

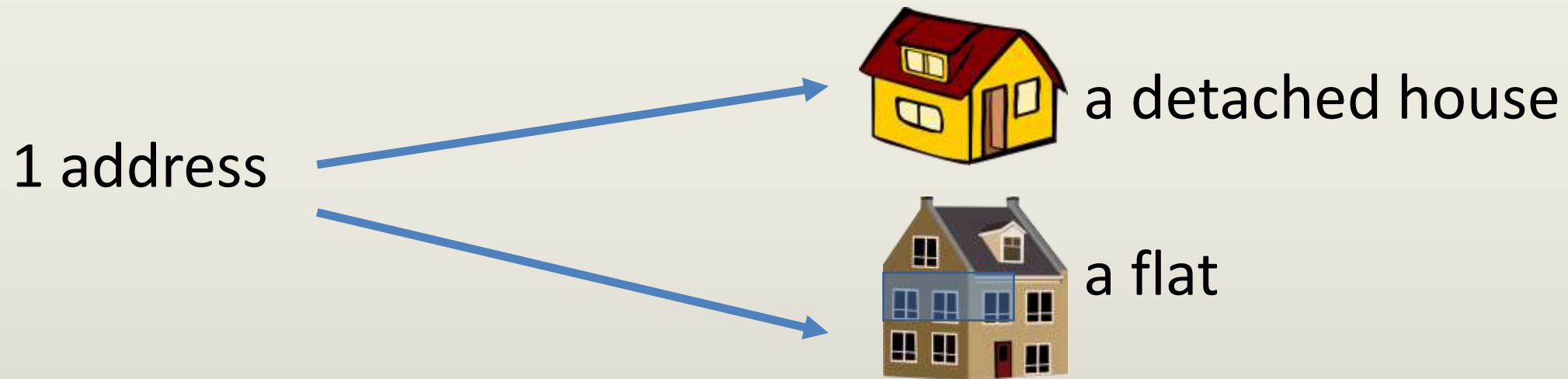
SOCIAL SURVEYS

Sampling – general rules



Główny Urząd Statystyczny
Central Statistical Office of Poland

All social surveys are carried out based on
a random sample of addresses



unique ID	NTS-5 code	locality	street	house number	flat number
528123	0212031	Wólka	Klonowa	3	10

