The ERICA series:

11. EMPLOYMENT AND RELATIVE LABOUR COSTS

ERICA (European Records of IFRS Consolidated Accounts) WG

European Committee of Central Balance Sheet Data Offices (ECCBSO)

October 2019

ERICA Working Group
eccbso
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(Document prepared by Ilse Rubbrecht, National Bank of Belgium)

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IMPORTANT INFORMATION ABOUT THE SOURCE USED (ERICA[1] DATABASE)

The data used in this note are obtained from publicly available financial statements of European non-financial listed groups; the data have been processed manually by CBSO statistics and accounting specialists to bring them into line with a standard European format (ERICA format). In some cases, this manual processing involves the interpretation of the original data, a constraint that readers of this document should bear in mind.

The database does not represent the total population of European non-financial groups; nevertheless, the coverage attained with ERICA (in the whole dataset of around 1,000 groups, and in ERICA+, a subset of around 200 groups with extra accounting details) on the listed European groups is well-attuned to the situation and national composition of the stock markets.

The opinions of the authors of this note do not necessarily reflect those of the national central banks to which they belong or those of the ECCBSO.

The "ERICA series" complement the annual report prepared on the ERICA database, with additional information and/or analysis on specific issues, using the full ERICA database or its subset ERICA+. In view of the specific character of the themes treated, these short notes are published separately from the annual report, on the ECCBSO webpage (www.eccbso.org).

[1] ERICA (European Records of IFRS Consolidated Accounts) is a database of the European Committee of Central Balance Sheet Data Offices.

EMPLOYMENT AND RELATIVE LABOUR COSTS

1. INTRODUCTION

This document links the field of employment to the consolidated data from non-financial groups, gathered in the ERICA database. Some basic employment-related ratios are analysed for the countries, economic sectors and group sizes available in the ERICA database. The analysis will focus on the financial year 2017, because the information on employment for consolidated groups has been entered more uniformly in the ERICA database since the accounting year 2017.

Data on employment levels in relation to consolidated data of listed non-financial groups offers the opportunity to take a look at the average labour costs at consolidated group level, enabling us to examine the distribution of group-level labour costs in different countries. In a subsequent step, the differences in group-level labour costs between countries can be decomposed within industries.

The next chapter describes the ERICA data used in the analysis. It contains an overview on the number of groups using each method of reporting their employment level. In addition, the labour costs per full time equivalent are explored by taking a closer look at the globalised averages and at the distribution by country, on the one hand, and the contribution of group size and sector of activity within that country on the other hand. Chapter 3 contains an overview of the methodology for decomposing a globalised ratio. Chapter 4 decomposes the variations in ratios between countries into sector effects. The results are summarised in chapter 5.

2. DATASET

The ERICA database contains information on the consolidated accounts of non-financial listed groups of 8 participating countries: Austria, Belgium, France, Germany, Greece, Italy, Portugal and Spain. The data relate to the country where the parent company is based. *It is important to bear in mind that ERICA groups are multinationals, so the performance of the groups belonging to a particular country does not necessarily reflect the performance of the country itself.*

The annual report on the ERICA dataset (ERICA WG 2019)[2] dedicates a chapter on the coverage of the ERICA data concerning the financial year 2017, both in terms of the absolute number of listed groups, and in terms of revenue. In terms of revenue, the coverage of the database in respect of the total population is very high for all eight countries, varying from 91% in France to 100% in Austria, Italy, Portugal and Spain.

2.1 Description of the dataset

The ERICA database contains accounting information from the maximum possible number of listed groups established in the eight participating countries. Some of those groups have a parent company whose consolidated accounts are also part of the ERICA database. The sub-groups are therefore counted twice. Since this analysis focuses on the comparison between countries, such double accounting within the same country should be avoided. This document only considers groups that are not double counted in the same country, for which the employment level is not missing and is different from zero. The database provides the consolidated data for 999 IFRS groups (see table 1), of which 940 groups record an employment level different from zero and are not double counted in the same country. 59 groups are thus omitted.

TABLE 1 NUMBER OF GROUPS IN THE ANALYSIS POPULATION FOR 2017

COUNTRY	*TOTAL ERICA-POPULATION*	*TOTAL POPULATION* · *EXCLUDING COUNTRY DOUBLES* · *EXCLUDING SECTOR=" "* · *WITH EMPLOYMENT ≠ 0*
Austria	44	42
Belgium	79	72
France	297	284
Germany	183	179
Greece	50	49
Italy	196	170
Portugal	39	36
Spain	111	108
TOTAL	**999**	**940**

Source: ERICA database, static sample for financial year 2017

[2] This is the analysis: "European non-financial listed groups: analysis of 2017 data", ECCBSO, February 2019

Each group is classified in one of the following sectors, according to the NACE code of the group's main activity (% in terms of number of groups):

- Construction (NACE codes 41 to 43) represents 7% of the population considered
- Energy (NACE codes 05, 06, 19, 35 and 36) represents 8% of the population considered
- Industry (NACE codes 07 to 18 and 20 to 33) represents 42% of the population considered
- Services (NACE codes 37 to 39, 45 to 63, 68 to 82, 86 to 96) represents 43% of the groups considered

All groups in the database are classified into size classes. The three size classes are based on the groups' turnover, as follows (% in terms of number of groups):

- Small groups (turnover < EUR 250 million) represent 39% of the population considered
- Medium groups (EUR 250 million ≤ turnover < EUR 1,500 million) represent 31% of the population considered
- Large groups (turnover ≥ EUR 1,500 million) represent 30% of the population considered.

