

Assessment of the labour productivity developments in Lithuania. Remuneration National Productivity Board

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Remuneration¹ and its developments in the European Union (EU) and Lithuania

COVID-19 did not put a stop to remuneration growth in EU 27. Remuneration growth in Lithuanian was the highest in 2020, reaching 12.3 %. Greece was the only EU country in which remuneration growth was negative.

Convergence of remuneration is ongoing, but slow. The average remuneration of the CEE countries grew faster in 2020 than that of the WE countries. In 2020, the average remuneration per hour worked in Lithuania rose to EUR 9.7, 48 % of the EU 27 average. Convergence of remuneration in terms of purchasing power standard (PPS) is more significant, amounting to around 70 % of the EU 27 average, although Lithuania ranked 20th amongst the EU 27 countries.

In 2020, convergence of remuneration was slightly lower in Lithuania than convergence of labour productivity. Convergence of nominal remuneration and real productivity was 50 % and 46 % of the EU 27 average respectively in that year.

In Lithuania, the increase in remuneration has been robust in recent years, but even larger labour productivity growth is needed to maintain a sustained, rapid increase in remuneration and convergence with the most developed EU Member States.

It also makes sense to increase the development of higher technology-based manufacturing / service activities to reduce the need to compete in low-cost product and service markets.

Remuneration per hour worked: Who earns the most in EU 27 Member States?

In 2020, Luxembourg had the highest annual average remuneration per hour worked among the EU 27 countries, amounting to EUR 47.6.

In 2020, the annual average remuneration per hour worked in Lithuania amounted to EUR 9.7 or 43 % of the EU 27 average (see Figure 1). Remuneration in Lithuania was equal to the average remuneration per hour worked of the CEE countries².

The average remuneration for the WE countries amounted to EUR 25.27, or 131 % of the EU 27 average, and was closer to the average for the leading EU Member States in terms of labour productivity rather than that of CEE countries³, which amounted to around 48 % of the EU 27 average remuneration. In 2020, the leading EU Member States in terms of labour productivity (Luxembourg, Ireland and Denmark) paid EUR 38 per hour worked, 186 % above the EU 27 average in the period 2004–2020 (see Figure 1).

The same trends are seen when assessing remuneration in terms of purchasing power standard (PPS). The main difference is that, in terms of PPS, remuneration in Lithuania (EUR 14) is also significantly higher than either nominal (EUR 9.7) or real (EUR 8.5) remuneration, amounting to 70 % of the EU 27 average (see Figure 2).

In 2020, the annual average remuneration in terms of PPS per hour worked in Lithuania was EUR 14, or 70 % of the EU 27 average.

¹ Remuneration of employees means the total remuneration, in cash or in kind, payable by an employer to an employee in return for work done by the latter during an accounting period. The remuneration of employees consists of wages and salaries and employers' social contributions (Statistics Lithuania).

² Central and Eastern European countries (Bulgaria, Czechia, Estonia, Croatia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovenia and Slovakia) or 'CEE'.

³ Western European countries (Belgium, Denmark, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal, Finland, Sweden, and the United Kingdom) or 'WE'.

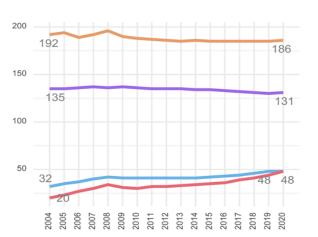
Fig. 1 Fig. 2

Remuneration (in terms of PPS) compared with the EU 27 (%)

CEE – Leaders – LT – WE

Nominal remuneration compared with the EU 27 average

CEE – Leaders – LT – WE



Source: Eurostat; Ministry of the Economy and innovations (MEI) calculations.

160 159 120 120 120 115 80 52 40 40 40 52 40 40 50 67 40 67 67 67 67

Source: Eurostat; MEI calculations.

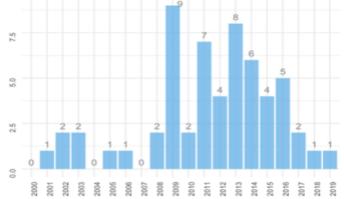
Changes in remuneration and convergence

Remuneration growth in Lithuania was the highest in 2020, reaching 12.3 %. Greece was the only country with negative remuneration growth in 2020, whereas three EU Member States (France, Hungary, Malta) had seen negative remuneration growth in 2019 (see Figure 3). Greece (8 times) and Sweden (6 times) were most often the countries with negative remuneration growth in EU 27 between 2000 and 2020.

Fig. 3

Number of EU Member States showing negative remuneration

growth



Source: Eurostat; MEI calculations

Despite the scale of the COVID-19 pandemic and the lockdown rules in EU Member States, overall wage growth remained positive. This differed from the situation in the 2009 global recession or subsequent periods (2013–2014). The numbers of countries with negative remuneration trends were the highest in 2009 and 2013:

- in 2009, owing to the global recession;
- in 2013 Cyprus, Czech Republic, Greece, Spain, Hungary, Ireland, Slovenia and the United Kingdom.

Most of them were countries in which recovery from the 2009 global recession was slow: Greece, Cyprus, Spain, Hungary, and Slovenia. In 2014, these countries had still not managed to exceed the level of real GDP for 2009

In general, remuneration has grown faster in EU Member States with a higher labour productivity growth (see Table 1).

Table 1

Changes in remuneration in the EU 27 countries and groups of countries (%)

Title	Average change 2009–2020
Leading EU Member States in terms of labour productivity	2.4 %
25% < x < 75%	2.7 %
< 10%	7.8 %
EU 27	2.6 %
Lithuania	6.6 %
Euro area	2.2 %
WE countries	2.2 %
CEE countries	4.2 %

Average growth in a given group of countries is calculated as the change in average labour productivity within the group. The average change in labour productivity for groups of countries is calculated below as the arithmetic average of changes in labour productivity in the countries that make up the group (e.g. the leading countries).

During the COVID-19 pandemic, remuneration growth continued to follow similar trends:

- In 2020, average 5-year moving remuneration growth was strongest in the group of countries with the lowest labour productivity (countries in the first decile in terms of labour productivity (< 10%)) and the 5-year moving average was 8.6 %.
- In 2020, wages did grow in the group of countries with the lowest labour productivity, but growth was lower than in other groups of countries. In countries with average labour productivity (countries with labour productivity in quartiles 2 and 3, 25 % <= x < 75 %), the average change in hours worked per person employed was 7.3 %. The leading EU Member States in terms of labour productivity and the group of Western European countries showed a similar level of growth (5 % and 5.3 % respectively).

In 2020, labour remuneration per hour in Lithuania grew by 12.3 %, more than the average changes in remuneration per hour worked for the CEE countries (see Figure 4).

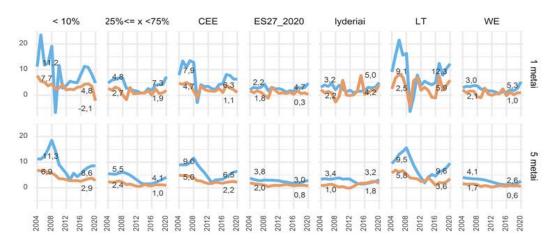
In Lithuania, average remuneration growth was one of the highest in the EU, both in 1-year and 5-year terms. Lithuania was also among the Member States with faster labour productivity growth (5.9 % in 2020).

