

# Statistics - essential tool for multidimensional analysis in measurements of social processes under crisis

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The paper mainly covers the state of play in social statistics in order to provide statistical information for multi-dimensional analysis used by researchers in studies on quality of life and other social processes, as well as main results and problems are presented. The paper comprises the priorities of social statistics and its refocusing, describes the directions to broaden and deepen the scope of the information relevant to the specific situation of Latvia, which requires a rapid response to ongoing situation. Emphasis is placed on speeding up the publication of statistical data and is expressed in knowledge concerning the role of indicators reflecting aspects of the crisis and making specific proposals in this area.

## Introduction

An ancient legend tells of a stranger who time after time turns up in Riga, the capital of Latvia, and asks ‘‘Is Riga finished yet?’’. Until now all passers-by have answered that it was not finished yet. According to legend, Riga can never be ‘‘finished’’, or it will sink to the bottom of the Daugava River. We can relate this popular legend also to statistics, which needs continuous development process.

The Central Statistical Bureau of Latvia (the CSB) is rather new institution founded in 1919, but contemporary history of it starts after the Latvia regained its independence in 1991. During this time period our institution has witnessed sharp economic recession at the beginning of the 90ties and overheating of the economy during the second half of the first decade of the 21<sup>st</sup> century, which ended with economic crisis. Experts have assessed the state of Latvia’s economy as one of the most crisis-hit among the EU Member States.

Statistics Latvia was to a great extent ready to adapt to crisis conditions, because of lessons learned from the outset – our institution was restored under rather harsh circumstances and it has always

been able to show remarkable persistence, as well as it possesses flexibility and is able to keep up with the pace of change. First decade after regaining independence was a period of knowledge acquisition and learning of European Union statistical requirements. The next decade for the Statistics Latvia has been a period of rapid development and growth. During this period solid foundations for the statistical infrastructure have been laid, new IT solutions have been introduced, special attention has been paid to the training of the staff, new statistical products have been created, respondent burden has been reduced, several administrative data sources have complemented surveys and modern methods of data capture have been introduced. And that largely allows us to react on challenges related to economic crisis timely and effectively enough.

## **1. New challenges for statistics**

Global and national early warning systems insufficiently signaled of the possible consequences, therefore, question arises – what is the role of statistics in this. Central Statistical Bureau of Latvia (the CSB) as the leading institution providing statistical information for research and modeling considers that, if statistical information would be analysed more in details and used for modeling of economic development processes, consequences of the crisis, at least in Latvia, would not be so adverse. It is a problem, which can be partly affected by statistics and requests solutions, creating effective means of early warning system.

Quantitative evaluation of quality of life changes in the country as a whole and in each region is essential. The improvement of quality of life analysis requires broad statistical information that covers various aspects of life and is timely. It should be noted that until now, in our opinion, method of multi-dimensional analysis is not used sufficiently enough. This method may be successfully used in evaluations of various socio-economic phenomena.

*Multi-dimensional analysis* is very important tool for decision making and development of social policies. Moreover, quality of life by itself is a multidimensional concept. Multidimensionality not only requires the description of several life domains, but also emphasizes the interplay between domains as this contributes to quality of life.

Professional users (analysts of governmental institutions, experts from the World Bank a.o. international institutions, who undertake research on government's behalf) should be provided with as broad range of statistical data as possible. For this very purpose, to obtain more information on phenomena that have previously missed a close and careful observation, surveys can be supplemented with new modules.

## 2. Priorities of social statistics in crisis

Interest about social statistics has increased noticeably not only for the economic downturn but also due to drastic government budget consolidation, which has especially harsh influence on the social sphere: growth of the unemployment, reduction of income practically in all typical population groups and decrease of the domestic demand has significantly influenced all life quality aspects of population in Latvia.

Economic situation in the country may be characterized with the following key indicators:

	2006	2007	2008	2009
<b>Gross domestic product</b> (change over previous year)	12.2	10.0	-4.6	-18.0
<b>Consumer prices</b> (increase over previous year)	6.5	10.1	15.4	3.0
<b>Employment rate</b> (share of employed population in total number of population in age group 15-64)	66.3	68.4	68.6	61.1
<b>Unemployment rate</b> (share of unemployed in total number of economically active population aged 15-64)	6.8	6.0	7.5	16.9

Previously one of the main tasks of the statistics was to measure progress in national economy and society, its influence on aspects of quality of life, but now it is how to reflect all manifestations of recession and its consequences, which population face in all aspects of life. This task is considerably harder, because requires immediate reaction to the latest events and data interpretation. Moreover, progress may be forecasted, but regress is rather unmanageable. Therefore, social statistics as statistical domain is gaining special importance and status in crisis.

