



Sample survey of wages on professions and positions: experience of carrying out in the Republic of Belarus

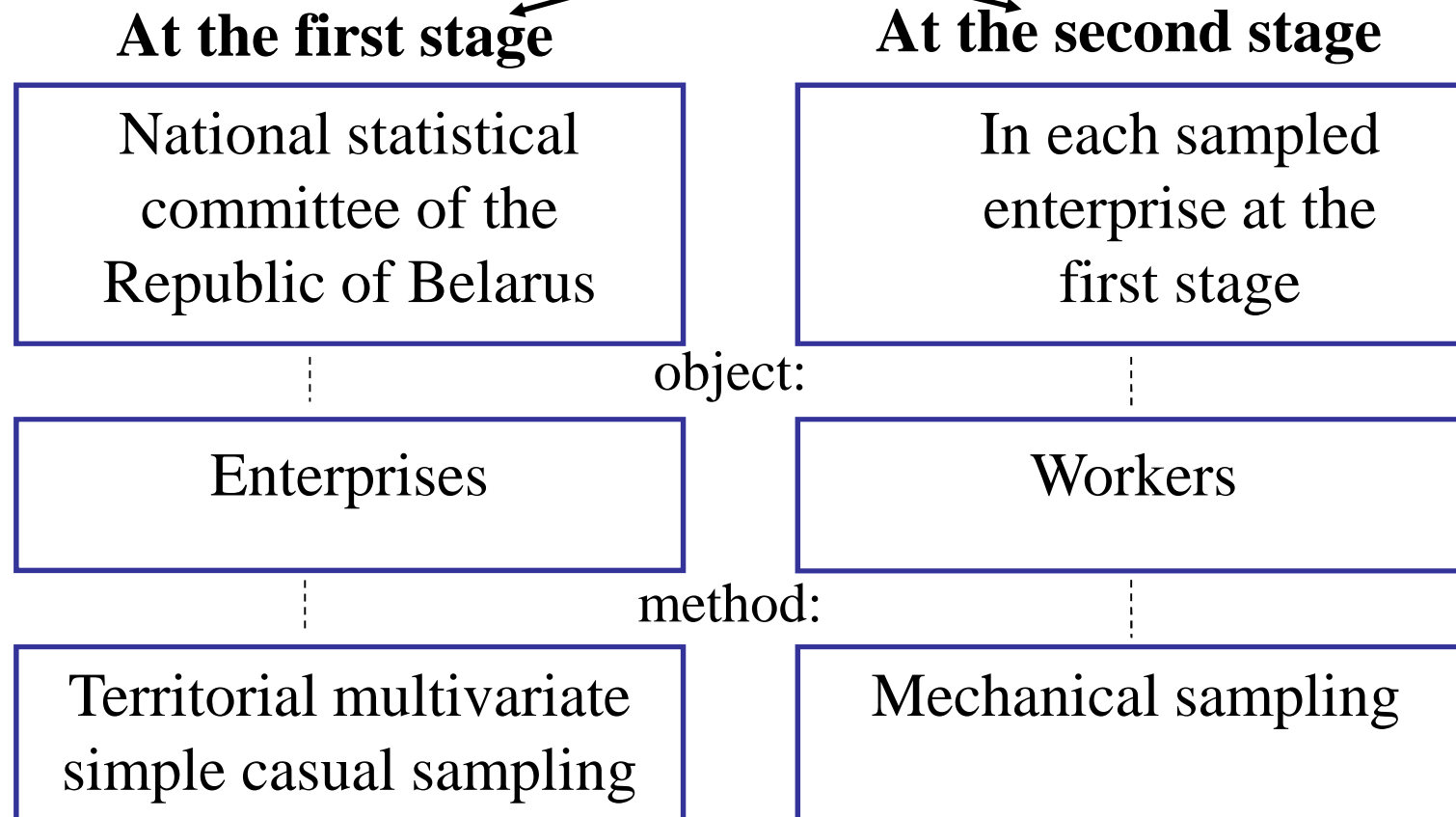
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Samples in labour statistics in Belarus

The survey	The purpose	The periodicity	The remark
The survey of the distribution of the number of workers on the sizes of wages in May	The differentiation in wages in economic activities and regions of the Republic of Belarus	Annually since 2007, 1 in 2 years since 2009	Continuous method since Nov.2011
The survey of the staffing structure in small enterprises	The structure of the number of staff by sex, educational level, training and age	In 2007 and 2008	Continuous method since 2009
The wages survey of professions and positions	The differentiation in wages on professions and positions	Since 2006, 2 in 5 years	
The labour force survey	The study of employment problems in households	In 2011 pilot survey, since 2012 quarterly	

Sampling design

Two-level sampling



The first stage

Sampling frame

List of the enterprises representing the monthly state statistical report on labour

Stratification by:

Regions of Belarus

Economic activities

Indicators for sampling:

Wage fund

Number of workers

Sample updating

Principles updating



Principles of sample updating

- The risks-enterprise is replaced by other enterprise with approximately identical wage fund of the risks-enterprise; reweighting procedure is not executed;
- The risks-enterprise is not replaced by other enterprise in two cases: 1) a wage fund of the risks-enterprise is small and will slightly affect on the sampling error; 2) no enterprises to replace in corresponding group of the enterprises in a general aggregate; reweighting procedure is executed;
- If the number of risks-enterprises makes more than 15 units in surveyed region and an economic activity, new sample of the enterprises is carried out in this region and an economic activity.



The second stage

Sampling frame

----- List of workers who worked full surveyed month (October)

Stratification by:

----- Categories: heads, experts, other employees, labourers

Indicators for sampling:

----- Professions (positions)



Weighting

Weight for each enterprise:

$$k_e = \frac{N_{ij}}{n_{ij}}$$

N_{ij} - number of the enterprises in a general aggregate for i -th economic activity of j -th region;

n_{ij} - number of the enterprises in a sample for i -th economic activity of j -th region.



Weighting

Individual weight for each worker:

$$k_w = \frac{T_i}{t_i}$$

T_i - total number of the workers of i -th profession
(position) who worked full surveyed month (October);

t_i - sampling number of the workers of i -th profession
(position).



Weighting

Aggregate weight:

$$k_{ai} = k_e \cdot k_w$$

k_e - enterprise weight;

k_w - individual worker weight.



Extrapolation

For a final unit (worker):

$$x_{eij} = x_i \cdot k_{ai}$$

x_{eij} - extrapolated value of x for i -th profession
(position) of workers on j -th enterprise;

x_i - value of the indicator for worker i -th profession
(position);

k_{ai} - aggregate weight for i -th profession (position).



Results

As a whole on:	The sampling fraction, %	The sampling error, % for indicator:	
		wage fund	number of workers
Republic of Belarus	29.5	0.2	0.5
Regions of Belarus	from 26.7 to 33.1	from 0.2 to 1.2	from 0.1 to 2
Economic activities	from 21.4 to 41.7	from 0.0 to 3.1	from 0.1 to 3.7



Thank you
very much