On the positive side, real remuneration convergence is keeping pace with or even outpacing nominal remuneration convergence. However, in the longer term, with free movement of labour and capital, nominal convergence will continue, and labour productivity growth will be critical to ensuring the sustainability of real convergence. Given the high remuneration growth rates in Lithuania, it is essential to promote investment that increases labour productivity (e.g. innovation, digitalisation, smarter technologies, etc.) and to refrain in the near future from policy measures (e.g. aggressive increases in the minimum monthly wage) that would strongly stimulate wage growth without increasing productivity growth.

Fig. 4

Average changes in labour remuneration and productivity per hour worked in the EU 27 countries and groups of countries

labour productivity – investment per employee
 lyderiai – leaders

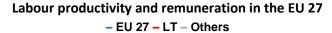


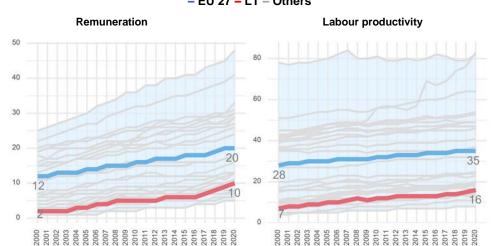
Source: Eurostat; MEI calculations

It should be noted that, while wage growth in Lithuania is strong, Lithuania remains at the bottom in terms of the level of remuneration in the EU 27, but is rising upwards: For the second year in a row (2019 and 2020), Lithuania moved one position up to 20th in 2020 (see Table 3). Lithuania is no longer in the 1 quartile of EU 27 countries with the lowest remuneration. In the period 1999–2019, Lithuania was in the bottom quartile of remuneration per hour worked 21 times.

In 2020, convergence in terms of remuneration was slightly lower in Lithuania than in terms of labour productivity. In 2019, Lithuania's labour productivity and remuneration ratio was close to the EU 27 average, amounting to 43 % and 45 % respectively, and 45 % and 50 % in 2020 (see Figure 5). Convergence of remuneration in terms of PPS was higher than convergence of labour productivity (70 % and 43 % respectively of the EU 27 average).

Fig. 5

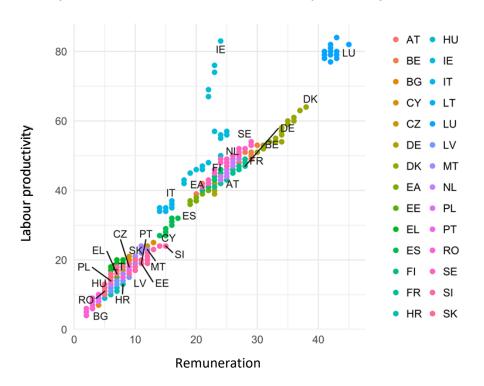




Source: Eurostat; MEI calculations

Relationship between real remuneration and labour productivity in the EU

Fig. 6
Relationship between real remuneration and labour productivity in EU 27* in 2020 in EUR



^{*} Full names of EU Member States can be found in the Annex (page 19).

Higher remuneration is associated with higher labour productivity. In 2020, the correlation between remuneration and labour productivity in EU 27 compared to the EU 27 average was 0.98 %.

Luxembourg ranked first in terms of remuneration in 2020 (see Figure 6). The top five countries with the highest remuneration (Luxembourg, Denmark, Belgium, Germany, and France) included three countries (Luxembourg, Belgium, and Denmark) in the top five in terms of labour productivity (Ireland, Luxembourg, Denmark, Sweden and Belgium).

When will Lithuania outperform EU 27 or WE countries in terms of labour remuneration?

Lithuania will only exceed the average labour remuneration of WE countries in 2045, assuming labour remuneration growth in Lithuania and the WE countries remains equal to their average growth in the period 2009–2020, i.e. 6.6 % and 2.23 % respectively.

For Lithuania to reach the level of the WE countries in 2030, an annual growth rate of 13 % is required (other things being equal, e.g. growth in the number of workers, etc.).

This represents 110 % of average growth in 2020

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Estonia, Poland and Latvia ranked 17th, 24th and 22nd respectively in 2020 in terms of labour productivity, and 16th, 25th and 21st respectively in terms of remuneration. Estonian workers earn more than Latvian and Lithuanian workers (20th), and Lithuanian workers earns more than Polish workers (see Table 3).

There is a clear trend towards higher real remuneration in countries with higher labour productivity. Bulgaria has the lowest labour productivity and remuneration, while Luxembourg has the highest labour productivity and remuneration.

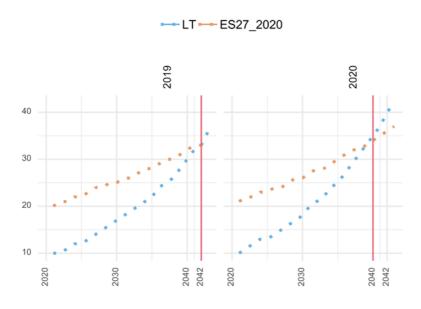
Lithuania's remuneration would be above the EU 27 average in 2040 (see Figure 7), while convergence of remuneration (in terms of PPS) with WE countries would take place in 2034 (see Figure 8).

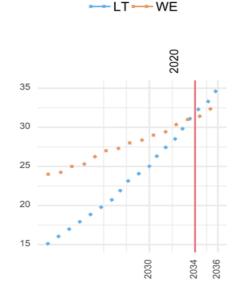
To bring Lithuania up to the EU 27 average wage:

- by 2030, Lithuania's average annual remuneration growth would have to be 10.5 %, equivalent to 90 % of the average growth in 2020;
- by 2050, Lithuania's average annual remuneration growth would have to be 5.2 %, equivalent to 42 % of average growth in 2020.

Fig. 7 Fig. 8

Convergence of remuneration with the EU 27 (year) Convergence of remuneration (in terms of PPS) with the WE countries (year)





Unit labour costs and risks

In Lithuania, remuneration growth reflects not only the country's continued growth and convergence, but also potential risks if labour productivity growth does not accelerate in the future. Nominal unit labour costs have risen in most countries since 2009, with nominal remuneration growth outpacing labour productivity growth. This was influenced by the convergence of remuneration. Remuneration in CEE countries is growing faster than in WE countries.

The fastest increase in unit labour costs is observed in the countries with the lowest labour productivity (< 10%).

Since 2009, labour productivity and remuneration have increased significantly in Lithuania compared with other groups of EU countries. Lithuania's average moving 5-year remuneration growth rates have been rising over the period 2017–2020, exceeding 9.6 % in 2020, while labour productivity growth has remained at around 3.6 %.

Accordingly, nominal unit labour costs in Lithuania grew faster. In 2020, the value of the Lithuanian nominal unit labour costs index was only lower than in the countries with the lowest labour productivity (< 10%)⁴.

Lithuania's 5-year average labour productivity growth and the difference in remuneration growth remains higher compared with the leading EU 27 Member States in terms of labour productivity or the WE countries. Remuneration growth is significantly slower in the leading EU Member States in terms of labour productivity or in the EU 27.

