



**NATIONAL INSTITUTE OF STATISTICS
ROMANIA**

**QUALITY REPORT ON
LABOUR COST SURVEY
2012**

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

Contact persons:

Mrs. Lavinia Elena Bălteanu

Director, Population and External Migration Statistics

E-mail address: lavinia.balteanu@insse.ro

Telephone no: (+4021) 3177769

Fax no: (+4021) 3181826

Mrs. Mihaela Anghel

Head of section, Wages, Labour Cost, Job Vacancies and Education Statistics

E-mail address: mihaela.anghel@insse.ro

Telephone no: (+4021) 3181826

Fax no: (+4021) 3181826

Mr. Alin Doru Cotirta

Expert, Wages, Labour Cost, Job Vacancies and Education Statistics

E-mail address: alin.cotirta@insse.ro

Telephone no: (+4021) 3181826

Fax no: (+4021) 3181826

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

Summary

	Page
1. Relevance	
1.1 . Summary of core users	4
1.2 . Description of users needs	4
1.3 . Satisfaction of users needs	5
1.4 . Completeness	6
2. Accuracy	
2.1 . Sampling errors	8
2.2 . Non-sampling errors	10
2.2.1 Coverage errors	10
2.2.2 Measurement errors	13
2.2.3 Non-response errors	16
2.2.4 Model assumption errors	19
3. Punctuality and timeliness	
3.1 . Punctuality	19
3.2. Timeliness	20
4. Accessibility and clarity	
4.1. Accessibility	22
4.2. Clarity	23
5. Comparability	
5.1. Geographical comparability	24
5.2. Comparability over time	25
6. Coherence	26

1. RELEVANCE

1.1. Summary of core users

The main Labour Cost Survey data users may be grouped as following:

(i) internal users:

- **governmental bodies:** Ministry of Labour, Family, Social Protection and Elderly Persons, Ministry of Public Finances, National Commission for Prognosis, National Agency for Employment, Ministry of National Education, National Council for Adult Education and Training, Ministry of Health;
- **employers and employers' associations;**
- **trade unions;**
- **professional associations;**
- **research institutes and universities:** Research Institute of National Economy, Research Institute for Labour Force, Research Institute for Education, Romanian Academy, Academy for Economic Studies etc.
- **mass-media;**
- **students, doctorates.**

(ii) external users:

- European Union and international organisations: Eurostat, ILO, OECD, UNDP, World Bank, IMF;
- foreign research institutes;
- foreign employers.

1.2. Description of users needs

(i) internal users:

The Labour Cost Survey outcomes, in relation with the information provided by other surveys are used by policy makers in establishing the actions and measures for economic development strategies as well as for implementing the programs on active measures for reducing the unemployment and on remuneration system.

- ✓ Ministry of Labour, Family, Social Protection and Elderly Persons and Ministry of Public Finances are interested in the structure of total labour costs and of the direct costs in relation to the policies for improvements of the net remuneration by reducing the taxes and the compulsory contributions paid by the employee and by the employer.
- ✓ Same Ministries together with the National Commission for Prognosis pay a special attention to the structure of indirect labour costs. Several strategies were already applied for reducing some contributions that the enterprises have to pay by creating and increasing in exchange the number of jobs within the unit.
- ✓ Ministry of Labour, Family, Social Protection and Elderly Persons, Ministry of Public Finances and National Commission for Prognosis also analyse the Labour Cost Survey data provided by regions (NUTS3). The information is used to measure the development level of different regions and to build up the strategies of supporting and improving the economic and social welfare of the poorest areas.
- ✓ Based on the Labour Cost Survey results of the last years, Ministry of Labour, Family, Social Protection and Elderly Persons and National Agency for Employment have developed and implemented special programs with the aim of unemployment decreasing

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

by offering special reductions on taxation and providing subsidies to the enterprises that would employ unemployed persons.

- ✓ The employers that employed graduates received special advantages (legal acts entered into force proposed by Ministry of National Education).
- ✓ National Council for Adult Education and Training has a high interest on the employers' expenses for vocational training as share of indirect costs, in order to improve the programs in this area. The aim is to reach a higher qualification of the existing labour force (instead of employing directly high educated staff), adequate to the high technologies and innovations.
- ✓ The labour cost level and structure are of interest when negotiations with trade unions are held. Labour Cost Survey results are key elements for the negotiation of collective agreements in relation not only with the direct remuneration, but as share of payments in kind and other advantages, pension scheme, social and health insurance, programs for vocational training (reconversion of the redundant employees, improvement of level of qualification etc.).
- ✓ Employers, employers' associations and professional associations carry out several comparative analysis of the labour cost among economic activities, ownership sectors and across the country.
- ✓ Research institutes and universities are interested in producing analysis on the labour cost level and structure by economic activities, ownership sectors, regional levels (on their own estimations); comparisons with other countries (either EU or non-EU member states).

(ii) external users:

- ✓ European Union and international organisations are usually expressing their needs by specific regulations and agreements and through the working groups held with a given periodicity (EUROSTAT) and through international meetings and regular (for updating of databases) and ad hoc requests sent to INS (ILO, OECD, World Bank);
- ✓ Foreign research institutes formulate their needs through the requests sent to INS, data being provided upon availability;
- ✓ Foreign employers (investors) are interested on labour cost level by economic activities for public and private sectors; upon request different levels of aggregated data are disseminated.

1.3. Satisfaction of the users needs

(i) internal users:

Before finalising the survey tools, the questionnaire and explanatory notes are sent to be studied by the main users: Ministry of Labour, Family, Social Protection and Elderly Persons, Ministry of Public Finances and National Commission for Prognosis. After few weeks, agreed in advance, meetings are held and each item and variable is discussed.

Based on their comments and observations different changes (variables added, breakdowns of variables, updates of the legislation in force etc.) are operated before drafting the final version of the questionnaire and explanatory notes.

In Romania, the official statistics is under the responsibility of National Institute of Statistics (INS) but, in order to ensure the objective, transparent and scientific, character of the methodologies, indicators and classifications used in statistics, the Council of Co-ordinating the Statistical Activity is established.

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

The Council is composed by representatives of:

- Romanian Academy,
- specialised higher education system and research,
- ministries and other specialised bodies sub-ordinate to the Government,
- Romanian National Bank,
- trade unions,
- employers' associations,
- mass-media,
- professional associations.

The Council representatives meet in working groups by statistical fields quarterly or more frequently when necessary. During these meetings, the National Institute of Statistics receives strong feed-back from the users in terms of results already disseminated (including the level of details, breakdowns etc.) and requests for further needed information to be included in next statistical inquiries.

(ii) external users:

- ✓ European Union and international organisations: data are sent according to the format requested; when different levels of aggregations are asked, if it is possible, data are processed accordingly or, if not, the most appropriate are given with the needed explanations;
- ✓ Foreign research institutes: depending on their requests, either data are sent in the available format or are prepared to fulfil as much as possible users' needs;
- ✓ Foreign employers (investors): most of their requests are satisfied by the available data.

1.4. Completeness

According to the Commission Regulation no.1737/2005 (amending the Commission Regulation no.1726/1999) as regards the definition and transmission of information on labour costs, all EU member states had to conduct the Labour Cost Survey (LCS) in 2012, collecting and providing to Eurostat a number of 45 variables (36 mandatory and 9 optional), distributed by:

- Table A: **national data** by economic activities at section and division level of **NACE Rev.2**, for enterprises with **10 or more employees**,
- Table B: **national data** by economic activities at section and division level of **NACE Rev.2** and 6 **size classes** of the enterprises (1-9, 10-49, 50-249, 250-499, 500-999, 1000+ employees),
- Table C: **regional data** by economic activities at section and division level of **NACE Rev.2** and 4 **macro-regions** at NUTS1 level, for enterprises with **10 or more employees**,

Romania collected **33 mandatory variables** (92% from all mandatory variables) and **4 optional variables** (44% from all optional variables), meaning 82% of all variables requested by the Commission Regulation.

