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Remuneration of Researchers in the Public and Private sectors

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Definitions

Adjustment coefficients: They represent the difference between the percentage of employer's charges with respect to the total yearly salary given by Eurostat and the one obtained in the study. These coefficients are used to improve the precision of the study data.

Associated Countries: Countries belonging to the Associated Countries are, in the context of the study, the following ones: Bulgaria, Croatia, Iceland, Israel, Liechtenstein, Norway, Romania, Turkey and Switzerland.

Countries Average: It is calculated considering the average salary between countries (taking the weight of 1 for each of the countries). Considering $S_{country}$, the salary average in each country, the countries average is calculated as follows:

$$S_{countries\ average\ (EU25)} = (S_{Austria} + S_{Belgium} + \ldots + S_{UK}) / 25$$

Corrective Coefficients: The correction coefficient used for the study is PPS (see below).

European Countries 15: The EU15 comprises the following 15 countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and United Kingdom.

European Countries 25: The EU25 comprises the EU15 plus: Czech Republic, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia.

N: the total number of replies considered in each case. (See Figure 5)

Net Yearly Salary: is the remaining amount after deductions from the total yearly salary.

Other Advantages: Advantages that a researcher may have included in her/his contract are: Health care; Beneficiary of mandatory pension; Beneficiary of complementary pension scheme; Paid maternity leave; Paid holidays; Beneficiary of unemployment benefits; Beneficiary of accident insurance; Accommodation costs - house / apartment; Car; Family supplement; Children allowances; Others.

Purchasing Power Parities (PPP): A rate of exchange that accounts for price differences across countries, allowing international comparisons of real output and incomes.

Purchasing Power Standard (PPS): It represents the PPP transformed into a standardised form with the EU region as a base (EU = 1). A fictitious "average" currency of all EU members is selected as an artificial unit (currency).

Total Yearly Salary = Net yearly Salary received + Employers' charges (e.g. social security contribution, pension funds) + Employee contribution to social security + Holiday pay + Personal income tax. (See Figure 7)

Weighted average: average applying the defined weights, which consider the number of responses per level of experience over the total obtained. Thus, considering S_1 the salary of the population with 0-4 years of experience, S_2 the salary of the population with 5-7 years of experience, etc…, and $P_1 \ldots P_5$ the weights defined per level of experience, the weighted average is calculated as follows:

$$S_{weighted\ average} = P_1 * S_1 + P_2 * S_2 + \ldots + P_5 * S_5$$

List of Terms

Countries Abbreviations

AT	Austria
AU	Australia
BE	Belgium
BG	Bulgaria
CH	Switzerland
CN	China
CY	Cyprus
CZ	Czech Republic
DE	Germany
DK	Denmark
EE	Estonia
EL	Greece
ES	Spain
FI	Finland
FR	France
HR	Croatia
HU	Hungary
IE	Ireland
IL	Israel
IN	India
IS	Iceland
IT	Italy
JP	Japan
LT	Lithuania
LU	Luxembourg
LV	Latvia
MT	Malta
NL	The Netherlands
NO	Norway
PL	Poland
PT	Portugal
RO	Romania
SE	Sweden
SI	Slovenia
SK	Slovakia
TR	Turkey
UK	The United Kingdom
US	The United States

Other Abbreviations and Symbols

"-"	Not applicable or unreliable
BE	Big Enterprise
BrB	Bridge Bodies
CC	Corrective coefficient
C-CPI-U	Chained Consumer Price Index for All Urban Consumers
CPI	Consumer Price Index
CPI-U	Consumer Price Index for All Urban Consumers
EARTO	European Association of Research and Technology Organisations
EC	European Commission

ECB	European Central Bank
EEA	European Economic Area (EU25, Iceland, Liechtenstein and Norway)
ESA	European System of Accounts
EU/EU25	European Union (25 Member States)
EU-15	European Union (15 Member States)
EUR	Euro
Eurostat	Statistical Office of the European Communities
GDP	Gross Domestic Product
HICP	Harmonized Index of Consumer Prices
IRC	Innovation Relay Centre
ISCO	International Standard Classification of Occupations
LCU	Local Currency
OECD	Organisation for Economic Cooperation and Development
PA	Public Administration
PAI	Post Adjustment Index
PPI	Producer Price Index
PPP	Purchasing Power Parities
PPS	Purchasing Power Standard
PWT	Penn World Tables
R	Researcher
RTC	Research Technological Centre
SME	Small and Medium Enterprise
U	University
UN	United Nations

FOREWORD

This document presents the results of the study on the remuneration of researchers in the public and private sectors. This study was launched and managed by the European Commission, Directorate D "Human Factor, Mobility and Marie Curie Actions, Strategy and Policy Aspects" of Directorate General for Research. Its main purpose was to have a clear picture of the remuneration of researchers in Europe (EU25 and Associated Countries). The study collected information on the gross and net remunerations of researchers in the public and private commercial sectors. As such, it is the first attempt to gain insight into the profession of researchers. The study also discusses researchers' career recognition, which seems to have fallen behind compared to other professions.

The results of the study, carried out from May 2006 to March 2007, show the remuneration scheme of the researchers in Europe, and compare it against the situation of researchers in other countries (Australia, China, India , Japan and the United States), as well as against the remuneration schemes of other similar professions in each country.

This study is one of the activities that the European Commission is performing in order to contribute to the creation of a more attractive Europe for researchers and young people entering a scientific career, the final aim of which is to become a more knowledge-based society.

Acknowledgments: CARSA's study team would like to thank all the people who have contributed to the successful performance of this contract, and in particular all the researchers that have answered our survey.

Recommended citation: European Commission. Research Directorate-General. 2007. Remuneration of Researchers in the Public and Private Sectors.

EXECUTIVE SUMMARY

This document presents the results obtained within the Study on the Remuneration of Researchers in the Public and Private Commercial Sectors that CARSA has carried out for the European Commission. The main objective of the study is to give a clear idea of the existing differences between researcher careers in EU25 and Associated Countries. Other areas of interest addressed in the study are the existing differences between researching and other similar professions, and differences between researchers working in Europe and those in Australia, China, India, Japan and the United States. The results of the study can support the Commission in the validation of the reference rates applicable to the "Marie Curie" Actions, as well as in the context of other elements of the Framework Programme.

> For the purposes of this study a researcher is any person who devotes at least 50% of her/his time to carry out research activities (Frascati Manual, OECD)

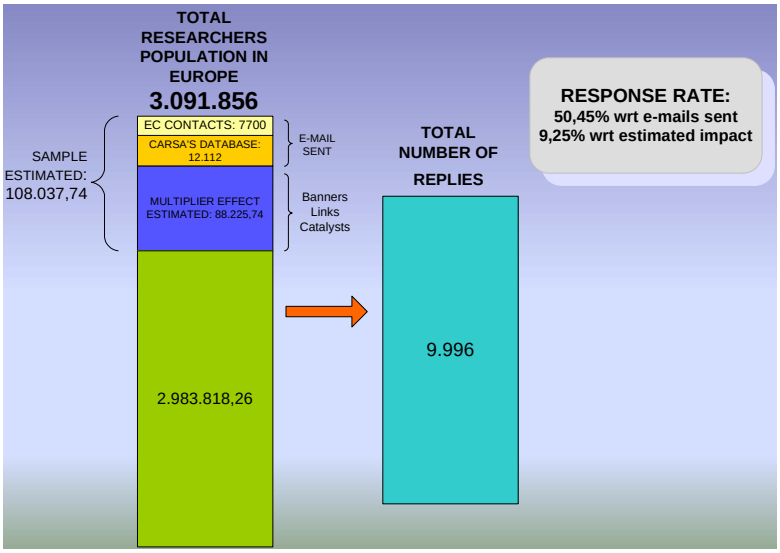
The contract service has been structured into 3 different phases based on the overall objectives of this study:

1. **Data gathering**: the provision of a scale of net and gross remunerations of researchers in the public and private commercial sectors in the EU25 and Associated Countries at the various stages of their career.

2. **Corrective coefficients**: analysis of the existing corrective coefficients which take into account the cost of living for researchers in the various countries in Europe and worldwide have been used in the data analysis and comparison phase.

3. **Data analysis and comparison:** a qualitative analysis of the results obtained in the first phase of the study, with a comparison of researchers' remunerations with other professions with comparable qualifications, as well as a collection of data on remunerations of researchers in Australia, China, India, Japan and the United States, and a comparison of these figures with those in Europe have been performed in this phase.

The **response rate** obtained from the survey, during the data gathering phase, is presented in the figure.



The raw data obtained from the survey have been processed in order to detect and delete possible inconsistencies and errors. In brief, the process has consisted of:

- QA Check. Eliminating outliers and existing deviations from the survey raw data.

- Verification of total yearly salary cost. An adjustment coefficient based on information provided by Eurostat (average of employers' social contributions, per country, over the total labour costs) has been applied.

- Calculation of weights. The final average has been calculated as the weighted average of the researchers' remunerations per level of experience.

On the other hand, the **accuracy** of the data was calculated, and showed that the consistency and reliability of the study results are either 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.

Finally, and in order to compare the researchers' remunerations in EU25 and Associated Countries, they have been converted in terms of standardised PPS. The PPP index calculated as the rate of final consumption by Eurostat has been applied as the corrective coefficient for the purposes of this study, since it considers the cost of living in each country, while allowing multilateral comparison at international level (including Australia, China, India, Japan and the United States). The next table presents the result of this process.

Total Yearly Salary Average of researchers in EU25, Associated Countries, Australia, China, India, Japan and United States (2006, N=6110, all currencies in EURO and in terms of PPS)

	Remuneration average in EURO	Corrective coefficient	Remuneration average in terms of PPS
Austria	62.406	103,1	60.530
Belgium	58.462	104,4	55.998
Cyprus	45.039	89,1	50.549
Czech Republic	19.620	53,1	36.950
Denmark	61.355	140,5	43.669
Estonia	11.748	55,8	21.053
Finland	44.635	121,8	36.646
France	50.879	107,0	47.550
Germany	56.132	105,2	53.358
Greece	25.685	83,3	30.835
Hungary	15.812	57,1	27.692
Ireland	60.727	122,3	49.654
Italy	36.201	106,1	34.120
Latvia	10.488	48,6	21.580
Lithuania	13.851	46,7	29.660
Luxembourg	63.865	113,5	56.268
Malta	28.078	69,6	40.342
Netherlands	59.103	104,2	56.721
Poland	11.659	54,0	21.591
Portugal	29.001	87,0	33.334
Slovakia	9.178	50,2	18.282
Slovenia	27.756	73,1	37.970
Spain	34.908	89,8	38.873
Sweden	56.053	118,9	47.143
United Kingdom	56.048	106,2	52.776
EU 25 Average	*37.948 €*		*40.126 €*

	Remuneration average in EURO	Corrective coefficient	Remuneration average in terms of PPS
Bulgaria	3.556	36,4	9.770
Croatia	16.671	61,6	27.063
Iceland	50.803	150,3	33.801
Israel (*)	42.552	71,4	59.580
Norway	58.997	141,1	41.813
Romania	6.286	46,6	13.489
Switzerland	82.725	138,1	59.902
Turkey	16.249	61,9	26.250
Associated countries average	*34.730 €*		*33.959 €*
Australia(*)	64.150	102,9	62.342
China(*)	3.150	22,9	13.755
India(*)	9.177	20,3	45.207
Japan	68.872	111,1	61.991
United States	60.156	95,8	62.793

(*)The corrective coefficients in those countries are the PPP from 2003 published by the World Bank.

Once the situation of researchers' remunerations in EU25 and Associated Countries has been analysed, a number of results from this work can be discerned.

High differences between the remuneration of researchers throughout the EU25 and Associated Countries, although the gap between the levels of remuneration in each country reduces when considering the cost-of-living.

The differences between the remunerations of researchers without applying PPS are higher than when the cost of living is considered. For example, the remuneration difference between Germany and Greece is 30.447 EUR without PPS, while that gap becomes only 22.523 EUR with PPS. The distance between the average remunerations has been reduced by 26,03%.

But, even if one considers the PPS, the differences between countries are extremely high in most cases and for example, a researcher working in Austria may expect a remuneration level around 60.530 EUR, whilst a researcher in France would receive 47.550 EUR (21,44% less) or a researcher in Slovakia would receive 18.282 EUR (69,80% less).

Thus, analysing the main study results (remunerations average per country in PPS) we can group all EU25 and Associated Countries in 4 different categories: low, medium, high and very high remuneration levels. The low and medium remuneration levels correspond to Eastern Europe and the Mediterranean, and the high and very high remuneration levels correspond to Central Europe and the Nordic countries.

As expected, those countries with a higher cost of living coincide with those with a higher remuneration level for researchers. Therefore, when applying the corrective coefficients defined (PPS as calculated by Eurostat in December 2006) to researcher remunerations, the differences between countries are reduced when compared to the same values without PPS. This is the so called "attractiveness" of each country for the researchers.

Only Austria, The Netherlands, Israel, Switzerland and Luxembourg have an average remuneration similar to that of the United States, considering the cost of living in each country.

The EU25 average (40.126 EUR) is far below the US average (62.793 EUR). Only Austria (60.530 EUR), The Netherlands (56.721 EUR) and Luxembourg (56.268 EUR) have a similar remuneration level to the United States. If we consider the Associate Countries, only Israel (59.580 EUR) and Switzerland (59.902 EUR) have an average remuneration similar to that of the United States.

Australia, India and Japan have an average of remuneration that is higher than the EU25 in terms of PPS and which is, in the case of Australia and Japan, in a similar range to the level of the United States. In the case of China, its remuneration level is far below the EU25 level.

High differences in expected career progression throughout the EU25 and Associated Countries.

A researcher in the United Kingdom can expect a significant increase in the remuneration throughout her/his research career. The United Kingdom which occupies the thirteenth position in the ranking for a young researcher (from 0 to 4 years of experience), rises to the sixth position for experienced researchers (with more than 15 years of experience). This increase represents an increment of 235,42% during the researchers' career.

On the contrary, a young researcher in Denmark cannot expect such an increase in her/his remuneration given that the position of Denmark in the ranking for a young researcher is sixth, while for experienced researchers Denmark occupies fourteenth place. This increase represents a 90,57% increment in remuneration during the researchers' career.

In most of the countries, the remuneration for men is higher than for women.

The difference between the remuneration of a female researcher and a male researcher is significant in most of the countries. Thus, the countries with higher differences (over 35%) are Estonia, Czech Republic, Israel and Portugal.

On the contrary, this gap is significantly reduced (difference below 15%) in Bulgaria, Denmark, Greece, Iceland, Malta and Norway.

1 INTRODUCTION TO THE STUDY SCOPE AND OBJECTIVES

1.1Study scope and objectives

The main objective of the study is to "present a clear picture of the remuneration of researchers in Europe", introducing the current inventory of the gross and net remunerations of researchers in the public and private commercial sectors in EU25 and Associated Countries by level of experience.

> For the purposes of this study a researcher is any person who devotes at least 50% of her/his time to carry out research activities.

The results of the study allow the European Commission to:

- Have a clearer idea of the researchers' remunerations in the different countries of the EU25 and the Associated Countries, and in the different categories depicted in the study,

- Compare the situation of European researchers' remunerations with other countries' (Australia, China, India, Japan and the United States) in order to undertake actions to make research more attractive in Europe,

- Compare researchers' remunerations against the remuneration of other similar professions within each of the EU25 and Associated Countries, highlighting the possible existing differences,

- Validate the reference rates applicable to the "Marie Curie" Actions (the researchers' remuneration scheme in the Seventh Framework Programme, under the People programme) as well as in the context of the development of other parts of the Framework Programme.

The objective of this action is to reinforce career attractiveness and mobility for the researchers activities supporting individual researchers, referred to as "Marie Curie" actions, with the aim of strengthening the human potential of European research through support to training, mobility and the development of European research careers.

1.2Contract activities

The contract service has been structured into 3 different phases, based on the overall objectives of this study, and presented in the figure below:

1. **Data gathering**: the provision of a scale of net and gross remunerations of researchers in the public and private commercial sectors in the EU25 and Associated Countries at the various stages of their career. Additional information on the situation of other similar professions of comparable qualifications was gathered during this phase.

2. **Corrective coefficients**: analysis of the existing corrective coefficients which take into account the cost of living for researchers in the various countries in Europe and worldwide and use them in the data analysis and comparison phase.

3. **Data analysis and comparison:** a qualitative analysis of the results obtained in the first phase of the study, a comparison of researchers' remunerations with other professions with comparable qualifications, as well as a collection of data on remunerations of researchers in Australia, China, India, Japan and the United States and a comparison of these figures with those in Europe was performed in this phase.

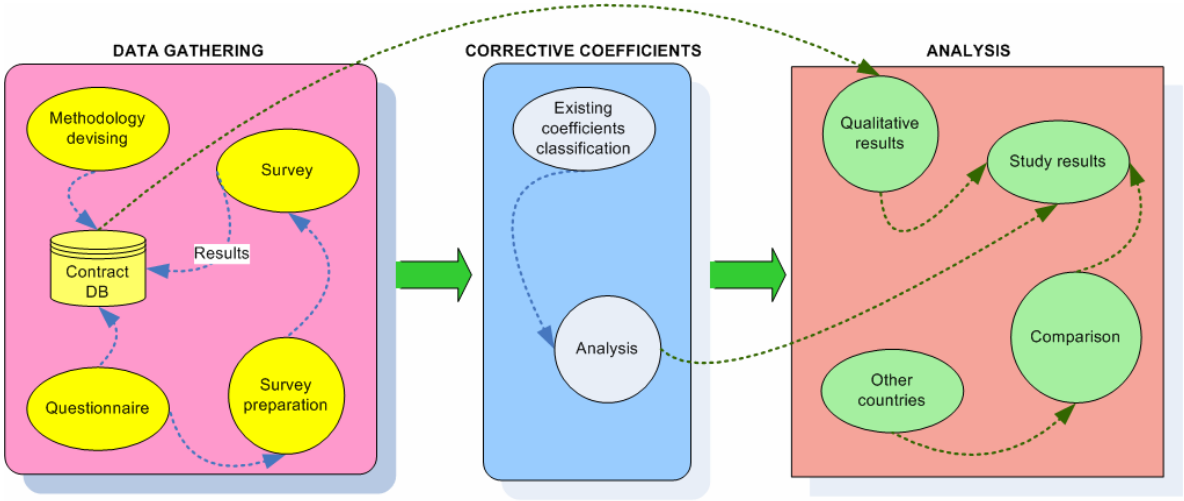


Figure 1 - Study phases

2 STUDY METHODOLOGY

The study methodology, covering the main activities of the three contract phases, is represented in the diagram below:

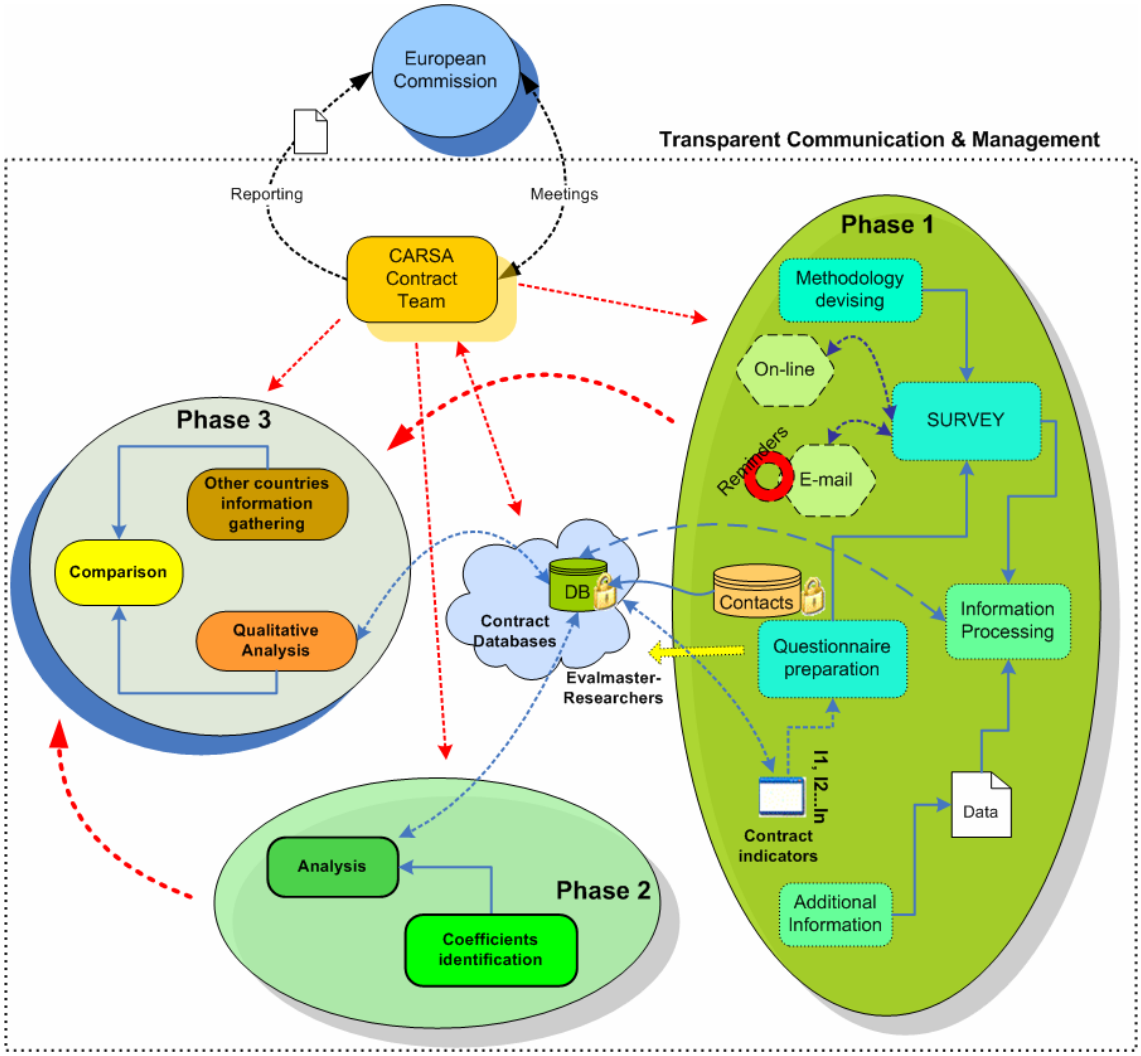


Figure 2 - Overall project methodology

The detailed description of each of the principal phases of the study can be found in the following chapters of this document.

2.1Data gathering

The collection of information on the current remuneration scheme of researchers in EU25 and Associated Countries has been realised by means of an on-line survey. On the other hand, and, in order to complete the necessary information for the

study, additional data has been gathered through desk-research on the situation of researchers in other countries as Australia, China, India, Japan and the United States. Additionally, the remuneration of other similar professions in the EU25 and Associated Countries were also compiled through desk-research.

The following chapters present the methodology for collecting the complete inventory of required information.

2.1.1 The data gathering for remunerations of researchers

In order to gather the remuneration of researchers in the EU25 and Associated Countries, the methodology depicted in the following picture has been used:

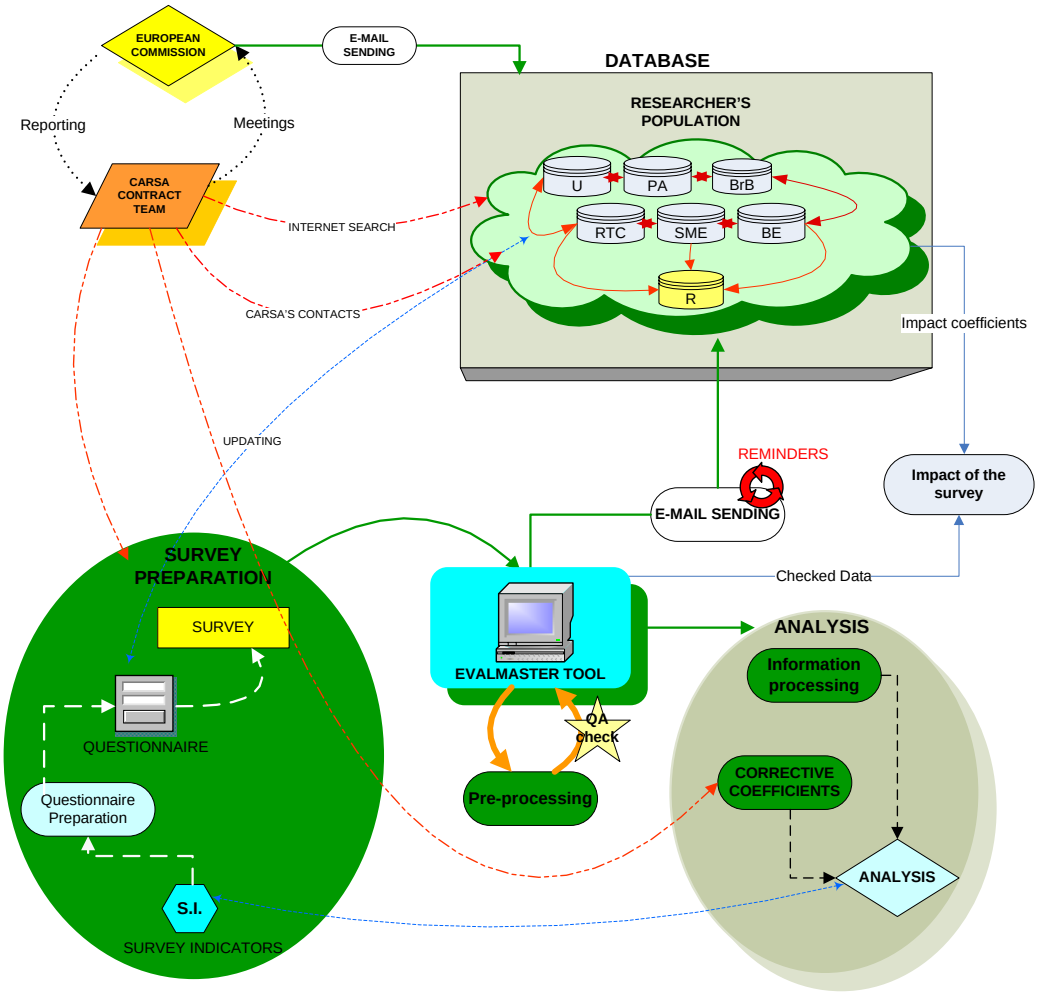


Figure 3 – Methodology for gathering researchers' remunerations in EU25 and Associated Countries

Questionnaire Preparation

The methodology was based on a survey, which briefly collected the most relevant information for the study. The questionnaire used was created considering the objectives of the study. Thus, a set of indicators was defined with a twofold purpose; to ensure that the relevant information for the study was collected, in a concise and efficient way, and to structure that

information for its further analysis. These indicators were defined considering the different types of information required:

- Basic information about the researchers: this included country, gender, level of experience, sector of activity, scientific domain of research and type of contract.

- Information about the remuneration scheme: this included detailed information on salaries, as well as other advantages of the contract.

The final questionnaire was defined taking into account the comments received from the Commission. This questionnaire was accessible to the researchers via the internet.

In this sense, the structure and the content of the questionnaire are composed of the following questions (see Annex 1 for a complete view of the questionnaire):

1) Gender:
   - Male
   - Female
2) Level of seniority of researchers:
   - 0-4 years of experience in research
   - 5-7 years of experience in research;
   - 8-10 years of experience in research;
   - 11- 15 years of experience in research;
   - More than 15 years of experience in research
3) Type of contracts:
   - Full time/ Part time
     - For part-time: which percentage?
   - Fixed-term / Permanent
     - for fixed-term: employment contract / non-employment contract (e.g. stipend, fellowship, grant…)
     - for fixed-term, who is funding your project:
       - Employer
       - National funding agency
       - Marie Curie fellowship
       - Other EU programmes
       - Other
4) Sectors to be covered:
   - Higher Education
   - Government sector
   - Business Enterprise sector
5) Scientific domain:
   - Social & Human Sciences
   - Economics
   - Chemistry
   - Physics
   - Life Sciences
   - Mathematics
   - Information Sciences
   - Engineering Sciences
   - Environment and Geosciences
6) Composition of remunerations:
   - gross salary
   - employers' charges
   - employee contribution to social security (including mandatory pension scheme contribution)

- holiday pay
- personal income tax
- net salary

7) Other advantages covered by the contract:
- Health care
- Beneficiary of mandatory pension
- Beneficiary of complementary pension scheme
- Paid maternity leave
- Paid holidays
- Beneficiary of unemployment benefits
- Beneficiary of accident insurance
- Accommodation costs - house / apartment
- Car
- Family supplement
- Children allowances
- Others

The intention of this survey was to reach to the maximum number of researchers in Europe, in order to assure the best representativeness of the results. In this way, different actions were undertaken to achieve this goal:

- ✓ Presentation of the questionnaire in the majority of the official languages of the study countries. The survey was translated into 19 languages (Czech, Danish, Dutch, English, Estonian, Finish, French, German, Greek, Hungarian, Italian, Latvian, Lithuanian, Polish, Portuguese, Slovak, Slovenian, Spanish and Swedish).

- ✓ Expansion of the network of contacts to whom the questionnaire was sent by the introduction of an invitation text in the e-mail, which encouraged the recipient to forward the informative e-mail to any other researcher concerned by the study.

- ✓ Insertion of a reference or a link to the survey web-site on different Internet portals such as CORDIS, The European Researcher's Mobility Portal, The Marie Curie Actions web site… and in some publications such as the EUA Newsletter 13/2006, which are read by researchers.

Survey launching and management

The survey was launched on the 4th July 2006 by sending the initial email to the contacts of a delivery database, which included both researchers and research active organisations. Those contacts were classified according to the following categories:

- Public Administration (PA)

- Universities (U)

- Research and Technological Centres (RTC)

- Big Enterprises (BE): Companies with more than 250 employees.

- Small and Medium Enterprises (SME): Companies with less than 250 employees.

- Bridge Bodies (BrB): we have considered Bridge Bodies as those organisations or networks of organisations that have access to a large research community. Amongst them we may find: Eureka, Network of

researchers at National and European level (EARTO, Dante Network, etc.), National Contact Points, IRC Network…

- Researchers (R): Defined as people carrying out research activities. They are the objective of the study.

The number of entries in this initial delivery database was 4.444. From each entry the following information has been stored: country, type of organisation, organisation name, contact name, contact email and contact telephone.

A second sending started on July 2006. In this case, a more extensive database of research contacts (4.115 new contacts), and contacts of researchers involved in Marie Curie projects, provided by the European Commission (2.731 new entries) was used.

Additionally and also aiming at improving the survey's impact, the questionnaire was forwarded to:

- The e-mail list of the ERACAREERS portal, owned by the European Commission (http://ec.europa.eu/eracareers/). The email list contains email addresses of about:
  - 6.000 active researchers and,
  - 1.500 active organisations.
- 200 attendees to a conference organised by the Austrian presidency, held in Vienna 1-2 June (http://www.eracareersaustria.at/conference/).

In the light of the preliminary results of the survey, the contacts database was again improved with additional industry contacts. This action aimed to obtain more data from the researchers working in the industry sector. Thus, 822 new contacts of industrial companies were included in the database, and a third sending was done to those new contacts.

For all these contacts, and in order to maximise the impact of the mailing, the following reminders (for each of the sending) have been sent, as presented in the table below:

Database	Initial sending	Reminder 1	Final Reminder
First Sending (4.444 contacts)	4 July 06	19 July 06	22 September 06
Second Sending (4.115 contacts)	26 July 06	4 August 06	22 September 06
Marie Curie contacts (2.731 contacts)	20 July 06	4 September 06	22 September 06
ERACAREERS portal email list (6.000 researchers + 1.500 organisations)	20 July 06	N/A	N/A
Contacts Austria conference (200 contacts)	20 July 06	N/A	N/A
Third Sending (822 contacts)	15 September 06	N/A	22 September 06

Table 1 – List of the e-mail sending for the survey

Impact calculation

In order to evaluate the survey impact on the European research community, the total survey sample has been estimated by applying coefficients of impact. These ad-hoc coefficients have been defined for each of the contact categories described above (Public Administration, Universities, Research and Technological Centres, Big Enterprises, Small and Medium Enterprises, Bridge Bodies, Researchers).

The coefficients represent an estimation of the number of contacts that each person who receives the questionnaire would be able to reach, if she/he were to forward the e-mail presenting the study received to other researchers, and therefore spread the survey. This estimation was done considering the number of researchers per country and organisation type, as defined by Eurostat[1].

The results of the calculations carried out highlight that the mailing targeted 3,49% of the total population of researchers in the EU25 and the Associated Countries. This figure would have been increased by the researchers who accessed the survey through the banner on the European Commission websites (CORDIS, Marie Curie portal), but this option has not been taken into account for this estimation.

The table below presents an overview of the reached contacts and its impact on the research community.

Number of contacts reached	19.812
(A) - TOTAL Number of researchers (estimated impact)	108.038
(B) - R&D PERSONNEL IN EU25 AND ASSOCIATED COUNTRIES	3.091.856
% OF EUROPEAN RESEARCHERS COVERED BY THE SAMPLE : (A)/(B)	3,49%

Table 2 – Estimated impact of the survey

Survey response rates

From 4th July to 29th September 2006, date of closure of the survey, 9.996 replies were obtained. They represent 50,45% of the total number of contacts to whom the questionnaire e-mail was sent.

The total number of received answers reflects that the participation of researchers has been very high and validates the survey results. Based on the final results, the total number of replies represents 9,25% of the estimated number of researchers to be reached by the survey.

[1] See Annex 2 for the detailed information on the calculation of coefficients of impact for each category of contact.

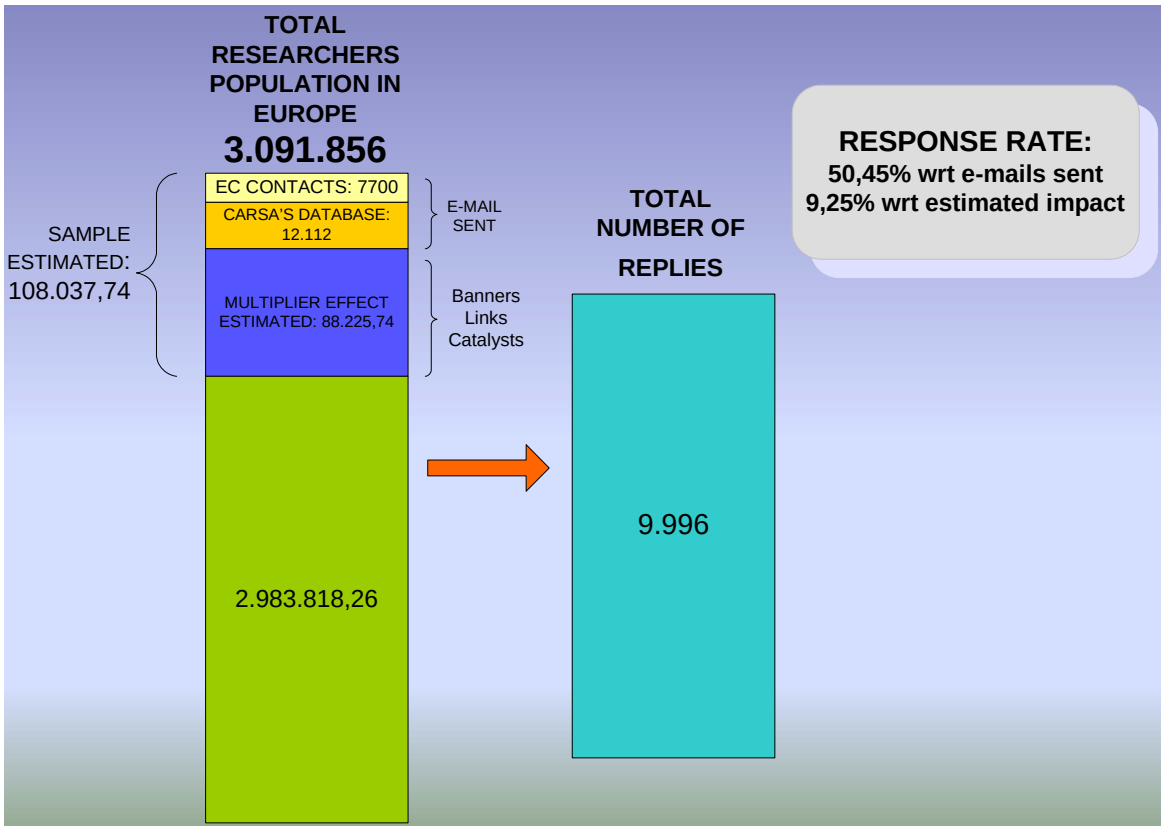


Figure 4 – Survey response rate

2.1.2 The data gathering for remunerations of researchers in other countries

The second task of the data gathering phase was the collection of information on the situation of researchers in other countries (Australia, China, India, Japan and the United States). This information was required to compare the situation of researchers in these countries with those of the EU25 and Associated Countries.

The Table 3 presents the information sources that were used. The majority of these sources were found using desk-research. The data on the remunerations was then downloaded from the Internet (when available) or directly asked to the related person within each organisation, as it was in the case of the United States, where Ms Nirmala Kannankutty (Senior Analyst at the National Science Foundation (NSF) – Division of Science resources statistics), Mr Raymond Wolf (Senior Analyst at the NSF - Division of Science resources statistics) and Mr John Tsapogas (Senior Analyst at the NSF) were contacted.

Additionally, the European Commission Delegations to Australia, China, India, Japan and the United States, were also contacted in order to give advice on possible local information sources:

- At the European Commission Delegation to Australia, Ms Lynne Hunter (Adviser, Delegation of the European Commission to Australia and New Zealand).

- China. Mr Georges Papageorgiou (Head of Science & Technology Section at the Delegation of the European Commission to China).

- India. Mr Andrew Sors (Research Programme Manager – Scientific Counsellor).

- Japan. Dr. Philippe de Taxis du Poët (First Counsellor - Head of Science & Technology Section at the European Union - Delegation of the European Commission to Japan).

- The United States, Ms Mary Kavanagh (Science Technology and Education Counsellor) was contacted.

AUSTRALIA	Delegation of the European Commission to Australia and New Zealand	Ms Lynne Hunter (Adviser)
	Australian Bureau of Statistics	http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/9F786460B670204ECA25713E00790EDD/$File/6306001.xls
	Australian National University	http://info.anu.edu.au/hr/Salaries_and_Conditions/Enterprise_Agreement/2005-2008_HEWRR/_S2/_S2_1.asp
	Australian Research Council - Australian Postdoctoral Fellowship (APD) - Australian Postdoctoral Fellowship Industry (APDI) - Australian Postdoctoral fellowship CSIRO (APDC) - Research Cadetship-Aboriginal and Torres Strait Islander (RC-ATSI) - Australian Research Fellowship (ARF) - Queen Elizabeth II Fellowship (QEII) - Australian Professoral Fellowship (APF) - Federation Fellowship (FF) - Australian postgraduate Award Industry (APAI)	http://www.arc.gov.au/pdf/2007_salaries_scales_stipends.pdf
	National Health & Medical Research Council	http://www.nhmrc.gov.au/fellows/funded/outcomes/index.htm
	Commonwealth Scientific and Industrial Research Organisation (CSIRO)	http://www.csiro.au/files/files/p5ur.pdf
CHINA	China Scolarship Council - The Barbara and Fred Kort Chinese Post-Doctoral Fellowship Program	http://www.csc.edu.cn
	National Science Council	http://web.nsc.gov.tw/
	Tsinghua University	http://www.tsinghua.edu.cn/
	Delegation of the European Commission to China	Mr Georges Papageorgiou (Head of Science & Technology Section at the European Union).

INDIA	Department of Biotechnology - Ministry of Science and Technology - Ramalingaswamy fellowship - Innovative Young Biotechnologist Award (IYBA) - Tata Innovation Fellowship	http://www.dbtindia.nic.in/
	Council of Scientific & Industrial Research (CSIR) Research Grants	http://www.csir.res.in/
	Delegation of the European Commission to India	Mr. Andrew Sors (Research Programme Manager - Scientific counsellor)
	Indian National Science Academy (INSA) fellowship	http://www.insaindia.org/
	Science and Engineering Research Council (CERC) fellowship: - Boyscast fellow (Better opportunities for Young Scientists in choosen areas of S&T) - Raman fellowship - Swarnajayanti fellowship - Fast Track Scheme for Young Scientists (FAST)	http://www.dst.gov.in/
JAPAN	Delegation of the European Commission to Japan	Dr. Philippe de Taxis du Poët (First Counsellor - Head of Science & Technology Section at the European Union)
	Ministry of Health, Labour and Welfare (MHLW)	http://wwwdbtk.mhlw.go.jp/toukei/kouhyo/data-rou4/data17/30601.xls
UNITED STATES	National Science Foundation - Division of Science Resources Statistics	http://www.nsf.gov/statistics
	Delegation of the European Commission to United States	Ms Mary Kavanagh (Science Technology and Education Counsellor)
	SESTAT (Scientists and Engineers Statisitical Data System)	Ms Nirmala Kannankutty (Senior Analyst at the NSF) Mr Raymond Wolf (Senior Analyst at the NSF) Mr John Tsapogas (Senior Analyst at the NSF)

Table 3 – Information sources for the researchers' remunerations in other countries

For those cases in which no specific studies with information on researchers' remunerations were available (**Australia and India**), an average of the different remunerations gathered was calculated and applied.

In the case of **China**, the Delegation of the European Commission sent information on the total income of researchers, as directly obtained from the Chinese Government (data from 2006).

In the case of **Japan**, the "Basic Survey of Wage Structure 2005" made by the Japanese Ministry of Health, Labour and Welfare (MHLW) provided information on the scheduled cash earnings (monthly) and annual special cash earnings, by occupation, sex, age group and occupational career group. This sum, representing annual earnings, has been used in the study. The information concerned (i)

scientific researchers (public and private researchers except in universities), (ii) professors, (iii) assistant professors, and (iv) lecturers (researchers from the last 3 categories are carrying out their work at universities).

The National Science Foundation in the **United States** provided information on the remuneration of researchers in the "National Survey of College graduates 2003" and the "Science and Engineering Indicators 2006".

See Annex 3 for the detailed data of researchers' remunerations in Australia, China, India, Japan and the United States.

2.1.3 The data gathering for remunerations in other professions

Finally, and in order to evaluate the situation of the researchers in each country against the remuneration of other similar profession at each of the defined experience levels, additional information has been gathered. The information source for the collection of this data was the structure of the Earnings Survey from Eurostat[2]. It presents data from 2002 - the next iteration will be in 2008. The collected data represents the total yearly salary cost per country, and is classified in accordance with the ISCO classification (International Standard Classification of Occupations (ISCO 88)).

2.2 Corrective coefficients

In the context of the study, the cost of living in each country must be taken into account when comparing both the situation of researchers in each European country, and, the researchers' remunerations in Europe against the situation of other researchers in non-European countries. The application of corrective coefficients aims to compare the "real" situation of researchers, taking into consideration the existing cost-of-living differences.

A cost-of-living measure reflects changes in the prices of goods and services, such as food and clothing that are directly purchased in the marketplace, but a complete cost-of-living measure goes beyond this and also takes into account changes in other governmental or environmental factors that affect consumers' well-being. Thus, some indexes and costs of living indicators have been selected, as possible indicators of the cost of living difference between countries. The corrective coefficient used in the study has been selected by means of three assessment criteria:

- ✓ **Temporal analysis**
- ✓ **Calculation method analysis**
- ✓ **Country comparison**

[2]http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1996,45323734&_dad=portal&_schema=PORTAL&screen=welcomeref&open=/labour/earn/earn_gross&language=en&product=EU_MASTER_labour_market&root=EU_MASTER_labour_market&scrollto=0

The following list summarises the principal indexes and cost of living indicators both at national and international level selected in the context of the study:

- Consumer Price Index (CPI):
    - Harmonised Index of Consumer Prices (HICP)
    - Consumer Price Index for all Urban Consumer (CPI-U)
- Producer Price Index (PPI)
- Correction coefficients
    - Calculated by the European Commission (EC)
    - Calculated by the United Nations (UN)
- Purchasing Power Parities (PPP)
    - PPP calculated by OECD
    - PPP calculated by Eurostat
    - Penn World Tables (PPP calculated in the University of Pennsylvania based on the United Nations International Comparison Programme)
    - The Big Mac Index
    - Price level indices (Data from UBS study)

These coefficients and indexes are briefly described in Annex 4.

2.2.1 Selection of the corrective coefficients for the study

In order to compare the indexes presented above and to select the most suitable for the study, all of them were adjusted to an adimensional format. To achieve this, some of them have been converted into the reference currency by dividing the figures by the exchange rate. When required, figures have been updated using inflation rates and converted into the reference currency at current exchange rate.

Once these calculations were done, the analysis of the coefficients was performed using the following criteria:

- Temporal analysis. It considers the date on which the coefficient has been calculated and published. For all the indexes and cost of living indicators, the most updated one was used, and any version before 2002 was excluded.
- Calculation method analysis. A global analysis on how each selected coefficient was calculated and a further analysis on the differences between them was carried out. This criterion is the most important one since it enables the best option for measuring the cost of living in each country to be selected.

- Country comparison. A specific analysis per country and coefficient was carried out. It served to detect possible differences between indexes per country.

The next table summarises the results obtained for each selected corrective coefficients, against the assessment criteria (which coefficients are in accordance with the assessment criteria and are suitable of being used for the purposes of this contract):

	HICPs published by the European Central Bank	CPI-U published by the Bureau of Labour Statistics	PPI published by OECD	EC Correction Coefficients	UN Correction Coefficients	PPP employed for GDP and published by OECD	PPP of final consumption published by Eurostat	Penn World Tables	Big Mac Index	Prices comparison of UBS
Temporal analysis	√	√	√	√	√	√	√		√	√
Calculation method analysis	√			√		√	√			√
Country comparison							√			

Table 4 – Analysis of the selected indexes and cost-of-living indicators against the assessment criteria

Analysis criteria results

The first analysis criterion, the temporal analysis, excluded the Penn World Tables, since 2000 is the last year for which it is available and no data before 2002 has been considered.

The calculation method analysis excluded the CPI-U, the Producer Price Index and the Big Mac Index. In the first case, the CPI-U calculated by the Bureau of Labour Statistics has been rejected as the HICP is also available and produced by the Members States of the European Union in order to give the best measure for international comparisons of household inflation within the Eurozone and the EU. In the case of the Producer Price Index, it does not reflect prices paid by the end users and furthermore, consumer price index seems to be a more realistic evaluator of inflation of prices in the different countries. The United Nations corrective coefficient has not been considered as the ones from the European Commission has been included. Concerning the Big Mac Index, it has limitations in its estimations of the PPP: the existence of barriers to trade, the inclusion of non-traded elements in the cost of a Big Mac, such as the cost of preparing the hamburger, the salaries of workers, price of the restaurant, etc, and pricing to markets. Furthermore, "The Economist" no longer reports prices for individual Euro area countries.

For each of the countries, a country comparison was carried out for all of the indexes in the different years, from 2000 to 2005 (see Table 35). The data available for UBS is from 2003 and was updated in 2005. UBS comparison prices have not been considered in the country comparison analysis. The EC Correction coefficients seem to be a good indicator for the purposes of this study, taking into account that initial data used for its calculation is from 1999 (EU15 data), that data for consecutive years have been adjusted and its most important aspect is that they are applied for the capitals cities, excluding rents. On the other hand, PPP

from Eurostat has an evolution and values very similar to the one from the Correction coefficients (based on the same items, except rents, but with different weights), but it allows comparisons at international level, including the United States, at country level. Furthermore, it is referenced to the average in the EU25, which is quite useful for the purposes of this contract. In the case of PPP calculated by OECD, there are significant variations in time along the years, and it is referred to US dollar which is not very useful for the purposes of the contract. HICP showed that in general, although it has values far away from PPPs, the followed evolution is the same as in PPP from Eurostat.

Even though all the above indicators were potentially useful, the **PPP index** calculated as the rate of final consumption by Eurostat seems to be the more useful coefficient when evaluating the cost of living in each country, since it allows multilateral comparison at international level (including Australia, China, India, Japan and the United States), and therefore, it **has been selected for the purposes of this study**.

2.3 Analysis

During the third phase of the study, the obtained results have been both qualitatively and quantitatively processed in order to guarantee the correctiveness of the data handled. On the one hand, a quality check has been performed in order to reject wrong answers, analysing case-by-case the replies collected from the survey. Furthermore, these results have been validated.

On the other hand, concerning the quantitative analysis, a set of indicators has been defined in order to present the survey results.

2.3.1 Qualitative analysis of the survey results

2.3.1.1 Quality check

The raw data obtained from the survey required an exhaustive analysis, in order to reject potential wrong answers and avoid the existence of possible deviations in some countries' results. Thus, an in-depth analysis has been carried out with the initial data from the survey.

Briefly, the analysis has consisted of the detection of unusual observations (outliers) from the initial survey data. This analysis was done for both the Total yearly salary data and the Net yearly salary cost.

Thus, the final sample of Total yearly salary cost had 6.190 correct replies that were used to present the survey indicators, including 80 answers from Marie Curie fellowships. In the case of the Net yearly salary cost, a case-by-case analysis was also carried out to detect unusual observations, resulting in a final sample of 7.018 correct replies, including 84 answers from Marie Curie fellowships.

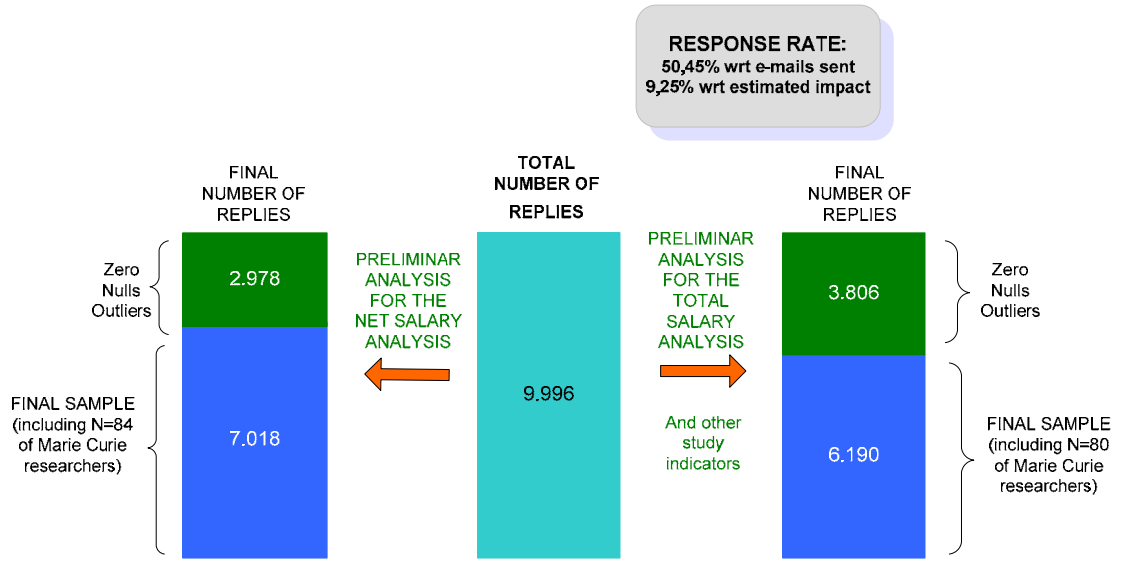


Figure 5 – In-depth analysis realised to the total number of the survey replies

Once the wrong answers were rejected, the Total Yearly Salary average per country, gender and level of seniority was calculated with the data from the final sample. Furthermore, those answers coming from Marie Curie fellows (80 answers) were not considered, since their remunerations are already known and were not the objective of this study.

The next action was to apply the least square adjustment method in order to correct the existing deviations on the average data per level of seniority and country, and per level of seniority, gender and country. In the example below the remunerations in Greece, per level of seniority corrected by the least square adjustment method are presented. See Annex 5 for a complete view of the country analysis.

