KU LEUVEN HIVA

RESEARCH INSTITUTE FOR WORK AND SOCIETY

INDICATORS OF COLLECTIVELY AGREED WAGES IN THE EUROZONE

A quality report

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Symposium: Collectively-agreed wages and the new European economic governance: challenges in the statistical and political field

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The paper makes a quality assessment of the available national indicators on collectively agreed wages available in ten European countries including Austria, Belgium, Finland, France, Germany, Italy, the Netherlands, Portugal, Spain and the UK. It assesses the available indicators in a comparative way by using the six dimensions of statistical output quality, developed within the European statistical system by Eurostat: relevance, coherence, clarity, accuracy, timeliness, and accessibility.

Most of the national data are either developed by the official national statistical agencies or by the Ministries of Labour. There are significant differences but sometimes also interesting similarities in the statistical definition of collectively agreed wages, the methods of calculation and coverage of the data. However, there is a certain dominance in the use of index-based indices, comparable with the methodological approach of a consumer price index, which could create a starting base for European harmonisation.

In order to get more comparable data the paper suggests and develops a step by step approach starting with more systematic exchange and coordination of national data providers, followed by a minimal harmonisation of certain data items towards the creation of an official European database on collectively agreed wages based on a harmonised data source (e.g. provided among others by collecting pay scale information of workers through the Structure of Earnings survey).

Contents

Introduction

Collective bargaining plays a key role in the determination of wages and wage developments in Europe (Caju et.al., 2008; European Commission, 2011). On average about two third of all employees in the European Union are directly covered by a collective agreement (European Commission, 2011: 36). Within the "old" fifteen EU member states the average collective bargaining coverage, i.e. the proportion of employees covered by a collective agreement, is even higher and reached nearly 80%: In contrast, collective bargaining is in many of the new EU member states relatively weak with an average collective bargaining of around 43%. Compared to most other world regions, however, many European countries have exceptionally high collective bargaining coverage. The dominance of collective bargaining in the process of wage formation is therefore widely regarded as a distinctive feature of the European social model (European Commission, 2009).

Considering the high importance of collective bargaining for the wage-setting in Europe, it is all the more astonishing that until today there exists no official European-wide database or statistics on collectively agreed wages. The only exception is the *indicator of negotiated wages* which is calculated by the European Central Bank as an aggregate figure for the whole Euro-Zone (ECB, 2002). Since the ECB does not publish the underlying national data, the ECB indicator of negotiated wages contains only a rough calculation at a highly aggregated level with no information for a European comparative analysis. The indicator is considered by the ECB itself as 'experimental data': statistics that are not yet fully developed in terms of coverage, rely on somewhat different source data, are not based on Euro area-wide harmonised definitions or rely heavily on estimation techniques using substantial assumptions (Schubert, n.d.). There is also an annual report on pay developments in Europe published by the European Industrial Relation Observatory (EIRO) of the European Foundation for the Improvement of Living and Working Conditions which includes data on collectively agreed wages (for the latest published issue see: Cabrita & Fric, 2012).

In response to the problems posed by the financial and economic crisis, the European Union has meanwhile put forward a series of new policies better known as *European economic governance*. As emphasised in the Euro Plus Pact, wages and collective bargaining systems are seen as one of the main instruments for the European coordination of economic policy. Recommendations on wages can be traced in the EU 2020 recommendations of the ongoing European monitoring of national reform programs and in the in-depth country reports of the macro-econmic imbalances procedure. Although the discussions are still running high on the status and content of these recommendations, especially at the European trade union side, such a policy turn necessitates reviewing and improving the available comparative information for European policymakers and social partners' organisations. Therefore, a quality review and assessment of comparative statistics on collective agreed wages seems urgently needed.

The ECB quarterly indicator of negotiated wage rates in the Eurozone is based on the non-harmonised data of 10 countries. However, the figures from Slovenia and France are based on national indicators of actual wage increases. The present paper compares the design and quality of the available indicators of collectively-agreed wages for the other 8 countries: Austria, Belgium, Finland, Germany, Italy, Netherlands, Portugal and Spain. These countries, belonging to the Eurozone, have a clearly available indicator. The comparison digs out also

the available data for France. It are also these indicators that play a dominant role in the recent annual EIRO reports on collectively agreed pay (Cabrita & Fric, 2012).

Tabel 1.1 UK Indicators of collectively-agreed wages

The very interesting paper by Emery (2012) of the Labour Research Department concludes the following on indicators of collectively-agreed wages in the UK. The country is relatively well provided for with statistics on pay settlements and earnings (actual wages) but not so well informed on the specific contribution of collectively agreed wages. Users rely on a combination of private sources (with implications for access) and official sources that are informative although inconsistent. With comparatively low levels of union membership and collective bargaining in large parts of the private sector, the role of collective agreements in wage setting seems to be implicit rather than explicit. However there are statistical sources available that, coupled with the reporting of developments in pay and conditions, should allow the specific contribution of collective bargaining in the UK labour market to be better understood. In this regard the paper warns first that 'agreed wages' have a broader connotation in the UK. Agreed wages arise from settlements which the Low Pay Commission defines as "the periodic adjustments that employers make, often through a process of collective bargaining with their employees, to basic pay rates and other terms and conditions of employment" which are usually determined and implemented annually (LPC, unpublished, 2010). Secondly it shows that the earnings of trade union members (from the Trade Union Membership survey as part of LFS) are a very good proxy to monitor collectively-agreed wage levels. As indicator of collectively-agreed pay increases the report refers to the LRD pay round pay settlement medians, published by the Labour Research Department itself. Annexe 1 contains a information sheet of this indicator.

Source: CAWIE national report UK

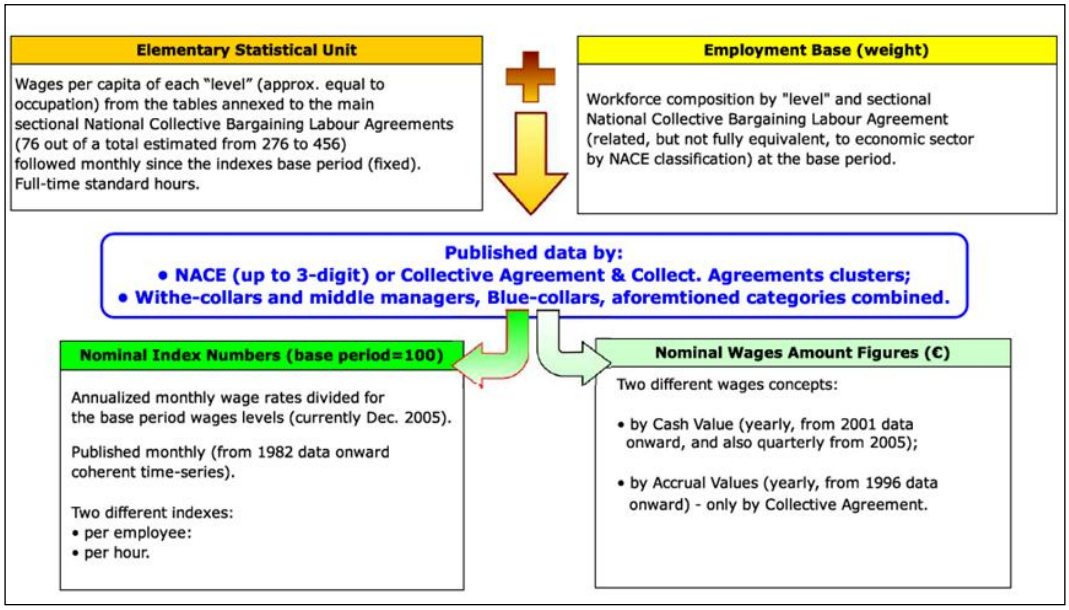
The quality concept applied in this report is in conformity with the definition developed by the European Statistical System (Eurostat, 2011). The following quality dimensions are distinguished in this approach: relevance, accuracy, timeliness and punctuality, accessibility and clarity. Each of the quality components will be explained briefly at the start of the involved section. The main sources of the paper are individual quality reports, delivered by national experts during the spring and summer of 2012.[1] In drafting these quality reports, the experts had contact with 2 to 5 stakeholders of the statistics (coming from trade union, Ministry of Labour or statistical office). The paper will first start with an overview of the current designs and methods used in the 9 countries.

1 BE: Sem Vandekerckhove & Guy Van Gyes (HIVA-KULeuven); DE: Reinhard Bispinck and Thorsten Schülten (WSI-Hans Böckler stiftung); ES: Jesús Cruces Aguilera, Ignacio Alvarez Peralta & Francisco José Trillo Parraga (Fundacion 1° de Mayo); FR: Noëlle Delahaie, Michel Husson & Catherine Vincent (IRES); IT: Lorenzo Birindelli & Salvo Leonardi (IRES); NL: Maarten Van Klaaveren & Kea Tijdens (AIAS-UVA); AT: Sepp Zuckerstätter (AK Wien); PT: Reinhard Naumann (Instituto Ruben Rolo); FI: Pekka Sauramo (Labour Institue for Economic Research). We thank these experts for their contributions. The integration of their work in this synthesis paper is of course the sole responsibility of the author itself. The national papers have been written within the CAWIE project, which has been co-financed by a grant of the European Commission.

1 | Designs and methods

National indicators of collectively-agreed wages can be divided in two types. On the one hand they can be related to pay *levels*, on the other hand to pay *increases*. The following figure summarises as first introduction the Italian approach.

Figuur 1.1 The Italian ISTAT indicators of collectively-agreed pay



Source: CAWIE national report Italy

However, the first type of indicators is in the countries of study not available or limited to only a database, and not summarised in an aggregated statistical index. Only Italy and Portugal form an exception to this observation (see table 1.1).

Table 1.1 National indicators or databases of collectively-agreed pay levels

	Indicator (or database)	Comment
BE	(Juridisk)	Only (legal) database; privately-owned; fee to access
DE	(WSI Tarifarchiv)	Only database; privately owned; accessible
ES	(REGCON database)	Only database; Ministry of Employment and Social Security;
FR	Not available	Database of sector agreements reported to the Ministry; Ad-hoc studies; DARES and DGT of the Ministry of Labour, Employment and Health; no access; DGT publishes an extinsive annual report on collective bargaining each year
IT	Nominal wage amount figures	ISTAT; published on quarterly and yearly basis; Annual national collectively agreed wage levels by accrual and cash value
NL	Not available	FNV trade union confederation and AWVN employers' organisations hold database. The former is accessible via AIAS/University of Amsterdam
AT	(KV-System)	Only legal database; privately owned; fee for access
PT	(Database of collective regulations)	Database of collective agreements and in 2011 for the first time section in annual report on average collectively agreed wage level; DGERT Ministry of Economy and Labour
FI	Not available	Ministry of Justice holds a database (FINLEX) which contains also collective agreements (that have been legally extended).

Source CAWIE national reports

As a result we focus on the available indicators of pay increases. *Annexe 1* of the paper contains for each of these indicators an information sheet.

1.1 Basic definition

Table 1.2 National indexes of collectively-agreed pay increases, Eurozone

	Publisher	Name
BE	Federal Ministry of Employment, Labour and Social dialogue	Index of the collectively agreed wages (Indexcijfer van de conventionele lonen / indice des salaires conventionnels)
DE	Federal Statistical Office (Destatis)	Index of agreed earnings (Index der Tarifverdienste)
ES	Ministry of Employment and Social Security (MEYSS)	Statistics on collectively-agreed wages (Estadistica de Convenios Colectivos de Trabajo, ECCT)
FR	Ministry of Labour, Employment and Health (DARES-DGT)	Average annual change of collectively agreed wages (Evolutions annuelles du salaire conventionnel)
IT	Italian statistical office ISTAT	Index numbers of the collectively agreed wages (Indici delle retribuzioni contrattuali)
NL	Statistics Netherlands (CSB)	Collective Labour Agreements Wages Indexes (CAO-lonen indexcijfers)
AT	Statistics Austria	Index of collectively agreed minimum wages (Tariflohnindex)
PT	Ministry of Labour (DGERT)	Annualised weighted average variation between wage tables (Variação salarial nominal média ponderada intertabelas anualizada, VMPI)
FI	Statistics Finland	Index of negotiated wages and salaries

- It is important to note that Germany have also other indicators. The WSI collective agreement archive publishes an agreed pay increase and an annual increase of agreed basic pay. The German Central Bank produces also an index on collectively agreed pay. See for furher information the national CAWIE report of Germany (Bispinck & Schulten, 2012).

Source: National reports CAWIE project

Indexes of collectively-agreed wages are a measure of the proportionate, or percentage, changes in a set of prices over time – the price of labor. A price index is typically assigned a value of unity, or 100, in some reference period and the values of the index for other periods of time are intended to indicate the average proportionate, or percentage, change in prices from this price reference period. However, the index is limited to changes in the compensation of workers, which are agreed in a collective way, i.e. by a collective agreement. The ILO Right to Organize and Collective Bargaining Convention (No. 98), 1949 describes collective bargaining as: "Voluntary negotiation between employers or employers' organisations and workers' organisations, with a view to the regulation of terms and conditions of employment by collective agreements." Collective bargaining may take place at the national, sector or company-level. In no European country does it take place exclusively at one level only. However, in most of the Eurozone Member States the existence of strong trade unions and employers' organisations has resulted in many agreements being concluded at the national or sector level, supplemented by some company-level bargaining.

The existing indexes on these collectively agreed pay increases focus on the average *nominal (basic) pay increase as set by collective agreements for full-time workers*. Two basic questions determine the content of the indicator:

- What set of agreed pay increases or collective prices of labour are covered by the index?
- What is the way in which the price movements are averaged?

Coverage and weighting are in other words key features of this kind of indexes (see infra). First we go back to the national origins and uses of the indicators.