Address vs household

Usually

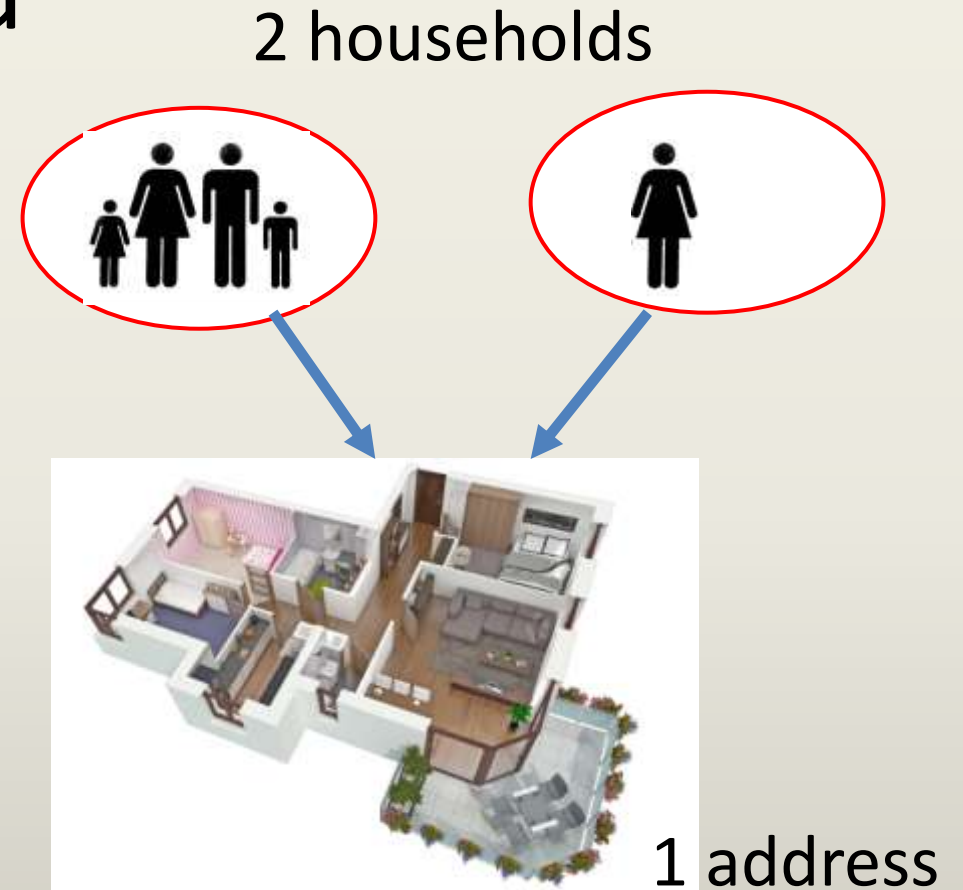
1 address ↔ 1 household

Sometimes (about 10% of addresses)

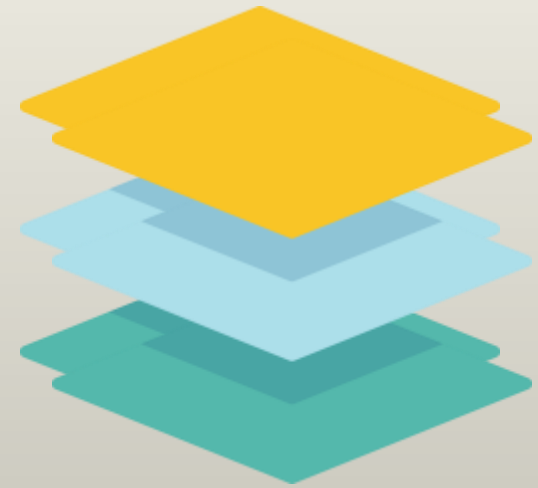
1 address ↔ 0 household

Rarely (about 1% of addresses)

1 address ↔ 2 or more households



In all samplings for social surveys we use
stratification



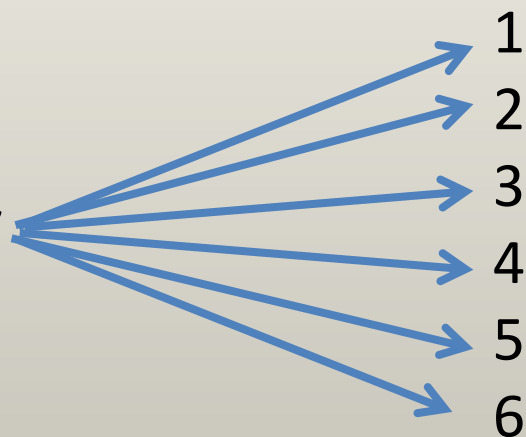
Stratification is based on:

1. Administrative territorial unit

NUTS 2	NUTS 3
Voivodeships	Subregions
16	72



2. Size of locality

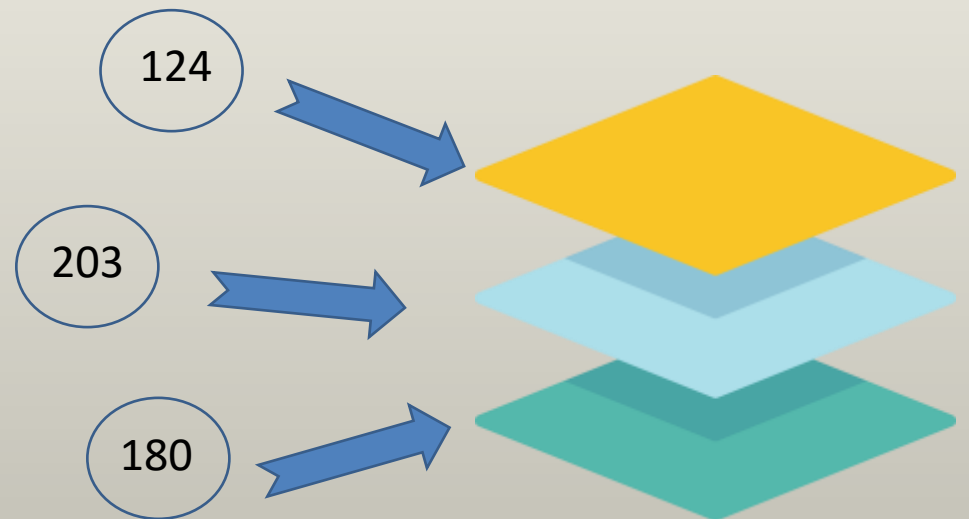


Allocation - distribution of units among the strata

Main methods of allocation used in social surveys:

1. Proportional to the number of units
2. Proportional to the square root of the number of units
3. Increased allocation in the strata having certain characteristics, e.g. rural strata

Each survey has its
specificity



Two-stage sampling

First stage: Primary sampling unit (PSU)

Second stage: Secondary Sampling Units (SSU)

Primary sampling unit (PSU)

Statistical unit consisting of ~30-500 addresses,
but varying in territorial size

But quite large in sparsely populated area:

Can be relatively small in a big city:



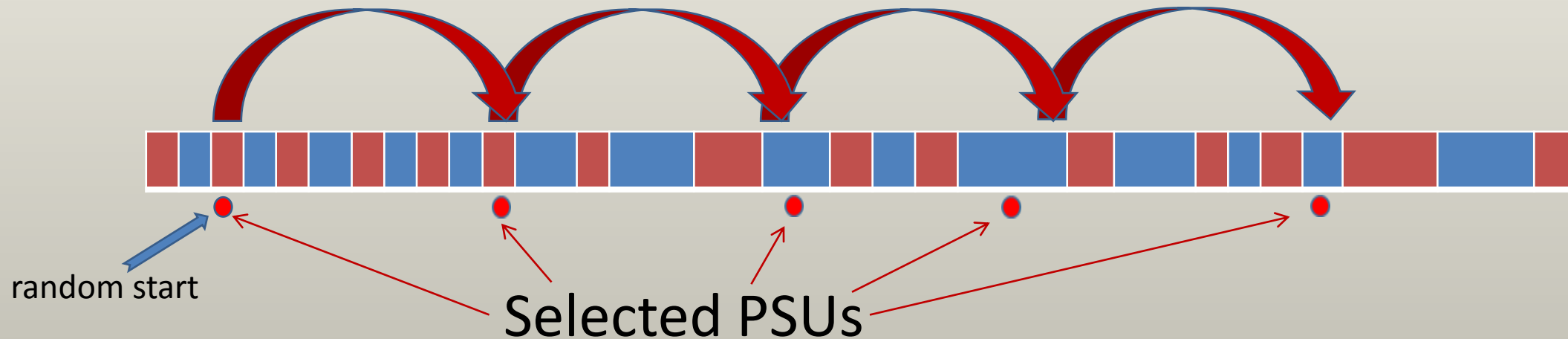
Sampling on the first stage

PPS - Probability Proportional to Size

Size = the number of addresses in the PSU

Method: Hartley-Rao

PSUs arranged in a random sequence



Sampling on the second stage

Secondary Sampling Units (SSU): Addresses

Method: Simple Random Sampling Without Replacement (SRSWOR)

Variance estimation

Due to:

- complex sampling design
- complex estimators

we use resampling methods like:

1. Bootstrap.
2. Balanced half-samples.

CSO's main social surveys

1. Household Budget Survey (HBS)
2. EU Statistics on Income and Living Conditions (EU-SILC)
3. The European Union Labour Force Survey (LFS)
4. European Health Interview Survey (EHIS)
5. Information and communication technology (ICT)
6. Time Use Survey (TUS)
7. Adult Education Survey (AES)

Household Budget Survey (HBS)

Household Budget Survey (HBS)

Summary

Household Budget Surveys (HBSs) are national surveys focusing mainly on consumption expenditure.

They are conducted in all EU Member States and their primary aim (especially at national level) is to calculate weights for the Consumer Price Index.

eurostat



The household budget survey provides detailed information on:

- the level and structure of expenditure as well as sources of goods and services;
- the consumption level of basic food products;



- prices at which households purchase selected goods and services;

- the level and sources of income;



– households' equipment with durable goods;



– dwelling conditions;



– subjective evaluation of the material condition of households;



– the demographic structure of households,



Household Budget Survey (HBS)

Size:

~ 37 600 households are examined each year



Household Budget Survey (HBS)

Allocation among strata

1350 PSUs allocated proportionally to the number of addresses in strata



216 PSUs additionally allocated in rural areas

Aim: to get a larger number of farmers' households

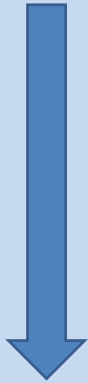


Household Budget Survey (HBS)