The increase in nominal unit labour costs in Lithuania may partly reflect the expansion of exports, with increased and persistent export markets reflecting an increase in corporate revenue and opportunities for companies to pay higher remuneration. Lithuania's export markets grew strongly in the period 2009–2020. In general, the export market shares of the countries with the lowest labour productivity or of the CEE countries have shown a stronger growth than those of the WE countries. Only the export market shares of the leading EU Member States in terms of labour productivity continued to grow more. In 2020, Lithuania was among the top five countries in terms of export growth rates. Ireland is the country with the highest growth in export market share (see Table 2).

Table 2

Growth in market share of exports of goods and services in 2020

Countries	In percentage points
Ireland	17.4
Luxembourg	9.2
Lithuania	8.3
Poland	8.0
Latvia	5.7

There is no correlation between real remuneration and changes in export markets in EU 27. In 2020, the 10-year moving correlation between real remuneration and export market changes varied across EU Member States (see Figure 15):

- strong and negative: Denmark, the Netherlands, Poland and Portugal;
- strong and positive: Germany, Greece, Ireland, Lithuania, Luxembourg, Slovenia, Slovakia;
- positive but weaker correlations were recorded in Finland, Croatia, Hungary, Sweden.

In the case of Lithuania, the correlation between real remuneration and the development of the export market share in the period 2011–2020 was 0.7, but was lower in other periods (e.g. 0.3 % in 2000–2008). This shows that remuneration growth is strongly influenced by factors other

than development of exports⁵. In addition, robust remuneration growth in the context of no sustained labour productivity gains increases risks to competitiveness. The negative correlation between remuneration and the growth of export markets in the EU 27 is confirmed by the results of a regression analysis, including a panel study.

In most countries, the sign of 10-year moving linear regression coefficients remained stable and was often negative, but the coefficients were not stable (see Figure 16). The fixed effect model for EU 27 in the period from 2009–2020 had a positive coefficient of 0.15, while Lithuania had a positive coefficient of 0.5.

This partly explains why the increase in remuneration in the period 2009–2020 did not affect competitiveness but was the result of convergence. On the other hand, if labour productivity growth remains slow or low, convergence with WE countries will slow down and competitiveness risks will increase..

⁴Similar trends are reflected in the evolution of real unit costs.

⁵ The Granger test does not indicate that market growth may explain the increase in remuneration or vice versa.

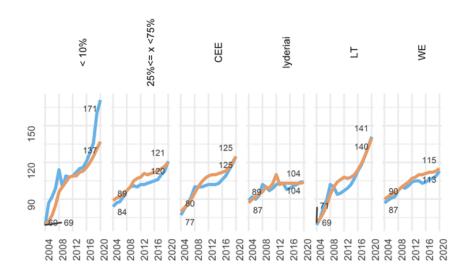
Annex 1

Unit labour cost index and change by country groups

Nominal unit labour costs in the EU, 2004–2020 (index 2009 = 100)

— 1 year — 5 years, lyderiai – leaders

Figure 9

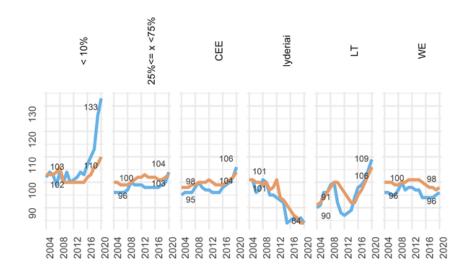


Source: Eurostat, MEI calculations.

Real unit labour costs in the EU, 2004–2020 (index 2009 = 100)

— 1 year – 5 years, lyderiai – leaders



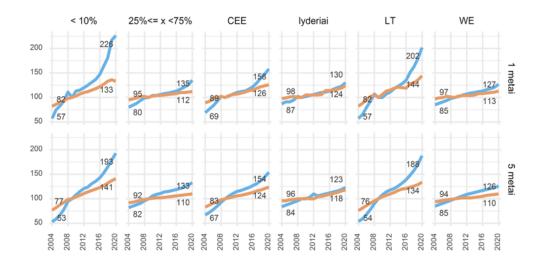


Index of remuneration and labour productivity by country

Figure 11

Remuneration and labour productivity per hour worked in the EU, 2004-2020 (index 2009 = 100)

- remuneration - labour productivity, lyderiai - leaders



Source: Eurostat, MEI calculations

Figure 12

Remuneration and labour productivity per hour worked in the EU, 2004-2020 (index 2009 = 100)

- remuneration - labour productivity, lyderiai - leaders

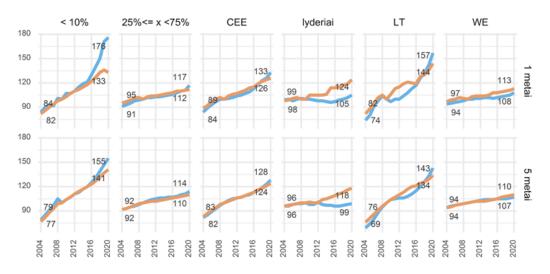
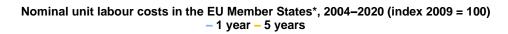
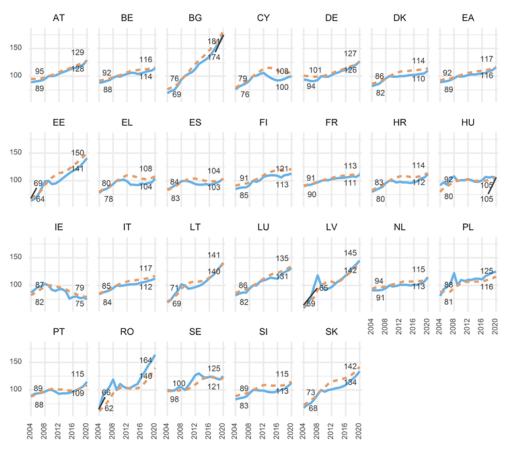


Figure 13



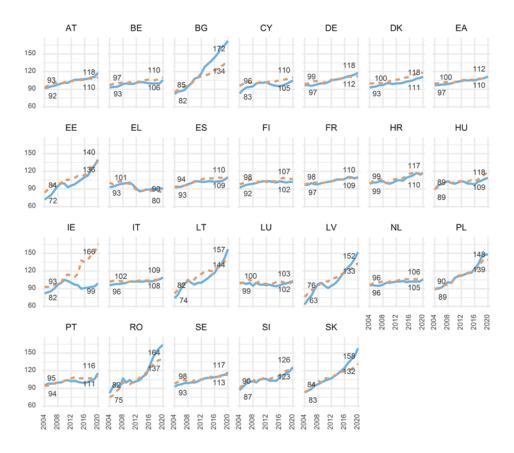


^{*-} Full names of EU Member States can be found on page 19.