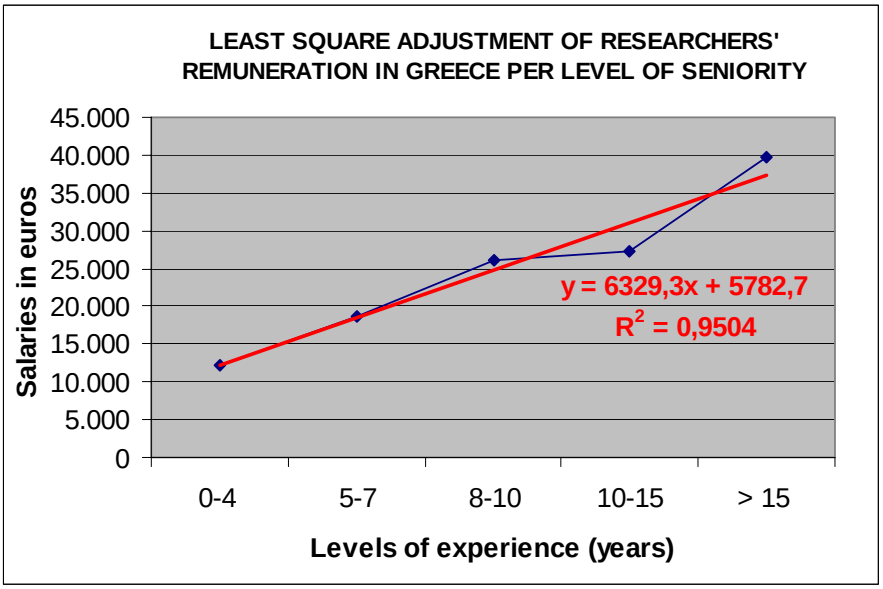
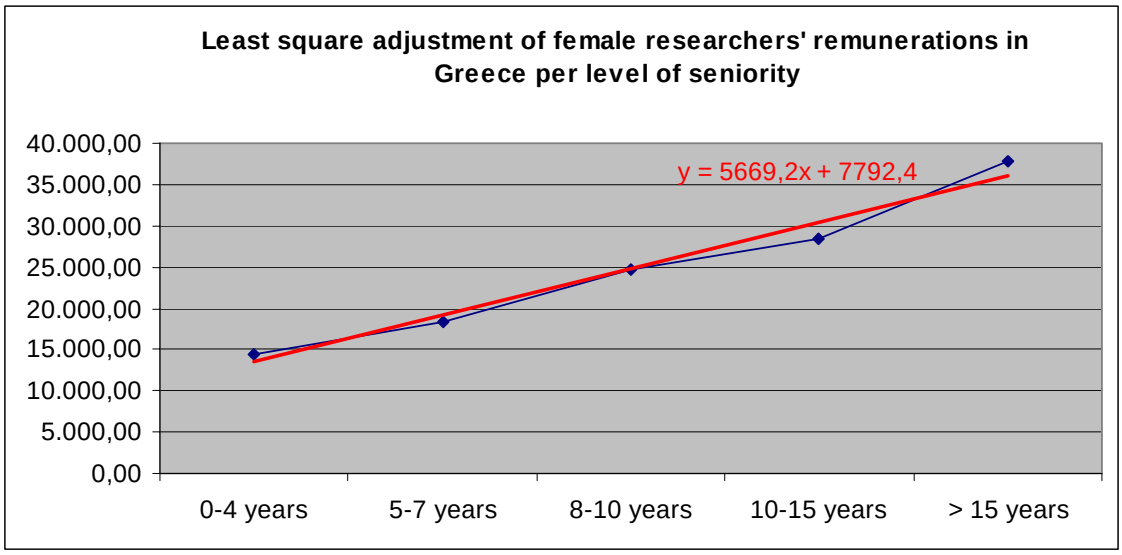
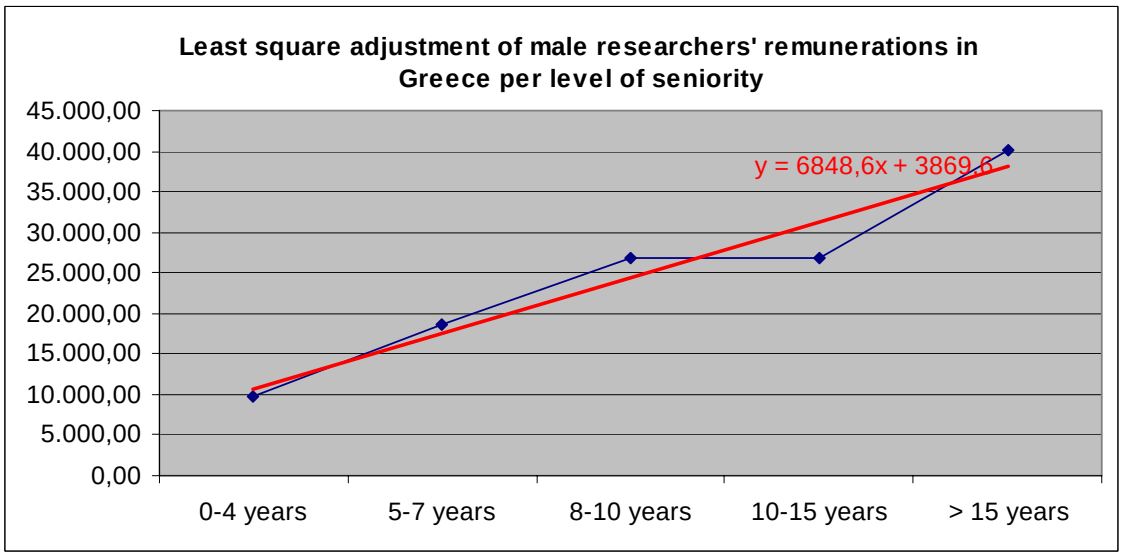


Figure 6 – Least square adjustment for the researchers' remunerations in Greece per level of seniority

This quality check produced processed and reliable data, ready for use in further analyses.

The survey results per level of seniority, gender and country were also corrected using the least square method, as shown in the following figures for the case of Greece.





The remuneration average per gender as calculated through the raw data from the survey shows important deviations in male/female remunerations. The remuneration average per gender presented in future chapters have been calculated as the weighted average of those adjusted values.

2.3.1.2 Verification

Additionally, in order to assure data correctness, the obtained figures were subjected to verification procedures. Verification did confirm that the total yearly salary cost obtained was close enough to the "real figures" for the study results to be considered as correct.

Thus, to verify the final results of the survey, diverse Universities in different countries were contacted, in order to check whether the average remuneration of

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, Istambul 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 2007[3].
- "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

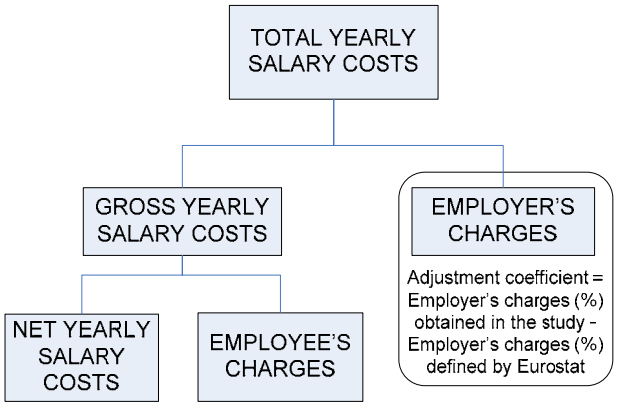


Figure 7 – Total yearly salary cost structure

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:

- 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.

3 STUDY RESULTS

The next table presents the remuneration average per country (average total yearly salary) obtained in this study.

Country/ Level of experience	The average weighted total yearly salary adjusted
Austria	62.406
Belgium	58.462
Bulgaria	3.556
Croatia	16.671
Cyprus	45.039
Czech Republic	19.620
Denmark	61.355
Estonia	11.748
Finland	44.635
France	50.879
Germany	56.132
Greece	25.685
Hungary	15.812
Iceland	50.803
Ireland	60.727
Israel	42.552

Country/ Level of experience	The average weighted total yearly salary adjusted
Italy	36.201
Latvia	10.488
Lithuania	13.851
Luxembourg	63.865
Malta	28.078
Netherlands	59.103
Norway	58.997
Poland	11.659
Portugal	29.001
Romania	6.286
Slovakia	9.178
Slovenia	27.756
Spain	34.908
Sweden	56.053
Switzerland	82.725
Turkey	16.249
United Kingdom	56.048

Table 8 – The average weighted total yearly salary per country (2006, N=6110, all currencies in EURO)

This chapter presents the study results, including:

- The corrective coefficients selected;
- The comparisons (applying the corrective coefficients) of the researchers' remunerations in the different countries analysed, the comparison against the situation of researchers in other countries (Australia, China, India, Japan and the United States), as well as the comparison against other similar professions in each country.

3.1 Corrective coefficients

The corrective coefficients selected in the context of the study are the Purchasing Power Parities (PPPs) as calculated by Eurostat. The original PPPs are transformed into a standardised form using the EU25=100 as a base. This artificial unit (currency) is named PPS (Purchasing Power Standard). In order to convert those figures into adimensional figures, they have been divided by the annual exchange rate (Local currency/Euro) in 2006.

PPPs, as calculated by Eurostat, were updated in December 2006. The corrective coefficients used for the comparison take into consideration that last update of PPPs. For some countries such as Australia, China, India and Israel, PPPs were not available in Eurostat and the data from the World Bank (2003) was considered.

These data are shown in the table below:

CORRECTIVE COEFFICIENTS IN EU-25 AND ASSOCIATED COUNTRIES (2006)

European countries	
EU-25	100
EU-15	104,5
Euro area (1)	103,1
Austria	103,1
Belgium	104,4
Cyprus	89,1
Czech Republic	53,1
Denmark	140,5
Estonia	55,8
Finland	121,8
France	107
Germany	105,2
Greece	83,3
Hungary	57,1
Ireland	122,3
Italy	106,1
Latvia	48,6
Lithuania	46,7
Luxembourg	113,5
Malta	69,6
Netherlands	104,2
Poland	54
Portugal	87
Slovakia	50,2
Slovenia	73,1
Spain	89,8
Sweden	118,9
United Kingdom	106,2

Associated countries	
Bulgaria	36,4
Croatia	61,6
Iceland	150,3
Israel (2)	71,4
Norway	141,1
Romania	46,6
Switzerland	138,1
Turkey	61,9
Other countries	
Australia (2)	102,9
China (2)	22,9
India (2)	20,3
Japan	111,1
United States	95,8

(1)Countries included: BE, DE, IE, GR, ES, FR, IT, LU, NL, AT, PT, FI
(2)Data from the World Bank, 2003[4]

Table 9 – Corrective coefficients for EU25 and Associated Countries to be used in the study

The application of the corrective coefficient selected is explained in the following figure:

[4] See http://devdata.worldbank.org/wdi2006/contents/Table4_14.htm. The corrective coefficient for China, calculated by the World Bank is based on a 1986 bilateral comparison of China and the United States (Rouen and Kai 1995), employing a different methodology than that used for other countries

Dividing the researchers' remunerations obtained in the survey by the appropriate corrective coefficient we obtain a salary in terms of PPS. The comparison of those salaries, in terms of standardised PPS, takes into consideration the different cost of living in each country. In this way, the researchers' remunerations in EU25 and Associated Countries obtained from the survey and converted in terms of standardised PPS through corrective coefficients, can be compared.

3.2 Analysis

The obtained inventory of the remunerations in the public and private commercial sectors in EU25 and Associated Countries allows the comparison of the situation of researchers between countries. This analysis considered the corrective coefficients (PPS), thus making the different remunerations of researchers comparable, when factoring in the "real" situation in each country.

On the other hand, the analysis was also extended to compare the situation in other countries, such as Australia, China, India, Japan and the United States, and to other similar professions, giving a clear idea of the existing differences between researchers and more socially recognised professions at equivalent levels, and differences between researchers working in Europe and researchers working in other countries.

3.2.1 Comparison of researchers' remunerations in EU25 and Associated Countries

The analysis and comparison of remunerations of researchers in Europe per country was carried out using the data collected, and then qualitatively and quantitatively processed, taking into consideration corrective coefficients to balance the different cost of living in each country.

The averages of the remunerations (total and net yearly salary averages) of researchers per country are presented in the following tables in terms of PPS:

Country	The average weighted total yearly salary in terms of PPS
Austria	60.530
Belgium	55.998
Bulgaria	9.770
Croatia	27.063
Cyprus	50.549
Czech Republic	36.950
Denmark	43.669
Estonia	21.053
Finland	36.646
France	47.550
Germany	53.358
Greece	30.835
Hungary	27.692
Iceland	33.801
Ireland	49.654
Israel	59.580

Country	The average weighted total yearly salary in terms of PPS
Italy	34.120
Latvia	21.580
Lithuania	29.660
Luxembourg	56.268
Malta	40.342
Netherlands	56.721
Norway	41.813
Poland	21.591
Portugal	33.334
Romania	13.489
Slovakia	18.282
Slovenia	37.970
Spain	38.873
Sweden	47.143
Switzerland	59.902
Turkey	26.250
United Kingdom	52.776

Table 10 – The average weighted total yearly salary of researchers of each country in EU25 and Associated Countries (2006, N=6110, all currencies in PPS)

Country	Net Yearly salary average in terms of PPS
Austria	30.603
Belgium	26.336
Bulgaria	9.801
Croatia	20.254
Cyprus	39.732
Czech Republic	22.252
Denmark	24.917
Estonia	13.777
Finland	22.971
France	26.983
Germany	28.687
Greece	24.326
Hungary	16.723
Iceland	22.354
Ireland	28.193
Israel	37.389

Country	Net Yearly salary average in terms of PPS
Italy	22.372
Latvia	18.828
Lithuania	13.507
Luxembourg	40.942
Malta	28.498
Netherlands	35.573
Norway	26.088
Poland	14.104
Portugal	21.835
Romania	12.500
Slovakia	12.173
Slovenia	18.211
Spain	27.060
Sweden	22.801
Switzerland	46.432
Turkey	23.530
United Kingdom	35.372

Table 11 – Country Net Yearly Salary Averages of researchers in EU25 and Associated Countries (2006, N=6.934, all currencies in PPS)

Note: A different analysis has been carried out for the net yearly salary costs obtained in the survey in order to detect unusual observations. The final sample had 7.018 correct replies, including 84 answers from Marie Curie fellowships. Marie Curie answers has not been considered for the calculation of the country net yearly salary average, as a result the sample had N=6.934).

The following tables present the researchers' remunerations in each country in terms of PPS, by gender and level of experience, by sector and by type of contract. Those figures are expressed in PPS, which considers the difference in the cost of living between countries.

Country Total Yearly Salary Average for researchers in EU25 and Associated countries, per gender and per level of experience (2006, N=6110, all currencies in PPS)										
Country/ Level of experience	0-4 years		5-7 years		8-10 years		11-15 years		> 15 years	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Austria	34.473	37.244	41.921	50.446	49.369	63.648	56.817	76.850	64.266	90.052
Belgium	27.767	26.802	35.079	40.933	42.392	55.064	49.705	69.195	57.018	83.326
Bulgaria	2.045	1.961	2.668	2.689	3.292	3.417	3.915	4.144	4.539	4.872
Croatia	9.862	9.458	12.665	12.124	15.468	15.541	18.270	19.922	21.073	25.537
Cyprus	22.234	21.208	28.051	32.147	33.867	43.086	39.684	54.025	45.500	64.964
Czech republic	7.478	10.728	10.792	15.015	14.105	19.301	17.419	23.587	20.733	27.874
Denmark	43.117	42.852	51.460	52.204	59.804	61.556	68.147	70.908	76.490	80.260
Estonia	4.825	7.691	6.939	10.068	7.636	12.444	8.334	14.821	9.053	17.198
Finland	23.369	28.886	29.776	36.724	36.182	44.563	42.589	52.401	48.996	60.239
France	30.223	30.726	38.859	39.225	47.494	50.075	56.129	63.926	64.765	81.608
Germany	22.143	25.716	35.969	38.731	49.795	51.746	63.621	64.761	77.447	77.776
Greece	13.462	11.823	19.131	18.370	24.800	24.917	30.469	31.464	36.138	38.011
Hungary	6.902	10.706	10.152	13.244	13.401	15.783	16.650	18.322	19.899	20.861
Iceland	45.664	44.713	50.070	50.073	52.273	55.432	54.475	60.792	58.881	66.152
Ireland	26.428	20.290	39.691	41.073	52.954	61.856	66.217	82.639	79.480	103.422
Israel	16.329	13.523	22.407	20.453	28.486	30.933	34.564	46.783	40.643	70.754
Italy	12.244	12.760	19.777	23.488	27.310	34.216	34.844	44.944	42.377	55.672
Latvia	12.000	-	14.667	-	17.335	-	20.002	-	22.670	-
Lithuania	7.356	6.836	8.286	9.068	9.216	11.299	10.146	13.531	11.076	15.763
Luxembourg	24.742	43.578	40.365	53.864	55.988	64.150	71.611	74.436	87.234	84.722
Malta	24.364	21.364	27.267	23.746	30.169	26.393	33.071	29.336	35.974	32.606
Netherlands	22.518	31.921	35.655	47.095	48.792	62.269	61.929	77.443	75.066	92.617
Norway	49.031	52.829	54.174	58.346	59.316	63.864	64.459	69.381	69.602	74.898
Poland	5.921	8.453	8.088	10.166	10.255	12.226	12.421	14.703	14.588	17.682
Portugal	10.512	12.051	14.693	17.541	20.535	25.532	28.702	37.164	40.115	54.095
Romania	3.813	2.476	4.696	4.474	5.785	6.473	7.126	8.472	8.778	10.471
Slovakia	5.547	5.895	6.794	7.187	8.041	8.762	9.287	10.681	10.534	13.021
Slovenia	16.424	17.976	22.502	22.372	28.581	27.844	34.659	34.654	40.737	43.130
Spain	16.416	17.228	22.858	22.955	29.300	30.586	35.742	40.754	42.184	54.301
Sweden	28.591	28.012	41.900	42.655	55.209	57.298	68.518	71.941	81.827	86.584
Switzerland	39.599	40.862	55.711	61.075	71.823	81.288	87.935	101.501	104.047	121.714
Turkey	7.674	8.634	10.707	11.387	13.740	15.016	16.773	19.803	19.806	26.116
United Kingdom	25.411	29.060	37.461	38.608	49.511	51.293	61.561	68.146	73.611	90.536

Table 12 – Country total yearly salary of researchers in EU25 and associated countries, per gender and per level of experience (2006, N=6.110, all currencies in PPS)

The weighted average of researchers' remunerations per gender has been calculated considering data from Table 12 and applying the weights presented in chapter 2.3.1.4.

The average weighted total yearly salary of researchers in EU25 and Associated Countries per gender and country (2006, N=6110, all currencies in PPS)			
Country/Gender	**Female**	**Male**	**Diference Male-Female (%)**
Austria	45.689	65.647	30,40%
Belgium	42.161	62.326	32,35%
Bulgaria	5.345	6.270	14,75%
Croatia	16.404	20.274	19,09%
Cyprus	37.661	54.472	30,86%
Czech Republic	25.313	39.831	36,45%
Denmark	39.777	44.740	11,09%
Estonia	12.179	23.070	47,21%
Finland	29.938	41.063	27,09%
France	40.317	52.111	22,63%
Germany	46.134	56.385	18,18%
Greece	27.922	32.568	14,27%
Hungary	22.029	29.386	25,04%
Iceland	33.820	37.592	10,04%
Ireland	39.487	55.051	28,27%
Israel	37.298	59.812	37,64%
Italy	25.652	38.440	33,27%
Latvia	-	-	-
Lithuania	19.033	25.526	25,44%
Luxembourg	45.758	60.093	23,86%
Malta	42.392	40.014	-5,94%
Netherlands	43.317	64.691	33,04%
Norway	38.233	43.395	11,89%
Poland	16.795	23.606	28,85%
Portugal	25.721	40.671	36,76%
Romania	12.429	15.358	19,07%
Slovakia	15.403	19.636	21,56%
Slovenia	34.095	40.249	15,29%
Spain	32.268	43.484	25,79%
Sweden	41.553	50.168	17,17%
Switzerland	48.462	63.334	23,48%
Turkey	20.707	28.939	28,45%
United Kingdom	43.830	58.907	25,59%

Table 13 – The average weighted total yearly salary of researchers in EU25 and Associated Countries, per gender and country (2006, all currencies in terms of PPS, N=6110)

Country Total Yearly Salary Average of researchers in EU25 and Associated Countries per sector of activity (2006, N=6110, all currencies in PPS)			
Country/Sector	**Business Enterprise Sector**	**Government**	**Higher Education**
Austria	65.805	49.182	62.069
Belgium	68.228	63.306	46.507
Bulgaria	-	6.988	6.598
Croatia	19.082	33.690	21.087
Cyprus	56.096	50.687	56.579
Czech Republic	46.925	34.217	47.682
Denmark	65.476	41.849	48.118
Estonia	-	13.856	22.657
Finland	37.407	37.173	33.084
France	40.705	52.058	50.881
Germany	49.723	54.036	45.893
Greece	29.276	39.452	32.045
Hungary	39.377	34.096	31.706
Iceland	-	32.512	34.622
Ireland	59.806	39.890	42.763
Israel	-	86.798	75.000
Italy	36.575	37.559	34.204
Latvia	24.691	40.255	18.433
Lithuania	46.813	30.970	26.564
Luxembourg	52.344	52.802	63.995
Malta	69.480	27.559	40.965
Netherlands	64.080	46.208	65.923
Norway	44.709	37.984	42.949
Poland	27.865	18.054	25.467
Portugal	22.673	39.893	27.495
Romania	19.333	17.365	14.780
Slovakia	30.644	21.278	18.514
Slovenia	34.335	34.420	41.501
Spain	40.543	37.827	36.817
Sweden	47.162	39.435	51.893
Switzerland	51.548	66.396	62.337
Turkey	35.119	35.945	30.539
United Kingdom	60.360	57.449	50.310

For Bulgaria, Estonia, Iceland and Israel, no data was collected via the survey, for researchers working in the Business Enterprise Sector.

Table 14 - Country Total Yearly Salary Costs in terms of PPS in EU25 and Associated Countries, per sector of activity (2006, all currencies in terms of PPS, N=6.110)

Country Total Yearly Salary Costs of researchers in EU25 and Associated countries per type of contract (2006, N=6110, all currencies in PPS)						
Country/Type of contract	Type of contract					
	Full time	Part Time	Permanent	Fixed-term		
				Regular employment	Non-employment	Total
Austria	62.196	52.464	76.696	44.574	48.132	44.870
Belgium	50.582	55.048	77.931	49.688	24.117	37.500
Bulgaria	6.725	-	7.225	4.205	2.628	2.891
Croatia	23.068	38.537	28.975	14.404	14.184	14.400
Cyprus	56.484	20.346	55.835	58.539	39.544	55.085
Czech Republic	45.606	33.719	53.929	33.821	65.527	34.655
Denmark	47.956	41.572	52.188	36.459	29.034	34.701
Estonia	23.634	15.240	25.790	21.596	7.634	20.749
Finland	35.044	33.071	44.284	31.589	15.373	28.428
France	51.327	54.412	61.497	33.243	22.311	28.119
Germany	52.339	43.481	76.824	46.258	27.342	39.787
Greece	37.157	30.065	44.766	26.685	20.617	23.915
Hungary	33.263	33.851	37.213	26.283	13.970	24.084
Iceland	34.388	-	36.419	8.002	28.272	18.137
Ireland	43.763	40.923	72.813	38.920	21.870	29.983
Israel	78.793	32.264	86.173	32.523	51.136	39.968
Italy	35.814	40.125	51.219	29.669	16.512	19.897
Latvia	22.070	24.691	22.070	-	24.691	24.691
Lithuania	29.359	23.938	33.353	20.152	29.748	20.717
Luxembourg	56.043	50.009	62.396	37.524	16.074	33.234
Malta	43.360	38.414	42.386	-	-	-
Netherlands	65.770	67.472	87.715	43.643	15.907	36.078
Norway	43.461	40.818	45.435	40.391	31.846	37.315
Poland	25.418	16.750	27.738	18.124	19.398	18.274
Portugal	29.592	27.131	56.550	37.103	15.469	19.178
Romania	16.384	15.669	16.511	7.851	21.848	14.850
Slovakia	19.882	20.594	23.614	17.467	12.634	16.695
Slovenia	38.203	-	47.367	25.567	13.774	25.054
Spain	37.662	40.594	58.223	31.878	17.664	24.389
Sweden	51.698	50.000	64.833	36.165	19.859	30.267
Switzerland	68.085	62.110	85.261	47.651	20.893	44.883
Turkey	32.239	40.388	32.236	35.122	26.746	33.665
United Kingdom	52.115	55.242	70.030	42.105	28.510	35.947

For some types of contracts and countries, no data was collected via the survey, and therefore, no result is showed in the table.

Table 15 - Country Total Yearly Salary Costs in terms of PPS in EU25 and Associated Countries, per type of contract (2006, all currencies in terms of PPS, N=6.110)

In Table 16 the researchers' remunerations per level of experience in the different European countries in terms of PPS are presented, using the corrective coefficients to balance the different cost of living in each country. Based on this analysis, a ranking has been prepared per level of experience to emphasize the differences between groups of researchers (see Table 17).

Country Total Yearly Salary Average for researchers in EU25 and Associated countries, per level of experience (2006, N=6110, all currencies in PPS)					
Country/ Level of experience	**0-4 years**	**5-7 years**	**8-10 years**	**11-15 years**	**> 15 years**
Austria	34.758	46.956	59.154	71.352	83.550
Belgium	27.505	40.991	54.477	67.963	81.449
Bulgaria	5.715	7.634	9.554	11.474	13.393
Croatia	14.534	20.464	26.394	32.324	38.254
Cyprus	23.909	36.518	49.127	61.736	74.345
Czech Republic	19.095	27.546	35.997	44.448	52.899
Denmark	29.539	36.227	42.915	49.603	56.291
Estonia	11.758	16.157	20.557	24.957	29.357
Finland	22.825	29.367	35.909	42.450	48.992
France	25.331	35.848	46.364	56.881	67.397
Germany	24.806	38.320	51.834	65.347	78.861
Greece	14.655	22.313	29.971	37.629	45.287
Hungary	17.365	22.253	27.141	32.029	36.917
Iceland	33.528	37.320	41.112	44.904	48.695
Ireland	14.919	26.981	39.043	51.106	63.168
Israel	18.857	29.163	45.100	69.748	107.866
Italy	12.648	22.811	32.974	43.137	53.300
Latvia	11.018	16.017	21.017	26.016	31.015
Lithuania	22.323	25.796	29.269	32.741	36.214
Luxembourg	32.247	43.617	54.986	66.356	77.726
Malta	35.475	37.779	40.083	42.387	44.691
Netherlands	24.797	39.907	55.017	70.127	85.237
Norway	34.027	37.712	41.397	45.082	48.767
Poland	11.654	16.358	21.061	25.764	30.467
Portugal	9.644	20.857	32.070	43.283	54.496
Romania	5.628	9.349	13.070	16.791	20.512
Slovakia	11.151	14.526	17.902	21.277	24.653
Slovenia	20.218	28.620	37.022	45.424	53.826
Spain	16.507	27.093	37.680	48.266	58.852
Sweden	22.441	34.133	45.825	57.517	69.208
Switzerland	28.645	43.440	58.234	73.028	87.823
Turkey	11.298	18.375	25.452	32.529	39.606
United Kingdom	23.524	37.369	51.215	65.060	78.906
EU25 AVERAGE	***20.374***	***28.722***	***37.240***	***46.022***	***55.213***

Table 16 – Country Total Yearly Salary Costs in terms of PPS in EU25 and Associated Countries, per level of experience (2006, all currencies in terms of PPS, N=6.110)

Ranking of researchers remuneration averages in terms of PPS in EU25 and the Associated countries per level of experience (2006, Total Survey Population N=6.110, salaries converted using corrective coefficients and presented in PPS)										
Country/ Level of experience	**0-4 years**	**Ranking 0-4**	**5-7 years**	**Ranking 5-7**	**8-10 years**	**Ranking 8-10**	**11-15 years**	**Ranking 11-15**	**> 15 years**	**Ranking >15**
Austria	34.758	2	46.956	1	59.154	1	71.352	2	83.550	4
Belgium	27.505	8	40.991	4	54.477	5	67.963	5	81.449	5
Bulgaria	5.715	32	7.634	33	9.554	33	11.474	33	13.393	33
Croatia	14.534	24	20.464	26	26.394	26	32.324	26	38.254	25
Cyprus	23.909	12	36.518	11	49.127	8	61.736	9	74.345	9
Czech Republic	19.095	18	27.546	18	35.997	19	44.448	18	52.899	18
Denmark	29.539	6	36.227	12	42.915	12	49.603	13	56.291	14
Estonia	11.758	26	16.157	29	20.557	30	24.957	30	29.357	30
Finland	22.825	14	29.367	15	35.909	20	42.450	21	48.992	19
France	25.331	9	35.848	13	46.364	9	56.881	11	67.397	11
Germany	24.806	10	38.320	6	51.834	6	65.347	7	78.861	7
Greece	14.655	23	22.313	23	29.971	23	37.629	23	45.287	22
Hungary	17.365	20	22.253	24	27.141	25	32.029	27	36.917	26
Iceland	33.528	4	37.320	10	41.112	14	44.904	17	48.695	21
Ireland	14.919	22	26.981	20	39.043	16	51.106	12	63.168	12
Israel	18.857	19	29.163	16	45.100	11	69.748	4	107.866	1
Italy	12.648	25	22.811	22	32.974	21	43.137	20	53.300	17
Latvia	11.018	30	16.017	30	21.017	29	26.016	28	31.015	28
Lithuania	22.323	16	25.796	21	29.269	24	32.741	24	36.214	27
Luxembourg	32.247	5	43.617	2	54.986	4	66.356	6	77.726	8
Malta	35.475	1	37.779	7	40.083	15	42.387	22	44.691	23
Netherlands	24.797	11	39.907	5	55.017	3	70.127	3	85.237	3
Norway	34.027	3	37.712	8	41.397	13	45.082	16	48.767	20
Poland	11.654	27	16.358	28	21.061	28	25.764	29	30.467	29
Portugal	9.644	31	20.857	25	32.070	22	43.283	19	54.496	15
Romania	5.628	33	9.349	32	13.070	32	16.791	32	20.512	32
Slovakia	11.151	29	14.526	31	17.902	31	21.277	31	24.653	31
Slovenia	20.218	17	28.620	17	37.022	18	45.424	15	53.826	16
Spain	16.507	21	27.093	19	37.680	17	48.266	14	58.852	13
Sweden	22.441	15	34.133	14	45.825	10	57.517	10	69.208	10
Switzerland	28.645	7	43.440	3	58.234	2	73.028	1	87.823	2
Turkey	11.298	28	18.375	27	25.452	27	32.529	25	39.606	24
United Kingdom	23.524	13	37.369	9	51.215	7	65.060	8	78.906	6
EU25 AVERAGE	***20.374***		***28.722***		***37.240***		***46.022***		***55.213***	

Table 17 – Ranking of the researchers' remunerations in terms of PPS in EU25 and Associated Countries (currencies in PPS, N=6110)

In Table 17, the ranking of researchers' remuneration averages by country per level of experience is presented. It can be seen that depending on the level of experience considered, each country has a different position in the respective ranking. The evolution of this index can be assumed as a relative career progression indicator between early stage researchers and experienced researchers[5]. This is, the difference between the ranking position of one country for early-stage researchers and the ranking position for experienced researchers in the same country (more than 15 years of experience).

Analysing the results of that Table 17, countries can be grouped into the following categories regarding the relative increase/decrease of the level of remuneration:

- **High relative increase countries** (relative increase in the country ranking is 7 or more positions): Ireland, Israel, Italy, Netherlands, Portugal, Spain and the United Kingdom.

- **Low relative increase countries** (relative increase in the country ranking is from 3 to 6 positions): Belgium, Cyprus, Germany, Sweden, Switzerland and Turkey.

- **Neutral relative increase countries** (relative increase/decrease in the country ranking below 2 positions): Austria, Bulgaria, Croatia, Czech Republic, France, Greece, Latvia, Poland, Romania, Slovakia and Slovenia.

- **Low relative decrease countries** (relative decrease in the country ranking is from 3 to 6 positions): Estonia, Finland, Hungary and Luxembourg.

- **High relative decrease countries** (relative decrease in the country ranking is 7 or more positions): Denmark, Iceland, Lithuania, Malta and Norway.

But analysing such progression is not enough in order to perceive the progression of a researching career in each country, since we have to consider not only the relative increase or decrease but also the absolute position in the table. The mixture of both concepts is graphically represented in the figure below (Figure 8).

[5] A detailed analysis of the career progression can be found in Annex 9: Career Progression, where a series of figures represent the evolution of the remunerations for each level of experience.

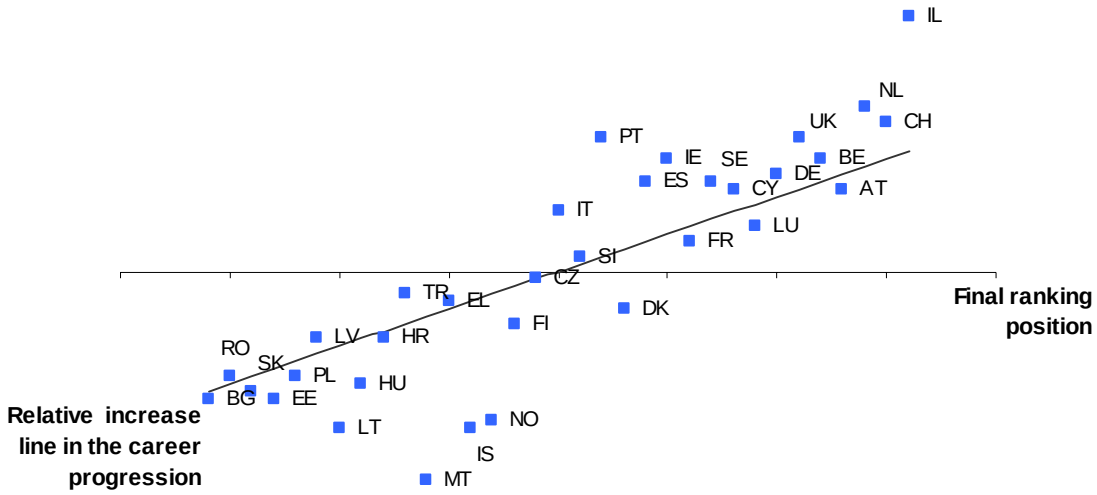


Figure 8 – Progression of a researching career in each country

In Figure 8, we have represented the final position of each country in the ranking of researchers' remuneration averages (more than 15 years of experience) on the x-axis, while the progression of the career appears as a relative position over or below the "Relative increase line". As an example, Portugal (PT) although it is positioned in a medium place in the ranking (15), its position highly over the "relative increase line" implies that the progression of a researcher from early stage to experienced is very attractive. This increase represents an increment of the remuneration of 465,08 % during the researchers' career.

On the other side, France (FR), which is positioned in a better place in the ranking (11), presents a less attractive career for a researcher since it is below the "relative increase line". This increase represents an increment of 166,07 % during the researchers' career.

3.2.2 Comparison of researchers' remunerations in the EU25 and associated countries against the situation in other countries

The comparison of the study results against the situation of researchers in other countries (Australia, China, India, Japan and the United States) may allow the Commission to focus better on its objectives and to take appropriate actions in the context of its human resources development policy in Research. The comparison was carried out based on the data obtained from the different information sources in each country (as shown in Table 3). In order to compare all the data obtained, it

was necessary to update it applying the annual inflation rate until 2006 for each case and convert it into Euros applying the exchange rate provided by The European Central Bank (year 2006). This was the case for those averages obtained from some studies considered, and for which data was derived from previous years. The results are presented in the following figure, in EURO, without applying the PPS:

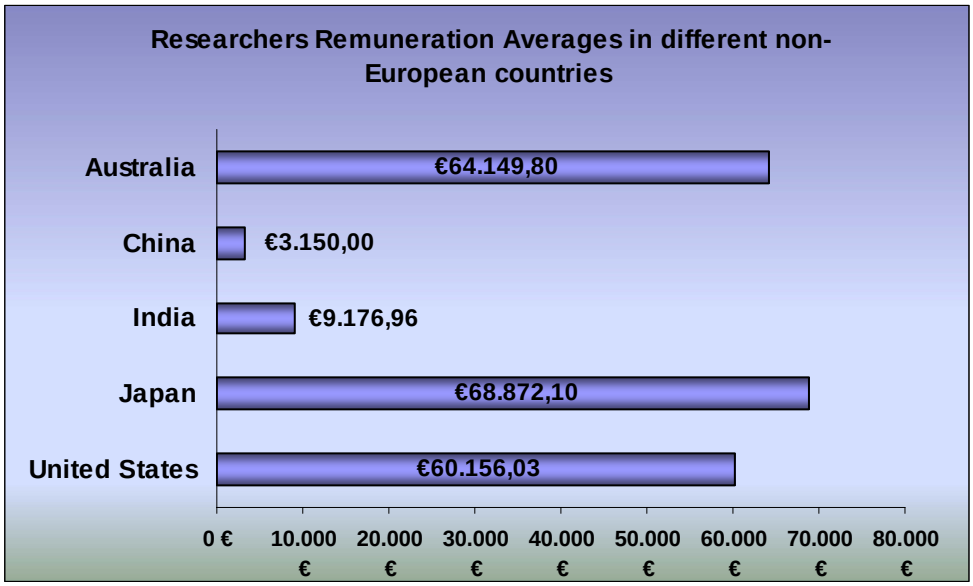


Figure 9 – Researchers' remuneration averages in the different non-European countries

In order to make those figures comparable to the researchers' remunerations in Europe, they were converted into PPS. The corrective coefficients were used to present the following table, where the comparison of the researchers' remunerations in the different non-European countries as Australia, China, India, Japan and the United States (total country average) against the situation in Europe is shown.

Total Yearly Salary Average of researchers in EU25, Associated Countries, Australia, China, India, Japan and United States (2006, N=6110, all currencies in EURO and in terms of PPS)			
	Remuneration average in EURO	Corrective coefficient	Remuneration average in terms of PPS
Austria	62.406	**103,1**	60.530
Belgium	58.462	**104,4**	55.998
Cyprus	45.039	**89,1**	50.549
Czech Republic	19.620	**53,1**	36.950
Denmark	61.355	**140,5**	43.669
Estonia	11.748	**55,8**	21.053
Finland	44.635	**121,8**	36.646
France	50.879	**107,0**	47.550
Germany	56.132	**105,2**	53.358
Greece	25.685	**83,3**	30.835
Hungary	15.812	**57,1**	27.692
Ireland	60.727	**122,3**	49.654
Italy	36.201	**106,1**	34.120
Latvia	10.488	**48,6**	21.580
Lithuania	13.851	**46,7**	29.660
Luxembourg	63.865	**113,5**	56.268
Malta	28.078	**69,6**	40.342
Netherlands	59.103	**104,2**	56.721
Poland	11.659	**54,0**	21.591
Portugal	29.001	**87,0**	33.334
Slovakia	9.178	**50,2**	18.282
Slovenia	27.756	**73,1**	37.970
Spain	34.908	**89,8**	38.873
Sweden	56.053	**118,9**	47.143
United Kingdom	56.048	**106,2**	52.776
EU 25 Average	*37.948 €*		*40.126 €*
Bulgaria	3.556	**36,4**	9.770
Croatia	16.671	**61,6**	27.063
Iceland	50.803	**150,3**	33.801
Israel (*)	42.552	**71,4**	59.580
Norway	58.997	**141,1**	41.813
Romania	6.286	**46,6**	13.489
Switzerland	82.725	**138,1**	59.902
Turkey	16.249	**61,9**	26.250
Associated countries average	*34.730 €*		*33.959 €*
Australia(*)	64.150	**102,9**	62.342
China(*)	3.150	**22,9**	13.755
India(*)	9.177	**20,3**	45.207
Japan	68.872	**111,1**	61.991
United States	60.156	**95,8**	62.793

(*)The corrective coefficients in those countries are the PPP published by the World Bank. PPP expressed as the local currency unit to international dollar[6]

Table 18 – Country total yearly salary average of researchers in EU25, Associated Countries, Australia, China, India, Japan and USA (2006, N=6.110, all currencies in EURO and in terms of PPS, converted through corrective coefficients)

[6] See http://devdata.worldbank.org/wdi2006/contents/Table4_14.htm

The following graphic summarises the results presented in the table above. It represents the deviation of the countries' remuneration average expressed in terms of PPS from the average calculated for EU25.

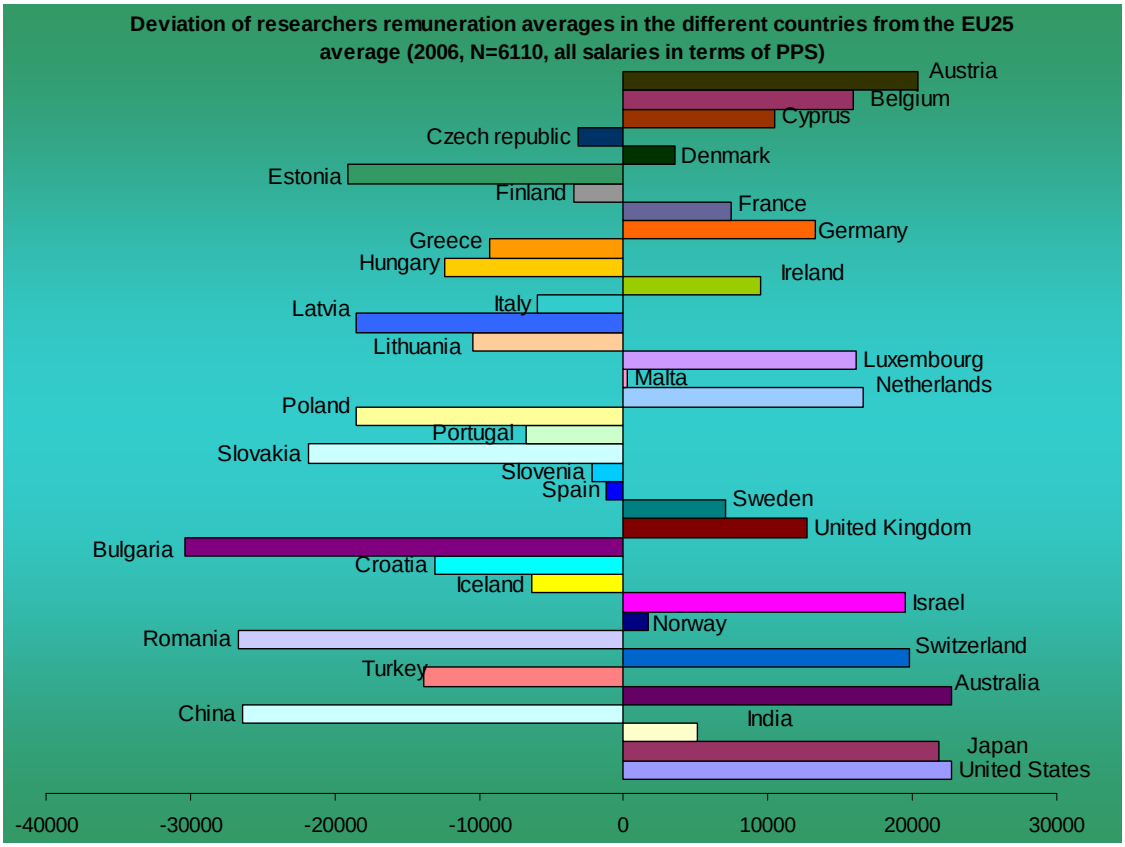


Figure 10 – Deviation of the researchers' remunerations in the different countries from the EU25 average, in terms of PPS

The graphic highlights that the most attractive countries for researchers, in terms of remuneration, are Austria, Israel Switzerland, Australia and the United States. However, it is important to remark that the corrective coefficient of Israel was calculated in 2003, and it may have varied since then.

On the other hand, the corrective coefficient for China, calculated by the World Bank, is based on a 1986 bilateral comparison of China and the United States (Rouen and Kai 1995), employing a different methodology than that used for other countries. Given the rise of the Chinese economy during the last years, its accuracy should be carefully considered[7].

[7] China is participating in the current round of the International Comparison Program, which should give fresh data by the end of 2007.

3.2.3 Comparison of researchers' remunerations against the situation of similar professions

The next analysis carried out on the study results, during the last phase of the study, included the analysis and comparison of the remuneration of researchers with other professions socially recognised with comparable qualifications, such as life sciences, engineering, etc. The data on the remuneration of other professions was extracted from data published by Eurostat and classified through the ISCO (International Standard Classification of Occupations) classification. Professions with similar levels of education than researchers can be identified in the ISCO group 2 (professionals), depicted as follows:

	PROFESSIONALS
OCCUPATIONS	2.1. PHYSICAL, MATHEMATICAL AND ENGINEERING PROFESSIONALS *2.1.1. Physicists, chemists and related professionals* *2.1.2. Mathematics, Statisticians and related professionals* *2.1.3. Computing professionals* *2.1.4. Architects, engineers and related professionals*
	2.2. LIFE SCIENCE AND HEALTH PROFESSIONALS *2.2.1. Life science professionals* *2.2.2. Health professionals (except nursing)* *2.2.3. Nursing and midwifery professionals*
	2.3. TEACHING PROFESSIONALS *2.3.1. College, university and higher education teaching professionals* *2.3.2. Secondary education teaching professionals* *2.3.3. Primary and pre-primary education teaching professionals* *2.3.4. Special education teaching professionals* *2.3.5. Other teaching professionals*
	2.4. OTHER PROFESSIONALS *2.4.1. Business professionals* *2.4.2. Legal professionals* *2.4.3. Archivists, librarians and related information professionals* *2.4.4. Social science and related professionals* *2.4.5. Writers and creative or performing artists* *2.4.6. Religious professionals*

(*)Data from Eurostat, 2006

Table 19 – ISCO Classification, group 2 (professionals)

The categories included in the group 2 of the ISCO classification can be easily compared with the scientific domains presented in the study:

- Social & Human Sciences
- Economics
- Chemistry
- Physics
- Life Sciences
- Mathematics

- Information Sciences
- Engineering Sciences
- Environment and Geosciences

To determine whether the remuneration of researchers are in line with remunerations in other similar professions per country, the tables of Annex 10: Comparison of researchers remunerations' against the situation of similar professions have been prepared for each country. In this case, the high segregation of data is an influencing factor (per scientific domain, country and gender) and therefore, the results do not have the same reliability as for the rest of the study, and only represent an approximation to the theme.

As an example of the results obtained per country, the tables below show the result for Spain.

Spain						
Scientific domain	Total Yearly Salary Costs of Researchers (data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	27.301 €	16.806 €	2.4.4	2.4	46.657 €	30.443 €
Economics	42.978 €	33.669 €	2.4.1	2.4	46.657 €	30.443 €
Chemistry	39.091 €	20.296 €	2.1.1	2.1	42.138 €	31.056 €
Physics	27.197 €	16.067 €	2.1.1	2.1	42.138 €	31.056 €
Life Sciences	36.523 €	22.139 €	2.2.1	2.2	37.111 €	28.705 €
Mathematics	45.389 €	41.107 €	2.1.2	2.1	42.138 €	31.056 €
Information Sciences	26.059 €	25.893 €	2.1.3	2.1	42.138 €	31.056 €
Engineering Sciences	34.316 €	25.435 €	2.1.4	2.1	42.138 €	31.056 €
Environment and Geosciences	29.210 €	14.847 €	2.1.4	2.1	42.138 €	31.056 €

Table 20 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Spain

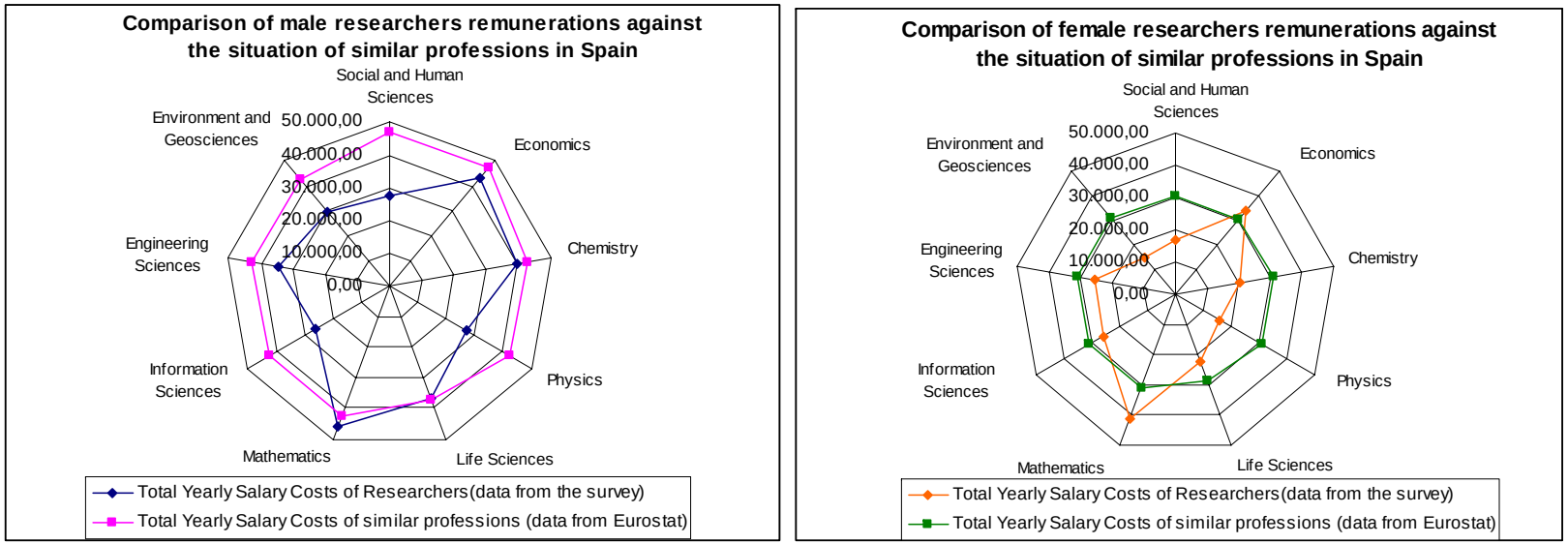


Figure 11 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Spain per gender

4 STUDY FINDINGS

Once the situation of researchers' remunerations in EU25 and Associated Countries has been analysed, a number of results out of this work can be figured out.

The total yearly salary has been the main orientation of the study. Figure 12 presents the distribution of countries total yearly salary averages within EU25 and Associated countries in terms of PPS. The data obtained will help the research institutions to design better their schemes and make sure they propose attractive schemes and jobs in comparison to those offered by other institutions, by other geographical locations and by other professions.

The net yearly salaries obtained in the study are more interesting from the point of view of researchers. Salary perceived after deductions is one of the elements of attractive research locations. Others are famous researchers, notoriety, prestige institutions, etc. Institutions designing policy for researchers are keen to promote the best practices for proposing attractive research locations. Knowing where the highest salaries are helps to benchmark attractive research locations. The country attractiveness from the point of view of researchers is represented in Figure 13.

It can be seen in the country attractiveness map (Figure 13) that most of the countries stay in the range between 20.000 EUR and 30.000 EUR. The Eastern countries have the lowest salary and Austria, Cyprus, Israel, Luxembourg, The Netherlands, Switzerland and The United Kingdom present a salary higher than 30.000 EUR.

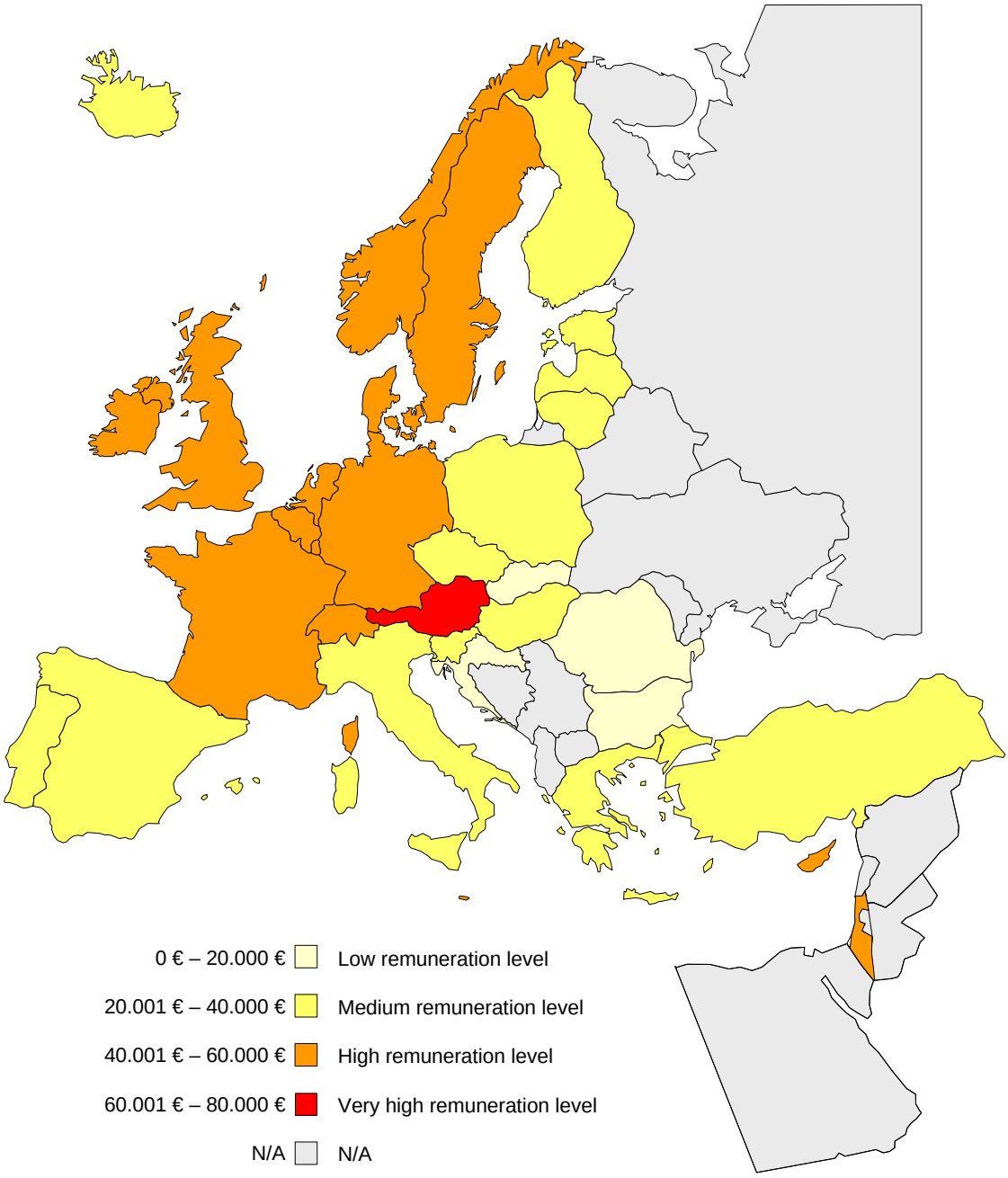


Figure 12 – Total yearly remuneration averages in terms of PPS. Data from Table 10.