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

Table 1: Missing variables from Labour Cost Survey 2012

Code	Label	Table A-C	Reasons for non-availability
D	TOTAL LABOUR COSTS		
D11141	Company products (optional)	n.a.	not reliable results where obtained in the past from other data sources
D11142	Staff housing (optional)	n.a.	
D11143	Company cars (optional)	n.a.	

Two of the mandatory variables foreseen by the regulation were not covered by the Romanian survey:

- **D1112** Payments to employees' saving schemes – these kind of payments are not covered by the national legislation;
- **D1212** Collectively agreed, contractual and voluntary social-security contribution – supplementary contributions paid by the employer to pension's schemes, occupational pension schemes, sickness insurance schemes, unemployment insurance schemes or other non-compulsory social security schemes are not covered yet by the national legislation.

Data for variable **D121** Employers' actual social contribution cover only **D1211** Statutory social-security contribution

$$\Rightarrow D121 = D1211$$

Data for variable **D122** Employers' imputed social contribution cover only **D1221** Guaranteed remuneration in the event of sickness, **D1223** Payments to employees leaving the enterprise and **D1224** Other imputed social contributions of the employer.

$$D122 = D1221 + D1223 + D1224$$

The mandatory variable **D4** Taxes paid by the employer is not applicable for Romania.

Few optional variables were not collected because, according to the Romanian legislation, are not covered (i.e. **D11144** Stock options and share purchase schemes). Also, the variable **D11143** Company cars was tested for SES 2002 and significant under-reporting was noticed (its estimation being a true burden for the respondent enterprises). Thus, the decision of not including it in Labour Cost Survey was taken.

Data for variable **D1114** Wages and salaries in kind cover only **D11145** Other.

$$\Rightarrow D1114 = D11145$$

The variables collected and provided by Romania answer to all Commission Regulation requirements, for data tabulation according to the classification schemes:

- **country level:** NUTS1 level – 4 macro-regions;
- **economic activities:**
 - section level **B – S (1-digit)**, division level **05 – 96 (2-digit)** according to **NACE Rev.2** and aggregates **B_S, BSO, B_N, B_F, B_E, G_S, GSO, G_N, G_J, K_N, O_S, P_S**;
- **size class of the enterprises:** 1-9, 10-49, 50-249, 250-499, 500-999, 1000 and more employees;

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

- *categories of variables:* number of employees (**A-variables**), hours actually worked (**B-variables**), hours paid (**C-variables**), labour cost (**D-variables**) and information on units (**E-variables**),
- *categories of employees:* **employees and apprentices.**

No breakdown, in terms of **economic activities** or **size classes**, is missing from Labour Cost Survey 2012.

Furthermore, data for NACE Rev.2 section O were collected and provided by Romania for all tables A, B and C. Also, data for the corresponding aggregates where section O was requested were provided in all tables.

Data for size class 1 – 9 employees were available and provided for Table B.

2. ACCURACY

2.1. Sampling errors

Sampling design

The sampling frame used for the sample selection was drawn from the Romanian Business Register (REGIS), which contained all enterprises, authorities and organisations as well as their local units that carried out any economic activity irrespective of their size or if they belong to the private or public sector. The Business Register was updated, yearly, on the balance sheets and contains the latest information on each enterprise in the statistical population such as the identification items (unique identification code, address etc.), economic activity codes (NACE Rev.2), number of employees (giving the enterprise size class).

The sampling technique applied for the LCS was the stratified sampling and the selection method used was the simple random selection without replacement. The strata were defined by crossing the 42 counties with 20 sections according to NACE Rev. 2 (divisions 01-96) and 3 size classes of enterprises (less than 10 employees, 10-49, 50 or more employees).

All units with 50 employees and over were exhaustively observed irrespective of their economic activity or their location. The public units from the public administration (O), education (P), human health and social work (Q) activities were exhaustively included in the survey, except local public administration units, for which data at level of local communal councils were collected based on representative sample at level of county (about 770 units). The private units from the education (P), human health and social work (Q) activities were sampled.

The selection unit was the enterprise, but the observation unit was the local unit.

The sample size for the reference year 2012 was around 24500 enterprises.

The coefficients of variation (CV) are presented below, by NACE Rev.2, sections and size classes, according to tables sent to Eurostat. The computations of CVs have been produced using the using the variance programme PROC SURVEYMEANS, a SAS macro.

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

Table 2a: Coefficients of variation by NACE Rev.2 sections (for size class 1+ employees)

NACE REV. 2	Coefficients of variation	
	D	D/B1
B	0.449607	0.038322
C	0.044133	0.008817
D	0.171925	0.033920
E	0.094808	0.017090
F	0.053868	0.013888
G	0.043866	0.019184
H	0.189639	0.026495
I	0.074694	0.015089
J	0.125096	0.029167
K	0.188183	0.038667
L	0.117726	0.026030
M	0.063918	0.025242
N	0.075344	0.020173
O	0.051888	0.016654
P	0.12113	0.024097
Q	0.077055	0.012997
R	0.095971	0.014883
S	0.083060	0.032102
TOTAL	0.028370	0.005561

Table 2b: Coefficients of variation by NACE Rev.2 sections (for size class 10+ employees)

NACE REV. 2	Coefficients of variation	
	D	D/B1
B	0.448409	0.046468
C	0.044692	0.008776
D	0.162436	0.039190
E	0.092470	0.018953
F	0.058179	0.014833
G	0.050310	0.020753
H	0.196189	0.030199
I	0.095410	0.019029
J	0.125879	0.030468
K	0.184747	0.041573
L	0.144025	0.035954
M	0.067249	0.027727
N	0.076659	0.023142
O	0.051505	0.016683
P	0.112190	0.026120
Q	0.076076	0.014483
R	0.099751	0.017630
S	0.096598	0.049291
TOTAL	0.029708	0.006255

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

Table 3: Coefficients of variation by size classes

Size class	Coefficients of variation	
	D	D/B1
1-9	0.035027	0.011508
10-49	0.033763	0.011174
50-249	0.011906	0.008818
250-499	0.021400	0.021625
500-999	0.025830	0.025685
1000+	0.057518	0.031986
TOTAL	0.028370	0.005561

Table 4a: Coefficients of variation by NUTS1 level (for size class 1+ employees)

NUTS1	Coefficients of variation	
	D	D/B1
RO01	0.042957	0.008598
RO02	0.047088	0.009225
RO03	0.049782	0.011075
RO04	0.061631	0.010105
TOTAL	0.028370	0.005561

Table 4b: Coefficients of variation by NUTS1 level (for size class 10+ employees)

NUTS1	Coefficients of variation	
	D	D/B1
RO01	0.045557	0.009692
RO02	0.050406	0.010707
RO03	0.051069	0.011718
RO04	0.064883	0.011608
TOTAL	0.029708	0.006255

2.2. Non-sampling errors

2.2.1. Coverage errors

No over coverage was registered.

The under coverage rate was 1.54%, representing the proportion of new units not included in the sample frame at the time of sample selection in the total number of units from the updated sample frame.

The over coverage units are not counted in response set. To perform the adjustments of the over- and under coverage by weighting procedure a model assumption (about the over- and under coverage) was used, applied for each stratum:

- The over coverage rate among the respondents is the same as among the non-respondents.
- The number of over coverage enterprises in the frame is the same as the number of under coverage enterprises.
- The mean value of any variable of interest is the same in the accessible part of the target population as in the under coverage part.

