

researchers (total yearly salary) per level of experience obtained in the study was within the usual range of remunerations or not.

The data on the remunerations of the Universities was cross checked with the following persons or entities within each organisation, as presented below:

- **Austria.** Universität für Bodenkultur, Vice-rector for research Martin Gerzabek.
- **Belgium.** Faculté Politechnique de Mons, Ms Magali Crouquet.
- **Bulgaria.** Technical University of Gabrovo, Ms Markova.
- **Denmark.** University of Aalborg, Ms Susanne B. Hansen; University of Copenhagen, Ms Gyrithe Hjorth Blichfeldt; University of Roskilde, Ms Mette Seistrup;
- **Estonia.** University of Tartu, Ms Kaili Kõiv (Head Specialist in Compensation and Work Arrangement).
- **Finland.** University of Oulu, Administrative director Hannu Pietilä; University of Vaasa, Ms Cucinotta, Head of International Relations.
- **France.** Institut national de physique nucléaire et de physique des particules (IN2P3) Ms Michele Layne (Assistant-management – Human Resources, Project Division IN2P3). Université de Paris VII - Denis Diderot, Mr Villar.
- **Germany.** Fraunhofer Institute, Dr. Raoul Klingner (Fraunhofer-Gesellschaft).
- **Hungary.** Pazmany Peter Catholic University, Administrative department.
- **Iceland.** Reykjavik University, Mr Jóhann Hjartarson.
- **Ireland.** The Dublin Institute of Technology, Administrative department. Trinity College, Dublin, Administrative department.
- **Italy.** University of Torino, Ms Silvia Forno (Research and International Relations); University of Roma, Ms Antonella Cammisa; Università degli Studi di Trento, Dra. Paola Antonicelli (Administrative and Personnel department).
- **Luxembourg.** University du Luxembourg, Mme Damienne Valentin (Head of the Human Resources department).
- **Malta.** University of Malta. Administrative department.
- **Netherlands.** University of Leiden, Administrative department. Utrecht University, Human Resources department of the veterinary faculty. University of Maastrich, Mr Philip van Engelen, Administrative Service Center.
- **Norway.** University of Trondheim, Mr Øyvin Sæter, Research and Development Adviser.
- **Poland.** University of Warmia and Mazury in Olsztyn, Ms Agnieszka Kowalska.
- **Portugal,** University Nova of Lisboa, Carmo Sampaio, rector of the University; University do Porto, Ms Teresa Mata.
- **Romania.** Technical University of Civil Engineering Bucharest (UTCB), Vice-Rector for Research and Development.
- **Spain.** CIEMAT, Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas, Jose Miguel Domingo Casado (Head of the retributions

department). University Complutense de Madrid, Jose Maria Alonso, Director of Investigation.

- **Sweden.** Chalmers University of Technology, Ms Erica Sköld.
- **Switzerland.** University of Genève. Ms Jacqueline Riat.
- **Turkey.** Hacettepe University, Istanbul Technical University. Administrative department.
- **United Kingdom.** University of Bath, Ms Sue Williams, director of Human Resources; University of Coventry; The University of Huddersfield, Ms Carol Doyle (Research budgets and studentships).

Other additional information, considered useful for the verification of the study data was collected, mainly using desk-research. The following documents were downloaded from the Internet (when available), or provided by some contacts:

- The retributions of the official personnel in the public universities of Spain in 2007³.
- "Complete Results of the SFRI Questionnaire on the Working Conditions of Researchers in the Universities and Public Research Organisations" from the Directorate for science, technology and industry, Committee for Scientific and Technological policy of the OECD, provided by Lynne Hunter (Adviser, Delegation of the European Commission in Australia).
- "Salary System for Universities – Job demand chart for teaching and Research staff", from the University of Oulu, 16th December 2005.

The results obtained from this verification phase, presented in Annex 6, showed that in some countries, there was a deviation between the Total yearly salary obtained in the study and the "real" total yearly salary applied in the institutions contacted. Thus, an adjustment of the final results was seen as necessary. Taking into account that the number of responses considered in the verification phase does not provide the minimum accuracy level demanded in this type of study, and that the categories of researchers considered do not exactly match the ones considered in the study sample, the adjustment of the study data should be done by means of a more reliable source.

At this point different people from the EC and National Ministries of Labour, Employment and Economy were contacted. Based on this action, it was decided to take the data of labour costs calculated by Eurostat in 2005 as a reference. Thus, an **adjustment coefficient** for each country was defined. That data provided the real percentage of employer's charges with respect to the total yearly salary. Those percentages were compared to the ones obtained from the survey data (percentage of employer's charges with respect to the total yearly salary). The adjustment coefficient represents the difference between both percentages.