Increasing emigration is one of the ways how population reacts to reduced quality of life and high unemployment rate, therefore *migration, population projections and employment statistics* are the CSB priorities among current social statistics domains.

It is absolutely essential to obtain precise number of population considering current migration flows as well as administrative reform that has created new structure of local governments, which need information for planning of their activities. Unfortunately, administrative data on migration can not cover all migration flows and, therefore, provide only approximate view on real migration volumes and directions. During the period 2005 to 2009 according to migration experts 80 to 100 thousand people have departed from Latvia, but according to the official statistics – only 25.3 thousand persons. The CSB considers that scientific research can provide general estimations regarding the trend of the population change, however this information can not be used for the revision of Population Register data, therefore official population number will be changed only after

*Population and Housing Census*. The questionnaire of the Census includes also questions on residents who emigrated from the country during the last ten years and resides abroad longer than year. We will devote great efforts to ensure that Census provides precise data on population number and changes of its composition so that statistics can serve as reliable base for social policy review in period of crisis and after crisis.

For policy planning documents related to further development of the country, e.g., conception on long-term stability of the social insurance system, *demographic projections* are used. Currently projection EUROPOP2008 developed by the Eurostat in co-operation with the University of Latvia and the CSB of Latvia is used. These scenarios were designed before crisis and thus projections data could deviate from expected results at the end of the projection period (2060). In specific cases projection EUROPOP2004 is also used. New projection would ensure better information base for development of strategically important documents, such as pension system long-term stability plan that is developed by the Ministry of Welfare.

In order to improve availability of regional employment statistics, the CSB decided to double the sample size of the *Labour Force Survey* (to 24 thousand households) as from 2007. This decision has fully justified itself and allows to provide credible and timely main indicators characterising the labour market at both national and regional level (NUTS3).

Another important priority is to *ensure continuousness* of domains in which information acquisition would be especially significant. Although working under conditions of reduced funding, none of the regular household or individual sample surveys was stopped, including such cost-consuming survey as *Household Budget Survey* (HBS). The CSB has reduced the costs, which in short-term would not undermine the implementation of State Statistical Information Programme.

HBS data provides timely information on domestic demand changes, and data of the survey may be used for the analysis of the situation in households of various types and in the country as a whole. HBS in Latvia is important data source for estimations of selected components of final consumption expenditure in National Accounts and is the only data source providing detailed information on consumption expenditure in kind, and that in Latvia is statistically significant. Data of this survey is used by the World Bank for the evaluation of selected activities in social safety network and in micro-simulation models.

Providing *new data series* for professional users is also in the list of priorities. During crisis the CSB has received several new and often very specific requests, e.g., monitoring of level of *wages and salaries* and number of employees in *general government sector*. Reduction of wages and

salaries and number of employees in state budgetary institutions are required by law, which implements the wide-ranging public administration review. In 2009 the CSB started to compile new data series to monitor this process – quarterly data on changes of the number of employees and wages and salaries are compiled in cooperation with the specialists of macro-economics.

<b>Changes of the number of occupied posts over corresponding period of previous year, %</b>						
	<b>2009</b>					<b>2010</b>
	1 <sup>st</sup> quarter	2 <sup>nd</sup> quarter	3 <sup>rd</sup> quarter	4 <sup>th</sup> quarter	year	1 <sup>st</sup> quarter
Latvia - total	-10.4	-16.2	-22.1	-22.5	-17.8	-17.2
Of which: general government sector	-0.2	-4.1	-12.3	-15.6	8.1	-15.3

### 3. React actively and timely

During the last year Statistics Latvia has committed its work to the suggestions expressed in Roundtable Discussion Forum on Monitoring the Effects of Financial Crisis on Vulnerable Groups of Society organised by the OECD in March 2009. Forum members agreed on the following recommendations:

- Strengthen existing data sources, and avoid compromising reliability for quicker delivery of data;
- Leverage a range of other sources to provide a more timely account of the social impacts of the crises;
- Explore the potential of microsimulation models to assess the impact of the crises on households.

In cooperation with the World Bank, the Labour Force Survey was supplemented with *specific crisis module* in 2010. LFS was most fit to obtain additional information on social problems caused by the crisis and efficiency of the social security network taking into account the timeliness. LFS data is first to reach information users in social statistics – it is published every quarter on 50<sup>th</sup> day after the reference period.

#### ***Box 1 - First finding from LFS crisis module***

*During the survey with the crisis module one of the household members is interviewed about the changes of the economic situation in household during the last 12 months. 1<sup>st</sup> quarter data show that during last 12 months economic situation has worsened in 75% of the households (in rural areas in 71% and in urban areas in 76%). Main reasons why economic situation in households became worse are the reduction of wages and salaries, loss of job and growth of food product prices. Considering the current economic situation households saved in various ways: limited or*

*postponed the clothing purchase (66% of households), reduced the consumption of basic food products (50%), cancelled or postponed physician visit (32%), did not buy the medicines prescribed by the physicians (28%), delayed payments of rent or public utilities (25%). Data of the survey showed that 79% of the households have no financial savings, but in 61% of the households with savings the amount of savings has reduced, and approximately half (54%) of the households admit that, in case when these savings were the only source of resources, this amount would be spent in one to four months.*

Regarding the timeliness, *EU survey on income and living conditions* (EU-SILC) is one of the surveys repeatedly criticized for the lag between data collection and publication of results. Due to results being available rather late, the data cannot be applied in the policy planning and do not reflect current situation. During the preparation for EU-SILC 2009 the sequence of all survey stages was evaluated to single out and review the stages that could be shortened by better work organisation and intensified effort. Thus the CSB improved the timeliness of release and the provisional results of EU-SILC 2009 were made available 13 months after the income reference period. It may still seem too late, but it is at least 9 months earlier than before. It should be taken into account that EU-SILC 2009 micro data file was sent to Eurostat 5 months after the end of the survey.

Already in January 2010 poverty and social exclusion indicators acquired in EU-SILC 2009 were published on the CSB web page. The increased timeliness has resulted in positive impact on the usability of the data. This was particularly important as this information could be used within the framework of the European Year for Combating Poverty and Social Exclusion. Currently the Ministry of Welfare in Latvia is considering to bring EU-SILC data in use for new purposes, e.g., for regional distribution of social services development funding – analyzing the number of population and at-risk-of-poverty rate – thus taking into consideration also income level in each region.

Beginning in 2010 the CSB has also changed the publication policy of monetary poverty indicators. Until 2010 these indicators were published with reference to the survey year, but now with reference to the underlying income reference period. Respectively, monetary indicators of EU-SILC 2009 are presented in database with reference to 2008. Previous data publishing policy gave wrong message to the data users, because trends regarding monetary poverty in 2008 and 2009 may differ significantly. Moreover, results of EU-SILC 2010 on monetary poverty indicators cannot be prognosticated, due to vectors pointing in different directions.

Also *HBS questionnaire* was supplemented with additional questions. In order to acquire broader and more detailed information on grey market by COICOP<sup>1</sup>, starting from 2010 the diaries of HBS include additional questions on grey market (purchases officially unregistered, purchases without cheques). The results of the first quarter show that most often such purchases in Latvia were made to buy cigarettes and alcoholic beverages.

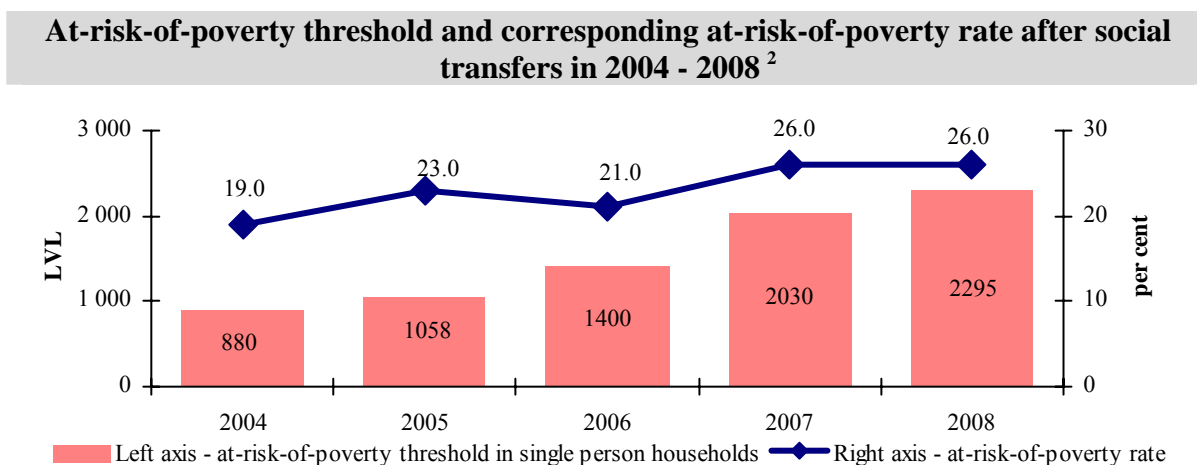
Emerging problem in this period is the *alienation of part of the society and growth of social isolation* greatly influencing not only the quality of life, but also mental health. It is necessary to consider the adding of the module dedicated to this subject to one of the regular sample surveys.

#### 4. New phenomena – new indicators

Eurostat in its document “Lessons derived from the crisis for social statistics” has clearly defined the fields which require certain undertakings to be done by the social statistics in crisis. But one aspect has been overlooked. Crisis has caused some phenomena, roots of which not always are directly related to economics.

Under extreme conditions, to which also current economic crisis belongs, in order to observe the essence of the problem, additionally to the existing ones some specific indicators are necessary. One of the well-known social inclusion indicators is *at-risk-of-poverty rate*, an index based on national at-risk-of-poverty threshold – 60% of equivalent income median.

In case of rapid disposable income growth in Latvia in 2006 – 2007 at-risk-of-poverty rate shows the following trend:



In autumn of 2008 with economic recession looming, when unemployment was growing and household income was decreasing rapidly, at-risk-of-poverty rate in Latvia, surprisingly for

<sup>1</sup> Classification of individual consumption by purpose.

<sup>2</sup> Data are published with reference to income reference year.

everybody, did not rise. To a certain extent it can be explained by use of country-specific statistical at-risk-of-poverty threshold. EU-SILC 2010 based on income in 2009 may produce even more abnormal results. It is not possible to foresee the at-risk-of-poverty rate in 2009, due to vectors pointing in different directions: rapid reduction of income, fast growth of unemployment. It may happen that along with the reduction of at-risk-of-poverty threshold the income inequality decreases and thus at-risk-of-poverty rate does not change or even drops. What kind of message it may send to the society coping with the effects of economic crisis on a daily basis?

In our opinion we should under a new light recall A.B. Atkinson et al [1] 2005 An Independent Scientific Report Commissioned by the Luxembourg Presidency of the EU “Taking Forward the EU Social Inclusion Process”, Section 5 where in relation to the EU enlargement following recommendation was made:

*“The EU Social Inclusion Process should continue with its existing Primary poverty risk indicators, based on country-specific poverty thresholds; but the Commission should use the advent of EU-SILC for EU-25 to complement these indicators with a background “2005 Lisbon mid-term social cohesion statistic”, based on the median income in the EU-25 as a whole. It would not have the status of an indicator....”.*

At the conference this opinion was supported also by Statistics Latvia. It would be useful to include this indicator in one of the OMC Indicators<sup>3</sup> portfolio. In fact this indicator is available [2] and for Latvia in 2007<sup>4</sup> it exceeds 70%.

As EU-wide AROP (at-risk-of-poverty) threshold does not change so unpredictably as country specific threshold for Latvia, at-risk-of-poverty rate may serve as additional explanatory indicator supplementing the existing OMC monetary poverty indicators. That would allow measuring progress in poverty elimination in international comparisons and over time more profoundly than based on country-specific at-risk-of-poverty thresholds.

More and more discussions arise on the “new poverty” phenomena. Those are members of the society, which prior by no means were considered poor, but who became victims of the crisis and now are caught in the trap of mortgages and bank loans taken in the proceeding years. In part of such households nominal income may have changed not so drastically, but due to the interest rate payments and repayment of the loans their consumption expenditure has dropped dramatically. Respectively, for this social group at-risk-of-poverty rate based on disposable income, may have

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<sup>3</sup> Open Method of Coordination on Social Inclusion and Social Protection indicators

<sup>4</sup> Data are published with reference to income reference year



slightly grown, but the *at-risk-of-poverty rate based on consumption expenditure* may show quite another picture. Our suggestion would be *to begin the discussion on calculation of such indicator* in those countries where consumption expenditure surveys are carried out on regular basis. It may open further essential dimension in understanding of “new poverty”.

To conclude, economic crisis represents challenges that will take a length of time to cope with. The statistical processes that have been successfully started should be continued and intensified, supplementing existing regular surveys with new modules, strengthening indicator process as well as offering statistical information for multidimensional analysis. Specific solutions can be acceptable in extraordinary situations, first of all this refers to monetary poverty indicators.

Looking into future there is a need to open discussion on how to reflect emerging social phenomena like “new poverty”. The fresh ideas from other Member states on how to improve our statistical capacity and actively react to phenomena of crisis would be welcomed, as well.

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