2.2 Description of the employment variable

Groups can report information about employment either by full-time equivalents (FTE) or by number of employees (NOE), recorded as the average level or as the amount at the end of the accounting year concerned.

The type of reporting differs among countries, as can be seen in table 2. The ERICA database registers the employment figure of a group in only one way: employment will be expressed in full- time equivalents or in number of persons. Most of the IFRS groups state their employment figure in full-time equivalents, since this type of reporting is the default value when employment levels are entered in the ERICA database. Greek groups clearly differ in how they report their employment, since they express the level in number of employees. Austrian, Belgian and Portuguese groups use both types of reporting.

TABLE 2 EMPLOYMENT IN 2017: NUMBER OF LISTED GROUPS PER TYPE OF REPORTING ***(in number of groups)***

	FTE		Number of employees		Total number of groups excluding double counting in 1 country with employment different from 0
	Average	At end of year	Average	At end of year	
Austria	16		24	2	42
Belgium	33	21	9	11	74
France	173	171			284
Germany	178	28			179
Greece			6	47	49
Italy	169	20			169
Portugal	6	4	22	10	36
Spain	108	105			108
TOTAL	**683**	**349**	**61**	**70**	**941**

Source: own calculations based on ERICA Database

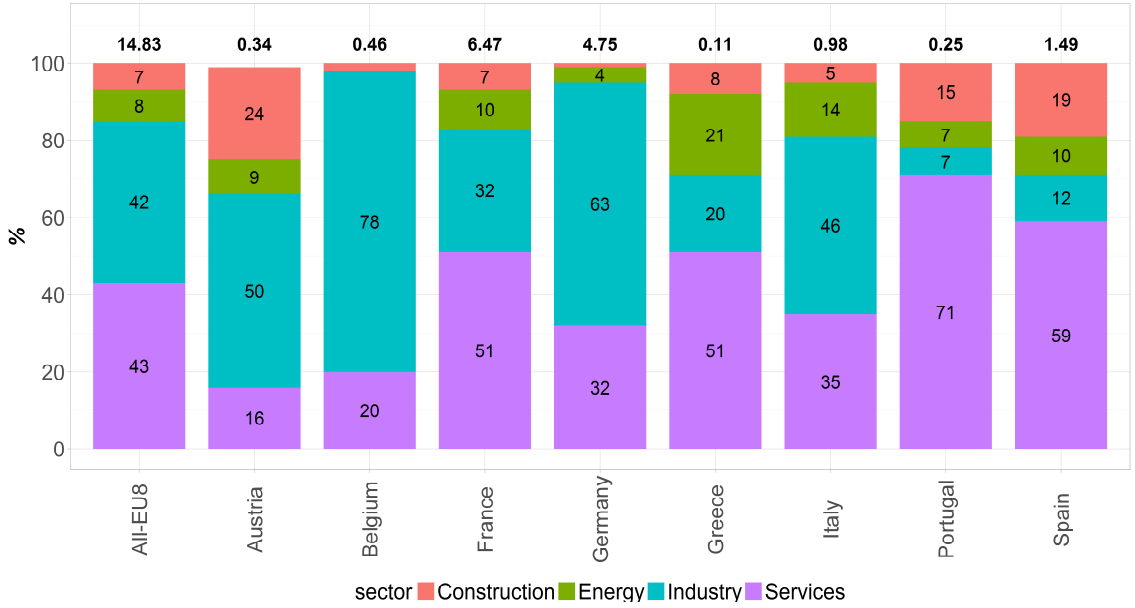
To obtain a similar employment measure for each IFRS group concerning the financial year 2017, the average level of full-time equivalents for 2017 will be deduced if not available as default value in the

employment field in the ERICA Database. For that purpose, some assumptions are applied. Details can be found in Annex 1.

As this report examines the impact of sector composition within the different countries, it could be useful to look at the sectoral breakdown of each country and of all countries together (All-EU8) in terms of employment in full-time equivalents.

Chart 1 illustrates that, overall (EU8), services (43%) and the industry sector (42%) provide the majority of the jobs, although this differs from country to country. The services sector is important in almost all the countries, but especially for the Portuguese, Spanish, French and Greek listed groups. Industry is particularly important in terms of employment in Belgium and Germany, but is also relevant in Austria and Italy. The construction sector creates some employment in Austrian, Spanish and Portuguese groups, while the energy sector accounts for one-fifth of the employment in Greek listed groups.

CHART 1 EMPLOYMENT LEVEL PER COUNTRY IN TERMS OF SECTOR COMPOSITION



Source: own calculations based on ERICA Database

Remark: the figures above the 100% boxes represent the employment per country (according to the location of the parent entity, which means that the location of the jobs is not restricted to the respective country) expressed in millions of full-time equivalents.