³ <http://www.ugr.es/~feteugt/Boletin/Boletin%20FETE%20Universidad%20039.pdf>

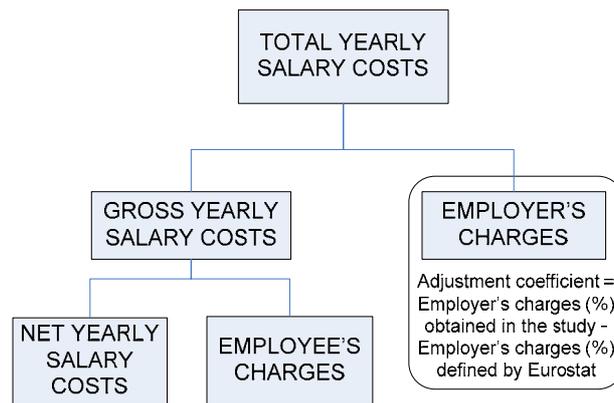


Figure 7 – Total yearly salary cost structure

Country	A - % of employer's charges from the total yearly salary average (STUDY RESULTS)	B - % of employer's charges from the total yearly salary average (EUROSTAT DATA)	Difference (A-B)	Adjustment coefficient
Austria	19,56	-	-	-
Belgium	22,91	31,12	8,21	1,08
Bulgaria	18,94	25,08	6,14	1,06
Croatia	25,62	-	-	-
Cyprus	10,71	15,25	4,54	1,05
Czech Republic	24,30	26,92	2,62	1,03
Denmark	12,75	10,34	-2,41	0,98
Estonia	27,65	25,39	-2,26	0,98
Finland	14,32	20,83	6,51	1,07
France	32,73	28,87	-3,86	0,96
Germany	16,95	23,40	6,45	1,06
Greece	19,18	19,97	0,79	1,01
Hungary	26,49	27,82	1,33	1,01
Iceland	16,22	15,22	-1,00	0,99
Ireland	14,22	12,93	-1,29	0,99
Israel	20,31	-	-	-
Italy	20,60	29,38	8,78	1,09
Latvia	-	20,69	-	-
Lithuania	28,73	28,23	-0,50	0,99
Luxembourg	14,01	15,37	1,36	1,01
Malta	7,53	8,13	0,60	1,01
Netherlands	20,65	21,40	0,75	1,01
Norway	13,57	6,98	-6,59	0,93
Poland	22,08	16,59	-5,49	0,95
Portugal	16,27	21,16	4,89	1,05
Romania	23,46	24,49	1,03	1,01
Slovakia	24,31	25,23	0,92	1,01
Slovenia	21,32	14,55	-6,77	0,93
Spain	18,87	24,85	5,98	1,06
Sweden	34,00	30,56	-3,44	0,97
Switzerland	13,76	-	-	-
Turkey	18,08	-	-	-
United Kingdom	16,78	18,31	1,53	1,02

SOURCE: Eurostat, Labour cost, wages and salaries, direct remuneration for Research and Development (NACE code), 2005.

Table 5 – Adjustment coefficient

2.3.1.3 Accuracy

Furthermore, the accuracy of the study data was calculated as part of the qualitative analysis. The complete results, shown in Annex 7, established that the consistency and reliability of the study results are excellent or high in 20 out of the 33 countries analysed in this study, representing 87,15% of the total number of researchers in Europe.

2.3.1.4 Weights

Another aspect considered during the qualitative analysis of the survey results, has been the possible impact that the distribution of responses per level of experience may have on the calculation of each country average. Thus, a set of weights per level of experience has been defined, considering the number of responses obtained in the study. These weights, as presented in the table below, have also been applied to the results, producing the weighted averages.

	0-4 years	5-7 years	8-10 years	11-15 years	> 15 years	TOTAL
Number of responses	1.528	1.058	729	787	2.008	6.110
Weights	25,01%	17,32%	11,93%	12,88%	32,86%	

Table 6 – Weights applied per level of experience

In a similar way, weights per level of experience and gender have been calculated and applied. These weights are presented in the table below.

	0-4 years	5-7 years	8-10 years	11-15 years	> 15 years	TOTAL
Number of responses- Female	695	400	260	260	451	2.066
Weights	33,64%	19,36%	12,58%	12,58%	21,83%	
Number of responses- Male	859	683	483	537	1562	4124
Weights	20,83%	16,56%	11,71%	13,02%	37,88%	

Table 7 – Weights applied per level of experience and gender

2.3.2 Quantitative analysis

The quantitative analysis process presents the obtained results in a structured manner, enabling the extraction of conclusions. As a result, the following set of survey indicators (SI) were defined, grouped within two indicator categories:

- Survey Indicator 1 (**SI1**), presenting the total number of received responses, distributed by: country, gender, level of experience, sector of activity and scientific domain.
- Survey Indicator 2 (**SI2**), presenting the results of the survey concerning salaries in the different countries for the different fields (seniority, gender) and the number of received responses for other advantages

SI1: Total number of responses: It classifies the responses received, as follows:

- o SI1.1:% distribution per country (QC: response to question 1 of the questionnaire)

- SI1.2:% distribution per country (QC) and gender (Q5: response to question 2 of the questionnaire)
- SI1.3:% distribution per country (QC), gender (Q5) and experience (Q1 response to question 3 of the questionnaire)
- SI1.4:% distribution per country (QC) and sector of activity (Q2 response to question 5 of the questionnaire)
- SI1.5:% distribution per country (QC) and scientific domain (JQN response to question 6 of the questionnaire)
- SI1.6: % distribution per country (QC) and type of contract (QF4 response to question 4 on the questionnaire)

SI2: Study Results: This indicator presents the study results.

- SI2.1: Country Total Yearly Salary Average, per Gender (Total Yearly Salary Average = Net yearly Salary received + Employers' charges (e.g. social security contribution, pension funds) + Employee contribution to social security + Holiday pay + Personal income tax).
- SI2.2: Country Total Yearly Salary Average, per Level of seniority.
- SI2.3: Total number of Other Advantages.
- SI2.4: Country employers' charges, employee contribution to social security, holiday pay, personal income tax and net salary.
- SI2.5: Country Net Yearly Salary Average.

The complete results for those indicators are presented in Annex 8.