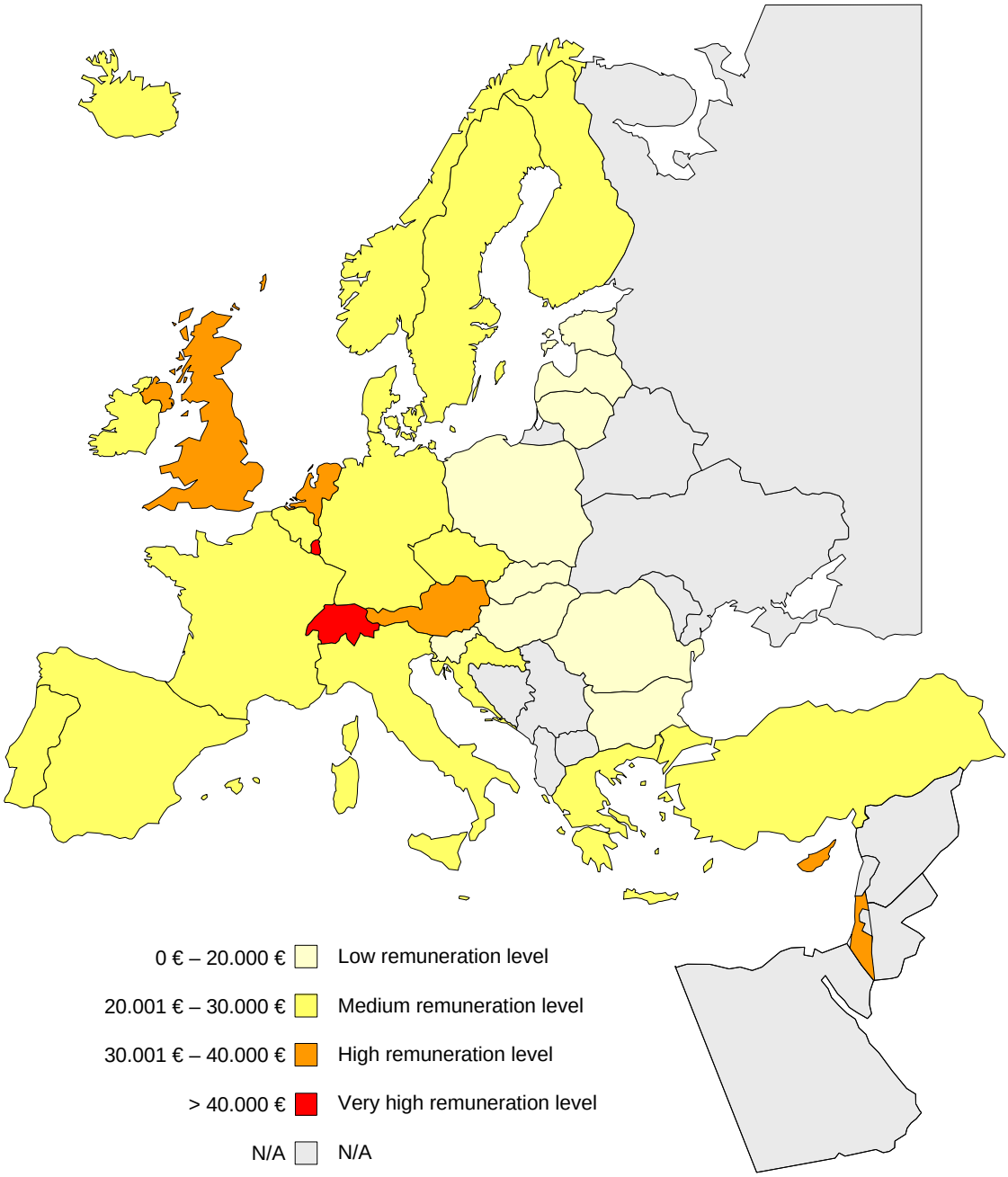


Figure 13 – Net yearly remuneration averages in terms of PPS ("Attractiveness" of countries). Data from Table 11.

High differences between the remunerations of researchers throughout the EU25 and Associated Countries, though the gap between the levels of remuneration in each country reduces when considering the cost-of-living.

The differences between the remunerations of researchers without applying PPS are higher than when the cost of living is considered. For example (see Table 8), the remuneration difference between Germany and Greece is 30.447 EUR without PPS, while that gap becomes only 22.523 EUR with PPS. The distance between the average remunerations has been reduced by 26,03%.

But, even if one considers the PPS (see Table 10), the differences between countries are extremely high in most cases and for example, a researcher working

in Austria may expect a remuneration level around 60.530 EUR, whilst a researcher in France would receive 47.550 EUR (21,44% less) or a researcher in Slovakia would receive 18.282 EUR (69,80% less). Thus, analysing the main study results (remunerations average per country in PPS) we can group all EU25 and Associated Countries in 4 different categories: low, medium, high and very high remuneration levels. The low and medium remuneration levels correspond to Eastern Europe and the Mediterranean, and the high and very high remuneration levels correspond to Central Europe and the Nordic countries.

As expected, those countries with a higher cost of living coincide with those with a higher remuneration level for researchers. Therefore, when applying the corrective coefficients defined (PPS as calculated by Eurostat in December 2006) to researcher remunerations, the differences between countries are reduced when compared to the same values without PPS.

Only Austria, The Netherlands, Israel, Switzerland and Luxembourg have an average remuneration similar to that of the United States, considering the cost of living in each country.

The EU25 average (see Table 18) (40.126 EUR) is far below the US average (62.793 EUR). Only Austria (60.530 EUR), The Netherlands (56.721 EUR) and Luxembourg (56.268 EUR) have a similar remuneration level to the United States. If we consider the Associate Countries, only Israel (59.580 EUR) and Switzerland (59.902 EUR) have an average remuneration similar to that of the United States.

Australia, India and Japan have an average of remuneration that is higher than the EU25 in terms of PPS and which is, in the case of Australia and Japan, in a similar range to the level of the United States. In the case of China, its remuneration level is far below the EU25 level.

High differences in expected career progression throughout the EU25 and Associated Countries.

Five different speeds in career progression have been detected depending on the relative increase or decrease in the ranking of researchers' remuneration per level of experience (see Table 17): from a high relative increase to a high relative decrease group of countries.

A researcher in the United Kingdom can expect a significant increase in the remuneration throughout her/his research career. The United Kingdom which occupies the thirteenth position in the ranking for a young researcher (from 0 to 4 years of experience), rises to the sixth position for experienced researchers (with more than 15 years of experience). This increase represents an increment of 235,43% during the researchers' career.

On the contrary, a young researcher in Denmark cannot expect such an increase in her/his remuneration given that the position of Denmark in the ranking for a young researcher is sixth, while for experienced researchers Denmark occupies fourteenth place. This increase represents a 90,57% increment in remuneration during the researchers' career.

In most of the countries, the remuneration of men is higher than for women.

The difference between the remuneration of a female researcher and a male researcher is significant in most of the countries (see Table 13). Thus, the countries

with higher differences (over 35%) are Estonia, Czech Republic, Israel and Portugal.

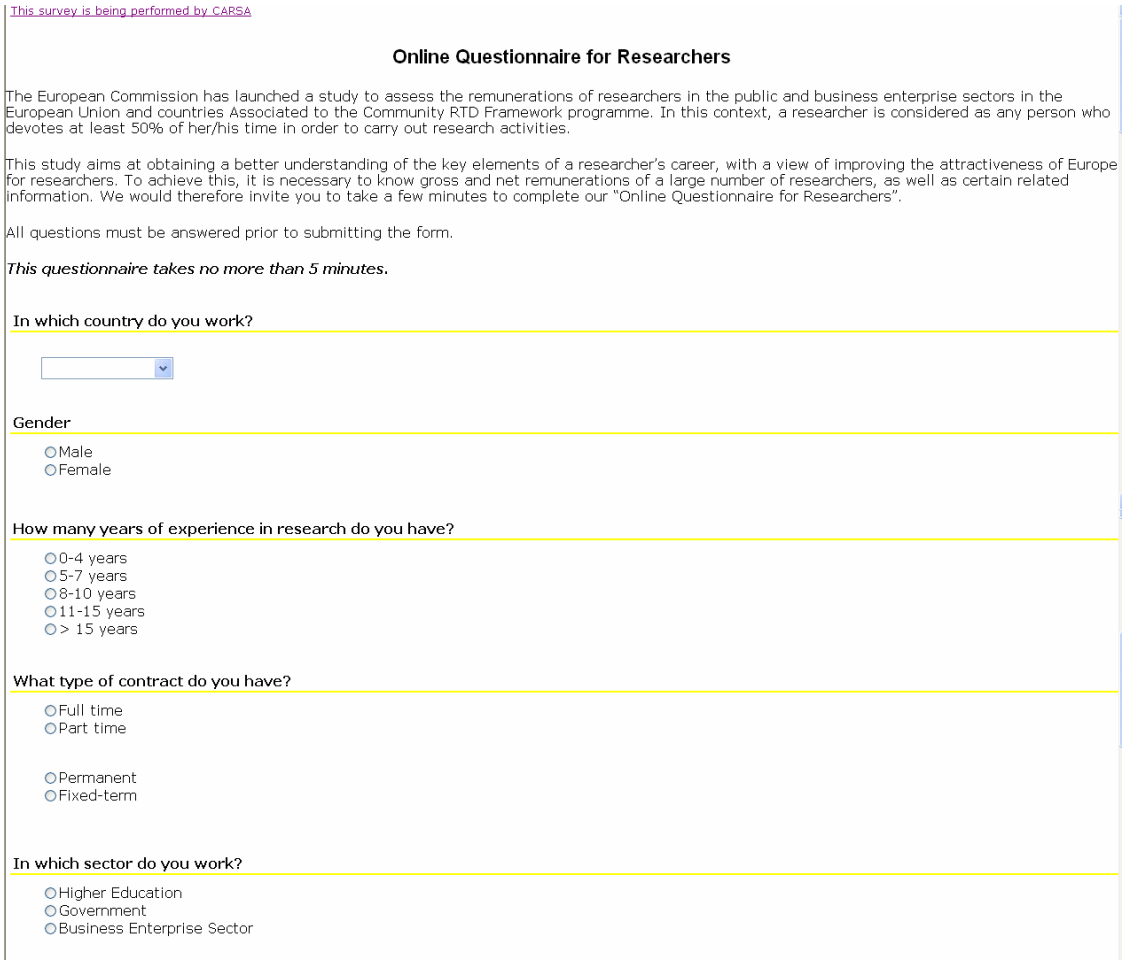
On the contrary, this gap is significantly reduced (difference below 15%) in Bulgaria, Denmark, Greece, Iceland, Malta and Norway.

With respect to the comparison of remunerations to other similar professions, the high segregation of data is an influencing factor (per scientific domain, country and gender) and therefore, the results do not have the same reliability as for the rest of the study, and only represent an approximation to the theme.

5 ANNEXES

5.1Annex 1: Survey Questionnaire

In this annex, the English version of the questionnaire is presented



This survey is being performed by CARSA

Online Questionnaire for Researchers

The European Commission has launched a study to assess the remunerations of researchers in the public and business enterprise sectors in the European Union and countries Associated to the Community RTD Framework programme. In this context, a researcher is considered as any person who devotes at least 50% of her/his time in order to carry out research activities.

This study aims at obtaining a better understanding of the key elements of a researcher's career, with a view of improving the attractiveness of Europe for researchers. To achieve this, it is necessary to know gross and net remunerations of a large number of researchers, as well as certain related information. We would therefore invite you to take a few minutes to complete our "Online Questionnaire for Researchers".

All questions must be answered prior to submitting the form.

This questionnaire takes no more than 5 minutes.

In which country do you work?

Gender

- Male
- Female

How many years of experience in research do you have?

- 0-4 years
- 5-7 years
- 8-10 years
- 11-15 years
- > 15 years

What type of contract do you have?

- Full time
- Part time

- Permanent
- Fixed-term

In which sector do you work?

- Higher Education
- Government
- Business Enterprise Sector

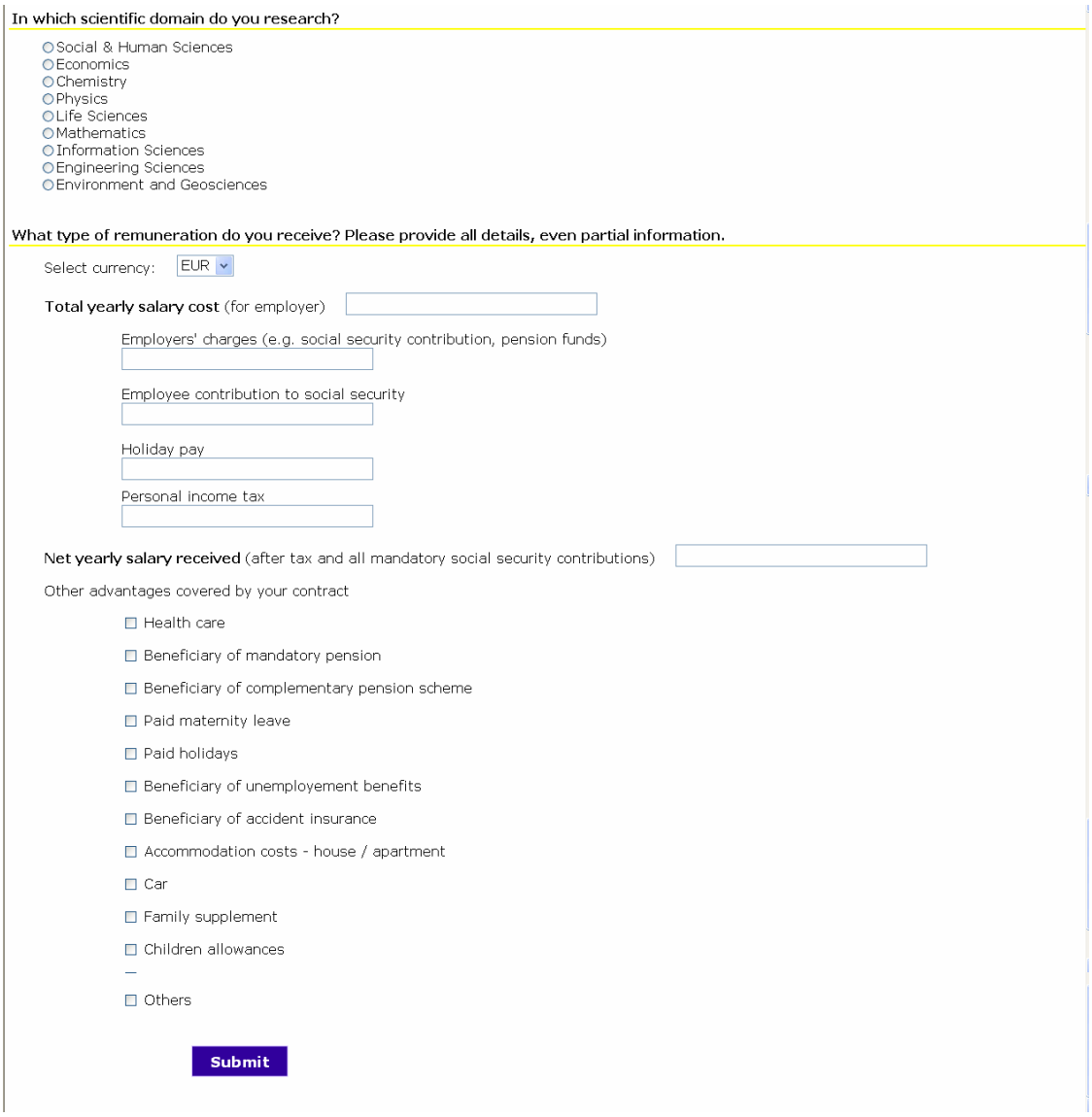


Figure 14 – Survey on-line questionnaire

The questionnaire was sent with an introductory e-mail to the delivery database contacts which included both researchers and research active organisations.

The email has an introductory text explaining the object of the survey and the links to the relevant web pages (introductory information and questionnaire). The e-mail presentation varies depending whether the user is a researcher or an intermediary (a person with access to a larger number of researchers)

Initial e-mail for researchers

European Commission. DG Research. Study on the remuneration of researchers in the public and business enterprise sectors.

[Deutsch] [Français] [Dutch] [English] [Čeština] [Dansk] [Eesti] [Suomi] [Français] [Deutsch] [Ελληνικά] [Magyar] [English] [Italiano] [Latviešu] [Lietuviu] [Français] [English] [Polski]

[Português] [Slovenčina] [Slovenščina] [Español] [Svenska] [Nederlands] [English] [English] [English] [English] [English] [Deutsch] [English] [English] [English] [Deutsch]

Dear Researcher,

The European Commission has launched a study to assess the remuneration of researchers in the public and business enterprise sectors in the European Union and countries Associated to the Community RTD Framework programme. In this context, a researcher is considered as any person who devotes at least 50% of her/his time in order to carry out research activities.

This study aims at obtaining a better understanding of the key elements of a researcher's career, with a view of improving the attractiveness of Europe for researchers. To achieve this, it is necessary to know gross and net remunerations of a large number of researchers, as well as certain related information. We would therefore invite you to take a few minutes to complete our "Online Questionnaire for Researchers", which you can access via the links provided below.

[Deutsch] [Français] [Dutch] [English] [Čeština] [Dansk] [Eesti] [Suomi] [Français] [Deutsch] [Ellinika] [Magyar] [English] [Italiano] [Latviešu] [Lietuviu] [Français] [English] [Polski]

[Português] [Slovenčina] [Slovenščina] [Español] [Svenska] [Nederlands] [English] [English] [English] [English] [English] [Deutsch] [English] [English] [English] [Deutsch]

The questionnaire is **anonymous** and should take no longer than **5 minutes** to complete.

We would like to stress that your feedback is very important to us, because it will enable us to analyse and improve the adequacy of the Commission's R&D remuneration schemes, which will in extension, finally benefit you, the researchers.

All completed surveys shall remain strictly private and confidential and shall only be used for the purposes of this study.

In order to maximise the impact of the study, please, feel free to distribute this e-mail amongst your fellow researchers.

Thank you for your valued input.

Yours faithfully,

European Commission. DG Research

Emmanuel.Boudard@cec.eu.int

Initial e-mail for intermediaries

European Commission. DG Research. Study on the remuneration of researchers in the public and business enterprise sectors.

Dear Sir/Madam,

The European Commission has launched a study to assess the remuneration of researchers in the public and business enterprise sectors in the European Union and countries Associated to the Community RTD Framework programme. In this context, a researcher is considered as any person who devotes at least 50% of her/his time in order to carry out research activities.

This study aims at obtaining a better understanding of the key elements of a researcher's career, with a view of improving the attractiveness of Europe for researchers. To achieve this, it is necessary to know gross and net remunerations of a large number of researchers, and thus we need your help to maximise the impact of the study.

In this respect, it would be of our maximum interest if you could forward the enclosed email to the scientific contacts you may have.

The questionnaire is anonymous and should take no longer than 5 minutes to complete.

We would like to stress that the researchers' feedback is very important to us, because it will enable us to compare the adequacy of the Commission's R&D remuneration schemes to current rates.

All completed surveys shall remain strictly private and confidential and shall only be used for the purposes of this study.

Thank you for your valued help.

Yours faithfully,

European Commission. DG Research

Emmanuel.Boudard@cec.eu.int

Questionnaire Introductory text

European Commission. DG Research. Study on the remuneration of researchers in the public and business enterprise sectors.

Dear Researcher,

The European Commission has launched a study to assess the remuneration of researchers in the public and business enterprise sectors in the European Union and countries Associated to the Community RTD Framework programme. In this context, a researcher is considered as any person who devotes at least 50% of her/his time in order to carry out research activities.

This study aims at obtaining a better understanding of the key elements of a researcher's career, with a view of improving the attractiveness of Europe for researchers. To achieve this, it is necessary to know gross and net remunerations of a large number of researchers, as well as certain related information. We would therefore invite you to take a few minutes to complete our "Online Questionnaire for Researchers", which you can access via the link provided below.

Online Questionnaire for Researchers

The questionnaire is **anonymous** and should take no longer than **5 minutes** to complete.

We would like to stress that your feedback is very important to us, because it will enable us to analyse and improve the adequacy of the Commission's R&D remuneration schemes, which will in extension, finally benefit you, the researchers.

All completed surveys shall remain strictly private and confidential and shall only be used for the purposes of this study.

In order to maximise the impact of the study, please, feel free to distribute this e-mail amongst your fellows researchers.

Thank you for your valued input.

Yours faithfully,

European Commission. DG Research

This is the web-site used for closing the survey. All questionnaire language versions are addressed to this message.

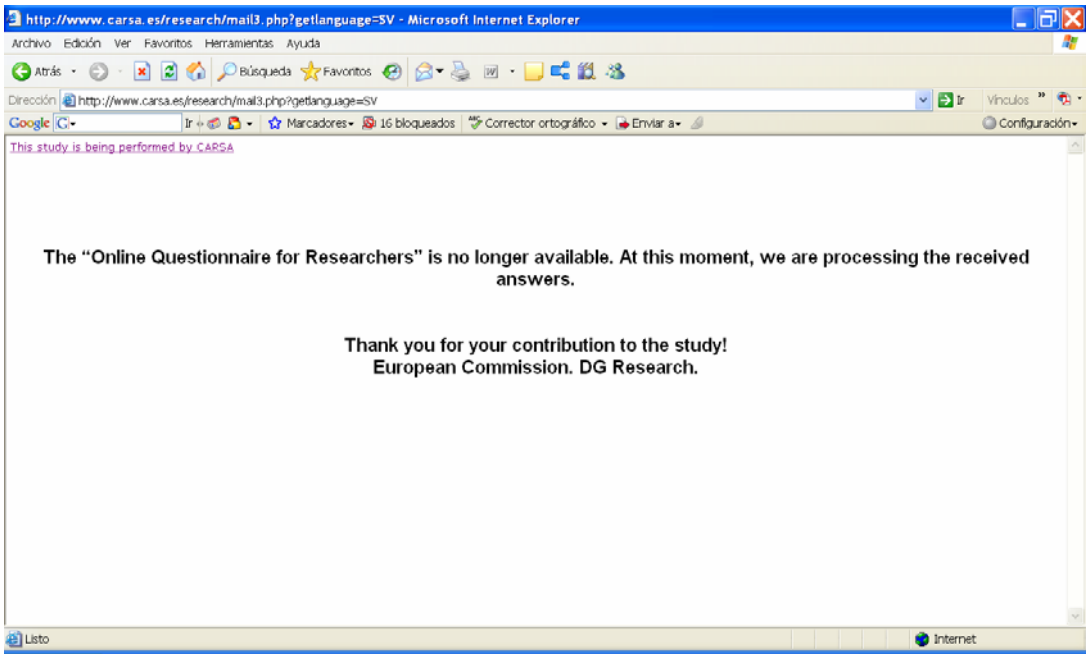


Figure 15 – Web-site used for the closure of the survey

5.2Annex 2: Survey Impact calculation

The impact of the survey has been calculated through the application of coefficients of impact. Those coefficients have been defined by means of the Eurostat Statistics data from 2006, "Science and Technology in Europe". The following tables correspond to the R&D Personnel as defined in the Eurostat study.

Table 2.2 R&D personnel by sector of performance, in head count (HC) and as a percentage of person employed, in the EEA countries, the Candidate Countries, Japan and the Russian Federation – 2003

	TOTAL		BES		GOV		HES	
	Total in HC	as a % of persons employed	Total in HC	as a % of persons employed	Total in HC	as a % of persons employed	Total in HC	as a % of persons employed
EU-25	2 781 491 s	1.44 s	1 262 484 s	0.66 s	374 451 s	0.19 s	1 114 355 s	0.58 s
EU-15	2 529 030 s	1.54 s	1 211 882 s	0.74 s	313 662 s	0.19 s	974 306 s	0.60 s
BE	73 763	1.82	37 812	0.93	3 903	0.10	31 431	0.78
CZ	55 699	1.18	24 122	0.51	13 357	0.28	17 877	0.38
DK	61 809	2.29	36 953	1.37	5 018	0.19	19 455	0.72
DE	664 731	1.85	333 285	0.93	84 695	0.24	246 751 p	0.69 p
EE	7 600	1.29	1 529	0.26	1 145	0.19	4 813	0.82
EL	57 257	1.34	12 808	0.30	9 148	0.21	35 088	0.82
ES	249 969	1.45	82 327	0.48	35 306	0.20	131 725	0.76
FR	415 061	1.73	203 264	0.85	50 690	0.21	153 131	0.64
IE	25 704 p	1.43 p	12 037	0.67	1 657	0.09	12 010 p	0.67 p
IT	249 782	1.13	81 189	0.37	42 610	0.19	120 629	0.55
CY	2 102	0.64	567	0.17	724	0.22	601	0.18
LV	8 002	0.80	1 228	0.12	1 472	0.15	5 302	0.53
LT	14 534	0.99	781	0.05	3 301	0.22	10 452	0.71
LU	4 135	2.20	3 533	1.88	548	0.29	54 u	0.03 u
HU	48 681	1.24	9 438	0.24	11 474	0.29	27 769	0.71
MT	975	0.65	97	0.07	37	0.02	841	0.56
NL	122 250 e	1.50 e	57 442	0.71	15 866	0.20	48 851 be	0.60 be
AT	65 725	1.79	34 020	0.93	6 010	0.16	25 072	0.68
PL	126 241	0.92	15 035	0.11	25 390	0.19	85 745	0.63
PT	44 036	0.86	9 882	0.19	7 273	0.14	21 488	0.42
SI	12 501 e	1.40 e	5 676 e	0.63 e	2 693 e	0.30 e	3 868 e	0.43 e
SK	20 928	0.97	4 545	0.21	4 458	0.21	11 917	0.55
FI	74 773	3.11	40 089	1.67	9 903	0.41	24 049	1.00
SE	108 146	2.49	52 346	1.20	5 521	0.13	49 909	1.15
UK	:	:	:	:	22 793	0.08	:	:
IS	5 466	3.48	2 193	1.40	1 740	1.11	1 323	0.84
NO	51 175	2.26	22 572	1.00	6 642	0.29	21 961	0.97
EEA	2 824 794 sp	1.45 sp	1 282 929 sp	0.66 sp	381 677 sp	0.20 sp	1 129 877 sp	0.58 sp
BG	17 400	0.61	2 398	0.08	10 977	0.38	3 920	0.14
HR	17 216	1.12	2 237	0.15	5 487	0.36	9 492	0.62
RO	39 985	0.43	17 232	0.18	9 641	0.10	12 859	0.14
TR	79 958	0.38	9 107	0.04	8 644	0.04	62 207	0.30
JP	1 081 099	1.66	653 380	1.00	72 367	0.11	335 983	0.52
RU	858 470	1.30	558 668	0.85	256 098	0.39	43 120	0.07

Exception to the reference year: AT 2002.

Exception to the reference year: TR 2002.

Sources: Eurostat-R&D statistics, OECD - MSTI 2005-1

Figure 16 – R&D Personnel by sector of performance in Head Count. Data from Eurostat, "Science and Technology in Europe, 2006"

The defined coefficients of impact represent an estimation of the number of contacts that each person who receives the questionnaire would be able to reach, if she/he forwards the e-mail presenting the study to other researchers and therefore spreads word of the survey. As already explained, this estimation has been done considering the number of researchers per country and organisation type, as defined by Eurostat. For example, for a person working at a Small and Medium Enterprise in Belgium the coefficient of impact would be 1,16 (1 person working in this type of company, in Belgium would be able to reach, in theory, 0,16 additional researchers). The table below presents these data.

BELGIUM		
Estimated average of employees in SMEs	R&D personnel in BES as % of people employed (*)	Coefficient of impact
125	0,93%	1,16

(*) Data from the Eurostat R&D Statistics, Science and Technology in Europe, 2006

Table 21 – Calculation of the impact coefficient for Belgium

This data is classified into:

- Government sector (GOV). Using our classification of organisations it corresponded to: Bridge bodies and Public Administration.
- Business Enterprise sector (BES). Corresponding to Big Enterprise and SME in our classification.
- Higher education sector (HES), which includes Universities, Researchers and Research and Technological centres, as defined in our classification of organisations.

The calculations carried out highlight that the impact of the sending (calculated by applying the coefficients of impact) covered 3,49% of the population of researchers in the EU25 and the Associated Countries. This figure would have been increased by the researchers that would accede to the survey through the banner on the European Commission websites (CORDIS, Marie Curie portal), but this option has not been taken into account for this estimation.

The table below presents an overview of the reached contacts and its impact on the research community. (For each researcher, the applied coefficient of impact has been 1).

Number of contacts reached	19.812
(A) - TOTAL Number of researchers (estimated impact)	108.038
(B) - R&D PERSONNEL IN EU25 AND ASSOCIATED COUNTRIES	3.091.856
% OF EUROPEAN RESEARCHERS COVERED BY THE SAMPLE : (A)/(B)	3,49%

The following is a detailed explanation of the coefficients of impact and their selection for the calculation of the survey impact for each of the categories considered in the delivery database.

Small and Medium Enterprises (SME)

A Small and Medium Enterprise is supposed to have less than 250 employees. We have supposed an average of 125 employees in each SME. The coefficient of impact of the survey in SMEs has been calculated by means of the personnel in R&D in BES

as a % of people employed in each of the countries shown in the tables and figures of the Eurostat document. Therefore, the coefficient of impact we have applied for example for Belgium is:

BELGIUM	Average of employees in SMEs	R&D personnel in BES as % of people employed (*)	Coefficient of impact
	125	0,93%	1,16

(*)Data from the Eurostat R&D statistics

Big Enterprises (BE)

In the case of Big Enterprises, the calculation of the coefficient of impact is the same as below, but we have considered that the average number of people employed in each of the companies is 500. Therefore the coefficient of impact in the case of Belgium is:

BELGIUM	Average of employees in BEs	R&D personnel in BES as % of people employed (*)	Coefficient of impact
	500	0,93%	4,65

(*)Data from the Eurostat R&D statistics

Public Administration (PA)

A contact from the Public Administration can be a contact from the Ministry of Science and Education, from the Council of Research, etc…The personnel dedicated to R&D can be found in the Eurostat document as personnel in R&D-GOV. But the main objective of contacts in Public Administration is that they can also act as bridge bodies, resending the e-mail to their own contacts in Enterprises dedicated to research, to universities, and to Bridges Bodies. We have estimated that a person from the Public Administration can provide us with 50 contacts. Taking into account that there is a 50% chance the mail has already been received by the contact, we have reduced the number to 25. This way, the coefficient is, in the case of Belgium, for example:

BELGIUM	Average of employees in PAs	R&D personnel in GOV as % of people employed (*)	Other contacts	Coefficient of impact
	1000	0,10%	25	26

(*)Data from the Eurostat R&D statistics

Bridge Bodies (BrB)

Any kind of organization participating in the FP6, Eureka, Network of researchers at National and European level (EARTO, Dante Network, etc...), National Contact Points, IRC Network… has been considered as a Bridge Body. There is probably nobody working in research within this kinds of organizations but they have several contacts in the research area, in companies, Research Centres, etc…We have estimated that a Bridge Body can provide us with 50 new contacts who have responded the survey. Half of them would have already received the e-mail, so the coefficient of impact we have used is 20.

Universities (U)

In the group of Universities we can find 3 different contact profiles:

- ✓ Rector/Vice-Rector of the University, is in contact with the person responsible for research in the University, and with other people working in research in companies (SME and BE), Bridge Bodies, and with other universities' rectors.

- ✓ The person responsible for Research in the University, in contact with all the laboratories of research in the university.

- ✓ Director of research laboratory in the University, in charge of all the researchers of the laboratory.

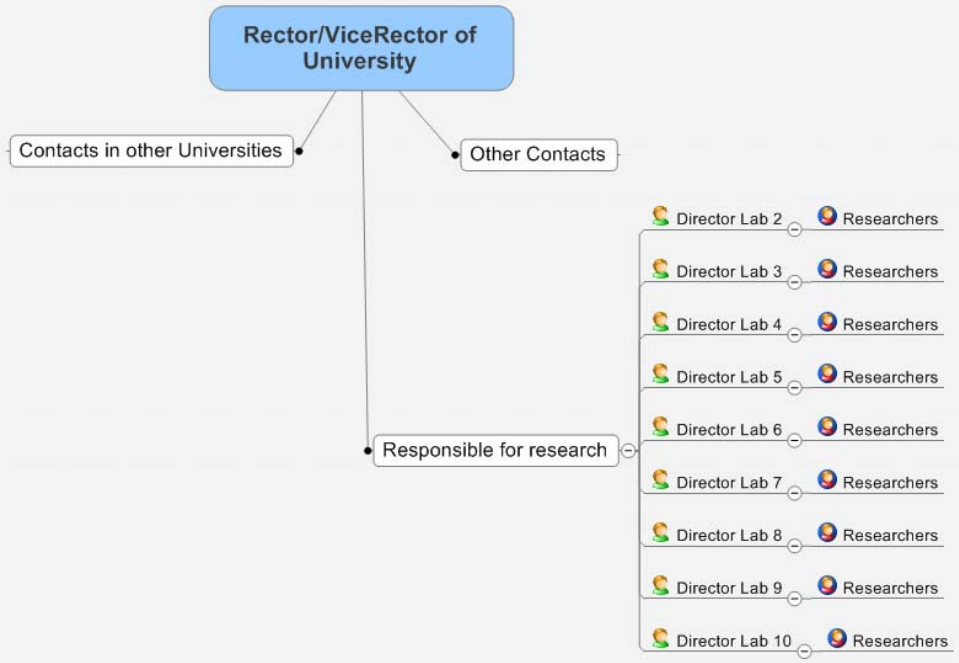


Figure 17 – Profile of contacts at a University

If the person responsible for research resends the mail to every director of laboratories, who are in contact with all the researchers (50 per laboratory), and the head of the University (Rector/Vice Rector) resends the mail to the person responsible for research and other contacts (we have assumed more than 30 but many of them have already received the e-mail, so we have estimated 30 other contacts), the coefficients we have used are shown below:

Type of Contact	Coefficient of impact
Rector/ Vicerector	10 Labs*20 + 30 other contacts =230
Responsible for research	10 Labs*20 researchers = 200
Director of research Labs	20 researchers/laboratory

To simplify the estimation we have considered all the contacts we have as head of departments and laboratories and the number of contacts to whom they have resent the e-mail, 20.

Research and Technological Centres (RTC)

In Research and Technology Centres we have assumed that 100% of the staff is working on research. We have taken an average of 50 people per centre.

By means of applying the coefficients of impact we can automatically estimate the survey sample from the obtained table of contacts, as shown in the table below.

	BIG ENTERPRISE (BE)								SMALL AND MEDIUM ENTERPRISES (SME)							
COUNTRY	Number of contacts from the 1st sending	Number of contacts from the 2nd sending	Number of contacts from the 3rd sending	Total number of contacts	Average of employees in BEs	Personel in R&D in BES as % of people employed (*)	Coefficient of impact	Impact	Number of contacts from the 1st sending	Number of contacts from the 2nd sending	Number of contacts from the 3rd sending	Total number of contacts	Average of employees in SMEs	Personel in R&D in BEs as % of people employed (*)	Coefficient of impact	Impact
Austria_AT	9	2	0	11	500	0,93	4,65	51,15	16	0	0	16	125	0,93	1,1625	18,6
Belgium-BE	13	3	0	16	500	0,93	4,65	74,4	15	0	0	15	125	0,93	1,1625	17,4375
Bulgaria_BG	0	0	2	2	500	0,08	0,4	0,8	0	0	198	198	125	0,08	0,1	19,8
Croatia_HR	3	0	0	3	500	0,15	0,75	2,25	0	0	0	0	125	0,15	0,1875	0
Cyprus-CY	0	0	0	0	500	0,17	0,85	0	8	8	0	16	125	0,17	0,2125	3,4
Czech Republic- CZ	16	81	30	127	500	0,51	2,55	323,85	4	0	19	23	125	0,51	0,6375	14,6625
Denmark-DK	11	6	0	17	500	1,37	6,85	116,45	12	0	0	12	125	1,37	1,7125	20,55
Estonia_EE	11	1	44	56	500	0,26	1,3	72,8	9	0	0	9	125	0,26	0,325	2,925
Findland_FI	14	0	0	14	500	1,67	8,35	116,9	8	0	0	8	125	1,67	2,0875	16,7
France_FR	15	8	0	23	500	0,85	4,25	97,75	27	0	0	27	125	0,85	1,0625	28,6875
Germany-DE	82	185	28	295	500	0,93	4,65	1371,75	44	49	0	93	125	0,93	1,1625	108,1125
Greece_EL	17	1	0	18	500	0,3	1,5	27	9	0	0	9	125	0,3	0,375	3,375
Hungary_HU	6	181	94	281	500	0,24	1,2	337,2	10	0	148	158	125	0,24	0,3	47,4
Iceland_IS	3	461	0	464	500	1,4	7	3248	0	122	0	122	125	1,4	1,75	213,5
Ireland_IE	14	1	0	15	500	0,67	3,35	50,25	15	0	0	15	125	0,67	0,8375	12,5625
Israel_IL	1	268	0	269	500	0,66	3,3	887,7	2	2	0	4	125	0,19	0,2375	0,95
Italy-IT	25	10	4	39	500	0,37	1,85	72,15	21	0	1	22	125	0,37	0,4625	10,175
Latvia_LV	10	161	0	171	500	0,12	0,6	102,6	5	140	0	145	125	0,12	0,15	21,75
Lithuania_LT	7	1	0	8	500	0,05	0,25	2	9	98	0	107	125	0,05	0,0625	6,6875
Luxembourg_LU	4	6	0	10	500	1,88	9,4	94	8	4	0	12	125	1,88	2,35	28,2
Malta-MT	0	97	0	97	500	0,07	0,35	33,95	16	71	0	87	125	0,07	0,0875	7,6125
Netherlands_NL	19	6	0	25	500	0,71	3,55	88,75	10	0	0	10	125	0,71	0,8875	8,875
Norway_NO	1	46	0	47	500	1	5	235	11	36	0	47	125	1	1,25	58,75
Poland_PL	12	1	68	81	500	0,11	0,55	44,55	14	0	0	14	125	0,11	0,1375	1,925
Portugal_PT	4	2	0	6	500	0,19	0,95	5,7	11	32	0	43	125	0,19	0,2375	10,2125
Romania_RO	2	1	0	3	500	0,18	0,9	2,7	2	0	0	2	125	0,18	0,225	0,45
Slovakia_SK	6	0	56	62	500	0,21	1,05	65,1	5	0	79	84	125	0,21	0,2625	22,05
Slovenia_SI	4	59	0	63	500	0,63	3,15	198,45	11	45	0	56	125	0,63	0,7875	44,1
Spain-ES	14	3	0	17	500	0,48	2,4	40,8	4	0	0	4	125	0,48	0,6	2,4
Sweden_SE	13	224	0	237	500	1,2	6	1422	12	0	0	12	125	1,2	1,5	18
Switzerland_CH	1	1	0	2	500	0,66	3,3	6,6	0	0	0	0	125	0,19	0,2375	0
Turkey_TR	0	6	0	6	500	0,04	0,2	1,2	0	0	0	0	125	0,04	0,05	0
United Kingdom_UK	18	10	0	28	500	0,66	3,3	92,4	38	4	0	42	125	0,19	0,2375	9,975
	355	1832	326	2513					356	611	445	1412				

(*) Data from the Eurostat R&D statistics

Table 22 – Impact calculation for Big Enterprises and Small and Medium Enterprises, per country

	RESEARCH AND TECHNOLOGICAL CENTERS (RTC)					UNIVERSITY (U)					PUBLIC ADMINISTRATION (PA)							
COUNTRY	Number of contacts from the 1st sending	Number of contacts from the 2nd sending	Total number of contacts	Coefficient of impact	Impact	Number of contacts from the 1st sending	Number of contacts from the 2nd sending	Total number of contacts	Coefficient of impact	Impact	Number of contacts from the 1st sending	Number of contacts from the 2nd sending	Total number of contacts	Average of employees in PAs	Personel in R&D in GOV as % of people employed (*)	Other contacts	Coefficient of impact	Impact
Austria_AT	40	1	41	50	2050	12	0	12	20	240	7	0	7	1000	0,16	25	26,6	186,2
Belgium-BE	20	5	25	50	1250	35	0	35	20	700	5	1	6	1000	0,1	25	26	156
Bulgaria_BG	5	0	5	50	250	17	0	17	20	340	1	0	1	1000	0,38	25	28,8	28,8
Croatia_HR	17	4	21	50	1050	24	15	39	20	780	5	0	5	1000	0,36	25	28,6	143
Cyprus-CY	8	0	8	50	400	1	0	1	20	20	0	0	0	1000	0,22	25	27,2	0
Czech Republic- CZ	12	2	14	50	700	27	0	27	20	540	4	0	4	1000	0,28	25	27,8	111,2
Denmark-DK	8	2	10	50	500	37	0	37	20	740	9	0	9	1000	0,19	25	26,9	242,1
Estonia_EE	2	0	2	50	100	17	0	17	20	340	1	0	1	1000	0,19	25	26,9	26,9
Findland_FI	20	25	45	50	2250	29	18	47	20	940	7	1	8	1000	0,41	25	29,1	232,8
France_FR	33	0	33	50	1650	13	0	13	20	260	6	0	6	1000	0,21	25	27,1	162,6
Germany-DE	51	1	52	50	2600	44	16	60	20	1200	3	0	3	1000	0,24	25	27,4	82,2
Greece_EL	21	0	21	50	1050	6	0	6	20	120	1	0	1	1000	0,21	25	27,1	27,1
Hungary_HU	5	53	58	50	2900	16	1	17	20	340	3	1	4	1000	0,29	25	27,9	111,6
Iceland_IS	2	0	2	50	100	6	0	6	20	120	3	0	3	1000	1,11	25	36,1	108,3
Ireland_IE	102	0	102	50	5100	47	0	47	20	940	2	0	2	1000	0,09	25	25,9	51,8
Israel_IL	6	1	7	50	350	20	0	20	20	400	2	0	2	1000		25	25	50
Italy-IT	56	0	56	50	2800	54	0	54	20	1080	10	0	10	1000	0,19	25	26,9	269
Latvia_LV	9	1	10	50	500	11	2	13	20	260	2	0	2	1000	0,15	25	26,5	53
Lithuania_LT	1	1	2	50	100	55	0	55	20	1100	3	1	4	1000	0,22	25	27,2	108,8
Luxembourg_LU	13	0	13	50	650	3	0	3	20	60	3	0	3	1000	0,29	25	27,9	83,7
Malta-MT	9	1	10	50	500	46	0	46	20	920	1	0	1	1000	0,02	25	25,2	25,2
Netherlands_NL	22	10	32	50	1600	33	2	35	20	700	6	0	6	1000	0,2	25	27	162
Norway_NO	11	14	25	50	1250	38	7	45	20	900	3	2	5	1000	0,29	25	27,9	139,5
Poland_PL	9	0	9	50	450	20	0	20	20	400	7	0	7	1000	0,19	25	26,9	188,3
Portugal_PT	6	2	8	50	400	45	1	46	20	920	7	0	7	1000	0,14	25	26,4	184,8
Romania_RO	5	0	5	50	250	20	0	20	20	400	8	0	8	1000	0,1	25	26	208
Slovakia_SK	68	0	68	50	3400	21	0	21	20	420	6	0	6	1000	0,21	25	27,1	162,6
Slovenia_SI	12	0	12	50	600	31	0	31	20	620	5	0	5	1000	0,3	25	28	140
Spain-ES	59	0	59	50	2950	82	0	82	20	1640	7	0	7	1000	0,2	25	27	189
Sweden_SE	35	0	35	50	1750	8	0	8	20	160	2	0	2	1000	0,13	25	26,3	52,6
Switzerland_CH	26	0	26	50	1300	13	0	13	20	260	5	0	5	1000		25	25	125
Turkey_TR	6	0	6	50	300	105	1	106	20	2120	0	1	1	1000	0,04	25	25,4	25,4
United Kingdom_UK	33	0	33	50	1650	54	0	54	20	1080	19	0	19	1000	0,08	25	25,8	490,2
	732	123	855			990	63	1053			153	7	160					

(*) Data from the Eurostat R&D statistics

Table 23 - Impact calculation for Research and technological Centres, Universities and Public Administrations, per country

	BRIDGE BODIES (Br)						RESEARCHERS						TOTAL OF RESEARCHERS ESTIMATED
COUNTRY	Number of contacts from the 1st sending	Number of contacts from the 2nd sending	Number of contacts from the 3rd sending	Total number of contacts	Coefficient of impact	Impact	Number of contacts from the 1st sending	Number of contacts from the 2nd sending	Marie curie contacts	Total number of contacts	Coefficient of impact	Impact	
Austria_AT	62	1	0	63	20	1260	0	0	52	52	1	52	3.857,95
Belgium-BE	21	19	0	40	20	800	0	128	80	208	1	208	3.205,84
Bulgaria_BG	5	1	49	55	20	1100	1	0	10	11	1	11	1.750,40
Croatia_HR	6	25	0	31	20	620	43	0	1	44	1	44	2.639,25
Cyprus-CY	0	1	0	1	20	20	8	0	12	20	1	20	463,40
Czech Republic- CZ	9	29	0	38	20	760	91	233	17	341	1	341	2.790,71
Denmark-DK	14	1	0	15	20	300	36	179	46	261	1	261	2.180,10
Estonia_EE	31	5	1	37	20	740	28	0	10	38	1	38	1.320,63
Findland_FI	0	50	0	50	20	1000	7	56	30	93	1	93	4.649,40
France_FR	56	0	0	56	20	1120	0	105	364	469	1	469	3.788,04
Germany-DE	5	2	0	7	20	140	5	332	287	624	1	624	6.126,06
Greece_EL	20	4	0	24	20	480	0	0	94	94	1	94	1.801,48
Hungary_HU	12	27	0	39	20	780	29	105	40	174	1	174	4.690,20
Iceland_IS	3	1	0	4	20	80	62	0	3	65	1	65	3.934,80
Ireland_IE	6	0	0	6	20	120	0	0	73	73	1	73	6.347,61
Israel_IL	1	6	0	7	20	140	0	10	27	37	1	37	1.865,65
Italy-IT	37	0	0	37	20	740	368	0	212	580	1	580	5.551,33
Latvia_LV	7	11	0	18	20	360	23	0	5	28	1	28	1.325,35
Lithuania_LT	20	2	0	22	20	440	47	10	8	65	1	65	1.822,49
Luxembourg_LU	4	1	0	5	20	100	16	0	1	17	1	17	1.032,90
Malta-MT	7	2	0	9	20	180	7	0	2	9	1	9	1.675,76
Netherlands_NL	43	22	0	65	20	1300	130	0	173	303	1	303	4.162,63
Norway_NO	11	24	0	35	20	700	290	0	20	310	1	310	3.593,25
Poland_PL	6	3	1	10	20	200	0	0	87	87	1	87	1.371,78
Portugal_PT	10	2	0	12	20	240	0	0	29	29	1	29	1.789,71
Romania_RO	11	1	0	12	20	240	0	0	15	15	1	15	1.116,15
Slovakia_SK	9	1	0	10	20	200	109	0	17	126	1	126	4.395,75
Slovenia_SI	4	39	0	43	20	860	34	0	12	46	1	46	2.508,55
Spain-ES	23	0	0	23	20	460	9	0	237	246	1	246	5.528,20
Sweden_SE	8	1	0	9	20	180	5	0	72	77	1	77	3.659,60
Switzerland_CH	10	0	0	10	20	200	0	0	59	59	1	59	1.950,60
Turkey_TR	14	7	0	21	20	420	6	0	23	29	1	29	2.895,60
United Kingdom_UK	20	0	0	20	20	400	3	0	613	616	1	616	4.338,58
	495	288	51	834			1357	1158	2731	5246			100.129,73

(*) Data from the Eurostat R&D statistics

Table 24 – Impact calculation for Bridges Bodies and Researchers, per country

5.3 Annex 3: Researchers remunerations in other countries

In the case of Australia, in which case no specific studies were available, an average of the different remunerations gathered was calculated and applied. The different sources of information considered for the calculation of the global average were:

- Australian Bureau of Statistics
- Australian National University
- Australian Research Council
- CSIRO (Commonwealth Scientific and Industrial Research Organisation)

The global average of researchers' remunerations in Australia was **64.150 EUR.**

In the case of China, the Delegation of the European Commission sent information on the total income of researchers as directly obtained from the **Chinese Government** (data from 2006). The global average of researchers' remunerations in China was **3.150 EUR.**

In the case of India, as no specific study on the remuneration of researchers was available, an average has been calculated from the following sources of information:

- Council of Scientific & Industrial Research (CSIR)
- Indian National Science Academy (INSA)
- Ministry of Science and Technology
- Science and Engineering Research Council (CERC)

The global average of researchers' remunerations in India was **9.177EUR.**

The source of information for the researchers remunerations in Japan has been the **"Basic Survey of Wage Structure 2005"** carried out by the Ministry of Health, Labour and Welfare (MHLW) of Japan that provides information on the scheduled cash earnings (monthly) and annual special cash earnings, by occupation, sex, age group and occupational career group. The following table presents the information selected concerning (i) Scientific Researchers (public and private researchers except in universities), (ii) Professors, (iii) Assistant Professors, and (iv) Lecturers (these last 3 categories being in universities). The global average of researchers' remunerations in Japan was **68.872 EUR.**

In the case of the United States, the information has been extracted from the **"National Survey of College graduates 2003"** of the National Science Foundation. The information is shown in table 49. The average calculated for the United States was **60.156 EUR.**

All the figures have been converted into Euros through the annual exchange rate provided by the European Central Bank in 2006, and updated to 2006 through the annual inflation rate in Australia, China, India, Japan and United States respectively.

Occupational career group / level of seniority	1-4 years			5-9 years			10-14 years			more than 14 years		
	Contractual Cash Earnings (monthly) 1000 yens	other special cash earnings (annual) 1000 yens	Total (Yens)	Contractual Cash Earnings (monthly) 1000 yens	other special cash earnings (annual) 1000 yens	Total (Yens)	Contractual Cash Earnings (monthly) 1000 yens	other special cash earnings (annual) 1000 yens	Total (Yens)	Contractual Cash Earnings (monthly) 1000 yens	other special cash earnings (annual) 1000 yens	Total (Yens)
Scientific researcher (male)	295,00	1.121,50	4.661.500	345,60	1.378,10	5.525.300	417,90	1.842,40	6.857.200	521,20	2.082,70	8.337.100
Professor (male)	644,40	3.318,50	11.051.300	694,00	3.662,40	11.990.400	709,20	3.744,60	12.255.000	707,10	3.787,90	12.273.100
Assistant professor (male)	526,60	2.505,10	8.824.300	550,50	2.725,70	9.331.700	547,80	2.654,80	9.228.400	576,90	2.882,00	9.804.800
Lecturer (male)	459,70	1.908,40	7.424.800	487,90	2.197,50	8.052.300	510,80	2.537,10	8.666.700	552,70	2.703,60	9.336.000
Lecturer (female)	395,80	1.676,30	6.425.900	400,10	1.746,80	6.548.000	446,40	1.945,30	7.302.100	456,40	2.043,40	7.520.200
Total Average			***7.677.560***			***8.289.540***			***8.861.880***			***9.454.240***

Table 25 - Scheduled cash earnings (monthly) and annual special cash earnings, by occupation, sex, age group and occupational career group. Data from the "Basic Survey of Wage Structure 2005" made by the Ministry of Health, Labour and Welfare (MHLW) of Japan

PRINCIPAL JOB AND HIGHEST LEVEL OF EDUCATIONAL ATTAINMENT	PRIMARY OR SECONDARY WORK ACTIVITY ON PRINCIPAL JOB IS R&D?					
	NO		YES		TOTAL	
	Total in Head count	Median Annual Salary	Total in Head count	Median Annual Salary	Total in Head count	Median Annual Salary
Computer and Mathematical scientists	1.112.216	67.000,00	896.279	70.000,00	2.008.496	70.000,00
Biological, agricultural and other life scientists	115.467	46.000,00	328.303	50.000,00	443.770	49.000,00
Physical and related scientists	97.549	52.000,00	217.514	60.000,00	315.063	58.000,00
Social and related scientists	272.423	50.000,00	222.161	50.000,00	494.584	50.000,00
Engineers	530.560	73.000,00	1.024.296	73.000,00	1.554.857	73.000,00
S&E related occupations	4.284.498	53.000,00	1.046.457	52.000,00	5.330.955	53.000,00
Non-S&E related occupations	6.697.962	49.000,00	1.175.371	55.000,00	7.873.332	50.000,00
TOTAL	13.110.676	53.000,00	4.910.381	62.000,00	18.021.057	55.000,00

Table 26 – Total Number and median annual salary of people carrying out R&D as primary or secondary work activity, per level of educational attainment. Data from the "National Survey of College graduates 2003" of the National Science Foundation, United States

5.4 Annex 4: Principal indexes and cost of living indicators

In this annex, the available data of the principal indexes and cost of living indicators chosen for the study are presented.

5.4.1 Consumer Price Index

The Consumer Price Index (CPI) measures the change in the cost of a bundle of consumer goods and services. The bundle includes about 200 types of goods and thousands of actual products, ranging from foods and energy to expensive consumer goods. The prices are measured by taking a sample of prices at different stores. The CPI is also important because it is used to adjust the annual changes to Social Security payments. This way it provides a measure of inflation. This is why frequently the CPI is called a cost-of-living index. But it differs in important ways from a complete cost-of-living measure. A cost-of-living index is a conceptual measurement goal, however, not a straightforward alternative to the CPI. A cost-of-living index would measure changes over time in the amount that consumers need to spend to reach a certain utility level or standard of living. User fees (such as water and sewer service) and sales and excise taxes paid by the consumer are included in CPI, while income taxes and investments items (like stocks, bonds, life insurance and homes) are not included. It is very difficult to determine the proper treatment of public goods, such as safety and education, and other broad concerns, such as health, water quality, and crime that would constitute a complete cost-of-living framework.

The CPI is used all around the world as an important economic indicator, principally to measure inflation. However, its calculation is different between Europe and the United States:

- The "CPI" in the Eurozone

In addition to their national consumer price indices, the Member States of the European Union also produce a harmonised index of consumer prices (HICP), published by the European Central Bank (ECB). The HICPs have been set up to provide the best measure for international comparisons of household inflation within the Euro-zone and the EU.