In the tables below (Table 5 and Table 6) are presented the measure of misclassification by size classes and NACE sections:

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

Table 5: The misclassification by size classes

Size classes – sampling frame	Size classes - after data collection phase						Total
	1-9	10-49	50-249	250-499	500-999	1000+	
1-9	93.65%	3.16%	1.77%	0.66%	0.34%	0.42%	100.00%
10-49	17.94%	79.82%	2.24%	0.00%	0.00%	0.00%	100.00%
50-249	2.39%	9.96%	86.90%	0.62%	0.05%	0.09%	100.00%
250-499	0.84%	0.42%	13.13%	83.16%	1.85%	0.59%	100.00%
500-999	0.50%	0.17%	1.51%	12.04%	83.28%	2.51%	100.00%
1000+	0.98%	0.00%	0.73%	1.47%	8.07%	88.75%	100.00%
Total	30.03%	25.48%	35.67%	4.75%	2.36%	1.71%	100.00%

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

Table 6: The misclassification by economic activities

NACE Rev.2 sampling frame	NACE Rev.2 after collection date phase																		Total
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	
B	99.22	0.19	0.00	0.00	0.00	0.19	0.19	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	100.00
C	0.02	99.52	0.00	0.02	0.09	0.15	0.00	0.04	0.02	0.00	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.04	100.00
D	0.27	0.54	96.21	0.27	0.54	0.81	0.27	0.27	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	100.00
E	0.00	0.12	0.00	99.76	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
F	0.05	0.27	0.05	0.00	99.24	0.22	0.05	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	100.00
G	0.00	0.38	0.04	0.08	0.25	98.73	0.13	0.08	0.00	0.00	0.08	0.00	0.17	0.00	0.00	0.00	0.04	0.00	100.00
H	0.09	0.00	0.00	0.00	0.09	0.17	99.48	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.09	0.00	100.00
I	0.00	0.00	0.00	0.11	0.00	0.11	0.00	99.33	0.00	0.00	0.22	0.00	0.00	0.00	0.11	0.00	0.11	0.00	100.00
J	0.00	0.11	0.00	0.00	0.00	0.11	0.00	0.00	99.22	0.00	0.11	0.33	0.11	0.00	0.00	0.00	0.00	0.00	100.00
K	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	99.64	0.00	0.00	0.18	0.00	0.09	0.00	0.00	0.00	100.00
L	0.00	0.70	0.00	0.00	0.18	0.00	0.00	0.70	0.35	0.00	97.72	0.00	0.18	0.00	0.00	0.00	0.18	0.00	100.00
M	0.00	0.08	0.16	0.00	0.41	0.25	0.00	0.16	0.00	0.00	0.08	98.37	0.25	0.08	0.00	0.00	0.16	0.00	100.00
N	0.00	0.07	0.00	0.07	0.21	0.14	0.14	0.14	0.00	0.00	0.00	0.35	98.80	0.00	0.00	0.00	0.07	0.00	100.00
O	0.00	0.05	0.00	0.05	0.19	0.05	0.05	0.00	0.05	0.05	0.05	0.76	1.09	96.82	0.14	0.09	0.43	0.14	100.00
P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	99.86	0.00	0.00	0.00	100.00
Q	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.08	0.00	99.41	0.00	0.00	100.00
R	0.00	0.00	0.00	0.00	0.09	0.09	0.00	0.18	0.09	0.00	0.09	0.00	0.00	0.73	0.00	0.00	98.64	0.09	100.00
S	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.14	0.00	0.29	99.43	100.00
Total	2.18	19.39	1.53	3.58	7.84	9.99	4.96	3.84	3.81	4.68	2.41	5.24	6.12	8.73	2.97	5.06	4.68	2.98	100.00

2.2.2. Measurement and processing errors

The IT solution for Romanian Labour Cost Survey 2012 was developed to find out the measurement and processing errors occurred in different stages of the survey. The on-line data collection was introduced under the web Portal named eSOP. The same application was used for data entry at respondent unit level and also for data validation at territorial statistical level and central level (INS headquarters - Bucharest).

The IT solution allowed performing the data entry and validation at respondent unit level/territorial statistical offices level, as a first checking of the data integrity and correctness. The logical tests are designed to check:

- the primary data from the questionnaires,
- the logical flows and data consistency among the questionnaire chapters,

and have the scope to:

- follow and check the logical flows of the questionnaire,
- correlate data from related chapters of the questionnaire,
- define and check certain limits to which different indicators must belong,
- find out the outliers or non-logical values.

The tests for data integrity check the identification information from the sample of units with the information from respondent files.

At central level besides the procedures developed for the web portal, there were developed IT programmes for:

- data validation, correctness and correlation,
- adjustment and weighting procedures,
- non-weighted and weighted data tabulation.

Further activities for solving the errors or diminishing the number of errors were carried out at central level:

- data comparability with the previous survey for the main and common variables,
- data comparability with other data sources (i.e. Monthly survey on wages and salaries),
- data imputation from administrative sources in case of unit non-responses,
- preparation of counties databases,
- codification of the national variables accordingly to the variables stipulated in the regulation;
- automatic transformation of final results into the standard format for data transmission designed by Eurostat.

Since 1994, when first Labour Cost Survey was performed in Romania, the largest part of the respondents is the same, especially the medium and big enterprises which are exhaustively surveyed each year. Thus, a certain routine and experience in respect of variables content occurred during the time.

The explanatory notes provided together with the questionnaires contain clear and detailed references for all cost variables. Generally no variable related to the labour costs posed special problems.

In total, 152 logical tests were performed for data checking and correlation designed for data entry and validation, focussing on key variables, such as: number of employees, hours worked, hours paid, direct remuneration and other labour costs. **Since the same tests were conducted at respondent level, local level as well as at central level, the largest part of**

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

the errors found was solved from the beginning (at respondent and local level). The figures were corrected after re-contacting the corresponding enterprises.

Furthermore, a number of about 120 tests were design and applied at central level for data validation, correctness and correlation. These tests were performed for more detailed checking at indicator level, by the main breakdowns and for data comparability with the previous survey and other surveys for common indicators.

The questionnaire design, detailed explanatory notes and the IT solutions developed had as result a complete and of good quality data set.

No item of **partial non-response** was finally recorded into the data. When discovered at local level, enterprises were re-contacted for filling in all missing variables.

The information below is an estimation of **errors and cases corrected at central level.** Statistics on the first level of checking (respondent and local level) are not available.

One error may need several variables to be corrected or, if the figures correspond to reality due to unusual phenomena, figures were accepted as such and no correction was made.

Most frequent errors that occurred during data checking period:

- **17.56%** of error coded A113 (in Romanian Logic tests); other imputed social contributions of the employer should fall between 0.0% – 20.0% of total gross amounts from salary found;
- **12.39%** of error coded A114; subsidies received by the employer should fall between 0.0% – 20.0% of total gross amounts from salary found;
- **11.56%** of error coded A24; the hours worked by full-time employees should fall between 1600 – 2040 hours/year (200 – 255 working days * 8 hours/day);
- **8.94%** of error coded A40; gross amounts from the salary fund should be greater then the payments for days not worked, payments in kind, arrears, net profit, other funds;
- **7.52%** of error coded A25; the yearly paid, but not worked hours for all employees should fall between 144-400 hours/year (18-50 paid, but not worked days * 8 hours/day);
- **6.82%** of error coded A45; the employee contribution for health insurance should fall between 4.5% – 6.5% of total gross payments;
- **6.19%** of error coded A44; the employee contribution for statutory social security should fall between 8.0% – 12.0% of total gross payments;
- **5.69%** of error coded A43; the employee contribution for unemployment insurance should fall between 0.2% – 0.8% of total gross payments;
- **5.46%** of error coded A18; number of full-time and part-time employees converted into full-time equivalent employees;
- **5.00%** of error coded A46; the taxes paid by the employee should fall between 0% – 16% of total gross payments.

The number of cases needed to be corrected was not so significant to have an impact on the accuracy of the final results. In the table below are estimated the percentages in the total cases corrected at central level, by each variable.

