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REPORT

from:	Presidency
to:	Working Party on Social Questions
Subject :	Examination of Member States' implementation of the Beijing Platform for Action: pay inequalities between women and men

Delegations will find attached a Presidency Report on Member States' implementation of the Beijing Platform for Action.

Gender indicators in the issue of pay equality between men and women
Belgian Presidency Proposal

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1. Introduction

Following the Fourth World Conference on Women (Beijing, September 1995) and the adoption of a platform for action, the Madrid European Council in December 1995 authorised the Council of the European Union to follow up annually the implementation of the platform for action by the Union's Member States. Each year, therefore, the Labour and Social Affairs Council examines the implementation of these commitments.

In 1998, the Austrian Presidency proposed a strategy aimed at developing indicators and benchmarking each year for one of the themes in the Beijing platform for action, and suggested the theme of Women and Decision-making for the first year.

In 1999, the Finnish Presidency accordingly produced a very full report on that theme. The Labour and Social Affairs Council on 22 October 1999 took note of the report and adopted indicators permitting progress in that field to be measured regularly. The Council also adopted a series of conclusions providing for continuation of the process around the themes of Violence against Women and Women in the Economy, as well as the joint development by subsequent Presidencies of new indicators in order to spread the load of data collection and analysis between several Member States.

Thus the Portuguese and French Presidencies chose to develop indicators on the reconciling of family and professional life, adopted at the Labour and Social Affairs Council on 27 and 28 November 2000.

Belgium in its turn now proposes indicators on pay inequalities between women and men.

The number of European processes leading to the development of indicators has increased considerably over recent years. In the framework of the Luxembourg Process, the Employment Committee and its Working Party on Indicators continue to build up a range of indicators to follow up the guidelines for employment. In this context, at the end of September 2001 the Working Party on Indicators for the first time examined a document containing an initial proposal for indicators on equal opportunities, based on the preparatory work of the

Gender and Employment network. The document also refers to indicators on pay inequalities. As the Working Party on Indicators wished, the content of this note and the study on which it was based will be included in subsequent discussion on indicators.

The European Council also wanted the Belgian Presidency to propose indicators on the theme of quality in work. We want the results presented in this note to be included within that process too.

While female employment and participation rates are growing, the pay inequalities between men and women have not fallen significantly over the past twenty years. Changes in jobs and the dynamics of female activity and employment vary widely from country to country. The different hours of work for men and women, their sometimes divergent developments, and occupational and sectoral differences make any one-dimensional comparison highly unsatisfactory and often deceptive. To absorb this wage gap, one must take as a basis a broad knowledge of the structural features of the wage gap and the ways it changes, and be able to estimate the potential and actual effects of certain significant labour market policies. The factors giving rise to pay inequality have been clearly identified in a series of studies on pay inequality (cf. Meulders et al. (1994), Rubery (1998), Silvera (1999), Jepsen et al. (2001), Blau et al.).

- Payment according to level of studies, training or occupational experience
- Sectoral and occupational segregation and/or concentration
- Definition of equality of value: classification and evaluation of jobs
- Full-time versus part-time
- Pay structure: overtime, seniority, performance-related pay, pay individualisation
- Access to higher hierarchical roles
- Level and coverage of industrial relations
- Existence and level of minimum wages
- Access to internal training and to publicly-funded training, organisation of training time
- Industrial organisation and structure: size of firm, subcontracting, etc.
- Representation of women in unions and in employers' associations and negotiating or representative bodies

The relative significance and effects of these factors on the gap in pay depending on gender may be affected, increased or diminished by policies acting on the labour market or by family policies (Concialdi, Ponthieux, 1999). Social security and tax rules can also lead to changes in career continuity or discontinuity, in the type of work women can do and in how such work is paid: income-related family allowances, fiscal measures such as the working family tax credit (UK), parental allowance for upbringing (APE - France) or the tax credit (Belgium) (Ruspini, Saraceno, 1999). The wage gap by gender is strongly correlated with pay inequality and the drop in real pay levels (Concialdi, Ponthieux, 1999). Policies that encourage low wages or which slow real pay growth can thus have an indirect negative effect on the gender pay gap. "(...) there is a considerable scope for political choice. Changing the gender pay ratio thus requires actions on a wide side set of policy agendas, involving the mainstreaming of gender pay equality across different levels of policy-making" (Rubery, Grimshaw, 2001).
That is why, in addition to quantitative indicators, qualitative indicators will also be proposed, based on analysis of labour market policies.

2. Harmonised databases that can be used to measure and compare gender pay gaps

There are two EUROSTAT statistical databases that can be used for this purpose: the European Structure of Earnings Survey (ESES) and the European Community Household Panel (ECHP). These two sources are not entirely satisfactory [1].