- CPI in the United States

On the other hand, concerning the calculation and use of the CPI in the US, most of the specific CPI indexes have a 1982-84 reference base in Bureau of Labour Statistics (BLS) (www.bls.gov), who sets the average index level (representing the average price level) for the 36-month period covering the years 1982, 1983, and 1984 equal to 100.

The CPI reflects spending patterns for each of two population groups: all urban consumers and urban wage earners and clerical workers. The price change experience of the all urban consumer group is measured by two indexes:

- The traditional Consumer Price Index for All Urban Consumers (CPI-U)

- The newer Chained Consumer Price Index for All Urban Consumers (C-CPI-U).

The following table shows a comparison between the European HICP and the CPI-U as calculated by the BLS.

Category	European HICP	CPI-U
Definition	Measure of the average change in the prices of goods and services available for purchase in the economic territory of the member State for purposes of directly satisfying consumer's needs	Measure of the average change over time in the prices of consumer items—that is, goods and services that people buy for day-to-day living
Geographic and population coverage	All households in the territory of the member State	Non-institutional urban population of the United States
Item coverage	Private consumption, except owner-occupied housing, gambling, lotteries, and life insurance	Includes owner-occupied housing and excludes gambling, lotteries, and life insurance
Formula	Laspeyres	Laspeyres
Weight update interval	At least 5 yearly updates, annual review	Biennial
Elementary aggregate formula	Ratio of geometric to arithmetic mean	Weighted geometric or arithmetic mean
Classification	Classification of individual consumption by purpose (COICOP)	U.S. CPI item classification structure
Level of detail	94 classes, 160 sub-indexes	211 item strata, 38 index areas

Table 27 – Differences between the Harmonized Index of Consumer prices and the CPI-U

The geographic and population coverage of the European HICP seems to be decisive criteria for the selection of HICP index instead of the CPI-U index as calculated by the BLS for the purpose of the study.

The following table presents HICPs as calculated by the ECB in April 2006.

TABLEAU V

GROUPES PRINCIPAUX DES INDICES DES PRIX A LA CONSOMMATION HARMONISES

Avril 2006 / Avril 2005 TAUX DE VARIATION ANNUEL (%)

	00.	01.	02.	03.	04.	05.	06.	07.	08.	09.	10.	11.	12.
Zone Euro	2.4p	1.5p	2.7p	0.4p	5.3p	1.0p	1.1p	4.6p	-3.7p	0.5p	2.6p	2.7p	2.1p
IPCE	2.3p	1.3p	2.5p	-0.7p	5.7p	0.5p	1.4p	4.4p	-2.8p	-0.1p	3.2p	2.8p	2.6p
BE	2.6	1.0	1.3	0.1	5.6	1.1	3.3	4.1	-1.9	1.7	1.6	3.1	2.2
CZ	2.3	-0.5	1.2	-6.6	10.1	-1.6	4.4	3.2	3.7	2.2	3.9	2.8	1.9
DK	1.8	1.7	0.3	-2.7	3.9	0.6	1.5	3.1	-2.0	1.4	1.5	2.4	1.6
DE	2.3	1.2	3.7	-0.8	4.7	-0.2	0.7	4.7	-3.2	0.8	2.0	1.5	0.7
EE	4.3	4.0	3.2	3.9	8.0	1.9	1.7	8.3	-6.1	4.5	3.6	2.0	4.6
EL	3.5	3.5	2.9	3.3	8.1	1.9	2.6	4.2	0.4	1.5	3.8	2.9	2.7
ES	3.9	3.5	2.2	1.3	7.2	2.7	1.3	6.9	-1.2	1.2	3.9	4.7	3.6
FR	2.0	1.0	0.2	0.2	5.4	1.3	1.7	3.8	-7.0	-0.6	3.2	2.4	2.8
IE	2.7	1.7	1.1	-1.7	6.6	-1.3	4.5	5.9	-0.6	0.4	4.7	3.4	2.5
IT	2.3	0.9	5.1	1.1	6.3	1.5	-0.7	4.0	-2.6	0.9	3.1	2.2	2.6
CY	2.5	6.4	-1.3	-8.7	12.4	0.1	2.0	5.4	-0.1	-0.6	5.3	0.3	2.6
LV	6.1	7.2	8.2	0.4	12.8	3.2	4.6	6.4	-8.9	2.9	9.1	10.9	6.1
LT	3.4	4.6	-1.8	-2.1	5.2	-0.2	6.6	11.3	-2.6	2.2	-1.1	2.7	4.3
LU	3.5	1.9	2.2	0.5	6.5	1.8	5.3	6.3	-2.6	1.8	5.0	3.5	3.0
HU	2.4	5.6	3.1	-1.6	2.3	-2.5	4.5	3.0	-2.8	0.6	7.4	3.9	1.7
MT	3.5	3.4	0.7	-1.1	13.2	2.4	4.6	5.7	0.1	1.1	2.7	2.6	3.1
NL	1.8p	1.7p	0.4p	-0.4p	4.6p	0.0p	3.3p	4.1p	-2.1p	-0.3p	-15.8p	2.4p	0.7p
AT	2.0p	0.4p	-0.2p	3.1p	5.5p	1.2p	1.6p	4.5p	-7.0p	-1.9p	7.2p	2.2p	2.5p
PL	1.2	-0.5	1.6	-6.8	4.7	0.0	1.5	2.0	-0.4	-2.0	1.6	1.7	3.7
PT	2.9	1.8	9.0	-7.1	4.2	0.9	0.5	7.9	-0.7	1.2	5.7	2.3	3.0
SI	2.8	0.8	3.9	2.3	7.2	3.1	-2.5	2.4	0.0	2.5	2.8	4.3	4.1
SK	4.4	1.6	2.1	-0.1	13.4	-1.0	8.6	1.2	0.1	1.5	7.3	2.3	3.6
FI	1.5	1.1	2.4	-2.1	3.4	0.9	0.9	3.4	-8.1	0.5	2.5	2.2	1.8
SE	1.8	-0.2	1.5	4.2	4.2	-2.4	0.9	4.2	-4.9	-1.0	3.1	2.6	3.6
UK	2.0	0.3	2.5	-4.4	7.7	-0.8	2.7	4.4	0.3	-1.6	4.7	3.0	4.0
EEA	2.3p	1.3p	2.4p	-0.7p	5.7p	0.5p	1.4p	4.4p	-2.7p	-0.1p	3.2p	2.8p	2.6p
IS	3.3	6.2	1.8	-1.3	3.3	0.3	2.6	7.3	4.1	0.2	11.6	2.7	2.0
NO	2.8	0.9	1.6	-1.9	10.7	-1.5	3.8	3.6	5.2	0.8	2.2	2.2	-1.8

p provisoire r révisé : non disponible

COICOP/Groupe IPCH

00. IPCH (indice d'ensemble)
01. Produits alimentaires et boissons non alcolisées
02. Boissons alcolisées et tabac
03. Articles d'habillement et articles chaussants
04. Logement, eau, électricité, gaz et autres combustibles
05. Ameublement, équipement ménager et entretien courant de la maison
06. Santé
07. Transports
08. Communications
09. Loisirs et culture
10. Enseignement
11. Restaurants et hôtels
12. Autres biens et services

(*) Data from the European Central Bank

Table 28 – Variation of HICP from April 2005/ April 2006

5.4.2 Producer Price Index

The Producer Price Index (PPI) is a group of indices used to measure the price of goods and services received by producers. The consumer price index (CPI) is a related index, but differs in that the CPI measures the price paid by the end users.

The PPI is often used as an indicator of inflation in the future, as additional costs of producing goods are passed on to the consumer. The PPI for an industry measures the average change in prices received for an industry's output sold to another industry.

Producer Price Index and Consumer Price Index are shown in the table below as calculated by the Organisation for Economic Co-operation and Development (OECD) in December 2004.

	Consumer prices		Producer prices	
	2000 = 100	Change December 2004/ December 2003 %	2000 = 100	Change December 2004/ December 2003 %
Australia	114,1 a	2,6 a	111,6 a	8,2 a
Austria	103,6	2,3	103,0	5,2
Belgium	108,6	2,3	104,4	5,1
Canada	110,5	2,1	101,7	3,6
Czech Republic	110,1	2,8	110,2	8,3
Denmark	108,4	1,2	106,1	2,6
Finland	105,5	0,4	95,8	1,2
France	108,3	2,1	103,4	2,3
Germany	107,3	2,1	105,2	3,2
Greece	116,1	3,1	114,2	4,2
Hungary	123,4	5,5	107,3	1,1
Iceland	120,2	3,3	..	..
Ireland	117,3	2,6	88,1	- 1,6
Italy	111,3	2,0	108,1	4,2
Japan	98,1	0,2	96,6	2,3
Korea	115,4	3,0	107,3	8,1
Luxembourg	110,4	2,1	117,0	16,7
Mexico	125,5	5,2	123,4	8,0
Netherlands	111,0	1,2	105,3	6,2
New Zealand	111,0 a	2,7 a	106,3 a	3,5 a
Norway	107,3	1,1	105,3	5,0
Poland	113,6	4,2	103,2	5,2
Portugal	115,6	2,5	107,5	4,5
Slovak Republic	123,5	6,0	115,0	4,3
Spain	115,2	3,2	103,0	5,0
Sweden	107,1	0,3	100,4	2,1
Switzerland	103,3	1,3	101,6	1,3
Turkey	325,3	9,3	354,6	13,8
United Kingdom	111,5	3,5	104,3	2,3
United States	110,5	3,3	108,6	5,3
Euro area	110,2 b	2,2 b	105,8 b	3,7 b
G7	108,5	2,6	105,3	4,1
EU-15	110,4	2,4	105,5	3,5
OECD Total	112,6	2,8	108,3 a	4,5 a
OECD excl. high infl.[1]	103,3	2,7	106,3 a	4,4 a

Notes:
.. not available
- not applicable
1. This total excludes high inflation countries: Hungary, Mexico, Poland and Turkey
a. Fourth quarter
b. OECD methodology

(*)Data from the Organisation for Economic Co-operation and Development (OECD) in December 2004

Table 29 – Consumer Price Index against Producer price index

5.4.3 Correction Coefficients

European Commission Correction Coefficients

The basic principle behind the application of correction coefficients is that when EC officials are serving in post outside Brussels or Luxembourg, they should not have

to suffer financially because of higher living cost in their duty station, or should not gain an unfair advantage over their counterparts in Brussels if the cost of living in the duty station is lower than in Brussels. For that reason, salary adjustment of EU officials outside Brussels and Luxembourg requires to compare relative living costs between Brussels and the duty stations.

The correction coefficient is added as a percentage to the gross salary and the tax. The final result is equivalent to multiply the net salary by the correction coefficient.

$$\text{Salary in LCU} = \text{Salary in euros} \times \text{exchange rate} \times \frac{\text{economic parity}}{\text{exchange rate}}$$

Correction Coefficient

The correction coefficients in the Capitals excluding rents have been used for the Marie Curie Actions in the 5th Framework Programme (FP5), and the 6th Framework Programme (FP6) with 1999 as the reference year. Coefficients are available for EU and non EU countries in the Capitals excluding rents and are updated yearly in December.

United Nations Correction Coefficients

Similarly, a comparable United Nation system is available at The International Civil Service Commission (ICSC), which is an independent expert body establish by the United Nations General Assembly.

The post adjustment index (PAI) is defined by the ICSC as a measure of the cost of living of staff at any location relative to the base city, New York. Post adjustment is an amount paid in addition to net base salary, which is designed to ensure that no matter where United Nations common system staff work, their net remuneration has a purchasing power equivalent to that at the base of the system, New York. It is applicable to the United Nations Common System international staff in the Professional and higher categories.

The post adjustment index (PAI) is established by means of periodic comparisons of cost-of living data between the base city and other locations. These data are collected through surveys called place-to-place surveys. In between place-to-place surveys, the PAI is adjusted from time to-time, reflecting movements in local prices as well as changes in the local exchange rates relative to the US dollar. Also, housing surveys are carried out each year at many duty stations to enable the housing component of the comparison to be adjusted at least once each year.

5.4.3.1 Corrective Coefficients of the European Commission

The corrective coefficients of the European Commission are computed by Eurostat under the following series:

- ✓ Correction Coefficients in the European Union (EU25), Total. Considering Brussels=100. This series is only available since 2004.
- ✓ Correction Coefficients in the European Union (EU25), Total without rents. Considering Brussels=100. This series is only available since 2004.
- ✓ Correction Coefficients in the European Union (EU25, Capitals), Total. Considering Brussels=100. Available for the period 1995-2005.

- ✓ Correction Coefficients in the European Union (EU25, Capitals), Total without rents. Considering Brussels=100. Available for the period 1995-2005.

- ✓ Correction Coefficients in non-European Union countries (Capitals), Total without rents and social security. Considering Brussels=100. Available for the period 2000-2005.

In the following table Correction Coefficients in the European Union (Capitals) excluding rents are shown. In this case Brussels = 100 as it is take as a reference, and Luxembourg = 100 as well because of political decision.

Correction coefficients in the European Union (Capitals), from 1999 - Brussels=100 (Excluding rents)

	1999	2000	2001	2002	2003	2004	2005
cz_cap Praha	:	:	:	:	:	79	82
dk_cap Kobenhavn	129	127	127	129	130	131	131
de_cap Berlin	104	104	103	104	101	102	101
ee_cap Tallinn	:	:	:	:	:	77	78
gr_cap Athinai	86	83	85	88	88	90	90
es_cap Madrid	90	91	92	94	94	95	95
fr_cap Paris	107	105	104	105	104	105	103
ie_cap Dublin	98	103	104	108	109	111	113
it_cap Roma	98	97	98	99	100	101	103
cy_cap Nicosia	:	:	:	:	:	100	101
lv_cap Riga	:	:	:	:	:	73	71
lt_cap Vilnius	:	:	:	:	:	75	74
hu_cap Budapest	:	:	:	:	:	76	78
mt_cap La Valletta	:	:	:	:	:	98	98
nl_cap Amsterdam	101	100	101	104	103	102	101
at_cap Wien	104	104	103	104	103	104	103
pl_cap Warszaw	:	:	:	:	:	69	78
pt_cap Lisboa	83	84	86	89	89	91	91
si_cap Ljubljana	:	:	:	:	:	78	76
sk_cap Bratislava	:	:	:	:	:	84	87
fi_cap Helsinki	115	115	115	116	115	114	113
se_cap Stockholm	116	118	108	111	109	110	106
uk_cap London	116	119	122	112	105	109	110

(*) Data from Eurostat

Table 30 – Correction coefficients in the European Union (Capitals), from 1999 to 2005 (excluding rents)

5.4.3.2 Corrective Coefficients in the United Nations (Post-Adjustment index)

Similarly to the corrective coefficients of the European Commission, the post adjustment index (PAI) is defined by the ICSC (The International Civil Service Commission) as a measure of the cost of living of staff at any location relative to the base city, New York. The table below shows the post adjustment index updated in July 2006:

CONSOLIDATED POST ADJUSTMENT CIRCULAR
Effective 1 July 2006 (Four Months Review)

Country or area	Exchange rate	Post Adjustment (New York, August 1992 = 100)					Thresholds			
		Index	Multiplier	Change	Effective date	Reason for change	Rate		Change	Effective date
							Dep.	Sing.		
Afghanistan	49.830	147.6	47.6	Y	Jul-06	PP	9	10	Y	Jul-06
Albania	97.10	139.0	39.2	Y	Jul-06	FMR	16	18		Mar-05
Algeria	71.26	146.1	46.1	Y	Jul-06	FMR	28	31		Nov-05
Angola	80.17	162.4	62.4	Y	Jul-06	FMR	30	33		Apr-05
Argentina	3.080	123.3	23.3	Y	Jul-06	FMR	15	17		Jan-03
Armenia	417.00	134.1	34.8	Y	Jul-06	FMR	18	20		Dec-02
Australia	1.370	144.7	42.1	Y	Jul-06	ER	21	23		Aug-03
Austria	0.796	154.3	52.9	Y	Jul-06	ER	19	21		Apr-06
Azerbaijan	0.90	145.5	45.5	Y	Jul-06	FMR	22	24		Oct-03
Bahamas	1.00	164.3	64.8		Jul-05		28	31		Jul-05
Bahrain	0.376	152.2	52.2	Y	Jul-06	FMR	25	28		Sep-05
Bangladesh	69.15	125.4	25.4	Y	Jul-06	FMR	13	14		Apr-04
Barbados	2.00	147.8	47.8	Y	Jul-06	FMR	19	21		Sep-05
Belarus	2142.00	142.1	42.1	Y	Jul-06	FMR	20	22		Oct-04
Belgium	0.796	148.5	49.7	Y	Jul-06	ER	15	17		Oct-98
Belize	2.00	137.1	42.9		Mar-06		18	20	Y	Jul-06
Benin	522.142	154.3	54.3	Y	Jul-06	FMR	15	17		Jul-02
Bhutan	46.36	135.4	35.8	Y	Jul-06	FMR	11	12		Jul-03
Bolivia	7.96	117.1	17.1	Y	Jul-06	FMR	16	18		Jan-05
Bosnia-Herzegovina	1.55684	134.8	34.8	Y	Jul-06	FMR	17	19		Dec-04
Botswana	6.080	134.3	34.3	Y	Jul-06	FMR	16	18		Nov-03
Brazil	2.240	147.0	47.0	Y	Jul-06	FMR	21	23		Oct-04
Bulgaria	1.550	128.4	28.4	Y	Jul-06	H	13	14	Y	Jul-06
Burkina Faso	522.142	142.4	42.4	Y	Jul-06	FMR	15	17		Jun-03
Burundi	1015.00	143.8	46.4	Y	Jul-06	FMR	16	18		Nov-05
Cambodia	4113.00	121.6	22.0		Jun-05		16	18		Jun-05
Cameroon, Republic of	522.142	142.8	42.8	Y	Jul-06	FMR	16	18		Apr-06
Canada Montreal	1.12	151.1	52.7	Y	Jul-06	ER	17	19		Jul-01
Canada Ottawa	1.12	155.5	57.1	Y	Jul-06	ER	21	23		Jul-01
Canada Toronto	1.12	159.1	60.8	Y	Jul-06	ER	26	29		Jul-01
Cape Verde	83.310	139.3	42.1	Y	Jul-06	FMR	17	19		Apr-05

Table 31 – Post Adjustment Index updated in July 2006 by the ICSC

5.4.4 Purchasing Power Parities

Purchasing Power Parities (PPP) states that the price levels in any two countries should be identical after converting prices into a common currency. Applications and empirical tests of PPP often refer to a broad "market basket" of goods that is intended to be representative of consumer spending patterns. PPP are based on the same items as Correction Coefficients from the EC, but with different weights. PPP allows multilateral comparisons.

The conditions under which the law of one price generalizes to yield PPP are clearly quite restrictive. For the law of one price to directly imply PPP, the same goods must be included in the price indices for each country, and the same base year must also be used for the prices indices. Consequently, testing the absolute version of PPP requires careful construction of price indices so that a common market basket of goods is measured.

Purchasing Power Parities (PPP) are computed by a consortium under the responsibility of the World Bank called the United Nations International Comparison Programme (ICP). Over the years a number of so-called benchmark studies have been conducted with the active co-operation and participation of the United Nations, and since 1980 Eurostat at the EU, the Organization for Economic Cooperation and Development (OECD), and the UN Regional Commissions have been most active in the work.

At the moment, for OECD/ Eurostat countries, PPP is under the Joint OECD-Eurostat PPP Programme, the OECD and Eurostat share the responsibility for calculating PPPs. Broadly; Eurostat handles the calculation for the EU countries and for the EU "Candidate Countries". The OECD deals with the non-European OECD Member countries and the other non-EU related countries such as Russia, Ukraine, etc…which are included in the PPP Programme.

The OECD-Eurostat PPPs are not only calculated for individual products, they are also calculated for product groups and for each of the various levels of aggregation up to and including GDP. Eurostat presents the original PPPs transformed into a standardized form with the base EU25=100. This artificial unit (currency) is named as PPS = Purchasing Power Standard.

Many of the principles and limitations of the theory of PPP can be illustrated using a less comprehensive collection of goods:

Penn World Tables

An example is a data set known as the Penn World Tables (PWT). PWT is based on the United Nations International Comparison Program. The PWT presents price measures that are based on the common market basket of approximately 150 detailed categories of goods. These measures are constructed using benchmark surveys that include hundreds of individual items that encompass all of the expenditure components of a nation's Gross Domestic Product.

Big Mac Index

Since 1986, The Economist has published an annual comparison of the prices of the McDonald's Big Mac™ sandwich in various countries around the world, evaluating prevailing exchange rates on the basis of international price differences.

Comparative Price Level from UBS

A similar index has also been developed by the financial firm UBS as part of a general comparison of prices and incomes around the world, taking as reference Zurich=100. Standardized price and earning surveys were carried out in 70 cities around the world in the first quarter of 2003.

The table below highlights PPP as calculated by the OECD in January 2007 (with the basis of U.S. dollar). (See http://www.oecd.org/dataoecd/61/54/18598754.pdf).

PURCHASING POWER PARITIES FOR GDP - PARITÉS DE POUVOIR D'ACHAT POUR LE PIB

	Purchasing Power Parities Parités de pouvoir d'achat				Comparative price levels Niveaux de prix comparés				Per capita volume indices Indices de volume par tête Current PPPs Parités courantes				Per capita volume indices Indices de volume par tête Constant 2000 PPPs Parités constantes 2000				
	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006	2003	2004	2005	2006	
Canada	1.24	1.25	1.25	1.23	91	94	101	107	116	116	116	116	119	119	119	118	Canada
Mexico	7.00	7.31	7.48	7.57	67	63	67	69	36	36	36	37	36	36	36	36	Mexique
United States	1.00	1.00	1.00	1.00	103	98	98	99	141	142	143	143	142	143	143	143	États-Unis
Australia	1.35	1.36	1.38	1.39	90	98	103	103	114	113	113	112	113	113	112	111	Australie
Japan	138	133	128	124	122	120	114	106	105	105	105	104	105	105	105	105	Japon
Korea	783	782	756	744	67	67	72	77	73	74	76	77	74	76	77	78	Corée
New Zealand	1.46	1.47	1.46	1.47	87	95	101	94	88	88	88	86	89	89	88	87	Nouvelle-Zélande
Austria	0.878	0.868	0.866	0.858	102	105	106	106	120	119	118	117	118	117	116	116	Autriche
Belgium	0.865	0.865	0.863	0.857	100	105	105	106	115	115	113	112	110	110	108	108	Belgique
Czech Republic	13.9	14.0	14.1	14.2	51	53	58	62	69	70	70	72	65	66	69	70	Rép. Tchèque
Denmark	8.47	8.40	8.40	8.37	132	137	137	139	116	115	117	117	117	116	117	118	Danemark
Finland	1.00	0.974	0.969	0.957	116	118	118	118	105	107	106	109	111	112	113	116	Finlande
France(1)	0.930	0.918	0.901	0.893	108	112	110	111	105	104	103	103	107	106	105	103	France(1)
Germany	0.905	0.894	0.883	0.875	105	109	108	108	109	107	105	104	104	103	102	102	Allemagne
Greece	0.684	0.695	0.695	0.698	79	84	85	86	98	99	101	102	95	97	98	100	Grèce
Hungary	120	124	125	128	55	60	61	60	59	59	60	60	57	58	60	61	Hongrie
Iceland	93.4	94.0	94.6	95.6	125	131	147	134	116	119	124	121	121	126	131	128	Islande
Ireland	1.01	0.995	1.000	1.00	117	121	122	124	130	131	133	133	130	130	132	132	Irlande
Italy	0.850	0.861	0.862	0.856	98	105	105	106	103	99	96	95	108	103	101	99	Italie
Luxembourg	0.935	0.918	0.915	0.920	108	112	112	114	230	232	240	242	216	216	219	221	Luxembourg
Netherlands	0.923	0.897	0.882	0.867	107	109	108	107	120	120	120	121	115	114	114	114	Pays-Bas
Norway	9.03	8.93	8.73	8.68	131	130	133	134	144	150	161	170	152	152	151	151	Norvège
Poland	1.83	1.85	1.85	1.84	48	49	56	59	45	47	47	49	46	47	48	49	Pologne
Portugal	0.702	0.707	0.704	0.699	81	86	86	87	71	69	68	67	74	73	71	70	Portugal
Slovak Republic	16.6	17.2	17.1	17.2	46	52	54	57	51	52	55	57	49	51	53	56	Rép. Slovaque
Spain	0.749	0.756	0.761	0.769	87	92	93	95	94	93	94	94	90	89	89	88	Espagne
Sweden	9.25	9.18	9.21	9.17	117	122	121	123	112	111	110	111	114	115	116	118	Suède
Switzerland	1.76	1.73	1.70	1.68	134	136	134	132	126	124	122	121	121	120	119	118	Suisse
Turkey(2)	0.755	0.831	0.877	0.921	52	57	64	64	25	26	26	27	28	29	30	31	Turquie(2)
United Kingdom	0.624	0.619	0.619	0.618	105	111	110	112	113	114	112	112	110	110	109	109	Royaume-Uni
OECD 30	..	..	..	..	100	100	100	100	100	100	100	100	100	100	100	100	OCDE 30
EU15	0.884	0.881	0.874	0.870	102	107	107	108	106	105	104	103	105	104	103	103	UE 15
Euro area	0.871	0.866	0.859	0.854	101	105	105	106	105	103	102	101	103	102	101	101	Zone euro

(1) Figures include Overseas Departments.
(2) Country still using SNA 1968.

(1) Les données incluent les Départements d'Outre-Mer.
(2) Pays utilisant encore le SCN 1968.

Table 32 – Purchasing power parity and comparative price levels as calculated by the OECD

Another example of Purchasing power parities is a data set known as the Penn World Tables (PWT), shown in the table below. The data are available at http://www.pwt.econ.upenn.edu/. 2000 is the latest year for which data are available.

Indicators of PPP, 2000	
Country	**PWT**
Austria	93,14
Belgium	88,91
Czech Republic	32,62
Denmark	110,09
Finland	96,58
France	93,98
Germany	95,04
Greece	67,93
Hungary	41,36
Ireland	87,34
Italy	79,22
Japan	153,36
Luxembourg	86,2
Netherlands	88,78
Norway	116,7
Poland	40,86
Portugal	63,23
Slovakia	28,91
Spain	63,2
Sweden	105,64
Switzerland	123,61
United Kingdom	100,5
United States	100,48

Table 33 – PPP for various countries relative to the United States based on the PWT for 2000

Since 1986, The Economist has published an annual comparison of the prices of the McDonald's Big Mac sandwich in various countries around the world, called the Big Mac Index, another example of the principle of the PPP. The following table presents the data for 2005.

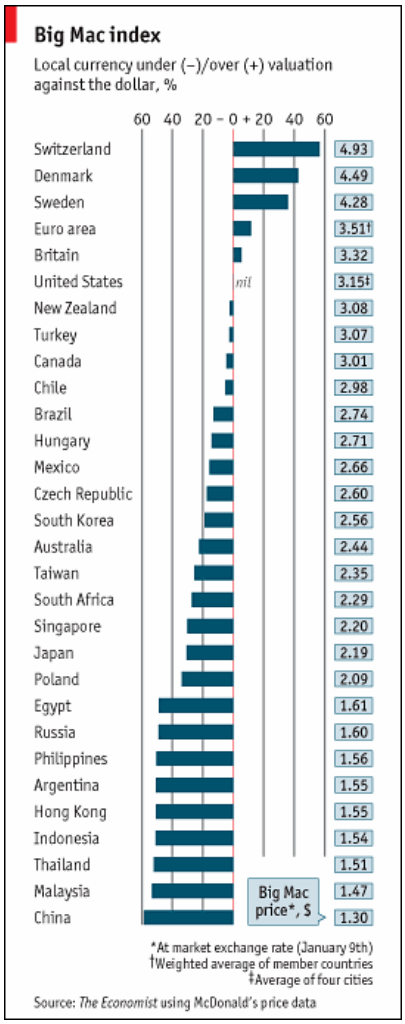


Figure 18 – Big Mac Index as calculated by "The Economist"

In the following table, prices comparison around the world are presented excluding and including rents, taking as reference Zurich=100.

Prices comparison

City[1]	Excl. rents Zurich = 100	Incl. rents Zurich = 100
Oslo	115.5	109.4
Copenhagen	105.1	104.1
Tokyo	101.3	104.6
Zurich	100.0	100.0
London	99.0	122.4
Stockholm	98.3	95.2
Basel	97.5	92.8
Paris	96.1	99.3
Geneva	95.6	98.2
Lugano	93.9	90.3
Helsinki	93.4	91.8
New York	91.8	105.0
Dublin	90.7	97.5
Vienna	89.7	90.8
Hong Kong	89.1	100.6
Chicago	85.4	99.1
Brussels	84.5	80.9
Luxembourg	84.0	81.0
Frankfurt	83.0	82.6
Amsterdam	82.5	86.4
Athens	81.0	79.1
Milan	80.6	89.5
Berlin	79.8	76.2
Rome	79.6	86.2
Seoul	76.6	77.7
Nicosia	76.2	85.7
Sydney	75.4	77.9
Istanbul	75.2	89.4
Madrid	74.8	73.9
Los Angeles	74.1	76.8
Toronto	73.0	74.3
Montreal	71.9	66.7
Lisbon	70.9	74.5
Auckland	69.7	71.7
Barcelona	68.9	67.7
Taipei	66.7	76.6
Miami	65.5	65.3
Tel Aviv	65.3	65.4
Singapore	65.0	71.2
Lagos	64.0	55.3
Budapest	63.8	65.3
Moscow	63.4	66.2
Shanghai	61.7	63.5
Ljubljana	60.4	64.6
Johannesburg	58.4	62.7
Dubai	57.9	65.3
Tallinn	57.5	52.7
Manama	56.4	58.2
Warsaw	54.3	55.5
Mexico City	53.7	54.9
São Paulo	51.9	51.8
Vilnius	51.2	48.2
Caracas	50.4	60.8
Bratislava	49.1	49.9
Nairobi	49.0	47.6
Jakarta	46.7	55.0
Rio de Janeiro	45.3	46.0
Santiago de Chile	45.0	45.8
Prague	43.8	45.2
Bangkok	43.2	41.9
Bogotá	42.7	38.8
Lima	42.4	32.7
Riga	42.1	37.7
Sofia	38.3	36.4
Kuala Lumpur	36.9	36.5
Bucarest	36.6	32.2
Manila	32.5	37.5
Kiev	31.1	32.7
Buenos Aires	30.4	27.8
Karachi	28.6	29.1
Mumbai	28.2	27.8

Table 34 – Comparative Price Levels as calculated by UBS in 2003

All the indexes presented can be summarized in the following table. The data has been converted into adimensional figures through exchange rates

	HICP						Correction coefficients EC						PPP OECD / exchange rate						PPP Eurostat / echange rate					
COUNTRY	2000	2001	2002	2003	2004	2005	2000	2001	2002	2003	2004	2005	2000	2001	2002	2003	2004	2005	2000	2001	2002	2003	2004	2005
be Belgium	103,1	105,9	108,7	110	111,5	113,7	100	100	100	100	100	100	104,066	100,077	94,068	81,047	78,832	77,242	106,304	103,886	103,353	104,945	105,265	105,574
cz Czech Republic	124	129,1	133,5	132,6	135,3	137,3	:	:	:	:	79	82	45,351	45,243	41,287	37,554	38,241	39,082	42,092	44,199	48,374	51,400	50,072	53,117
dk Denmark	106,5	108,9	111,6	114,5	115,6	116,5	127	127	129	130	131	131	127,421	124,656	120,775	104,892	101,044	98,932	129,450	131,700	135,854	139,492	138,876	137,975
de Germany	103,6	104,9	107,2	108,2	109,5	111,3	104	103	104	101	102	101	110,831	108,677	102,122	87,454	83,408	80,644	110,116	111,127	111,476	112,433	110,506	110,182
ee Estonia	124,9	132	137,6	141,1	142	147,9	:	:	:	:	77	78							48,201	51,185	53,364	54,825	54,914	55,934
gr Greece	113,2	116,8	122,4	126,4	130,3	135,8	83	85	88	88	90	90	77,310	77,306	72,205	62,911	62,648	62,182	79,012	80,279	78,509	80,491	81,105	82,137
es Spain	107,7	110,8	114,2	118,5	121,2	125	91	92	94	94	95	95	83,823	83,523	79,139	68,999	67,829	67,528	84,207	84,119	83,909	85,592	86,033	87,043
fr France	103,3	104,7	107,3	109,3	111,7	113,5	105	104	105	104	105	103	103,350	100,210	95,897	83,291	81,826	79,628	104,331	102,900	103,433	103,182	104,813	104,505
ie Ireland	108,2	112,4	118,3	123,9	126,7	129,3	103	104	108	109	111	113	107,683	109,705	106,750	93,968	90,116	88,519	110,406	115,504	120,787	124,119	122,646	122,646
it Italy	106,9	109,5	112	115,2	117,7	120	97	98	99	100	101	103	91,244	91,190	87,886	77,730	76,167	75,103	94,492	96,662	98,648	102,471	102,799	102,799
cy Cyprus	110,2	111,9	114,4	119,5	121,4	124,8	:	:	:	:	100	101	:	:	:	:	:	:	89,850	91,140	90,440	97,574	92,081	92,910
lv Latvia	117,9	119,5	123,6	125,4	130,4	139,1	:	:	:	:	73	71	:	:	:	:	:	:	46,119	48,002	51,130	49,962	48,768	49,186
lt Lithuania	119,5	119,4	123,2	121	119,5	122,9	:	:	:	:	75	74	:	:	:	:	:	:	39,910	42,330	44,435	46,522	46,832	47,057
lu Luxembourg	104,3	107,3	109,6	113,2	115,8	119,1	:	:	:	:	:	100	111,592	111,030	104,410	88,260	84,416	83,726	109,695	111,736	110,886	114,155	115,312	117,117
hu Hungary	156,4	172,1	183,5	192,3	205,1	213,2	:	:	:	:	76	78	57,515	51,368	48,374	43,177	44,206	45,601	43,485	44,402	50,762	57,965	54,219	58,564
mt Malta	110,8	111,9	116,7	117,6	120,9	123,2	:	:	:	:	98	98	:	:	:	:	:	:	68,281	70,474	71,042	71,438	69,908	69,677
nl Netherlands	105,8	110,7	116,1	119,2	121	122,5	100	101	104	103	102	101	104,430	102,339	98,109	85,086	81,436	79,426	102,810	102,711	104,098	105,615	104,785	104,067
at Austria	103,5	105,8	107,9	109,7	111	113,7	104	103	104	103	104	103	:	:	:	:	:	:	104,017	104,725	106,359	107,600	105,484	105,381
pl Poland	146,4	157,1	162,7	163,3	166,2	172,5	:	:	:	:	69	78	55,540	53,201	46,011	42,383	45,557	47,962	47,937	53,521	58,777	52,706	45,553	52,541
pt Portugal	107,3	112	116,1	120,7	123,4	125,9	84	86	89	89	91	91	73,462	73,278	70,139	65,371	63,463	62,022	74,617	75,640	77,297	86,907	85,719	85,635
si Slovenia	129,8	140,7	152,5	162,7	169,2	173,1	:	:	:	:	78	76	:	:	:	:	:	:	73,840	72,791	76,358	76,657	74,264	73,572
sk Slovakia	134,8	144,9	154,2	165,2	178,9	184,7	:	:	:	:	84	87	47,831	46,251	39,178	36,986	37,470	44,317	40,101	39,666	40,058	45,242	48,023	51,417
fi Finland	104,8	107,8	110,9	112,5	113,4	113,2	115	115	116	115	114	113	110,568	108,707	102,989	89,701	86,064	84,414	120,778	120,868	122,394	124,250	122,019	120,348
se Sweden	103,5	105,1	108,1	111	112,4	113	118	108	111	109	110	106	120,479	117,515	113,342	101,503	88,952	86,768	125,637	116,376	120,341	122,359	121,336	117,639
uk United Kingdom	104,5	105,4	107,1	108,6	110,1	111,9	119	122	112	105	109	110	103,667	103,347	98,721	95,085	90,935	89,817	117,996	115,167	111,811	105,984	107,513	106,600
bg Bulgaria	721	788,1	843,2	857,9	912,8	943,2	:	:	:	:	:	:	:	:	:	:	:	:	31,550	32,995	34,893	35,781	36,480	37,475
ro Romania	738,4	1033	1328,1	1548,8	1764,8	1922,7	:	:	:	:	:	:	:	:	:	:	:	:	41,064	37,300	39,221	38,476	37,369	45,794
tr Turkey	727,7	976,7	1763,6	2221,1	2560,6	2796,1	:	:	:	:	:	:	50,145	63,696	43,984	45,524	57,829	62,049	20,515	75,420	52,913	49,426	53,458	54,831
is Iceland	108,2	111,9	122,9	124,3	126,2	129,5	:	:	:	:	:	:	117,462	125,210	127,435	118,291	95,447	91,851	131,661	133,900	124,257	136,544	128,389	136,503
no Norway	108,5	111,9	112,9	117,6	115,9	117	:	:	:	:	:	:	127,495	120,858	117,220	105,384	102,134	106,406	133,891	133,217	141,523	160,877	137,708	139,762
CH Switzerland	102.9	103.8	104.5	105.2	106,40	107,20	:	:	:	:	:	:	130,83	130,90	120,12	104,61	101,73	101,05	145,53	149,88	149,62	142,85	136,34	133,02

(1)Switzerland the national CPIs are given,which are not strictly comparable with the HICPs.
(2)As of 1 July 2005 the currency of Romania is the new Romanian leu (RON). 1 RON equals 10,000 old Romanian lei (ROL).
(3) As of 1 January 2005 the currency of the Republic of Turkey is the new Turkish lira (TRY). 1 TRY equals 1,000,000 Turkish liras (TRL).
: No data availble

Table 35 – Values of the indexes considered for the selection of the study corrective coefficient, converted into adimensional figures, from 2000 to 2005

5.5Annex 5: Country analysis of the survey results

The least squares adjustment method has been used for correcting the existing deviations on the average data of researchers' remunerations per level of seniority and per gender and level of seniority. The following graphics show the adjustment of the data in the different countries, including the equation of the least square adjustment for each country.

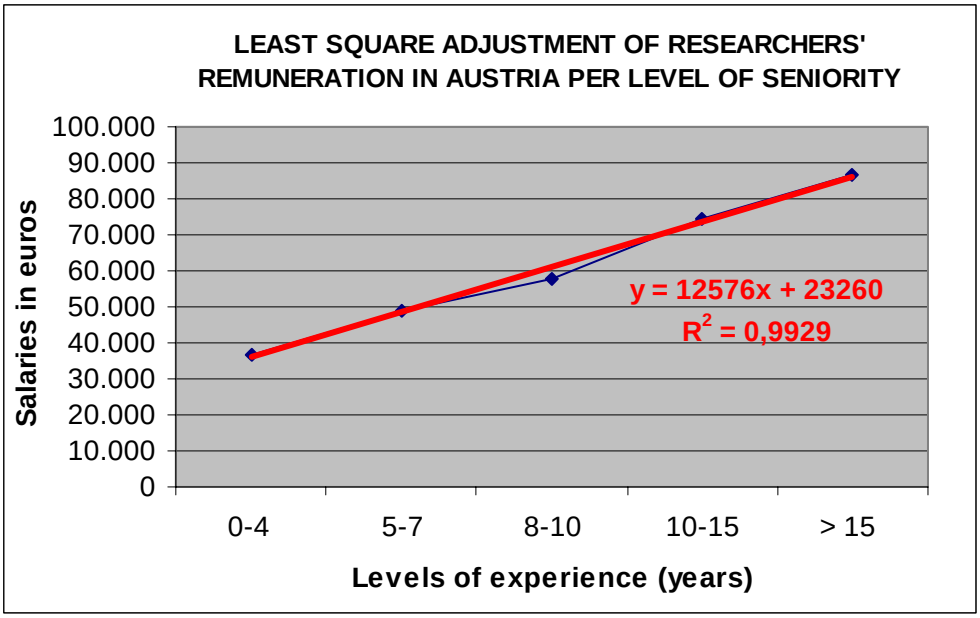


Figure 19 – Least square adjustment of researchers' remunerations in Austria per level of seniority

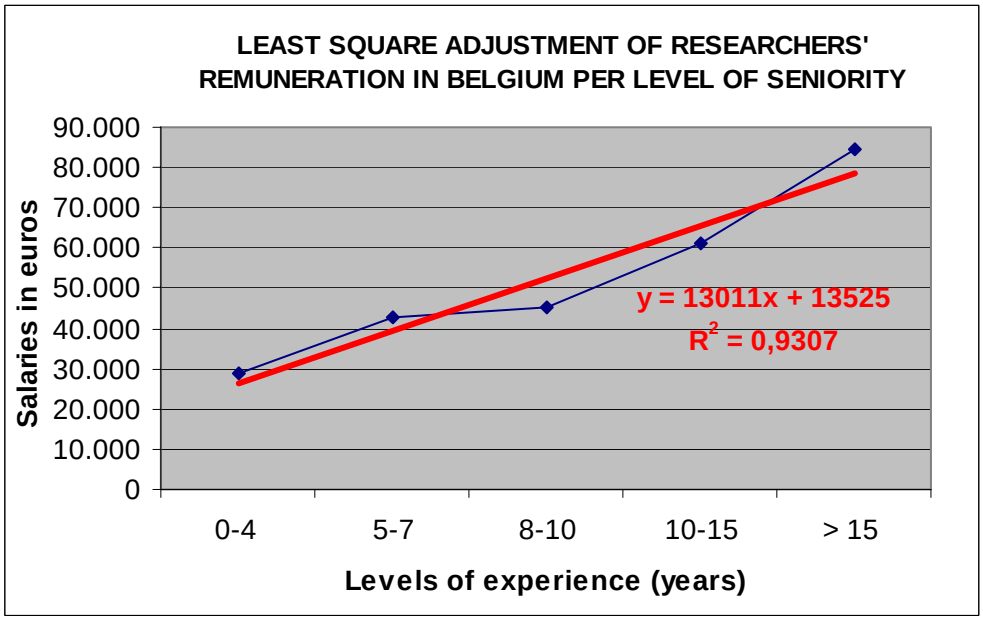


Figure 20 - Least square adjustment of researchers' remunerations in Belgium per level of seniority

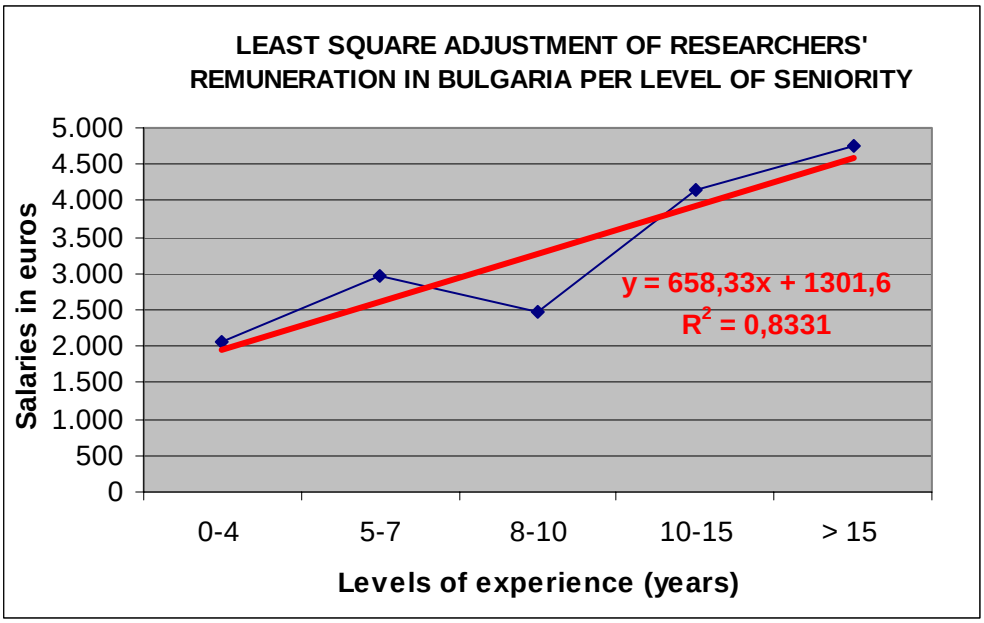


Figure 21 - Least square adjustment of researchers' remunerations in Bulgaria per level of seniority

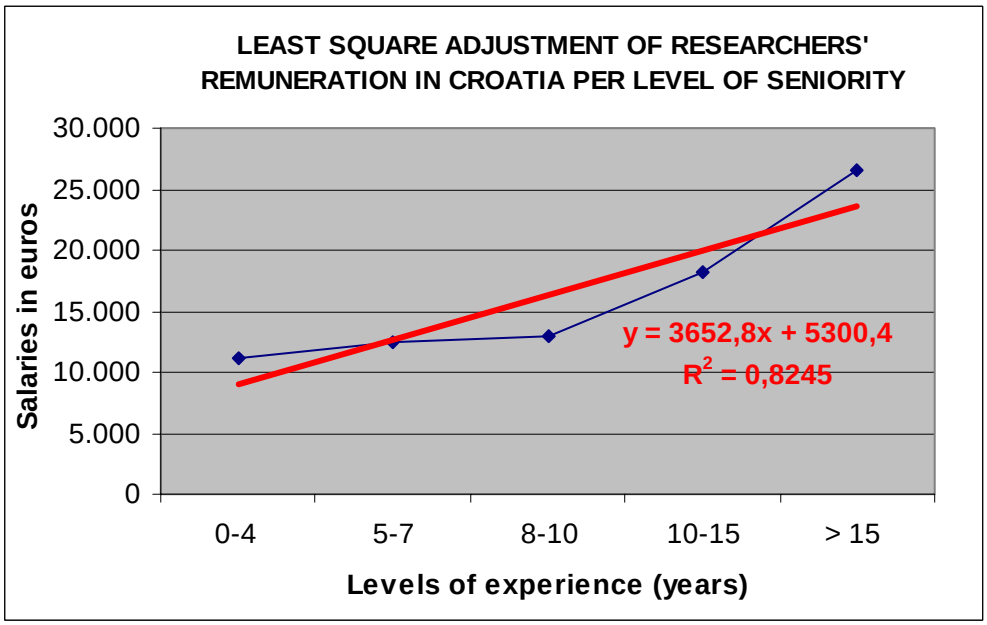


Figure 22 - Least square adjustment of researchers' remunerations in Croatia per level of seniority

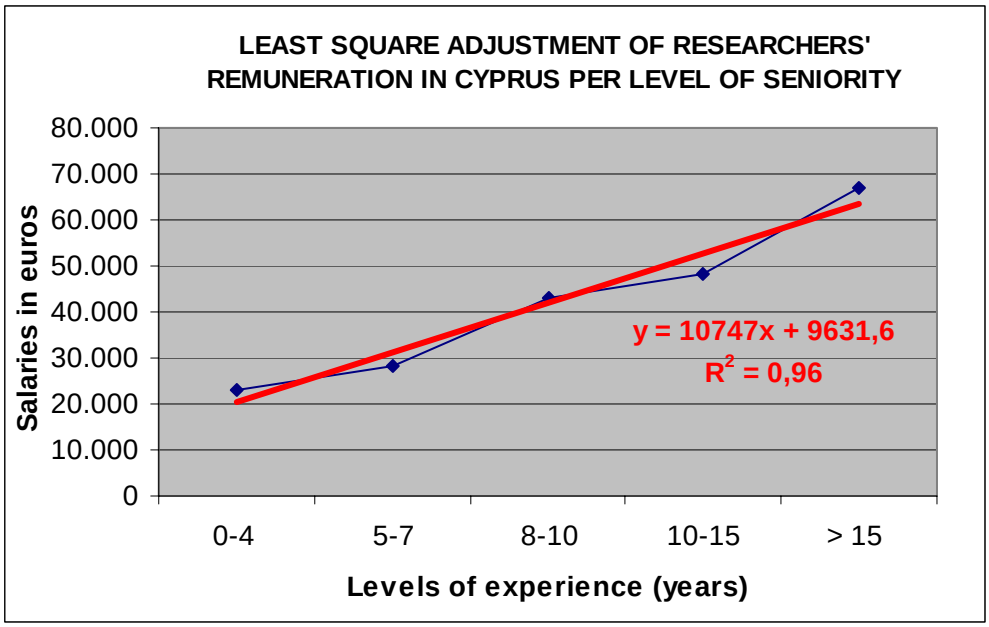


Figure 23 - Least square adjustment of researchers' remunerations in Cyprus per level of seniority

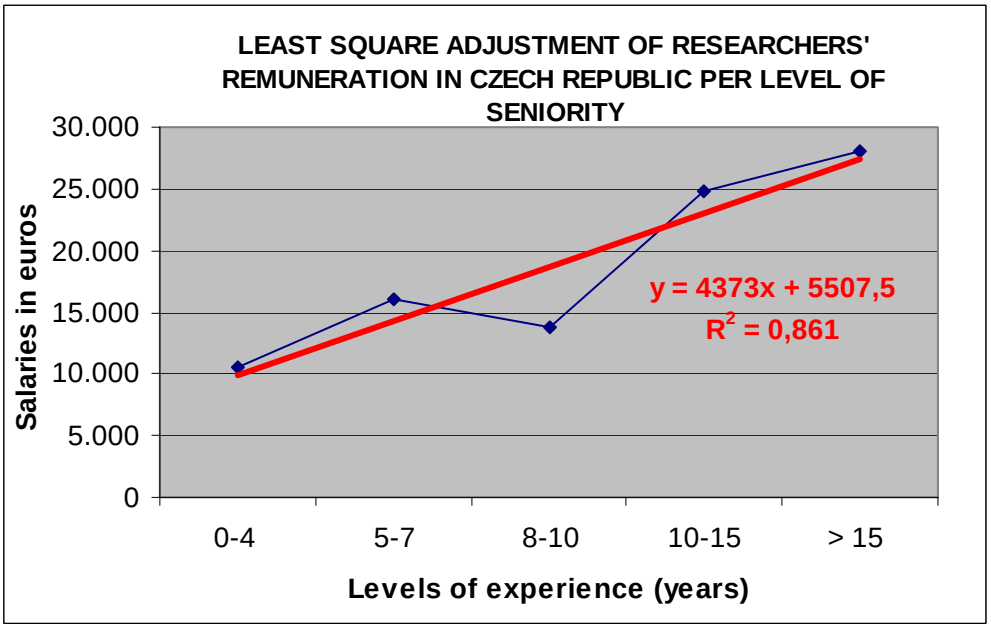


Figure 24 - Least square adjustment of researchers' remunerations in Czech Republic per level of seniority

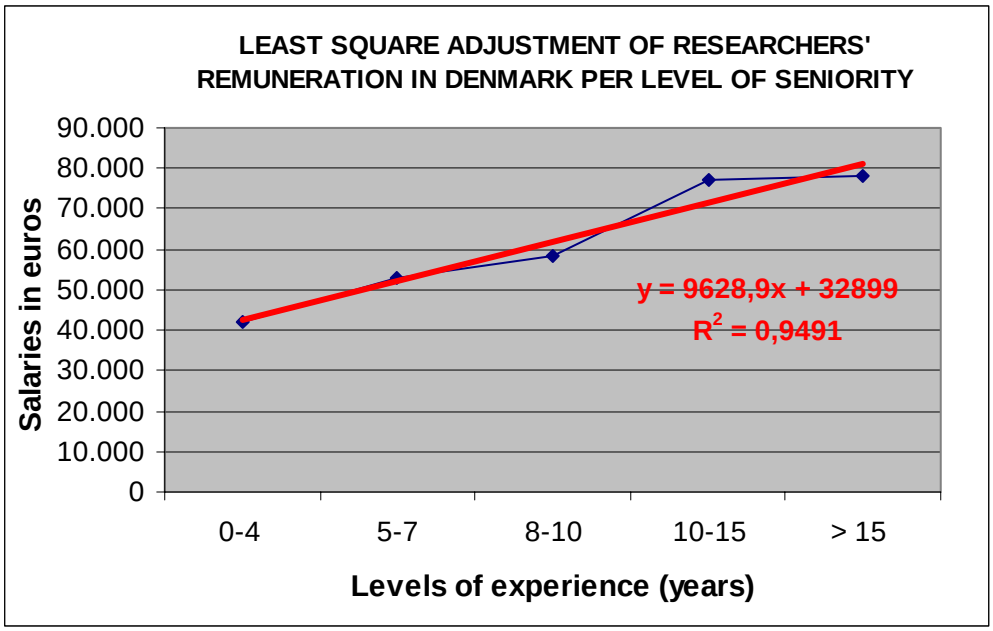


Figure 25 - Least square adjustment of researchers' remunerations in Denmark per level of seniority