Figure 14

Remuneration and labour productivity per hour worked in the EU Member States, 2004–2020 (index 2009 = 100)

— remuneration — labour productivity

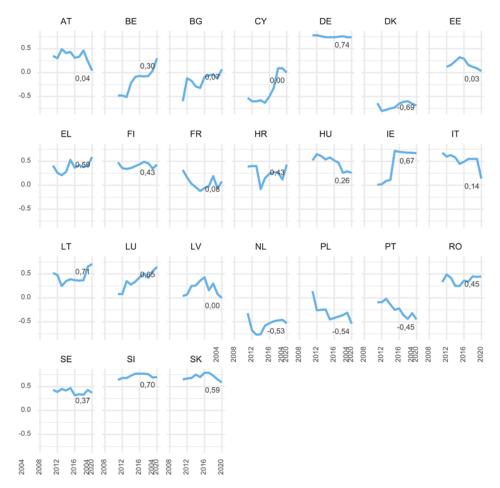


^{*-} Full names of EU Member States can be found on page 19.

Correlation between export markets and remuneration in the EU Member States

Figure 15

10-year moving correlation of changes in export markets and remuneration in the EU Member States*, 2004–2020

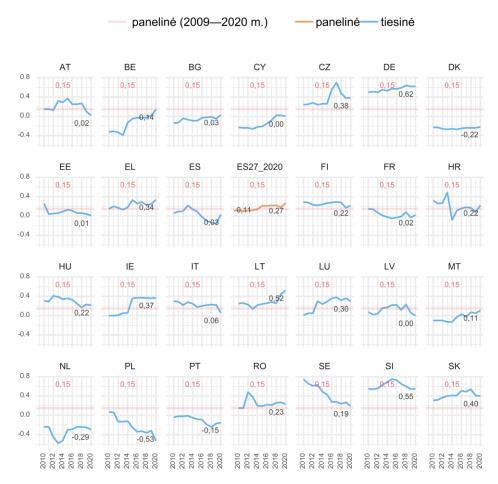


^{*-} Full names of EU Member States can be found on page 19.

Moving linear regressions and panel regression

Figure 16

10-year moving linear regressions and panel regression in the EU Member States, 2009–2020 (Key: panelinė = panel regression; tiesinė = linear regression)

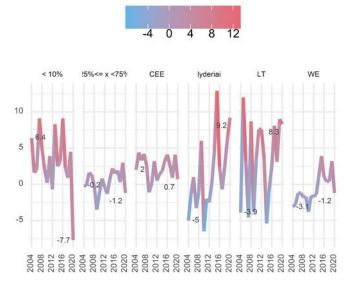


^{*-} Full names of EU Member States can be found on page 19.

Growth shares of export markets

Figure 17

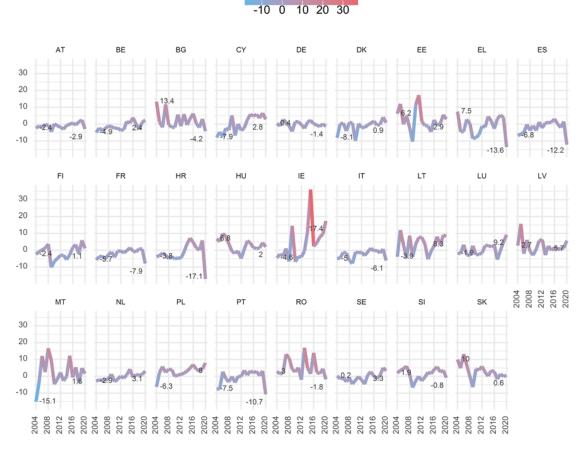
Growth in export market shares in the EU 2004-2020 (%)



Source: Eurostat; MEI calculations.

Figure 18

Growth in export market shares in the EU Member States* 2004–2020 (%)



^{*}Full names of EU Member States can be found on page 19.

Table 3

EU Member States* ranked by remuneration per hour worked, 1999–2020

Year / Ranking	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1	LU																					
2	DK																					
3	BE																					
4	DE	DE	FR	FR	NL	NL	FR	FR	FR	NL	NL	FR	FR	SE	SE	SE	FR	FR	FR	FR	DE	DE
5	FR	NL	NL	NL	FR	FR	NL	NL	NL	FR	FR	NL	NL	FR	FR	FR	SE	SE	SE	DE	FR	FR
6	NL	FR	DE	DE	DE	DE	DE	SE	SE	SE	FI	SE	SE	NL	NL	NL	NL	DE	DE	NL	NL	NL
7	SE	DE	FI	FI	DE	FI	FI	FI	FI	DE	DE	NL	NL	SE	SE	SE						
8	FI	DE	DE	IE	DE	DE	DE	DE	FI	FI	FI	FI	FI	FI	AT							
9	AT	AT	AT	AT	AT	IE	IE	IE	IE	IE	SE	IE	IE	IE	AT	FI						
10	IE	ΙE	IE	IE	IE	AT	ΙE	ΙE	IE	IE	IE	ΙE	ΙE	IE								
11	IT	ES	IT	IT	IT	IT	IT	ES														
12	ES	IT	ES	ES	ES	ES	ES	IT	IT	ΙΤ	IT	IT	ΙΤ	IT	ΙΤ	IT						
13	SI	CY	SI	CY	CY	CY	CY	CY	SI	SI	CY	CY	CY	CY	CY	CY	SI	SI	SI	SI	SI	SI
14	CY	SI	CY	SI	SI	SI	SI	SI	CY	CY	SI	SI	SI	SI	SI	SI	CY	CY	CY	CY	CY	CY
15	PT	MT	MT	MT	MT	MT	МТ	MT	EE	МТ												
16	MT	MT	MT	MT	MT	MT	EL	EL	EL	EL	EL	EL	MT	PT	PT	PT	PT	PT	PT	EE	MT	EE
17	EL	EL	EL	EL	EL	EL	MT	MT	MT	MT	MT	MT	EL	CZ	EE	EE	EE	EE	EE	PT	CZ	PT
18	HR	HU	CZ	CZ	CZ	CZ	EL	CZ	SK	CZ	CZ	CZ	CZ	PT	CZ							
19	CZ	HU	HU	HU	HU	HU	HU	CZ	HR	HU	EE	HR	HR	EE	HR	CZ	SK	SK	SK	SK	SK	SK
20	HU	CZ	CZ	CZ	CZ	CZ	CZ	HU	CZ	HR	HR	EE	EE	HR	SK	HR	HR	HR	HR	HR	LV	LT
21	PL	PL	PL	PL	SK	EE	EE	EE	EE	EE	SK	SK	SK	SK	EL	EL	EL	LV	LV	LV	LT	LV
22	SK	SK	EE	EE	EE	SK	SK	SK	SK	SK	HU	HU	HU	HU	HU	HU	LV	EL	LT	LT	HR	HR
23	LT	EE	SK	SK	PL	LT	LT	LT	LV	LV	LV	LT	LT	LT	LT	LV	HU	LT	EL	HU	HU	HU
24	LV	LT	LT	LT	LT	PL	PL	LV	LT	LT	LT	LV	LV	LV	LV	LT	LT	HU	HU	EL	EL	EL
25	BG	LV	LV	LV	LV	LV	LV	PL														
26	RO	BG	BG	BG	BG	RO																
27	n/d	RO	RO	RO	RO	BG																

Source: MEI calculations.