Table 1: Comparison between ESES and ECHP for measuring gender wage gaps

	ECHP		ESES	
	Advantages	**Limitations**	**Advantages**	**Limitations**
Coverage	ECHP covers the whole population, including those not working. It is useful in selective wage equations			Persons in employment
	Self-employed and employees included. Useful where self-employment is still widespread. However, it is wage gaps we are interested in here.			Only covers private sector and firms with more than 10 employees
Family and household	It is a household database, and therefore includes useful information such as number of children and family status			No information
Sectors of activity		Only covers 18 sectors of activity: problematic because they are very heterogeneous in gender terms	NACE 2 available, allows for more exact measurements of wage gap, especially using Oaxaca	
Education		3 levels	7 levels	
Data on wages		Net wages, with means of transition to gross wages either non-existent or based on crude algorithms	Gross wages declared by employer	
		No detail on wage structure	Wage structure is subject of survey	
Availability	ECHP is available as individual data and can be bought at low cost	Because of pay and working hours data quality, ECHP must be used with care	Use of individual data would be helpful in calculating certain indicators and for estimating Oaxaca-type breakdowns	ESES is available only for indirect access, in the form of cross-indexed tables made by Eurostat via New Cronos, or obtained from certain variables
Frequency	Annual			Every 4 years
	Panel data: individuals can be followed			Not panel data

[1] The Labour Force Survey cannot be used because the data on pay are optional and are therefore not gathered in all Member States.

Type of data		Survey of individuals, implying subjectivity and imprecision in responses, and also non-responses, particularly on income	Employer survey, implying better quality for most data, especially regarding pay	

Table 1 compares the strengths and weaknesses of these statistical sources. **ESES** contains all the information needed to develop most of the proposed indicators, but does not cover public-sector employees and is only available for 1995 at Community level. Also, the database is only available in aggregate form and via indirect access. The **ECHP**'s wage data concern net wages, whereas the notion of gender pay equality clearly applies to the gross wage and the tax system introduces bias if the effects, differing from one country to another, of the family and household situation are taken into account. The **ECHP** will be used more in cases where indicators are required for which the family or household situation is important, while **ESES** will be preferred where the characteristics of the company are of more interest.

3. Public policy and wage inequalities

Wage inequalities between men and women are a part of the general pay inequalities among citizens, against which States have legislated. The qualitative part of the Belgian Presidency's questionnaire concerns legal and regulatory measures against such discrimination. Respondent countries selected those measures that could play a part in reducing wage inequalities.

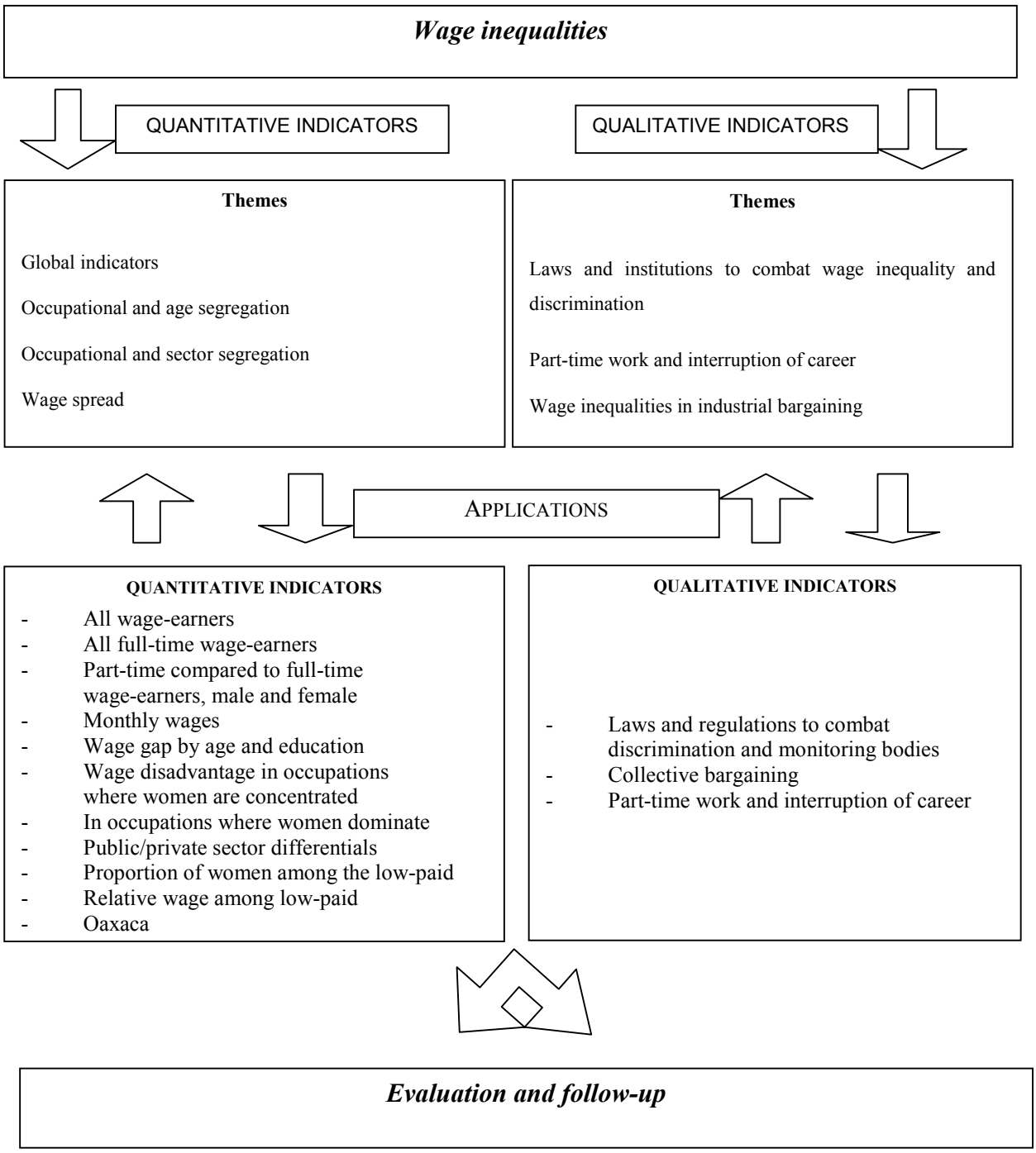
We hold to the notion that remuneration of workers, wages and ways of rewarding work are generally a matter for negotiation between workers and employers. In theory, the State is responsible for these matters only when it is itself the employer. However, in practice, through the various policies it develops, it has strong direct and indirect influences on wage talks between employers and workers in the private sector: these influences operate through tax policies, family policies, health and education policies and so on as well as, of course, through employment policies.