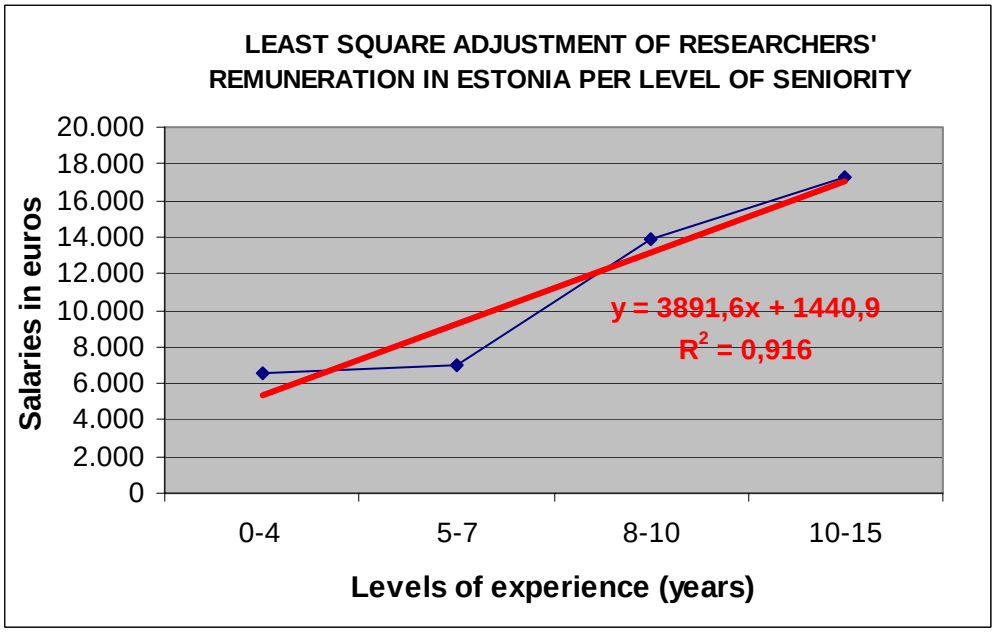


Figure 26 - Least square adjustment of researchers' remunerations in Estonia per level of seniority

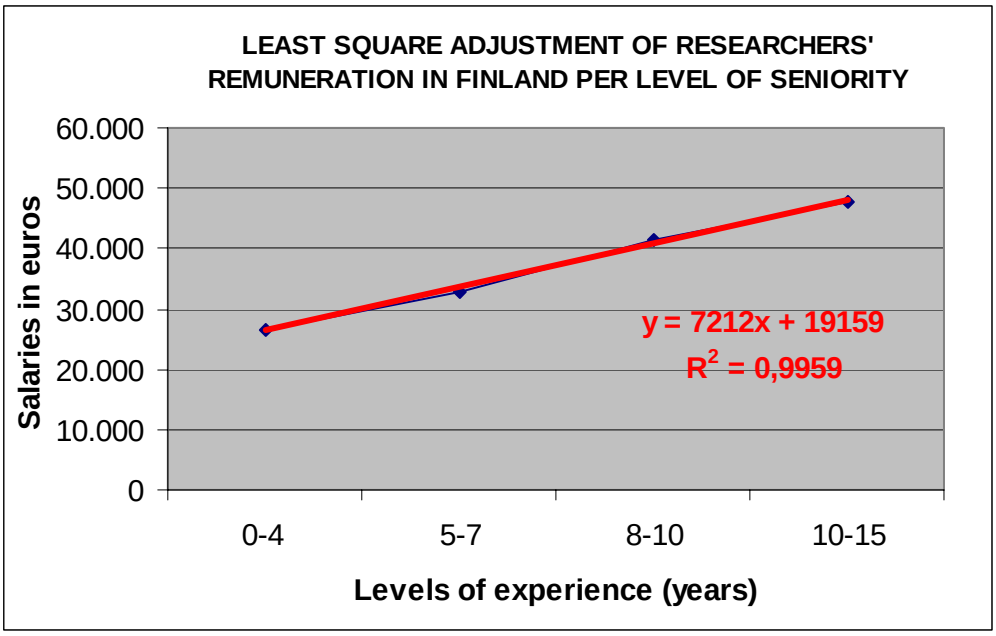


Figure 27 - Least square adjustment of researchers' remunerations in Finland per level of seniority

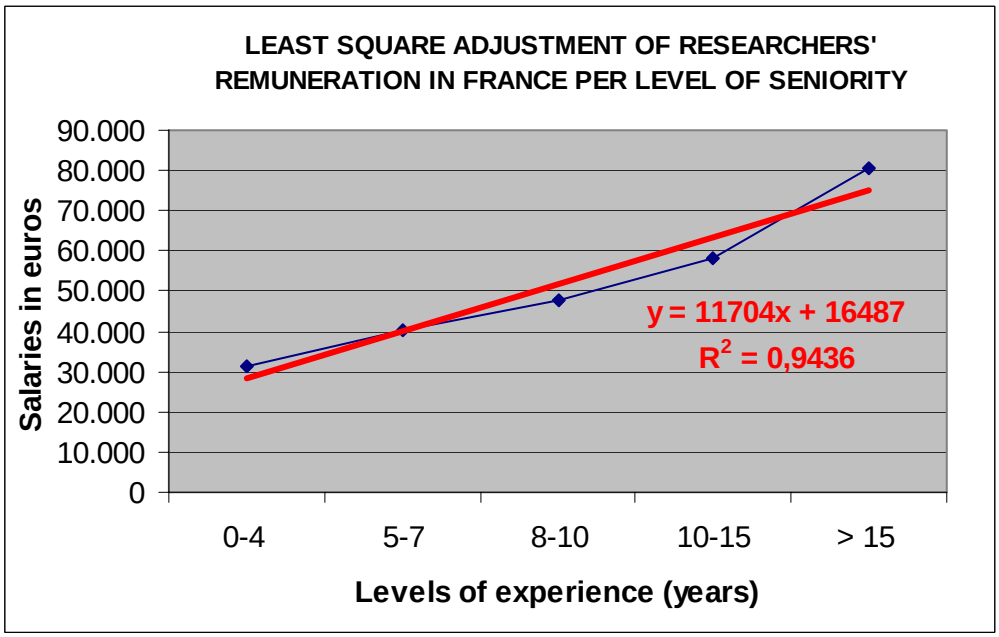


Figure 28 - Least square adjustment of researchers' remunerations in France per level of seniority

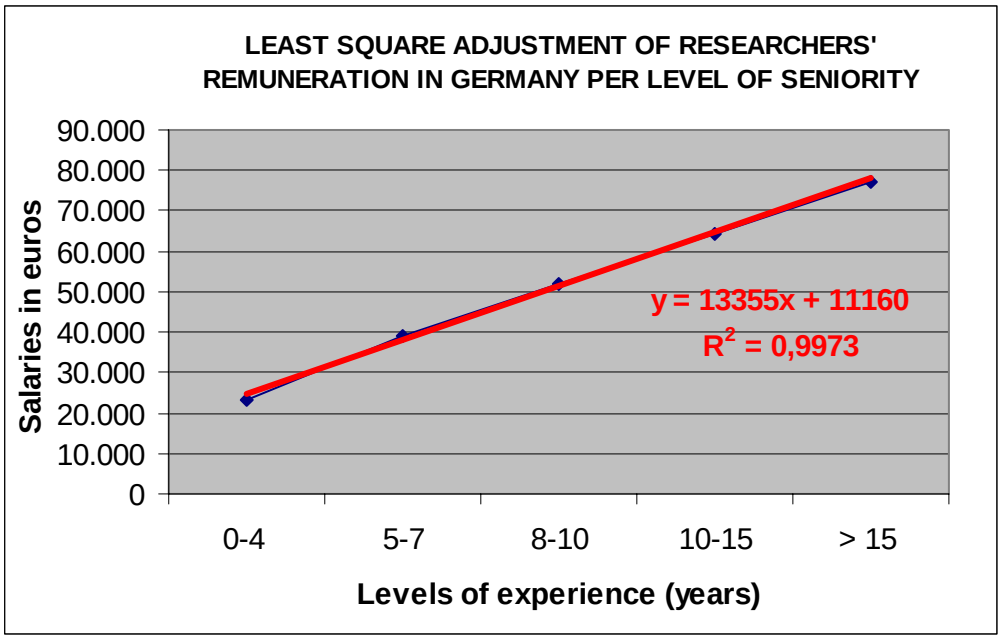


Figure 29 - Least square adjustment of researchers' remunerations in Germany per level of seniority

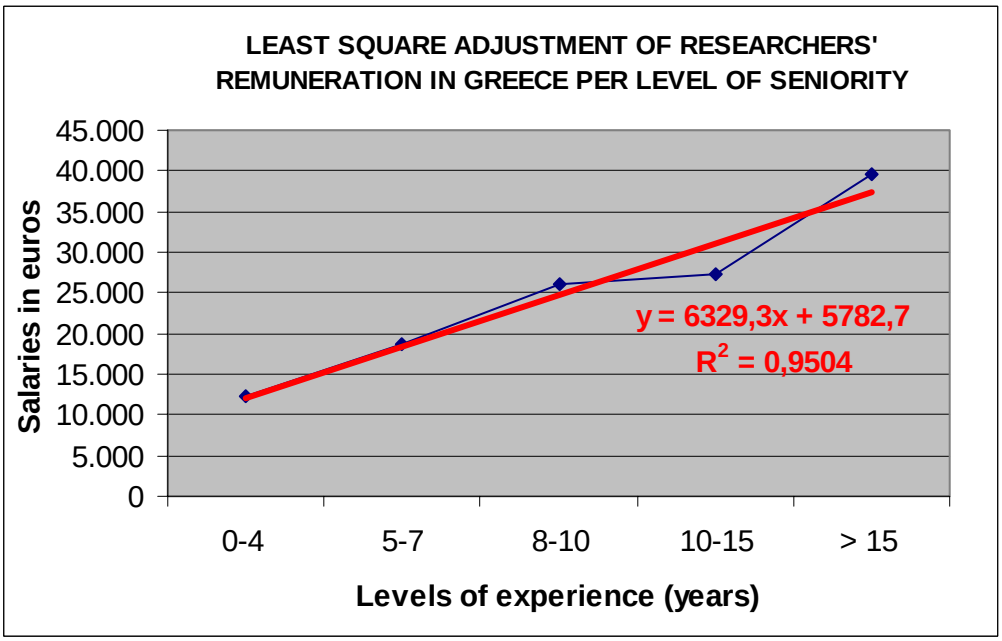


Figure 30 - Least square adjustment of researchers' remunerations in Greece per level of seniority

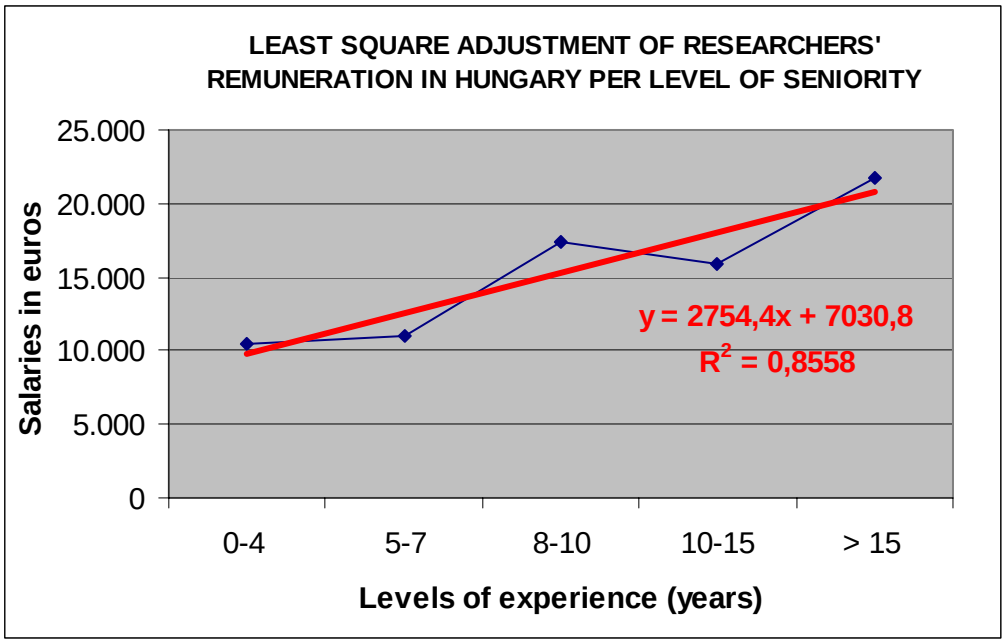


Figure 31 - Least square adjustment of researchers' remunerations in Hungary per level of seniority

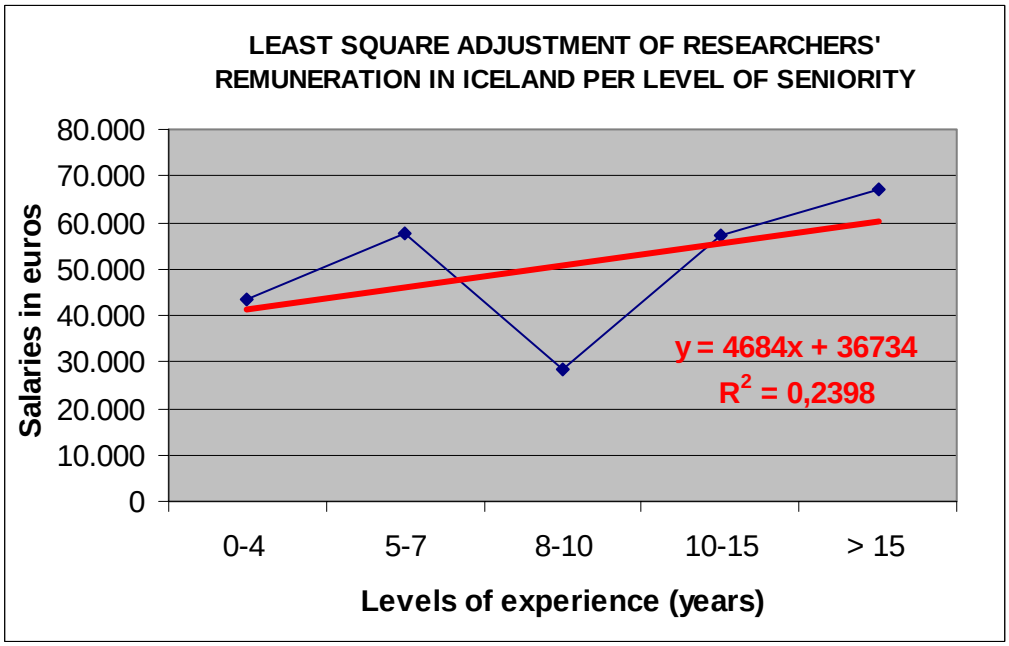


Figure 32 - Least square adjustment of researchers' remunerations in Iceland per level of seniority

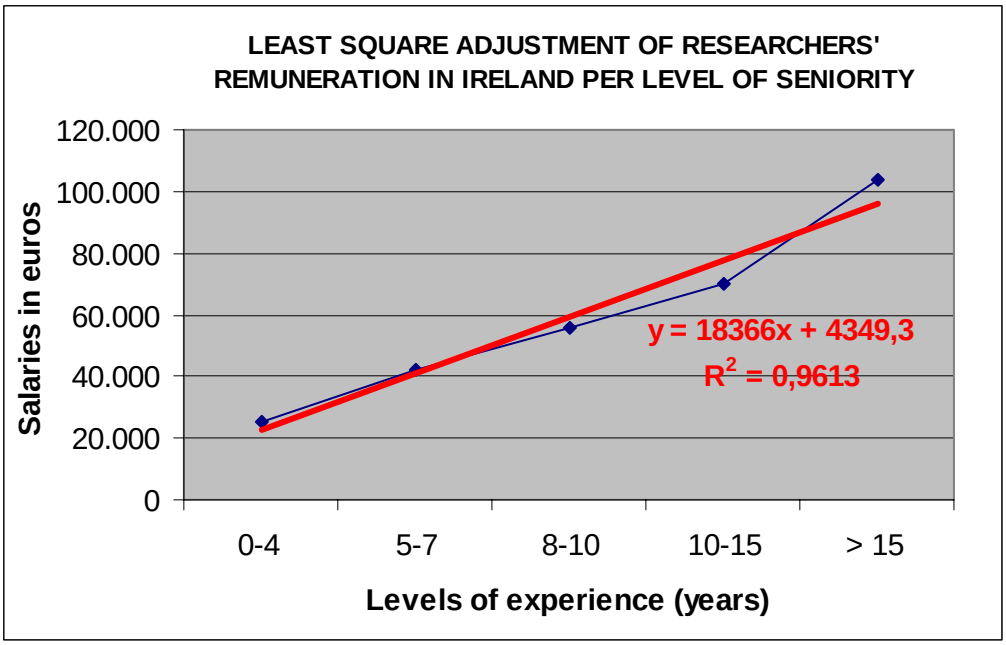


Figure 33 - Least square adjustment of researchers' remunerations in Ireland per level of seniority

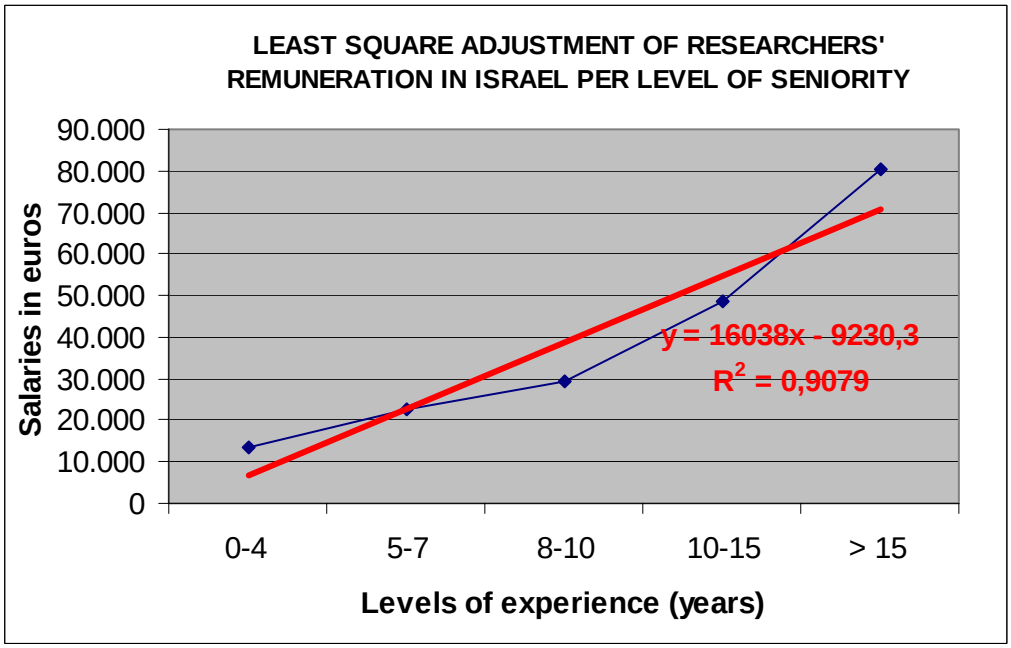


Figure 34 - Least square adjustment of researchers' remunerations in Israel per level of seniority

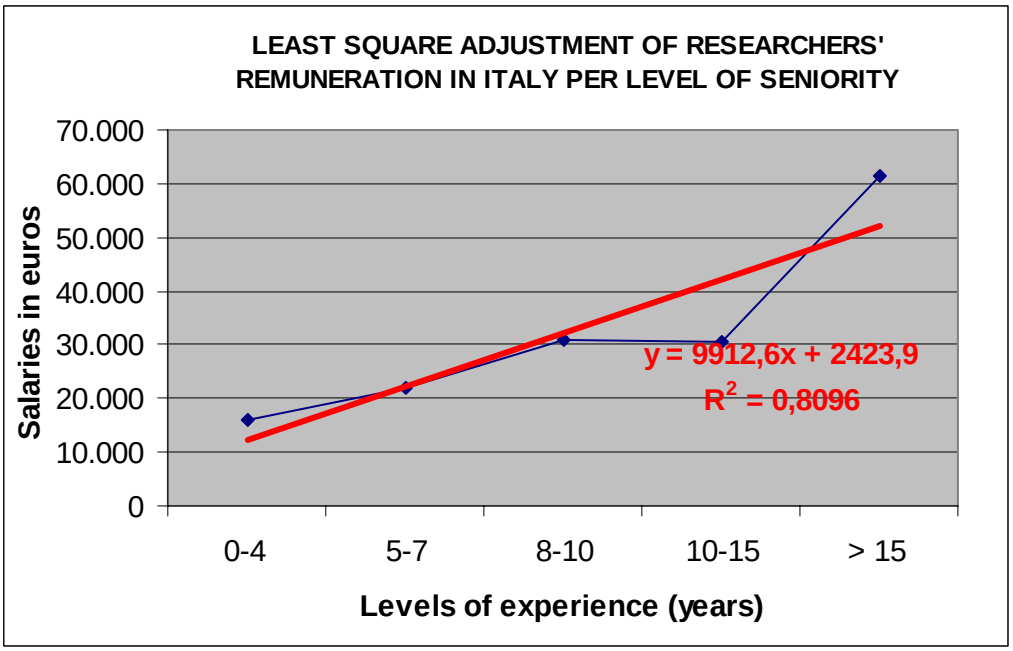


Figure 35 - Least square adjustment of researchers' remunerations in Italy per level of seniority

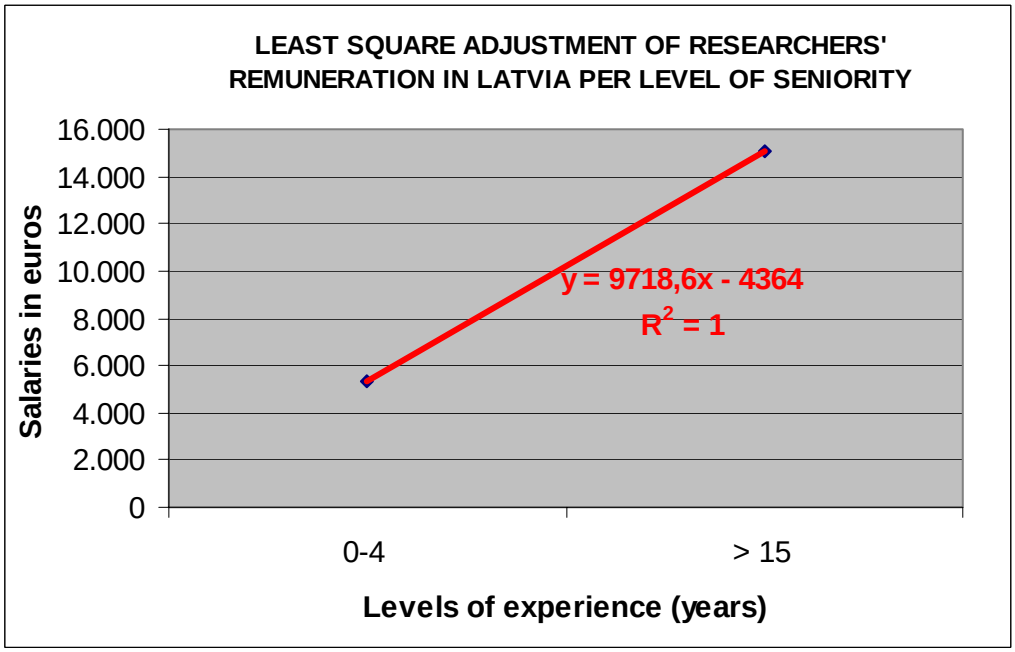


Figure 36 - Least square adjustment of researchers' remunerations in Latvia per level of seniority

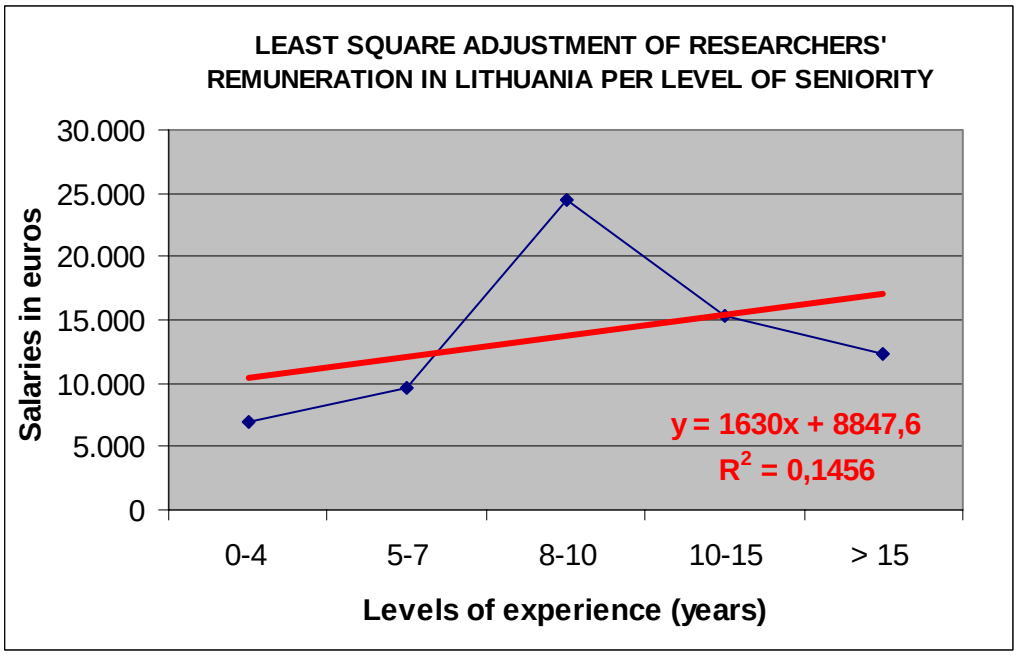


Figure 37 - Least square adjustment of researchers' remunerations in Lithuania per level of seniority

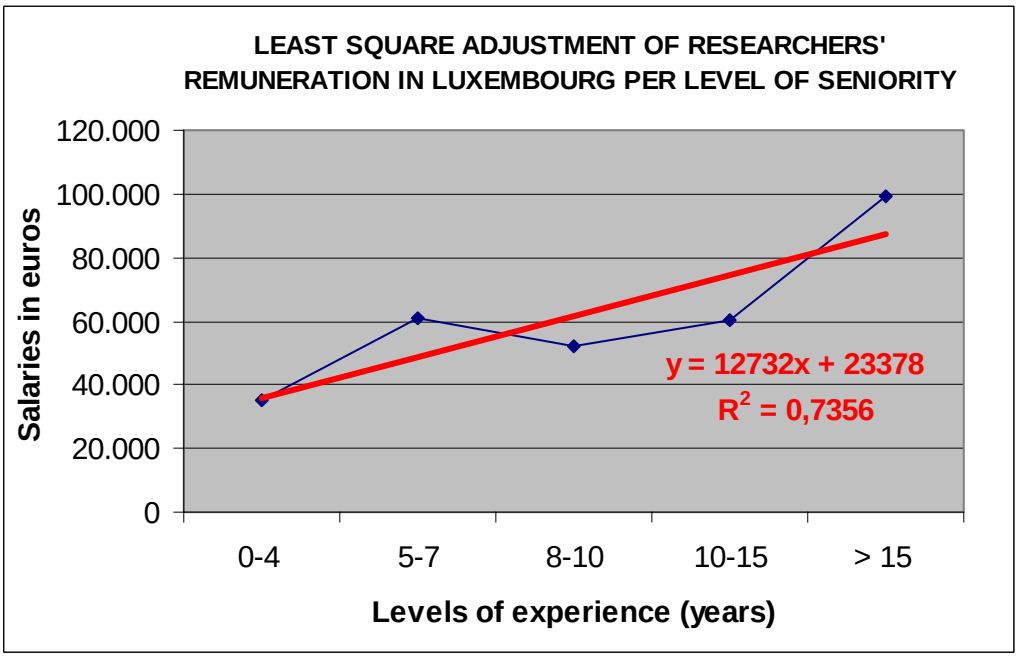


Figure 38 - Least square adjustment of researchers' remunerations in Luxembourg per level of seniority

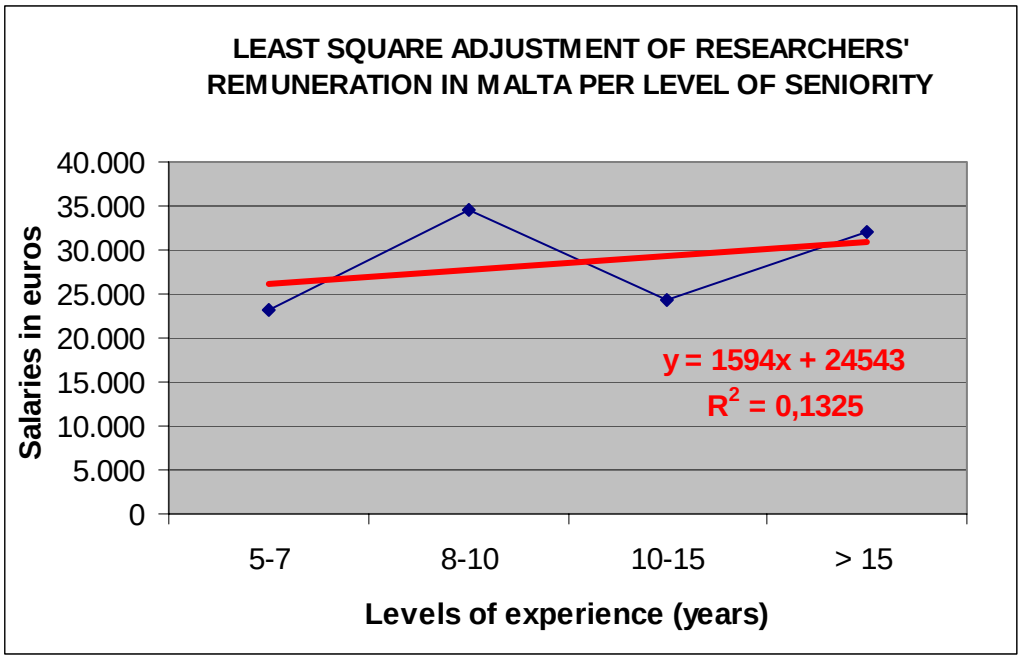


Figure 39 - Least square adjustment of researchers' remunerations in Malta per level of seniority

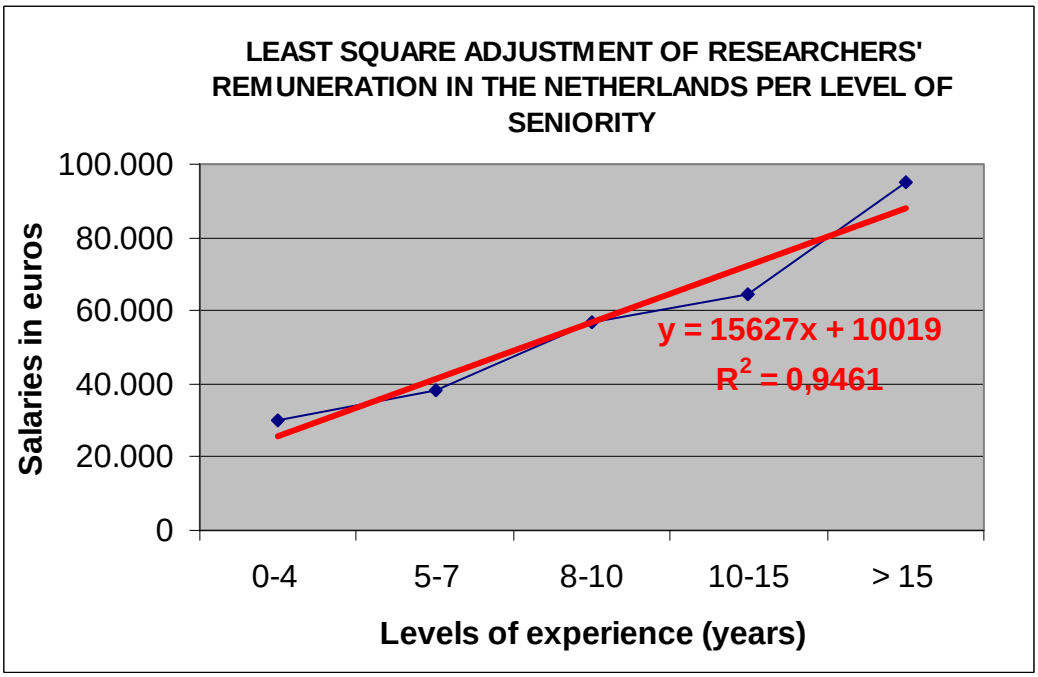


Figure 40 - Least square adjustment of researchers' remunerations in The Netherlands per level of seniority

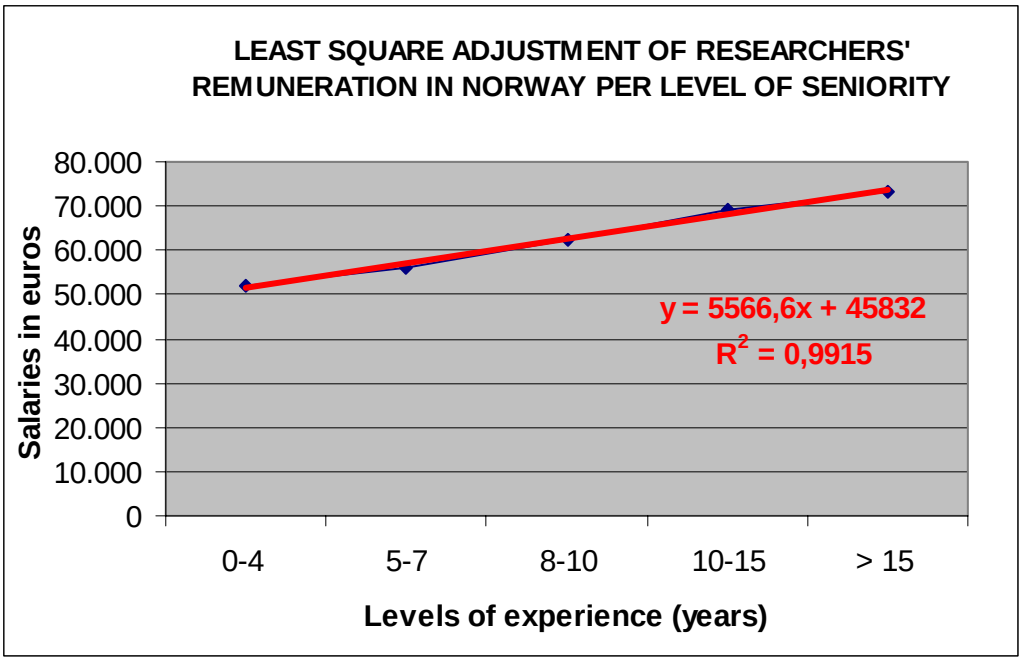


Figure 41 - Least square adjustment of researchers' remunerations in Norway per level of seniority

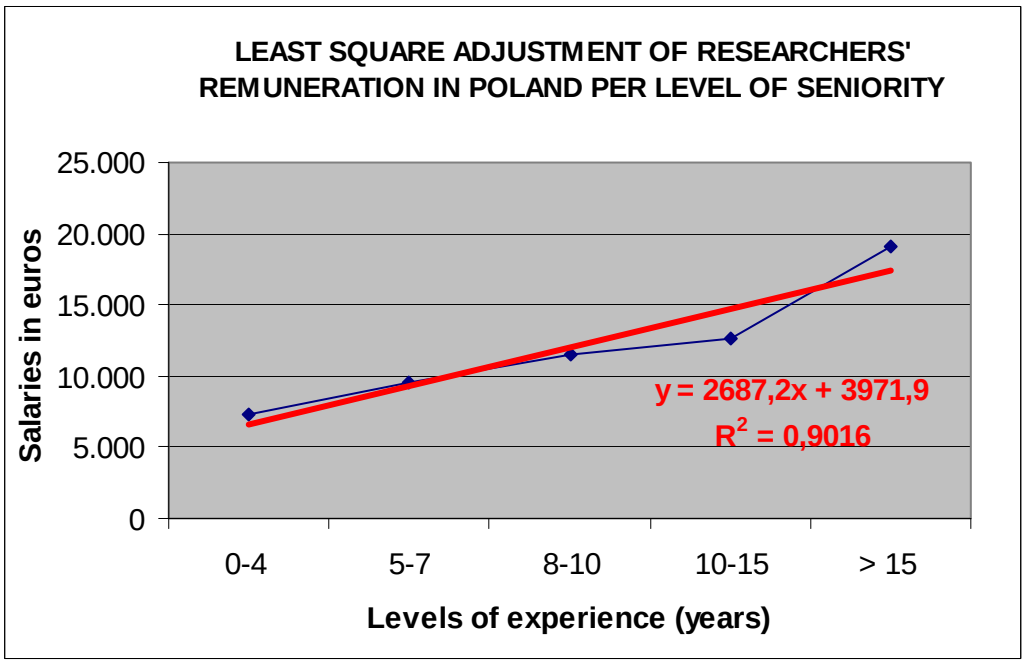


Figure 42 - Least square adjustment of researchers' remunerations in Poland per level of seniority

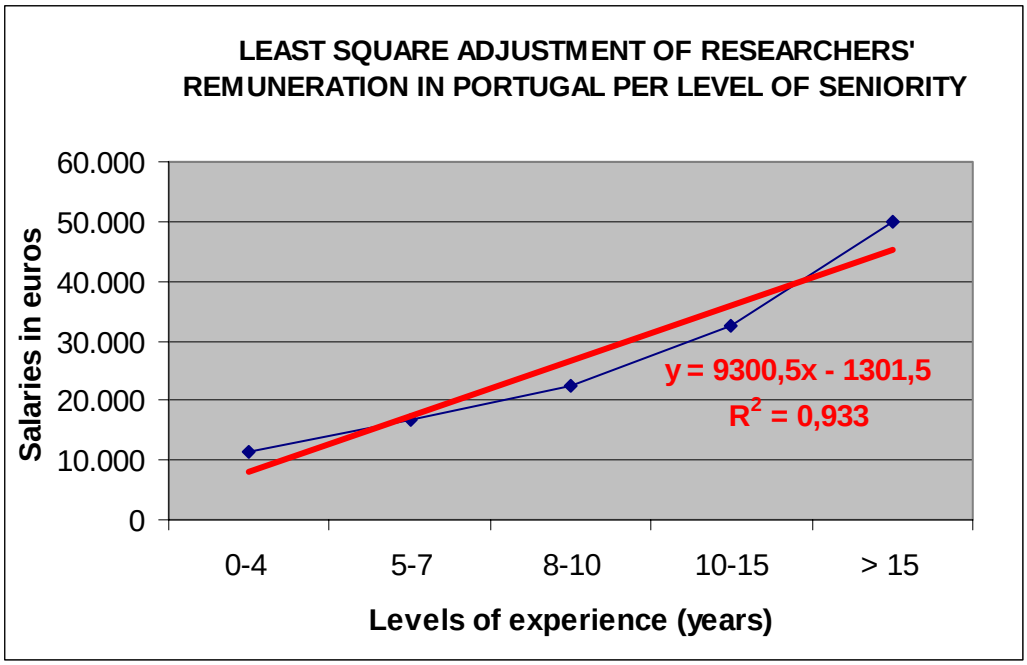


Figure 43 - Least square adjustment of researchers' remunerations in Portugal per level of seniority

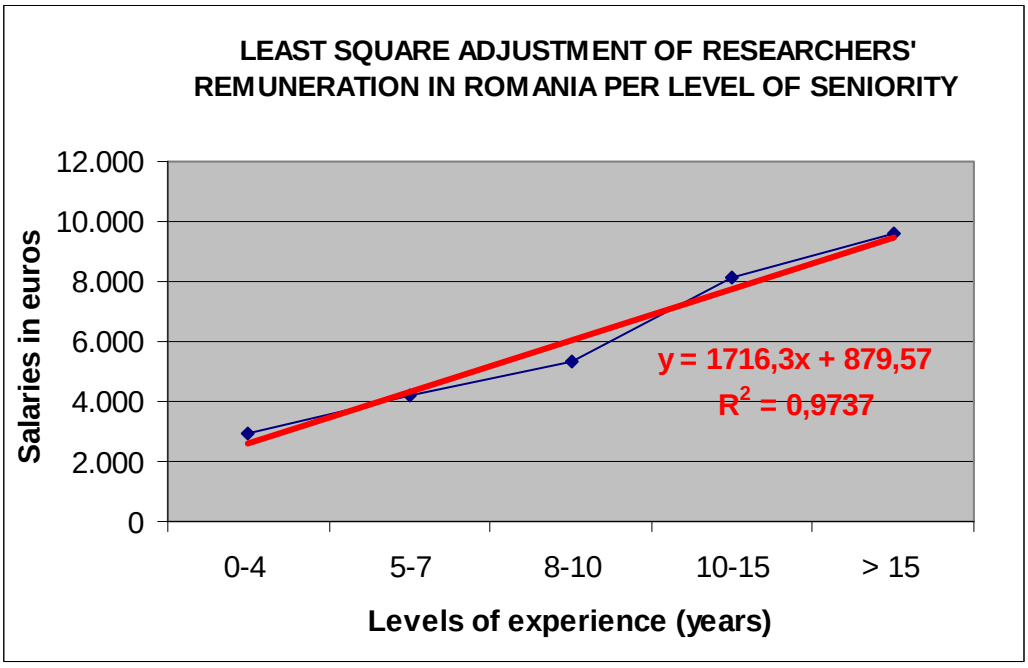


Figure 44 - Least square adjustment of researchers' remunerations in Romania per level of seniority

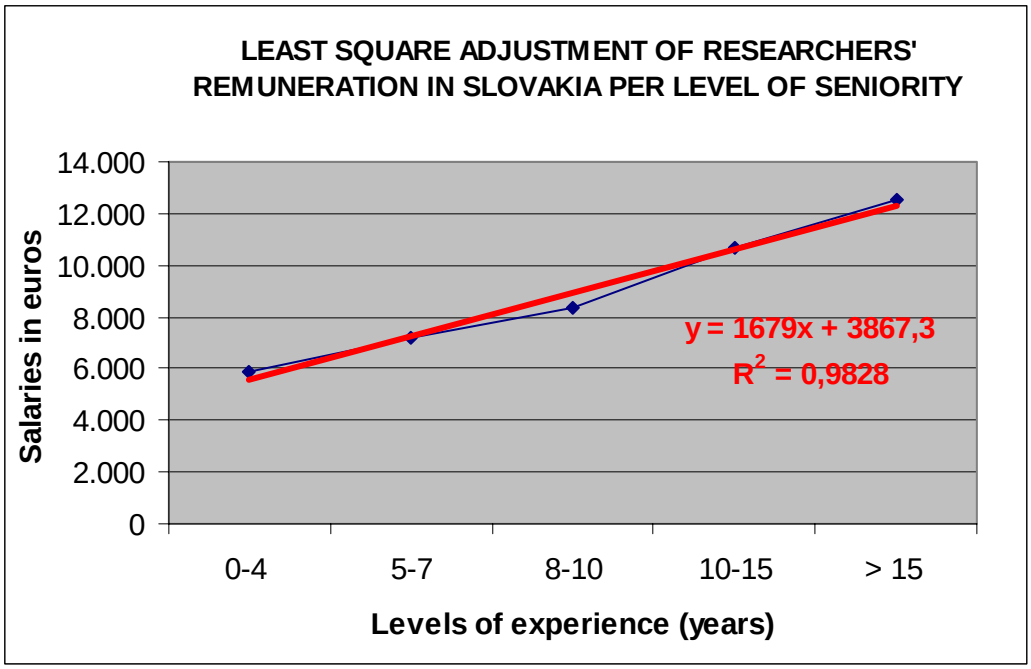


Figure 45 - Least square adjustment of researchers' remunerations in Slovakia per level of seniority

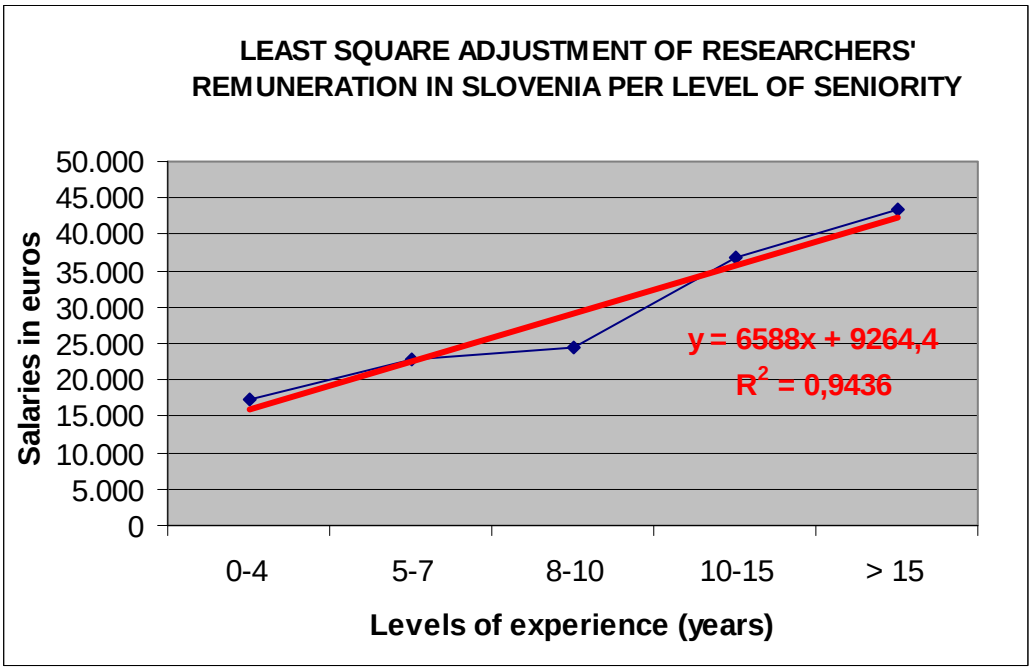


Figure 46 - Least square adjustment of researchers' remunerations in Slovenia per level of seniority

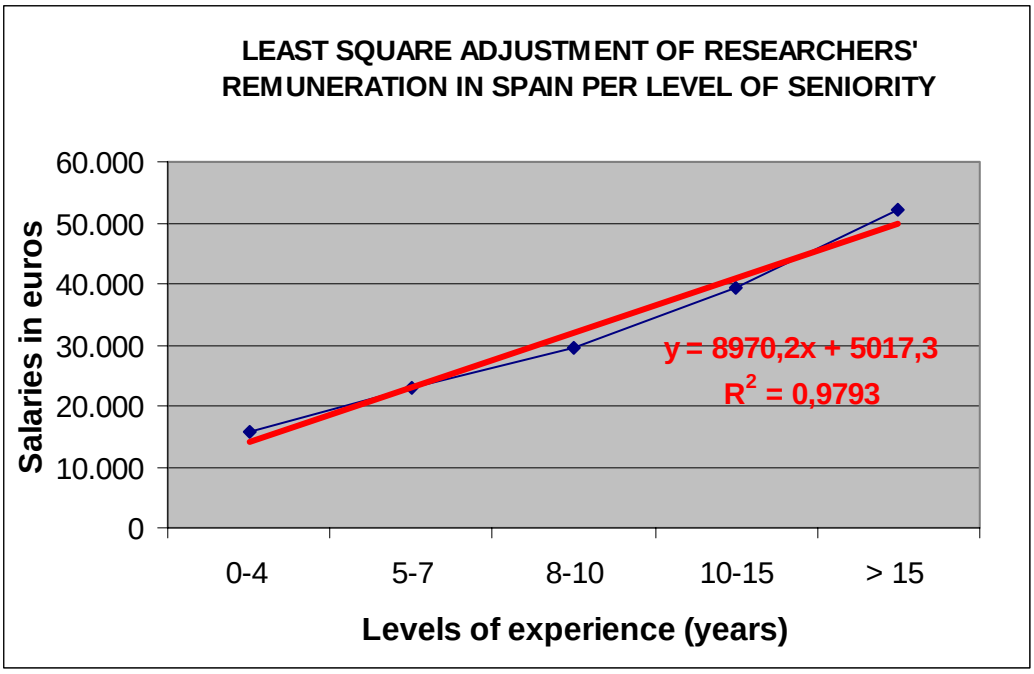


Figure 47 - Least square adjustment of researchers' remunerations in Spain per level of seniority

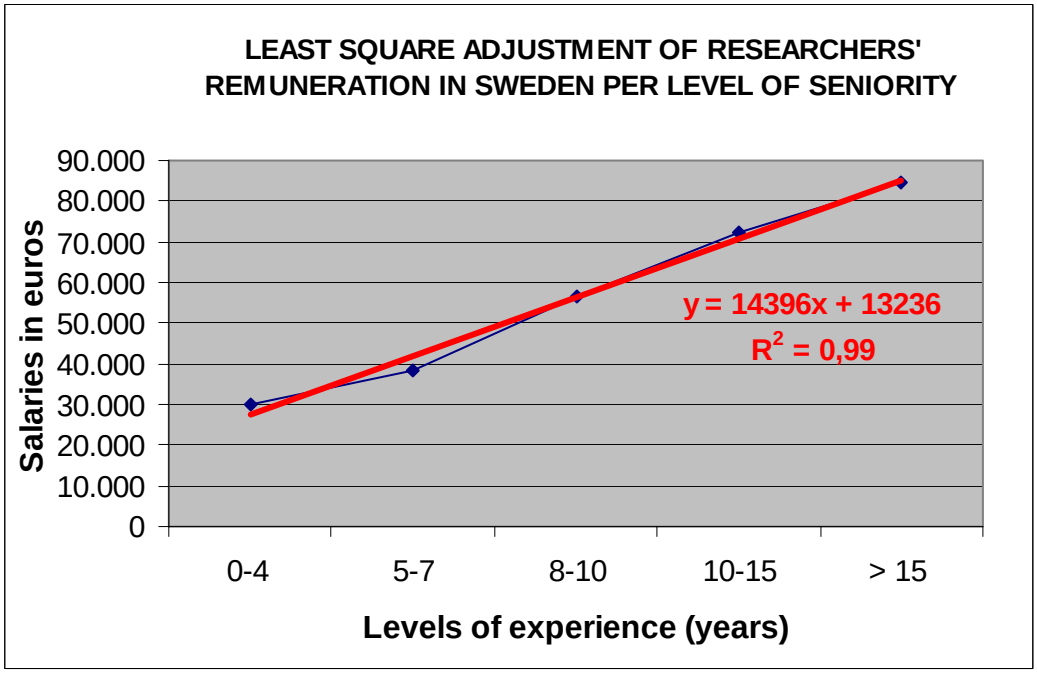


Figure 48 - Least square adjustment of researchers' remunerations in Sweden per level of seniority

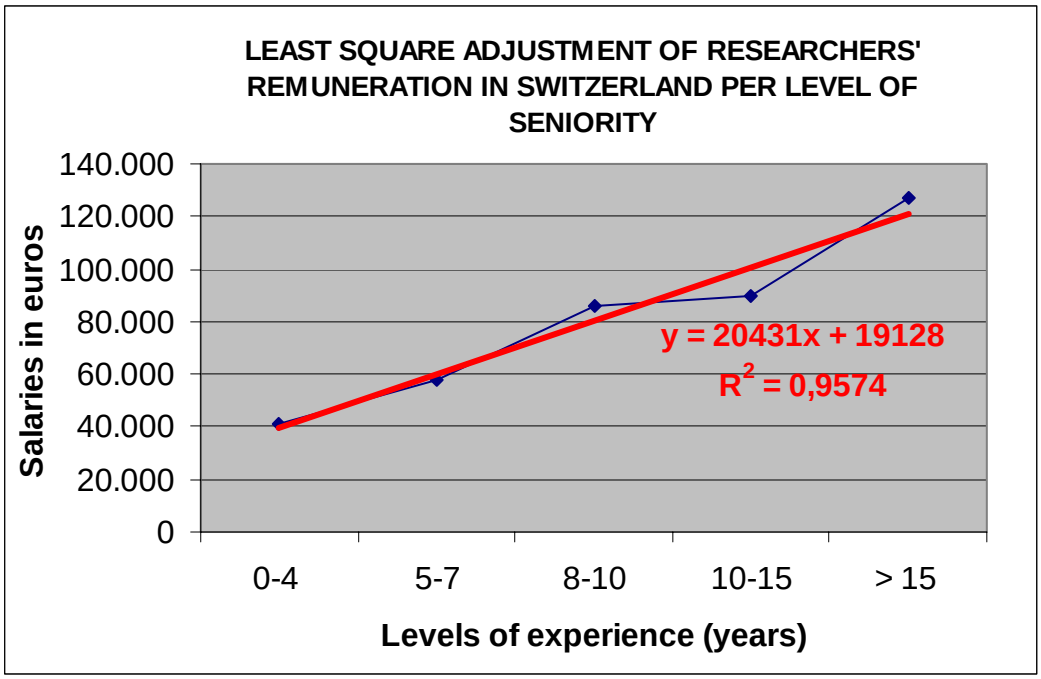


Figure 49 - Least square adjustment of researchers' remunerations in Switzerland per level of seniority

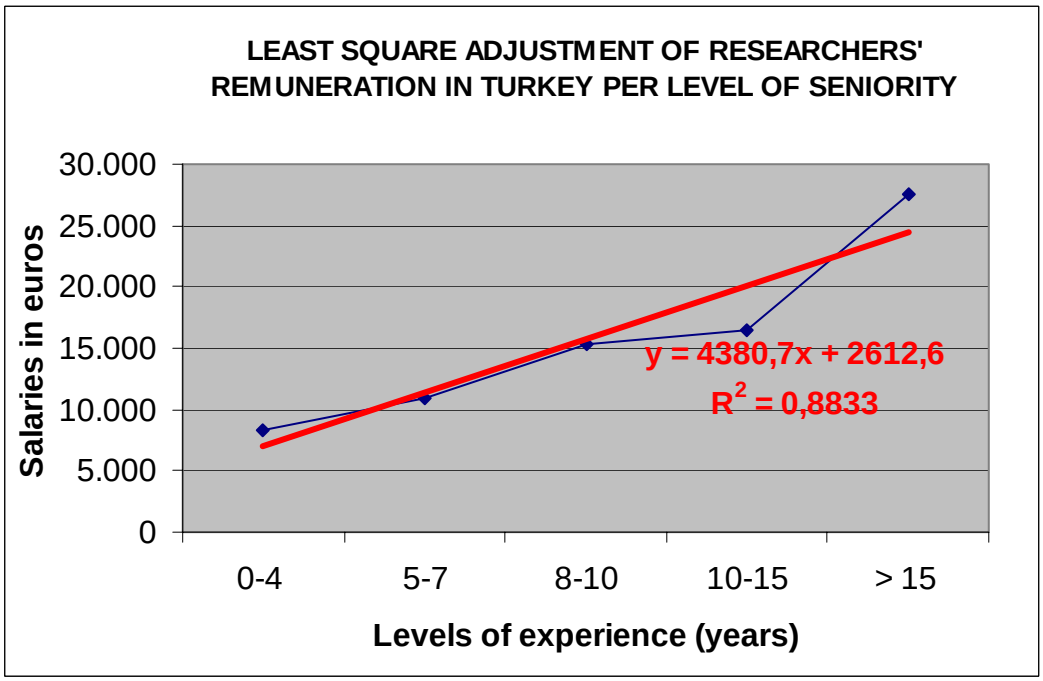


Figure 50 - Least square adjustment of researchers' remunerations in Turkey per level of seniority