2.3 Description of the ratio

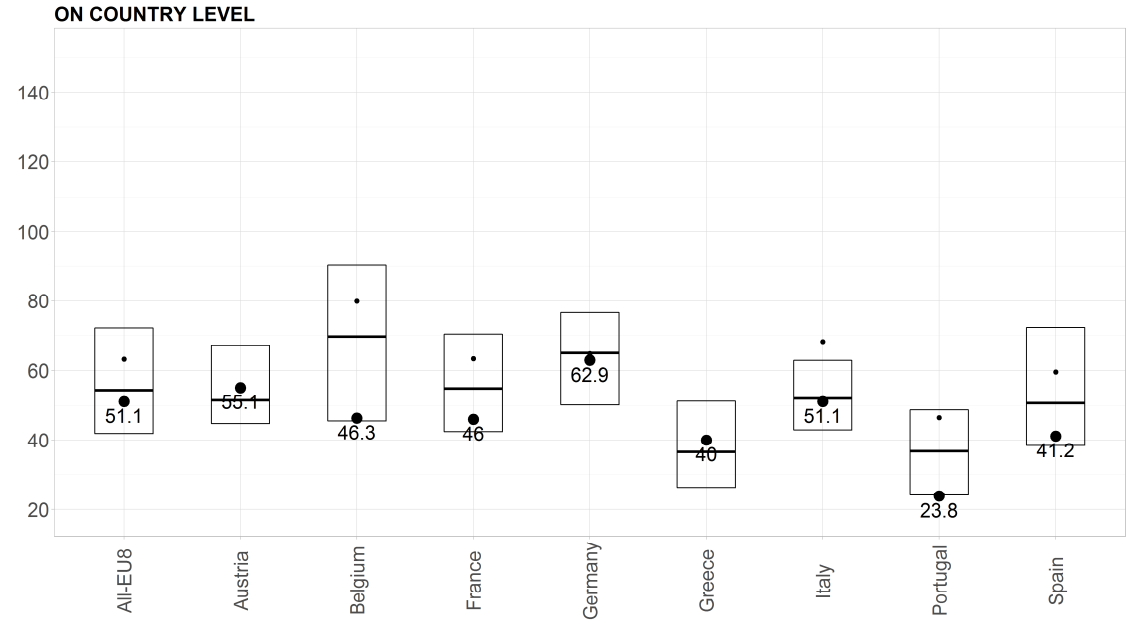
To measure the relative wage costs in the different countries, the following ratio is calculated, as explained below. The ratio assesses the average labour cost for one full-time equivalent.

Labour costs per full-time equivalent:

$$LABOUR\ COSTS\ fte = \frac{wage\ costs}{average\ number\ of\ full\ time\ equivalents} \qquad \textit{(Equation 1)}$$

A ratio can be presented in the form of global figures and quartiles. Globalised ratios are obtained by taking the sum of the numerators of all IFRS groups and dividing it by the sum of their denominators. The globalised ratio is therefore the weighted average of each ratio at the level of each IFRS group, whose weight represents each group's share in the total value of the ratio's denominator. Thus, the globalised average represents the situation of the groups having the largest value in the denominator. The quartiles are the values in an ordered distribution where the median is the central value, with 50% of firms having a ratio above the median and 50% having a ratio below the median. The first quartile is the amount where 75% of firms have a ratio above that value and 25% have a ratio below it, while the third quartile represents the figure where 25% of the groups have a ratio above that value and 75% a ratio below it. Combining the calculated global average with the quartile figures permits a complementary analysis, since globalised ratios are influenced by extreme values (outliers), while the quartiles neutralise those extremes. The globalised figures also present the situation from a macro- and meso-economic angle, while the quartile values reflect the microeconomic situation.