^{*} Full names of EU Member States can be found on page 19.

Table 4

EU Member States* real remuneration per hour worked, 1999–2020 (EUR)

Year / Coun try	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AT	14.9	15.3	15.6	16.0	16.3	16.6	17.1	17.8	18.5	19.2	20.0	20.3	20.7	21.7	22.4	23.0	23.8	24.2	24.8	25.6	26.2	28.6
BE	19.4	19.7	20.6	21.3	21.7	22.3	22.8	23.5	24.3	25.4	25.9	26.1	26.7	27.5	28.2	28.5	28.6	28.8	29.3	29.7	30.4	32.6
BG	0.9	1.0	1.1	1.1	1.2	1.3	1.4	1.5	1.7	1.9	2.1	2.3	2.5	2.7	3.0	3.1	3.3	3.5	3.8	4.3	4.6	5.0
CY	6.6	7.1	7.3	7.8	8.2	8.7	9.6	10.3	10.6	11.1	12.0	12.3	12.7	12.9	12.4	11.9	11.7	11.5	11.9	12.2	12.7	13.1
CZ	2.6	2.8	3.4	4.0	4.1	4.4	5.0	5.6	6.2	7.2	6.7	7.1	7.5	7.6	7.5	7.2	7.6	7.9	8.7	9.7	10.4	10.9
DE	18.5	19.1	19.6	19.9	20.3	20.3	20.4	20.3	20.6	21.2	21.9	22.1	22.8	23.7	24.4	25.1	25.9	26.6	27.5	28.5	29.6	31.1
DK	21.5	22.0	22.9	23.9	24.8	25.6	26.6	27.5	29.0	30.2	31.4	32.3	32.4	33.3	33.8	34.6	35.3	35.8	36.7	37.9	38.8	40.7
EA	14.9	15.4	15.5	16.0	16.4	16.7	17.1	17.5	17.8	18.5	18.8	19.2	19.5	20.0	20.4	20.6	20.8	21.1	21.7	22.1	22.7	24.0
EE	NA	2.4	2.7	3.0	3.2	3.6	4.0	4.6	5.7	6.5	6.7	6.7	6.6	7.1	7.6	8.1	8.5	9.0	9.5	10.8	11.8	12.7
EL	4.7	4.8	5.2	5.8	6.3	6.7	6.9	7.3	7.7	8.1	8.4	8.4	8.0	7.5	6.9	6.8	7.0	6.9	7.0	6.8	7.1	7.0
ES	10.4	10.8	11.1	11.5	11.9	12.3	12.8	13.4	14.1	15.0	15.6	15.8	15.8	15.5	15.5	15.6	15.7	15.7	16.0	16.2	16.8	17.7
EU27	11.1	11.6	12.1	12.7	13.0	13.3	13.7	14.1	14.5	15.2	15.4	15.9	16.3	16.7	17.1	17.3	17.6	17.9	18.4	19.0	19.5	20.4
FI	15.4	16.1	16.9	17.3	17.8	18.4	19.2	19.9	20.6	21.5	22.1	22.5	23.3	24.1	24.6	24.8	25.2	25.5	25.5	25.9	26.3	26.8
FR	18.1	18.8	19.7	20.8	21.4	21.8	22.4	23.4	23.6	24.1	24.7	25.2	25.6	26.1	26.7	27.2	27.4	27.7	28.5	28.9	28.7	30.1
HR	3.8	4.0	4.2	4.7	5.0	5.3	5.6	5.9	6.3	6.7	6.6	6.7	6.8	7.0	7.1	6.9	7.2	7.5	7.7	8.2	8.2	8.2
HU	2.5	2.9	3.4	4.1	4.4	4.9	5.6	5.6	6.3	6.8	6.1	6.2	6.4	6.4	6.4	6.1	6.3	6.3	6.8	7.1	7.5	7.5
IE	11.7	12.8	13.9	14.8	16.0	16.9	17.9	18.9	20.0	20.8	20.9	21.5	21.5	21.8	21.4	21.4	21.8	22.5	23.2	23.8	24.9	25.9
IT	10.4	10.7	11.2	11.6	12.0	12.3	12.8	13.1	13.4	14.0	14.3	14.6	14.8	15.0	15.2	15.3	15.5	15.6	15.8	16.2	16.5	17.3
LT	1.7	1.9	2.1	2.3	2.5	2.7	3.1	3.8	4.4	5.1	4.8	4.8	5.2	5.4	5.6	5.9	6.2	6.5	7.3	7.8	8.7	9.7
LU	23.8	25.2	26.2	27.4	27.7	28.7	30.3	31.7	32.7	33.6	35.5	36.1	37.6	38.2	39.6	40.2	40.7	41.0	42.6	43.8	44.7	47.6
LV	1.5	1.8	1.9	1.9	2.0	2.3	2.7	3.3	4.6	5.6	5.0	4.7	4.8	5.3	5.5	5.9	6.4	6.9	7.5	8.1	8.9	9.6
MT	5.4	5.8	6.4	6.4	6.6	6.9	6.8	7.1	7.4	7.6	7.8	8.2	8.8	9.2	9.5	9.9	10.6	10.7	11.4	11.6	11.5	12.7
NL	17.6	18.9	19.7	20.7	21.6	21.8	22.2	22.5	23.2	24.2	24.9	25.0	25.4	26.0	26.3	26.4	26.3	26.5	26.8	27.4	28.2	30.0
PL	2.2	2.5	3.0	3.0	2.7	2.7	3.1	3.3	3.7	4.3	3.7	4.3	4.4	4.6	4.7	4.8	4.9	4.9	5.4	6.0	6.4	6.4
PT	6.1	6.4	6.7	7.0	7.2	7.5	7.9	8.2	8.4	8.7	9.0	9.2	9.1	8.9	9.2	9.0	9.1	9.3	9.6	9.9	10.4	11.5
RO	0.6	0.8	0.9	1.1	1.1	1.3	1.8	2.2	2.5	3.1	2.6	2.8	2.8	2.8	3.0	3.2	3.4	3.9	4.5	5.1	5.6	5.9
SE	15.9	18.0	17.5	18.5	19.5	20.0	20.3	21.0	22.0	22.0	20.5	23.0	25.1	27.1	28.0	27.3	27.3	27.5	27.9	27.2	27.4	29.0
SI	6.7	7.1	7.6	7.8	8.1	8.5	9.3	9.9	10.7	11.3	11.4	11.7	12.0	12.0	11.7	11.7	11.9	12.6	13.2	14.0	14.7	15.8

Source: MEI calculations.

^{*-} Full names of EU Member States can be found on page 19.

