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# **USE OF ADMINISTRATIVE DATA IN WAGES AND LABOUR COSTS STATISTICS**

*(Workshop on labour costs, Rome, 5-6 May 2015)*

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# INTRODUCTION

In 2006 the Central Statistical Bureau of Latvia, after long and difficult discussions of several years, finally signed the collaboration agreement with the State Revenue Service on the use of administrative data for statistical purposes.

At present the information provided by this institution is the only administrative source for producing wage and labour costs statistics, whereas, data of the State Social Insurance Agency or other institutions are not used.

All registered employers (legal entities and physical persons) are obliged to submit reports on all employees to this institution.



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# INTRODUCTION

Since administrative data of SRS have been available for statisticians from 2006, the analysis of data quality and timeliness were immediately started as well as schedule for construction and implementation of possible estimation methodology was established.

During the financial crisis of 2008/2009, when the budget of NSI was reduced, part of data Collection and Processing Centers employees were dismissed, and dissatisfaction of enterprises caused by the administrative burden intensified this process.



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# INTRODUCTION

## Before 2008 / LC statistics

- to compensate non-response for large enterprises (private 50+ and public sector)
- for evaluation / comparison of data

## From 2008 / LC statistics

- to reduce non-response for large enterprises
- to obtain data of micro enterprises not surveyed
- for calibration of sample weights



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# INTRODUCTION

## From 2008 / other

- to produce monthly data on distribution of employees by labour income
- to produce monthly data on number of employees by 118 administrative territories of Latvia



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# INTRODUCTION

## Going on at present

- obtaining of some variables in SES2014 for microenterprises with 1-10 employees (shorter questionnaire)

## In nearest future

- to provide annual estimates of GPG by age



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# QUARTERLY LABOUR COST SURVEY (QLCS)

## Data source for...

- labour costs indexes
- Labour Costs Survey

## ....also

- statistics of job vacancies and occupied posts
- STS labour variables
- monthly/annual gross and net wages
- gender statistics/GPG annual estimates





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QLCS

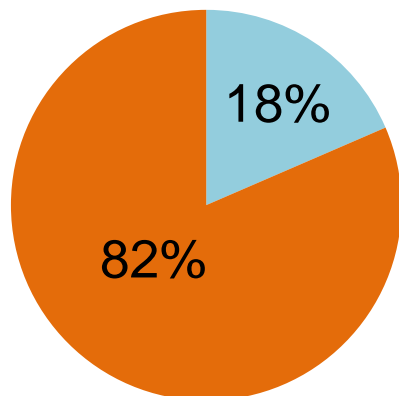
UNITS	Number (thsd)	%
Economically active statistical units (2015q1)	92.5	
Sample frame	17.1	18.5
<b>Sample</b>	<b>7.5</b>	<b>44.2 / 8.1</b>
commercial companies	6.2	
large	2.2	
other	1.3	
<b>Microenterprises (1-6)</b>	<b>75.4</b>	<b>81.5</b>
Burden (hours/questionnaire)	<b>1.73</b>	
Response rate	<b>92%</b>	



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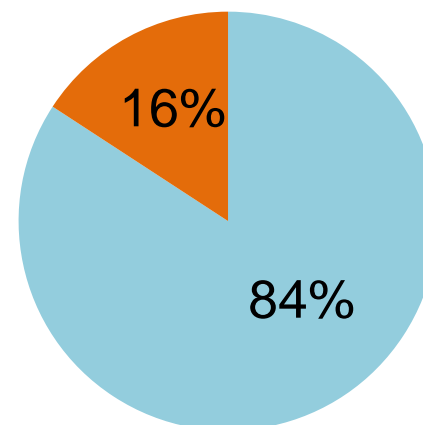
QLCS

## Statistical units, % of population



■ sample frame  
■ microenterprises

## Jobs, % of total



■ sample frame  
■ microenterprises



# CONTENT AND STRUCTURE

## Reports of employers to the State Revenue Service

- from 2008 monthly reports on statutory state social security contributions, population income tax and entrepreneurship risk state duty
- from the end of 2010 – quarterly tax declarations of microenterprises (microenterprise tax payers)
- quarterly reports on hiring and dismissal – for control and analysis



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# CONTENT AND STRUCTURE

	<b>M</b>	<b>Q</b>
registration number of employer	v	v
employee's personal code	v	v
codes of employees by categories (pensioners, disabled etc.)	v	-



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## CONTENT AND STRUCTURE

	M	Q
calculated monthly income	gross	net
calculated compulsory social contributions	total	-
entrepreneurship state risk duty	v	-
hours worked	v	-
updates of calculated income and social contributions	v	-