1.2 Origins and uses

Five of the nine indicators are developed and published by the official national statistiscal agencies (DE, IT, NL, AT & FI). The four others are maintained by the Ministry of Labour.

The Dutch CSB publishes already since 1926 'indexcijfers van regelingslonen' (index of regulated wages). Statistics Finland and the Italian ISTAT started in 1938 calculating their index. Others joined in the 50s (e.g. Belgium) and 60s (e.g. Austria). Spain and Portugal introduced their indexes in the 80s. The French Ministry of Labour developed only recently the database. The German statistical office expanded and innovated the calculated index markedly in 2010. It has data from 1995 on.

The principal use of the indexes earnings is of course to serve as background material for the social partners in the process of collective bargaining. It provides information on past earnings, facilitating the search for a common understanding of past and future earnings trends. However, bargainers look not alone and probably even more – as reported by the CAWIE national reports – to aspects like profits, productivity and inflation to set wage bargaining targets.

The original use of the indexes was maybe even more related to a perspective of income policies. Firstly, the indicators were used to monitor if the price of labour – or beter income of labour – was following the ('other') consumer price index. Secondly, they served and serve as a reference point to increase certain social benefits. The Finnish index plays for example a role in the calculation of pension rights. Comparable examples are also found in other countries. Wage replacement payments for 'Altersteilzeit' are in Austria increased according to the increase of the 'Tariflohnindex'. 'Altersteilzeit' is a scheme to partially compensate eligible employees who reduce their working time as they approaching the pension age. In Belgium the index is used for example in particular housing contracts to determine the rent increase.

In recent times the macro-economic perspective is getting more relevant. The index has always been used in a number of countries in economic forecasts as the index is a timely measure of wage developments. It is frequently published (monthly and quaterly). Other wage data are available only with some time lag. It is in particular this characteristic that also the ECB finds attractive. This timeliness makes the data very usefull to monitor and forecast wage evolutions in the broader macro-economic forecasting that the ECB needs to fulfill its (inflation-related) monetary policy obliglations.

This macro-economic perspective has risen in importance due to the centrality of competitiveness assigned in these debates and the limiting new framework of the Euro monetary unification for national policies. In this perspective wage moderation is considered an important policy instrument, which turns an increased attention to wage-setting systems and collective bargaining – see as a recent lot the EuroPlus Pact.

A concrete example of this 'turning' attention is the Belgian introduction of a wage norm. The Belgian state tries to balance the automatic indexing of wages and the sector level bargaining with a tight law on monitoring and intervention in the wage-setting system. The 1989 law on the competitiveness of the economy (1989-01-06/31) authorises government intervention if the average overall wage increases results (based on past performance) in an upsurge of relative labour costs and in a deteriorating external performance of companies in the private sector. The 1989 law was extended in 1996 (1996-07-26/32) to enable the government to monitor the wage bargaining process even more closely. The most important changes with respect to the 1989 law were a shift from an assessment of labour costs based on past performance to one that predicted future performance, and the number of countries used as a benchmark reduced to three. The forecast weighted growth of foreign hourly labour costs (a weighted average for France, Germany, and the Netherlands) now acts as an

upper limit (termed the 'wage norm') for wage negotiations at all levels (macro, sector, and company). The lower limit remains, as before, the automatic price index.

In sum, first users are ministries, employers' organisations, trade unions, politics, scientific community and macro-economic institutes. Secondary users are employers and private users (cf. use within price escalator clauses of contracts). Countries like Germany, France, Spain and Portugal publish in this regard also the basic information of the indexes – namely the agreed pay increases of the individual collective agreements as a service to the general public of employers and employees. They do this electronically and/or in a journal. Belgium has comparable plans for the near future.

1.3 Method of calculation

1.3.1 Choice of index numbers

Two basic approaches can be discerned in the current indexes.

1.3.1.1 Main approach: Laspeyres price index

A majority of the indicators can be defined as Laspeyres indexes. It is the case for Austria, Belgium, Germany, Finland, Italy and the Netherlands.

The purpose of these indexes is to compare the aggregate values of collectively-agreed wages in two time periods. These values include a price and quantity element. A change in wage costs can be attributed to an increase of the wage (price element), but also to a change in how many workers get this wage (quantity element). The constructed indexes are intended to measure the price component, just like the consumer price index measures the price component of the change in households' consumption expenditures. Measuring or focusing on the price element, means that indexes are constructed to capture the change in the average collectively-agreed pay, holding the quantities constant. This given set of quantities can be described as the 'basket' of collectively-agreed wages that is compared.

The period whose quantities are actually used in the index can be described as the weight reference period. In most of the studied indexes period Zero or the reference period is also used as the weight reference period. As such, the constructed indexes belong to the group of the so-called Laspeyres index. In a formula:

$$P_L = \frac{\sum p_i^t q_i^0}{\sum p_i^0 q_i^0}$$

The values indicate a relative change but not absolute values (i.e. one price index value can be compared to another or a base, but the number alone has no meaning). Indices select a base year and make that index value equal to 100.

Table 1.3 Base reference period used in 2012 for calculation Laspeyres indexes

BE	1997	New base period irregular (future plan every 10 years)
DE	2005	Weight reference period = 2006; revision after 5 years
IT	2005	Revision after 5 yerars
NL	2000	Revision after 10 years
AT	2005	Weight reference period = 2006; revision every 10 years
FI	2005	Revision after 5 years; 2010 is to start

Source: CAWIE national reports

As can be seen from the definitions above, if one already has pay and quantity data for the base period, then calculating the Laspeyres index for a new period requires only new data on the pay increase. Collecting only new pay increase data is often easier than collecting both new pay increase data and new quantity data, so calculating the Laspeyres index for a new period tends to require less time and effort.

The Finnish index has a slightly different approach. The index of negotiated wages and salaries measures the effect of collectively-agreed pay rises on the average regular pay rises. The index is as such calculated as a chained index using the same weight structure as in the (actual) wage and salary index. The effects of negotiated pay rises are estimated in relation to the earnings level as at the previous year-end.

1.3.1.2 Alternative, simplified approach

The Spanish and Portuguese indicators are constructed in a different way. The Labour ministries of both countries publish on a monthly basis overviews of the agreed wages in newly signed collective agreements. As a kind of synthesis they calculate an average of these agreed wages. In Spain this is done in a cumulative way, resulting in an average agreed wage increase for all reported collective agreements of the year. Once a collective agreement is signed, each of the bargaining or peer committees (at sector, province or company level) must fill in a statistical sheet to be attached to the agreement when recorded at the Collective Agreement Registry. In the sheet the bargainers have to indicate the agreed wage increase as a percentage and the employees covered. This information is used to obtain the average increases. The French approach, still in its first developing days, currently mainly focuses on the calculation of average annual collectively-agreed pay increase by branch. An average is calculated for the whole economy.

1.3.2 Coverage

1.3.2.1 Wage definition

Key in the calculation is of course what kinds of pay elements are included in the indexes.
In most of the countries the index calculations are taking into account a broad definition of earnings (see table).

Table 1.4 Wage definitions of the national indicators of collectively-agreed pay increases

BE	Base wage; doesn't include bonuses such as premiums, year-end bonuses and holiday allowances; factors included are wage increases due to automatic indexation, collectively agreed and working time revisions for workers with a hourly pay base. Seniority increments are not included, but are taken into account in the weighting procedure of averaging.
DE	Agreed earnings; not included are individual bonuses and premiums, one-off payments, flat rate payments and remuneration in excess of agreed earnings
FR	Level and increases in the minimum wage, which forms the content of sector collective agreement in the French wage bargaining system. This minimum wage can be an 'hiearchical' wage (salaire hierarchique) or 'guaranteed' wage (salaire garanti). The former are hourly or monthly wages which are close to the minimum wage, including basic pay, production or individual performance bonues and benefits in kind. Guaranteed wages are monthly or annual wages which definition is broader than the previous one and include certain benefits, such a seniority premium or bonuses related to working conditions.
ES	The wage increase considered is the increase in the base salary (without bonuses). Nevertheless many collective agreements refer to increases in the total salary.
IT	Basic pay; seniority allowances; shift work allowances; all bonuses specified in national agreements and payable to all workers (but not one-off payments), as well as those paid periodically (e.g. 13the monthly payment as end-of-the-year premium).
NL	Collectively agreed wages, including specific remuneration: - gross wages for regular working hours of full-time employees - all binding prescribed, regularly prescribed paid benefits- all binding prescribed, special (non-monthly) benefits, like holiday allowances or end-of-year payments Excluded are those allowances only for specific worker groups or individuals, like age allowances, shift allowances, or strictly individual pay increases
AT	Included in the wage are all regular payments which are conditional on the job the person holds. Not included are payments which are conditional on personal circumstances of a particular person, like special payment for parents, payment for special occasions jubilee premia etc. The wage also does not include wages paid in kind, due to the difficulty of attaching a monetary value for them. In most collective agreements wages are usually fixed in monetary terms while admissible deductions for in-kind parts of the remuneration like food or housing are fixed within the contract.
PT	Basic rates as defined in the wage tables annexed to the collective agreements
FI	Increases in gross average earnings for regular working hours in sector collective agreements; The earnings concept includes one-offs based on the considered collective agreements. Compensation for overtime, holiday pay and other such items are not included.

Source: CAWIE national reports

As such the defintions can be situated between the two internationally used concepts in wage statistics of actual pay (ILO, 1973):

- The concept of *wage rates* relate to basic prices of a unit of labour, before adding any bonuses for overtime, shift work or family allowance, and before deducting contributions for social security schemes and for advanced tax payments. Wage rates can be expressed in units of time, such as an hour, a week, a month, etc., or as piece rates. It is the smallest of all pay concepts and applies to workers in paid employment only.
- The concept of *earnings* typically relates to the pay that employers provide directly to their employees on a regular basis during a specified reference period. It includes basic pay for time worked or work done as well as for time not worked, such as vacation, holidays and sickness time. In addition, it also includes other payments granted by the employer for various reasons such as: overtime work, unsocial hours or schedules, difficult work, regular bonuses and fringe benefits such as family allowances. On the other side, it will exclude all irregular bonuses even if provided by the employer. Earnings are, like time rates, recorded gross of social security contributions or tax deductions.

  The latter concept refers also to the gross earnings statistics published by Eurostat, referring to EU 1738/2005 of 21 October 2005. Gross earnings cover in this definition remuneration in cash paid directly by the employer, before tax deductions and social security contributions payable by wage earners and retained by the employer. All bonuses,

regardless of whether they are regularly paid (such as 13th or 14th month pay, holiday bonuses, profit-sharing, allowances for leave not taken, occasional commissions, etc.) are included.

Compared to these two concepts the definitions used by Belgium, Portugal and Spain are more confined to the wage rate definition, the others more to the concept of gross earnings. However, each of these others excludes pay elements that are included in the actual gross earnings statistics. Overtime pay is always excluded. The following box summarises the detailed wage definition of the Finnish indicator

Table 1.5 The Finnish wage concept

The earnings concept in the index includes rewards and one-offs based on collective agreements. The rewards and one-offs based on collective agreements are added to regular earnings as annual averages, which means that these annual one-offs are added to each quarter of the calendar year as a proportion of regular earnings. Compensation for overtime, holiday pay and other such items are not included. Taxes have not been deducted from the earnings figures. The effect of changes in hours worked: The index of wage and salary earnings measures the development of average earnings for regular working hours, which are determined on the basis of the unit tariff of wages. This means that for wage earners paid on an hourly basis, the index measures changes in hourly earnings for regular working hours. For salaried employees, the index measures the development of monthly earnings among full-time employees. The salaried period may also include days off with pay. For wage earners paid on an hourly basis, the labour input unit is fully standardized: it describes their hourly wages. For salaried employees a change in the volume of labour input may in some cases influence their level of earnings. For instance, a reduced number of weekly working hours will be reflected in a negative earnings trend even if their hourly earnings remain unchanged. A temporary change in paid working hours (such as through layoffs or unpaid leave of absence) has only a partial effect on monthly earnings. Nor does the index describing the development of earnings for regular working hours reflect the effect of the amount of overtime or overtime raises on the level of earnings.

Source: Statistics Finland, 2009

1.3.2.2 Included collective agreements

The pay increases taken into consideration are in BE, AT, IT, FI and FR limited to sector or branch agreements. This bargaining level is dominant in these countries, nevertheless lower-level collective agreements are not included. Portugal and Spain report on the average pay increases of all agreements that are mandatory registered at the Ministry of Labour. Netherlands and Germany work with a sample of collective agreements of different levels to have a representative coverage. Belgium has plans to include company agreements of large companies in sectors, where the sector-level is not dominant.

1.3.2.3 Sectoral/occupational scope

The scope of the index is in DE, NL, AT, FI, IT, ES the whole economy. However, domestic help or the sector of private households is explicitly not included in Italy and Germany. The Spanish ECCT provides information on all the private sector workers (agriculture, industry and services) who are covered by collective bargaining, as well as on public sector workers covered by such bargaining process (i.e. Public Administration Defence, Social Security, Education, Health, etc.). The scope of the Portuguese, French and Belgian indicators is more limited. They do not include the public administration (civil servants). The Belgian index currently excludes also the collective agreements of large (semi-)privatised public enterprises (Post, telecommunications and public transport). The French data exclude agriculture and parts of entertainment in their indicator of the private economy.

In most of the countries the indexes are next to as national aggregate also available and presented by a sector classification. The NACE-classification is a common practice. In Austria, Germany , Italy and Spain the information is available by NACE-2-digit, in Belgium, Finland, Portugal, the Netherlands at the level of the letter codes (1-digit). Specific

classifications based on industrial relations practices are furthermore used in Austria, Belgium, Netherlands and Finland. In France these branches are the only sector classification used. 278 industries are divided in three global sectors: metal, construction and general sector.

Occupational classifications also play a role in the way of calculation. In Belgium the index is seperately calculated for blue-collar and white-collar workers, which are still recognised as a separate employment statute in labour law. The French indicator speaks about blue-collars (ouvriers), white-collars (employés), intermediary professions (professions intermédiares) and higher professional and managerial staff (cadres). Netherlands and Finland make a distinction between hourly-paid and monthly-paid employees (which is to a large extent also the main division between the blue-collar and white-collar segment in Belgium).

1.3.3 Sampling and weighting

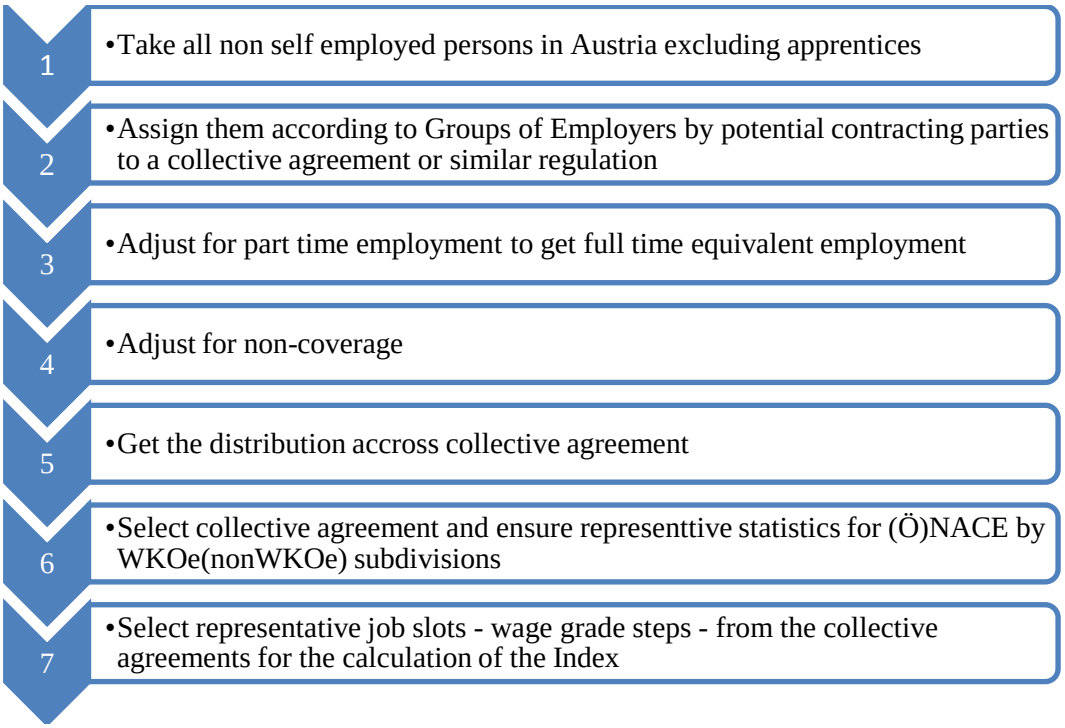
The second important methodological question of the constructed indices of collectively-agreed wages is related to the averaging – the quantity dimension of a price index. For the countries assembling a Laspeyres index, this procedure relates to the base year (see table 1.3)

1.3.3.1 Austrian example as first illustration

The quantity dimension of the Tariflohnindex should represent the weight of collectively agreed minimum wages across the total of non-self-employed in Austria, covered by such agreements. The first weighting scheme was established in 1966 and it was revised in 1976, 1986 and 2006. This is the reference period information that is used in the weighting procedure. The indicator is a Laspeyres index, so the starting point is to confine the weighting procedure for the average calculation to a base period. Basically collective agreements assign pay increases to wage tables consisting of job/occupational grades and possible wage increase steps within these grades (for example based on seniority or performance evaluation). Moving between grades is most of the time related to career changes and promotion. In order to calculate an average wage increase – especially when it is not a %-increase for all workers – it is important to know who gets the increase – wich grades in which collective agreements. Gathering information on how many people are covered by which collective agreement and which grade of the collective agreement wage table is as a result key for this exercise.

The Austrian Tariflohnindex is based on employment data gathered from various sources. There are a number of data sources for employment in Austria but none of them records employment by collective agreement or by an equivalent wage regulation. The actual weighting therefore uses a multi stage procedure which is shown in figure 1.2.

Figure 1.2 Weighting procedure of the Austrian Tariflohnindex



Source: CAWIE national report Austria

1.3.3.1.1 Overal employment by group of contracting party.

Overall employment data for the non-agricultural private sector are taken from the Enterprise Register. These data are based on employment data from the Austrian Social Security Administration. The register also contains information on the membership status of the employer within the specific section of the Chamber of Commerce an Trade and the relevant (Ö)NACE classification. The register includes also information on whether the employee earns a wage or salary. Since employment in Austria is on average about 5% higher at the peak of the year than in the trough, employment weights are based on annual average employment, to avoid the influence of seasonal fluctuations. For non-self-employment in the agricultural sector data are taken from the Survey of Agriculture (Agrarstrukturerhebung) in 2005. Public employment data come from the adminstrations themselves.

1.3.3.1.2 Adjusting for full time equivalents

Adjustment to full time equivalents is done by using information from the Labour Force Survey. Working time data form the LFS are matched on an individual basis with data from the Enterprise Register and used to adjust the number of employees of the respective (Ö)NACE by WKOe section. Private Enterprises which are not part of the Chamber of Commerce are treated like an additional section of the Chamber. If data in the matched data set of the enterprise register plus LFS Data set are insufficient, at the level (Ö)NACE by WKOe subsection the average of the higher aggregation level was used for imputation. Data for the public sector and from the survey of Agriculture are reported as full time equivalents.

1.3.3.1.3 Adjusting for coverage by collective agreement.

As the aim of the Tariflohnindex is to incorporate only people covered by collective agreements non-coverage has to be taken into account in weighting the index. It should be noted that non coverage can on the one hand be the result of the employer not being a

member of the contracting organisation to the collective agreement, which can only happen for employers outside of the sectors included in the WKOe where membership is mandatory. Or if the relevant subdivision of the WKOe refused to enter into an agreement. On the other hand, employees' non coverage could only happen if the collective agreement explicitly excludes a group of employees from applicability. Such exclusions are exceptionally applied for high level management positions or for people employed for short durations as part of their education.
For the purpose of the Tariflohnindex the coverage of collective agreements was taken from data collected in the Structure of Earning Survey 2002. This survey had an explicit question on coverage by collective agreements. Unfortunately the question was framed in a way not compatible with the Austrian legal situation, so that the resulting data have to be treated with some caution. These adjustments lead to a structure for employment as presented in table 1.6.

Table 1.6 Determination of employment figures, Austrian Tariflohnindex

Sector	Employees (employment contracts)	Full time adjustment	Employment, covered by col. Wage setting
Crafts and Trades	613521	90%	536955
Industry	406125	96%	386177
Commerce	485776	84%	410388
Banking and Insurance	103033	91%	89505
Transport and Communications	156365	92%	13678
Tourism and Leisure	245309	85%	189123
Information and Consulting	170545	88%	124031
Non WKOe Member	349813	84%	230188
Agriculture	27648	55%	14470
Central Government	192767	85%	162211
Federal States	176753	85%	148737
Municipalities Incl. Vienna	169847	85%	142924
Other State Sector	59788	85%	50148
Total Employment	3157290	88%	2621637

Source: CAWIE national report Austria

1.3.3.1.4 Distribution/weighting of employment by collective agreement

Having established the aggregate structure of employment, the next step is to find the distribution of employment according to collective agreement and Job-slot, representative for the full cross classification of (Ö)NACE and Employers Association. For the two important sections of the Chamber of Commerce (industry and commerce) data are collected by the Chamber according to subsection and job slot, which are used directly. For the remainder of the private sector, a sample survey was conducted by Statistik Austria. The sample was stratified according to size (as measured by number of employees) and section of the WKOe. The size of the sample was restricted ex-ante to 5.000 out of roughly 55.000 enterprises. The number of samples by subgroup was chosen to ensure larger sample sizes in sectors with a higher number of collective agreements. The number of collective agreements by subsection of the Chamber is known from the existing trade union database of collective

agreements. The survey included only firms employing more than 5 employees. A similar procedure was used for the agricultural sector where 107 enterprises were surveyed. Public sector information comes directly from the pay administration departments.
Next collective agreements which are considered representative for the relevant group were selected (step 6 in figure 1.2**Error! Reference source not found.**). An example is shown in table 1.7.

Tabel 1.7 Selection of collective agreements for Austrian index, example

WK SUB-Sec	(Ö)NACE	Collective Agreement	No.	covered
1090 Carpenters	20.) Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	*Cabinet makers, Joiners, in Trade*	5 380	99%
		Carpenters	64	
	36, Manufacture of furniture; manufacturing n.e.c.	*Cabinet makers, Joiners, in Trade*	9277	91%
		Plastic processing,	778	
		glaziers	21	
		Iron and metal processing trade	66	
	45 Construction	*Cabinet makers, Joiners, in Trade*	1178	
	52 Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	Cabinet makers, Joiners, in Trade	132	
1090	Total		16895	87%

Source: CAWIE national report Austria

As shown in the example members of the sub section '1090- Tischler' (ie. cabinet makers and joiners) of the Chamber of Commerce, perform tasks in 4 different (O)NACE i.e. NACE Rev 1.1-2-Digit sub-sectors, and they employ people belonging to five different collective agreements. The latter, somewhat surprising finding, results from the fact that enterprises can belong to more than one-sub section of the Chamber of Commerce.
For each WKOe-Subsection by NACE cell representative agreements are selected until at least 75% of employment is covered. In addition at least 75% of all employees in the WKOe-Sub-section have to be included. The stated procedure is repeated in similar form for all sectors included in the index. It resulted in the selection of 295 collective agreements which directly cover about 89% of blue collar and 91% of white collar employees. To improve the representativeness of the index the weight's for each selected collective agreement were adjusted to give more weight to agreements which also represent other not selected agreements.

1.3.3.1.5 Distirbution/weighting of employment within a collective agreement by wage grade/job slot

A similar procedure was chosen for the selection of representative job/experience categories or wage grade steps of the selected agreements, leading to 1082 index positions. The 75% rule was again applied, but an additional criterium was introduced. A maximum amount of positions was introduced according to the importance of the collective agreement (employment size), ranging from 1 for an employment size below 500 to 9 for an employment size above 15,000. Employment of non-selected positions is accorded to the weights of nearby selected points (see example of white-colllars in construction).

Tabel 1.8 Employement distribution by wage table white-collars construct industry collective agreement, Austria, selected reference points weighting for base year

	A1	A2	A3	A4	A5	M1/P1	M2/P2	HP/OM
1-2 years	101	388	666	**281**	127	109	25	5
After 2 y.	110	348	**705**	184	32	54	74	2
After 4 y.	35	**489**	510	312	78	89	27	5
After 6 y.	54	275	375	110	15	72	46	9
After 8 y.	73	257	443	226	**589**	52	47	40
After 10 y.	116	438	**1903**	**1181**	--	**467**	**327**	**195**

7 grades are selected. For the two most important an additional cell was selected to have more 'balanced' information. Resulting in using the following wage grade/steps with a re-weighted employment share.

Selected wage grade position	Minimum wage level of the collective agreement	Re-weighted employment	% in the average wage of the collective agreement
A2 – After 4 years	1631.00	2609	21.8
A3 –After 10 years	2391.00	2346	19.6
A3 – After 2 years	2002.00	2256	18.8
A4 – After 10 years	3437.00	1517	12.7
A5 – After 8 years	4401.00	842	7.0
M1 – After 10 yearrs	2657.00	842	7.0
A4 – 1-2 years	2715.00	757	6.3
M2 – After 10 years	2842.00	546	4.6
OM After 10 years	3157.00	255	2.1

Source: Statistik Austria, 2011

1.3.3.2 Population or sampling

It is in this regard important to note that Belgium, Spain, Portugal, Austria use the whole population of registered collective agreements. In Belgium and Portugal this population is however restricted to sector collective agreements (see supra).

Others use samples of collective agreements. Statistics Austria includes as already stated for each of the differentiated sectors – NACE and section of the Chamber of Commerce and Trade (WKOe) - the most important collective agreements until at least 75% of the wage earners that are covered by a branch-level agreement are included. The Italian Istat uses as selection criteria that for each sector the pay increases of the leading national agreement are taken into account. As a result the calculated index is based on a sample of 76 leading agreements. For the private sector this sample covers 85% of the employees. Statistics Finland monitors 216 base series for constructing 70 industry-specific indices. In Germany the statistics cover at least 75% of the persons covered by collective agreements in any economic sector or branch that is included in the index and this for both the old and the new Länder. 600 collective agreements are included. The Dutch CSB samples 250 of the approximately 900 collective agreements, including all agreements covering at least 2500 employees. The French database monitors all industries with more than 5000 employees: 278 in total covering 66% of the French private sector.

1.3.3.3 Determination of the average wage: weighting within collective agreements

A first step in calculating the average is of course determinating the average pay increase of the collective agreement. In the majority of cases, this question is not a difficult one, namely

when the increase is set as a percentage increase for everybody covered by the collective agreement.

The difficulty starts when increases are set not in relative but absolute amounts: a fixed amount as increase. A 5 Euro increase of a monthly wage has a bigger proportional impact on lower wages than on higher wages. Another complication happens when a wage increase is only granted to certain wage categories. This can happen because a certain occupational group needs higher increases, because of shortages or making the occupation more attractive on the labour market. Another possibility is that the lowest wages get a higher increase. This happens for example on an infrequent base in countries with a national minimum wage. The lowest wages of a collective agreement can as result be below this minimum wage and has to be raised to be legally in order. This issue has for example been playing in France in recent times (André, 2011).

Different approaches are developed to handle the issue of determining the average pay increase within a collective agreement. The Spanish method is rather straigthforward, but also very 'subjective'. Bargainers fill in a statistical sheet and it is one of the questions they have to answer. The Belgian ministry has by the social security administrative data information on how many people are covered by a collective agreement, but lacks information on the distribution of these wage earners over the cells used in the wage tables of the collective agreement. It uses as a consequence a 'rough' construct, namely the median pay level of all wage categories or the mean over all pay levels in the different categories. The latter is done when a sophisticad occupational wage classification system is used (including seniority increments per wage category).

The Portuguese have a rather encompassing method. For each collective agreement the average pay increase is calculated on the basis of the comparison between the pay levels in the respective wage tables (present and earlier agreement). The weight of each wage group in the average of an agreement is calculated on the ground of statistical employment data provided by the statistical office of the Ministry of Labour (GEP). These employment data are drawn from the annual company survey (Quadros de Pessoal) carried out by the Ministry of Labour. Companies are legally obliged to answer to this survey and therefore the coverage tends to be complete.

The Italian statistical offices uses a range of survey, administrative and qauli-quantitative (data information provided by interviewees of employers' organisations) to weight the FTE employment by job levels and average for each agreement (the 76 national sector agreements montiored) the index by broad categories of occupation (blue-collar, white-collar and complex).

The French system monitors 278 branches. The weighting is organised based on the tri-annual ACEMO survey on the evolution of monthly base wage. 2008 is currently used as the reference period. In this survey covering more than 200,000 enterprises and 12 million wage earners, employers with more than 10 employees have to indicate for 3 skill levels of 4 occupational categories (blue-collar, white-collar, intermediate profession and cadres) the base wage and the amount of people. For each of the 12 socio-professional categories, the company can choose a reference job position to answer the wage question. This information is next used to select reference wages in the wage tables of the collective agreement. The lowest wage categorie in the table is accorded to the skill level one, the highest wage categorie to the skill level two and three and this for each of the 4 occupational categories (when included in the agreement). When different types of wages are agreed for this wage categorie, the so-called 'salaire hièarchique' is selected. The employment figures of the ACEMO survey are used to weighting wage data in calculating the average.

Austria, Germany and the Netherlands apply comparable methods (for Austria see above point 1.3.3.1.). The Dutch CSB monitors 259 collective agreements. The wage tables of these agreements contain all together 28,000 different wage categories or measure points. Until 2006 CSB organised a large-scale quaterly/yearly company survey on employment and wages. Information on the contract wage and wage scale were collected. As such employment weights for the different wage categories could be reconstructed. In a next step the statistical office sampled 4700 of these measure point, guaranteeing that at least 60% of the total wage sum is covered for eache collective agreement. Employment of the non-selected points is in a next move attributed to the 'nearest' sampled points. As a result weighted average pay increase for each collective agreement can be calculated by referring to the base year information as reference period.[2] The German Destatis collected the same type of information as part of the Structure of Earnings Survey. The German statistical office uses this information as main variable for occupational class (cf. ISCO) as part of the individual wage information that is asked for the sampled employees.The German offices uses thus all the wage groups compared to the Dutch approach.

Another confusing element is the type of wage increase. The agreed proportional wage increase can be dedicated to the wage-level as it is indicated in the wage table of a collective agreement or it can be just a general percentage increase to the total wage. Both can be the same for an individual worker, but can also be not the same. In a range of countries it is common practices that some wage increases are limited to the wage as represented in the wage table. However, as the calculated wage increases in the indices refer to the (minimum) wages of the collective agreement tables, this practice distort not the calculation of the indices. Although conceptually and also for the bargaining partners in practice, a 2% increase of total salary is for example a bigger increase in absolute terms (and costs) than a 2% increase of the wage sum reference in the wage table of a (sector) collective agreement.

1.3.3.4 Aggregating average wages: weighting between collective agreements

A next step in the calculation of the average is the weighting between collective agreements. All countries possess employment data by collective agreement (crossed by the applied sector classification). Portugal, France and Germany use mainly (large-scale) survey material for this weighting; Netherlands (since 2006), Finland and Belgium mainly administrative data; Austria and Italy a mix. Spain uses the self-reported figures from the statistical sheets of the collective agreement.

Belgium, Germany, Italy and Austria of the countries working with a base year use only the employment distribution of this base year. The Netherlands and Finland adapt these figures. However, they do it in a different way. The Finnish statistical agency uses yearly changing weights in the aggregation of the 216 base series of the industry-specific indices and fixed-weights of the base year for the aggregation to 70 industry-specific indices. The Dutch statistical offices uses changing weights of employment between the collective agreement, but not for the weighting within the agreement.

1.3.3.5 Summarised

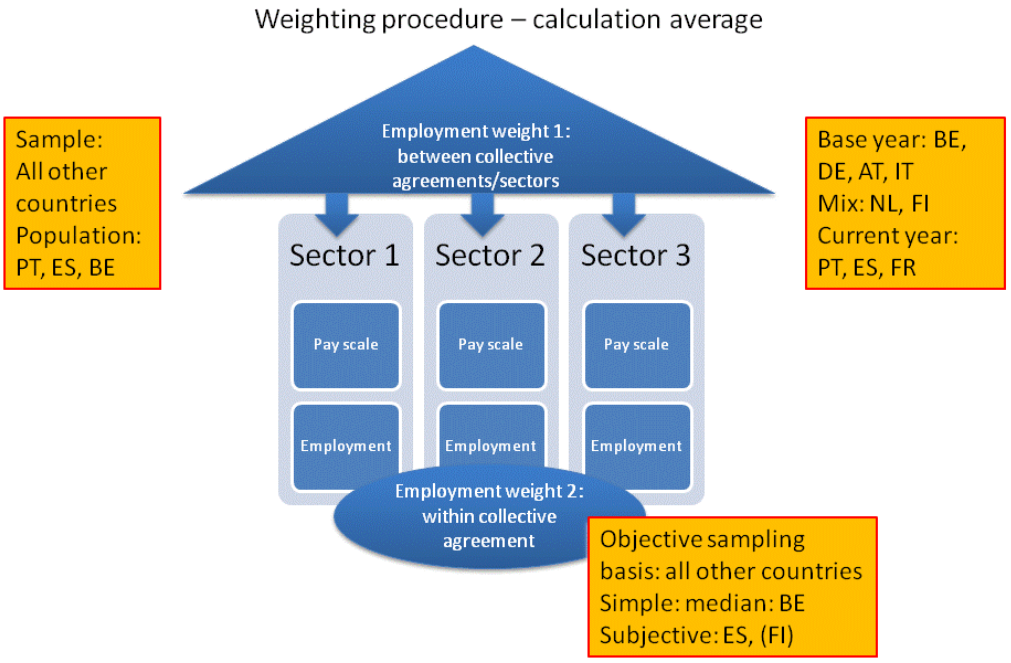
The following figure summarises these weighting procedures for the calculation of the 'average' increase. Key differences are:

- Is it based on a sample or the whole population of covered collective agreements
- Is the start a base year, current year of a mix

2 The Dutch CSB stopped in 2006 with organizing the survey and relies now for this data on information from the tax administration. These data include however not the contract wage information related to the collective agreement.

- Is the weighting within an included collective agreement based on the objective collection of employment figures by pay scales or based on a simple or subjective method.

Figure 1.3 Weighting procedures to calculate average pay increase



1.3.4 Periodicity and revisions

Belgium, Germany, Finland publishes on a quaterly basis. The French data are also quarterly updated, but they are however not published on a regular base. Currently most of the time confined to an annual publication. Italy publishes monthly, quarterly and annual data. The annual data are published in March together with the monthly data for January and February. Spanish and Portuguese publish monthly averages, which are cumulated in an annual figure.

Preliminary, monthly calculations are published by Austria and the Netherlands. The Dutch offices indicates each time on how many collective agreeements the calculation is already based and updates it monthly until the figures are definitive. The office publishes also quarterly and annual indexes. Statistics Austria has the same appraoch. It publishes prelimary calculations 15 days after expiration of the month; the final figures come 3 months later. Retroactive revisions are in other words only included within these 3 months, but for this rule again exist an exception for very important agreements (representing more than 5% of the employment covered by the Index).

The French data take into account the effective date when the wage increases is foreseen by the agreement. When this date is in the past (for example an agreement of November refers already to an increase in January), the signing date is used as the date of implementation. The Italian ISTAT publishes to counter this problem of retroactive wage

increases two indicators on pay levels: 'accrual' with retroactive revision and 'cash value' what they actually got and get at the time of payment. The Italian index is published monthly and an annual figure.

The Spanish indicators make a difference between 'agreed' and 'revised wage increase'. The revised wage increase is the result of incorporating the impact of revisions on account of 'wage guarantee clauses' to the agreed wage increae for the period, in cases when such revisions are retroactive whatever the date on which they were actually paid. In other words the result of the revisions is attributed to the year for which they are retro-active calculated (and agreed).

2 | Comparative quality assessment

There is no universal definition of quality; it is multifaceted and can therefore mean different things to different people, and vary in concept in relation to different procedures and products. In relation to statistical output quality, the European Statistical System's (ESS's) six dimensions of quality are generally used: relevance, accuracy, timeliness, accessibility and clarity, comparability and coherence. The structure of the section is based on the quality concept of this ESS. The assessment is organised from a harmonisation perspective. Harmonisation can be defined as actions or processes that through matching and blending bring about agreement, reconciliation or standardisation. Harmonisation is the process of agreeing and applying standards that can lead to comparability. Comparability is one of the ESS dimensions of quality. As we embrace the harmonisation perspective in this paper, comparative coherence is of course a key aspect of relevance. So in a first section of the quality assessment we discuss relevance, comparability and coherence combined.

2.1 Relevance, coherence and comparability

Relevance is the degree to which statistics meet current and potential user needs. It depends on whether all statistics that are needed are produced and the extent to which concepts used reflect user needs.

2.1.1 Changing needs

In the different countries the relevance of the statistics on collectively-agreed pay increases has been at the origin mainly attributed to income policies: informing the social dialogue on this matter and linking this information to social policies. Especially in countries with a colourful or diffuse picture of agreements at different levels (local, regional, national) and demarcations (company, sub-sector, sector) and different timing, this reporting is instructive for other bargainers, see for example the examples of Portugal, Spain and the Netherlands. However, it is certainly correct to state that it is only one of the statistical figures bargainers look at (and probably not the main). The following passage of the French CAWIE report is in this regard illustrative: "the main conclusion of interviews with social partners is the weak use of French statistical data. At the time of collective bargaining, social partners mainly focus on consumer price index, on the minimum wage (SMIC) and housing charges. They look at the hourly wage for manual worker index (SHBO) which is supplied by DARES's official publications to understand the SMIC evolution" (Delahaie, Husson & Vincent, 2012, p. 10).

This kind of horizontal coordination usage is complemented by a more macro-economic perspective. Evidence of this perspective is the most clear in countries where vertical coordination of collective bargaining is/has been strong. Statistics Finland cooperates with the Information Committee on Cost and Income developments. October 2008, the Finnish Prime Minister's Office appointed an Information Committee on Cost and Income Developments for a period of four years. Its predecessor was the Incomes Policy Settlement Commission. The Information Committee prepares economic reports and estimates for collective bargaining and decision-making. The Committee monitors how collective

agreements are realised and assesses their impacts, taking account of euro area requirements and the stability and functioning of the labour market. In addition, the Committee serves as a discussion forum for assessing to what extend wage formation and collective bargaining can promote employment and advance the functioning of the labour market in the evolving circumstances. The Committee has a tri-partite composition. Trends of collectively-agreed wages of the country and its 3 main neighbours (NL, DE, FR) play a dominant role in the technical report that the Belgian office of the Central Economic Council publishes each year in autumn. Every two years the Council tries to determine a wage norm to coordinate collective bargaining in Belgium. Also in other countries, statistics of collectively-agreed pay rises play a role in macro-economic discussions, among others because of the timely availability to use this wage information in forecasting (by central planning offices or national banks).

These macro-economic purposes of coordination have in recent years got an increasing European dimension. Attempts of horizontal coordination, especially at the trade-union side, have been developing at sector level (for example EMF) or in neighbouring countries (Doorn-Initiative). Most recently, the ETUC, in a 2010 resolution on the coordination of collective bargaining has urged trade unions to resist wage freezes and wage cuts in the context of tentative economic recovery. It notes that trade unions should refuse to bargain arrangements which have the effect of poaching jobs from other countries, regions and companies. Within the context of a dominating competitiveness policy mantra and Eurozone monetarism, the EU installed another dimension to this macro-economic governance in the current economic crisis. The European Commission (2010) published six proposals which make up the economic governance package, emphasising the importance of wage setting mechanisms that allow for 'competitive wages' and proposing indicators (so called 'scoreboard') to safeguard this aim (by evaluating wage indexation mechanisms, decentralising bargaining, decreasing wages in the public sector, etc.). Finally, in March 2011 a majority in the European Council (the 17 Euro and six non-Euro member countries) endorsed a pact on competitiveness, now renamed under the title Euro Plus Pact, resulting in a reinforcement of fiscal austerity policies and an increase in competitive wage pressures. In February 2012, the European Council adopted the above mentioned scoreboard to tackle macro-economic imbalances.

2.1.2 Coherence and comparability

From these developing user perspectives, which increase minimumly the need for European comparison, it is important to notice that only 9 of the 17 countries, belonging to the Eurozone, construct this type of index. However, these countries represent more than 90% of the Eurozone GDP. The bigger economies are all represented. Only Greece and Ireland are as smaller ones missing of the countries that constitute more than 1% of the Eurozone GDP. A starting base is in other words certainly available, especially when one considers that a basic approach can be detected in the countries, namely monitoring the trend in nominal average pay increases.

It is also important to see that most of the countries can produce already statistics using the common NACE sector classification. France is an exception in this matter. Private sector data are everywhere included. Public sector data are however missing in Belgium, France and Portugal. Employees of private households are also not always included (see for example Germany).

Two fundamental issues have furthermore to be dealt with in order to make further progress. The lack of a common wage definition and method of averaging hamper the coherence and comparability.

6 of the 9 existing indicators calculated an average collectively-agreed pay increase based on a fixed-weight system with a base year or a so-called Laspeyres Index. The French have not yet invested thoroughly in the availability of average increases. The Portuguese and Spanish ministries have another approach. They calculate an average increase in the monthly/quaterly/annually published agreements. This is a fundamental other approach than BE, DE; IT; NL, AT and FI. The latter countries focus on the monitoring of the collectively agreed pay increase of the average (representative) worker. The average worker is constructed by distributing the employment of a base year over the wage tables of 'representative' collective agreements and uses this distribution as weights in the averaging. 'Representativeness' is linked to the coverage of collective agreements in this base year.

The former approach of Portugal and Spain looks to what is the average increase of the pay increases that have agreed. The major approach is on the contrary a price index, namely about the price of labor. The other is about how much the price is increased when the price is changed. The difference is best illustrated with a theoretical, but illuminating example. When in a country most of the collective agreements foresee no wage increase (probably because no agreement will be signed) and only one, which covers 5% of the employement, foresees an increase of 5%, the Portuguese and Spanish indexes would end up with a 5% increase (averaged to a yearly figure). The Laspeyres indexes would only indicate a 0.25% increase. Of course this is a theoretical case, but it shows how sensitive the Portuguese and Spanish indicators are for 'zero' or 'no' agreements.

The Portuguese and Spanish approaches are in turn better in catching new trends in employement, when these sectors would be covered by collective agreement. However, most of the price index systems have an update every 5 year. The Dutch do it only every 10 years, but they update the weighting between the collective agreements on a yearly basis.

To conclude, from the 'price of labor' perspective, the Laspeyres index approach is superior, when a well-developed weighting methodology is available.

Another difficulty of coherence is the varieties of wage definitions applicated. Some focus more on basic wage rates (Belgium, France, Spain and to a lesser extent Austria), other use a more encompassing earnings definition. Particularities reign. The German indicator includes currently not flat sum increases (but this will change). Holiday and end-of-the year premiums cause also confusion. From the macro-economic perspective, it would be advisable to streamline as much as possible the wage definition with the wage concept of the statistics on actual earnings. For example: in the present Belgian index, the congruence between the labour cost indicator and the indicator of negotiated wages is imperfect. Some public-private enterprises (e.g. postal services and telecommunication) do appear in the labour cost index, but negotiated wages are not measured. On the other hand, schools are absent in the (private sector) labour cost index, while the negotiated wages are measured. The first of these two issues is promised to be resolved. The Italian CAWIE report (Birindelli & Leonardi, 2012) pinpoint to the fact that labour costs data are most of the time deducted from national accounts. These calculations include estimates for the informal economy, which makes again comparison more difficult and open for interpretation.

A stress on the macro-economic perspective would anyhow involve the broader ILO definition of earnings as concept. Illuminating in this regard could also be the Dutch and Finnish practices. The Dutch calculate and publish two types of indexes: regular payments with and without special premiums and bonus. Statistics Finland produces the index of negotiated wages and salaries as an organic part of the construction of the index of wage and

salary earnings. Since wage drift can be measured in a consistent manner, the index of negotiated wages and salaries has been an indispensable tool in studies on wage determination in Finland.

From a scientific perspective a restriction to basic wage ratess equates the wage drift to the wage cushion. When variable wage components would be monitored, however, a distinction could be made between uncontrolled wage drift (a wage change that was not negotiated) and wage flexibility allowed by the negotiating partners.

2.1.3 Completeness

The target of calculations and estimations is the average collectively-agreed pay increase. Besides the already mentioned sectoral 'gaps', a key issue in regard to completeness is the inclusion of lower-level collective agreements, in casu company agreements.

The Dutch and German indicator cover this decentralised form of collective bargaining already rather well by sampling collective agreements based on an employment threshold. Belgium has plans in the same direction. The Spanish and Portuguese information is also rather complete in this matter. The lowest level of completeness on this issue we detect in Italy. Only leading nation-wide sectoral agreements are covered. The territory-linked bargaining is very partially covered. Collective bargaining at firm level is absent. As in most of the countries sector collective bargaining is still dominant, one currently not has to exaggerate this matter. It stays nevertheless a point of rising attention (due to decentralisation).

A question of time coverage seems to play mainly in France. Information collection for the DGT-DARES database was not always systematic before 2003 and the scope of coverage was different: industries covering 10,000 employees were taken into account (against industries with 5,000 employees after 2003) Secondly, before 2003, information on wages was available for three occupations only, while four occupations are now reported.

We can further conclude that higher-level managerial staff and apprenticeships are most of the time exclude from the coverage. The focus is on the average pay increase of the full-time worker, which is a commendable choice. The Spanish ECCT does not provide salary information for different occupational groups or other job classifications (type of contract, seniority, etc.), since this data is not communicated by all companies and therefore is unrepresentative and unreliable.

2.2 Accuracy

The accuracy of statistical outputs in the general statistical sense is the degree of closeness of estimates to the true values. Taking into account from the previous section that the available indicators do not measure all in the same way the same, one could argue nevertheless that what they measuring is often done in a very accurate way. Criticism is low on this matter in the countries, except maybe in Belgium, but there a revision in the methodology is as a result planned. It is however again important to stress that part of this high accuracy is obtained by limiting the coverage and completeness of the indicator. Limiting to basic pay rate and/or at national sector level and/or excluding certain sectors/occupations, makes the calculations a lot easier, more accurate in a range of countries – again looking to Belgium as example in the first place.

Additional flaws in accuracy can be detected. We zoom in on some sample, coverage and measurement issues.

2.2.1 No sampling errors

Sampling plays not a major role in most of the calculated indices. It is only in the sophisticated indexes of the Austrian, Dutch, Finnish and German statistical agencies that sampling plays a role in constructing the base reference points or elementary aggregates of the price index. Non-probabality sampling is the main strategy. One looks to 'leading' agreements, the 'biggest in employment coverage'. Threshold are applied: coverage of 70% in a sector; the most important pay scales, … . Information for this sampling comes from adminstrative population data or large-scale official surveys of which companies have a legal obligation to respond.

One could hypothesize that a focus on bigger, leading agreements has a potential to 'overestimate' pay increases, because smaller, weaker agreements are not included. However, this idea remains speculation as no such type of 'bias' is reported in one of the countries.

2.2.2 Coverage errors in technical details

Coverage errors (or frame errors) are due to divergences between the target population and the frame population. Undercoverage is very related to the completeness problems already mentioned: not all countries cover all agreements and all sectors.

Other possible coverage errors are more situated in technical details.

The first have to do with the timing of collective agreements. Agreements can have a multi-annual duration, they can be retro-active or conditional. The indicators that caculate an average of the labour price increases and not an average increase of the price (see supra), are especially struggling with this issue. The Spanish ECCT only takes into account agreements with annual economic effects which are registered before the Labour Authority, but not those with "ultra activity". The situation is compounded in the case of multi-year agreements, which are registered only in the reporting year without annual updates for the duration of the agreement . Thus, the ECCT leaves out all those agreements that are not newly registered every year (either because they are multi-year agreements or because they have to be extended). The Portuguese wage increases are calculated on the basis of the agreements published in a determined period (month, quarter, semester or year). Different agreements published in the same year may cover different periods. Some may cover 12 months, starting on 1st of January, others on 1st of March, and so forth. Furthermore, there are many agreements covering more than 12 months, many of them with a retroactive effect of several months or even a year. This raises some problems for the interpretation of the data. The first is that the average increase of wages in agreements that were published in a determined year does not refer exactly to that year. This is particularly relevant in years with a very long average duration of agreements, as for instance 2005 and 2006 (more than 20 months).

The Dutch CSB solves this question by publishes preliminary figures and indicating on how many agreements the data are already based. The Italian statistical offices publishes two indices: accrual (with ex-post revisions) and cash values (without).

Another difficulty of coverage relates to the growing fragmentation of collective bargaining in some countries. Opting-out, wage cuts or 'overruling' of collective agreements by authorities installin ga wage freeze are causing problems of under-coverage. Until a few months ago, the Spanish ECCT did for example not generally consider wage cuts, which prevented registration of "negative increases." It took a change in the computer application to do that, although the effect is not yet visible in official statistics. It should also be noted that the ECCT does not reflect recent statutory wage cuts applied by public authorities, since wage reductions are only incorporated into the database if they have been the subject of discussion and agreement between the parties involved in collective bargaining. The

agreements still reflect wage increases that were agreed some time ago and have little bearing with reality. In addition, potential improvements on wage levels specified in collective agreements may be changed unilaterally by employers under the labour reform introduced by Royal Decree-Law 3/2012. The current crisis situation highlights an additional problem with the ECCT. Although the information is relatively current and regularly updated, wage increases for the years 2010, 2011 and 2012 may be overestimated for different reasons: many agreements for 2010 and 2011 do not yet include any clauses on the revision of wage growth relative to inflation, many others have been revised downwards and others are still unknown, since they have not been and may never be registered.

The German statistical office is also considering how to integrate the growing opting-out practice in their country.

2.2.3 Measurement errors

2.2.3.1 Non-universal granting of pay increases and weighting quality

Measurement errors can be considered low as a lot of the pay increases are granted as a percentage to all workers. The risk for measurement errors increases however considerably when only particular groups of workers are assigned a (higher) increase or the increase is a fixed amount and not a percentage.

Accuracy depends in these cases heavenly on the quality of the weighting procedure. Information on the employment by wage tables of collective agreements is the key issue in this regard. Combining different sources, NL, FI, IT and AT manage to collect this employment information in a satisfactory way. DE and PT have high-quality information on this matter based on regular, official survey material: the Structure of Earnings Survey in Germany and the Annual national Company survey (Quadros de Pessoal) in Portugal. Belgium has here the biggest problem as it is missing employment figures by wage tables and as a result uses only a simplified weighting (between collective agreements). At the moment, an average (generally arithmetic) is taken of all occupations defined by the sector agreement. A major issue is the fact that we have no insight to what extent the unknown distribution of functions would deviate from such an average.

The Finnish data rely on 'subjective' information by the Employers organisation to obtain the part of pay increases that can be related to a negotiated agreement. For each agreement (the base series) the employers' organisations provide their estimates about the contribution of pay increases concluded in collective agreements. By using this information Statistics Finland constructs base series-level contributions of collectively agreed pay increases and aggregates these increases to sector-level contributions.

This 'subjective' factor plays an even bigger role in the Spanish case. One of the main problems of the ECCT is related to the completion of statistical sheets. In principle, bargaining or peer committees are responsible for filling the data; however, the sheets are often completed by the company or even by contracted agents (without control by the workers' representatives) and that affects the quality and reliability of data. Furthermore, it is next to impossible to translate the complex casuistry of collective bargaining into a digit in a statistical sheet. For example, the agreed wage increase -one of the main results provided by the records- is generally considered with respect to the base salary, but in many agreements it is based on the total salary and distributed through bonuses, or distributed only to certain categories of workers. It is therefore difficult to obtain a single or generally valid figure for the wage increase. As a result of poor completion of statistical sheets, the information on the number of workers affected by collective bargaining is not very reliable in some agreements

above company level (as the average number of workers per sector is difficult to estimate for bargaining committees).

As already stated, this measurement problem do not has to be exaggerated as it confines mainly to particular a-typical agreements. However, one can estimate that this measurement error is biger in times of economic crisis, when these a-typical agreements are more negotiated (lump-sum, particular groups other pay increase, …).

2.2.3.2 Pending questions on technique of price index

When we go further into the technical details, one could raise some additional questions on possible measurement errors. These questions can be formulated by making analogies with similar reported measurement errors of the more known consumer price index (United Nations, 2009; ILO, 2004). The questions relate mostly to the use of the index number formula: a Laspeyres index based on fixed-weights of a base year.

A first relevant shortcoming of a CPI is called new product bias. This occurs when new goods and services are introduced into the economy but are not incorporated into the fixed market basket of the CPI until much later. A 'bias' problem is that a large part of the price declines for many of these new goods occur over the early stages of the product cycle, when they have not yet been included in the CPI. One could hypothesize that this new product – here new agreement – bias plays in the opposite direction for collectively-agreed pay. First-time agreements in a (new) sector will probably make a kind of 'catching-up' process. The index-indicators, using a base year with a fix basket of agreements, are here confronted with a distortion. The annual averaging Portugues and Spanish indicators have an advantage here.

A second strongly debated issue in relaton to the CPI is 'substitution bias', which occurs when consumers substitute between types of goods and services when relative prices change. A fixed market basket measure like the CPI assumes that, contrary to standard economic theory, consumers do not substitute comparable products (for example fast food) when the price of one rises relative to the other. It seems save to argue that this kind of substitution effect does not play in the price of labor, but this type of labor index is hampered by a comparable effect, namely the composition effect, related to the anti-cyclical evolution of low-wage employment. When an economy grows, the amount of lower-paid jobs (temporary, low-skilled, …) rises, when an economy turns into a crisis, these jobs are the first to go. This is certainly the case in the Eurozone, that makes in addition also for especially these types of jobs a turn from industrial work to the service economy.

The ECB (2012) brings proof of this composition effect for actual wage developments. The ECB investigated the changes in the actual wages for five European countries (France, Germany, Italy, Belgium and Portugal) for a period of one or two years between 2007and 2010. They split the observed wage change in two effects, a 'prize effect' which represents a real change in the wages, and 'composition effects'. These compositions effects are the effects of changes in (the characteristics of) the workforce. For example, during the crisis, especially workers with low-wages (young, low skilled ...) became unemployed, which changed the composition of the workforce and thus influences the evolution of the average wage. When a large part of low wage workers leave employment, it is possible that the average wage increases even though individual wages stay the same or even decrease. This is illustrated by the analyses of five countries. The observed wage change for all countries was positive. However, when this change is splitted into a prize effect and composition effects, a different wage evolution was found. The prize effect was negative for four countries and diminished considerably for Portugal. Real wages thus decline in most countries during these crisis years. However, large positive composition effects were found for all countries, explaining the total positive observed change.

It is probably correct to state that these insights can also be transferred to the Laspeyres indexes of collectively-agreed wages. It is important to have information on what point in the economic cyle the base year information is gathered. In period of a severe unemployment shock, it seems fair to presume that a Laspeyres index is overstating the 'average' price/pay increase collectively agreed. The Finnisch national expert reports such a problem concretely. When the wage and salary earnings index 1990=100 was calculated, construction had, after the construction boom of the late 1980s, too great a weight in comparison to the real situation. During the depression years of the early 1990s the share of the construction sector collapsed. A possible solution for this matter would be to adopt a Fisher index that would take into account the employment distribution weights of the base year and current year. It all depends of course on what one focuses: the trend in the price effect or the trend in the price cost effect. The latter is from a macro-economic perspective more important and necessitates to make inquiries into the composition effects.

All-in-all, one should not overexaggerate these technical questions. From a scientific point of view, they invite however to further methodological research (and possible solutions) as has been done for the harmonised calculation of consumer price indexes.

2.3 Organisational quality

The presented indexes are provided by two types of official organisations: national statistical offices (DE, IT, NL, AT & FI) and statistics departments of Ministries of Labour (BE, ES, FR, PT). In general, one can state that the organisational quality, provided by the statistical offices, is higher than the one provided by Ministries of Labour. A release calendar drives timeliness and punctuality. Larger and more sophisticated use of internet tools delivers better accessibility. Nevertheless, the input of Labour Ministries is essential to provide expert knowledge on the basic aggregation points, namely collective agreements, their pay settlements and their wage tables or pay scales.

2.3.1 Timeliness and punctuality

The timeliness of statistical outputs is the length of time between the event or phenomenon they describe and their availability. Punctuality is the time lag between the release date of data and the target date on which they were scheduled.

As already mentioned several times, timeliness is considered as an important characteristic of the indicators on collectively-agreed pay increase. They are praised for this quality. Monthly or quaterly data are available that are published very quickly after the end of such a period. Information delay depends mainly on how long the bargaining process takes and on the procedure to register and record the agreement in the database of collective agreement.

We illustrate this delay issue with the Portuguese case. The period between signing an agreement and its deposit at the Ministry of Labour may take some months, the period between deposit and the publication in the Bulletin of the Ministry takes normaly only some weeks. The online-publication of the DGERT's "Reports on collective work regulation" occurs normally in the first week of the following month. From this perspective the source is very timely. The wage increases stipulated in the collective agreements refer often to periods that start several months before their signature and subsequent publication. This kind of delay is the exclusive responsibility of the negotiating parties. As an example we may think about an agreement that has been signed during a certain period on a regular yearly basis, always 2 or 3 months before the end of the year. Thus, the Ministry has always been able to publish the agreement before the date when the agreement and its wage table get into force

(let's say, 1st of January). In one specific year, negotiations enter a deadlock and the agreement is only signed in April, that is several months after the end of validity of the previous wage table (31st of December). The new agreement includes a wage table that starts its validity on January 1st, several months before the agreement has been signed. This happens with some frequency and causes delays in the publication of the agreements and subsequently of the statistical data on wage increases.

The time lag between the release date of the monthly reports and the target date on which they were scheduled for release is very short in Portugal. The indicators of timeliness and punctuality must be considered separately for the Italian Monthly Indices and for Wages Levels Indicators. For the Indexes, the monthly publication are regulated by an annual calendar of press releases, made available by the end of one year for the following year (i.e. by the end of 2011 for the entire 2012). Their release schedule has always been respected. IT: Annual Wages Levels by accrual value are generally published in March with reference to the previous year. The degree of information completeness/temporariness is variable: in March 2010, for a series from 2005 to 2009, only the year 2005 was definitive. The degree of coverage gradually decrease with the more recent data (98.9 % of employees in 2006 and 2007; 92.8 % in 2008 and 91.6 % in 2009). Dutch data are available for each month at the beginning of the next month. Due to the use of annual data concerning the distribution of the labour force over the measure-points, the finalization of the index lags more than a year behind. By May 2012, the index over 2011 still has to be finalised.

2.3.2 Accessibility and clarity

The accessibility of statistical outputs is the measure or the ease with which users can obtain the data. It is determined by the physical conditions by means of which users obtain data: where to go, how to order, delivery time, pricing policy, … . The clarity of statistical outputs is the measure or the ease with which users can understand the data. It is determined by the information environment within which the data are presented, whether the data are accompanied with appropriate metadata, whether use is made of illustrations such as graphs and maps, whether information on data accuracy are available and the extent to which additional assistance is provided by the producer.

Tabel 2.1 Dissemination strategy of the Italian index by ISTAT

1) **press release available monthly on the ISTAT website** (http://www.istat.it/en/archive/collective+agreements);

2) **the on-line database *Statistiche I.Stat*** (http://dati.istat.it/?lang=en), opening first the link **Labour** then **Wages** in the pull-down menu and then picking up one the following choices:

   a) Annual cash and accrual wages according to collective labour agreements per employee per agreement - annual data - euros
   b) Cash and accrual wages according to collective labour agreements per public administration employee per agreement - annual data - euros
      i) Annual cash and accrual wages according to collective labour agreements in public administration
      ii) Annual cash and accrual wages according to collective labour agreements in public administration of executive subject to collective contract by area
   c) Cash wages according to collective labour agreements per employee by Nace rev.2 - quarterly and annual data .
   d) Index of wages according to collective labour agreements by agreement - monthly and annual data
      i) http://dati.istat.it/MetadataWebApplication/ShowMetadata.ashx?Dataset=DCSC_RETRATECOMonthly data

ii) Annual data

e) Index of wages according to collective labour agreements by Nace - monthly and annual data
i) http://dati.istat.it/MetadataWebApplication/ShowMetadata.ashx?Dataset=DCSC_RETRATECOMonthly data
ii) Annual data

Source: CAWIE national report Italy

A quality difference can be detected on this matter between the statistical offices and the others. Metadata and elaborated methodological notes are produced and easy accessible, especially the notes from the Netherlands and Austria are very detailed (Statistik Austria, 2011; van den Berg, 2004). Destatis, CSB, Statistics Finland, Statistics Austria and Istat also have extensive possibilities to present the data in different ways and with illustrations like graphs and maps. More experienced, professional users – the main users of this type of data – are certainly better served by these offices.

Occasional users will also find at these offices publications with data in static format that are easy to find and interpret. However, the French, Portuguese and Spanish Ministries of Labour are better to integrate these indices in a more global panorama of collective bargaining or wage development. The Portuguese and Spanish labour administrations have also invested in internet tools, whereby also collective agreements and wage tables can consulted. Belgium has comparable plans and provides now already in basic format collective agreements on the website. Of the statistical offices, only the German Destatis present this type of information (in a partial way).

Three more general remarks can be made about accessibility and clarity of the statistics.

First of all, transparency on the basic weights is rather low in comparison to information available on for example the building blocks of consumer price indexes. The Dutch CSB is maybe the most transparent. They indicate also cleary the preliminary character of their first calculations by indicating on how many agreements the calculation is already based.

Secondly, long-term time-series are not always available on an easy base. For example, currently online data by employer sector are in Finland available from 2000 and by industry from 2005. Data for longer periods are available on request.

Thirdly, statistics are currently to be traced at the national level. The annual reports on pay developments of the European Foundation for the Improvement of Living Conditions make reference to these data, they are however not collected in a data-file format, nor in detail form presented for sectors. Again the example of Finland: data are available for regular users who are paying for access to the relevant database (ASTIKA), but currently they are not available free of charge through the internet (even though they can be obtained most probably free of charge upon request). French data are only publicly available as part of a written publication. Belgium data are in excel-files hidden at the website of the Ministry of Labour.

Finally, one can see that a series of countries publish data using an occupational classification. This is in particular the case in Belgium and France. Others refer to monthly-paid and hourly paid occupations (NL & FI). Others have no such information. From a European perspective, this situation blurs the picture.

Conclusion

In this paper we compared the 9 available indicators on collectively-agreed pay increases in the Eurozone. Basic insights have been provided in the applied methods. A quality assessment has been conducted using the framework of the European Statistical system as guideline. Besides direct input for bargainers and being a trend indicator for other income (policies), the indicators play also an increasing role in macro-economic policies. Methodological acccuracy can be considered high when the basic information on the employment distribution by wage tables of collective agreements is one way or another available. However, not all countries have this type of information available. Spanish indicator depends in this regard on subjective reporting from the collective bargainers, Belgium uses for the employment distribution by pay scale a statistical artefact (the median pay scale). From a comparative point of view big challenges are the coherence and completeness. Different wage definitions are used; one or several indicators are calculated; sector coverage is not everywhere the same; lower-level collective agreements are not always included. As such, each of the indicators is confronted with challenges (see table). The available indicators are furthermore split between two fundamentally different approaches. The more sophisticated approach is the index-type, which is comparable with a consumer price index. However, pending technical questions can be raised about the current calculation method (a Laspeyres index), when taking the composition effect along the business cycle in average wage trends into consideration.

Tabel 2.2 Specific challenges of the studied indicators

BE	(Expected and planned) revision of the basic weighting procedure and other methological improvements
ES	Quality of the subjective basic data
IT	Coverage beyond the national agreements
FR	Growing into a regular statistical publication
PT	Use the data potential to calculate a more sophisticated price index
NL	Maintain the data information to update weights of a reference period/base year
AT	Inclusion of other forms of remuneration (by extra indices)
FI	Increase the transparancy on the basic data collection
DE	Keep covering the current fragmentation of the German pay bargaining system (opting-out; company-level)

Taking this quality assessment into consideration, how can we than argue for a stronger harmonisation of these statistical indicators on collectively-agreed pay in the Eurozone?

Rationales to work on such harmonised statistical system of collectively-agreed wages are certainly growing. The evolving coordination of collective bargaining in the Eurozone forms the basis of these arguments. Due to globalisation, one looks more and more for pay bargaining beyond national borders (Glassner & Pochet, 2011). In the Eurozone this (implicit) horizontal coordination is strengthened by the developing German wage leadership (Ramskogler, 2012). One sees also more attempts from the union side to develop this kind

of coordination (e.g. the Doorn initiative, the collective bargaining networks within IndustriAll). As already stated in the introduction, the pressure for vertical coordination as part of the newly European economic governance is also mounting. An evidence-based policy discussion on wage setting in the Eurozone would be helped by a stronger harmonisation of the available indicators. It is important to know in this regard that the European Central Bank is using these data.

Such an harmonisation would be best developed step-by-step when we overlook the current fragmentation. We distinguish 3 main steps within this cumulative learning process that would leave space for experimentation and for an informed debate with users: open coordination – minimal harmonisation – strong harmonisation.

Although only 9 of the current 17 Eurozone countries calculate a statistical indicator of collectively agreed pay, this situation can be considered as an important starting base. The countries with an indicator cover 93% of the total Eurozone GDP. Only Greece and Ireland are missing as bigger countries (counted by GDP). Working with the international sector classification NACE is broadly adopted. Databases with high reliability exist on the basic raw data, namely pay increases within collective agreements. A key issue in the road to more harmonisation is of course the different approach. France, Portugal and Spain monitor on a yearly base the average increases in collective agreements. The other countries (BE, DE, IT; AT, NL, FI) calculate a more sophisticated index with a base year of the the collectively agreed increases of the average pay in the workforce.

In a first step of open coordination the whole group could learn about the quality procedures that mainly the official statistical offices in the group use. Transparancy about the adopted weight system could inspire the mutual learning process. Making reference to each other indicators would also help in this regard. Solutions could be exchanged on the accuracy problems that have been dealt with: the threshold for including company agreements; the development of more than one index to include premiums; how to dealt with opting-out clauses in agreements, pay decreaeses, working time changes, retro-active pay deals. Creating this European level of statistical exchange and coordination would probably also help to increase the national attention (in time and resources) to tackle the specific pending methodological issues of the country.

A second level could be defined as minimal or weak harmonisation. Adopting 'less is more' as pragmatic principle, the involved countries would attempt to make besides their national practies or needs, a Laspeyres index of the average nominal basic pay increases as set by collective agreements for full-time levels. It would be a collaboration of statistical offices and Ministries of Labour. The focus would be on the private sector and the sector level (NACE-letters) and as stated limited to basic pay. Belgium, France, Spain and Portugal have to make still the biggest efforts to reach this point of minimal harmonisation.

In a third and only third step it seems feasible to speak or think about a strong or maximal harmonisation. Besides a fast and quarterly availability of the changes in basic pay rates, it would be helpful to also have more comparable indicators on an annual basis about the earnings – regular payments and special payments. These data would make it more easy to make links with actual earnings or compensation data and to make a better comparison with labour cost developments possible. One should at that moment strife to include private and public sector and lower-level of pay bargaining. The step would require still a lot of definitional work to do and to investigate fully the use of a Laspeyres index or a more elaborated form of such kind of index (see in this regard the experiences of the Netherlands and Finland).

Important drivers of such a strong harmonisation could be on the one hand a possible (European) revision of the ILO Resolution concerning statistics of collective agreements

(dating from 1926) and on the other hand using the European Structure of Earnings Survey as harmonised database for the weighting issue. As already stated several times in this paper, key to calculate a high-quality and robuust index of collectively-agreed pay increases requires employment data about collective agreements and their pay scales. How is the workforce covered by collective agreements, which part of the wage increaes is determined by collective agreement; how is the workforce distributed within the pay scales of these agreements. The German statistical office uses the Structure of Earnings Survey to collect this information. Including questions for each sampled individual on his/her collective agreement and accompanying pay scale helps the surveyed companies also to fill in more quickly the requested data. Adopting this practice on a European-wide scale would on the one hand solve for a lot of countries key methodological issues (see for example Belgium) and would on the other hand almost automatically make a possible strong harmonisation very feasible. One could than easily debate an expansion to other countries.

This step-by-step harmonisation effort would of course also require the institutional or organisational leadership of an international organisation or agencies. Who would take up the challenge of the European Employment Committee(EMCO), the Economic and Social Committee (EESC), Eurofound Dublin, Eurostat, or ILO Europe ?

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appendix 1 Information sheets national indicators

BELGIUM

Title of the indicator	Index of the Collectively Agreed Wages (NL: Indexcijfer van de Conventionele Lonen – ICL; FR: Indice des Salaires Conventionnels – ISC)
Institutional mandate	Ministry of Labour (NL: FOD Werkgelegenheid, arbeid en sociaal overleg / FR: SPF Emploi, travail et concertation); no legal mandate
Time coverage	Annually from 1959 to present Quarterly by sector from 2000 to present
Schedule	No pre-announced schedule
Frequency of data calculation	Quarterly
Short description	The index of the collectively agreed wages follows the rise in sector level minimum wages by occupation, based on collective agreement gathered monthly
Source data	Collective agreements filed at the ministry (mandatory by law)
Data type	Legal data (collective agreements); administrative data
Sampling	No sampling method is used; by definition the average wage in the wage classification scheme is used for each sector committee as the base wage for calculation.
Registers	Register of sector collective agreements, deposited at the Ministry of Employment, Labour and Social dialogue.
Definition	Basic salary only; currently limited to sector agreements Excluded: bonuses, deferred compensation
Construction	Median value of wage scales within joint industrial committees, calculation of relative increases. Absolute conventional wage increases are described relative to the average effective wage in 1997
Statistical unit	Hourly wages for blue-collar workers Monthly wages for white-collar workers
Sector coverage	Nace rev. 1.1 A-K/M-P
Statistical population	All private sector blue- and white-collar workers (= all people with an employment contract and no civil service employment status)
Unit of measure	Relative Index (last base year is 1997)
Classification system	National aggregate For blue- and white-collar workers separate NACEBEL (NACE rev. 1.1): character codes A-K/M-P Joint committees: on request
Documentation	No published note on the method; methodological background documentation available on request
Release	http://www.werk.belgie.be/moduleDefault.aspx?id=7390

Compiled by Sem Vandekerckhove & Guy Van Gyes

GERMANY

Title of the indicator	Database on agreed earnings (Tarifverdienste)
Institutional mandate	The Federal Statistical Office is an independent agency under the responsibility of the Federal Ministry of Interior. It is legally based on the federal law on statistics (Bundesstatistikgesetz, BstatG). In addition to that, there are various laws and provisions for several statistical indicators. The statistics on "agreed earnings" are provided on behalf of the Federal Ministry of Labour.
Time coverage	From 2009 until present
Schedule	Data are continuously updated
Frequency of data calculation	Continuously
Short description	Data on collectively agreed pay levels, pay increases, working time, holidays and agreed criteria of the different wage groups.
Source data	Sample of collective agreements provided by the Ministry of Labour (in exceptional cases also by trade unions).
Data type	Collective agreements
Sampling	Around 4000 branch-level collective agreements (no company agreements)
Registers	According to the German Law on Collective Agreements (Tarifvertragsgesetz) all collective agreements have to be registered at the Ministry of Labour.
Definition	Collectively agreed basic pay, one-off and flat-rate payments and other bonuses
Construction	Documentation of collective agreements
Statistical unit	Collectively agreed pay levels in Euro per hour or per month
Sector coverage	Focus on: Agriculture, Manufacturing, Retail Trade, Transport, Hotels and restaurants, Financial services, public administration
Statistical population	All employees covered by a collective agreement (in some cases still divided in blue and white collar workers)
Unit of measure	Collectively agreed pay levels in Euro per hour or per month
Classification system	NACE rev. 2, ISCO 3 digit
Documentation	Destatis (2012a), Decker (2009)
Release	www.destatis.de/tarifdatenbank

Compiled by Reinhard Bispinck & Thorsten Schulten (WSI-HBS)

SPAIN

Title	Statistics on Labour Collective Agreements (*Estadística de Convenios Colectivos de Trabajo*, ECCT
Institutional mandate	Ministry of Employment and Social Security (Royal Decree 713/2010 of May 28 on registration and deposit of labour collective agreements)
Periodicity	Monthly (1981-2011)
Schedule (statistics dissemination policy)	Monthly
Frequency of data calculation	Monthly

Short description	Available statistics: number of collective agreements, number of workers involved, agreed wage increase, revised wage increase and agreed working hours. All data are available by territory, by type of collective agreement (sectoral vs. company level) and by activity (CNAE-NACE).
Source data	Data set is based on administrative data sources (collective agreements signed by unions and companies and recorded by the Ministry of Employment).
Data type	Administrative data
Definition of collectively agreed wages	The wage increase considered is the increase in base salary (without bonus). Nevertheless, many collective agreements refer to increases in total salary.
Construction and methodology	*The data in each series are cumulative from month to month and are obtained by pooling agreements. *The "agreed wage increase" refers to the average increase, weighted by the number of workers in each agreement. *The "revised wage increase" is the result of incorporating the impact of revisions on account of "wage guarantee clauses" to the agreed wage increase for the period.
Statistical units	Annual wage increases, absolute number of collective agreements, annual working hours
Sectoral coverage	Agriculture, Industry, Real Estate Construction and Services
Statistical population	All private blue and white collar workers. Public workers are also included.
Units of measure	Absolute (number of agreements, hours, EUR,…) and relative (growth rate...) values
Classification system	CNAE-2009 (NACE-2009)
Documentation	http://www.mtin.es/series/

Compiled by Jesús Cruces Aguilera, Ignacio Álvarez Peralta & Francisco José Trillo Párraga (Fundacion 1° Mayo)

FRANCE

Title	Database on collectively-agreed wages
Formal institution	Research, Studies and Statistics Department of the Ministry of Labor, Employment and Health (DARES, Direction de l'animation de la recherche, des études et des statistiques du Ministère du Travail, de l'Emploi et de la Santé)
Time coverage	From 2003 to 2010
Schedule	Preliminary figures in June N+1 Revised figures in September N+1.
Frequency of data calculation	Quartely
Short description	Conventional wages and their increase reported for two ranks (the first one and the last one) of four occupational categories (manual worker, clerical worker, intermediate occupations, managers).
Source data	Mandatory agreement filed at the DGT (Department of the Ministry of Labour)
Data type	Administrative

Sampling	Sample size: 278 industries covering more than 5000 employees (278 industries).
Registers	Mandatory agreement
Definition	Three types of wage: hierarchical wage or guaranteed wage (monthly or annually)
Construction	For each collective agreement, the annual average change in wage is computed by weighting increases for each skill by the number of employees at that level
Sector coverage	Metal sector, construction sector and general sectors
Statistical population	sector-level collective agreement
Unit of measure	levels and increases in the minimum conventional wage
Classification system	Sector-level collective agreement (identifiant of collective agreement)
Documentation	André & Breda (2011) ; André (2012) ; André & Muller (2011)

Compiled by Noëlle Delahaie, Michel Husson & Catherine Vincent (IRES)

ITALY

Title of the indicator	Index Numbers of the Collectively Agreed Wages (*Indici delle retribuzioni contrattuali - IRC)* per employee *(per dipendente)* and per hour *(orarie)*
Institution	ISTAT.
Institutional mandate	Not applicable , but the Index has been adopted by Italian legislation (e. g. Law 448/1998, art. 24 comma 1, Law 160/1975, art. 1).
Time coverage	Since 2005 onward with the same base (Dec. 2005). With different bases and methodology, since 1947.
Schedule	Release calendar available (for the entire year) and accessible.
Frequency of data calculation	Monthly
Short description	The monitored wages at current prices are determined by contractual provisions (increases) set by nation-wide collective labour agreements between labour unions and employers' associations. Statistics from this survey are based on concept of labour price. For each nation-wide collective agreement, the number of employees and their composition by specific wage level (combined with indications for seniority, skill, estimation about shift work) are fixed at the base year and remain constant until the renewal of base has been done. The Index Numbers are insensitive to changes in composition. (albeit, with a new base, the weight of the elementary statistical unit changes). These indicators are not influenced by changes due to overtime, worked hours or not worked for strikes or worker's illness.
Data source	The wages of each vocational qualification of the main sectoral National Collective Bargaining Agreements (CCNL) are pieced together using the tables annexed to the Agreements' texts selected, filed and processed by ISTAT. Relevant Laws are considered too. Weighting information are collected from various sources (see below).
Data type	Legal (in broad sense).
Sampling	Not Applicable.
Registers	Not Applicable. The chosen *leading* Agreements are selected with the index's base.
Definition of wages	Basic pay; seniority allowances; shift work allowances; all bonuses specified in national agreements and payable to all workers (but not *una tantum*=one-off payments and arrears) as well as those paid periodically (e.g. the 13th monthly payment). Full-time employees bar Apprentices and Managers
Construction	The Contratctual (=Collectively Agreed) Wages Index per employee measures the

	change in the contractually agreed annual(ized) wage rates. The Index of Contractual Work Hours measures the change in the hours of work that employees have to work during the year (excluding the holiday periods); this index is used in the calculation of Contractual Hourly Wage Rates Index, that is the ratio of the two indices (per employee and per hour). Each month, the gross rates for each group of qualifications in the collective agreement are divided by 12. The indices for each group of qualification are obtained by dividing the absolute value of the current rates and the average rates by the base period figures. Aggregated Index Numbers are calculated applying a Laspeyres formula (fixed base) to the elementary Index Numbers with the weighting procedure described below. The Index's base changes since the '90s every 5 years.
Weighting procedure	The wages of each vocational qualification (level) of each National Collective Bargaining Agreement (CCNL) are weighted using data from statistical and administrative sources, and information collected by direct interviews to employers' associations. The weights of the per employee Index Numbers are the products of the estimated number of workers (expressed in full-time equivalent) in the base period and the corresponding wage value in the base period. The weights of the collectively agreed hours Index Numbers are the products of the estimated number of workers (expressed in full-time equivalent) in the base period and the corresponding collectively agreed hours in the base period.
Statistical unit	Annualized monthly wages/12 for each vocational qualification of the monitored Nat. Collective Agreement.
Sector coverage	Nearly all sectors, public and private. Some sectors, minor but not insignificant, mainly in Services, are excluded due to lack of reliable data; Domestic Helpers also are not included. The leading Agreement in a sector is deemed in use for all the concerned employees in that sector.
Statistical population	"Regular" employees bar Apprentices, Domestic Help workers and Executives (albeit data for Public Sector Managers are still collected).
Unit of measure	Nominal Index Numbers, currently Dec. 2005=100.
Base period	Currently Dec. 2005=100.
Classification system	• NACE rev.2 up 3.digit or National-Sectoral Collective Agreement. *and* • White-collars&Middle managers; Blue-collars; aforementioned categories combined
Quality of the data	Accurate and very user-friendly in terms of relevance, accessibility and clarity. The Index Numbers series are acceptably coherent since 1982-year-of-reference data. The survey is not a panel in the full sense, but the agreements observed remain largely the same over time, even if the sample changes during the periodic renewal of the base (since the '90s every 5 years). The indicator is insensitive to changes in composition (albeit, with a new base, the weight of the elementary statistical unit changes). The survey is characterized by the good timeliness and excellent punctuality: the agreements' pay increases are made *always* available to users in about a month (bar February) . Limited in scope: only leading nation-wide sector agreements are covered by the survey. The territory-linked bargaining is very partially covered. Bargaining at firm level is utterly absent.
Timeliness	A month delay to the reference month (e. g. October data by the end of November).
Punctuality	Absolute till now.
Documentation	http://www.istat.it/it/archivio/21571
Release	http://www.istat.it/it/informazioni/per-i-giornalisti/appuntamenti
Diffusion link	http://www.istat.it/en/archive/labour+market

Compiled by Lorenzo Birindelli, IRES

NETHERLANDS

Title of the indicator	Indexcijfers contractuele loonkosten, series 2000=100 (or: Cao-lonen, indexcijfers) [Index Collective Labour Agreement (CLA in English, CAO in Dutch) wage rates]
Institutional mandate	CBS (Centraal Bureau voor de Statistiek/Statistics Netherlands)
Time coverage	Monthly from Jan 2000 - April 2012

