Business sample co-ordination

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Overview

- Business sample surveys in Central Statistical Bureau of Latvia (CSB);
- Co-ordination methods. Other country experience;
- Co-ordination methods in Statistics Latvia

Business survey sample

- Population frame;
- Sampling every year in November;
- Long-term (current and next years) and short term (next year);
- Stratified simple random sample;
- Surveys are independent.

Business survey sample

Survey samples in 2010/2011:

- 18 (22) samples
  - 1 subsample;
  - 2 surveys interested in "big" enterprises;
  - 3 rare than one a year;
  - 12 may be co-ordinated.

Business survey sample

Population for 2010\2011 **88 313** units

Number of employee	Group	Amount	Proportion of enterprises, (%)
0-9	0	76677	86,8
10-19	**1**	**5695**	6,4
20-49	**2**	**3453**	3,9
50-249	4	2090	2,4
250+	5	398	0,5
	Total	88313	100,0

Respondent burden

All employee groups

Number of survey forms	Number of units	Proportion of enterprises, (%)
0	49860	56,5
1	9764	11,1
2	4427	5,0
3	2446	2,8
4	1372	1,6
5	920	1,0
6	804	0,9
7	589	0,7
8	55	0,1
9	1	0,0
sys	18075	20,5
Total	88313	100,0

Respondent burden
10-49 employee

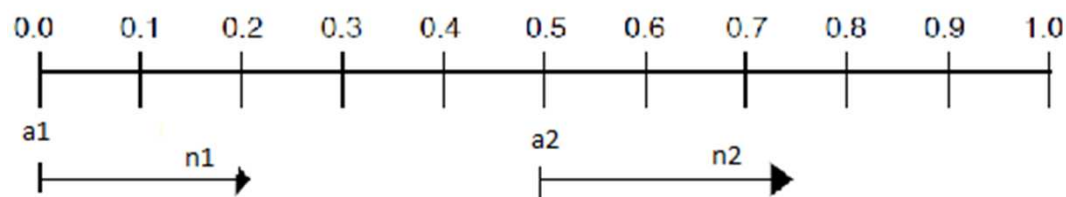| Number of survey forms	Number of units	Proportion of enterprises, (%)
0	849	9.3
1	2067	22.6
2	2345	25.6
3	1898	20.7
4	1176	12.9
5	583	6.4
6	200	2.2
7	28	0.3
8	1	0.0
sys	1	0.0
Total	9148	100.0

Co-ordination methods

- Swedish method (**SAMU/JALES**)
- Netherland method (**EDS**)
- France coordination method (**OCEAN**)
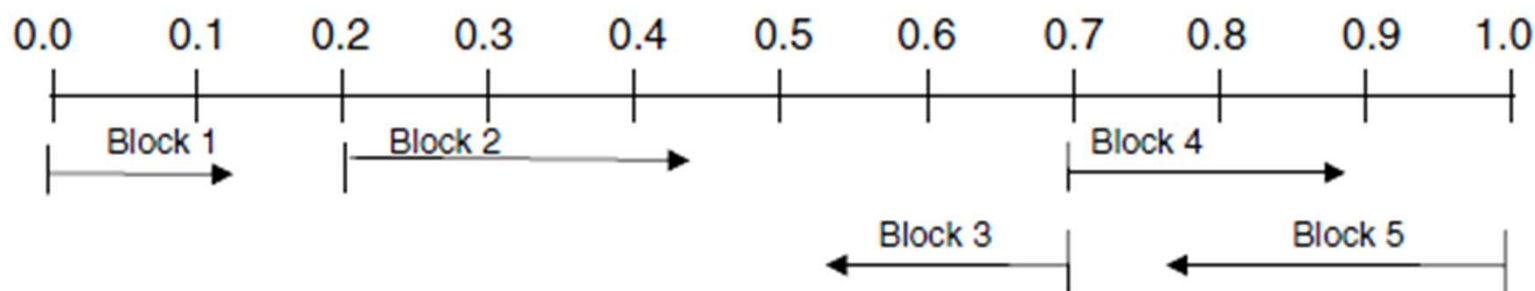- Finland method (**OTKO**)

SAMU/JALES

- Permanent random number (PRN) (0,1);
- Starting point *a;*

- Rotation groups;
- Survey blocks.

Co-ordination in CSB

- 7 surveys non-overlapping;
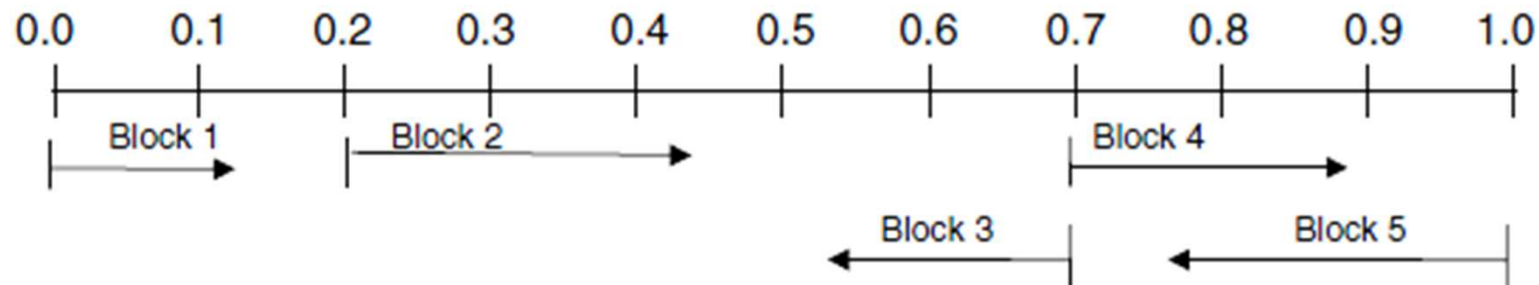
Number of survey	Number of units	Proportion of enterprises, (%)
0	1816	19.9
1	**6676**	**73.0**
2	650	7.1
3	5	0.1
sys	1	0.0
Total	9148	100

- 5 overlapping surveys

Number of survey	Number of units	Proportion of enterprises, (%)
0	1	0.0
1	350	3.8
2	431	4.7
3	165	1.8
4	**1139**	**12.5**
5	**7061**	**77.2**
sys	**1**	**0.0**
Total	9148	100.0

Co-ordination in CSB

- Find a_n for all 12 surveys

Co-ordination in CSB
results

- PRN;
- Co-ordination scheme with 7 blocks;

Block number	1	2	3	4	5	6	7
Surveys	7 surveys with no overlapping frames	1 survey	1 survey	Free place for rare and special surveys	1 survey	1 survey	1 survey
Starting point	0	0.143	0.286	0.429	0.571	0.714	0.857

- Right direction;
- Negative co-ordination;

Co-ordination in CSB

Results

3 rotation groups;

Rotation group	Start point	End point
1	[0.xxx xx0 000	0.xxx xx3 333)
2	[0.xxx xx3 334	0.xxx xx6 666)
3	[0.xxx xx6 667	0.xxx xx9 999]

2010/2011 surveys (10-49 employees)

Number of forms	2010/2011 samples	Co-ordinated samples (2010)
0	969	635
1	2402	2725
2	2601	2764
3	1876	1841
4	896	840
5	353	303
6	48	38
7	2	1
Kopā:	9147	9147
Sys	1	1
	9148	9148

Thank you!