Table 5

EU Member States* ranked by real remuneration per hour worked, 1999–2020

Year /	4000	2000	2004	2002	2002	2004	2005	2000	2007	2000	2000	2040	2044	2042	2042	2014	2045	2046	2047	2040	2040	2020
Ranking	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1	LU																					
2	DK																					
3	BE	FR	FR	SE	BE																	
4	NL	NL	NL	FR	NL	FR	FR	FR	FR	FR	NL	FR	BE	BE	BE	SE						
5	FR	FR	FR	NL	FR	NL	NL	NL	SE	NL	FR	NL	NL	SE	FR	FR						
6	DE	DE	DE	DE	DE	SE	SE	SE	NL	SE	SE	ΙE	SE	NL	NL	NL	NL	NL	DE	DE	DE	DE
7	FI	FI	SE	SE	SE	DE	FI	DE	DE	DE	NL	NL	NL	NL								
8	AT	SE	FI	FI	FI	FI	DE	DE	DE	DE	IE	SE	IE	DE	DE	FI	FI	FI	FI	FI	FI	AT
9	SE	AT	IE	IE	DE	DE	DE	IE	AT	FI												
10	IE	ΙE	IE	ΙE	IE	ΙE	IE	IE	AT	AT	AT	AT	AT	AT	ΙE	IE	IE	ΙE	IE	ΙE	ΙE	IE
11	ES	ES	ES	IT	ES																	
12	IT	IT	IT	ES	ΙΤ	IT	ΙΤ	IT	IT	IT	IT	ΙΤ	IT	IT	IT	IT						
13	SI	SI	SI	CY	CY	CY	CY	CY	SI	SI	CY	CY	CY	CY	CY	SI						
14	CY	CY	CY	SI	SI	SI	SI	SI	CY	CY	SI	SI	SI	SI	SI	CY						
15	PT	PT	PT	PT	PT	МТ	PT	PT	PT	PT	PT	PT	МТ	МТ	МТ	MT	МТ	МТ	МТ	МТ	MT	МТ
16	HR	MT	MT	MT	MT	PT	MT	MT	MT	MT	MT	MT	PT	EE	EE	EE						
17	EL	HR	EL	EE	EE	EL	EE	EE	EE	EE	EE	EE	PT	PT	PT							
18	SK	EL	HR	HR	HR	HR	HR	HR	EE	EE	EL	EL	EE	CZ	CZ	CZ	CZ	SK	SK	SK	SK	SK
19	cz	SK	CZ	CZ	CZ	CZ	CZ	CZ	HR	cz	cz	cz	cz	EL	SK	sĸ	sĸ	cz	cz	cz	cz	cz
20	HU	EE	CZ	HR	LV	LV																
21	LT	cz	SK	SK	SK	HU	HU	HU	HU	HU	sĸ	sĸ	sk	sĸ	EL	EL	EL	EL	LV	LV	LT	LT
22	PL	HU	HU	HU	HU	SK	SK	SK	SK	SK	HU	HU	HU	HU	HU	HU	LV	LV	EL	LT	HR	HR
23	LV	PL	PL	PL	LT	LT	LT	LT	LT	LT	LV	LV	LT		LT	LV	HU	LT		EL		EL
	BG													LT					LT		EL	
24		LT	LT	LT	PL	PL	LV	LV	LV	LV	LT	LT	LV	LV	LV	LT	LT	HU	HU	HU	HU	HU
25	RO	LV	LV	LV	LV	LV	PL															
26	n/d	RO																				
27	n/d	BG																				

Source: MEI calculations.

^{*-} Full names of EU Member States can be found on page 19.

Table 6

Real remuneration per hour worked in EU Member States*, 1999–2020 (EUR)

Year / Country	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AT	19.7	19.9	19.9	20.2	20.3	20.4	20.6	21.1	21.4	21.8	22.3	22.4	22.5	23.1	23.5	23.5	23.8	23.8	24.1	24.4	24.6	26.2
BE	25.3	25.2	25.8	26.3	26.3	26.4	26.6	26.7	27.1	27.9	28.3	28.0	28.2	28.5	28.8	28.8	28.6	28.2	28.2	28.3	28.4	30.0
BG	1.7	1.8	1.8	1.9	2.0	2.0	2.0	2.1	2.1	2.3	2.4	2.6	2.6	2.8	3.1	3.2	3.3	3.4	3.6	3.9	4.0	4.1
CY	8.4	8.8	8.8	9.5	9.8	10.1	10.9	11.4	11.4	11.6	12.2	12.3	12.3	12.4	12.0	11.8	11.7	11.6	11.8	12.1	12.4	12.8
CZ	4.5	4.7	5.1	5.3	5.6	5.9	6.2	6.6	6.8	7.0	6.7	7.0	7.2	7.4	7.4	7.4	7.6	7.8	8.2	8.7	8.9	9.2
DE	21.9	22.8	23.1	23.2	23.4	23.2	23.3	23.1	23.2	23.7	24.0	24.0	24.5	25.2	25.4	25.6	25.9	26.3	26.8	27.2	27.6	28.3
DK	29.9	29.8	30.3	30.8	31.5	31.8	32.2	32.6	33.5	33.3	34.4	34.2	34.2	34.3	34.5	34.8	35.3	35.6	36.0	37.0	37.6	38.2
EA	19.0	19.5	19.0	19.2	19.3	19.3	19.4	19.5	19.5	19.8	19.9	20.2	20.4	20.7	20.9	20.9	20.8	20.9	21.2	21.4	21.6	22.4
EE	NA	4.7	4.9	5.2	5.5	5.8	6.1	6.4	7.1	7.6	8.0	7.9	7.5	7.7	7.9	8.2	8.5	8.8	9.0	9.8	10.4	11.2
EL	5.7	6.0	6.2	6.8	7.1	7.3	7.3	7.5	7.7	7.8	7.9	7.9	7.6	7.2	6.7	6.8	7.0	7.0	7.1	7.0	7.2	7.1
ES	14.5	14.6	14.3	14.3	14.2	14.2	14.3	14.4	14.6	14.9	15.3	15.8	15.8	15.6	15.6	15.7	15.7	15.6	15.7	15.8	16.1	16.8
EU27	14.5	14.9	15.2	15.5	15.6	15.7	15.8	15.9	16.0	16.2	16.5	16.8	17.0	17.3	17.4	17.5	17.6	17.7	18.1	18.3	18.6	19.1
FI	20.5	21.2	21.5	21.8	22.2	22.7	23.5	24.1	24.3	24.6	24.8	25.2	25.6	25.6	25.5	25.3	25.2	25.5	25.3	25.2	25.2	25.3
FR	22.8	23.3	23.8	24.6	24.8	24.9	25.2	25.8	25.4	25.3	25.8	26.1	26.3	26.7	27.1	27.5	27.4	27.6	28.3	28.4	27.9	28.4
HR	5.9	6.1	6.0	6.3	6.5	6.6	6.7	6.7	6.8	6.8	6.6	6.6	6.7	6.9	7.0	6.9	7.2	7.4	7.5	7.7	7.6	7.8
HU	4.1	4.5	4.8	4.9	5.3	5.7	6.1	6.2	6.4	6.5	6.3	6.2	6.4	6.5	6.5	6.3	6.3	6.2	6.4	6.6	6.7	6.9
IE	18.0	18.2	18.4	18.7	19.1	19.9	20.6	20.9	22.1	23.6	24.3	25.5	25.2	24.4	23.5	23.4	21.8	22.2	22.4	22.6	22.8	24.0
IT	14.1	14.2	14.3	14.3	14.3	14.4	14.7	14.9	14.8	15.0	15.1	15.4	15.4	15.4	15.5	15.4	15.5	15.4	15.6	15.8	16.0	16.5
LT	3.3	3.1	3.3	3.5	3.8	4.0	4.3	5.0	5.3	5.6	5.4	5.3	5.4	5.4	5.7	5.9	6.2	6.4	6.9	7.2	7.7	8.5
LU	40.4	40.6	41.9	43.1	42.8	43.1	43.3	42.3	43.1	41.2	43.2	41.8	41.9	41.3	41.7	41.2	40.7	41.5	42.2	42.7	43.4	44.6
LV	2.8	2.9	3.0	3.0	3.3	3.6	4.1	4.5	5.1	5.6	5.7	5.5	5.2	5.4	5.6	6.0	6.4	6.8	7.2	7.6	8.1	8.7
MT	NA	7.8	8.2	8.1	8.6	8.9	8.6	8.8	8.9	8.9	8.9	9.1	9.7	9.9	10.1	10.3	10.6	10.6	11.1	11.0	10.7	11.7
NL	23.1	23.9	24.0	24.4	24.8	24.9	24.9	24.6	24.8	25.3	25.9	25.9	26.2	26.4	26.5	26.6	26.3	26.4	26.4	26.3	26.4	27.5
PL	3.3	3.4	3.6	3.7	3.8	3.7	3.7	3.8	4.0	4.2	4.2	4.5	4.6	4.7	4.8	4.9	4.9	5.2	5.5	5.9	6.2	6.1
PT	8.3	8.4	8.5	8.6	8.6	8.7	8.9	9.0	9.0	9.1	9.1	9.4	9.5	9.3	9.4	9.2	9.1	9.1	9.3	9.4	9.7	10.6
RO	1.5	1.8	2.0	2.2	2.3	2.4	2.7	2.9	2.7	3.2	3.0	3.1	3.0	3.0	3.1	3.3	3.4	3.8	4.2	4.5	4.7	4.9
SE	19.4	20.8	21.5	22.3	23.0	23.5	24.2	24.5	24.9	25.0	25.2	25.2	25.8	26.5	27.0	27.1	27.3	27.4	27.7	28.2	28.6	29.4
SI	8.6	9.1	9.5	9.5	9.7	10.0	10.7	11.2	11.6	11.8	11.5	12.1	12.2	12.2	11.8	11.9	11.9	12.4	12.9	13.3	13.7	14.5
SK	4.6	4.8	4.8	5.1	5.4	5.2	5.4	5.7	6.0	6.2	6.3	6.6	6.7	6.8	7.0	7.3	7.6	7.9	8.4	8.8	9.2	10.0