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

Table 7: Percentage of cases corrected by LCS variables

LCS Variables		% of cases corrected
Code	Label	
A. Number of employees		
A1	Total number of employees	4.12%
A11	Full-time employees (excluding apprentices)	4.56%
A12	Part-time employees (excluding apprentices)	1.98%
A121	Part-time employees converted into full-time equivalents (excluding apprentices)	2.89%
A13	Apprentices	0.00%
A131	Apprentices converted into full-time employees	0.00%
B. Hours actually worked		
B1	Total hours actually worked	6.29%
B11	Hours actually worked by full-time employees (excluding apprentices)	5.78%
B12	Hours actually worked by part-time employees (excluding apprentices)	4.15%
B13	Hours actually worked by apprentices	0.00%
C. Paid hours		
C1	Total hours paid	4.96%
C11	Paid hours for full-time employees (excluding apprentices)	4.90%
C12	Paid hours for part-time employees (excluding apprentices)	3.63%
C13	Paid hours for apprentices	0.00%
D. Total labour costs		
D1	Compensation of employees	3.98%
D11	Wages and salaries	5.29%
D111	Wages and salaries (excluding apprentices)	5.29%
D1111	Direct remuneration, bonuses and allowances	4.93%
D11111	Direct remuneration, bonuses and allowances paid at each pay period	0.12%
D11112	Direct remuneration, bonuses and allowances not paid at each pay period	2.84%
D1113	Payments for days not worked	2.71%
D1114	Wages and salaries in kind	1.87%
D11145	Other	1.02%
D121	Wages and salaries of apprentices	0.00%
D12	Employers' social contributions	3.59%
D121	Employers' actual social contributions (excluding apprentices)	4.21%
D1211	Statutory social security contributions	3.81%
D122	Employers' imputed social contributions (excluding apprentices)	0.56%
D1223	Payments to employees leaving the enterprise	0.58%
D1224	Other imputed social contributions of the employer	4.41%
D123	Employers' social contributions for apprentices	0.00%
D2	Vocational training costs	0.12%

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

D3	Other expenditure paid by the employer	2.54%
D5	Subsidies received by the employer	3.10%

2.2.3. Non-response errors

The response rates broken down by economic activity (NACE Rev.2. 2 digits) and by size classes are presented in Table 8 and Table 9.

Table 8: Response rates by NACE Rev.2 division level and size classes

NACE REV.2 2 digit level	Size classes							-%-
	1-9	10-49	50-249	250-499	500-999	1000+	TOTAL	
5	57.14	100.00	100.00			100.00	85.00	
6	100.00	100.00		100.00		100.00	100.00	
7	100.00	100.00	100.00	100.00		100.00	100.00	
8	96.18	100.00	100.00	100.00		100.00	97.54	
9	90.91	100.00	100.00	100.00	100.00		98.28	
10	93.33	100.00	100.00	100.00	100.00	100.00	99.32	
11	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
12	60.00		100.00	100.00	100.00		80.00	
13	90.91	100.00	100.00	100.00	100.00	100.00	99.19	
14	88.46	100.00	100.00	100.00	100.00	100.00	99.22	
15	94.44	100.00	100.00	100.00	100.00	100.00	99.68	
16	97.14	100.00	100.00	100.00	100.00	100.00	99.61	
17	87.50	100.00	100.00	100.00		100.00	98.51	
18	88.00	100.00	100.00	100.00			96.34	
19	100.00	100.00	100.00		100.00		100.00	
20	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
21	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
22	96.30	100.00	100.00	100.00	100.00	100.00	99.53	
23	95.65	100.00	100.00	100.00	100.00	100.00	99.42	
24	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
25	92.86	100.00	100.00	100.00	100.00	100.00	99.05	
26	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
27	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
28	90.00	100.00	100.00	100.00	100.00	100.00	99.46	
29	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
30	80.00	100.00	100.00	100.00	100.00	100.00	97.40	
31	97.87	100.00	100.00	100.00	100.00	100.00	99.62	
32	100.00	100.00	100.00	100.00	100.00		100.00	
33	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
35	92.50	100.00	100.00	100.00	100.00	100.00	95.82	
36	96.88	100.00	100.00	100.00	100.00	100.00	99.37	
37	100.00	100.00	100.00	100.00			100.00	
38	95.47	100.00	100.00	100.00	100.00	100.00	98.09	
39	90.00	100.00	100.00				94.44	
41	92.99	100.00	100.00	100.00	100.00	100.00	98.37	
42	97.06	100.00	100.00	100.00	100.00	100.00	99.74	
43	94.15	100.00	100.00	100.00	100.00	100.00	98.14	

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

45	93.55	100.00	100.00	100.00	100.00		98.66
46	87.01	100.00	100.00	100.00	100.00	100.00	98.13
47	95.21	100.00	100.00	100.00	100.00	100.00	98.37
49	93.33	100.00	100.00	100.00	100.00	100.00	97.45
50	87.50	100.00	100.00	100.00	100.00		95.83
51	75.00	100.00	100.00	100.00		100.00	91.67
52	90.00	100.00	100.00	100.00	100.00	100.00	98.87
53	87.50	100.00	100.00	100.00	100.00	100.00	97.62
55	97.01	100.00	100.00	100.00	100.00		99.25
56	95.94	100.00	100.00	100.00	100.00	100.00	97.81
58	94.12	100.00	100.00	100.00	100.00		97.78
59	90.00	100.00	100.00	100.00	100.00		94.55
60	90.91	100.00	100.00	100.00	100.00	100.00	96.83
61	94.37	100.00	100.00	100.00	100.00	100.00	97.78
62	95.62	100.00	100.00	100.00	100.00	100.00	98.27
63	89.74	100.00	100.00	100.00	100.00		94.44
64	95.27	100.00	100.00	100.00	100.00	100.00	97.34
65	94.12	100.00	100.00	100.00	100.00	100.00	98.55
66	93.81	100.00	100.00				95.40
68	95.88	100.00	100.00	100.00	100.00	100.00	97.54
69	95.52	100.00	100.00	100.00		100.00	96.94
70	92.52	100.00	100.00	100.00	100.00	100.00	96.14
71	98.47	100.00	100.00	100.00	100.00	100.00	99.50
72	92.86	100.00	100.00	100.00	100.00		99.49
73	90.00	100.00	100.00	100.00	100.00		96.35
74	88.46	100.00	100.00			100.00	94.92
75	95.45	100.00	100.00	100.00			98.65
77	92.11	100.00	100.00				95.00
78	91.67	100.00	100.00	100.00	100.00	100.00	98.02
79	98.11	100.00	100.00				98.72
80	83.33	100.00	100.00	100.00	100.00	100.00	98.26
81	93.83	100.00	100.00	100.00	100.00	100.00	97.98
82	92.45	100.00	100.00	100.00	100.00	100.00	97.10
84	88.10	100.00	100.00	100.00	100.00	100.00	99.76
85	98.03	100.00	100.00	100.00	100.00	100.00	98.86
86	96.88	100.00	100.00	100.00	100.00	100.00	98.84
87	100.00	100.00	100.00	100.00	100.00	100.00	100.00
88	100.00	100.00	100.00	100.00	100.00		100.00
90	96.74	100.00	100.00	100.00			98.82
91	100.00	100.00	100.00	100.00			100.00
92	96.05	100.00	100.00	100.00	100.00	100.00	98.80
93	94.17	100.00	100.00				96.29
94	100.00	100.00	100.00	100.00	100.00	100.00	100.00
95	96.15	100.00	100.00	100.00			97.33
96	96.71	100.00	100.00	100.00		100.00	98.11
TOTAL	94.68	100.00	100.00	100.00	100.00	100.00	98.42

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

Table 9: Response rates by NACE Rev.2 section level and size classes

-%-

NACE REV.2 1 digit level	Size classes						
	1-9	10-49	50-249	250-499	500-999	1000+	TOTAL
B	95.24	100.00	100.00	100.00	100.00	100.00	97.27
C	94.16	100.00	100.00	100.00	100.00	100.00	99.34
D	92.50	100.00	100.00	100.00	100.00	100.00	95.82
E	95.78	100.00	100.00	100.00	100.00	100.00	98.34
F	93.79	100.00	100.00	100.00	100.00	100.00	98.59
G	92.73	100.00	100.00	100.00	100.00	100.00	98.30
H	92.54	100.00	100.00	100.00	100.00	100.00	97.52
I	96.12	100.00	100.00	100.00	100.00	100.00	98.23
J	93.73	100.00	100.00	100.00	100.00	100.00	97.44
K	94.40	100.00	100.00	100.00	100.00	100.00	96.46
L	95.88	100.00	100.00	100.00	100.00	100.00	97.54
M	94.13	100.00	100.00	100.00	100.00	100.00	97.89
N	91.97	100.00	100.00	100.00	100.00	100.00	97.85
O	88.10	100.00	100.00	100.00	100.00	100.00	99.76
P	98.03	100.00	100.00	100.00	100.00	100.00	98.86
Q	97.06	100.00	100.00	100.00	100.00	100.00	99.08
R	95.71	100.00	100.00	100.00	100.00	100.00	98.19
S	96.79	100.00	100.00	100.00	100.00	100.00	98.29
TOTAL	94.68	100.00	100.00	100.00	100.00	100.00	98.42

The treatment of non-response is regarding to the survey status of enterprises and its response. The non-response type used to the collection data phase is:

Table 10: Type of non-response of survey data collection

<i>Non-response type</i>
Refusal
Unidentified unit
Out of scope units
Units whose the contact was not established
Ceased unit

The estimation method involves multiplying the value for each sampled business (y_i) by a combination of weights, one being outlier weight (w_{ih}), one resulting from the sample design (a_{ih}).