The last five questions in the questionnaire (questions 6 to 11) were intended to collect information we describe as "qualitative", in the sense that they concern the effects and the methods of public policy measures on the reduction of inequalities and the promotion of wage equality between men and women. We seek to identify those that influence the level of remuneration and income of wage-earners. We have also asked respondent States to submit quantitative data on the outcomes of actions taken, insofar as these have been assessed, as well as assessments in relation to the objectives being pursued.

The indicators which the questionnaire should help to formulate should contribute to measuring the progress made in each State in reducing wage inequalities even if only indirectly or over the long term.

4. Proposed indicators measuring wage inequality

4.1. Model of interactions between indicators



4.2. Proposed indicators

There are at present two quantitative indicators used to follow the progress made by Member States in implementing the guideline on equal pay (guideline 17):

- **Gender wage gap**: ratio of female net hourly wage to male net hourly wage, for wage-earners working more than 15 hours per week, public and private sectors.
- **Income wage gap**: Proportion of women earning less than 50% of the national median income, compared to proportion for men.

These two indicators are calculated on the basis of the ECHP, the latest available year being 1997. The first is a general indicator, which is needed since it determines the size of the total deficit to be overcome. The second is relative to income and need not be considered here, since we are concerned with wages.

The indicators proposed below take over the first indicator and add 14 others, the first 10 of which can be obtained directly from the harmonised databases, even if access to them cannot be guaranteed. We favour the use of ESES for calculating these indicators. However, in the case of indicators for which the variables needed in order to calculate them cannot be found in ESES, the ECHP will have to be used. In addition, it is desirable that countries provide the latest data on the basis of national sources, insofar as the definitions and concepts used are the same as those used for ESES and ECHP. This implies that either the Member States themselves develop these indicators or EUROSTAT carries out the exercise in a harmonised fashion.

The objective is not to compare one country to another in terms of wage gaps but to make it possible to establish, for each country, which factors of those identified as making up the wage gap are those that contribute to the gap's existence and therefore on which action must be taken or to which thought must be given.

This could be presented by a diagram showing the strong and weak points for each country relative to its average gender wage gap level. Indicator 12, provided by a breakdown of wage gaps, gives a different, more rigorous view of the relative situation of the countries, since it will make it possible to calculate for each country the proportion of the wage gaps generated by the explanatory factors.

The last three indicators are qualitative indicators selected after analysis of the questionnaires sent to Member States. These indicators relate to:
- the regulatory and agreement-based frameworks that make it possible to combat inequalities between men and women in the labour market, with wage gaps as the target;
- certain aspects of collective bargaining;
- the regulations that apply to individual working time and to voluntary suspensions of hours of work.