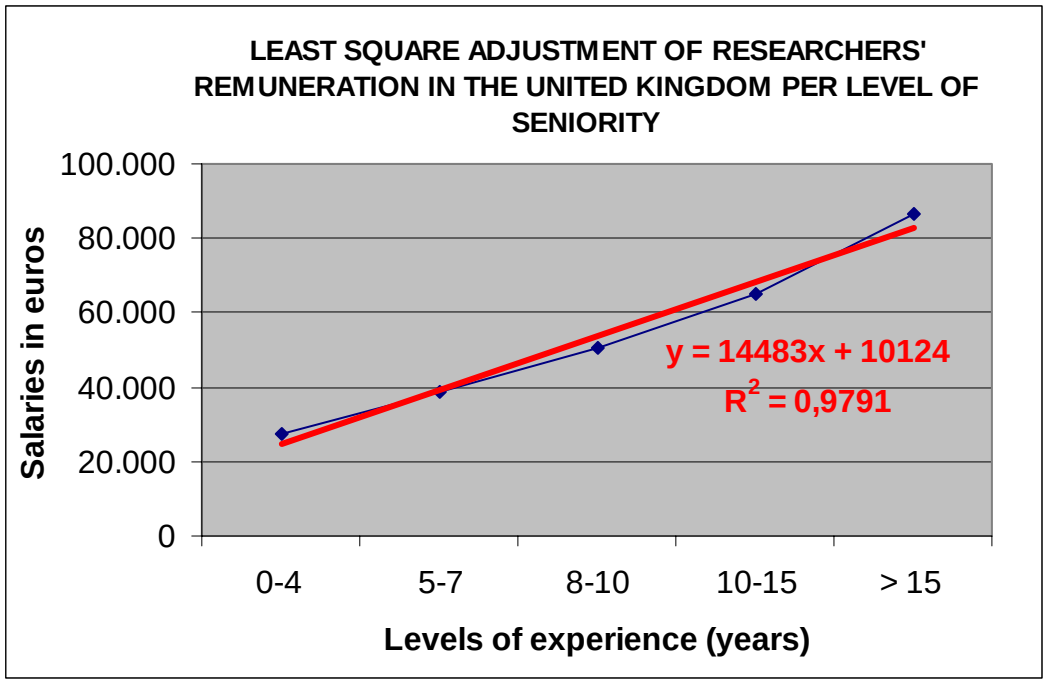


Figure 51 - Least square adjustment of researchers' remunerations in The United Kingdom per level of seniority

In the case of the data per gender and level of experience adjusted by the least square method, the graphics are presented as follows:

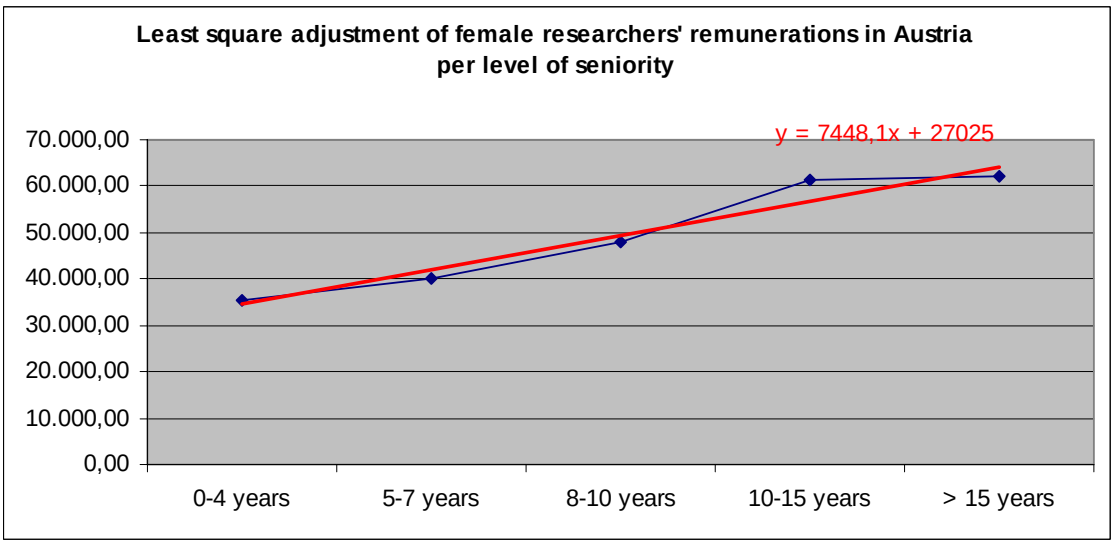


Figure 52 - Least square adjustment of female researchers' remunerations in Austria per level of seniority

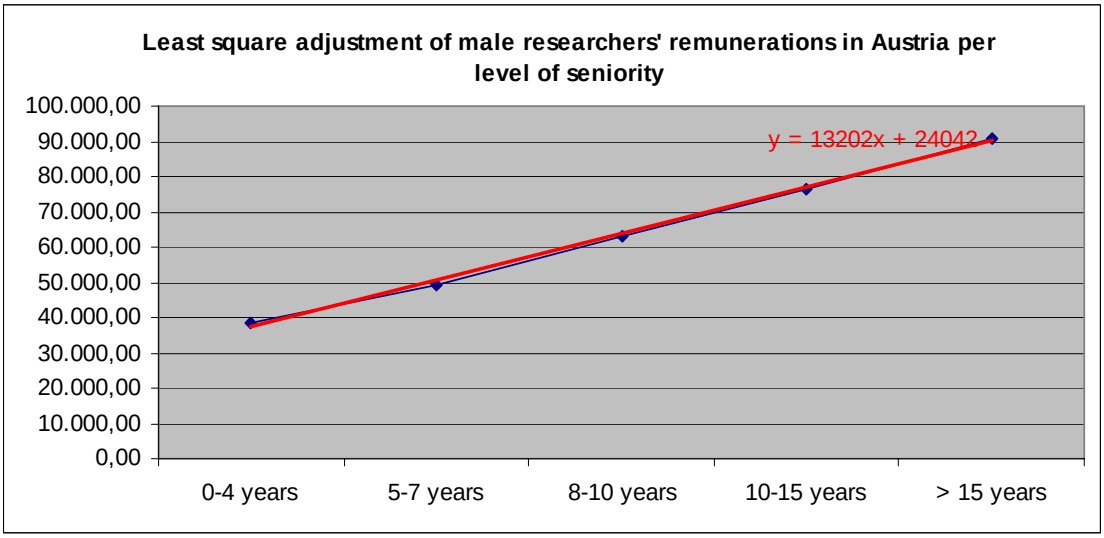


Figure 53 - Least square adjustment of male researchers' remunerations in Austria per level of seniority

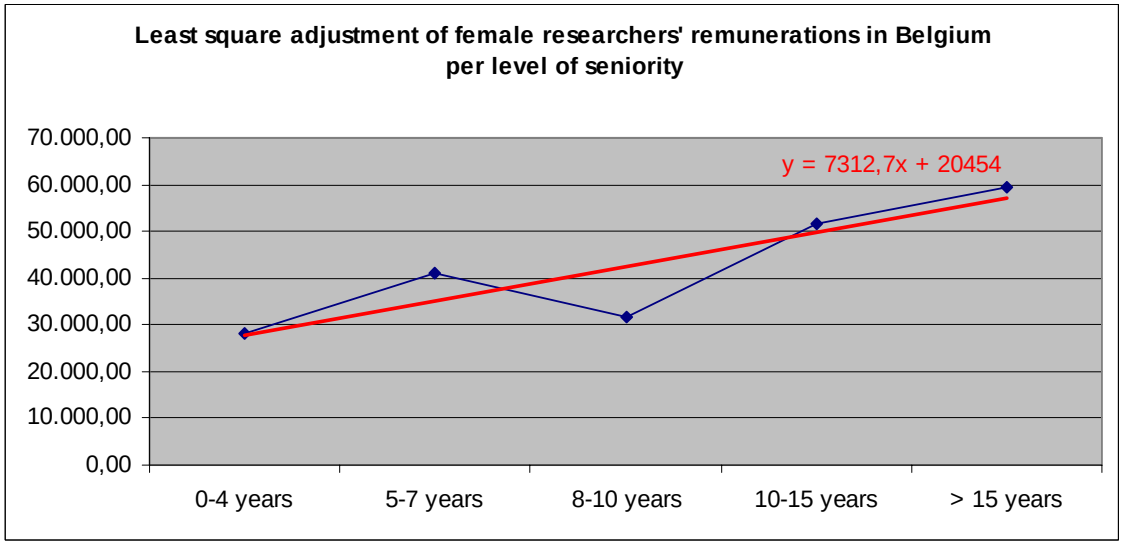


Figure 54 - Least square adjustment of female researchers' remunerations in Belgium per level of seniority

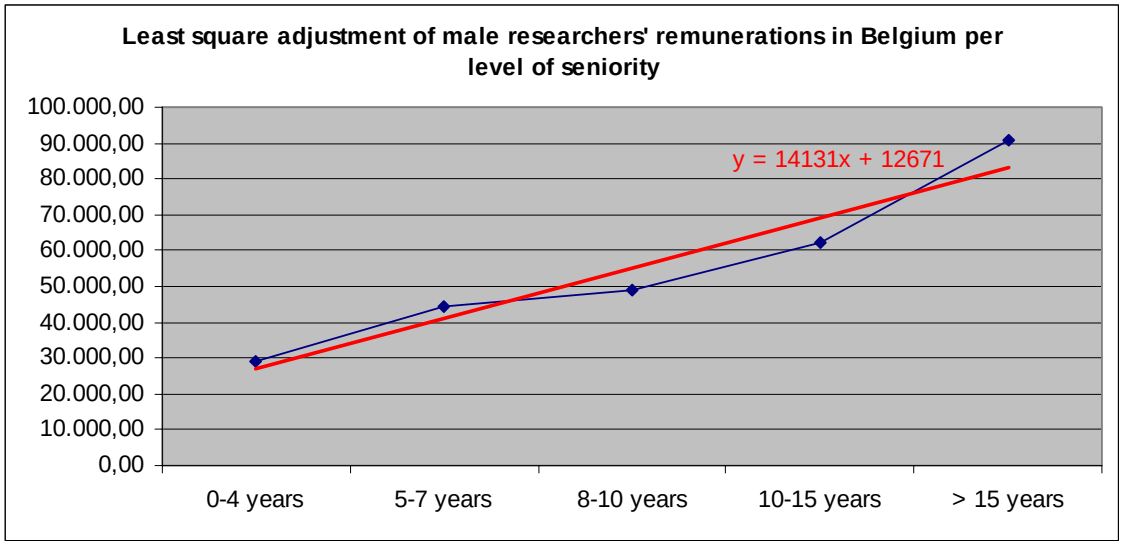


Figure 55 - Least square adjustment of male researchers' remunerations in Belgium per level of seniority

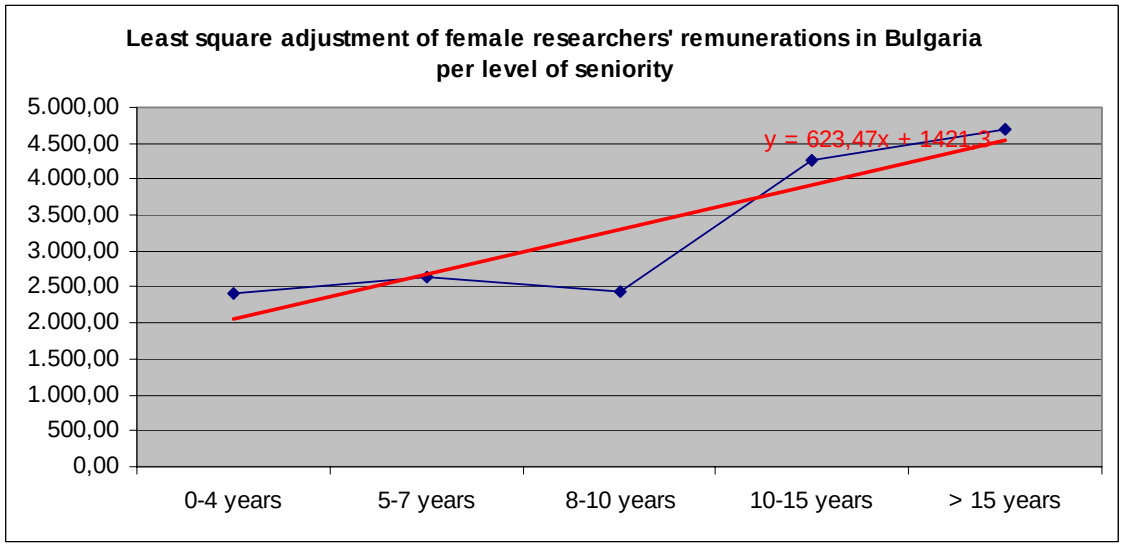


Figure 56 - Least square adjustment of female researchers' remunerations in Bulgaria per level of seniority

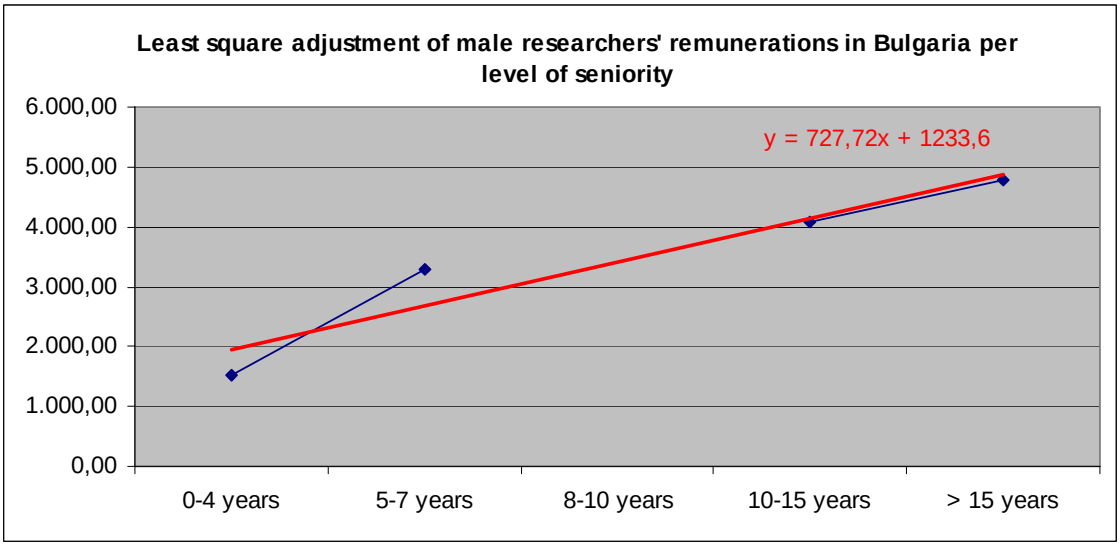


Figure 57 - Least square adjustment of male researchers' remunerations in Bulgaria per level of seniority

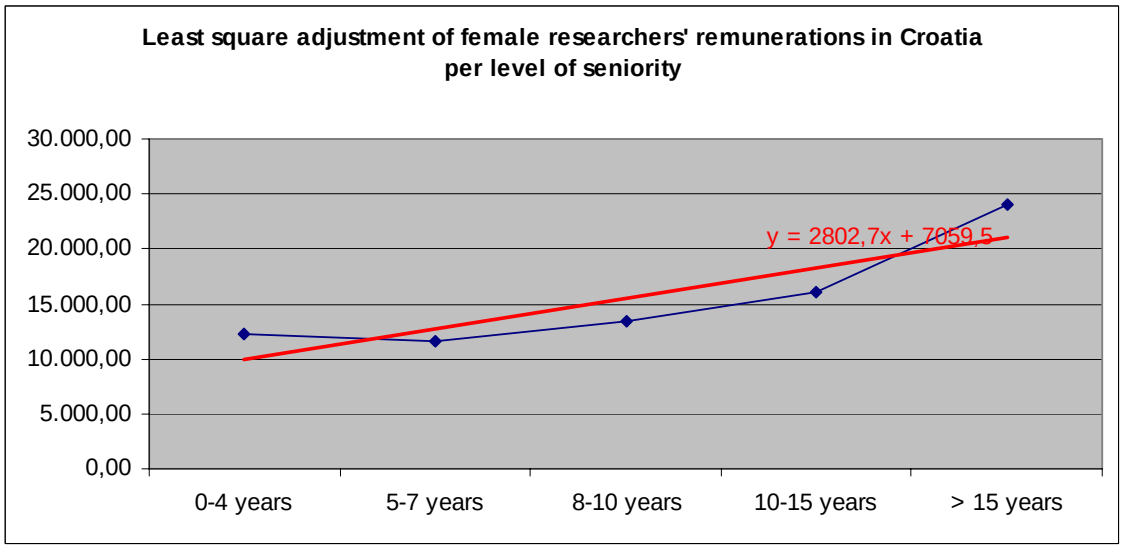


Figure 58 - Least square adjustment of female researchers' remunerations in Croatia per level of seniority

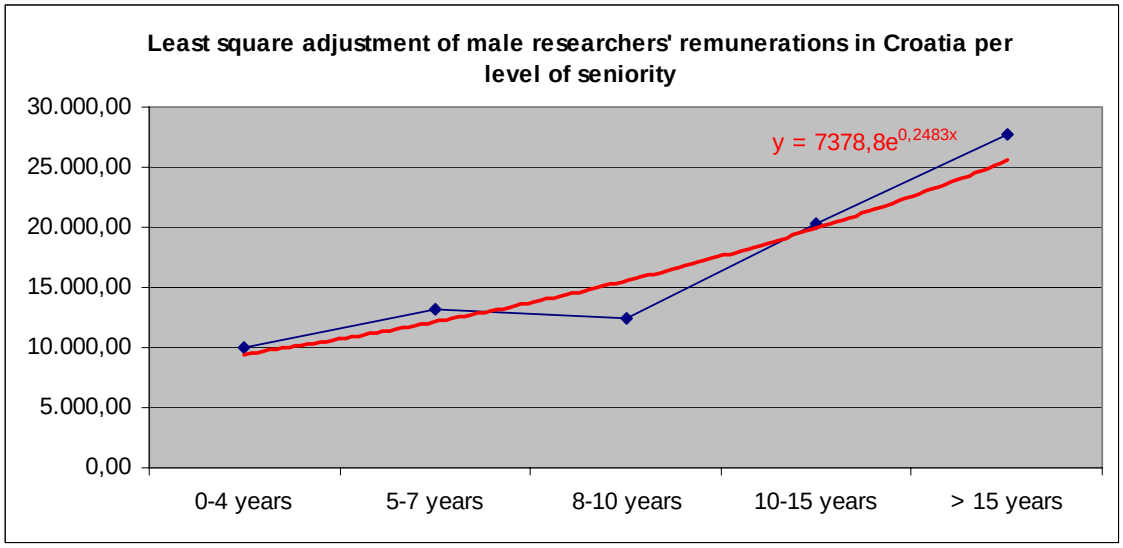


Figure 59 - Least square adjustment of male researchers' remunerations in Croatia per level of seniority

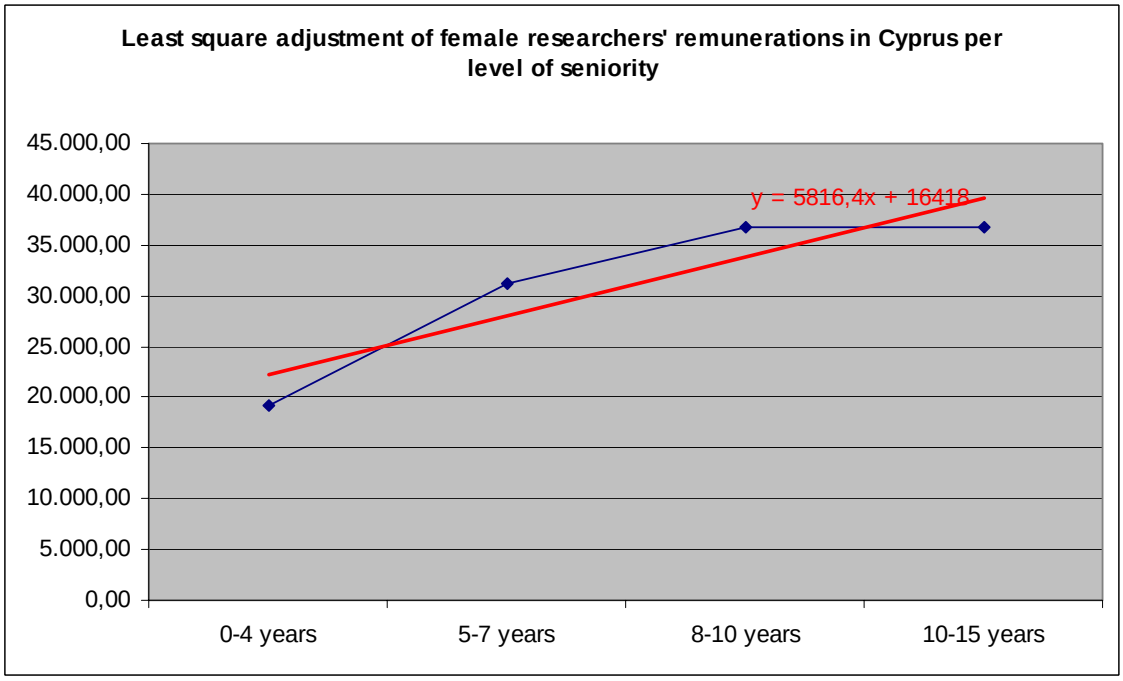


Figure 60 - Least square adjustment of female researchers' remunerations in Cyprus per level of seniority

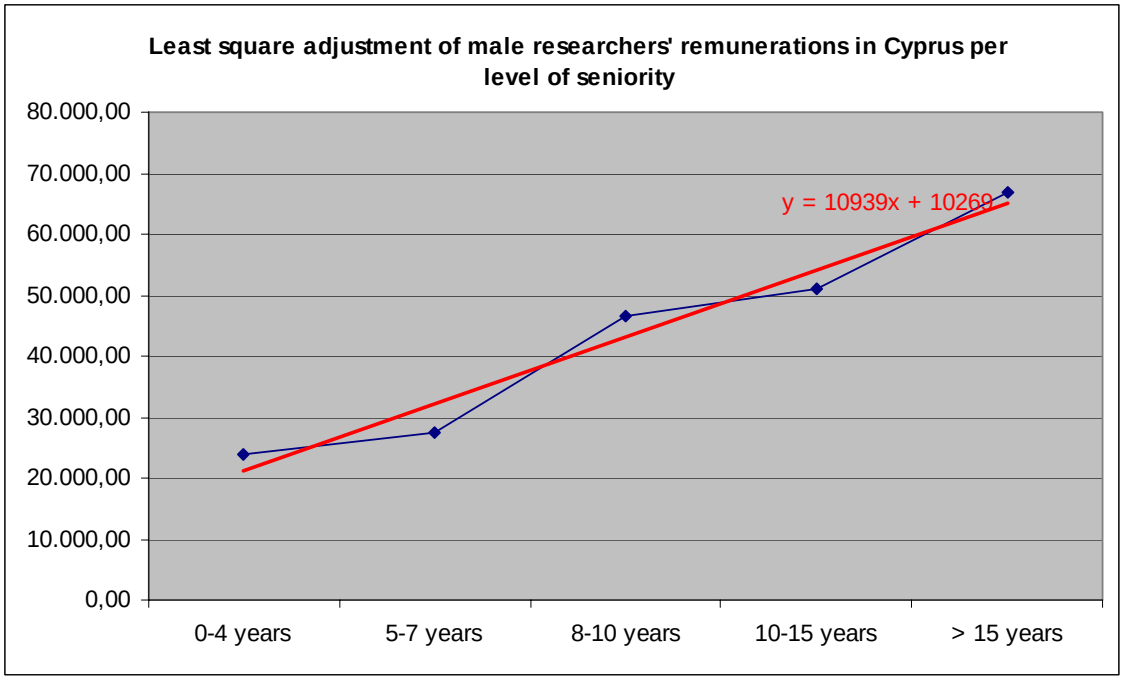


Figure 61 - Least square adjustment of male researchers' remunerations in Cyprus per level of seniority

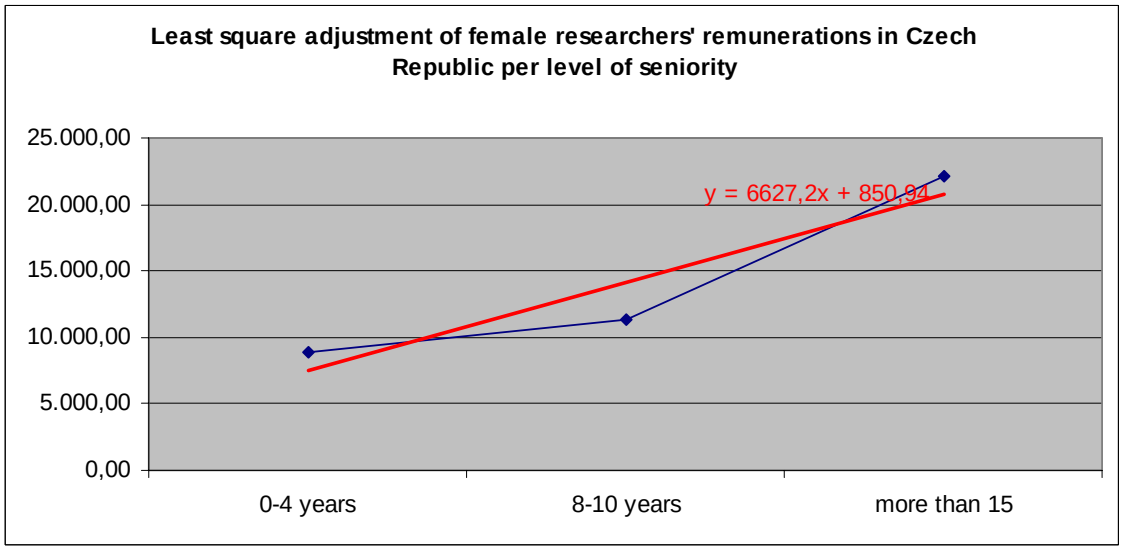


Figure 62 - Least square adjustment of female researchers' remunerations in Czech Republic per level of seniority

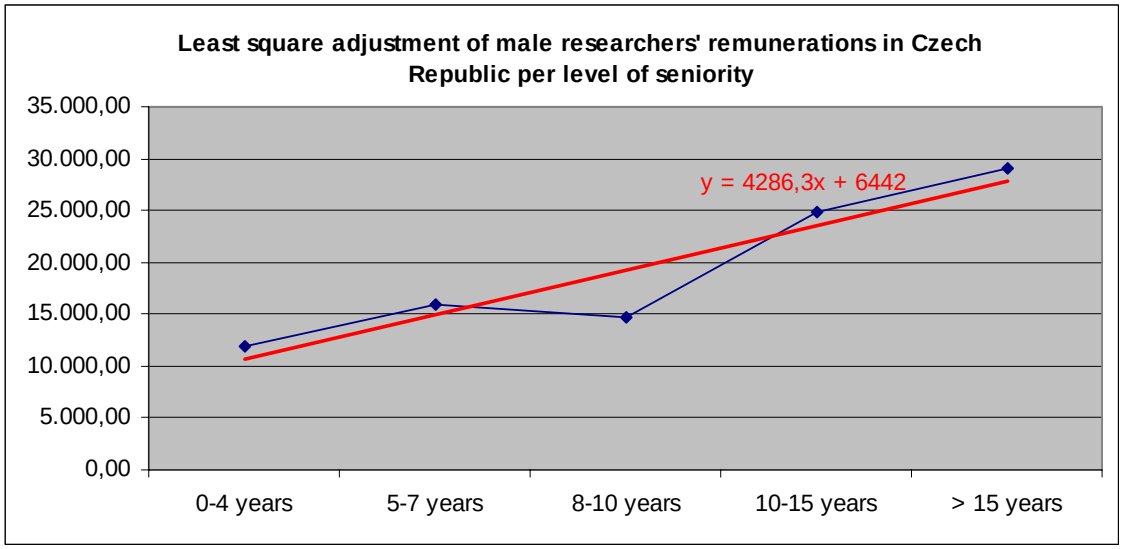


Figure 63 - Least square adjustment of male researchers' remunerations in Czech Republic per level of seniority

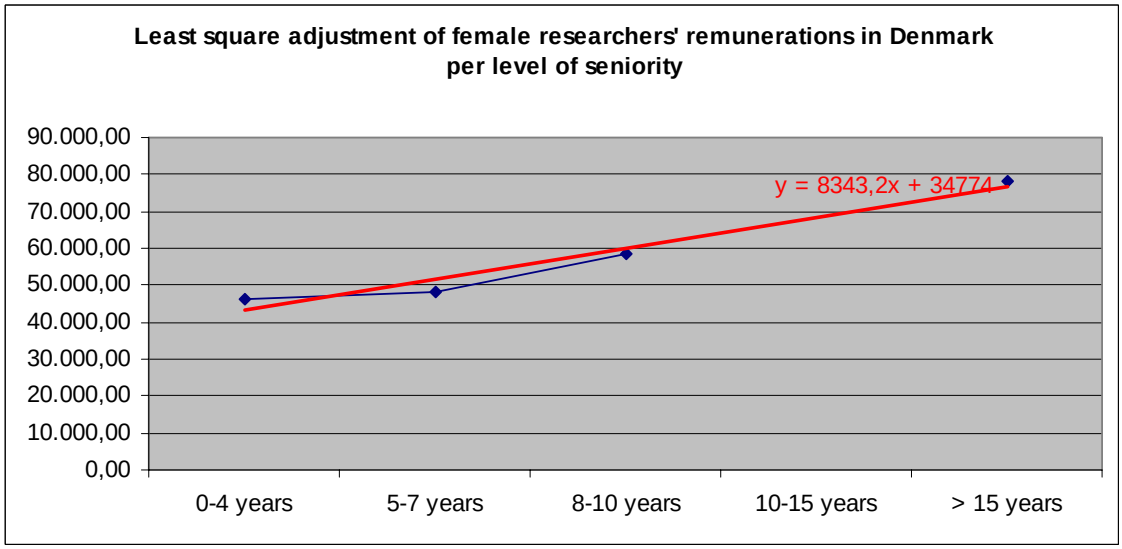


Figure 64 - Least square adjustment of female researchers' remunerations in Denmark per level of seniority

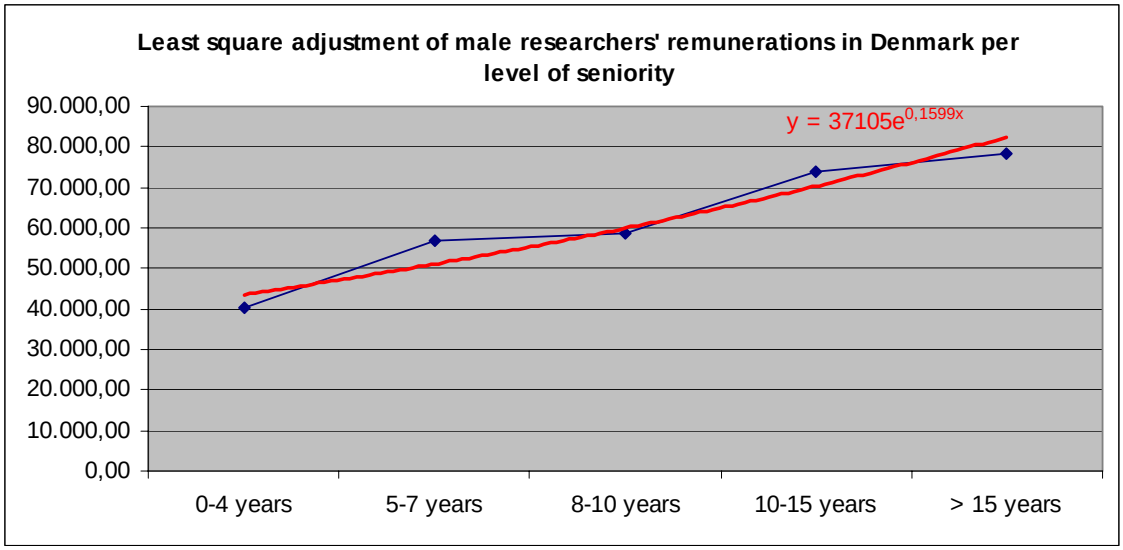


Figure 65 - Least square adjustment of male researchers' remunerations in Denmark per level of seniority

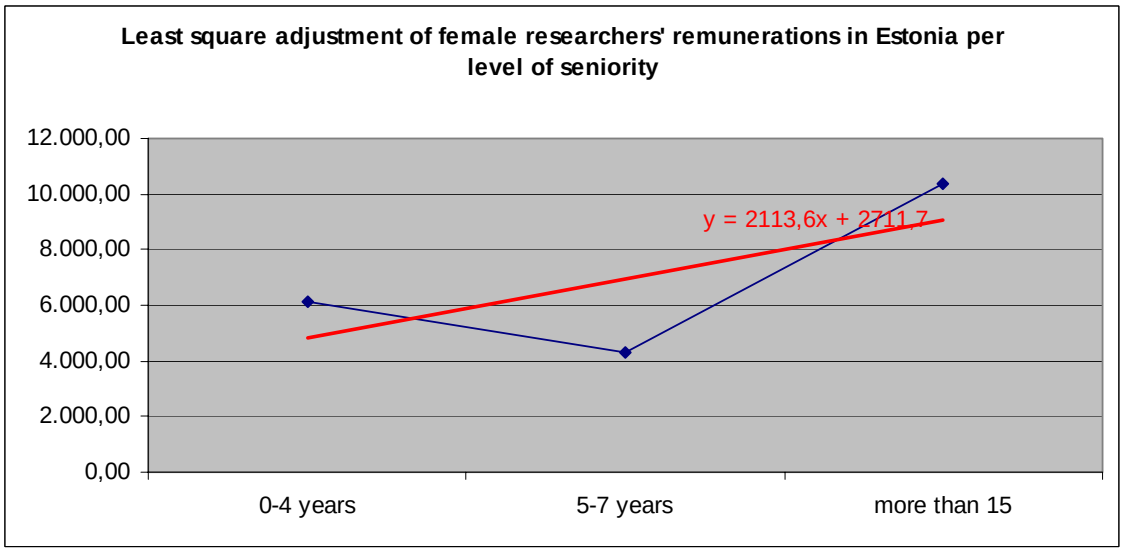


Figure 66 - Least square adjustment of female researchers' remunerations in Estonia per level of seniority

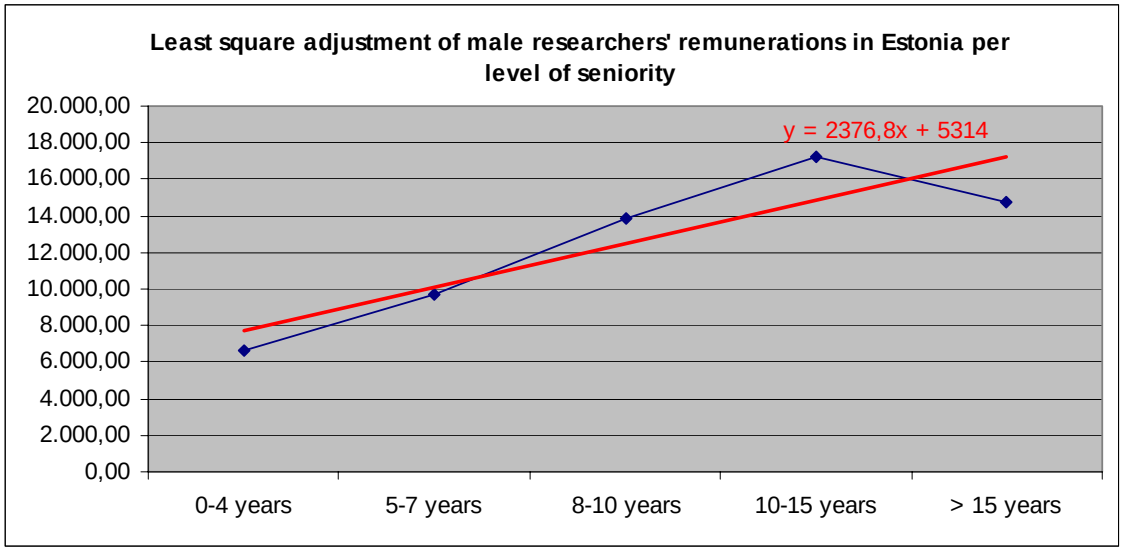


Figure 67 - Least square adjustment of male researchers' remunerations in Estonia per level of seniority

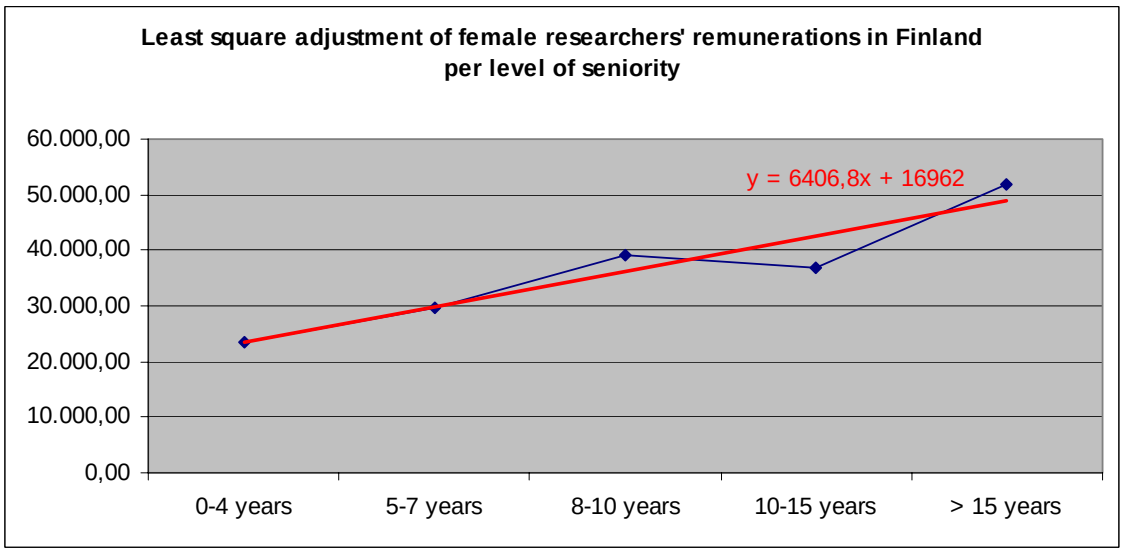


Figure 68 - Least square adjustment of female researchers' remunerations in Finland per level of seniority

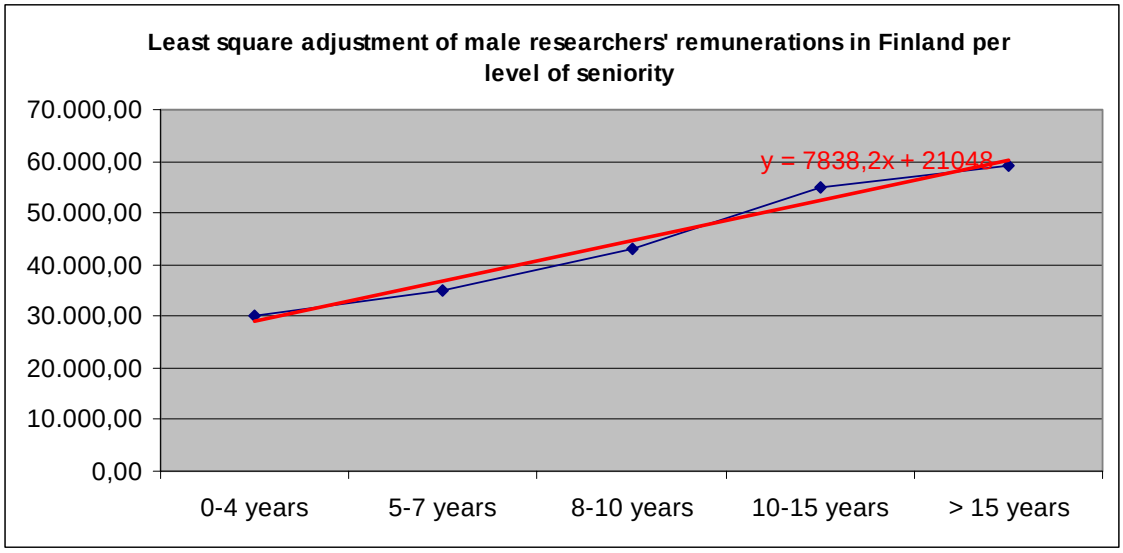


Figure 69 - Least square adjustment of male researchers' remunerations in Finland per level of seniority

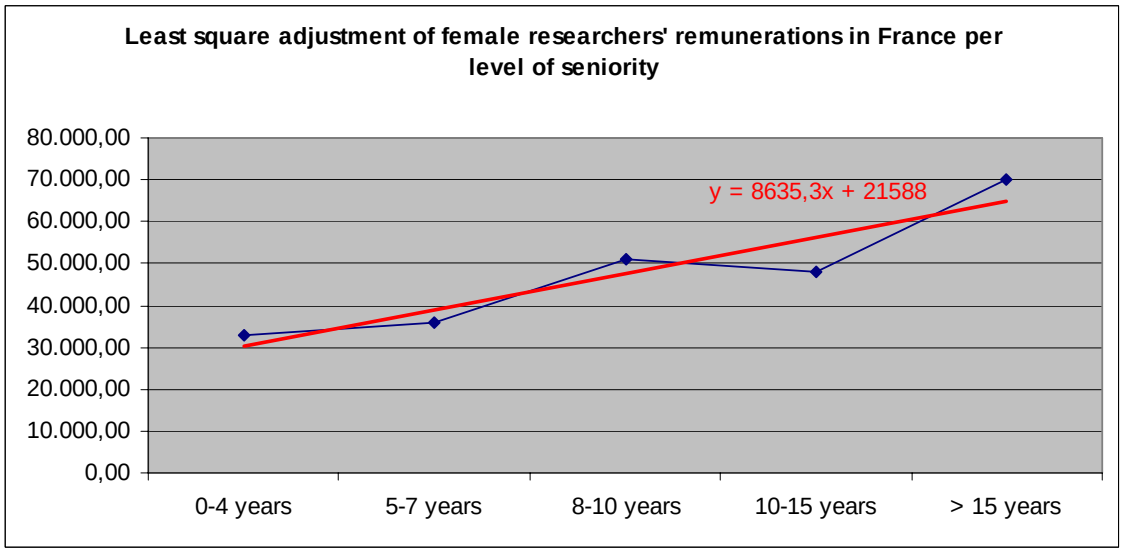


Figure 70 - Least square adjustment of female researchers' remunerations in France per level of seniority

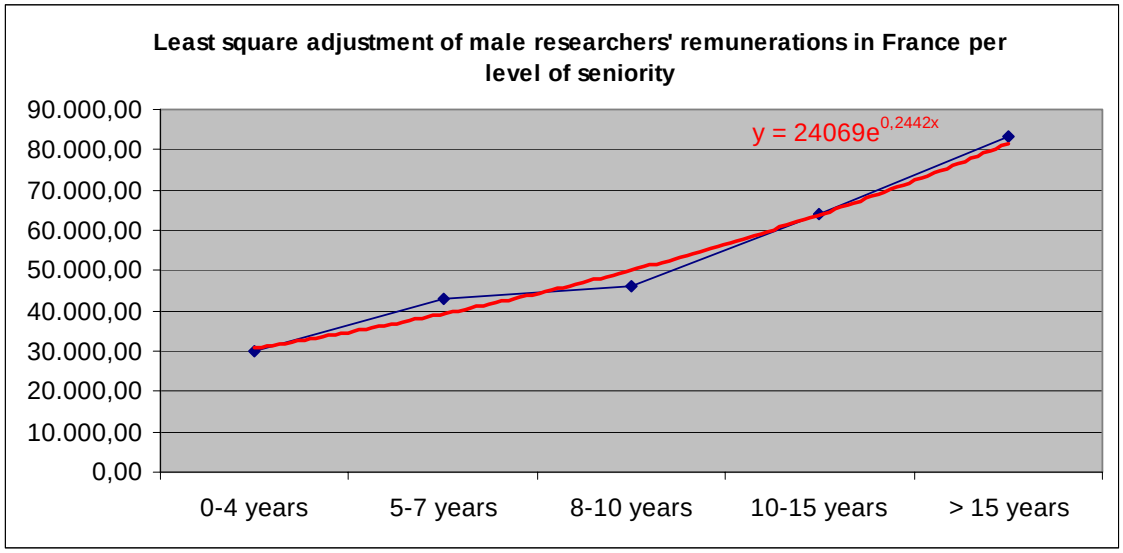


Figure 71 - Least square adjustment of male researchers' remunerations in France per level of seniority

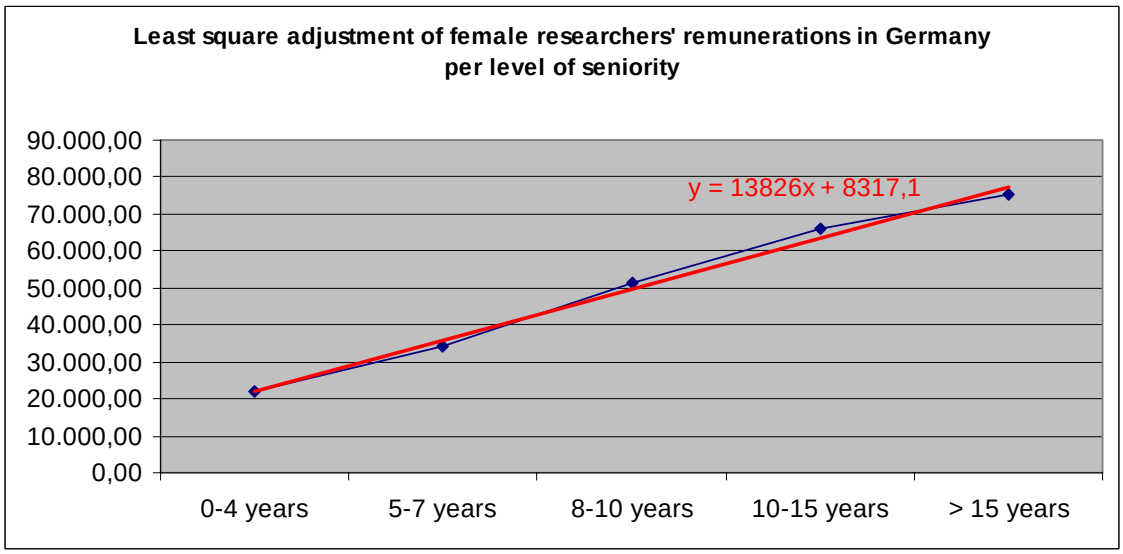


Figure 72 - Least square adjustment of female researchers' remunerations in Germany per level of seniority

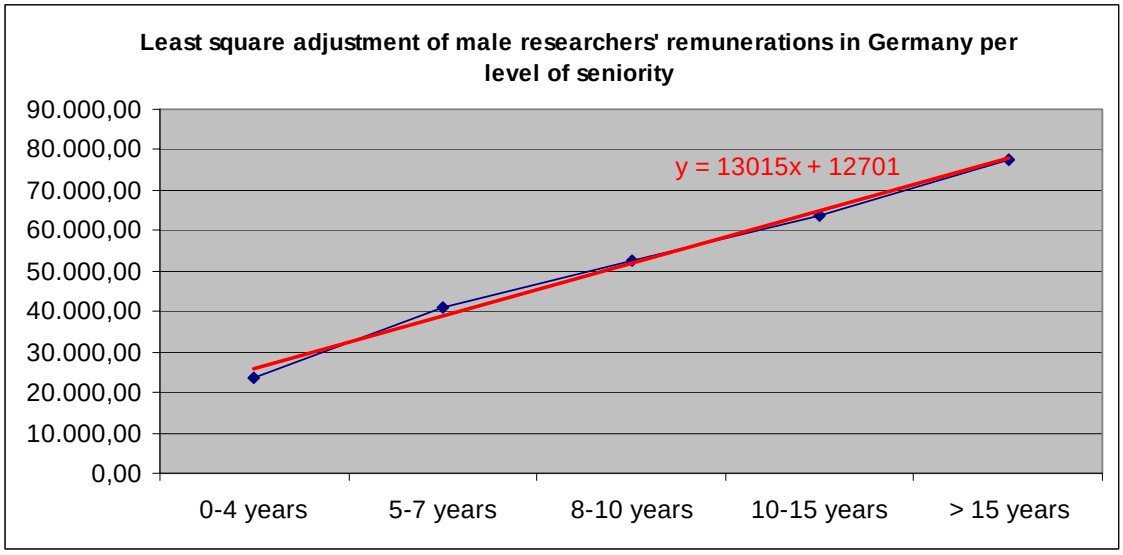


Figure 73 - Least square adjustment of male researchers' remunerations in Germany per level of seniority

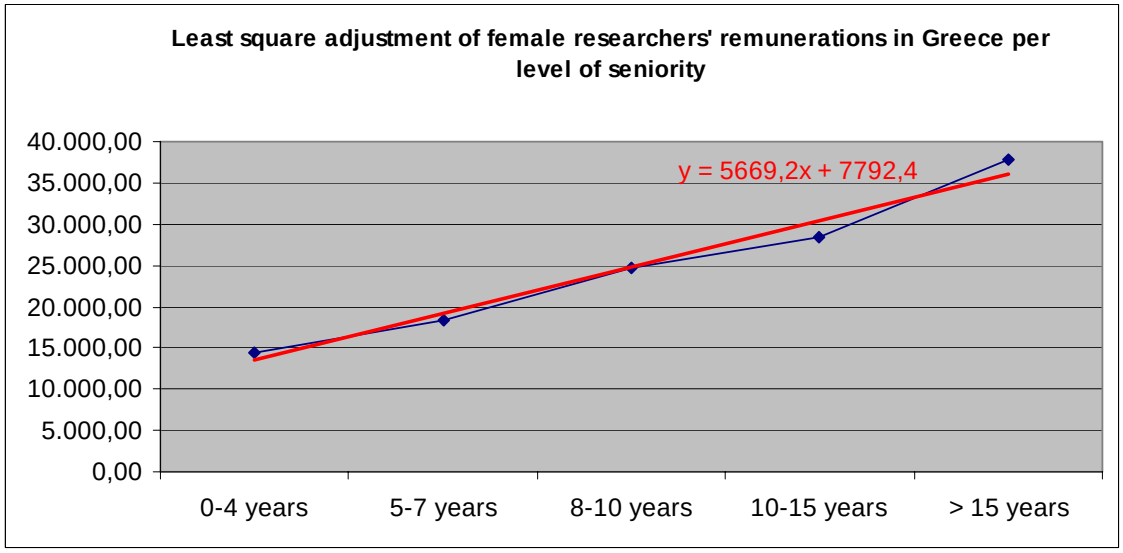


Figure 74 - Least square adjustment of female researchers' remunerations in Greece per level of seniority

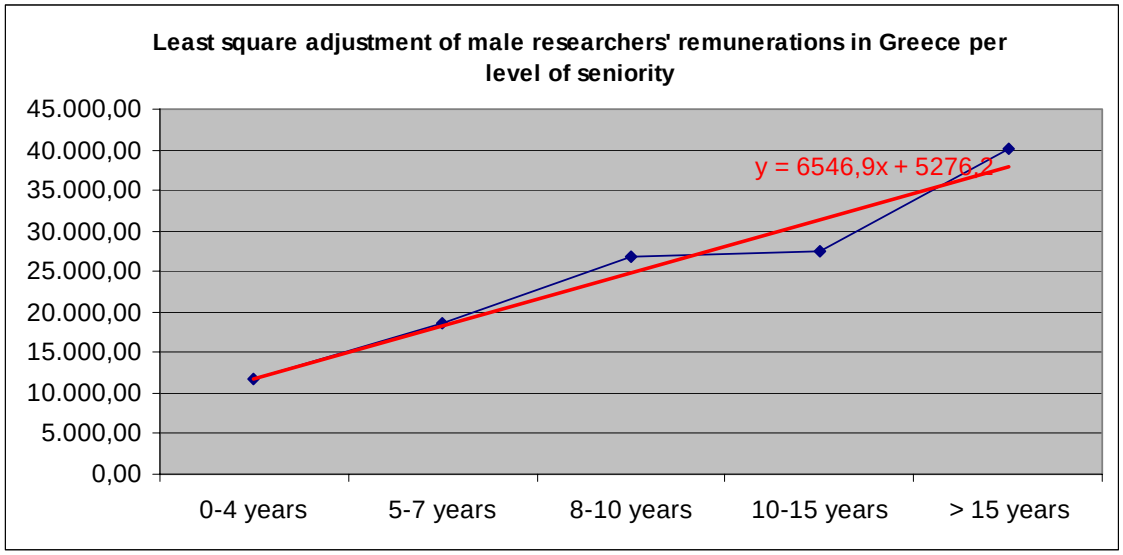


Figure 75 - Least square adjustment of male researchers' remunerations in Greece per level of seniority