CHART 2 DISTRIBUTION OF WAGE COST PER FTE *(in 1000€)*



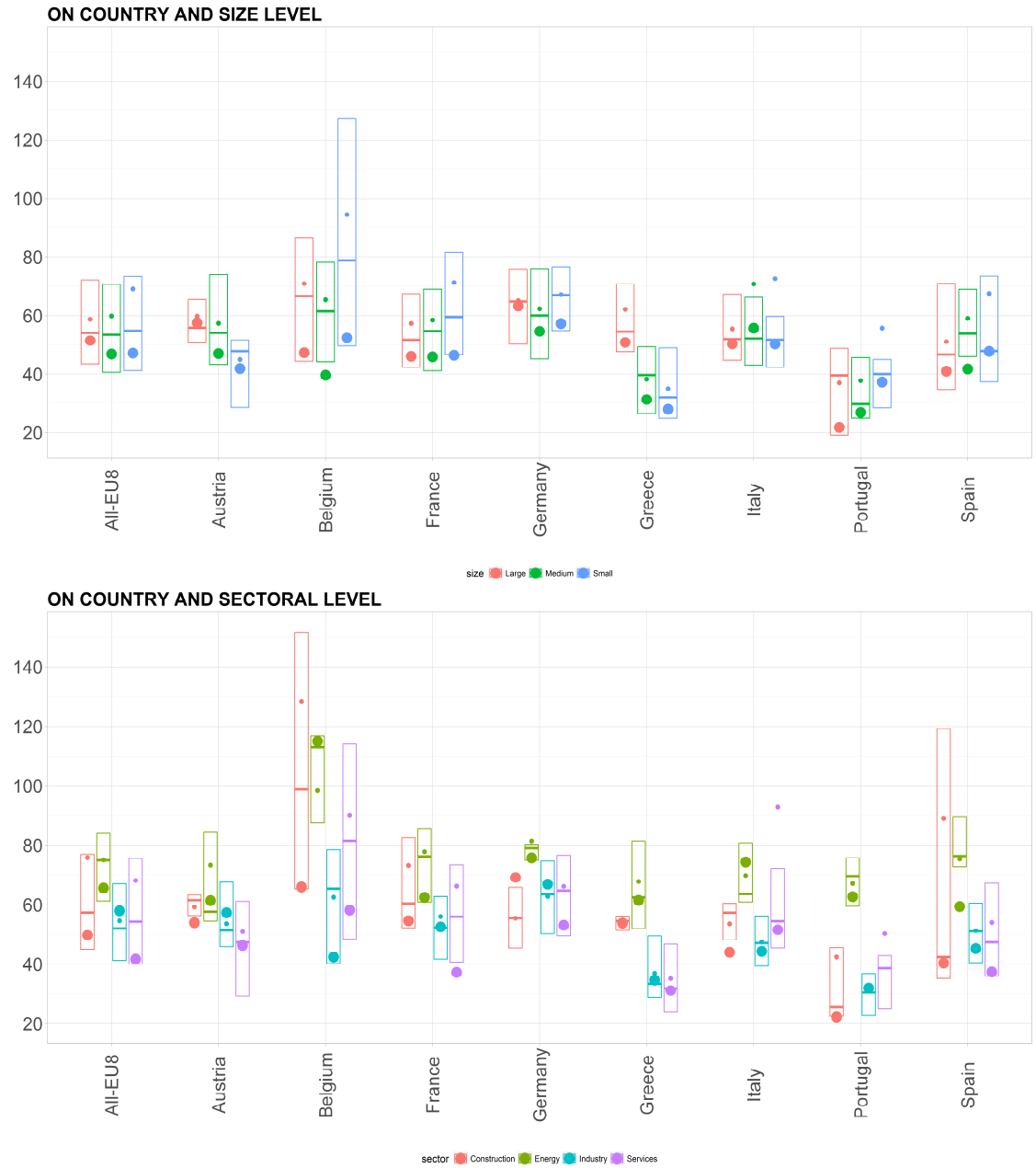
Source: own calculations based on ERICA database

Remark: Each box should be read as follows: the lower and upper edges of the box correspond respectively to the 1st and 3rd quartiles. The line inside the box represents the median. The small dot is the arIthmitical average while the big dot shows the value of the weighted average

Chart 2 illustrates the amounts of the globalised wage cost per full-time equivalent for each country and for all eight countries together (All-EU8). The contribution of the group's size and the sector of activity (Chart 3) will be considered in parallel. The globalised wage costs per full-time equivalent of the European non-financial listed groups varies significantly from country to country (Chart 2). For all eight countries together, the globalised wage cost equals € 51,100 in 2017, which corresponds more or less to the globalised wage cost of Italian groups. Portuguese groups clearly have the lowest globalised wage cost of € 23,800 per full-time equivalent in 2017, while the German groups tend to have the

highest, at € 62,900 per FTE. The different levels in the globalised wage costs per country can be influenced by the sectoral specialisation of some countries or by the geographic areas where their listed IFRS groups are located.

CHART 3 DISTRIBUTION OF WAGE COST PER FTE BY SIZE AND SECTOR *(in 1000€)*



Source: own calculations based on ERICA database

Remark: Each box should be read as follows: the lower and upper edges of the box correspond respectively to the 1st and 3rd quartiles. The line inside the box represents the median. The black dot is the arIthmitical average while the red dot shows the value of the weighted average

Another interesting observation is that the globalised wage cost in Belgian, Portuguese, Spanish and French groups is clearly lower than its median value. This means that Belgian, Portuguese, Spanish and French groups with a high employment level tend to have a lower wage cost per full-time equivalent. The Spanish and French figures do indeed show lower wage costs for larger firms. (see part 1, chart 3). Remember that the size of a group depends on the revenue level and not on the volume of employment. In many cases, large groups provide many jobs, but not always. The Portuguese large groups display a wider distribution in their wage cost per FTE, with a q1 value lower than the q1 value for medium-sized and small groups in Portugal. All Belgian listed groups together have a relatively wide distribution (with the biggest interquartile range, i.e. the distance between q3 and q1). In all sectors of activity, except for the energy sector, Belgian groups display a median wage level per FTE that is much higher than the globalised level, implying that those groups with a relatively high employment level are characterised by a relatively low wage cost per FTE.