An outlier weight is computed as a Windsor weight. The units having the normal score (z score) out of interval $[-3, 3]$ are outlier units. The normal score, which determines the outlier units, is computed taking into account the stratification used in sample design.

In order to perform the adjustment of non-response is computed a weight resulting from the sample design, as the sample weight adjusted by the inverse of response probability:

$$a_{ih} = \pi_h \cdot v_h \quad \text{Where:} \quad \pi_h = \frac{N_h}{n_h} ; \quad v_h = \frac{n_h}{m_h}$$

N_h = sample frame size of stratum h

n_h = sample size of stratum h

m_h = number of responses in stratum h

So, for each response unit the final weight is:

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

$$weight_{ih} = w_i \cdot a_{ih} = w_{ih} \cdot \pi_h \cdot v_h$$

2.2.4. Model assumption errors

- ✓ In Romania, fiscal year fully corresponds to the calendar year. Thus, no adjustment is necessary.
- ✓ Romanian Labour Cost Survey 2012 covered all enterprises irrespective of their size, including the small enterprises, with less than 10 employees.

According to Eurostat arrangements for implementing the Council Regulation no.530/1999 and the Commission Regulation no. 1737/2005, Romania provided data for:

1. **Table A** (national data by economic activities section and division level NACE Rev.2) - data refer to enterprises with 10 or more employees;
 2. **Table B** (national data by economic activities section and division level NACE Rev.2 and by size class of the enterprise) - data refer to all size class enterprises (including small enterprises with less than 10 employees);
 3. **Table C** (regional data by economic activities section and division level NACE Rev.2) - data refer to enterprises with 10 or more employees;
- ✓ Starting with **year 2012** administrative data sources were used to improve the response rates
 - ✓ Starting with **year 2012** data from administrative sources was used for data completeness and to improve the response rates (in case of refusal, unidentified units in the survey data collection, dormant units in the survey but with data in administrative sources). The administrative data sources used are provided by the Ministry of Finance and Ministry of Labour (Unique Fiscal Form and Social Security Register). The two databases were matched and the selections were done for each legal unit (fiscal code), for the number of employees, the gross earnings paid to employees, the employees' working time, the indirect costs of the employers in accordance with the types of insured persons. The percentage of units estimated from the administrative sources was of 8.14%.

3. PUNCTUALITY AND TIMELINESS

3.1. Punctuality

The **data collection period** for Labour Cost Survey was lasted three months:

- about 1 month for enterprises to fill in the questionnaires on-line (15.01.2013 – 19.02.2013), or on paper and to send them to the territorial statistical offices (month January 2013);
- almost two months for the territorial statistical offices to perform data entry for the questionnaires received on paper, for data checking and first validation (months February-March 2013). The deadline for completing the data collection was 29th March 2013.

Since not all enterprises respected the deadline requested, a high proportion of questionnaires reached with delay the territorial statistical offices. Furthermore, due to the recalls necessary for additional information and corrections of the variables filled in by the enterprises, delays occurred in complete the data collection process.

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

Only the information on the delays encountered in completing the data collection at territorial statistical offices level is available. Below are presented information on the proportion of data collection completion:

- before 29th March: 4.76%
- **29th March: 80.95%**
- 29th March – 10th May: 14.29%.

A delay of more than one month was registered between the scheduled and actual data files transmission. Even so, the release dates at national level (19.08.2013 for the number of employees and earnings and 27.09.2013 for labour costs) were the same as the scheduled dates, no delays were registered.

Also, the data transmission to Eurostat (Tables A, B, C) was in accordance with the legal requirements, as csv files, via eDAMIS, sent on the 28th April 2014 (the deadline stipulated by the Council Regulation no. 530/1999 is up to 30th June 2014).

3.2. Timeliness

All the activities carried out by INS during a year are scheduled through the Activity Plan with several months earlier. Annually, INS issues for the users a catalogue of statistical products and services containing the names, periodicity, short descriptions and release dates for all publications.

The length period of preparing and carrying out the Labour Cost Survey 2012 lasted about one year (from mid-October 2012 to the end October 2013), as described in the table below:

Table 12: Scheduled activities of the Romanian Labour Cost Survey 2012

No	ACTIVITY	ACTIVITY DESCRIPTION	DEADLINE
1.	Programmin g of survey activities and documentati on study	1.1. Identification of the activities and operations to be carried out in order to successfully run the LCS	15.10.2012
		1.2. Documentation study - national level (changes in legislation, collective agreements, labour code etc.) - European level (Council and Commission regulations, working group documents etc.)	15.10.2012
2.1	Redesigning of survey tools	2.1. Redesigning first version of survey tools (questionnaires, explanatory notes, classifications)	21.10.2012
		2.2. Sending the survey tools for comments and observations to main users (Ministry of Labour, Family, Social Protection and Elderly Persons, National Commission for Prognosis) and to some statistical territorial offices	25.10.2012
		2.3. Meetings with the experts from the main users (ministries) for discussing the proposed changes in the survey methodology	05.11.2012
		2.4. Receiving comments and observations from the statistical territorial offices	05.11.2012

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

		2.5. Operating the changes based on comments and observation received and redesigning the final version of survey tools	12.11.2012
		2.6. Approval of the final version of survey tools	14.11.2012
2.2	Dispatching survey tools in the territory	2.7. Sample selection of enterprises	26.11.2012
		2.8. Printing the survey tools according to the number of selected enterprises	29.11.2012
		2.9. Sending for checking the samples selected to each territorial statistical office	03.12.2012
		2.10. Updating the samples based on the updates received from the territorial statistical offices (organisational changes, identified / not - identified, activity changed etc.)	11.01.2013
		2.11. Dispatching survey tools to the territorial statistical offices	05.12.2012
3.	IT solutions	3.1. Designing the logical tests for on-line data entry, data checking, correction and validation	12.11.2012
		3.2. Designing the IT solution for on-line data collection and checking	23.12.2012
		3.3. Testing the IT solution for on-line data collection and checking	11.01.2013
		3.4. Designing the final indicators and corresponding breakdowns for data tabulation	29.03.2013
		3.5. Designing the IT solution for data tabulation and weighting	31.05.2013
4.	Fieldwork and data checking	4.1. Planning and organisation the field work activities	15.11.2012
		4.2. Data collection (on paper or on-line)	19.02.2013
		4.3. Data entry, checking and validation at local level	24.03.2013
		4.4. Data validation and processing at central level	10.05.2013
		4.5. Data checking and errors correction	31.05.2013
		4.6. Tabulation of non-weighted data	05.06.2013
		4.7. Weighting procedures and validation of weighted data	17.06.2013
		4.8. Tabulation of weighted data	01.07.2013
		4.9. Analysis of final results	15.07.2013
5.	Dissemination of survey results	5.1. Dissemination of final results on the number of employees and earnings	19.08.2013
		5.2. Dissemination of final results on the labour cost	27.09.2013
		5.3. Release of the press release on annual earnings and labour costs	27.09.2013

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

		5.4. Release of the annual publication on earnings and labour costs	17.10.2013
		5.5. Updating and validation of the national databases with the results of the annual earnings and labour costs	18.10.2013

4. ACCESSIBILITY AND CLARITY

4.1. Accessibility

Based on the Labour Cost Survey results **three detailed copybooks (on the number of employees, on earnings and on labour costs)** are prepared and disseminated to the main users (about 25), in electronic format:

- Romanian Presidential Administration;
- Romanian Parliament (including several Commissions oriented on labour, social protection policies);
- governmental bodies: Ministry of Labour, Family, Social Protection and Elderly Persons, Ministry of Public Finances, National Commission for Prognosis, National Agency for Employment, Ministry of Economy, Ministry of Internal Affairs, Ministry of Education, Ministry of Health, Ministry of Foreign Affairs, Ministry of Defence, Ministry of Agriculture etc.;
- employers and employers' associations;
- trade unions;
- professional associations;
- research institutes and universities: Research Institute of National Economy, Research Institute for Labour Force, Research Institute for Education, Romanian Academy, Academy for Economic Studies etc.