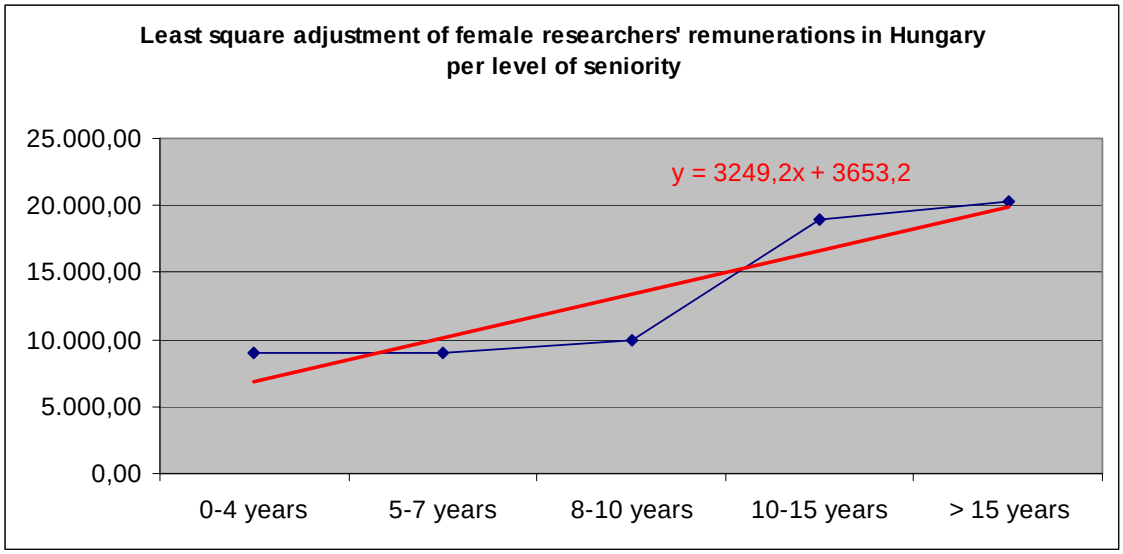


Figure 76 - Least square adjustment of female researchers' remunerations in Hungary per level of seniority

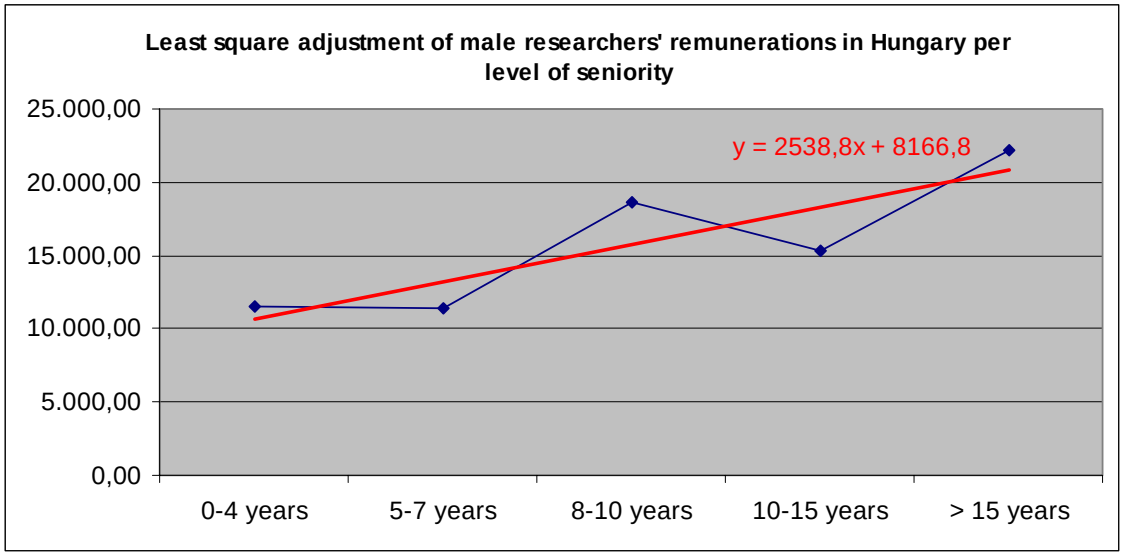


Figure 77 - Least square adjustment of male researchers' remunerations in Hungary per level of seniority

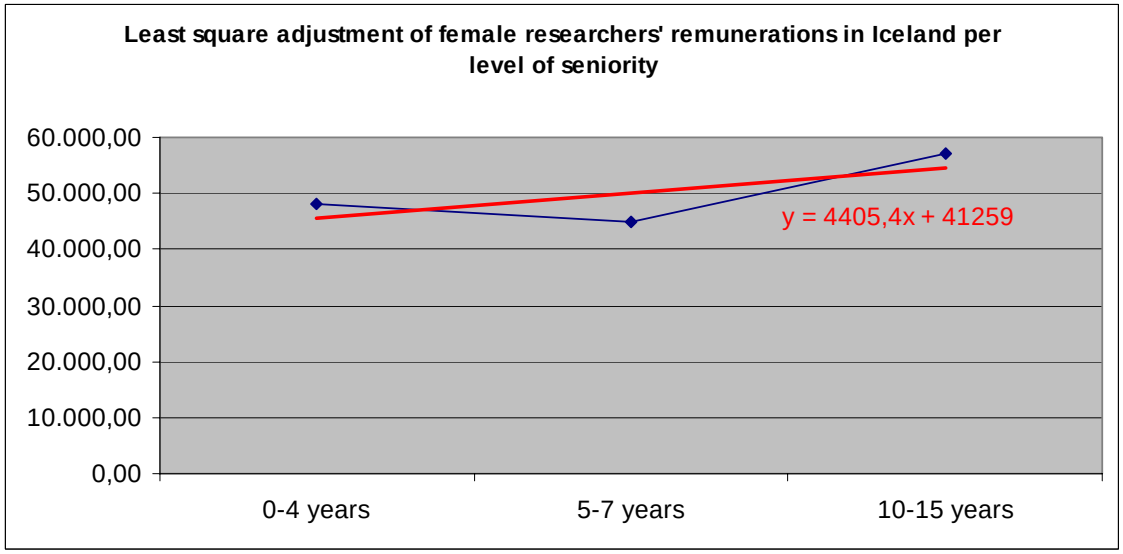


Figure 78 - Least square adjustment of female researchers' remunerations in Iceland per level of seniority

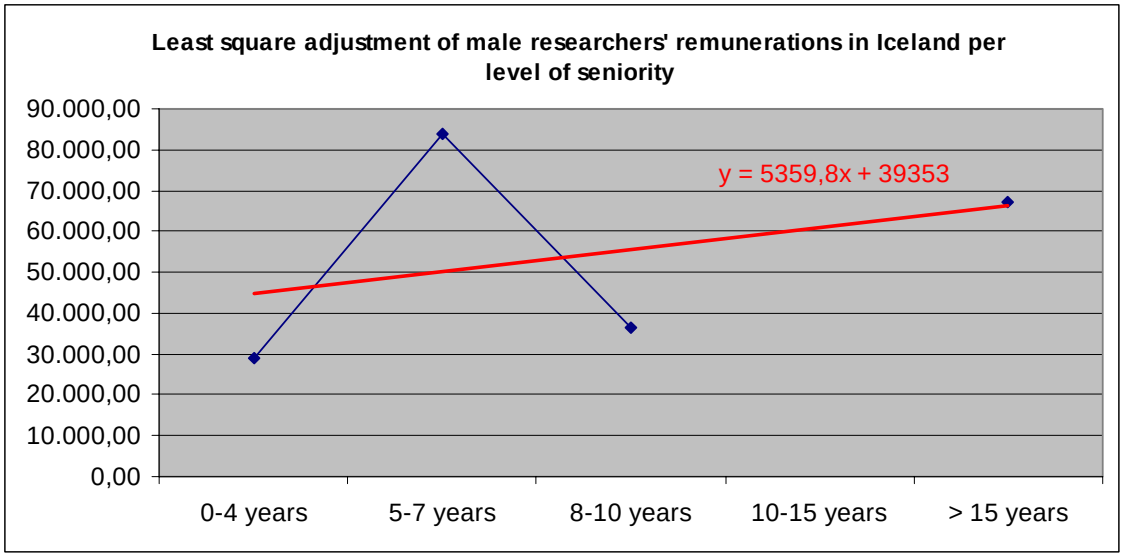


Figure 79 - Least square adjustment of male researchers' remunerations in Iceland per level of seniority

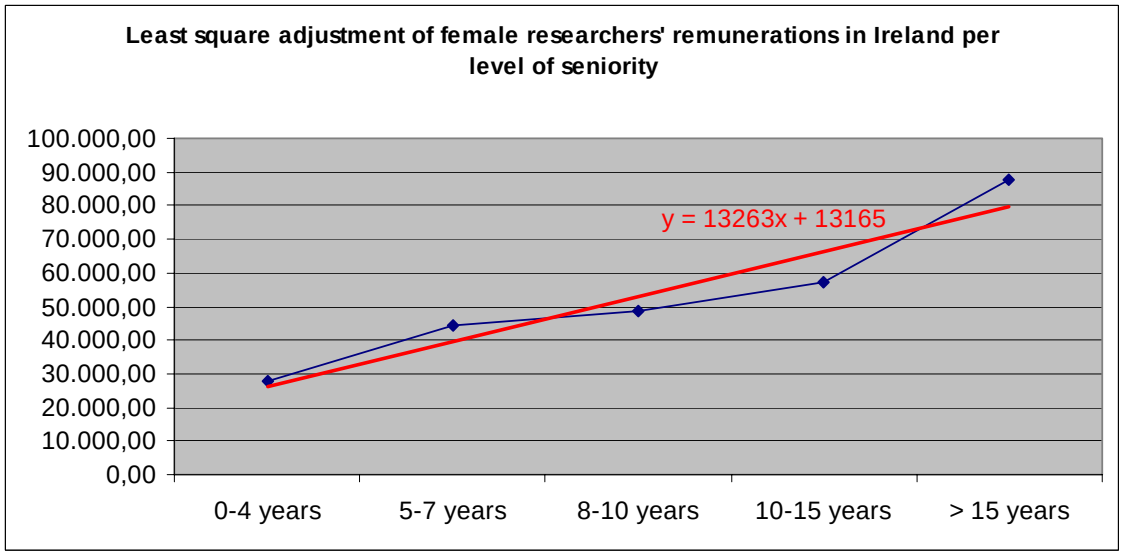


Figure 80 - Least square adjustment of female researchers' remunerations in Ireland per level of seniority

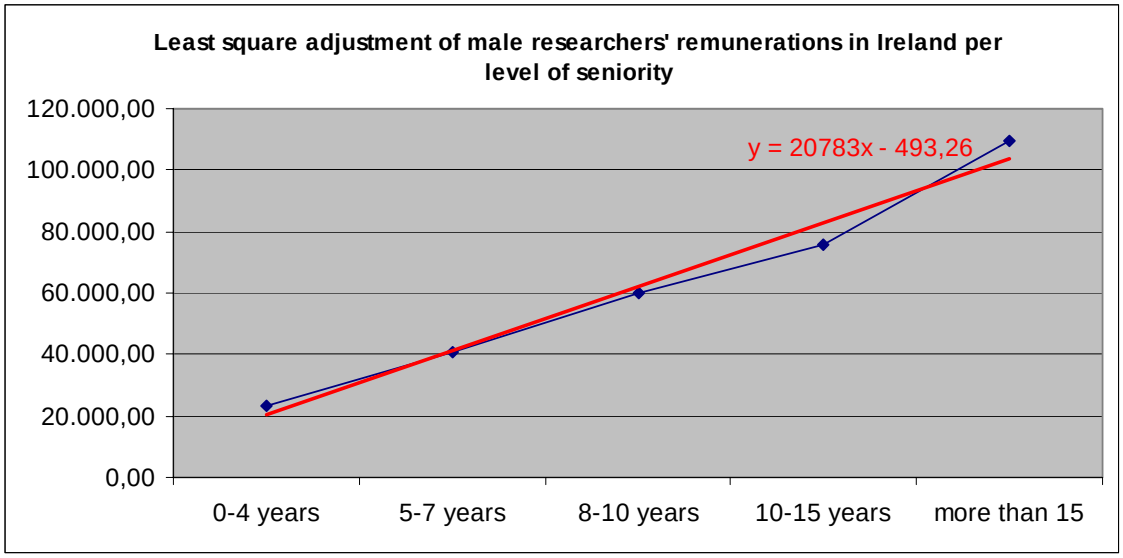


Figure 81 - Least square adjustment of male researchers' remunerations in Ireland per level of seniority

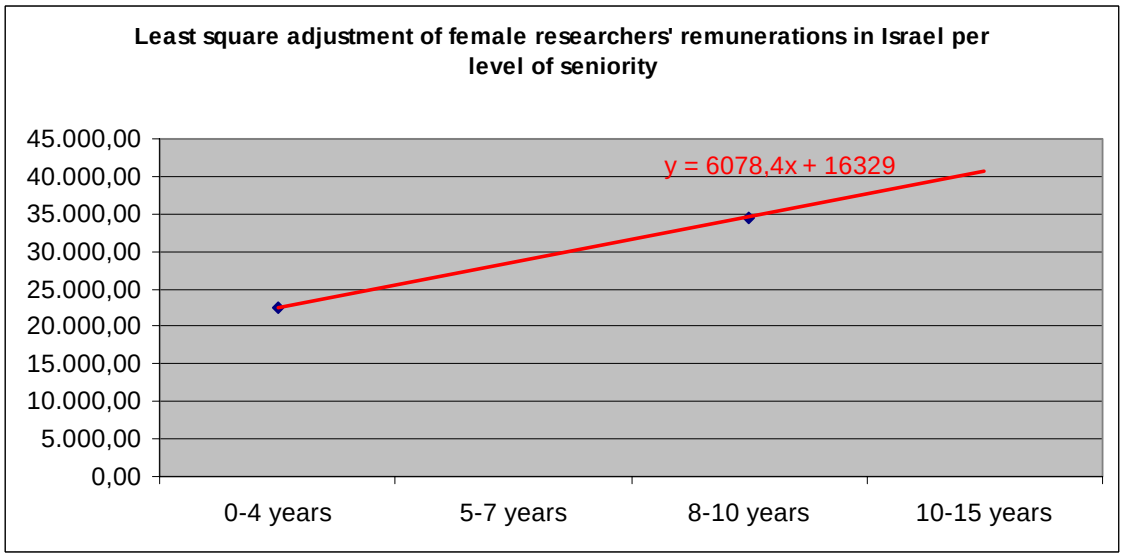


Figure 82 - Least square adjustment of female researchers' remunerations in Israel per level of seniority

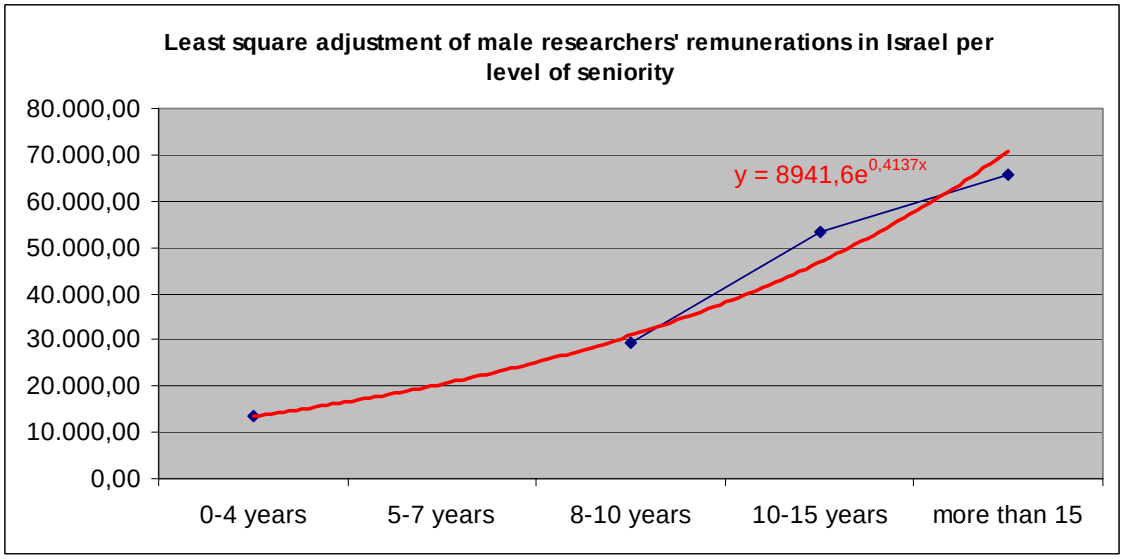


Figure 83 - Least square adjustment of male researchers' remunerations in Israel per level of seniority

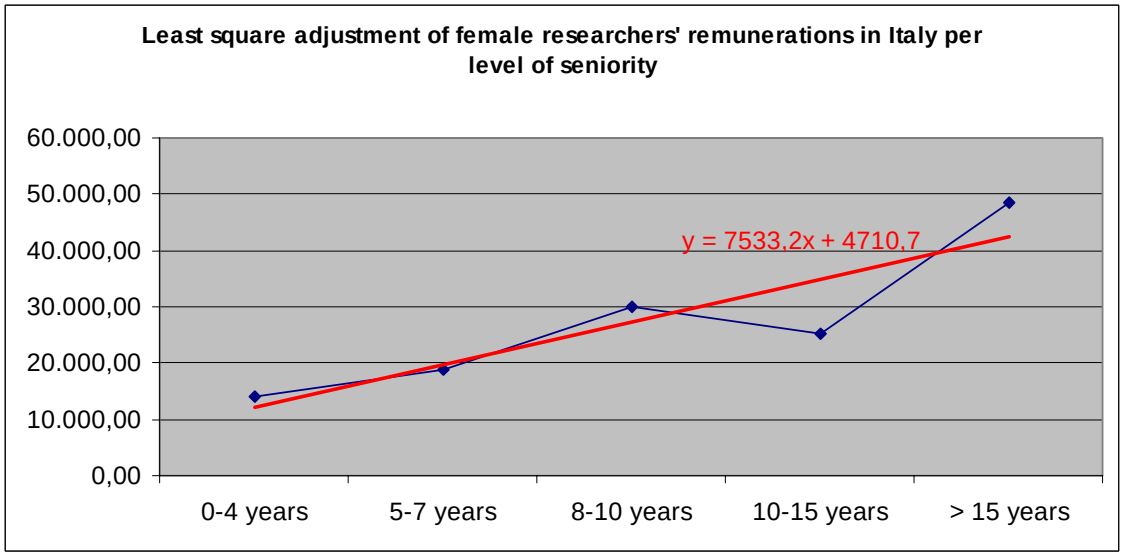


Figure 84 - Least square adjustment of female researchers' remunerations in Italy per level of seniority

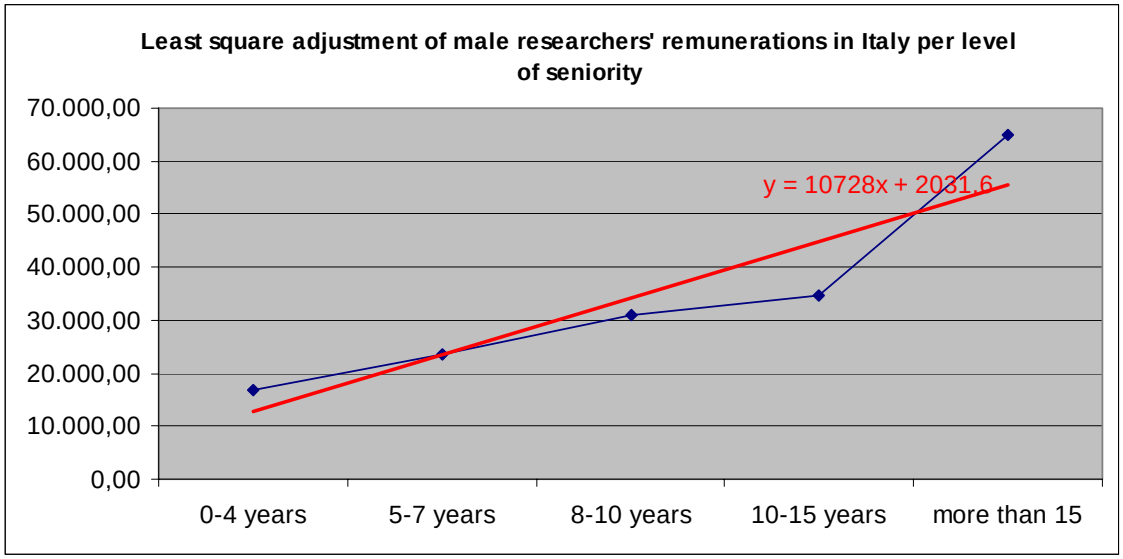


Figure 85 - Least square adjustment of male researchers' remunerations in Italy per level of seniority

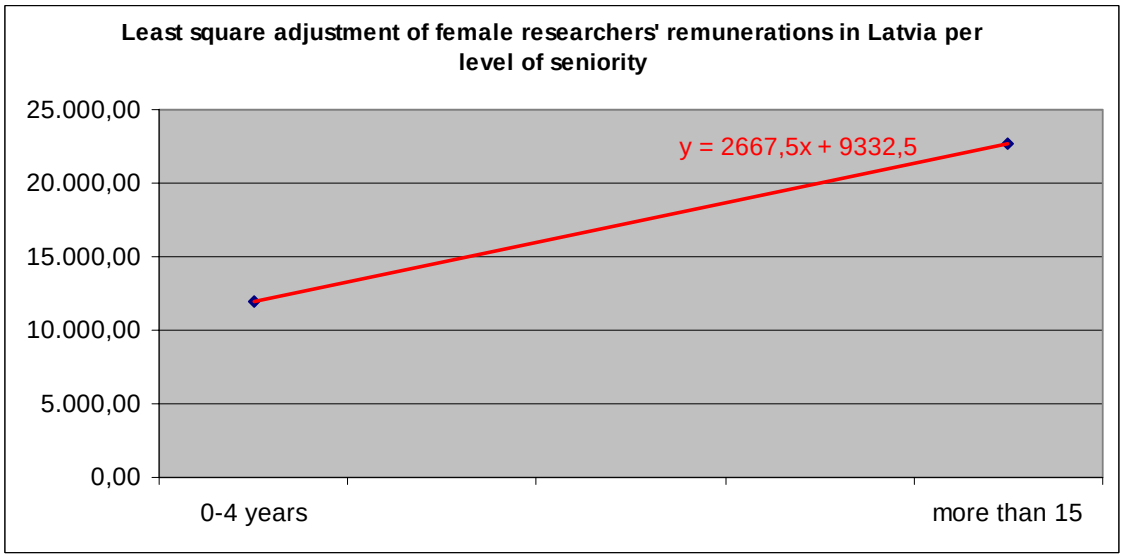


Figure 86 - Least square adjustment of female researchers' remunerations in Latvia per level of seniority

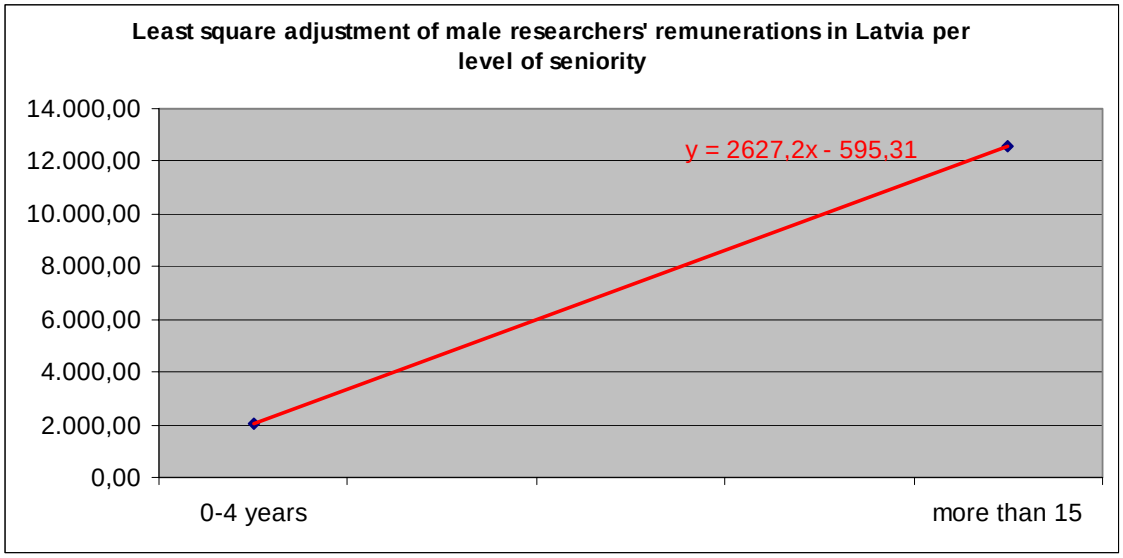


Figure 87 - Least square adjustment of male researchers' remunerations in Latvia per level of seniority

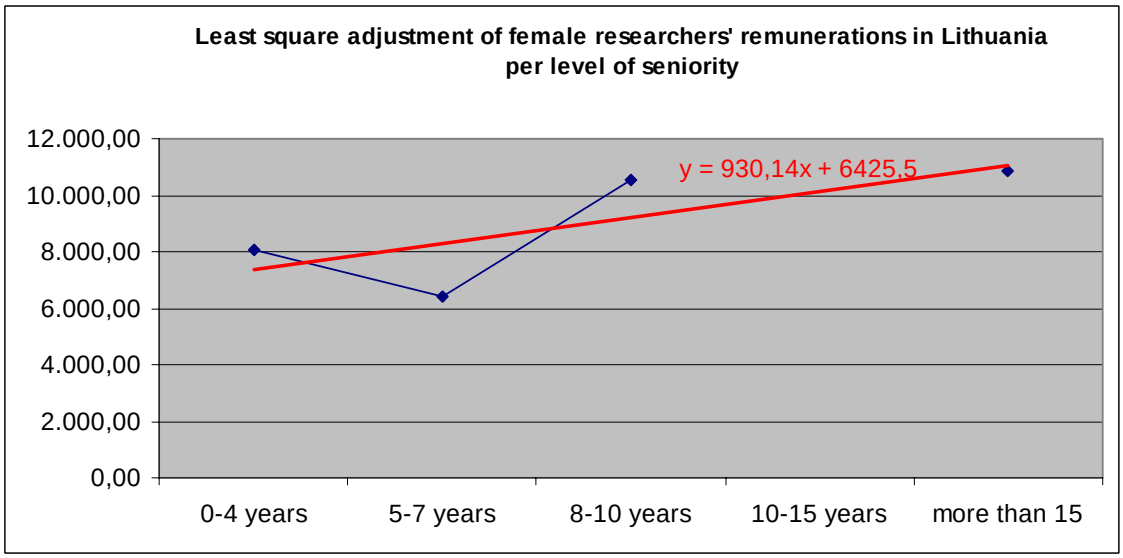


Figure 88 - Least square adjustment of female researchers' remunerations in Lithuania per level of seniority

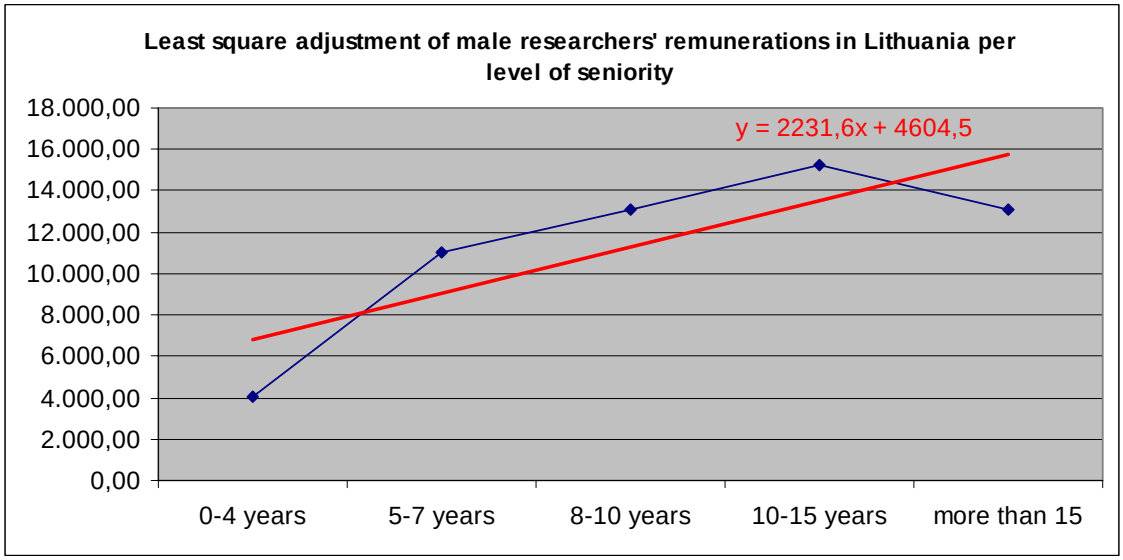


Figure 89 - Least square adjustment of male researchers' remunerations in Lithuania per level of seniority

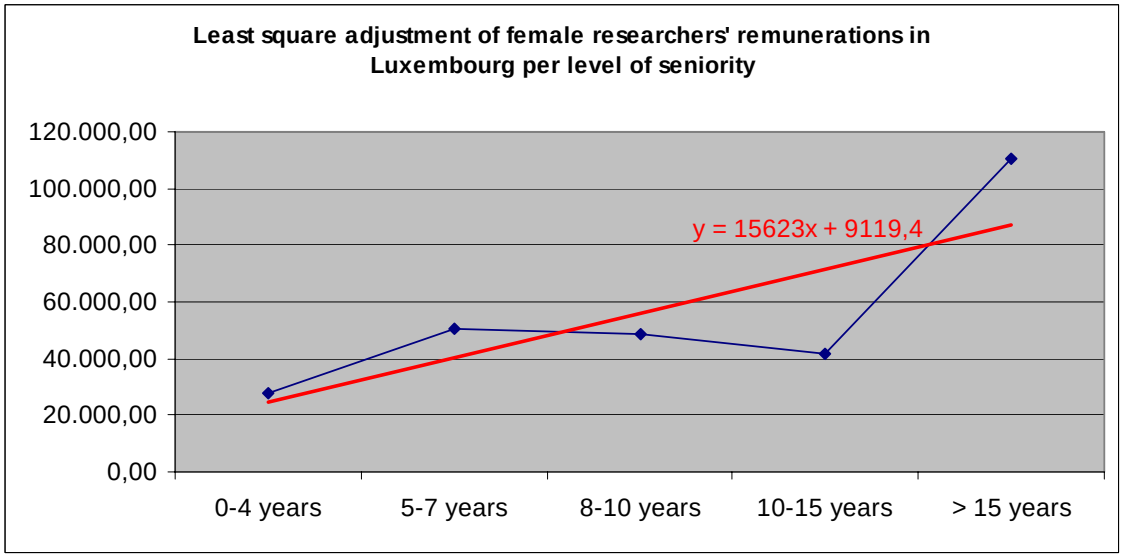


Figure 90 - Least square adjustment of female researchers' remunerations in Luxembourg per level of seniority

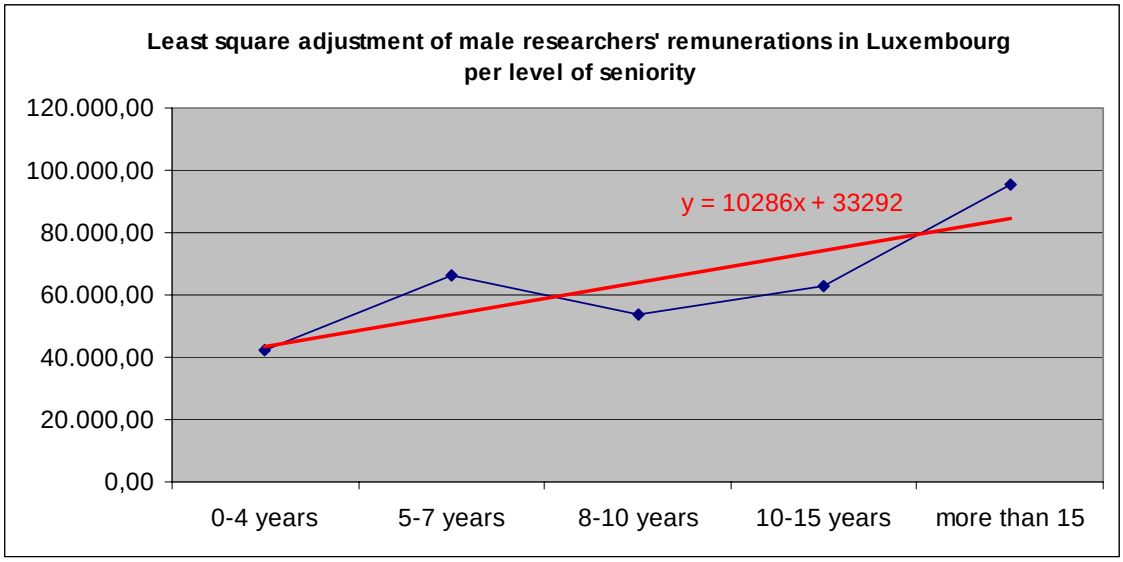


Figure 91 - Least square adjustment of male researchers' remunerations in Luxembourg per level of seniority

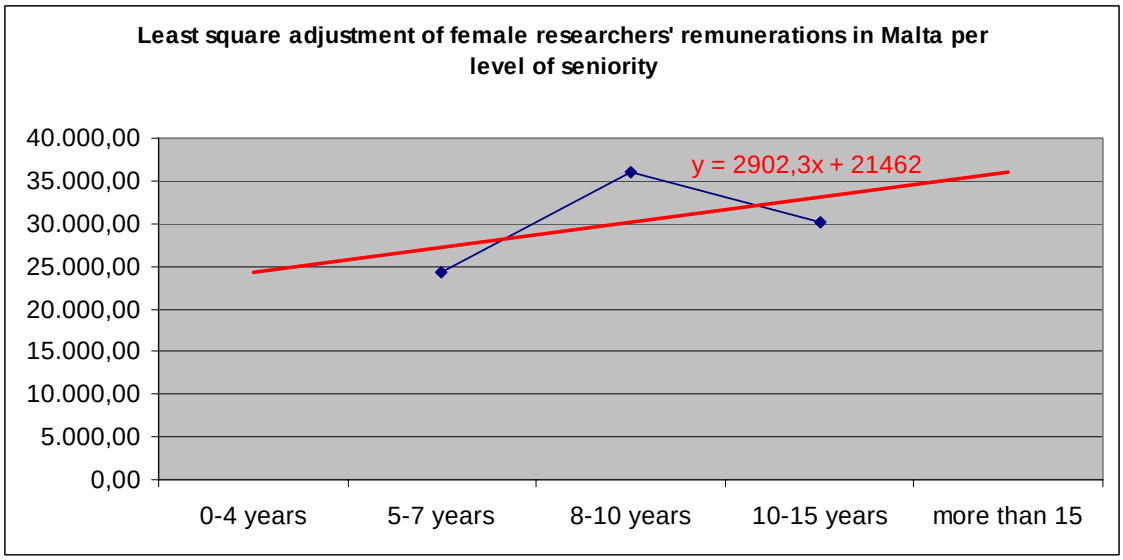


Figure 92 - Least square adjustment of female researchers' remunerations in Malta per level of seniority

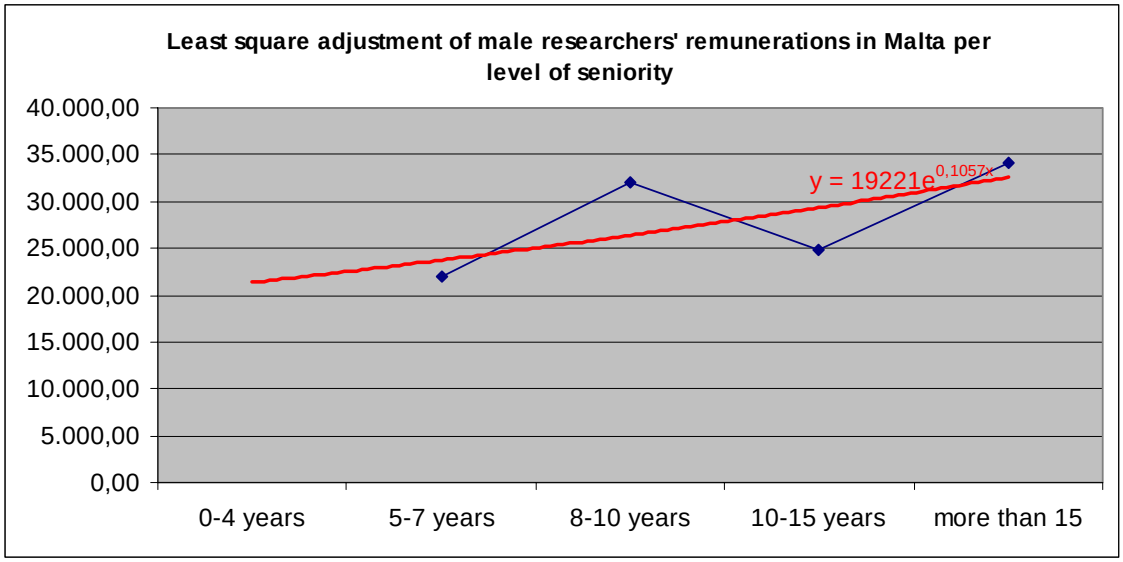


Figure 93 - Least square adjustment of male researchers' remunerations in Malta per level of seniority

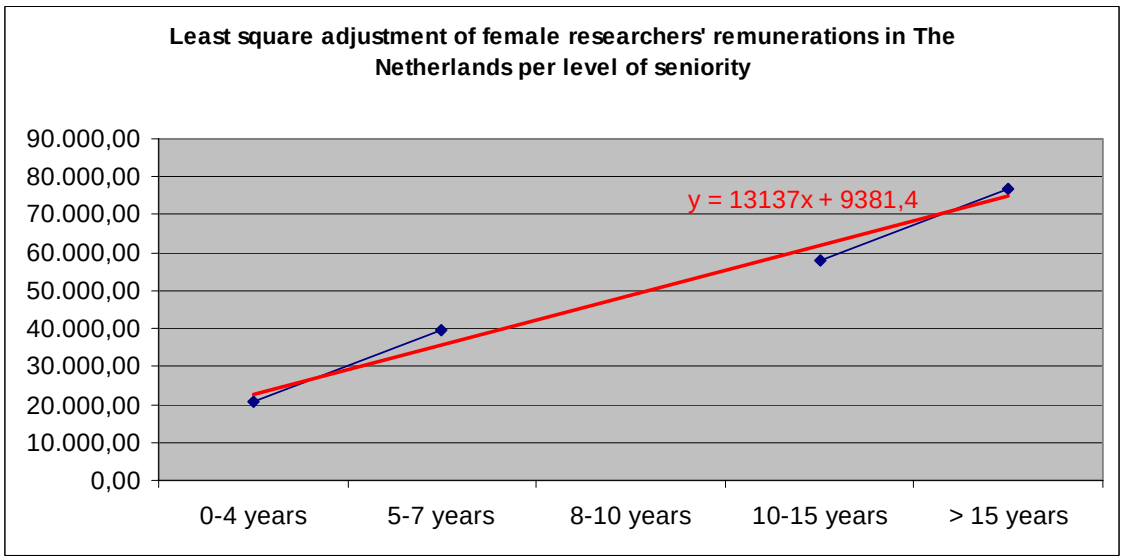


Figure 94 - Least square adjustment of female researchers' remunerations in The Netherlands per level of seniority

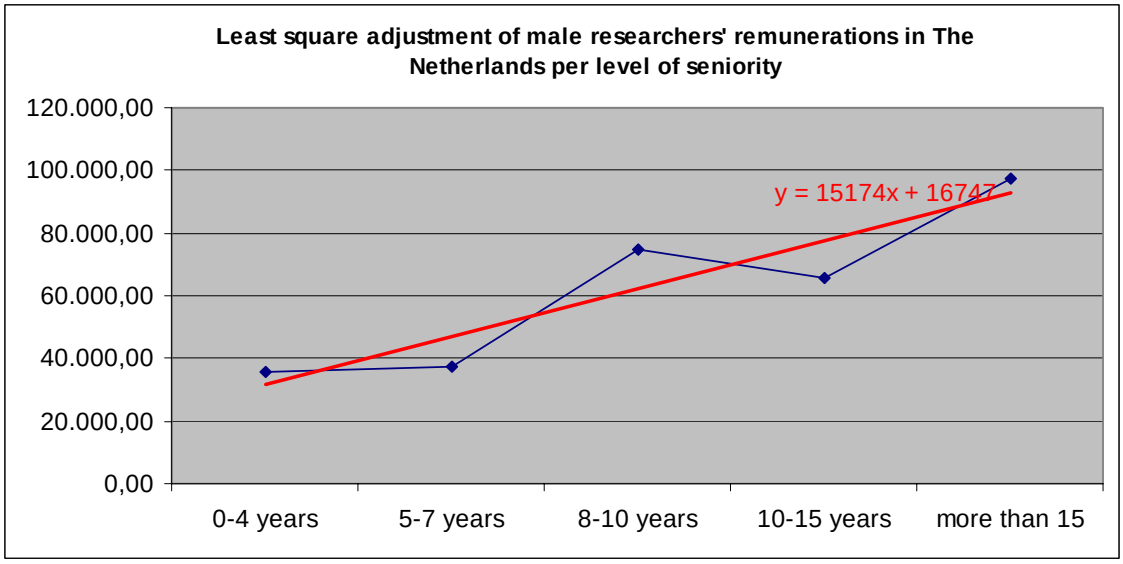


Figure 95 - Least square adjustment of male researchers' remunerations in The Netherlands per level of seniority

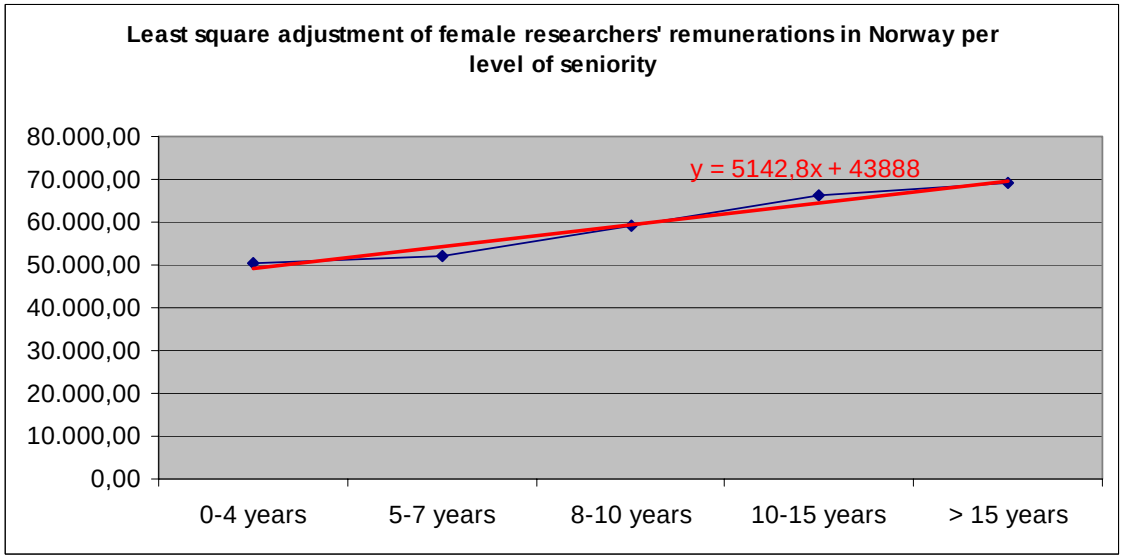


Figure 96 - Least square adjustment of female researchers' remunerations in Norway per level of seniority

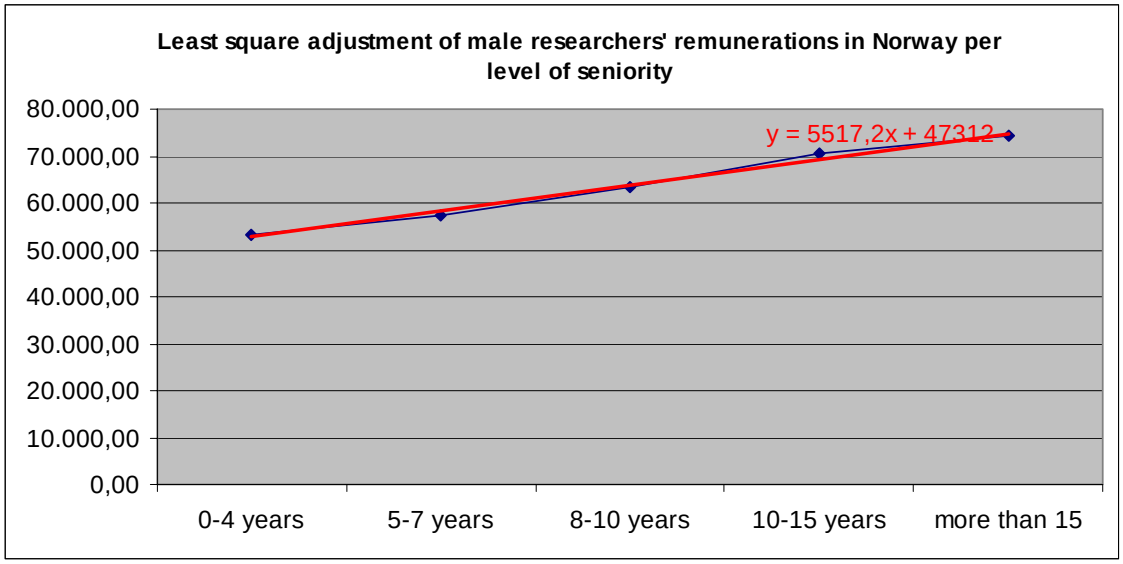


Figure 97 - Least square adjustment of male researchers' remunerations in Norway per level of seniority

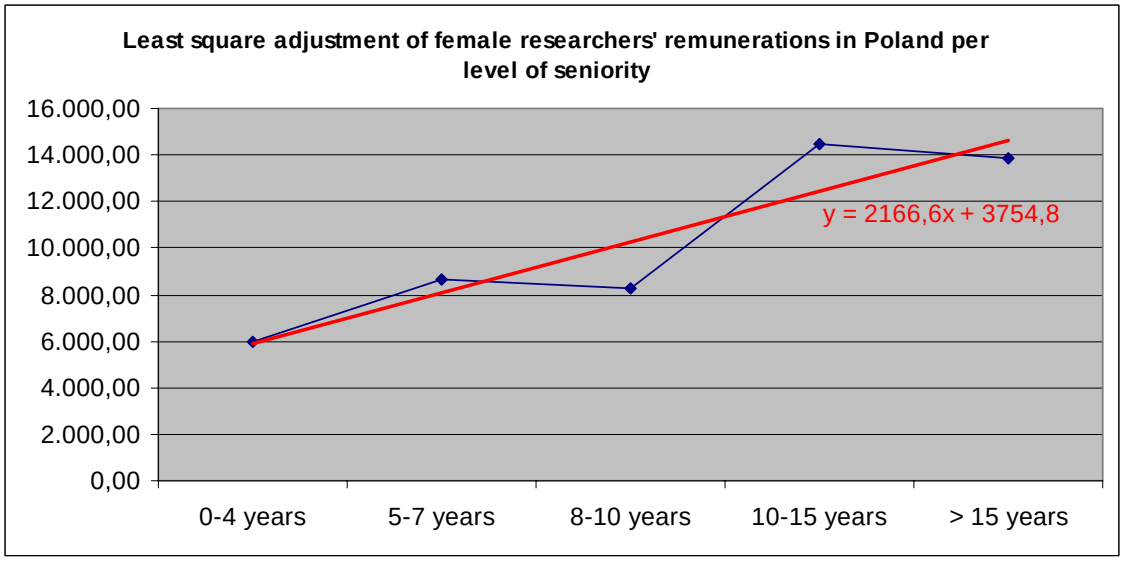


Figure 98 - Least square adjustment of female researchers' remunerations in Poland per level of seniority

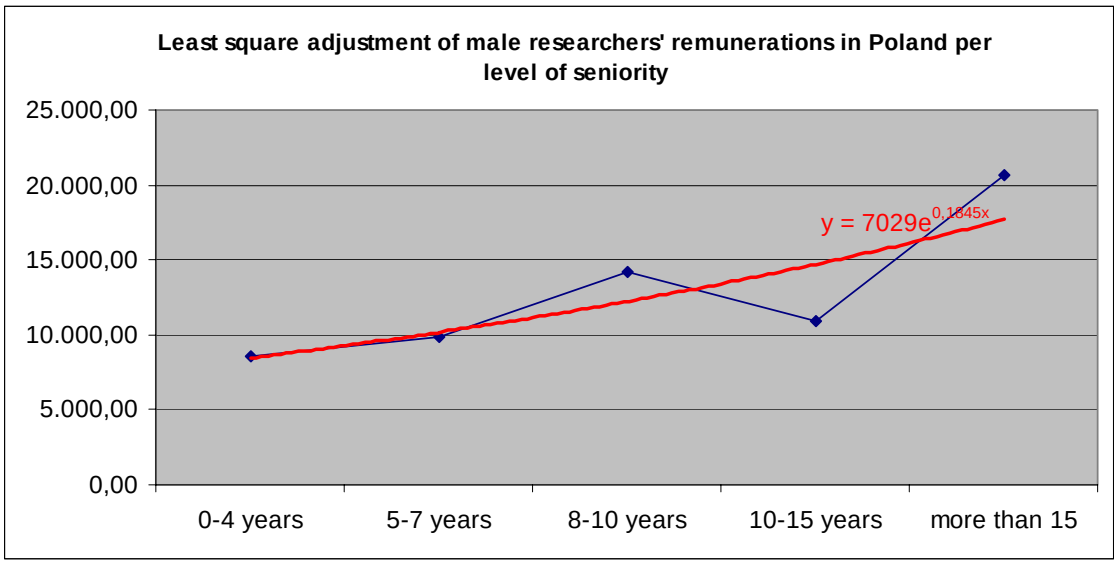


Figure 99 - Least square adjustment of male researchers' remunerations in Poland per level of seniority

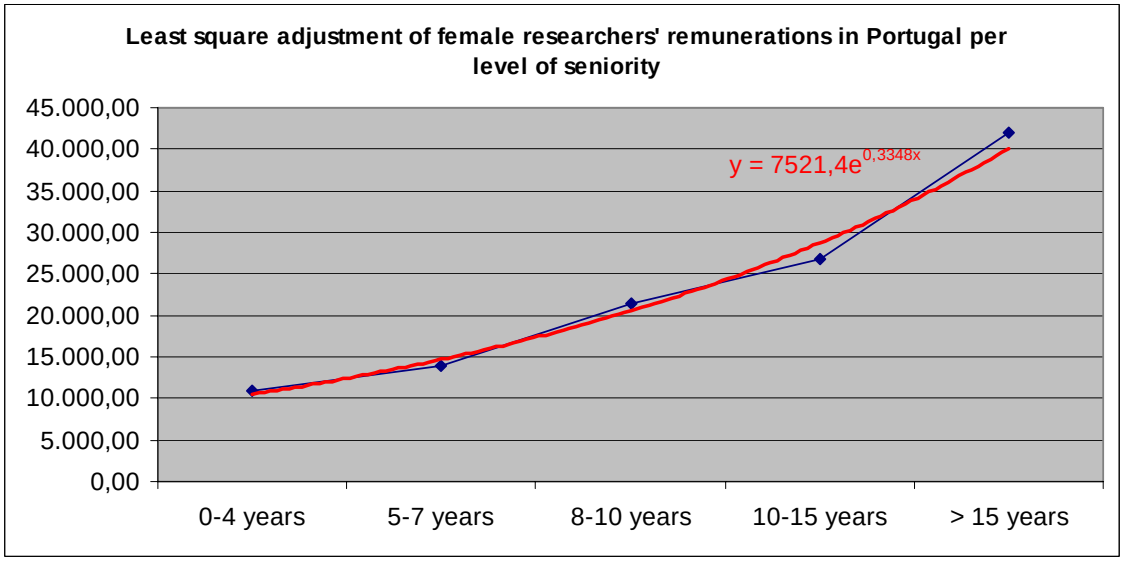


Figure 100 - Least square adjustment of female researchers' remunerations in Portugal per level of seniority

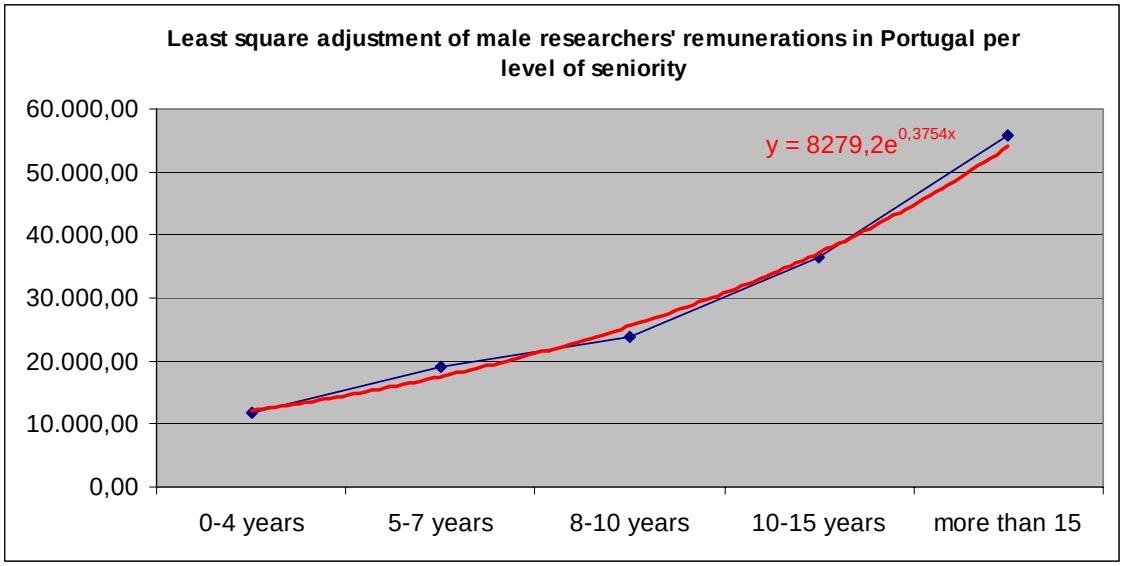


Figure 101 - Least square adjustment of male researchers' remunerations in Portugal per level of seniority