In all eight countries, the wage cost per full-time employee is highest in IFRS groups active in the energy sector; this is apparent at both the globalised and the median level. We shall use the decomposition technique described below to explore in more detail the impact of the sector of activity on the wage cost level.

It is known that globalised figures of IFRS groups established in various countries often reveal significant differences in key indicators at national level. However, these differences are not necessarily intrinsic disparities due to national features of corporate behaviour. Some of the differences could be explained by a diverse composition of the national IFRS populations. In some countries, large firms are over-represented, in other countries, energy groups are under-represented. If large groups tend to behave differently compared to medium-sized or small firms, or if energy groups behave differently to those in other sectors of activity, then a part of the difference in a specific ratio can be explained by the specific composition of the national set of groups. This issue can be analysed by using the decomposition technique.

3. METHODOLOGY

A globalised ratio for a country is equal to the sum of the numerators of all listed IFRS groups within that country, divided by the sum of the denominators of the listed IFRS groups.

Each globalised ratio can be decomposed into an intrinsic component and a structural component. For the theory as a whole, we refer to the Statistical paper on decomposition of ratios: an application to the ERICA database of listed groups (*Carlino et al., 2017*).

Each global ratio at country level $r_i(t)$ at moment t can be broken down into a sum of sectoral contributions $r_{ij}(t).\sigma_{ij/i}(t)$:

$$r_i(t) = \sum_{j=1}^{n} r_{ij}(t).\sigma_{\frac{ij}{i}}(t)$$

$$= \underbrace{r_{i1}(t).\sigma_{\frac{i1}{i}}(t)}_{contribution\ of\ sector1} + \underbrace{r_{i2}(t).\sigma_{\frac{i2}{i}}(t)}_{contribution\ of\ sector2} + \cdots + \underbrace{r_{in}(t).\sigma_{\frac{in}{i}}(t)}_{contribution\ of\ sector\ n} \qquad \textit{(Equation 1)}$$

with $r_i(t)$: *globalised ratio for country i at moment t*
$r_{ij}(t)$: *globalised ratio of sector j in country i at moment t*
$\sigma_{\frac{ij}{i}}(t)$ *share / weight of sector j in all sectors of country i at moment t*

while each sectoral contribution can be split up into:

(a) an intrinsic component: t.i. the value of the ratio of sector j in country i
(b) a structural component: t.i. the value of the share of sector j in the economy of country i.

TABLE 3 CONTRIBUTION OF THE SECTORS TO THE GLOBALISED WAGE COST PER FTE IN 2017 ***(in 1000 €)***

	Ratio (a)	Share (b)	Sectoral contribution (a)x(b)
AUSTRIA	55.1	1	
· Construction	54.049	0.245	13.2
· Energy	61.381	0.090	5.5
· Industry	57.365	0.505	29.0
· Services	46.224	0.160	7.4
BELGIUM	46.3	1	
· Construction	65.885	0.019	1.2
· Energy	115.112	0.005	0.6
· Industry	42.368	0.775	32.8
· Services	58.215	0.201	11.7

Source: own calculations based on ERICA database

Suppose we consider two countries (Austria and Belgium), each sub-divided into four sectors (construction, energy, industry and services). The global ratio calculated in table 3, is the globalised wage cost per full-time equivalent. The second column (Ratio) measures the globalised wage cost per FTE in each sector per country. The third column (Share) illustrates the share or weight of each sector in terms of the denominator of the global ratio, in this case employment in FTE. The fourth column (sectoral contribution) is the multiplication of the values in the two previous columns. The sum of all sectoral contributions in one country gives the globalised ratio of the country concerned.

Table 3 illustrates that the globalised wage cost of the Austrian construction sector amounts € 54,049 per FTE, while it totals € 65,885 per FTE in the Belgian construction sector. Since the Austrian construction sector represents 24.5% of the employment created by Austrian IFRS groups, while the weight of the same sector accounts for only 1.9% in Belgium, it implies that the contribution of the Austrian construction sector to the globalised Austrian wage cost per FTE is bigger than the contribution of Belgian construction to the global Belgian wage cost per FTE. The difference is therefore due to a structural effect.

Globalised ratios will be computed for several countries by using the ERICA data in order to analyse the difference in the ratios between two countries. The literature calls this a cross-country comparison where country C_i will be compared to a reference country C_0, and where the difference between the

globalised ratios of those 2 countries will be decomposed into an intrinsic effect (i.e. the difference in the sectoral ratios) and a structural effect (i.e. the difference in the shares of the sector).

The Marshall-Edgeworth decomposition technique will be applied. The advantages of this approach are described in the ECB statistical paper by *Carlino et al. (2017, p19-24*).

As a benchmark or reference point, we choose the "multi-regional" approach (Ang et al., 2015), this is the average of all eight countries (All-EU8). This means that the reference point is an "average country" (EU8); moreover, the difference between two countries can be deduced indirectly (via the benchmark).

Several levels of decomposition are possible: by sector, by size or by a sector-size combination. We have four different sectors and three size classes. A sector-size combination may exist in the benchmark (All-EU8), but be non-existent in a particular country because the number of observations is insufficient. The decomposition will therefore be done at sectoral level only.