Source: MEI calculations.

^{*-} Full names of EU Member States can be found on page 19.

Table 7

EU Member States* ranked by remuneration per hour worked in terms of PPS, 1999–2000

Year /	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Ranking 1	LU	LU			LU		LU		LU				LU	LU		LU				LU	LU	LU
•			LU	LU		LU		LU		LU	LU	LU			LU		LU	LU	LU			
2	BE	BE 	BE	BE	DK	DK	BE	BE	BE	DK	DK	DK	DK	DK	DK							
3	NL	NL	NL	FR	NL	NL	NL	FR	NL	NL	DK	BE	BE	DK	DK	DK	BE	BE	BE	BE	BE	BE
4	DE	DE	FR	NL	FR	FR	FR	NL	FR	DK	NL	FR	NL	NL	FR	FR	FR	FR	FR	DE	DE	DE
5	FR	FR	DE	DE	DE	DE	DE	DK	DK	FR	FR	NL	FR	FR	NL	DE	DE	DE	DE	FR	FR	FR
6	DK	DE	DE	DE	DE	DE	DE	DE	DE	NL												
7	AT	AT	SE	SE	FI	IE	FI	SE	SE	AT												
8	FI	SE	AT	AT	AT	FI	FI	FI	FI	FI	SE	FI	IE	AT	AT	SE						
9	SE	FI	FI	FI	FI	AT	AT	AT	AT	AT	AT	SE	SE	FI	IE							
10	ES	ES	ES	ES	IE	IE	IE	IE	IE	IE	IE	AT	AT	IE	FI							
11	IT	IE	IE	IE	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES
12	IE	IT	IT	IT	IT	IT	SI	SI	SI	SI	IT	SI	SI	SI	SI							
13	SI	SI	SI	SI	SI	SI	IT	IT	IT	IT	SI	IT	IT	IT	IT							
14	PT	CY	MT	CY	MT	MT	CY	CY	CY	CY	CY	CY	CY	CY	CY	CY	MT	CY	MT	CZ	EE	EE
15	MT	PT	CY	МТ	CY	CY	PT	PT	PT	PT	PT	PT	MT	МТ	МТ	МТ	CY	МТ	CY	CY	cz	CZ
16	CY	MT	PT	PT	PT	PT	MT	MT	MT	MT	MT	MT	PT	HU	PT	CZ	CZ	CZ	CZ	EE	CY	MT
17	HR	HR	HR	HR	HR	HR	HU	HU	CZ	HU	HU	HU	HU	PT	HU	PT	EE	EE	EE	МТ	МТ	CY
18	EL	EL	CZ	EL	CZ	CZ	CZ	CZ	HR	CZ	CZ	CZ	CZ	CZ	CZ	EE	HR	HR	HR	HR	LT	LT
19	cz	cz	EL	CZ	EL	HU	HR	HR	HU	HR	EE	EE	HR	HR	HR	sĸ	PT	PT	PT	LT	HR	SK
20	SK	HU	HU	HU	HU	EL	EL	EL	EL	EE	HR	SK	SK	EE	EE	HR	SK	SK	LT	SK	SK	PT
21	HU	sĸ	sĸ	sĸ	SK	SK	sĸ	sĸ	EE	EL	EL	HR	EE	sĸ	sĸ	HU	HU	HU	sĸ	PT	PT	LV
22	PL	PL	PL	PL	EE	EE	EE	EE	SK	SK	SK	EL	LT	LT	LT	LT	LT	LT	HU	LV	LV	HR
23	LT	EE	EE	EE	PL	PL	LT	LT	LT	LT	LT	LT	EL	EL	PL	LV	LV	LV	LV	HU	HU	HU
24	LV	LT	LT	LT	LT	LT	PL	PL	LV	LV	LV	LV	PL	PL	LV	PL	PL	PL	PL	PL	RO	RO
25	BG	LV	PL	PL	PL	PL	LV	LV	EL	EL	EL	EL	RO	RO	PL	PL						
26	RO	BG	BG	BG	BG	BG	RO	RO	RO	RO	RO	RO	RO	RO	BG	BG	BG	RO	EL	BG	BG	BG
27	n/d	RO	RO	RO	RO	RO	BG	BG	BG	BG	BG	BG	BG	BG	RO	RO	RO	BG	BG	EL	EL	EL

Source: MEI calculations.

n/d – no data available.

^{*-} Full names of EU Member States can be found on page 19.