Schedule	Publication schedule: monthly, April 2012 is the latest publication at the time of writing (May 31). CBS indicates that all monthly index figures from JAN 2011 are preliminary figures.
Frequency of data calculation	Monthly
Short description	Index showing the development of the gross wages unconditionally due to employees when they work fulltime.
Source data	Collective agreements (approx 250) monitored by the CBS
Data type	Database
Sampling	250 of the approx. 900 agreements are sampled, among which all agreements covering at least 2500 employees.
Registers	n.a.
Definition	Collectively agreed wages, including specific remuneration: - gross wages for regular working hours of full-time employees - all binding prescribed, regularly prescribed paid benefits - all binding prescribed, special (non-monthly) benefits, like holiday allowances or end-of-year payments Excluded are those allowances only for specific worker groups or individuals, like age allowances, shift allowances, or strictly individual pay increases The index of negotiated wages shows the development of the gross wages to which a normal full-time employee working unconditionally is entitled. These figures relate to the wages and working hours as stated in collective agreements. No actual amounts are observed, only events with respect to the scale wages and mandatory fees are prescribed in the development of the agreed wage reflected. A distinction is made between collective wages including special payments and negotiated wages excluding special rewards, and between hourly wages according to the CLA and monthly wages according to the CLA. Changes in the agreed wage are reflected in both the wages per month as the wages per hour. Changes in the agreed annual working hours only affect the collective wage per hour
Construction	Within the 250 CLA's, 4,700 measure points have been distinguished (= a wage for a wage grade), whereby the grades are selected. For each measure point, changes in the collectively agreed wages are monitored. The weighting to obtain representative results for all employees takes place in two steps. In the first step the data from different points within each agreement are increased to a collective outcome of this agreement (within weighting, which is based on the data of 2000). In the second step the results of collective weighed together to results by publication group (outside weighting, which is updated annually using the data of the Arbeidsrekeningen). For data about the distribution of the covered labour force over the measure points, CBS relies on personnel records of a large number of companies. Hence, the computation of the collectively agreed wages distinguishes between the wage data of the agreements and the distribution of the labour force over the agreements.
Statistical unit	Index of hourly wages
Sector coverage	All sectors are covered.
Statistical population	The 900 collective agreements
Unit of measure	Index
Classification system	NACE2.0
Documentation	http://www.cbs.nl/nl-NL/menu/themas/arbeid-sociale-zekerheid/publicaties/artikelen/archief/2003/2003-basisverlegging-cao-lonen-art.htm; Van den Berg 2003, 2004; http://www.cbs.nl/nl-NL/menu/methoden/dataverzameling/indexcijfers-cao-lonen-reeks-2000100.htm
Release	www.cbs.n/statline

Compiled by Maarten Van Klaaveren & Kea Tijdens (AIAS-UvA)

AUSTRIA

Title of the indicator	Index of Collectively Agreed Minimum Wages, Tariflohnindex 2006 (TI)
Institutional mandate	Statistics Austria is obliged by a directive based on the Bundesstatistikgesetz 2000, Anhang II (federal law on statistics Appendix II), to collect information on wage norms which define lower bounds on wages for specific jobs or occupations which are based either on law, collective agreement or similar stipulations. In addition to the long standing national obligation the calculation of the Tariflohnindex is part of Austria's compliance with relevant EU legislation on price and volume adjustments in National Accounting.
Time coverage	A detailed index is compiled from Jan. 1967 onward, some recalculations for aggregates exist back to April 1945.
Schedule	The index is published on a monthly basis, available on the web site of Statistik Austria. Previous data are available in Publications of Statistik Austria.
Frequency of data calculation	Continuous
Short description	The Index is a Laspeyres Index of minimum wages which have to be paid for a particular job/seniority groups. Job/seniority groups are selected to represent the total sum of wages covered by collective agreements or similar legal regulations.
Source data	Data for changes in collectively agreed wages are directly taken from the respective agreement as soon as they come into force.
Data type	The Index is based on representative collective agreements, current changes are mainly taken from the database on collective agreements which is provided by the publishing company of the Austrian trade Union, or directly from legal sources if wages are based on law (mainly in the public sector). In some cases direct contact to negotiators or experts of the trade unions and employer associations are used.
Definition	Included in the wage are all regular payments which are conditional on the job the person holds. Not included are payments which are conditional on personal circumstances of a particular person, like special payment for parents, payment for special occasions jubilee premia etc. The wage also does not include wages paid in kind, due to the difficulty of attaching a monetary value for them. In most collective agreements wages are usually fixed in monetary terms while admissible deductions for in-kind parts of the remuneration like food or housing are fixed within the contract.
Construction	Laspeyres index
Statistical unit	Monthly wages on a full time basis.
Sector coverage	All sectors covered by wage agreements are included in the index. Due to the inclusive nature of the Austrian system of collective agreements this encompasses almost the entire economy.
Statistical population	All non-self-employed people working in the sectors mentioned above.
Unit of measure	Index 2006=100
Classification system	(Ö)NACE 03/08 (NACE 1.1, 2) 2 Digit, Subdivision, Sub Sections of Employers organisation WKO+ non WKO Employers.
Documentation	Standard Dokumentation, Meta- Information zum Tariflohnindex, Statistik Austria 2007, (in German) only, http://www.statistik.at/web_de/wcmsprod/groups/gd/documents/stddok/029909.pdf#pagemode=bookmarks
Release	Monthly, quaterly, annual

Compiled by Sepp Zückerstatter (AK Wien)

PORTUGAL

Title of the indicator	Annualized weighted average variation between wage tables Variação salarial nominal média ponderada intertabelas anualizada (Portuguese achronym: VMPI)
Institutional mandate	Legal order (Portaria) n.º 633/2007 of May 30th Regulates the nuclear structure and the competences of the organic units of the DGERT Article 4, section (h): Deliver information about instruments of collective work regulation applyable to diverse economic sectors and employers.
Time coverage	From 1995 or before until now 1997-2004 quarterly reports Since 2000 (or earlier) monthly, quarterly, semestral and annual
Schedule	Monthly reports are published at the beginning a few days after the end of the respective month. Quarterly, semestral and annual reports may take a bit more time.
Frequency of data calculation	Ccontinuous (data are drawn from the weekly published BTE.
Short description	For each collective agreement the average collectively agreed wage increase is calculated on the basis of the comparison between the pay levels in the respective wage tables (present agreement and earlier agreement). The weight of each wage group in the average of an agreement is calculated on the ground of statistical employment data provided by the Statistical Office of the Ministry of Labour (GEP).
Source data	The wage data are drawn from the wage tables of all collective agreements published during the respective period in the official bulletin of the Ministry of Labour (Boletim de Trabalho e Embrego, BTE). The data regarding the weight of each wage group in the average are drawn from the annual national company survey (Quadros de Pessoal) carried out by the Ministry of Labour. Companies are legally obliged to answer to this survey and therefore the coverage tends to be complete (in relation to the legal economy).
Data type	See above
Sampling	Does not apply.
Registers	For administrative source data – All collective agreements signed under the legislation on collective bargaining have to be sent to the DGERT at the Ministry of Labour. The DGERT analyses whether they are admissable (according to legislation) and initiates their publication in the official bulletin of the Ministry of Labour (Boletim de Trabalho e Embrego, BTE). Primary purpose: The publication in the BTE guarantees the legal validity of the agreements. Potential deficiencies: The agreements published in the BTE are controlled by the services of the Ministry of Labour and by the signing parties. This allows a high degree of accuracy. Furthermore, the coverage is complete (all agreements in continental Portugal). The calculation of the average wage under a specific contract may raise some problems with regard to the calculation of the weight of the different wage groups in the total of the covered workers, but this would only have a considerable impact if the wage increases in the different wage groups differ from each other (which is mostly not the case) AND if at the same time the calculation of the weight of the different wage groups is seriously deficient.
Definition	Definition of collectively agreed wages: basic rates as defined in the wage tables annexed to the collective agreements.
Construction	See above
Statistical unit	Monthly wages drawn from wage tables in published agreements of the respective year
Sector coverage	Companies of any size in all sectors where collective wage bargaining takes place (total of economy, except public administration). Disaggregation to each agreement and aggregation at one digit of NACE and for total.
Statistical population	All salaried workers in all companies of any size in all sectors where collective wage bargaining takes place (total of economy, except public administration).
Unit of measure	Relative: percentage

Classification system	CAE 3, 1 digit (national Classification of Economic Activities), corresponds to NACE rev. 1.1, 1 digit
Documentation	Brief introductory note on the methodology at the DGERT-website: www.dgert.mtss.gov.pt/trabalho/rendimentos/vmpi_introducao.htm
Release	www.dgert.mtss.gov.pt/contactos.htm

Compiled by Reinhard Naumann (with Raquel Rego and Ana Cristina Pontes), Instituto Ruben Rolo

FINLAND

Title of the indicator	The Index of Negotiated Wages and Salaries
Institutional mandate	The compilation of statistics is governed by the Statistics Act. The Statistics Act contains provisions on the collection and processing of data and on the obligation to supply data.
Time coverage	Data for the whole economy and by employer sector (private, local government, central government) annually from 1968 until present and quarterly from 1995 (on request)
Schedule	Data are published four times a year according to a pre-announced schedule simultaneously with the publication of data on the Index of Wage and Salary Earnings. Access to data through the internet, though subject to fees, is available. Free data may be available on request.
Frequency of data calculation	Quarterly
Short description	The index of negotiated wages and salaries measures the effect of collectively agreed pay increases on average earnings for regular working hours measured by the Index of Wage and Salary Earnings.
Source data	Collective agreements filed at employer organisations (private, central government, local government)
Data type	Legal (see above); survey or register data are not used
Sampling	-
Registers	-
Definition	The Index measures collectively agreed increases in average earnings for regular working hours measured by the index of wage and salary earnings. In collective agreements increases in hourly and monthly earnings are concluded.
Construction	Because the Index measures the contribution of collectively agreed wage increases to the average level of earnings for regular working hours measured by the index of wage and salary earnings, it is calculated as a chained index using the same weight structure as in the Index of Wage and Salary Earnings. The effects of negotiated pay increases are estimated in relation to the earnings level at the previous year-end.
Statistical unit	Two units: hourly wages and monthly wages
Sector coverage	Four employer sectors: private, local government, central government and others. The private sector accounts for around 70 per cent, the local government around 20 per cent, and the central government around 7 per cent of the Index.
Statistical population	All private and public sector workers (blue and white collar) covered by collective agreements (coverage rate approx. 90%)
Unit of measure	Index
Classification system	NACE (Rev. 1.1) 1 or 2 digit from 1995
Documentation	The Index of Wage and Salary Earnings 2005=100, Handbook for users, Ch. 5.2 (Hyperlink http://www.stat.fi/tup/julkaisut/tiedostot/isbn_978-952-244-209-3.pdf)

Release	Release calendar is the same as for the Index of Wage and Salary Earnings: http://www.stat.fi/til/ati/tjulk_en.html. Contact email address: palkat.indeksit@stat.fi

Compiled by Pekka Sauramo (Labour Institute for Economic Research)

UNITED KINGDOM

Title	LRD pay round pay settlement medians
Institutional mandate	Under its 1912 constitution the Labour Research Department exists to co-operate with Labour, Socialist and Co-operative movements in promoting and carrying out research into problems of importance to the labour movement, to supply information, and to issue publications. Today its principal relationships are with the trade unions and it has over 5,000 trade union organizations and individuals, including over 50 national unions (representing more than 99% of total TUC membership) affiliated or subscribing to its services.
Time coverage	1985-2012
Schedule	Statistics are published in the magazine Workplace Report (and its predecessor Bargaining Report) on a monthly basis eleven times per year (not published in August). Pay medians for each three-monthly period and each twelve-month period are published mid-monthly, timed to follow the publication of inflation and labour market statistics by ONS. An annual pay-round summary (covering all settlements recorded as being effective in the year to the end of July each year) is published in October.
Frequency of data collection	Continuous
Short description	Data published in the magazine is drawn from the LRD Payline database. The selected indicator is the median increase on the lowest basic rate of pay arising from pay settlements effective between the 1 August and the 31 July in the following year, traditionally seen in the UK as the "pay round". Alternative indicators (the median 'standard' pay rise and – where known – the paybill increase) are also available.
Source data	The main source of the information is correspondence from trade union or, in a few cases, employer contacts, supplemented by a search of secondary sources (eg union publications and web sites) and information provided by public sector bodies. In some cases union head-offices coordinate the channelling of information to LRD.
Data type	On-going survey-type data gathering. There is no pre-determined sample, but efforts are made to re-new information provided in the past as well as supplement that with new data.
Definition	Included in the statistic would be any increase in the basic wage or salary: Where this is boosted either by extra money targeted at the lowest paid, or by the consolidation of money from pay "superstructures" (eg money paid previously as a bonus) into salaries, resulting in a larger increase on the lowest basic rate, that would be counted. Where additional money is allocated to payments other than basic pay or salary, eg new/improved allowances, premia, bonuses or other cash payments, that would not be counted towards the percentage value of the pay increase. Where money is allocated on an individual basis (eg through a performance-related pay matrix) without affecting the basic wage or salary payable to someone else joining the same grade or post, that would not generally be counted (although the distinction between variable individual rises and what might be called a "structural" pay rise is not always simple to determine). Where there are successive "staged" increases in a period of less than two years (in practice, less than 18-20 months) these will be treated cumulatively, leading to a bigger percentage increase in the second or subsequent stage. Where the second and any subsequent stages have the appearance of pre-arranged "annual" pay deals, each stage is treated as a settlement in its own right and not accumulated: The aim is that annual and staged/long-term settlements should make an equal contribution to the statistics.
Construction	Settlement median (all increases treated equally irrespective of the number of workers covered) and 'by workers covered' (ie weighted) median. Settlement medians have the advantage of giving due weight to the number of different sets of negotiations taking place, rather than allowing a small number of very large bargaining groups to set the trend. Weighted medians have the potential advantage of reflecting typical pay rises among the working population but may distort the results where large pay deals allocate bigger increases to the lowest paid than they do workers covered generally.
Basic units	Median percentage increase.
Sector coverage	No sector in which employees work is excluded from the survey, thus it includes pay

	settlements for the armed forces, police etc. Data from employers who do not recognise unions is not excluded although there is not much data of that kind in the database. The regularly-published statistics reflect the broad Nace categories but users with access to the on-line database (subscribing trade unions) can narrow down their searches to sub-classes within the major groups.
Statistical population	Employees.
Unit of measure	Percentage.
Classification system	SIC 2007 (Nace) and SOC (2000)
Documentation	The Payline page on the LRD web site (http://www.lrd.org.uk/index.php?pagid=18) provides access to a user guide.
Release	info@lrd.org.uk

Compiled by Lewis Emery (LRD)