The approach used to decompose the difference between the globalised ratio of country C_i compared to its benchmark "the average EU8-country" C_0 into an intrinsic and a structural component according to the Marshall-Edgeworth decomposition technique can be visualised in the formulae below. As cross-country comparisons are made at the same point in time, we drop the time argument t to simplify the presentation.

$$r_i - r_0 =$$

$$= \sum_{j=1}^{n} r_{ij} . \sigma_{\frac{ij}{i}} - \sum_{j=1}^{n} r_{0j} . \sigma_{\frac{0j}{0}}$$

$$= \sum_{j=1}^{n} \left[\underbrace{\left(r_{ij} - r_{0j}\right) . \sigma_{\frac{ij}{i}}}_{intrinsic\ \ effect\ \ for\ sector\ j} + \underbrace{\left(\sigma_{\frac{ij}{i}} - \sigma_{\frac{0j}{0}}\right) . r_{ij}}_{structural\ \ effect\ \ for\ sector\ j} + residual\ term \right]$$

$$= \sum_{j=1}^{n} \left[\underbrace{\left(r_{ij}(t) - r_{0j}(t)\right) . \sigma_{\frac{ij}{i}}(t) + \frac{1}{2} . residual\ term}_{intrinsic\ \ effect\ \ for\ sector\ j} + \underbrace{\left(\sigma_{\frac{ij}{i}}(t) - \sigma_{\frac{0j}{0}}(t)\right) . r_{ij}(t) + \frac{1}{2} . residual\ term}_{structural\ \ effect\ \ for\ sector\ j} \right]$$

which can be transferred to

$$= \sum_{j=1}^{n} \left[\underbrace{\left(r_{ij} - r_{0j}\right) . \frac{\sigma_{\frac{ij}{i}}(t) + \sigma_{\frac{0j}{0}}(t)}{2}}_{intrinsic\ \ effect\ \ for\ sector\ j} + \underbrace{\left(\sigma_{\frac{ij}{i}} - \sigma_{\frac{0j}{0}}\right) . \frac{r_{ij} + r_{0j}}{2}}_{structural\ \ effect\ \ for\ sector\ j} \right]$$

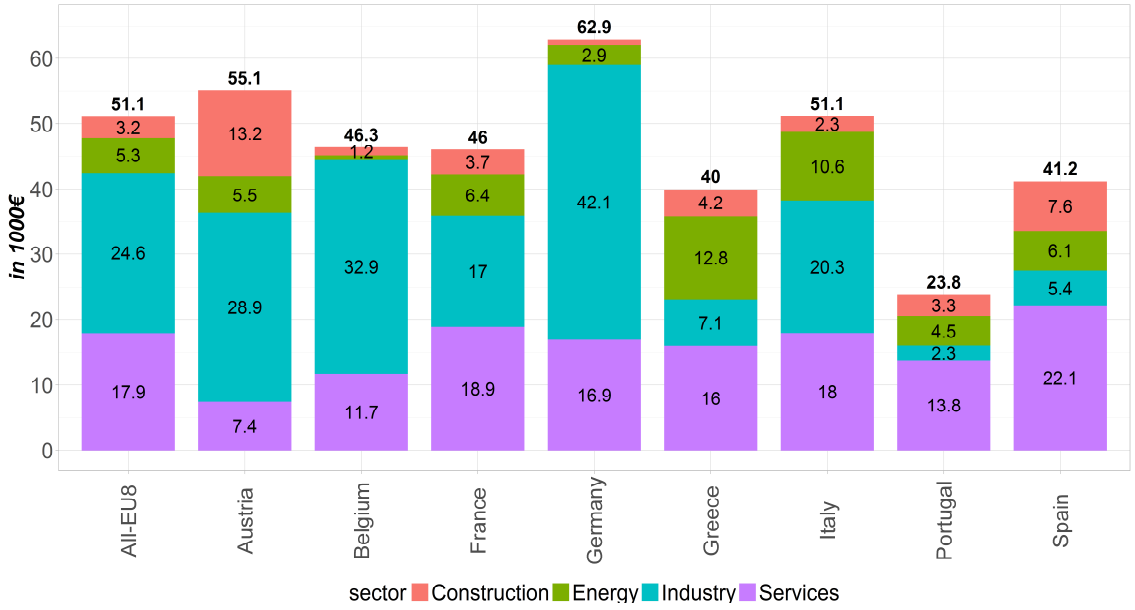
$$= \underbrace{\sum_{j=1}^{n} \left(r_{ij} - r_{0j}\right) . \frac{\sigma_{\frac{ij}{i}}(t) + \sigma_{\frac{0j}{0}}(t)}{2}}_{aggregate\ intrinsic\ component} + \underbrace{\sum_{j=1}^{n} \left(\sigma_{\frac{ij}{i}} - \sigma_{\frac{0j}{0}}\right) . \frac{r_{ij} + r_{0j}}{2}}_{aggregate\ structural\ component} \qquad \textit{(Equation 2)}$$