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## CONTENT AND STRUCTURE

NACE	total 1-6	no hours	NACE	total 1-6	no hours
	<b>100</b> (138.2 thsd)	<b>38.5</b> (53.2 thsd)			
<b>A</b>	3.5	0.9	<b>J</b>	5.8	3.6
<b>B</b>	0.2	0.0	<b>K</b>	0.8	0.2
<b>C</b>	7.6	2.6	<b>L</b>	6.3	1.4
<b>D</b>	0.4	0.0	<b>M</b>	<b>15.7</b>	<b>10.1</b>
<b>E</b>	0.3	0.1	<b>N</b>	5.8	3.5
<b>F</b>	8.6	4.1	<b>P</b>	1.3	0.7
<b>G</b>	<b>26.1</b>	4.4	<b>Q</b>	2.0	0.8
<b>H</b>	6.9	2.0	<b>R</b>	1.4	0.9
<b>I</b>	3.4	1.0	<b>S</b>	3.9	2.2



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# CONTENT AND STRUCTURE

## In monthly reports:

Before July 2013 hours worked only for employees with income below the minimum wage, now – for all with the exception for some of administrative staff

Gross monthly income includes not only regular and non-regular wages but also other income in cash or kind to be taxed (severance pay, presents and prizes, stipends and training expenses paid by the employer, various events if it is possible to personify them etc.)



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## CONTENT AND STRUCTURE

### In quarterly reports of microenterprises:

Hours worked – not available

Gross monthly income includes not only wages but also other payments in cash or kind, as well as income from business of owner

No data on labour taxes – those are calculated from available Tax of Microenterprise for the respective quarter (income tax, employer's soc. contributions, state risk duty)





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# IMPUTATION METHODOLOGY

After the analysis of the quarterly survey's historical data of microenterprises an assumption was made:

employees of this group of enterprises receive only wages in cash, share of other labour costs is not significant and administrative data on labour income can be used instead of survey data

***gross labour income = gross wages***



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# IMPUTATION METHODOLOGY

## Use of available administrative data

+ imputation of missing variables  
calculated as shares or rates per employee  
from the defined average stratas by NACE  
classification 2-digit level of responded  
statistical units with number of employees  
7-10



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# IMPUTATION METHODOLOGY

## Main principles for imputation -

- minimum wage, labour income and hours worked of full-timers in strata – for missing hours
- only employees having income (at least 1EUR) are imputed
- imputation of administrative data into questionnaire is performed on the level of employees; missing variables – of the level of enterprise



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# IMPUTATION METHODOLOGY

- employees are distributed according to the structure of a survey's questionnaire by the level of gross monthly income and existence of hours worked
- for distribution into full and part-timers threshold of 6.5 hours/day (32/week)



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## PROCESSING AND CONTROL

- the first data release on monthly wages - 60 days after reference quarter
- administrative data - 60 days after reference month/quarter

monthly report data of last month of a quarter and quarterly report of microenterprises for reference quarter are not available during data processing

### Solution:

- for imputation data of previous month/quarter are used.
- information is updated when the next quarter data are produced.



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# PROCESSING AND CONTROL

## 1st step (on the level of enterprise)

- overall evaluation of all dataset (number of records' lines, personal and registration codes, codes of categories etc.)
- summing up totals for enterprise and comparison with data of previous months
- if last month data=0 or decreased significantly, checking of economical activity in the Statistical Business Register



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## PROCESSING AND CONTROL

- control an analysis with SRS hiring and dismissal data
- if no evidence of inactivity - imputation of missing data for reference month (previous month's data are used)
- adding codes from SBR (UEC, title, NACE, territory, sector – by form of ownership)



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# PROCESSING AND CONTROL

## 2nd step (on the level of employees)

- adding of sex and age from the Population Register
- calculation of net/gross income
- if necessary – corrections of income tax (during the calculation of net income)
- calculation of social contributions (employer's part)





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## FUTURE PLANS

### From the 1st quarter 2016

according to the resolution of the Ministry of Economy and decision made by working group of CSB, associations of employers and SRS the next steps are taking to decrease the burden of respondents – the implementation of shortened questionnaire for population units in sample frame



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## FUTURE PLANS

- for surveyed enterprises all variables available in databases of SRS will not be collected (number of employees, hours worked and occupied posts by occupations)
- new imputation methodology for shortened questionnaire/the database of employees will be created
- monthly reports will be available in the 45th day after reference quarter
- initial checking of administrative data will be made by the Administrative Data Processing Section



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**Thank you for your  
attention**

*Everything can be improved  
(C. W. Barron)*