These indicators are established from a single model comprising three aspects: two static aspects, the "State indicators and dissemination indicators", and a development aspect.

These three indicators do not aim to describe all the policies, rules, arrangements, etc., but to show clearly certain special aspects of the way they operate and change which are connected to the distribution of wage levels between men and women. The choice of the questions that make up the different sections should therefore be seen from that point of view.

The change indicators are those that, by definition, change every time the indicator is updated. We have taken care to integrate qualitative information with them and, wherever possible, relate them to quantitative indicators.

Indicator 1:
Ratio for all wage earners: female gross hourly wage/male gross hourly wage

Indicator 2:
Ratio for full-time employees: female gross hourly wage/male gross hourly wage (full-time employees)

Indicator 3:
Ratio for male part-time employees in relation to male full-time employees : female part-time gross hourly wage/female full-time gross hourly wage

Indicator 4:
Ratio for part-time employees in relation to female full-time employees : female part-time gross hourly wage/male full-time gross hourly wage

Indicator 5:
Ratio for monthly wages: gross female monthly wage/gross male monthly wage (full-time)

Indicator 6:
Ratio by age and by educational level: gender wage gap by age group (full-time hourly wage) (16-24, 25-49, 50-64) and by educational level

Indicator 7:
Wage disadvantage in occupations in which women are concentrated: average wage of women (men) in the ten occupations including the highest proportion of women (men) in employment in relation to the average wage of all women (men)

Indicator 8:
Wage disadvantage in occupations in which women are dominant: average wage of women (men) in occupations in which more than 66% are women (men) in relation to the average wage of women (men) in occupations including more than 66% men (women)

Indicator 9:
Public/private sector differentials

Indicator 10:
Proportion of women among the low-paid: proportion of women in the population earning a wage less than 60% of the median income

Indicator 11:
Relative wage of low-paid: average gross wage of low-paid women/average gross wage of low-paid men

Indicator 12:
Breakdown of wage gap between men and women using the Oaxaca technique

> *Why?*
> The above indicators are deficient in that they are insufficient to capture the specific effect of the various explanatory factors. In that light it is helpful to consider the results obtained from econometric estimates of a wage equation. The coefficients obtained, where statistically significant, measure the specific effect of the variable to which they relate, *ceteris paribus*.

Oaxaca (1973) and Blinder (1973) proposed a breakdown of the gender-related earnings gap so as to distinguish the effect of factors determining that gap. This consists, on the basis of separate earnings equation estimates for men and women, of calculating the proportion of the average earnings gap which is due to explicable, **but not necessarily justified**, factors, such as sectoral breakdown and differences in level of education, and the unexplained proportion of the gap which is due to lower remuneration associated with these various characteristics, i.e. the aspect of "pure and simple" discrimination. In other words, this is the earnings gap between men and women which cannot be explained by the differences observed between them from the point of view of their characteristics and situation on the labour market and resembles "pure" discrimination, which does not mean that the "explained" part does not reflect discriminatory behaviour or segregation.

The information provided by this breakdown technique is particularly useful for implementing policies to reduce the earnings gap between men and women. By underlining the contribution of each individual characteristic to the total earnings gap and by showing the scope of "pure" earnings discrimination, this technique considerably improves our understanding of earnings differences between men and women.

In view of the replies to the questionnaire "Indicators of gender-related salary inequalities – Follow-up to the Beijing Conference", calculating an Oaxaca-type indicator for all the countries in the European Union is a realistic option. Several Member States refer to studies in which such indicators have been calculated for their countries (Finland, Denmark, Ireland, France, Belgium, Sweden and the Netherlands). Furthermore, the Oaxaca-type breakdown of wage differences carried out by the Department of Applied Economics of the Free University of Brussels (DULBEA) for all European Union countries on the basis of the ECHP (European Community Household Panel) also bears witness to the feasibility of this option.

Given that an Oaxaca-type breakdown is appropriate and feasible, we propose that one be carried out every four years for all European Union countries on the basis of the ESES (European Structure of Earnings Survey). The choice of that database is justified by the quality of the earnings information and the high degree of differentiation of occupations and sectors of activity it contains. However, the absence of data on the public sector is a major obstacle to the use of ESES. It should be supplemented by administrative data on the public sector, as is the case in Finland and the Netherlands, so that the study can cover both the private and public sectors.

How?

Specifically, we propose that the 15 Member States:

(1) *Calculate the average earnings gap between men and women.*
This will enable us for the first time to compare earnings differences between men and women within the European Union countries using a uniform database containing gross hourly earnings. Moreover, by repeating this exercise every four years, we will be able to analyse the development of gender-based wage differentials in each of the member countries and the changes in their relative positions.

(2) *Breaking down the average earnings gap on the basis of the Oaxaca technique*
In this way we can make a distinction between earnings differences explained by different characteristics for both men and women (such as level of education, professional experience, occupation, the type of work contract, the number of hours paid, sectoral affiliation, company size, etc.) and the proportion of the earnings gap which remains unexplained after these characteristics have been taken into account.

(a) *The unexplained portion* of the earnings gap will give us a good approximation of the scope of "pure" earnings discrimination in the various European countries and of its development over time.

(b) *The explained portion* of the earnings gap will enable us to measure the part which is due to:

– different levels of human capital (degree, professional experience and seniority).

- different occupations (ISCO, 2 figures)
- different sectors of activity (NACE, 2 figures).

It emerges from many studies that these three factors generally explain almost 70% of the "explicable" earnings gap. We must therefore ascertain their relative contribution to earnings inequality so that we can best direct our policies against earnings discrimination.

The technical details of this proposal and a specific example relating to Belgium are attached.

Indicator 13:

Indicator of laws and regulations to combat discrimination and of monitoring institutions

State		
Is there a general law against discrimination?	Yes No	Year of entry into force
Is there a law against inequality at work?	Yes No	Year of entry into force
Are there institutions to monitor the application of the laws and regulations?	Yes No	Year of entry into force
What is the status of that/those institution(s)?	Administration Subsidised organisation	Year of entry into force
Status of the decisions taken by that/those institution(s)?	Advisory opinion Binding opinion	
Dissemination		
Institution's sphere of competence	Opinions internal to the State administration Opinions addressed to the social partners Others	
Development		
New regulations entered into force during the past year	Yes No	
If yes, have they been subject to ex-ante assessment for gender-related effects?	Yes No	
Any change in the State indicator	Yes No	
During the past year, has one of these measures been the subject of an ex-itinere assessment of its gender-related effects?	Yes No	
During the past year, has one of these measures been the subject of an ex-post assessment of its gender-related effects?	Yes No	
Total number of opinions published	Per year of activity	
Number, nature and proportion of complaints lodged relating to earnings discrimination	Per year of activity Relating to earnings in the strict sense Relating to job classification Relating to career progression Relating to access to training Relating to working hours total	
Overall ratio		Number of complaints of earnings inequality compared with all complaints of discrimination

Indicator 14:
Indicator of collective bargaining

State		
Measures and mechanisms relating to the conduct of collective bargaining	Binding legislation Recommendations None	First implemented in year:
Originator of the measure	European Union Member State	
Dissemination		
Area of application	National Regional Local Companies	
Companies/organisations concerned	Private Public Administrations	
Sectors of activity	All sectors/intersectoral Sectors	
Development		
Has the measure entered into force for the year in question?	Yes No	
If yes, has it been the subject of an ex-ante assessment of gender-related effects?	Yes No	
Change in the State indicator	Yes No	
Change in the sphere of competence	Yes No	
During the past year, has one of these measures been the subject of an ex-itinere assessment of gender-related effects?	Yes No	
During the past year, has one of these measures been the subject of an ex-post assessment of its gender-related effects?	Yes No	
If sectoral application	Correlate with: – the breakdown of the average earnings gap based on the Oaxaca technique (Indicator 12) – the indicator of sectoral and occupational segregation (Indicators 7, 8 and 9)	

Indicator 15

Indicator relating to part-time work and temporary career breaks

State		
Possibilities for reducing individual working time or taking career breaks	On the company's initiative On the employee's initiative	
With incentive measures (tax measures, bonuses, reduced social security costs, etc.)	In the employee's favour In the employer's favour	
With guarantees for the employer (return to full-time work, etc.)	Yes No	
Dissemination		
Companies concerned	Private companies Public companies Administrations	
Development		
Has the measure entered into force for the year in question? If yes, has it been the subject of ex-ante assessment of its gender-related effects?	Yes No Yes No	
Change in the State indicator	Yes No	
Change in the sphere of competence	Yes No	
During the past year, has one of the measures been the subject of an ex-itinere assessment of its gender-related effects?	Yes No	
During the past year, has one of the measures been the subject of an ex-post assessment of its gender-related effects?	Yes No	
For part-time working	Correlate with indicator 4, "Earnings for women working part-time/Earnings for men working full-time"	
For career breaks	Correlate with the new context indicator, EO_{c13} proposed by the "Group of Experts on Gender and Employment": "Gender gap in unpaid time spent looking after children, other dependent people and basic domestic tasks"	

5. Recommendations for improving the statistical machinery

5.1. ESES

In the introduction to this note, it was observed that the European Structure of Earnings Survey is without doubt the best basis for information on earnings. Nevertheless, considerable improvements can be made. The last survey took place in 1995. Since then, Europe has new legislation on the subject, in particular Council Regulation No 530/1999. That Regulation opens up some possibilities, but is still less than perfect.

From an analysis of the questionnaires it emerges that the SES databases for Finland and the Netherlands must be considered as examples of good practice which should be imitated. Like the other SES, they contain reliable information on earnings, but differ in that they also cover the public sector. This is made possible by combining the employers' survey with administrative data. These databases are also combined with other surveys to obtain data on households, which then makes it possible to calculate all the global indicators, per group, and earnings distribution. [2] Furthermore, these databases are annual, which means that indicators can be set up each year. Given that all the Member States have an SES based on the same structure, international comparisons would be possible if the national statistical institutes made similar changes to their SES.

As regards opening up to the public sector, the Regulation provides that it will be optional to take into account the NACE classification sectors concerned (L, M, N and O) for the 2002 survey, which will be the first major survey in the new four-year timetable. In principle, these sectors should be included as from 2006, but the Regulation allows for the possibility of making an exception on the basis of a Commission pilot study. That study has become available in the meantime and shows that extension to L,M,N and O is possible in all the Member States. We therefore propose to recommend that the greatest possible number of Member States include the public sector in the ESES as from 2002 and that the possibility of making an exception no longer be used after 2002.

The ISCO two-figure classification of professions is probably inadequate for a detailed analysis of earnings inequalities. The Commission Regulation on the ESES (1916/2000) states nevertheless that Member States may restrict themselves to two figures and, "if possible" include three. In view of the fact that an increase in the level of detail tends to reduce the quality of the information obtained in a survey, a compromise solution might be recommended. Such a solution could consist in including a three-figure ISCO classification for some occupations (ISCO 1-5) and two figures for the others (ISCO 7-9).

As regards limiting the ESES survey to businesses with more than ten employees, it is clear that a detailed view of earnings inequalities between the sexes requires the removal of that barrier. The Council Regulation also provides in this case for a pilot study which "weighs the importance of complete data against the reporting possibilities and the response burden." The results of that study have not yet emerged, but we propose to recommend that the aspect of equality between men and women be borne in mind.

Finally, it is clear that it would be desirable to make the SES survey an annual one, although we should probably have no illusions about the possibility of achieving this in the short or medium term. In the meantime, we could nevertheless recommend a greater degree of harmonisation between the national SES and the ESES.

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[2] For more detailed information on the methods of compiling the Netherlands databases, the reader may refer to E. Schulte Nordholt, 1999, *Hot Deck Imputation in the Dutch Structure of Earnings Survey*, a paper presented at the ETK conference in Prague in October 1999, and to P. Van der Laan, 2000, *Social Statistics based on Micro-Integration of Administrative Registers and Household Surveys*, a paper presented at the meeting of the Sienna Group on Social Statistics, Maastricht, May 2000. For information on the Finnish SES database, the reader should consult Statistics Finland.

5.2. SILC

Work is also in progress in Eurostat on replacing the ECHP by a SILC (Statistics on Income and Living Conditions) survey which would come into operation from 2003 onwards. The draft regulation clearly allows for the possibility of making links between gross earnings (taken as far as possible from administrative registers) and family situation. As that survey will be an annual one and will contain a longitudinal element (panel), it could open up major possibilities for indicators of earnings inequality. We therefore propose to recommend support for setting up the survey.

It is nevertheless true that the series based on the SILC survey will be rather short. One solution would be to ascertain whether Member States have other surveys using the same salary concepts so as to combine them with the ECHP or SILC to construct longer series.

5.3. OAXACA

As matters now stand, it would be possible to use the ECHP for the breakdown of the earnings gap (OAXACA), but its sectoral breakdown is too limited; only net earnings are available and the quality of the data on wages and working time is mediocre compared with the ESES. The results obtained from breakdowns based on the ECHP do not currently seem sufficiently substantial, especially if we wish to split the earnings gap into its various components. Moreover, it seems impossible to make good and uniform use of the advantages which the ECHP offers as regards information on non-participants in the labour market, which reduces its practical interest. Moreover, it remains to be seen whether the changeover to the SILC survey can resolve all these problems. The ESES offers definite advantages in terms of reliability, but is limited from the point of view of frequency, because of the absence of the public sector and because it relates only to the employed population (businesses with more than ten employees), which technically poses problems as regards the quality of the econometric findings. However, the choice of that database is justified by the quality of the earnings data and the high degree of separation of occupations and sectors of activity.

From an operational viewpoint, this breakdown for all the Member States must, at least at the initial stage, be carried out by a single team with access to ESES data and with expertise in this area. Ideally, a study should be carried out to establish the breakdown and put in place a permanent system for achieving it on the basis of the ESES. The study could be based on the one currently being conducted by Professor David Marsden in the context of the research programmes of DG Research , the aim of which is to make the best use of the ESES, with strict regard for the protection of privacy. One part of the research team is working specifically on wage differences.

Annexe : Détails techniques complétés d'un exemple pour la Belgique

a) Technique de décomposition d'Oaxaca

Oaxaca (1973) a mis en évidence que l'écart entre le salaire horaire moyen (en logarithme) des hommes et des femmes peut être décomposé de la manière suivante :

$$\overline{\ln(W_h)} - \overline{\ln(W_f)} = \overline{X}_h\ (\hat{\beta}_h - \beta^*) + \overline{X}_f(\beta^* - \hat{\beta}_f) + (\overline{X}_h - \overline{X}_f)\beta^* \qquad (1)$$

où,

- Les indices h et f désignent respectivement les hommes et les femmes.
- Les termes de gauche mesurent la valeur moyenne des salaires horaires bruts (en logarithmes) des hommes et des femmes.
- Les termes $\overline{X}$ représentent les valeurs moyennes ou fréquences d'occurrence des différentes variables (niveau d'éducation, expérience professionnelle, etc.) pour les hommes et les femmes.
- Les $\hat{\beta}$ sont obtenus en estimant une équation de gains séparée pour les hommes et pour les femmes :

  $$\ln\ (W_{h,i}) = \beta_h\ X_{h,i} + \varepsilon_i \qquad \longrightarrow \hat{\beta}_h$$

  $$\ln\ (W_{f,i}) = \beta_f\ X_{f,i} + \varepsilon_i \qquad \longrightarrow \hat{\beta}_f$$

  Les $\hat{\beta}$ mesurent le rendement - en termes de salaire - des variables contenues dans le vecteur $\overline{X}$ pour les hommes et les femmes.
- β^* correspond à la valeur qui serait estimée pour chacun des coefficients en l'absence de discrimination, c'est-à-dire si les $\hat{\beta}$ étaient identiques pour les hommes et les femmes ou encore si les caractéristiques individuelles des hommes et des femmes étaient rémunérées de manière équivalente.

5.3.1.1.1.1.1. Que signifie cette expression ?

- Le membre de gauche de l'équation (1) mesure l'écart de salaire moyen observé entre les hommes et les femmes (en logarithme).
- Le premier terme de droite représente l'avantage dont bénéficient les hommes. Il s'agit du supplément de salaire dont ils bénéficient du fait que l'impact sur leur salaire des différentes variables contenues dans le vecteur $\overline{X}$ est différent de celui qu'elles auraient en l'absence de discrimination.

- Le second terme de droite reflète le désavantage que subissent les femmes, c'est-à-dire la perte de salaire qu'elles subissent du fait que l'impact sur leur salaire des différentes variables contenues dans le vecteur $\overline{X}$ est différent de celui qu'elles auraient en l'absence de discrimination.
- Le troisième terme de droite mesure la partie de l'écart salarial attribuable à des différences dans les caractéristiques individuelles des hommes et des femmes.

Quelle est la valeur de $\beta*$? Autrement dit, quelle est la valeur du vecteur des coefficients de régression associé à la structure salariale non discriminatoire, c'est-à-dire à un état de la nature où les écarts de salaires entre hommes et femmes s'expliquent entièrement par la diversité de leurs caractéristiques individuelles ?

Il n'existe pas de consensus dans littérature concernant la structure salariale non discriminatoire à utiliser (pour plus de détails voir Oaxaca R. et Ransom M. (1994), "On discrimination and the decomposition of wage differentials", *Journal of Econometrics*, Vol.61, No.1, p.5-21). Cependant, nous proposons de prendre celle des hommes comme référence car : i) ils constituent la plus grande proportion de la population en emploi et ii) la distribution des salaires masculins constitue implicitement la norme dans la loi relative à l'égalité salariale ("salaire égal pour un travail égal"). Ce choix implique que $\beta*=\hat{\beta}_h$.

Dès lors, nous pouvons réécrire l'équation (1) de la manière suivante :

$$\overline{\ln(W_h)} - \overline{\ln(W_f)} = \overline{X}_f(\hat{\beta}_h - \hat{\beta}_f) + (\overline{X}_h - \overline{X}_f)\hat{\beta}_h \qquad (2)$$

où,
- Le membre de gauche de l'équation mesure l'écart de salaire moyen observé entre les hommes et femmes (en logarithme).
- Le premier terme de droite constitue l'effet prix, c'est-à-dire l'écart salarial non expliqué attribuable à une discrimination salariale "pure".
- Le deuxième terme de droite mesure l'écart salarial expliqué, c'est-à-dire attribuable aux différences dans les caractéristiques individuelles des hommes et des femmes.

b) Spécification de l'équation de gains :

Variable expliquée :

- Logarithme népérien du salaire horaire brut (en monnaie nationale), y compris heures supplémentaires rémunérées et primes pour travail posté, de nuit et de week-end. Les bonus tels que les 13ièmes mois et les participations aux bénéfices ne sont pas inclus.