4. APPLYING THE DECOMPOSITION TECHNIQUE IN A CROSS-COUNTRY ANALYSIS

In this chapter, the globalised labour cost per full-time equivalent of each country, calculated by means of equation 2, will be compared to a benchmark consisting of the globalised labour cost per full-time equivalent for all eight countries together (All-EU8)

Chart 4 shows that the globalised labour cost per full-time equivalent in European non-financial listed groups in 2017 varies significantly from country to country**.** For all eight countries together (All-EU8) the globalised wage cost per FTE amounts € 51,000 in 2017, similar to the global wage cost per FTE in Italian IFRS groups. In both cases, the biggest contribution comes from the industry and services sectors. The sum of all four coloured stacked bars for one country gives the globalised labour cost per FTE for that country. In Belgian and German IFRS groups, the industry sector accounts for 77% and 63% respectively of the globalised wage cost per FTE. Industrial activity is also the biggest driver in Austrian and Italian groups. The globalised wage cost per FTE in Spanish, Portuguese, Greek and French groups comes mainly from the services sector.

CHART 4 ABSOLUTE CONTRIBUTION OF THE DIFFERENT SECTORS TO THE GLOBALISED WAGE COST IN 2017 ***(in 1000 €)***



Source: own calculations based on ERICA database

The globalised employment cost per FTE in German non-financial listed groups is significantly higher than the figure for EU8. According to the chart, the main difference lies in the contribution of the industry groups (€ 17,500 higher). This is partially compensated by the contribution of German energy groups (€ 2,400 lower) and construction groups (€ 2,300 lower), and to a lesser extent German services groups (€ 1,000 lower). As mentioned earlier, these sectoral differences may result from structural differences (i.e. the weight of the industry sector in terms of employed full-time equivalents is higher in the German

groups than in the EU8 groups) or from intrinsic differences (meaning that the labour cost per FTE in industry is higher in the German groups than in EU8).

Chart 5 depicts the structural and intrinsic impact of each sector on the difference in the globalised labour cost per FTE of country C_i compared to its benchmark "the average EU8 country" C_0. Positive figures mean that the labour cost per FTE at country level exceeds the EU8 figure. Similarly, negative amounts mean that the national labour cost per FTE is smaller than the benchmark. Note that, for each sector, the sum of the intrinsic and the structural impact equals the difference between the absolute contribution of that sector to the country-specific labour cost per FTE and the absolute contribution of that sector to the EU8 labour cost per FTE.

Comparing the globaliszed country-specific labour cost per FTE with the European benchmark, Chart 5 shows that the German and Austrian groups have a globalised labour cost per FTE that is respectively € 11,800 and € 4,100 higher than the EU8 level and results in a globalised amount of € 62,900 in Germany and € 55,100 in Austria, while the EU8 figure comes to € 51,100. In the other six countries the globalised labour cost per FTE is lower than its European reference point. The biggest difference is visible in Portuguese, Greek and Spanish figures.

The higher labour cost per FTE in **German groups** is due primarily to intrinsic effects in all four sectors, but particularly in the industry and services sector. German non-financial listed groups active in the industry and services sector have higher labour costs per FTE compared to the average EU8 groups active in the same sector. The structural effect is most visible in industry, as this sector dominates the population of German listed groups. The Volkswagen and Daimler groups (automotive industry), together with the Siemens Group have a strong influence on the figures for German industry. Those three groups together account for 19% of all full-time equivalents employed in the German non-financial listed groups under review.

In **Austria** overall, the globalised labour cost per FTE is higher than its EU8 benchmark, due to both structural and intrinsic effects. Chart 4 illustrates the larger contribution of the industry and construction sector. The structural effect mainly explains the difference in relation to EU8. The Austrian listed groups employ relatively more full-time equivalents in the construction and industry sector and employ relatively fewer in the services sector. The intrinsic effects are quite limited: Austrian services groups (€ 46,223) incur higher labour costs per FTE than the EU8 service groups (€ 41,684).

Portuguese groups pay the lowest globalised labour cost per FTE in 2017 (€ 23,800), which is € 27,200 lower than the EU8 level (€ 51,100). Both intrinsic and structural effects play a role, but the latter have both a positive and a negative influence. The lower labour cost per FTE (intrinsic effect) is particularly marked in the industry and services sector, and to a lesser extent in the construction and energy sector.

The lower globalised labour cost per FTE for **Greek groups** (€ 40,000) is mostly due to intrinsic effects, with relatively lower globalised labour costs in the Greek services and industry sector.

CHART 5 **DECOMPOSITION OF THE DIFFERENCES IN THE GLOBALISED LABOUR COST PER FTE IN 2017: EACH COUNTRY MINUS EU8 *(in 1000 €)***

Source: own calculations based on ERICA database

Remark: The first box, the aggregate level, is the sum of the four sectors (t.i the other boxes)

The **Spanish groups** also have a globalised labour cost per FTE that is clearly below the EU8 level, at € 9,900 less, giving a total of € 41,200. This is due primarily to intrinsic effects in all four sectors, but particularly in the industry and services sector. The structural effects have both a positive and a negative influence simultaneously.