The three copybooks are available only in Romanian language, in printed and electronic format.

The main publication of Labour Cost Survey results is the “**Annual earnings and labour costs**”, available only in Romanian language and contains the following chapters:

- Survey methodology and organization;
- Data analysis,
- Results tables.

The publication is available for consulting purposes in the INS library and also can be bought by all interested users from the INS bookshop.

The main results are disseminated through a **press release** posted on INS web-site, both in Romanian and English language

http://www.insse.ro/cms/files/statistici/comunicate/com_anuale/costul%20fortei%20de%20munca/cfm12r.pdf.

The main results of the Labour Cost Survey are published in the **Statistical Yearbook**, which is available in printed form, on CD-ROM and on-line (www.insse.ro), both in Romanian and English language.

Also, the **national database (TEMPO)**, available on INS website, both in Romanian and English language, contains data on annual earnings and labour costs. On request, data are provided to a variety number of other users (internal and international).

4.2. Clarity

The Labour Cost Survey data are disseminated together with comprehensive and clear metadata, irrespective of the release form or user category.

The copybooks contain:

- a brief description of the survey (scope, coverage, periodicity, sample size, non-response rate),
- definitions of the main indicators,
- detailed results tables on the main indicators:
 - number of employees,
 - earnings,
 - labour costs,by economic activities (section and division level), ownership forms, legal status of the enterprises, size classes of the enterprises, regions of economic development.

The publication “**Annual earnings and labour costs**” is structured in three chapters:

- I. *Survey methodology and organization*: provides information on the survey objectives, coverage, unit of selection/observation, periodicity and reference period, sampling design, concepts and definitions of the collected and derived indicators, classifications used,
- II. *Data analysis*: contains tables, graphs and analysis of the main indicators obtained – number of employees, hourly and monthly average earnings, working time, hourly and monthly average labour cost, labour cost structure – by economic activities, ownership forms, legal status of the enterprises, size classes of the enterprises, regions of economic development.
- III. *Results tables*: contains detailed tables of the main indicators by economic activities (section level), ownership forms, legal status of the enterprises, size classes of the enterprises, and regions of economic development.

The **press release** contains the main results of the survey and comparative analysis by economic activities, gender, territorial distribution and over time. Also, methodological explanations are available and tables with detailed results.

The tables with data in the **Statistical Yearbook** are accompanied by methodological notes describing the data sources, the concepts and definitions of the indicators presented.

The **databases** are also accompanied by metadata on the released indicators, data sources, survey coverage, periodicity, sample size.

The users are informed by the INS on the publications that are to be issued over the year, through the “Catalogue of statistical products and services”, which is available on printed form, but also on-line (www.insse.ro). The catalogue contains the INS yearly publications, periodicals, quick information, electronic publications, publication in stock and statistical services.

5. COMPARABILITY

5.1. Geographical comparability

Comparability between national and European concepts on:

- ***Definition of statistical units - There is no deviation from European concepts:***
 - The **unit of selection** was the **enterprise** defined according to the communautaire rules for enterprises statistics as: „the smallest combination of legal units that is an organisational unit producing goods or services, which benefits from a certain degree of autonomy in decision-making, especially for the allocation of its current resources. An enterprise carries out one or more activities at one or more locations. An enterprise may be a sole legal unit”.
 - The sampled enterprises provided data for each local unit, thus the **observation unit** of the Labour Cost Survey was the **local unit**, in accordance with the requirements of Council Regulation no. 530/1999 concerning structural statistics on earnings and labour costs.
- ***Populations - There is no deviation from European concepts:***
 - The Romanian Business Register was designed and implemented based on the administrative files (REGIS, which is the Fiscal Register, updated annually) and statistical sources in addition (Trade Register, Balance Sheet files, VAT files, feedback from other surveys, used as consultation data sources for improving the quality of the register data).
 - According to the Council Regulations, REGIS contains the following types of statistical units: legal unit, enterprise, and local unit. All the enterprises having the main activity in the section A to S - NACE Rev.2, whatever their size (number of employees or turnover) are covered.
 - The Romanian Business Register contains all enterprises, authorities and organisations as well as their local units in Romania that carry out any economic activity irrespective of their size or if they belong to the private or public sector. There are covered the following institutional sectors:
 - Non-financial corporate and quasi-corporate enterprises
 - Central and local administration
 - Social security institutions and private non-profit institutions serving householdsIn respect to the budgetary institutions and public administration REGIS is the most complete register in Romania, based on Official Journal and the collaboration with a lot of administration institutions.
- ***Reference times - There is no deviation from European concepts:***
 - The statistics on level and composition of labour cost are produced for the 2012 calendar year, with a yearly periodicity for national purposes.
- ***Classifications - There is no deviation from European concepts:***
 - The national classification of economic activities is covered by CAEN Rev.2 fully harmonized with NACE Rev.2.
 - The size classes of enterprises correspond to the size classes described in the Council Regulation no. 530/1999 concerning structural statistics on earnings and labour costs.
- ***Definitions of variables - There is no deviations from European concepts:***

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

- The definitions of Labour Cost Survey 2008 variables were developed and adopted in accordance with European standards (Commission Regulation (EC) no 1737/2005 amending Regulation (EC) No 1726/1999 as regards the definition and transmission on labour costs), but also taking into account the national features.

5.2. Comparability over time

The Romanian Labour Cost Survey has been carrying out annually since 1994 with 1993 as reference year.

No significant changes in definitions, coverage or classifications used over the years. The improvements made from year to year refer only to the changes in variables collected and not to the content of the variables, as are presented below:

- For the period **1994 - 1998** the same type of questionnaire was used. No data on hours worked or paid hours were collected. Variable regarding the number of employees (converted into equivalent full units) was not broken down on full-time and part-time. Variables composing earnings (bonuses and grants for length in service, for shift work, for night shift, work in underground etc.) were detailed, reason for which and taking into account complaints of the enterprises, this part was afterwards simplified.
- In **1999** the chapter related to earnings composition was redesigned and the number of variables collected was reduced. Experimentally, for the first time variables on paid hours and hours actually worked were collected but only related to all employees (without any distinction by full time and part time or any other category).
- For Labour Cost Survey **2000** the questionnaire was significantly improved. Variables on the number of employees, hours worked and paid hours were broken down by full-time and part-time employees, according to the Council Regulation 530/1999 concerning structural statistics on earnings and on labour costs and Commission Regulation (EC) No 1726/1999 as regards the definition and transmission of information on labour costs. There still were some missing variables. First quality report was carried out according to the Commission Regulation (EC) No 452/2000 as regards quality evaluation on labour cost statistics.
- Labour Cost Surveys for 2001 - 2003 kept same questionnaire as for Labour Cost Survey 2000 and followed same methodology. The only changes operated from one year to another referred to the requirements of the national legislation in force.
- Labour Cost Survey **2004** was designed and carried out according to the Commission Regulation no 1726/1999. The data transmission for 2004 survey was done in accordance with the Commission Regulation (EC) no 1737/2005 amending Regulation (EC) No 1726/1999 as regards the definition and transmission on labour costs. The following *improvements* were made:
 - the breakdowns of average number of employees on full-time, part-time and in full-time equivalents were collected;
 - the breakdowns of the average number of employees, hours worked, hours paid and direct costs *by gender* were collected even if it was not required by the regulation;
 - the missing variables of *section D* were introduced in data collection: D1111 Direct remuneration and bonuses, D11111 Direct remuneration, D11112 Bonuses, D1113 Payments for days not worked, D1114 Wages and salaries in kind, D11144 Other, D1223 Payments to employees leaving the enterprise;

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

- all variables related to the apprentices were collected, being covered by the legislation now.
- Labour Cost Surveys **2008 and 2012** were designed, carried out and data were transmitted according to the Commission Regulation (EC) no 1737/2005 amending Regulation (EC) No 1726/1999 as regards the definition and transmission on labour costs. No significant changes were adopted compared with the previous survey.

6. COHERENCE

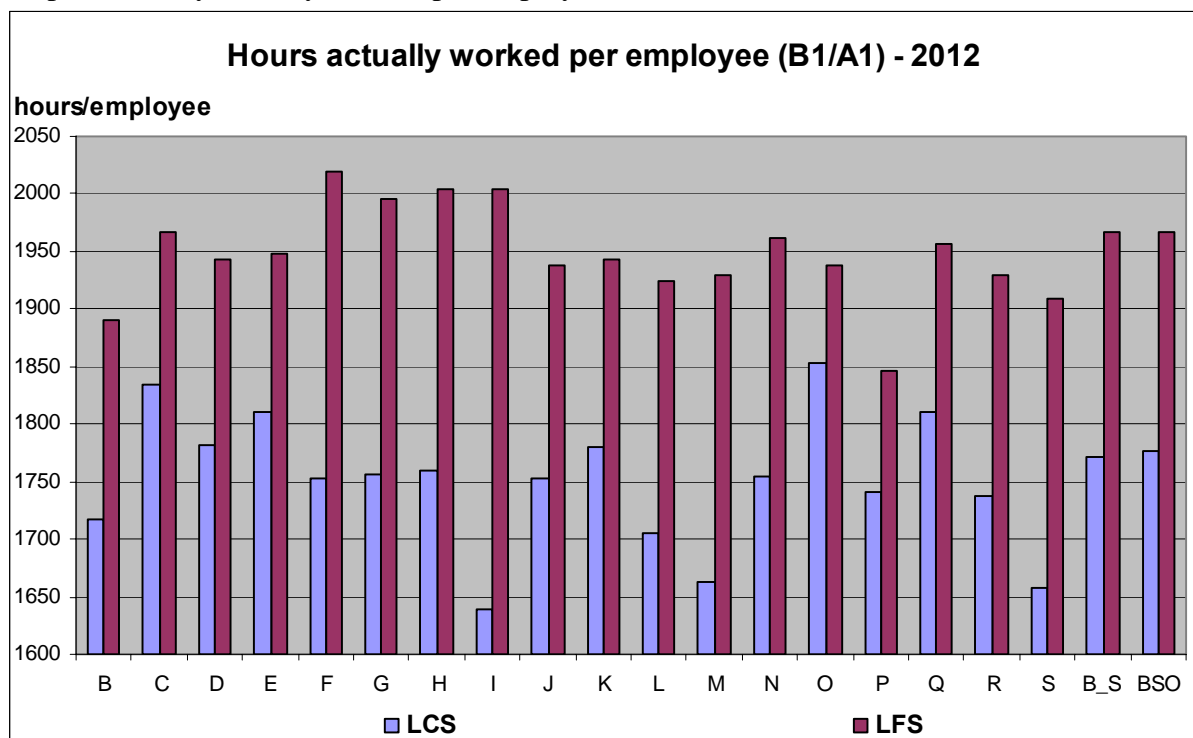
The coherence is analysed in the annex, according to the template provided by Eurostat.

Coherence with the statistics from Labour Force Survey

The comparison between the number of hours actually worked in 2012, expressed per employee (from Labour Cost Survey) and the average actual hours worked in the main job (excluding the employees that did not worked during the reference week) per year of the Labour Force Survey (LFS), expressed per employee shows differences for all NACE Rev.2 sections.

Apart from the clear difference in terms of employment definitions and survey methodology between LFS and LCS, the main reason for the discrepancies between the figures provided by the two data sources is the *proportion of informal sector and black market* in Romania, that are covered only by LFS.

Graph 1: Hourly actually worked per employee (B1/A1) – 2012: LCS vs LFS



The sections where the number of hours worked is much higher in LFS than in LCS are hotels and restaurants (section I), professional, scientific and technical activities (section M), construction (section F) and other service activities (section S), where, due to the seasonal character of those activities, the proportion of informal sector is higher. By total economy (B_S), the number of employees from LFS is about 30 percent higher than those of LCS data.

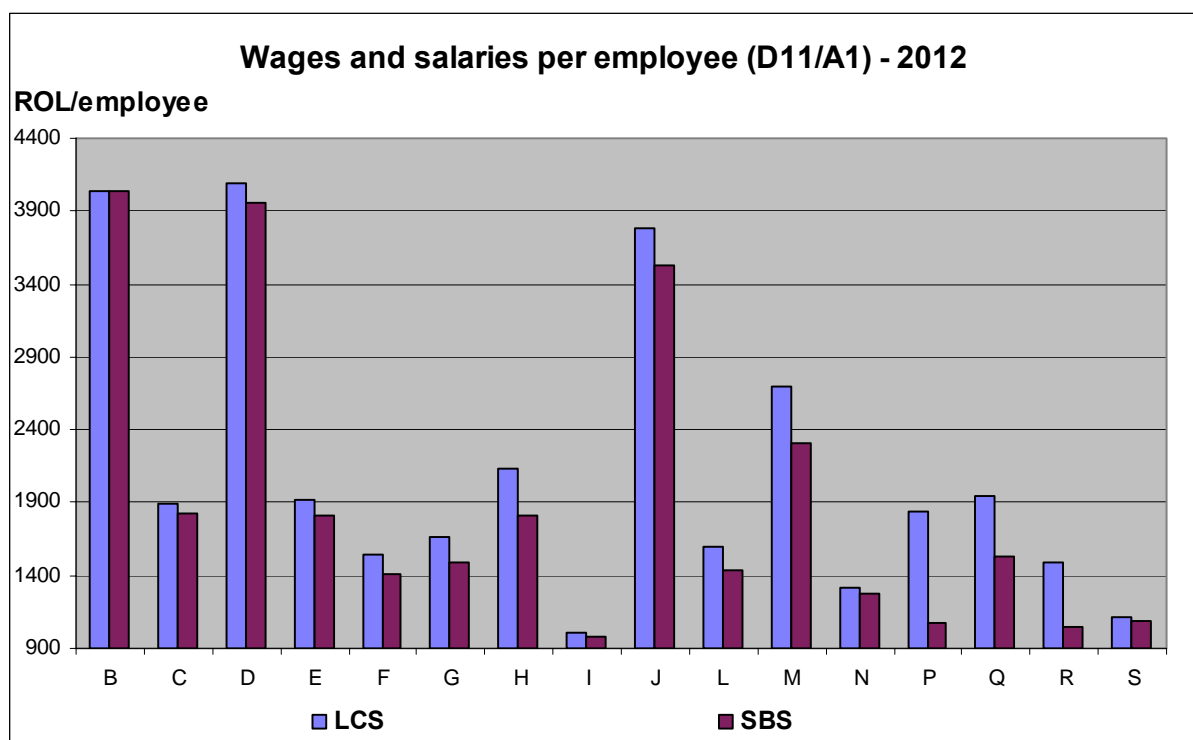
Coherence with Structural Business Statistics

Taking into account the differences of the two surveys coverage, the figures on wages and salaries per employee follows the same trends.

SBS does not cover the section financial intermediation (section K), public administration (section O) and covers only the private sector for education (section P), human health and social work activities (section Q), arts, entertainment and recreation (section R) and activities of membership organisation (division 94 belonging to section S).

In SBS the number of persons employed is defined as the total number of persons who work in the observation unit (inclusive of working proprietors, partners working regularly in the unit and unpaid family workers working regularly in the unit).

