes at this time.<sup>1</sup>

One investigator was David Davies, a clergyman about whom little is known. He collected budgets first in his own parish and then through correspondents elsewhere, until he amassed 127 budgets, which he reported in detail but did not summarize.<sup>2</sup> His results are presumably not characteristic of agricultural laborers

<sup>1</sup> Thus Eden says he was led to his splendid study by "the difficulties, which the labouring classes experienced, from the high price of grain, and of provisions in general, as well as of clothing and fuel, during the years 1794 and 1795" (*The State of the Poor* [London, 1797], I, i).

<sup>2</sup> *The Case of Labourers in Husbandry* (Bath, 1795).

# Modern household surveys

- **Household** surveys provide a large number of variables on a **probabilistic sample** of the population
- This prompts two questions:
  - Q1. What is a **household**, exactly?
  - Q2. And what is a **probabilistic sample**, exactly?

# Household

a definition

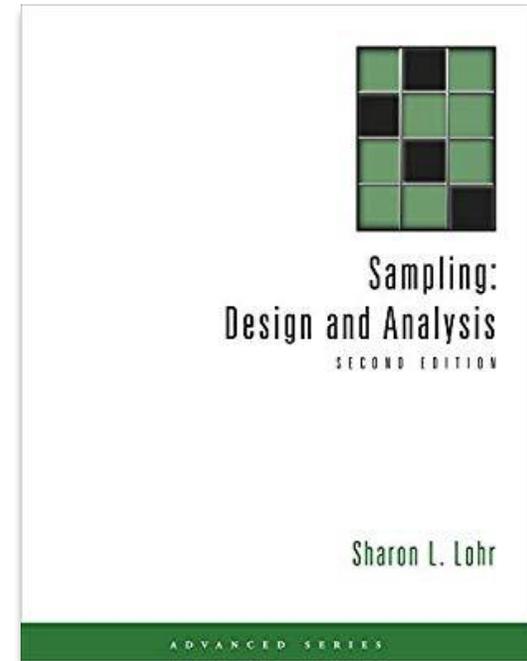
- According to Eurostat, a **household** is constituted by a person or people living together in the same dwelling who share meals or joint provision of living conditions.
- ‘Household’ is a broader classification than ‘**family**’, since family refers only to a group of people related by blood or marriage such as parents and their children only.
- Can you trace the **official** definition of ‘household’ for the survey of any country of interest? **You can use google.**

# Probabilistic sample

a definition

“In a probability sample, each unit in the population has a **known probability of selection**, and a randomization mechanism is used to choose the specific units to be included in the sample.

If a probability sampling design is implemented well, an investigator can use a relatively **small sample** to make inferences about an arbitrarily **large population**.”



# Heterogeneity in household surveys

- When we say **household surveys**, we may refer to a variety of things.
- Surveys are very different, because they aim at answering different questions.

# Household Surveys

## Common surveys

Labor Force Surveys  
(**LFS**)

Demographic and  
Health Surveys (**DHS**)

Multiple Indicator  
Cluster Surveys (**MICS**)

## Household Consumption and Expenditure Surveys (HCES)

### “Quick Survey”

Monitoring of various socio economic  
indicators

### “Large survey”

Comprehensive income & consumption  
info

Priority Surveys (**PS**)

Core Welfare Indicator  
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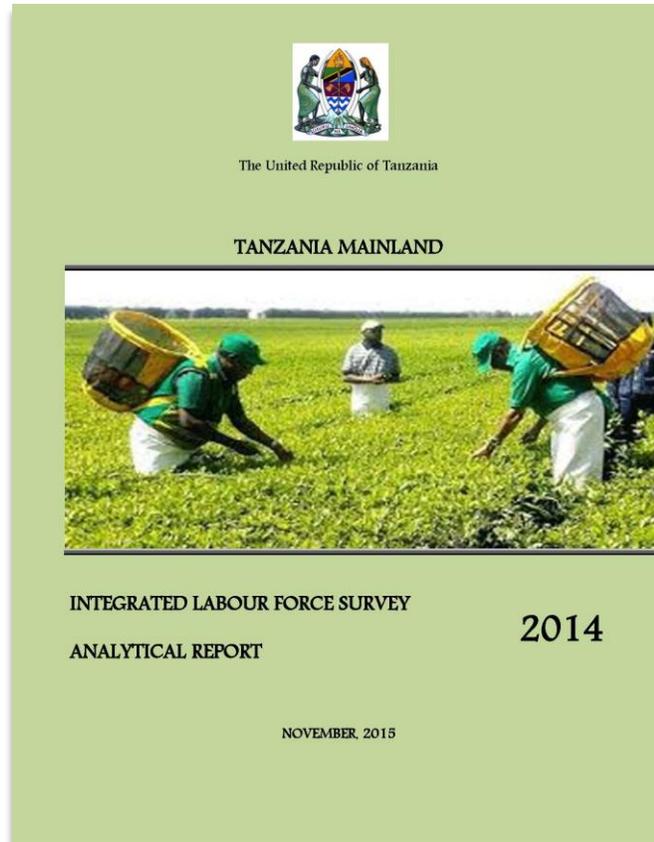
Integrated Household Surveys (**IHS**)

# Labor Force Survey (LFS)

- Purpose  
measure and monitor indicators of a country's **labor market** and economic situation
- Topics include those related to labor: employment, unemployment, earnings, hours of work occupation, industry, and class of worker, ...
- Supported by ILO, Ministry of Labor  
[http://www.ilo.org/dyn/lfsurvey/lfsurvey.list?p\\_lang=en](http://www.ilo.org/dyn/lfsurvey/lfsurvey.list?p_lang=en)

# Labor Force Survey (LFS)

Tanzania Integrated Labour Force Survey 2014



- First launched in 1965
- Modules: general labour, informal sector, working children and time use
- Sample size: 11,520 households, 47,199 individuals

# Labor Force Survey (LFS)

Unemployment rate

**Table 7.2: Unemployment Rates of Persons Aged 15 Years or Above Based on Different Definitions of Unemployment by Category and Area, Tanzania Mainland, 2006 and 2014**

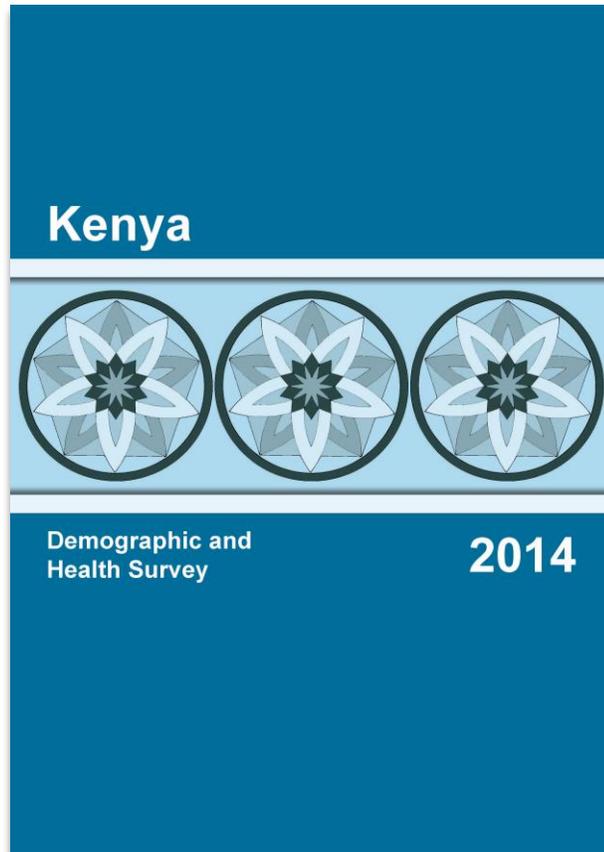
Category	Dar es salaam		Other Urban		Total Urban		Rural		Total	
	2006	2014	2006	2014	2006	2014	2006	2014	2006	2014
<b>A: Looking for work (Strict international definition)</b>	16.8	10.3	3.6	2.1	8.9	4.6	0.8	0.6	3.0	2.1

# Demographic and Health Surveys (DHS)

- Purpose: collect data on **demography** and **health** (primarily maternal and infant health)
- Started in 1984, more than 300 DHS surveys in 90+ countries
- Topics usually covered include: child health, education, family planning, fertility and fertility preferences, HIV/AIDS knowledge, attitudes and behavior, infant and child mortality, maternal health, nutrition, welfare measure based on asset ownership
- Supported by USAID, now through ICF International  
<https://dhsprogram.com/>

# The Demographic and Health Survey (DHS) in Kenya

Kenya DHS 2014



- First launched in 1989
- 3 main questionnaires: household, women aged 15-49, men aged 15-54
- Sample size: 40,300 households

# Demographic and Health Surveys (DHS)

## nutritional status of women

**Table 11.10 Nutritional status of women**

Among women age 15-49, the percentage with height under 145 cm, mean Body Mass Index (BMI), and the percentage with specific BMI levels, by background characteristics, Kenya 2014

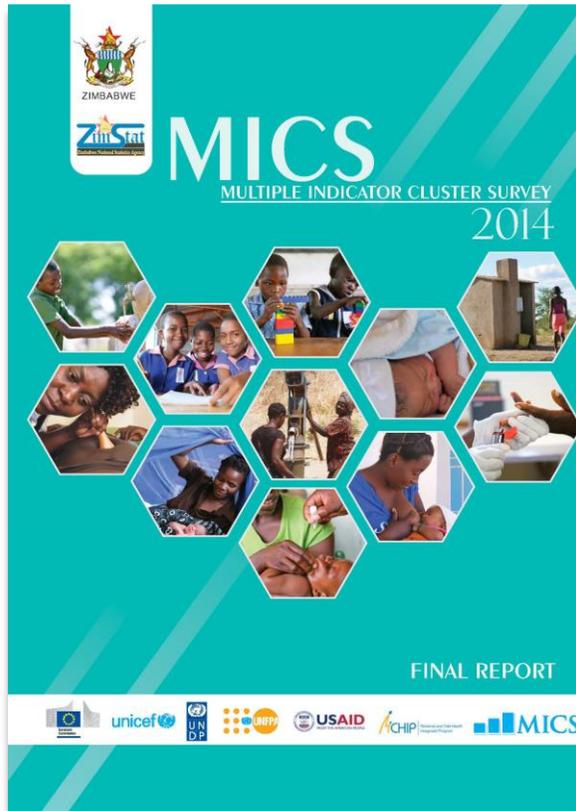
Background characteristic	Height		Mean Body Mass Index (BMI)	Body Mass Index <sup>1</sup>							Number of women
	Percentage below 145 cm	Number of women		18.5-24.9 (Total normal)	<18.5 (Total thin)	17.0-18.4 (Mildly thin)	<17 (Moderately and severely thin)	≥25.0 (Total overweight or obese)	25.0-29.9 (Overweight)	≥30.0 (Obese)	
<b>Wealth quintile</b>											
Lowest	1.8	2,198	21.1	66.4	21.5	14.4	7.2	12.1	10.2	1.8	1,934
Second	1.5	2,546	22.5	67.8	11.2	8.1	3.1	21.0	16.3	4.8	2,353
Middle	0.5	2,819	23.3	65.0	7.6	5.9	1.7	27.4	21.0	6.4	2,613
Fourth	0.5	3,048	24.6	53.6	5.3	3.9	1.4	41.1	28.6	12.5	2,829
Highest	0.3	3,655	25.6	45.9	4.2	3.2	0.9	50.0	30.7	19.3	3,415
<b>Total</b>	<b>0.8</b>	<b>14,265</b>	<b>23.7</b>	<b>58.3</b>	<b>8.9</b>	<b>6.4</b>	<b>2.5</b>	<b>32.8</b>	<b>22.7</b>	<b>10.1</b>	<b>13,143</b>

# Multiple Indicator Cluster Surveys (MICS)

- Purpose  
monitor progress on the 1990 World Summit for Children Goals, assessing the situation of children and women around the world
- Six waves so far, MICS VI started in 2016, also to collect info for SDGs
- MICS covers topics related to the assessment of women and children's well-being such as health, education, child protection, or water and sanitation.
- Supported by UNICEF <http://mics.unicef.org/>

# The Multiple Indicator Cluster Survey (MICS) in Zimbabwe

Zimbabwe MICS 2014

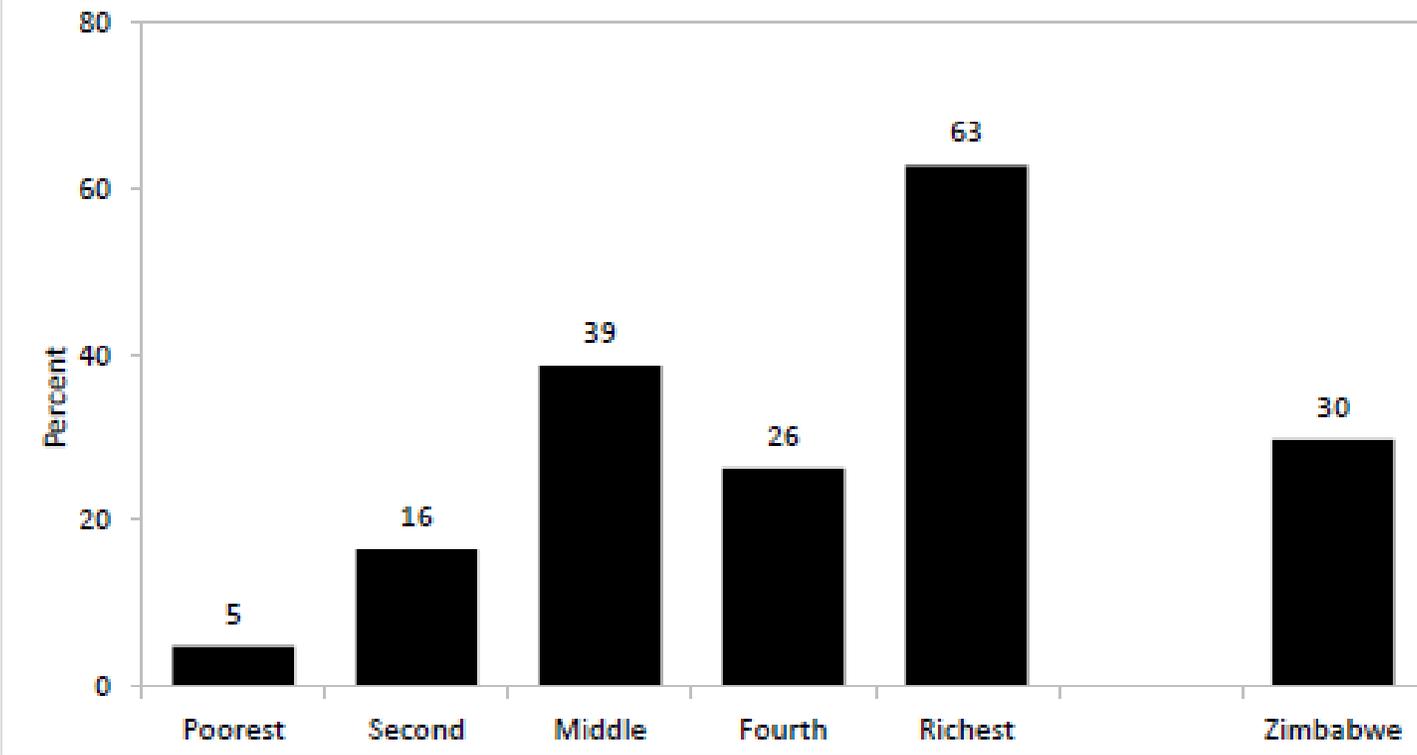


- First launched in 2009
- Four questionnaires: household, women aged 15-49 years, men aged 15-54 years, children 0-5 years
- Sample size: 17,047 households.

# Multiple Indicator Cluster Surveys (MICS)

use of improved sanitation

**Figure WS.3: Use of improved drinking water sources and improved sanitation facilities by household members,**



# Household Surveys

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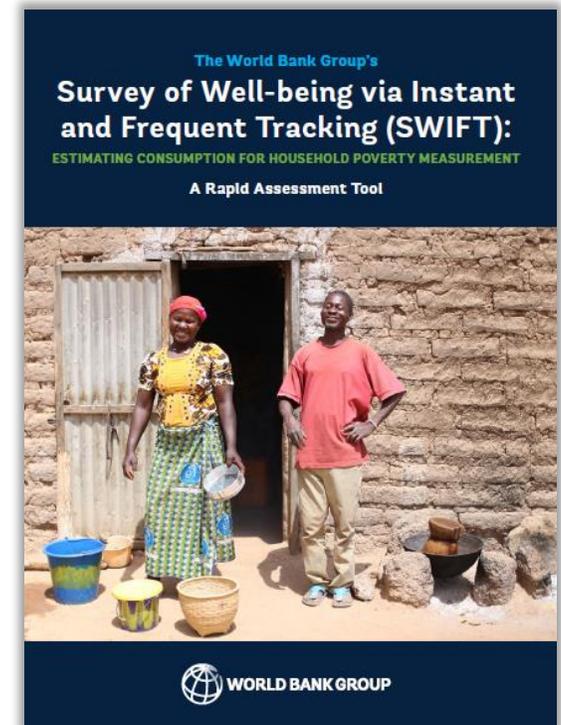
Household Income and Expenditure  
Surveys (**HIES**)

Living Standards Measurement  
Studies (**LSMS**)

Integrated Household Surveys (**IHS**)

# “Large” and “Quick” Surveys

- Different surveys for different aims
- **Quick** surveys usually enable regular computation of welfare estimates contingent upon the existence of an underlying comprehensive **large** survey
- The administration of Quick and Large surveys can be combined for better coordination and value addition
  - “**SWIFT** estimations are only as good as the underlying models which **require access to recent large scale data sets** collected by governments and multilateral agencies.” (p. 3)



# Household Surveys

## Common survey forms

Labor Force Surveys (**LFS**)  
Demographic and Health Surveys (**DHS**)  
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### “Large survey”

Comprehensive income & consumption info

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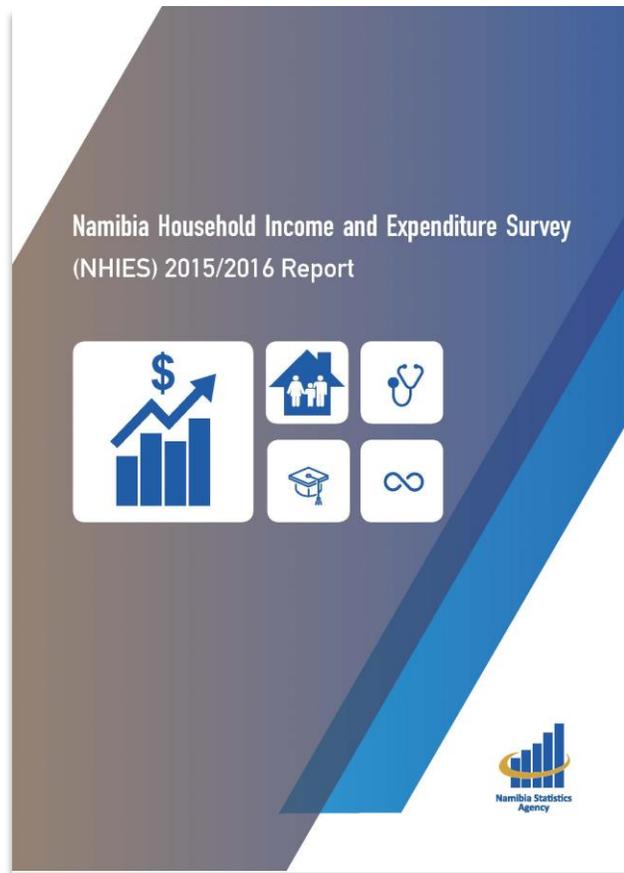
Integrated Household Surveys (**IHS**)

# Household Budget Surveys (HBS)

- Purpose  
collect information on household **income** and/or **expenditure**
- Besides income and expenditure, topics can include: basic demographic information, education levels, employment/labor. In some countries, several additional modules added
- Supported by Central Bank, IMF, NSOs

# The Household Budget Survey (HBS) in Namibia

Namibia HIES 2015/16



- First conducted in 1993
- Sample size = 10,368 households
- Questionnaires: household, Daily Record Book

# Household Budget Surveys (HBS)

Some key results

**Table 11.2.3 Incidence, depth and severity of poverty by category of poor persons, 2015/2016**

	Incidence (P0)	Depth (P1)	Severity (P2)
Poor	17.4%	6.0%	2.9
Severely poor	10.7%	3.4%	1.5

# Living Standards Measurement Study (LSMS)

- While reading through the first [World Development Report](#), President McNamara was stunned to discover that only a handful of countries were collecting any data for the reporting of poverty figures
- He initiated an effort that among other things resulted in the creation of the [LSMS](#).



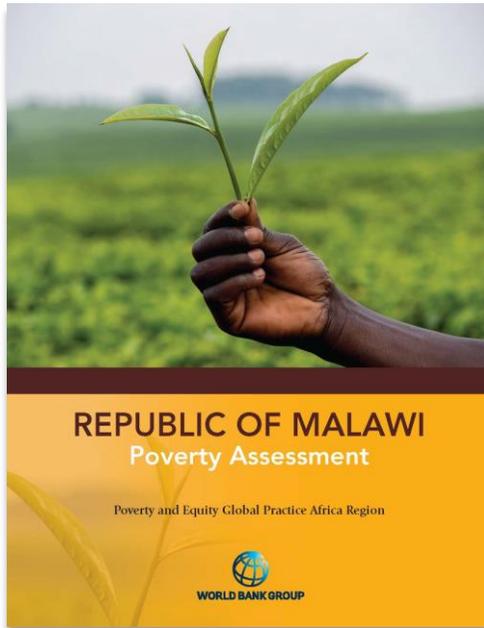
Robert McNamara (1916-2009)  
5<sup>th</sup> World Bank President (1968-1981)

# Living Standards Measurement Study (LSMS)

- Purpose  
measure poverty plus study household behavior, determinants of outcomes, and linkages among assets/household characteristics/livelihood sources/government interventions/welfare
- Unit of analysis is the household, as both a consuming and producing unit
- One survey collecting data on a range of topics is a more powerful tool for policy formulation than a series of single purpose surveys: the sum is greater than its parts!
- Supported by World Bank, IADB, some UN and bilateral agencies, NSOs  
<http://www.worldbank.org/lsms>

# The Living Standards Measurement Study (LSMS) in Malawi

Malawi Poverty Assessment 2017



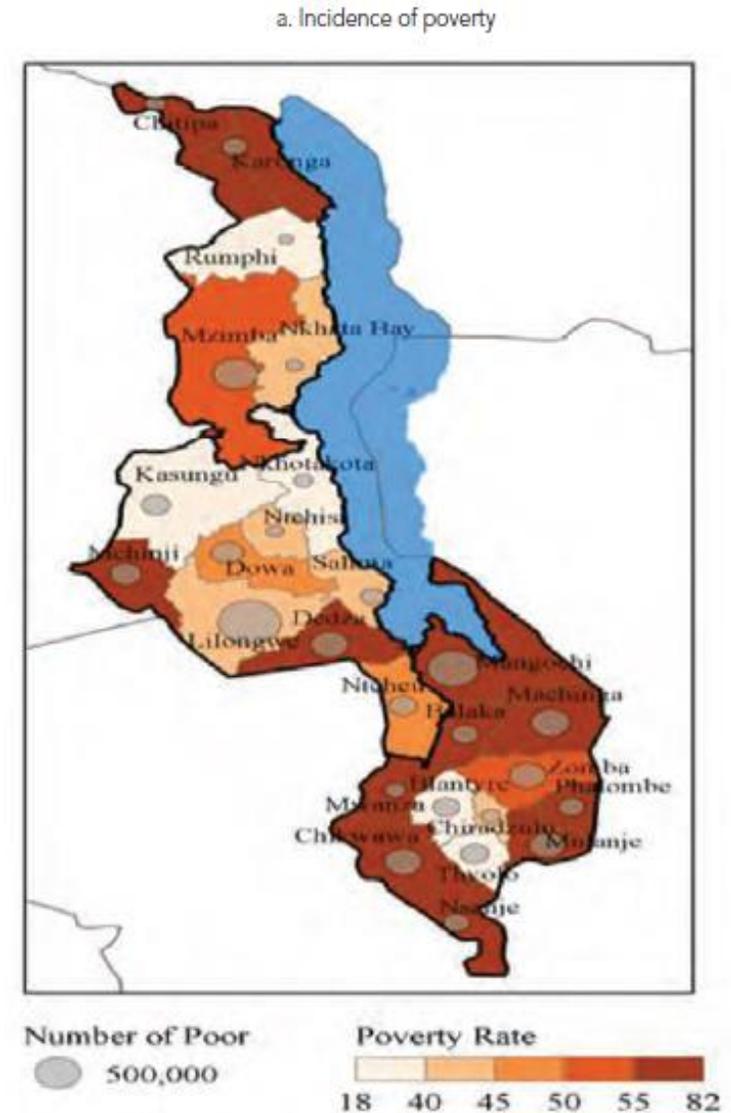
- Based on Integrated Household Survey 1997-2011
- Third wave
- Sampling size: 12,271 households
- 4 types of questionnaires: Household , Agricultural, Fisheries and Community.

# Living Standards Measurement Study (LSMS)

Some key results

MAP 1.1: Poverty and Ultra-Poverty in Malawi by District, 2010

- Light brown: less poverty
- Dark brown: more poverty



# HBS vs LSMS

- Both are **multi-topic, integrated, complex** and **nationally representative** surveys
- Note that country-specific surveys names do not always mention 'HBS' or 'LSMS' explicitly (but these categories still apply)
- HBS/HIES: Originally designed to provide input into the **CPIs** and **National Accounts** (improve macro economic statistics)
- LSMS/IHS: Designed primarily for detailed welfare and **poverty measurement** and monitoring (improve development statistics)
- LSMS has typically a smaller sample size w.r.t. HBS to minimize non-sampling error
- The period of data collection/fieldwork is (usually) around 12 months for both in order to account for seasonality



## Lessons learned

- Multitude of different **survey surveys**. Why?
- Different questions require different surveys: their **design** varies, as does their **implementation**.
- This course focuses on survey data needed for inequality and poverty measurement.
- Which data are needed, exactly?
- In lectures 1 and 2 we saw that analysts want to measure the standard of living of the population, more precisely the consumption expenditure  $x/P$ .
- Analysts need **household budget data** (e.g. HBS, and LSMS type of surveys)

# References

## Required readings

Grosh, M., & Glewwe, P. (1998). Data Watch: The World Bank's Living Standards Measurement Study Household Surveys. *The Journal of Economic Perspectives*, 12(1), 187-196.

## Suggested readings

A'Hearn, B., Amendola, N., & Vecchi, G. (2016). On historical household budgets. *Rivista di storia economica*, 32(2), 137-176.

Alkire, S. (2013). Towards frequent and accurate poverty data.

Alkire, S., & Samman, E. (2014). Mobilising the household data required to progress toward the SDGs.

Deaton, A. (1997). The analysis of household surveys: a microeconomic approach to development policy. The World Bank. Chapter 1, 1.3 (p 32-40)

Lohr, S. L. (2009). Sampling: design and analysis. Nelson Education. Chapter 2: Simple Probability Samples

Pape, U., & Mistiaen, J. (2015). Measuring household consumption and poverty in 60 minutes: The Mogadishu high frequency survey. World Bank.

Stigler, G. J. (1954). The early history of empirical studies of consumer behavior. *Journal of Political Economy*, 62(2), 95-113.

Thank you for your attention

# Homework

# Exercise 1 - Engaging with the literature

- Read the following papers:
  - Alkire, S. (2013). Towards frequent and accurate poverty data.
  - Alkire, S., & Samman, E. (2014). Mobilising the household data required to progress toward the SDGs.
- Write a short essay (not to exceed 3000 characters) where you summarize their main findings.

## Exercise 2 – What is a household?

- Go to: <http://iresearch.worldbank.org/lsms/lsmssurveyFinder.htm>
- Choose a survey of your choice and individuate the definition given to ‘household’ from the interviewer’s manual
- Indicate the “household identification” questions used in the household questionnaire

## Exercise 3 - Household surveys

- Select two or three countries of interest for you
- List household surveys that have recently been implemented
- Classify them according the year they were first introduced, their sample size and the sampling method applied

## Exercise 4 - Sherlock Holmes

- Pick a country of your choice
- For the chosen country, find the latest following indicators from the WDI website:
  - Labour force participation rate:  
<https://data.worldbank.org/indicator/SL.TLF.CACT.NE.ZS>
  - Poverty headcount ratio:  
<https://data.worldbank.org/indicator/SI.POV.NAHC>
- Trace the origin of the statistic back to the survey it came from.

# Exercise 5 - The Gemini Project

[https://www.bls.gov/cex/research\\_papers/research-paper-catalog.htm](https://www.bls.gov/cex/research_papers/research-paper-catalog.htm)

The screenshot shows the Bureau of Labor Statistics website's CE Library page. The header includes the BLS logo and navigation menus. The main content area is titled "Consumer Expenditure Surveys" and "CE Library". It features a search bar and a table of research papers. The table has columns for Title, Author, Year, Gemini, and Presentation. The papers listed are all from 2018 and cover various topics related to the CE Gemini project, such as household surveys, respondent cooperation, and survey redesigns.

Title	Author	Year	Gemini	Presentation
<a href="#">A Household Survey Perspective on Re-Engineering an Establishment Survey</a>	Safir, A.	2018	Y	Y
<a href="#">Proof of Concept Test for the Consumer Expenditure Survey: Results on Respondent Cooperation, Select Interview and Diary Characteristics, and Respondent Experience</a>	Erhard, L., Y. Lee, B. McBride, S. Park, and L. Tan	2018	Y	N
<a href="#">CPI Outlet Frame Survey Redesign</a>	Saxton, M.	2018	Y	Y
<a href="#">Creating a redesigned questionnaire for the Consumer Expenditure Survey using Colectica</a>	Krishnamurty, P.	2018	Y	Y
<a href="#">Results from The Incentives Field Test for The Consumer Expenditure Interview Survey</a>	Elkin, I., B. McBride, and B. Steinberg	2018	Y	N
<a href="#">Implementing DDI to Document the Consumer Expenditure Surveys</a>	Noel, R. and P. Krishnamurty	2018	Y	Y
<a href="#">An Introduction to the CE Gemini Redesign</a>	Krishnamurty, P.	2018	Y	Y
<a href="#">Exploring monetary incentives and respondent burden in the Consumer Expenditure Interview Survey</a>	Lee, A., and C. Knappenberger	2018	Y	Y
<a href="#">Making Audit Trails Accessible for the CE Quarterly Interview Survey</a>	Kopp, B., A. Lee, and L. Tan	2018	Y	Y
<a href="#">Results from a Test of Online Modes for the Consumer Expenditure Diary Survey</a>	Elkin, I., D. Williams, and H. Sun	2018	Y	Y

Footnotes:  
1 A paper or presentation affiliated with the CE Gemini Redesign Project.  
2 A presentation by CE or CE-affiliated staff using CE data.

- Browse through the papers contained in this website
- Select a paper covering a topic of your interest and write a 2,000 word essay where you summarize the main findings.

# Exercise 6 – Historical Household Budget Surveys



- The Historical Household Budget Project ([www.hhbproject.com](http://www.hhbproject.com)) promotes research on the long-run evolution of living standards around the world on the basis of household budgets, in partnership with the World Bank
- Search for a copy of the reports for the earliest and the most recent Household Budget Surveys ever administered in your country.
- Draft a short comment summarizing the main differences between the two in terms of objectives pursued, survey design and fieldwork.