On average **French groups** have a lower employment-weighted labour cost per FTE of € 46,000 compared to the EU8 benchmark level, due principally to a smaller contribution from the industry sector because of a negative structural component reinforced by a negative intrinsic component. This means that the labour cost per FTE in French industrial listed groups is lower than in EU8 industry groups.

Comparing the globalised labour cost per FTE of **Belgian** groups with the EU8 benchmark, chart 4 illustrates that the Belgian labour cost per FTE is € 4,700€ lower, equalling € 46,300. The sectoral decomposition reveals significant differences at sectoral level. The share of industry (in terms of employment) in Belgium is much larger, while the other sectors have smaller shares. In Belgian industry, the positive structural impact is countered by a big negative intrinsic impact, influenced entirely by Belgium's largest listed industry group, Anheuser-Busch Inbev (13% of the Belgian sample's employment)

Italian listed groups show a global employment-weighted labour cost of € 51,100 per FTE, matching the EU8 benchmark. The sectoral contributions (chart 4) differ somewhat. A more detailed analysis of the intrinsic and structural effects in chart 5 illustrates that Italian energy and services groups pay higher labour costs per FTE (intrinsic) than the benchmark. The slightly higher intrinsic wages in the Italian energy sector, in companies such as ENI, are reinforced by their substantial share of overall employment, the effect of which is entirely neutralised by a strong negative intrinsic effect in the industry sector. At the same time, the higher intrinsic effect of the Italian services groups is totally negated by its smaller share in the employment level generated by Italian listed non-financial groups.

CONCLUSION

The analysis of cross-country comparisons for the globalised labour costs per full-time equivalent illustrates the importance of producing decomposition data in order to better understand the real figure for a specific country (formed by a dataset of listed non-financial groups established in that given country) or the figure for a specific sector of activity.

TABLE 4 OVERVIEW OF THE RESULTS OF THE CROSS-COUNTRY DECOMPOSITION OF THE GLOBALISED LABOUR COST PER FTE

Country		Main impact at aggregate level	Main impact at sectoral level	Sector with largest impact
Germany	+	Intrinsic	Structural (offset)	Industry
Austria	+	Structural	Structural (offset)	Services
Italy	=	Intrinsic = structural	Intrinsic = structural	Energy
Belgium	-	structural	Structural (offset)	Industry
France	-	Intrinsic	Structural (offset)	Industry
Spain	-	Intrinsic	Structural (offset)	Industry
Greece	-	intrinsic	Structural (offset)	Industry
Portugal	-	Intrinsic	Structural (offset)	Industry

Source: own calculations based on ERICA database

It is important to decompose the difference in the globalised labour cost per full-time equivalent between two countries into its intrinsic and structural components, in order to understand whether the difference between the ratios of two countries is mainly due to differences in the real labour cost per FTE or to differences in the structure of the countries' group population.

Knowing the two components that explain the difference between the two countries is not sufficient. It is also important to know the details by sector of activity, because analysis at a more detailed level can reveal different results, due to some offsetting among sectors of activity. For example, in Germany the intrinsic effect is predominant in explaining why its globalised labour cost per FTE exceeds the globalised figure for the benchmark EU8, while the details by sector of activity in Germany indicate that the structural effect is much more important but is partly offset between the sectors.

Comparing the level of globalised ratios between two countries to examine the different behaviour in multiple sectors of activity may hide information, because of changes in the ratio levels themselves combined with changes in the composition of the country population. That is why **the focus should be on the intrinsic components.** This means: the difference in the level of the labour cost per FTE itself. By isolating the weight of employment used in the different sectors of activity, we can better understand which sectors of activity in which country experience lower or higher labour costs. The intrinsic effect in a country can be influenced by its relative price and salary levels on the one hand and by the geographical areas where the subsidiaries are established on the other hand. If the listed IFRS groups have many subsidiaries located in low wage countries, their intrinsic effect will be more important.

Focusing on the intrinsic figures, we conclude that the listed groups active in Germany's industry and services sectors experience higher labour costs per FTE than the industry and services groups

established in France, Greece, Portugal and Spain and the industry groups based in Belgium and Italy. At the same time, Portuguese services groups have the lowest labour cost per FTE.

REFERENCES

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Annex 1: how to calculate the average level of full-time equivalents for each listed group for the financial year 2017

1) When the average employment level in 'full-time equivalents' is known, this figure is considered as the final figure

2) If the number of 'full-time equivalents' is recorded at the end of the year, an average level will be calculated by considering the year-end level for 2017 and the year-end level for 2016.

3) If the average employment level is only recorded in 'number of employees', an average 'full-time equivalents level' will be deduced by applying a conversion factor of 0.9 to the average 'number of employees'. A conversion factor of 0.9 is applied based on Belgian employment figures available in the social balance sheet figures; these figures show that the proportion between the number of full-time equivalents and the number of employed persons in the private sector during the most recent years equals 0.9. Eurostat figures do not reveal this kind of information for the different European countries.

4) If a group only states the 'number of employees' at the end of the financial year 2017, an average level will be calculated based on 2017 and 2016 figures and then transposed to full-time equivalents by using the conversion factor of 0.9.