Graph 2: Wages and salaries per employee (D11/A1) – 2012: LCS vs. SBS



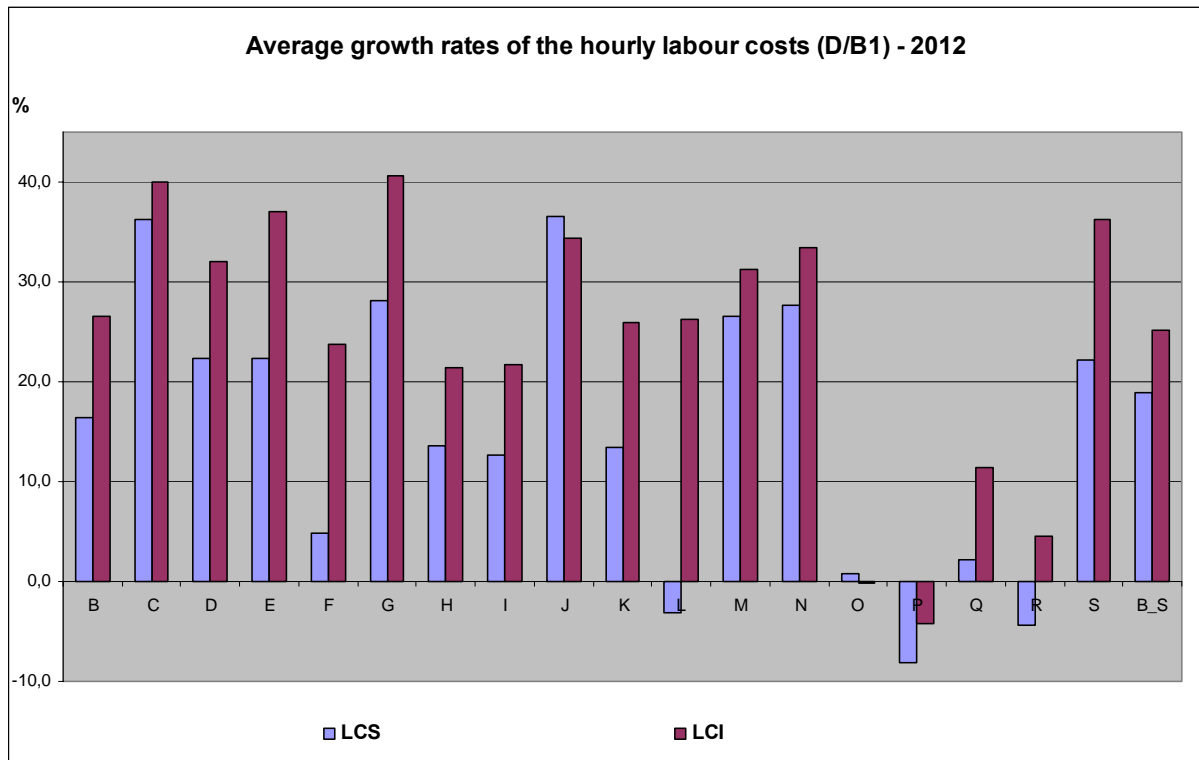
Furthermore, in SBS special procedure for weighting scheme is done, namely calibration with the updated Business Register (REGIS). This procedure it is not possible to be applied to LCS due to the fact that the results are disseminated before REGIS is updated with the information related to the survey reference year.

Coherence with Labour Cost Index

The comparison between the average annual growth rate of the hourly labour cost (D/B1) and the average annual growth rate of LCI was done by comparing year 2012 against 2008.

The differences between the two data sources are mainly due to the broader content of the total labour cost from LCS (that includes vocational training D2 and other expenditures D3).

Graph 3: Average growth rates of the hourly labour cost (D/B1) – 2012: LCS vs LCI



LCI is composed based on the results of the monthly survey on wages and salaries. According to the national methodology, on short term statistics, for a “clean” indicator on wages and salaries, the payments belonging to other pay periods, the back-dated pay arrears that do not refer to the current year are excluded. These payments are included in the annual wages and salaries that are reflected in the LCS figures.

Coherence with National Accounts

The comparisons between the compensation of employees, expressed per employee, show some differences between Labour Cost Survey and National Account, and are due to the different coverage.

Main data sources for the National Accounts, by NACE sections are:

- Accounting statements of financial and non-financial units,
- Accounting statements of non-profit institutions serving households,
- Execution of state budget,
- Structural Business Survey ,
- Household Budget Survey,
- Labour Force Survey (for employment data only),
- Declaration on global income of self-employed persons and family associations,
- Balance of payments.

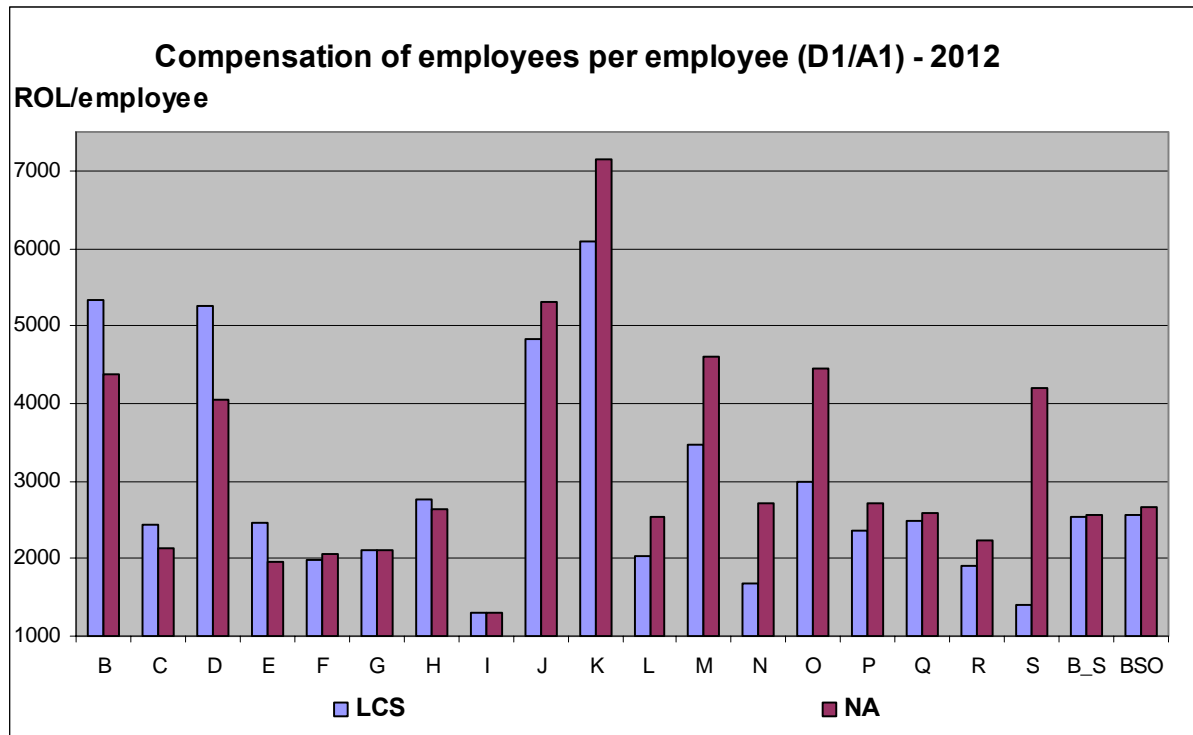
NA estimates also the shadow economy that is not covered by LCS. Also, NA includes armed forces and similar staff. Thus, variable D1 in NA comprises as payments in kind also the meals, uniforms (militaries) and business travel expenses.

NA includes persons with other contract forms such as: civil conventions (special type of working arrangement – for performing specific services – but the staff involved is not

NATIONAL INSTITUTE OF STATISTICS - ROMANIA
Quality Report On Labour Cost Survey 2012

considered as employees according to the national legislation, although the payment is done quite in similar way), author ownership rights and free lancers.

Graph 4: Compensation of employees per employee (D1/B1) – 2012: LCS vs NA



NA – provisional data