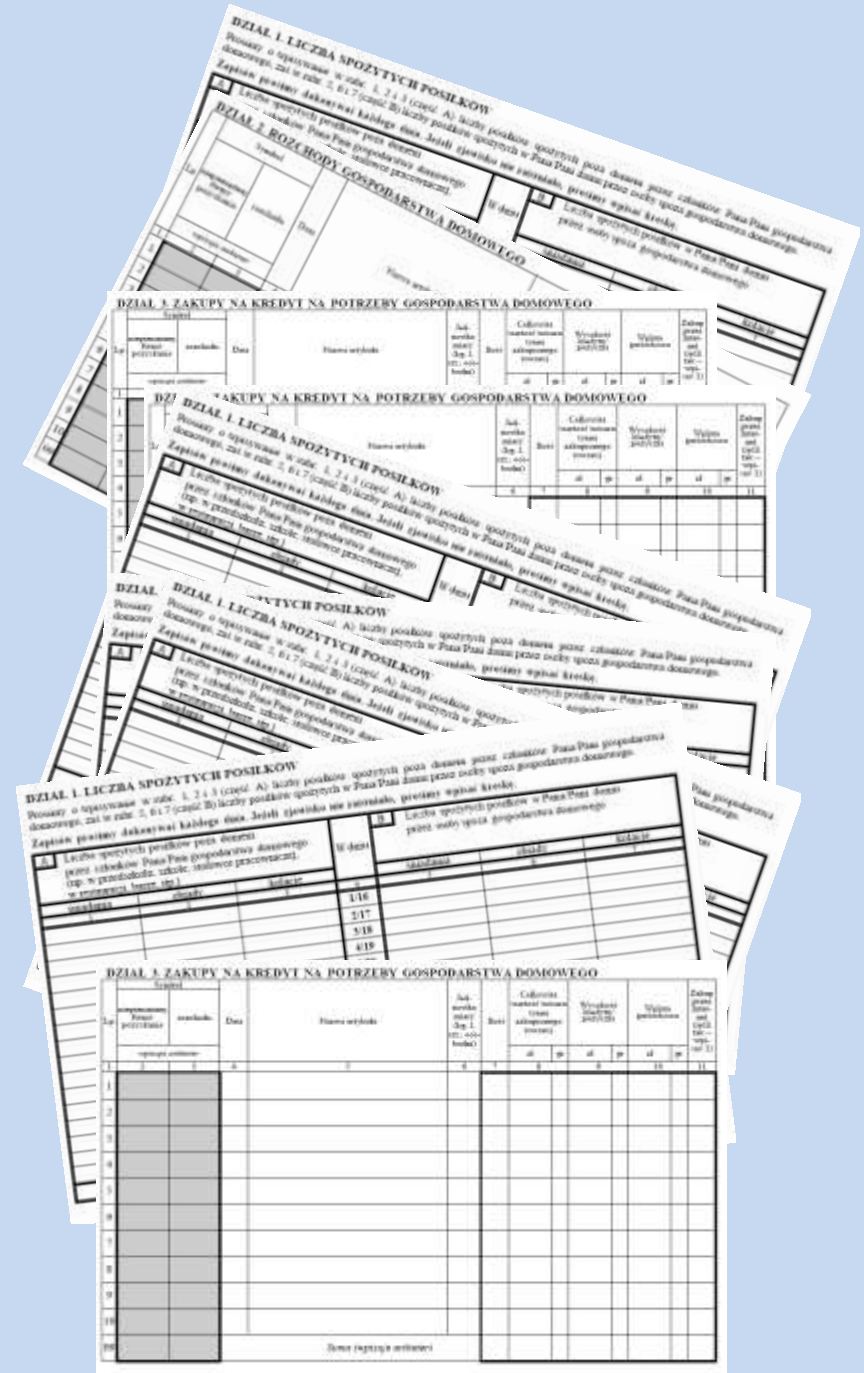
Specific feature

Huge workload for the respondent:

- single questionnaire
- filling twice, year after year, 1-month diary of all revenues and expenditures of the household



difficulty in recruiting respondents



Household Budget Survey (HBS)

Specific feature

Problem	Solution	Effect
High non-response	Substitution using a randomly sorted list	1. Planned sample size is achieved. 2. Probable increase of the bias of the estimators.

Household Budget Survey (HBS)

Weighting



Weights adjustment is based on demographic data:



urban/rural (u/r)	Number of people in the household	Number of households
u	1	2 486 514
u	2	2 215 940
u	3	1 890 321
u	4	1 568 063
u	5	550 173
u	6 or more	253 452
r	1	820 174
r	2	881 162
r	3	763 848
r	4	836 736
r	5	535 523
r	6 or more	535 134

Precision

The method used to estimate the coefficient of variation:

Balanced half-samples

Selection of halves based on Hadamard's matrix