Variables explicatives :

- Niveau d'éducation (6 variables catégorielles indiquant le diplôme le plus élevé obtenu par l'individu).
- Expérience professionnelle antérieure (nombre d'années passées sur le marché du travail avant l'obtention du dernier emploi). Cette variable doit être inclue dans l'équation de gains en niveau, au carré et au cube (pour plus d'explications voir Murphy K. et Welch F. (1990), "Empirical age-earnings profiles", *Journal of Labour Economics*, Vol.8, No.2, p.202-29).
- Ancienneté dans l'entreprise (nombre d'années passées auprès de l'employeur actuel). Cette variable doit être inclue dans l'équation de salaire en niveau et au carré. Il faut également inclure une variable duale qui prend la valeur 1 si l'ancienneté de l'individu est strictement supérieure à zéro et 0 sinon.
- Occupation professionnelle (variables catégorielles, ISCO à 2 chiffres).
- Logarithme népérien du nombre d'heures rémunérées (y compris les heures supplémentaires rémunérées).
- Type de contrat (3 variables catégorielles).
- Prime pour travail posté, de nuit et/ou de week-end (variable duale qui vaut 1 si l'individu a touché une telle prime et 0 sinon).
- Type de contrôle économique et financier de l'établissement (variables catégorielles).
- Heures supplémentaires rémunérées (variable duale qui vaut 1 si l'individu a presté des heures supplémentaires rémunérées et 0 sinon).
- Secteur d'activité (variables catégorielles, NACE à 2 chiffres).
- Logarithme népérien de la taille de l'établissement (ln du nombre de travailleurs dans l'établissement).

c) Exemple pour la Belgique

Les résultats repris dans les Tableaux 1 et 2 se basent sur l'Enquête sur la Structure et la Répartition des salaires de 1995. La spécification de l'équation de gains est conforme à celle décrite au point b).

Comme le montre le Tableau 1, l'écart salarial moyen entre les hommes et les femmes était de 25.4% en Belgique en 1995. Approximativement 50% de cet écart salarial s'explique par l'hétérogénéité des caractéristiques individuelles des hommes et des femmes (niveau de capital humain, type de contrat de travail, secteur d'activité, affiliation sectorielle, nombre d'heures

rémunérées, taille de l'établissement, etc.). Autrement, il subsiste un écart salarial de l'ordre de 13% qui s'apparente à de la discrimination salariale "pure".

5.3.1.1.1.2. Tableau 1 : Décomposition Oaxaca de l'écart
5.3.1.1.1.3. salarial entre hommes et femmes

	Écart salarial moyen entre hommes et femmes :	Proportion de l'écart salarial :	
		Expliquée ≡ $(\overline{X}_h - \overline{X}_f)\hat{\beta}_h$	Non expliquée ≡ $\overline{X}_f(\hat{\beta}_h - \hat{\beta}_f)$
En logarithmes	$\overline{\ln(W_h)} - \overline{\ln(W_f)} = 0{,}226$ [= 6,172 – 5,946]	0,108 (48%)	0.118 (52%)
	$\frac{W_h - W_f}{W_f} = 0.254$ [= (479 – 382)/382]	0,122 (48%)	0,132 (52%)

Source : Enquête sur la Structure et la Répartition des Salaires, 1995.

Le Tableau 2 montre que les différences en matière de capital humain (niveau d'éducation, expérience professionnelle et ancienneté), d'occupation professionnelle et d'affiliation sectorielle expliquent plus de 75% de l'écart salarial expliqué. En effet, ces différences générèrent un écart salarial de 9,2%. Enfin, on constate que :

1. L'affiliation sectorielle et le capital humain contribuent davantage à l'explication des écarts de rémunération que l'occupation professionnelle.
2. Parmi les variables de capital humain, l'ancienneté dans l'entreprise est la principale source d'inégalité salariale entre hommes et femmes.

5.3.1.1.1.4 Tableau 2 : Contribution à l'inégalité salariale

Variables :	En logarithmes	En BEF	En % du total expliqué
Capital humain :	0,031	0,035	28,7%
- Niveau d'éducation	*0,004*	*0,005*	*3,7%*
- Expérience professionnelle	*0,009*	*0,010*	*8,3%*
- Ancienneté	*0,018*	*0,020*	*16,7%*
Occupation professionnelle	0,017	0,019	15,7%
Secteur d'activité	0,034	0,038	31,5%

Total	0,082	0,092	75,9%

Source : Enquête sur la Structure et la Répartition des Salaires, 1995.

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