Table 8
EU Member States* ranked by remuneration per hour worked in terms of PPS, 1999–2000 (EUR)

Year /	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Country	13.5	14.0	14.0	14.5	15.1	15.4	15.9	16.5	16.8	17.4	17.9	18.3	18.6	19.7	20.3	20.6	21.4	21.6	22.0	22.7	23.1	25.0
BE	17.4	18.2	19.1	20.0	20.3	20.5	21.0	21.3	21.8	22.7	23.0	23.6	23.9	24.7	25.2	25.5	25.7	25.6	25.9	26.4	26.9	29.0
BG	2.7	2.9	3.1	3.2	3.4	3.4	3.7	3.7	4.0	4.3	4.6	5.1	5.2	5.7	6.1	6.6	6.8	7.2	7.6	8.3	8.7	9.3
CY	7.6	8.0	8.3	8.8	9.2	9.6	10.7	11.3	12.0	12.4	13.2	13.3	13.5	13.5	13.0	12.6	12.7	12.9	13.2	13.6	14.1	14.5
CZ	5.6	5.9	6.6	7.0	7.6	8.0	8.4	8.8	9.5	9.9	9.8	10.0	10.3	10.6	10.9	11.2	11.6	11.8	12.7	13.6	14.3	15.2
DE	16.2	16.8	17.4	17.9	18.6	18.9	19.2	19.1	19.4	20.0	20.4	20.8	21.5	22.3	22.7	23.4	23.9	24.6	25.4	26.2	26.8	27.9
DK	15.2	15.7	16.2	17.0	17.5	18.4	18.9	19.7	20.9	22.0	22.8	24.0	24.1	24.2	24.7	25.2	25.9	26.2	27.3	28.3	29.3	30.7
EA	14.0	14.6	14.7	15.2	15.5	15.7	16.2	16.6	17.0	17.6	17.8	18.2	18.6	19.0	19.4	19.6	19.8	20.1	20.6	21.1	21.6	22.7
EE	NA	4.3	4.5	5.0	5.5	5.9	6.5	7.0	8.2	9.2	9.7	9.9	9.7	10.1	10.5	11.1	11.3	11.8	12.2	13.5	14.5	16.0
EL	5.6	5.9	6.4	7.2	7.6	7.9	7.9	8.3	8.5	8.9	9.1	8.8	8.4	8.1	7.9	8.0	8.3	8.1	8.3	8.2	8.6	8.6
ES	11.7	12.1	12.3	12.7	12.8	13.1	13.6	14.5	15.2	16.0	16.3	16.5	16.5	16.5	16.6	16.8	17.0	16.9	17.4	17.4	18.0	19.2
EU27	11.1	11.6	12.1	12.7	13.0	13.3	13.7	14.1	14.5	15.2	15.4	15.9	16.3	16.7	17.1	17.3	17.6	17.9	18.4	19.0	19.5	20.4
FI	13.0	13.6	14.0	14.2	14.6	15.5	16.0	16.6	17.4	18.3	18.6	18.9	19.4	19.6	19.6	19.6	19.9	20.1	20.3	20.6	21.0	21.3
FR	15.9	16.8	17.9	19.0	18.9	19.0	20.0	20.8	21.0	21.2	21.6	22.3	22.6	22.9	23.8	24.1	24.4	24.7	25.5	25.9	26.4	27.4
HR	6.4	6.7	6.8	7.4	7.7	8.1	8.4	8.8	9.4	9.8	9.6	9.5	10.1	10.6	10.8	10.7	11.3	11.5	11.9	12.5	12.4	12.9
ни	5.0	5.6	6.4	6.9	7.5	7.9	8.6	8.9	9.4	10.1	10.1	10.3	10.7	10.9	10.9	10.5	10.5	10.4	10.7	11.0	11.4	11.9
IE	10.7	11.3	11.9	12.4	13.1	14.0	14.5	15.3	16.5	17.1	17.5	19.2	19.2	19.5	19.0	18.8	19.3	19.6	20.1	20.4	20.8	22.1
IT	10.8	11.1	11.3	11.5	11.8	11.8	12.3	12.7	13.1	13.8	14.0	14.3	14.5	14.8	14.9	14.8	15.1	15.5	15.8	16.2	16.6	17.5
LT	3.9	3.7	4.1	4.4	5.1	5.4	5.9	6.8	7.4	8.1	7.7	8.0	8.5	8.7	9.2	9.6	9.9	10.2	11.3	11.9	12.9	14.4
LU	20.8	21.9	22.5	23.4	23.6	24.7	26.2	27.5	28.1	29.0	29.7	29.6	31.0	31.1	31.9	32.6	33.2	33.4	34.5	35.1	35.5	37.1
LV	3.1	3.3	3.5	3.6	4.0	4.4	5.0	5.4	6.4	7.5	7.3	7.3	7.2	7.6	8.0	8.6	9.3	9.9	10.6	11.2	12.1	13.3
МТ	7.6	7.8	8.5	8.5	9.3	10.0	9.8	9.9	10.3	10.3	10.3	10.8	11.4	11.7	11.9	12.2	12.7	12.8	13.4	13.5	13.3	14.9
NL	16.2	17.6	18.0	18.9	19.1	19.6	20.3	20.5	21.3	22.1	22.1	22.2	22.7	23.3	23.8	23.4	23.3	23.1	23.5	23.9	24.1	25.9
PL	4.4	4.6	5.0	5.2	5.3	5.4	5.5	5.6	5.9	6.4	6.4	7.3	7.6	7.9	8.0	8.1	8.3	8.6	9.1	9.9	10.4	10.7
PT	7.7	8.0	8.3	8.5	8.9	9.1	9.8	10.1	10.3	10.6	10.8	11.2	10.9	10.8	11.4	11.2	11.2	11.3	11.4	11.7	12.3	13.5
RO	1.8	2.2	2.5	2.8	2.9	3.4	3.8	4.4	4.4	5.6	5.3	5.8	5.7	5.8	5.9	6.2	6.5	7.7	8.8	9.6	10.5	11.1
SE	12.6	13.8	14.2	14.8	15.4	16.0	16.3	17.0	18.1	18.7	18.4	18.4	19.1	20.2	20.3	20.4	20.7	20.5	20.8	21.4	22.0	23.2
SI	8.9	9.6	10.2	10.3	10.7	11.4	12.4	13.0	13.3	13.9	13.3	13.9	14.3	14.6	14.3	14.2	14.4	15.1	15.9	16.7	17.5	19.0
SK	5.2	5.6	5.9	6.4	6.8	6.7	7.2	7.6	8.1	8.7	9.0	9.6	9.7	9.9	10.4	10.8	11.2	10.9	11.3	11.8	12.3	13.7

Source: MEI calculations.

Ireland – IE, Austria – AT, Belgium – BE, Bulgaria – BG, Czech Republic – CZ, Denmark – DK, Estonia – EE, Euro zone – EA, Greece – EL, Spain – ES, Italy – IT, United Kingdom – UK, Cyprus – CY, Croatia – HR, Latvia – LV, Poland – PL, Lithuania – LT, Luxembourg – LU, Malta – MT, Netherlands – NL, Portugal – PT, France – FR, Romania – RO, Slovakia – SK, Slovenia – SI, Finland – FI, Sweden – SE, Hungary – HU, Germany – DE.

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^{*-} The following EU Member States abbreviations are used in this assessment: