

Understanding Household Surveys

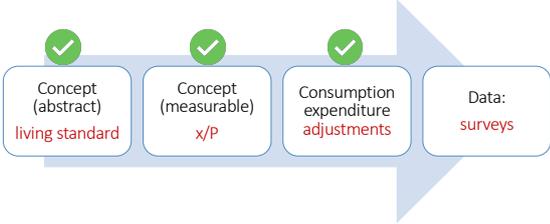
LECTURE 3



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Where we are

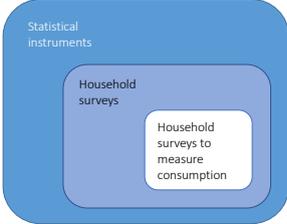


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Today's topics



- **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**.



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1. An overview of statistical instruments

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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 thereof) in each indicator

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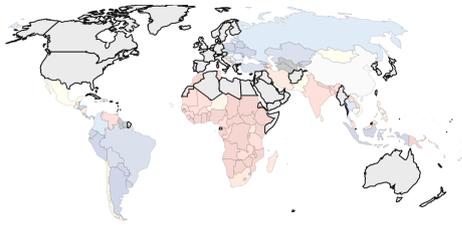
What about the supply of data?

- What is the **availability** of data that are suitable for the measurement of poverty?
- One way to assess this is to look at the surveys used by the **World Bank** to compile estimates of global poverty (see Ferreira et al. 2016).
- These are the estimates published in the World Bank's World Development Indicators and the Poverty and Shared Prosperity reports.

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No survey data at all in the last decade (2005-2014)



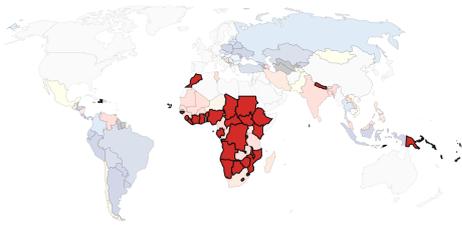
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Source: Our World in Data <https://ourworldindata.org/inequality-poverty>

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Only one survey available in the last decade (2005-2014)



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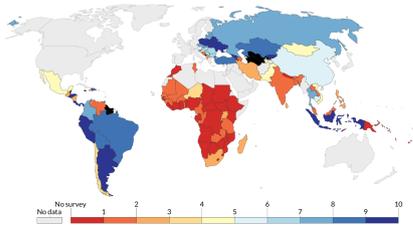
Source: Our World in Data <https://ourworldindata.org/inequality-poverty>

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Global overview

Number of poverty surveys available via the World Bank in the last decade (2005-2014)



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Source: Our World in Data <https://ourworldindata.org/inequality-poverty>

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*PovcalNet

- PovcalNet is an interactive computational tool that allows you to replicate the calculations made by the World Bank's researchers in estimating the extent of absolute poverty in the world.
- <http://iresearch.worldbank.org/PovcalNet/home.aspx>



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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**

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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

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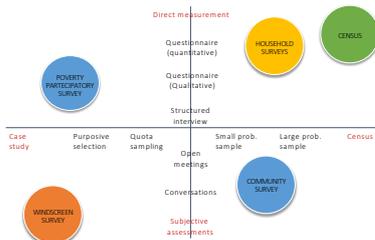
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Examples

- **Subjective assessments:**
e.g., the interviewer rates the quality of a household's dwelling as "adequate, less than adequate, inadequate"...
- **Objective assessments:**
e.g., direct measurement of anthropometrics (height, weight, of a respondent), reporting information directly from electricity or water bills

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A taxonomy of statistical instruments



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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

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2. An overview of household surveys

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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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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?

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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.
- Can you trace the **official** definition of 'household' for the survey of any country of interest? [You can use Google.](#)

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Polygamy

- **Polygamy** is legal in **some countries**, where a man is allowed to marry multiple women at a time.
- This adds complexity to defining a household

In cases of shared accommodation and the persons or families sharing were identified as separate households, the Enumerator had to find out who was the head of the separate households. If they were identified as one household and the household members could not identify or consider one person as being the head, the oldest person had to be taken as the head. In polygamous households, the husband was assigned to the most senior wife's household if the wives were identified as running separate households. This was done to avoid double counting. In this case the second spouse automatically became the head of her household.

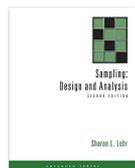
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Probabilistic sample

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**."



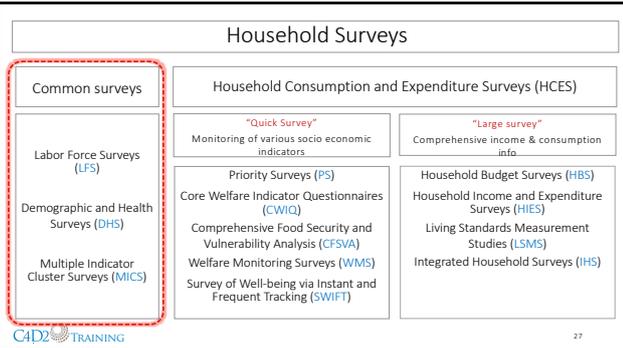
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Heterogeneity in household surveys

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

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Household Surveys



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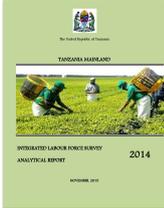
Labor Force Survey (LFS)

- 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

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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

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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 |
| A: Looking for work (Strict international definition) | 16.8 | 10.3 | 3.6 | 2.1 | 8.9 | 4.6 | 0.8 | 0.6 | 3.0 | 2.1 |

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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/>

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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

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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 | | Body Mass Index ^a | | | | | | | Number of women | |
|---------------------------|-------------------------|-----------------|------------------------------|--------------------------|--------------------|-------------------------|--|---------------------------------------|----------------------------|-----------------|---------------|
| | Percentage below 145 cm | Number of women | Mean Body Mass Index (BMI) | 18.5-24.9 (Total normal) | <18.5 (Total thin) | 17.0-18.4 (Mildly thin) | 15.0-16.9 (Moderately and severely thin) | 25.0-29.9 (Total overweight or obese) | ≥30.0 (Overweight) (Obese) | | |
| Wealth quintile | | | | | | | | | | | |
| 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 |
| Total | 0.8 | 14,265 | 23.7 | 58.3 | 8.9 | 6.4 | 2.5 | 32.8 | 22.7 | 10.1 | 13,143 |

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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/>

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The Multiple Indicator Cluster Survey (MICS) in Zimbabwe

Zimbabwe MICS 2014



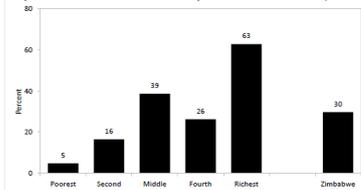
- First launched in 2009
- Four questionnaires: household, women aged 15-49 years, men aged 15-54 years, children 0-5 years
- Sample size: 17,047 households.

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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,



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Household Surveys

Common surveys

Labor Force Surveys (LFS)
Demographic and Health Surveys (DHS)
Multiple Indicator Cluster Surveys (MICS)

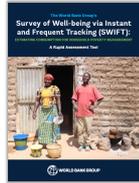
Household Consumption and Expenditure Surveys (HCES)

| | |
|--|---|
| <p>"Quick Survey" Monitoring of various socio economic indicators</p> <p>Priority Surveys (PS) Core Welfare Indicator Questionnaires (CWIQ) Comprehensive Food Security and Vulnerability Analysis (CFSVA) Welfare Monitoring Surveys (WMS) Survey of Well-being via Instant and Frequent Tracking (SWIFT)</p> | <p>"Large survey" Comprehensive income & consumption info.</p> <p>Household Budget Surveys (HBS) Household Income and Expenditure Surveys (HIES) Living Standards Measurement Studies (LSMS) Integrated Household Surveys (IHS)</p> |
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“Large” and “Quick” Surveys

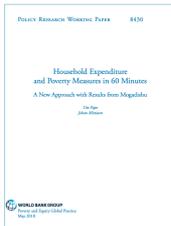
- Different surveys for different aims
- **Quick** surveys usually enable regular computation of welfare estimates, **contingent upon** the existence of an underlying comprehensive **large** survey
- “**SWIFT** estimations are only as good as the underlying models which **require access to recent large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



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*Additional references

The “rapid consumption methodology”



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Household Surveys

Common survey forms

Household Consumption and Expenditure Surveys (HCES)

Labor Force Surveys (LFS)
Demographic and Health Surveys (DHS)
Multiple Indicator Cluster Surveys (MICS)

“Quick Survey”
Monitoring of various socio economic indicators

Priority Surveys (PS)
Core Welfare Indicator Questionnaires (CWIQ)
Comprehensive Food Security and Vulnerability Analysis (CFSVA)
Welfare Monitoring Surveys (WMS)
Survey of Well-being via Instant and Frequent Tracking (SWIFT)

“Large survey”
Comprehensive income & consumption info

Household Budget Surveys (HBS)
Household Income and Expenditure Surveys (HIES)
Living Standards Measurement Studies (LSMS)
Integrated Household Surveys (IHS)

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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

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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

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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 |

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Living Standards Measurement Study (LSMS)

- While reading through the first [World Development Report](#), in 1978, 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)
5th World Bank President (1968-1981)

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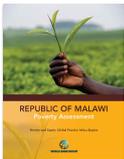
Living Standards Measurement Study (LSMS)

- 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/lms>

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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.

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Living Standards Measurement Study (LSMS)
Malawi 2010

- Incidence of poverty on the map:
- Light brown: less poverty
- Dark brown: more poverty

Number of Poor: 0 100,000 200,000 300,000 400,000 500,000
Poverty Rate: 18 40 45 50 55 82

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HBS vs LSMS

- Both are multi-topic, integrated, complex and nationally representative surveys
- 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: typically 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, to account for seasonality

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 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 surveys)

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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.

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

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

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Ferreira, F.H.G., S. Chen, A. Dabalen, Y. Dikhanov, N. Hamadeh, D. Jolliffe, A. Narayan et al. (2016). A global count of the extreme poor in 2012: data issues, methodology and initial results. *The Journal of Economic Inequality* 14, no. 2 (2016): 141-172.

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

Pape, U., & Mirtaen, 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.

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Thank you for your attention

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Homework

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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.

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Exercise 2 – What is a household?

- Go to: <http://iresearch.worldbank.org/lsm/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

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Exercise 3 - Household surveys

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

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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.

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Exercise 5 - The Gemini Project

https://www.bls.gov/cex/research_papers/research-paper-catalog.htm



- 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.

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Exercise 6 – Historical Household Budget Surveys



- The Historical Household Budget Project (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.

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