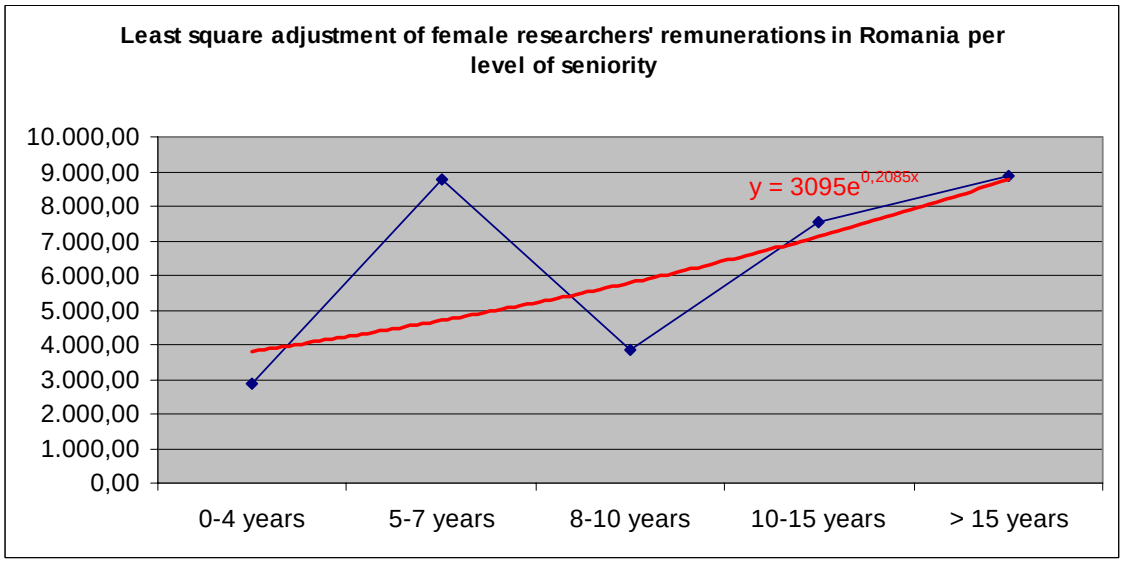


Figure 102 - Least square adjustment of female researchers' remunerations in Romania per level of seniority

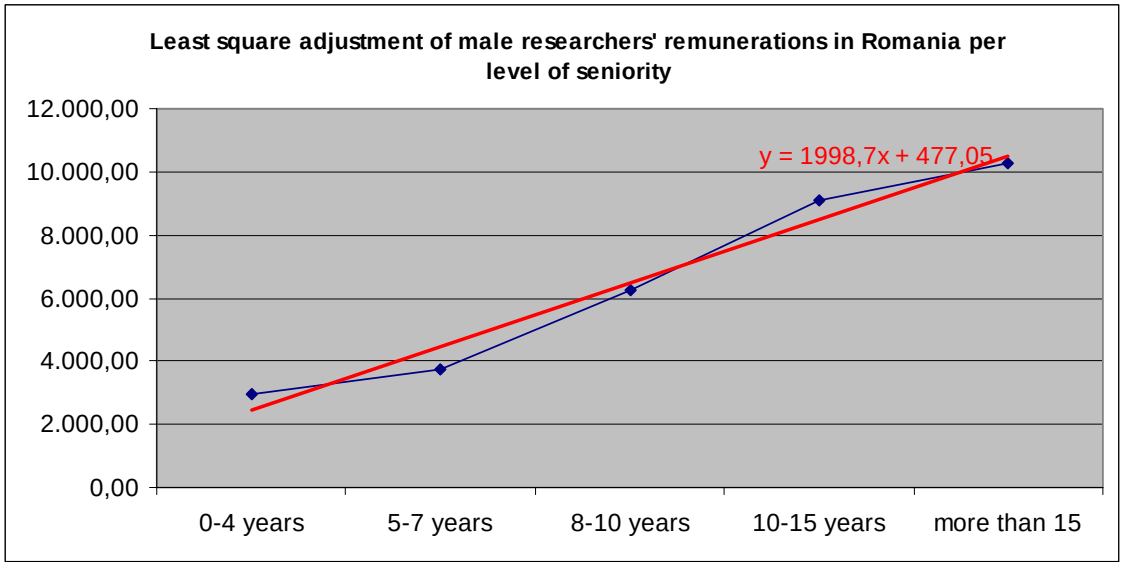


Figure 103 - Least square adjustment of male researchers' remunerations in Romania per level of seniority

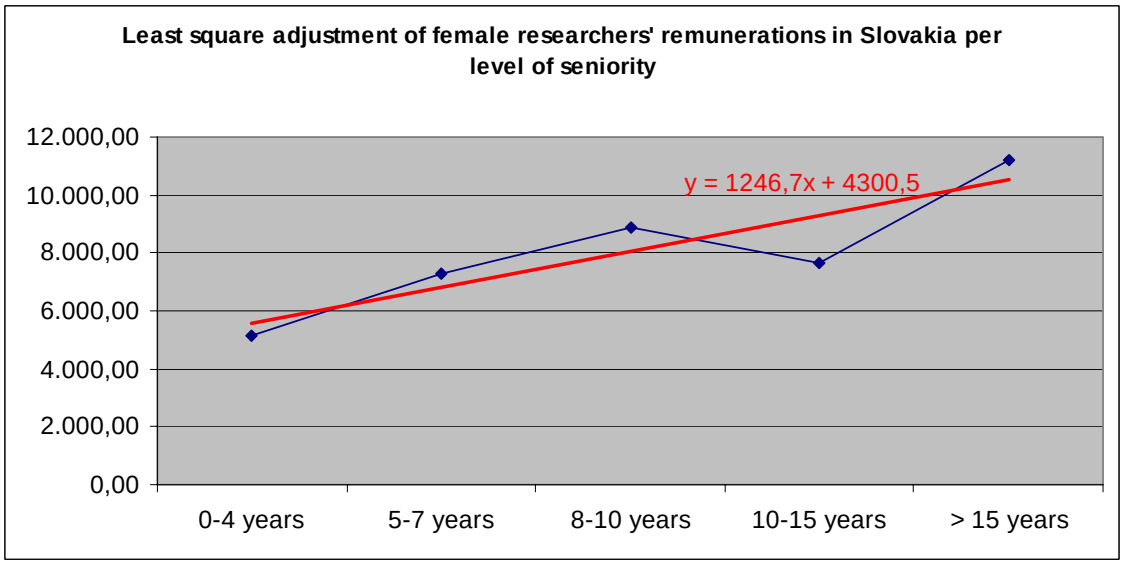


Figure 104 - Least square adjustment of female researchers' remunerations in Slovakia per level of seniority

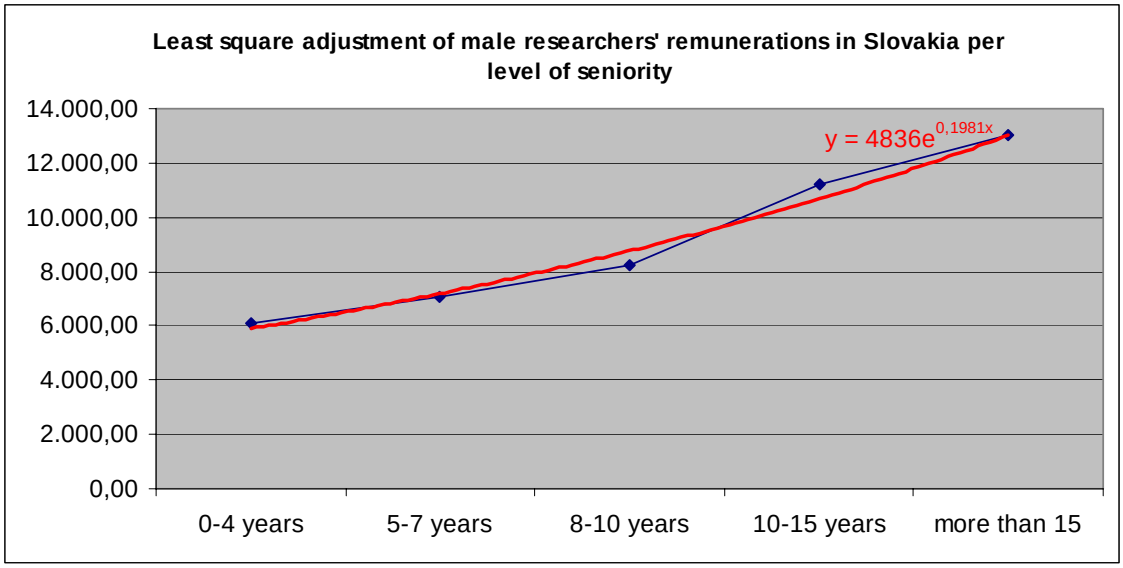


Figure 105 - Least square adjustment of male researchers' remunerations in Slovakia per level of seniority

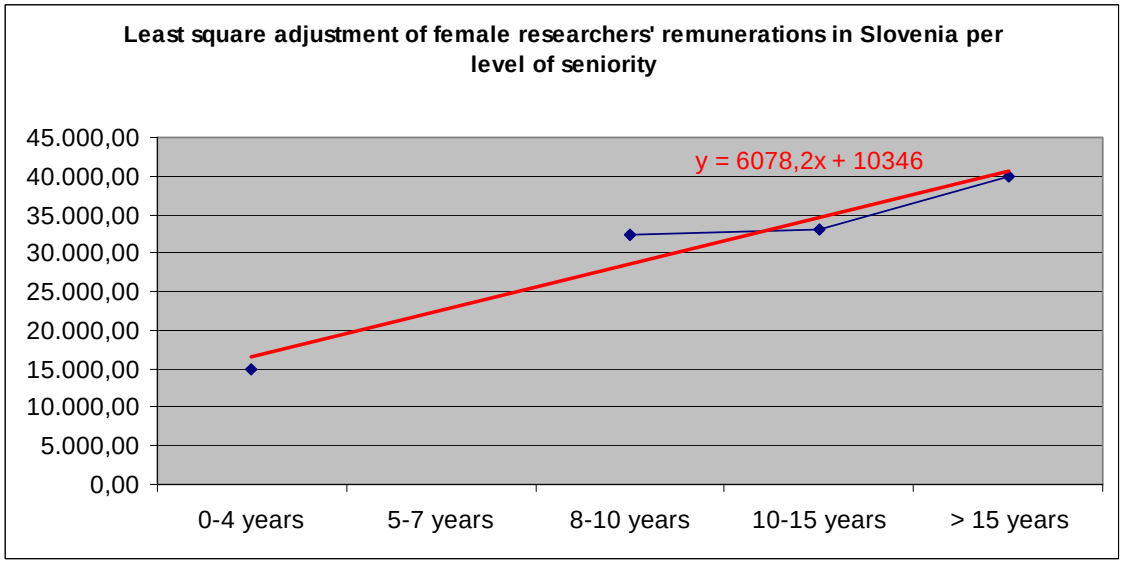


Figure 106 - Least square adjustment of female researchers' remunerations in Slovenia per level of seniority

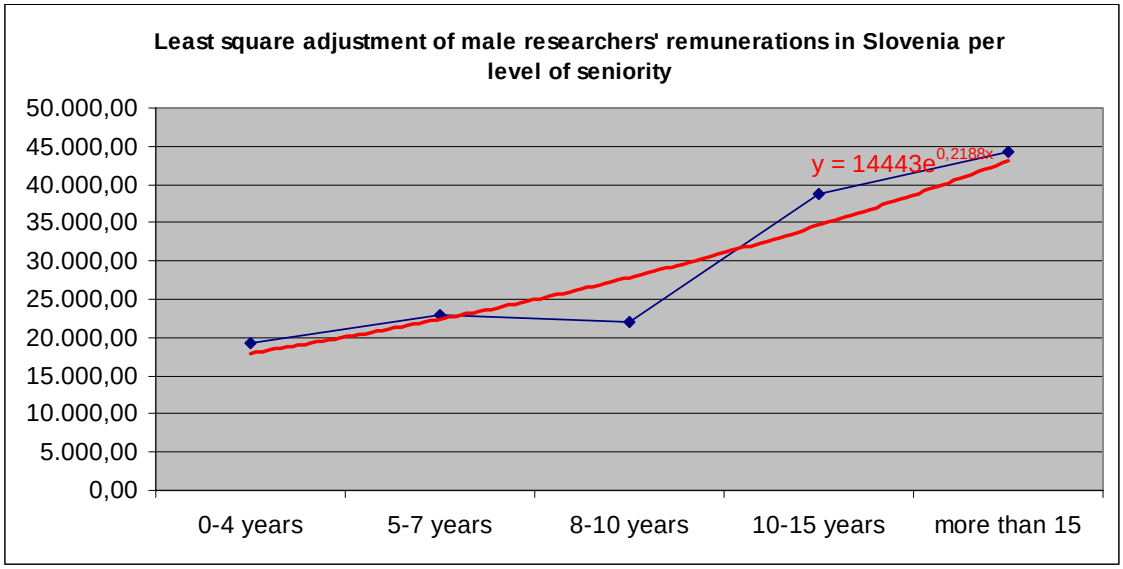


Figure 107 - Least square adjustment of male researchers' remunerations in Slovenia per level of seniority

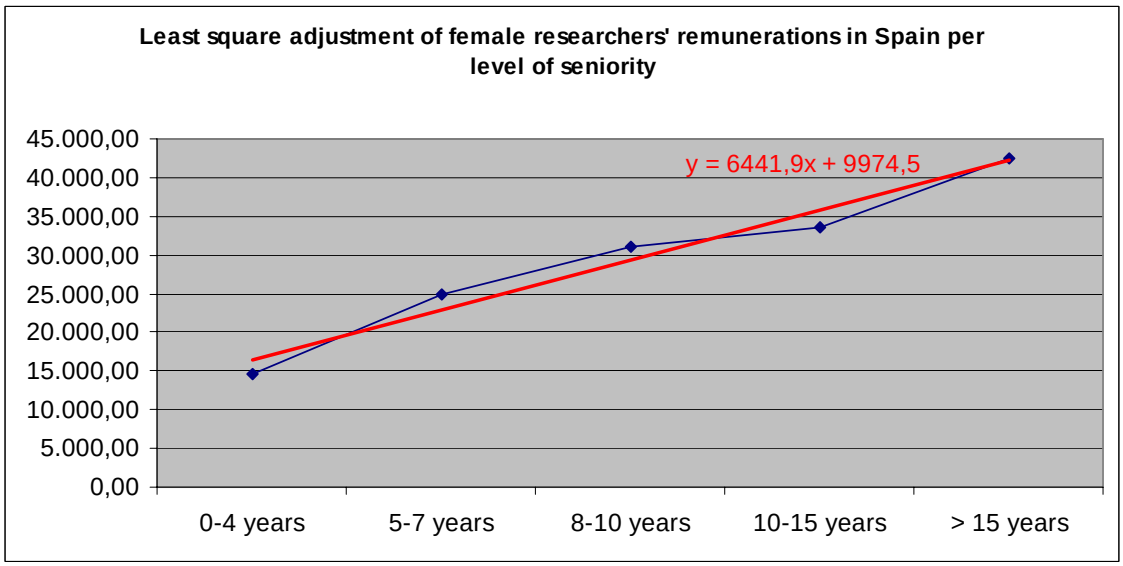


Figure 108 - Least square adjustment of female researchers' remunerations in Spain per level of seniority

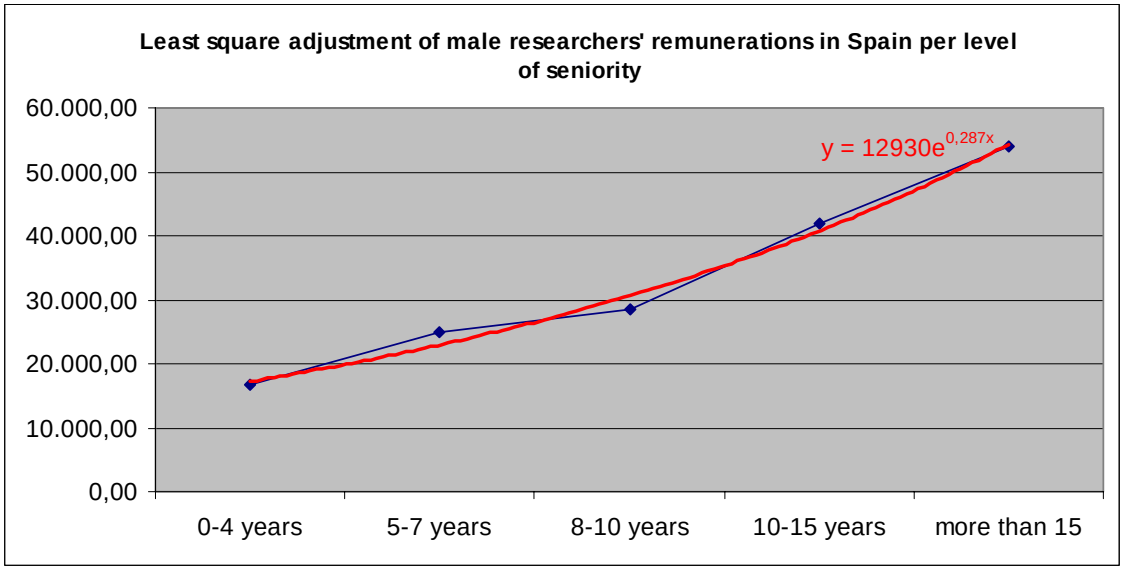


Figure 109 - Least square adjustment of male researchers' remunerations in Spain per level of seniority

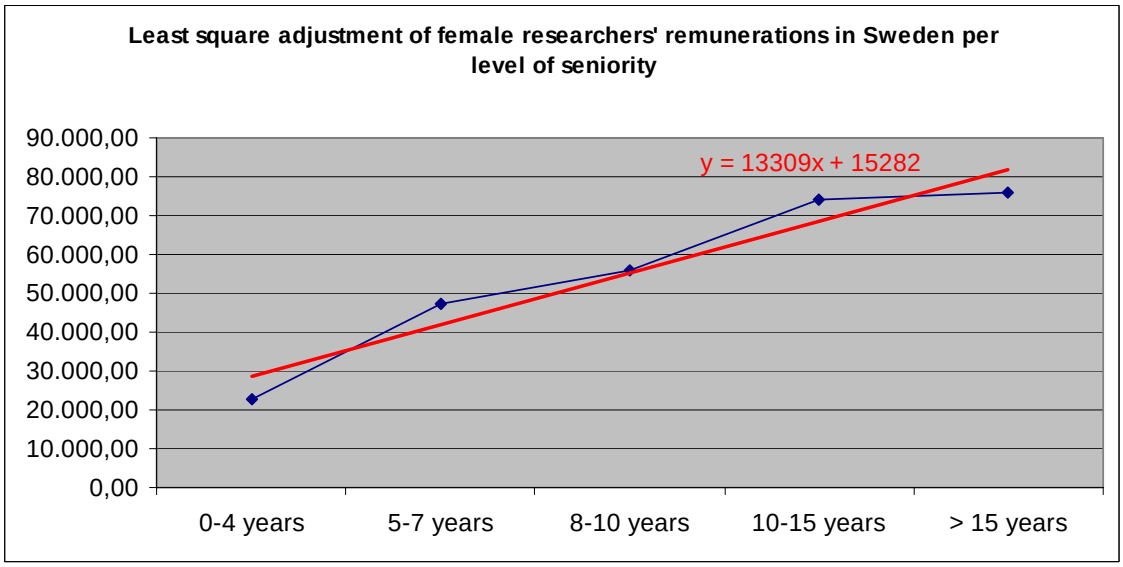


Figure 110 - Least square adjustment of female researchers' remunerations in Sweden per level of seniority

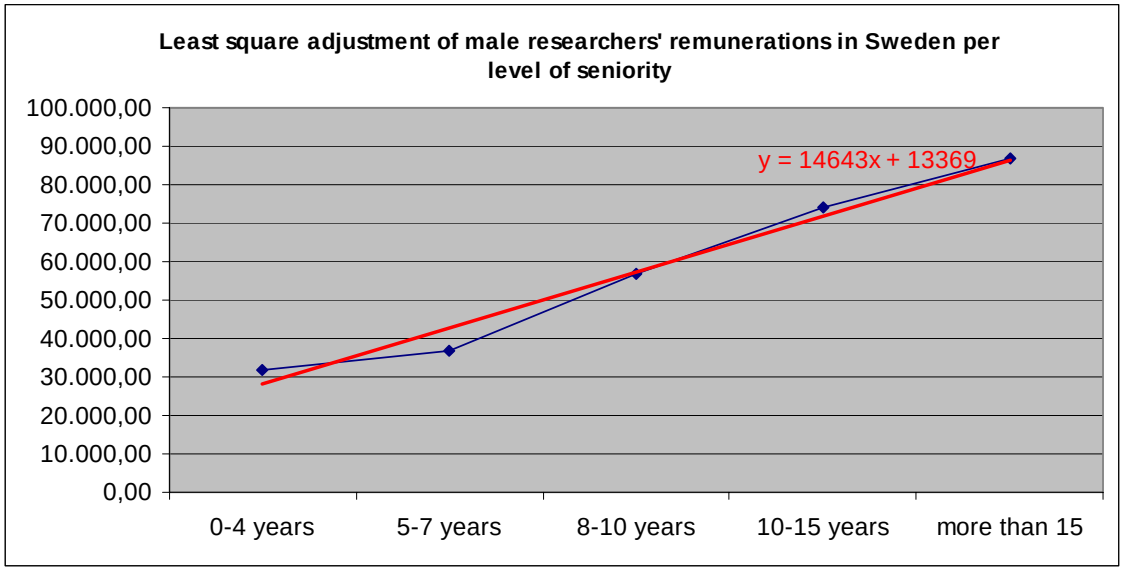


Figure 111 - Least square adjustment of male researchers' remunerations in Sweden per level of seniority

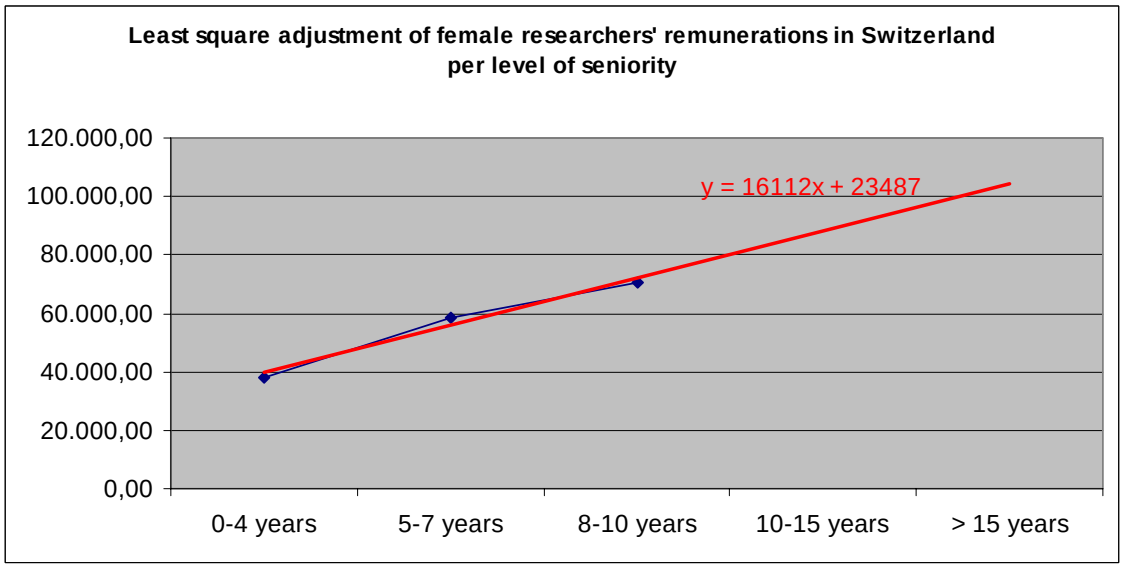


Figure 112 - Least square adjustment of female researchers' remunerations in Switzerland per level of seniority

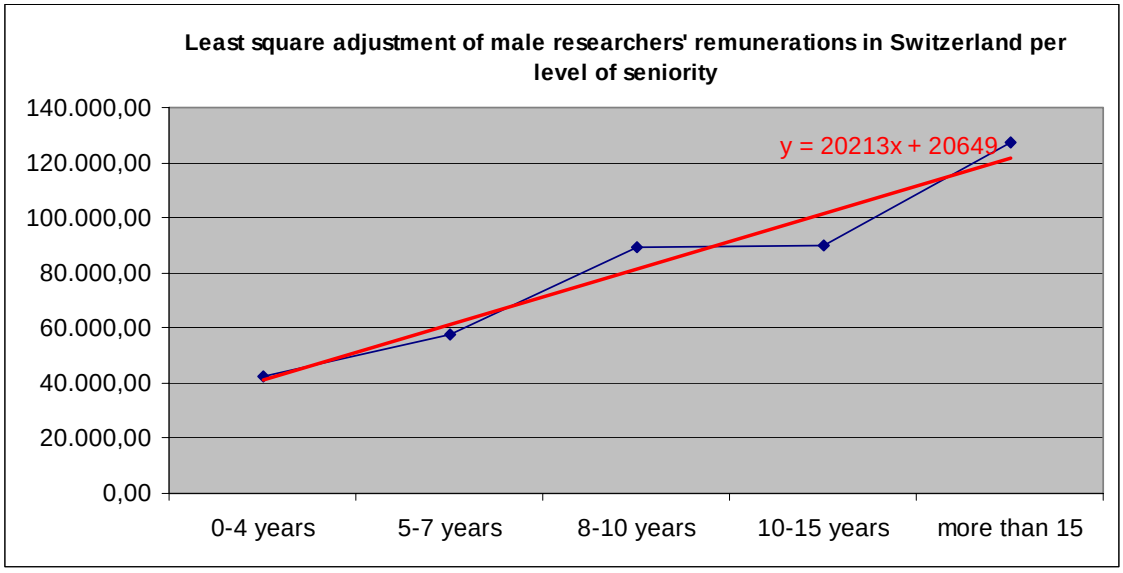


Figure 113 - Least square adjustment of male researchers' remunerations in Switzerland per level of seniority

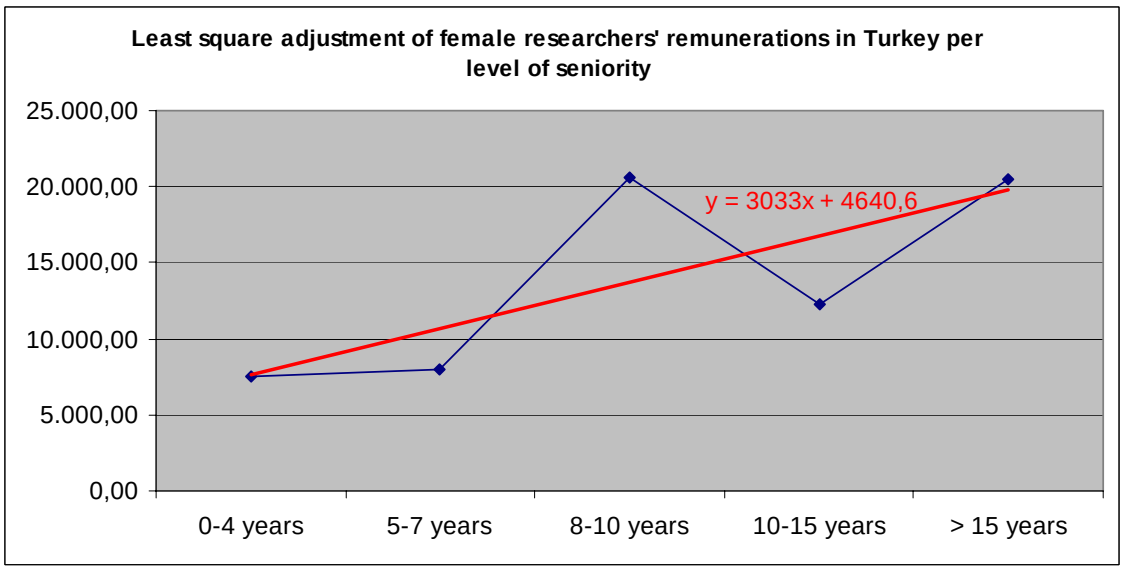


Figure 114 - Least square adjustment of female researchers' remunerations in Turkey per level of seniority

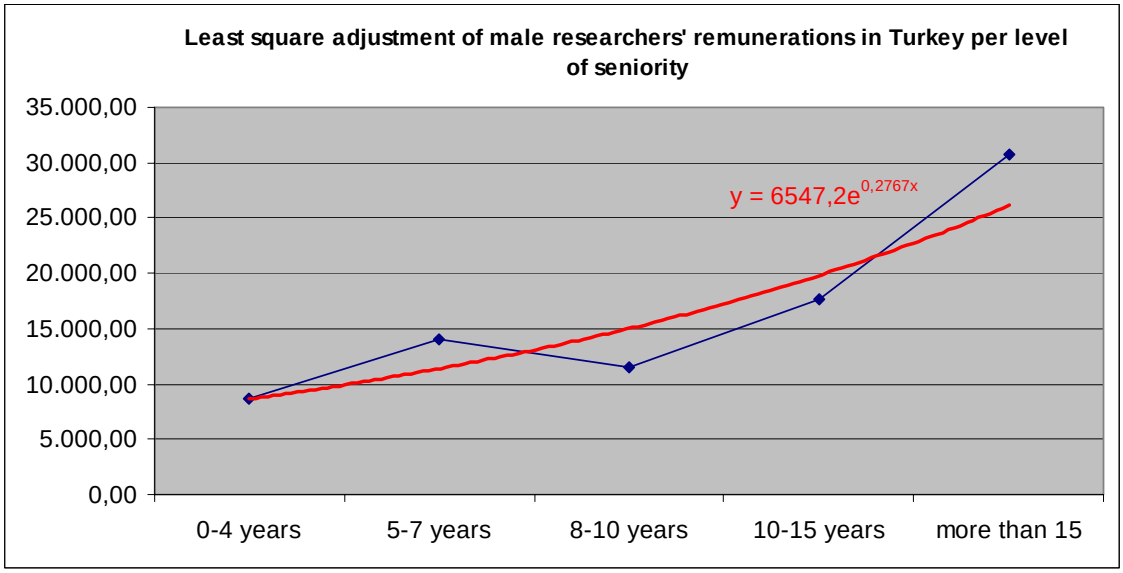


Figure 115 - Least square adjustment of male researchers' remunerations in Turkey per level of seniority

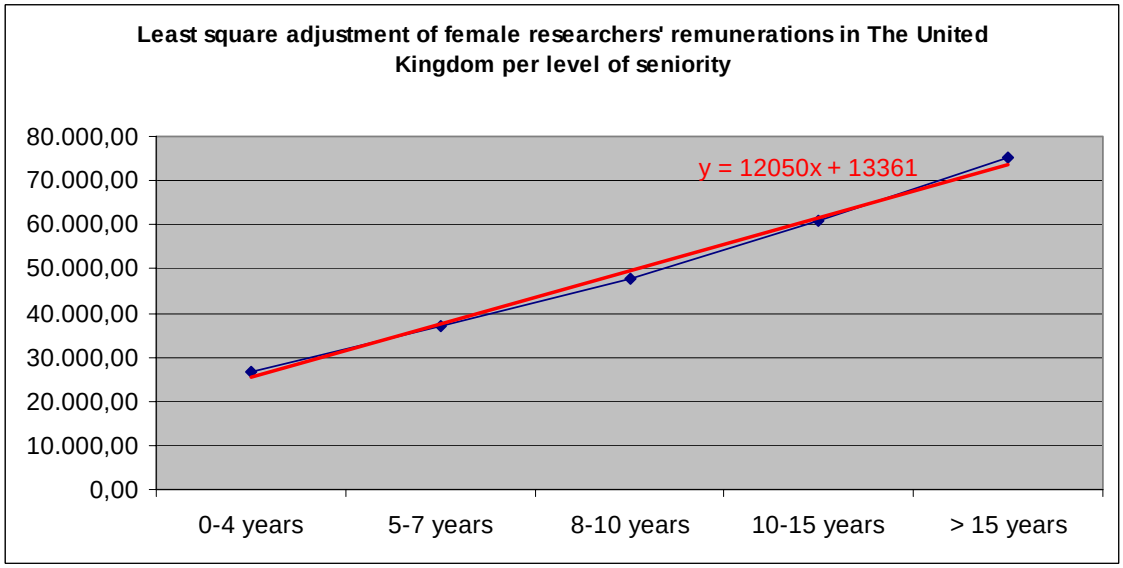


Figure 116 - Least square adjustment of female researchers' remunerations in The United Kingdom per level of seniority

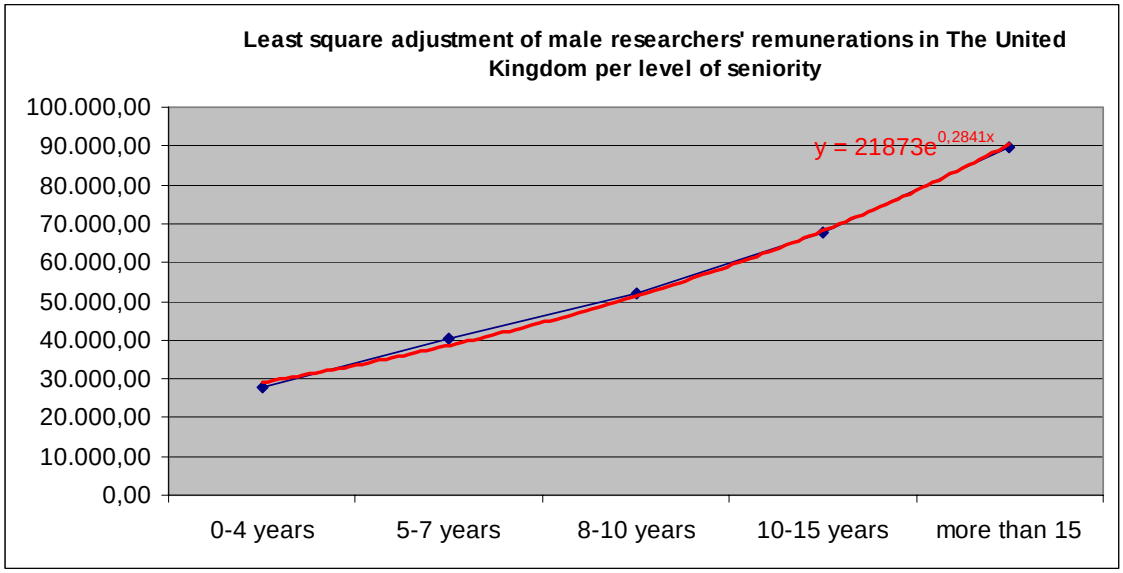


Figure 117 - Least square adjustment of male researchers' remunerations in The United Kingdom per level of seniority

5.6 Annex 6: Country results of the verification phase

A verification process was carried out in order to verify the results of the survey, contacting diverse Universities in different countries. The results obtained through telephone calls and e-mail contacts are presented in this annex.

The verification results are sometimes not comparable to the remuneration average per country obtained in the study, since the number of responses taken into account does not provide the minimum accuracy level demanded in this type of studies and the categories of researchers considered are not even the same. The specific analysis done for each country is presented below. The deviations have been calculated from the data not rounded in order to obtain more precise and reliable deviation figures.

In **Austria**, the average between the different categories of researchers in the University of Bodenkultur was calculated (Post-Doc, PhD Students and professors). The final average was 57.666,67 EUR, **representing a deviation of 9,06% from the study data.**

In **Belgium**, the remuneration average between the "Assistant recherche ingenieur", "Chargé recherche" and "Chercheur qualifié" existing in the University of Mons was calculated, for the categories from which data were obtained (8-10 and 11-15 years of experience), **representing a deviation of 8,64% and 13,33% for researchers respectively.**

	8-10 years	11-15 years
Verification results	57.100,00 €	74.310,67 €
Study results	52.558,00 €	65.569,00 €
Deviation	**8,64%**	**13,33%**

In **Bulgaria**, the remuneration average of the different categories of researchers estimated in the Technical University of Gabrovo was 3.450,36 EUR, **representing a deviation of 11,60% from the study data.**

In **Denmark**, a study carried out by the Roskilde University of the salaries of professors, assistant professor, associate professor and professor MSO, in the different universities of Denmark (Roskilde University, Copenhagen University, University of Southern Denmark, University of Aarhus, University and Aalborg) revealed that the average salary was 77.025,72 EUR. **The final average has a deviation of 12,80% from the study data.**

In **Estonia**, the average remunerations for senior research fellows from the University of Tartu were obtained, **representing a deviation of 7,64% and 17,54%**, as follows:

	11-15 years	>15 years
Verification results	13.159,41 €	19.698,27 €
Study results	14.247,60 €	16.759,40 €
Deviation	**-7,64%**	**17,54%**

In **Finland,** the salary system for Universities, as the University of Oulu and the University of Vaasa, recognized that the salary for State Civil Servants and Employees under Contract is based on components established according to work-

specific component based job demands, a personal component based on personal work performance and a guaranteed salary component. The average of the components for teaching and research staff was 41.069,36 EUR, **representing a deviation of 3,72% from the study data.**

In **France,** a remuneration average was calculated between the data of remunerations obtained for "Enseignants-Chercheurs" and "Chercheurs". The total yearly remuneration average for the first category was estimated by the people contacted in 63.000 EUR. The average for the "chercheurs" category calculated from the standard remunerations of the CNRS was 49.767,55 EUR. **The final average has a deviation of 8,5% from the study data.**

In **Germany**, the remuneration of researchers is between Remuneration level 13 and 15 of the categories defined in the remuneration contract for official personnel at the Fraunhofer Institute. Additionally Fraunhofer has a small bonus system for outstanding performance. Young researchers from university have an annual remuneration of roughly 35.000 EUR. The highest salary a scientist can achieve within the public service tariff is roughly 68.000 Euro per year. **The global average has a deviation of 9,8% from the study data**

In **Hungary**, the remuneration average between the "Full Professor", "Assistant professor", "Senior lecturer", "PhD students" and "Senior assistant professor" existing at the Pazmany Peter Catholic University was calculated. The final average was 19.613,40 EUR, **representing a deviation of 6,15% from the study data.**

In **Iceland**, the remuneration average calculated for the different categories of researchers in the University of Reykjavik was 51.400,48 EUR, **representing a deviation of 1,54% from the study data.**

In **Ireland**, the salary scales available in the Dublin Institute of Technology website, and the Trinity College website allowed the calculation of a remuneration average for the different categories of researchers. The final average was 61.029,31 EUR, **representing a deviation of 14,27% from the study data**.

In **Italy**, the remuneration average calculated for the senior researchers in the University of Torino, Roma and the Università degli Studi di Trento ("Professor Ordinari", "Professor Associati", "Ricercatori") was 67.521,22 EUR, **representing a deviation of 29,88% from the study data.**

In **Luxembourg**, the remuneration average for senior researchers at the University of Luxembourg was obtained. **The deviation obtained was 2,95% and 9,72% for both categories**, as indicated below:

	11-15 years	>15 years
Verification results	76.500,00 €	95.500,00 €
Study results	74.306,00 €	87.038,00 €
Deviation	**2,95%**	**9,72%**

In **Malta, the global average has a deviation of 13,72% from the study data.**

In **the Netherlands,** the salary scales provided by the University of Leiden, Utrecht University and Univesity of Maastrich, had a remuneration average for researches of categories from 0 to 7 and from 8 to 10 years of experience, **representing a deviation of 5,77% and 12,56% respectively.**

	0-7 years	8-10 years
Verification results	31.528,00 €	49.756,00 €
Study results	33.459,50 €	56.900,00 €
Deviation	**-5,77%**	**-12,56%**

In **Norway**, the University of Trondheim was contacted. The average provided for senior researchers (88.416,90 EUR) **has a deviation of 20,03% from the study data** (73.665,00 EUR).

In **Poland,** a remuneration average was calculated between the data of remunerations obtained for "Research assistant", "Titular professors", "Associate professors" and "Assistant professors" at the University of Warmia and Mazury in Olsztyn. The total yearly remuneration average was estimated, by the people contacted, at 13.398,75 EUR. **The final average has a deviation of 5,54% from the study data.**

In **Portugal**, the salary scales provided by the people contacted at the University Nova of Lisboa and the University of Porto allowed the calculation of a remuneration average for the different categories of researchers. The final average was 29.210,27 EUR, **representing a deviation of 20,28% from the study data**.

In **Romania,** the global average calculated through the data obtained from the Technical University of Civil Engineering Bucharest (UTCB) **has a deviation of 10,49% from the study data.**

In the case of **Spain**, in an organisation such as CIEMAT, the remuneration of researchers varies from 50.982,70 EUR for a senior researcher to 38.199,52 EUR for researchers in the early stages. The remunerations of researchers have an average of 23.145 EUR according to the retributions of the official personnel in the public universities. Other information was collected from researchers with a fellowship from the different regional governments in Spain. **The global average has a deviation of 6,6% from the study data.**

In the case of **Sweden,** the global average calculated through the data obtained from the Chalmers University of Technology **has a deviation of 15,07% from the study data.**

In **Switzerland,** the remuneration average obtained through the data provided by the University of Genève **revealed the following deviations for each level of experience.**

	Results		
Experience	Verification	Study	Deviation
0-4 years	48.114,31 €	39.559,00 €	**21,63%**
5-7 years	71.499,28 €	59.990,00 €	**19,19%**
8-10 years	101.208,27 €	80.421,00 €	**25,85%**
11-15 years	110.520,52 €	100.852,00 €	**9,59%**
>15 years	137.728,43 €	121.283,00 €	**13,56%**

In **Turkey,** the Hacettepe University and the Istambul Technical University was contacted. The global average provided for the different categories of researchers **has a deviation of 18,80% from the study data.**

Finally, in **the United Kingdom,** the salary scales provided by the people contacted at the University of Bath, the University of Coventry and the University of Huddersfield allowed the calculation of a remuneration average for the different categories of researchers. The final average was 52.285,97 EUR, **representing a deviation of 2,82% from the study data**.

As it can be seen, although the deviations are not very significant, in general, a necessity of adjusting the study results was founded and therefore the adjustment coefficient were defined and applied as explained in chapter 2.3.1.2.

5.7 Annex 7: Accuracy of the results

In order to estimate the significance of the data obtained, the accuracy level has been calculated, using the formula for the determination of the sample's size,

$$n = \frac{N * Z_{\alpha}^{2} p * q}{d^{2} * (N-1) + Z_{\alpha}^{2} * p * q}$$

Where,

- N = Total population
- Z_{α}^{2} = 1.962 (for confidence interval of 95%)
- p = margin (for unknown margin ranges, p=0,50 (50%))
- q = 1 – p = 0,50
- d = accuracy

The following table presents the number of valid replies per countries, after the in-depth analysis (outliers), the number of researchers per country as defined by Eurostat, and the calculated value of d (accuracy).

Four categories of countries results have been established:

- Excellent: accuracy level <5%
- High: 5%< accuracy level<10%
- Medium: 10%< accuracy level<15%
- Low: accuracy level >15%

Those categories have established the **reliability** and **consistency** of the results. Countries with low accuracy have a less significant sample size than the other categories so their results must be carefully analysed since the number of responses taken into account does not provide the minimum accuracy level demanded in this type of studies.

Accuracy of the replies obtained from the survey carried out by CARSA (2006, Total survey population N=6190)				
Country	Valid replies per country	Number of researchers per country (1)	d (2)	Accuracy Level
Latvia	7	8.002	0,37027	Low
Malta	18	975	0,22896	
Iceland	18	5.466	0,23063	
Luxembourg	22	4.135	0,20841	
Israel	25	30.700	0,19592	
Cyprus	45	2.102	0,14455	Medium
Estonia	46	7.600	0,14406	
Bulgaria	52	17.400	0,13570	
Slovenia	56	12.501	0,13067	
Switzerland	64	68.465	0,12244	
Austria	78	65.725	0,11090	
Czech Republic	78	55.699	0,11089	
Lithuania	95	14.534	0,10022	
Turkey	96	79.958	0,09996	High
Netherlands	105	122.250	0,09560	
Romania	110	39.985	0,09331	
Greece	115	57.257	0,09129	
Poland	121	126.241	0,08905	
Sweden	125	108.146	0,08760	
Croatia	144	17.216	0,08133	
Denmark	153	61.809	0,07913	
Belgium	161	73.763	0,07715	
Slovakia	176	20.928	0,07356	
Hungary	187	48.681	0,07153	
Norway	195	51.175	0,07005	
Finland	202	74.773	0,06886	
Ireland	217	25.704	0,06625	
France	435	415.061	0,04696	Excellent
Portugal	535	44.036	0,04211	
United Kingdom	586	163.000	0,04041	
Spain	617	249.969	0,03940	
Italy	639	249.782	0,03872	
Germany	667	664.731	0,03793	

(1) Data of researchers in the different countries are extracted from Eurostat ("Science and technology in Europe-Statistical pocketbook", 2006).

(2) d represents the accuracy calculated through the formula for the determination of the sample's size.

SOURCES: Data for Switzerland are extracted from the Swiss Federal Statistical Office, data for Israel from the Central Bureau of Statistics of Israel, and data for United Kingdom from the Office for National Statistics.

Liechtenstein has not been included in the table: No answers received.

Table 36 – Accuracy of the survey results

5.8 Annex 8: Complete study Results: Tables and figures

5.8.1 SI1: Total Number of responses

In this annex are presented the results of SI1: Total number of responses. It presents the final sample of responses (6.190, including Marie Curie researchers), classified as follows:

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

Country	Valid replies per country	Marie Curie replies	Total
Austria	77	1	78
Belgium	159	2	161
Bulgaria	52	0	52
Croatia	144	0	144
Cyprus	43	2	45
Czech Republic	78	0	78
Denmark	151	2	153
Estonia	46	0	46
Finland	201	1	202
France	428	7	435
Germany	646	21	667
Greece	113	2	115
Hungary	187	0	187
Iceland	18	0	18
Ireland	213	4	217
Israel	25	0	25
Italy	627	12	639
Latvia	7	0	7
Lithuania	94	1	95
Luxembourg	22	0	22
Malta	18	0	18
Netherlands	104	1	105
Norway	195	0	195
Poland	120	1	121
Portugal	532	3	535
Romania	110	0	110
Slovakia	176	0	176
Slovenia	56	0	56
Spain	614	3	617
Sweden	122	3	125
Switzerland	64	0	64
Turkey	96	0	96
United Kingdom	572	14	586
TOTAL	***6110***	***80***	***6190***

Table 37 – Distribution of the total number of replies (N=6190) per country, including the total number of Marie Curie replies

o SI1.2:% distribution per country (QC) and gender (Q5: response to question 2 of the questionnaire)

Distribution of survey replies per country and gender (2006, N=6190)		
Country/gender	**Male**	**Female**
Austria	59	19
Belgium	109	52
Bulgaria	30	22
Croatia	82	62
Cyprus	37	8
Czech Republic	65	13
Denmark	116	37
Estonia	36	10
Finland	114	88
France	299	136
Germany	481	186
Greece	81	34
Hungary	145	42
Iceland	9	9
Ireland	127	90
Israel	21	4
Italy	458	181
Latvia	5	2
Lithuania	58	37
Luxembourg	16	6
Malta	11	7
Netherlands	79	26
Norway	140	55
Poland	81	40
Portugal	261	274
Romania	57	53
Slovakia	125	51
Slovenia	40	16
Spain	412	205
Sweden	101	24
Switzerland	53	11
Turkey	65	31
United Kingdom	351	235
TOTAL	***4124***	***2066***

Table 38 – Distribution of the survey replies per country and gender (2006, N=6190)

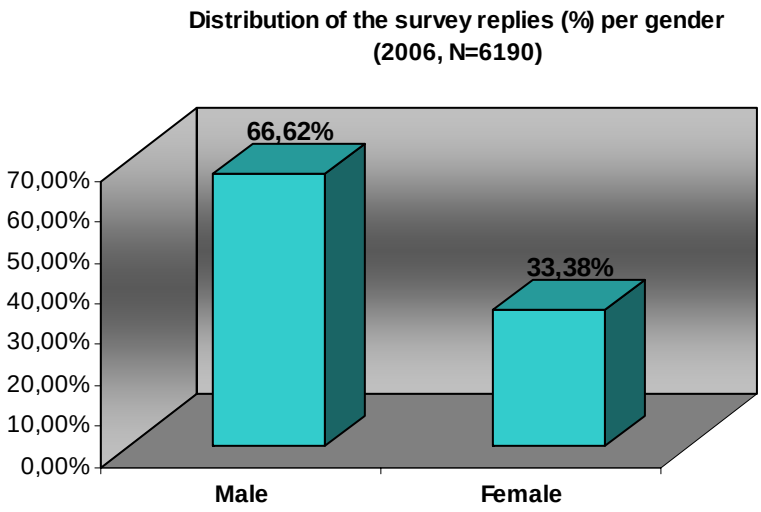


Figure 118 – Distribution of the total number of replies (%) per gender (2006, N=6190)

- SI1.3:% distribution per country (QC), gender (Q5) and experience (Q1 response to question 3 of the questionnaire)

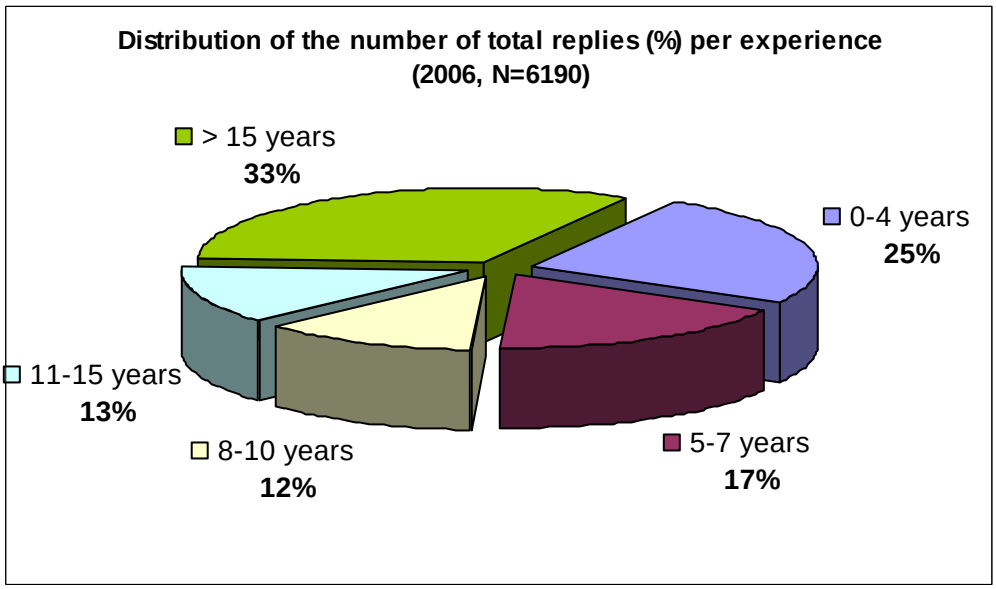


Figure 119 – Distribution of the total number of replies (%) per level of experience (2006, N=6190)

Distribution of the survey replies per country, level of experience and gender (2006, N=6190)										
Country/Level of experience	**0-4 years**		**5-7 years**		**8-10 years**		**11-15 years**		**> 15 years**	
	Female	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**
Austria	10	9	1	13	3	6	1	7	4	24
Belgium	26	37	15	20	3	12	2	15	6	25
Bulgaria	6	4	2	2	2	1	2	3	10	20
Croatia	10	9	7	10	12	2	10	10	23	51
Cyprus	1	4	1	3	4	8	2	9	0	13
Czech Republic	4	5	0	11	3	7	0	5	6	37
Denmark	7	13	8	9	4	14	1	19	17	61
Estonia	1	5	4	4	0	1	0	2	5	24
Finland	28	26	18	25	14	18	14	21	14	24
France	33	55	31	51	18	31	24	43	30	119
Germany	92	140	40	94	18	67	18	51	18	129
Greece	9	8	5	15	5	9	6	12	9	37
Hungary	8	12	3	15	2	12	4	19	25	87
Iceland	3	1	2	1	1	2	3	0	0	5
Ireland	35	35	23	23	12	21	10	22	10	26
Israel	0	2	2	0	0	2	1	3	1	14
Italy	46	119	43	88	20	59	29	37	43	155
Latvia	1	2	0	0	0	0	0	0	1	3
Lithuania	11	5	4	9	6	8	0	6	16	30
Luxembourg	2	2	1	2	1	2	1	7	1	3
Malta	0	0	1	1	2	1	3	3	1	6
Netherlands	10	16	6	7	3	7	1	5	6	44
Norway	14	19	9	22	7	19	12	21	13	59
Poland	8	7	7	18	6	7	7	7	12	42
Portugal	114	67	44	61	46	36	24	35	46	62
Romania	9	7	1	9	4	6	10	6	29	29
Slovakia	11	31	11	11	2	10	2	11	25	62
Slovenia	7	9	0	8	1	3	5	10	3	10
Spain	90	98	38	67	26	45	28	63	23	139
Sweden	5	17	3	17	5	12	3	16	8	39
Switzerland	4	9	5	8	2	9	0	5	0	22
Turkey	3	10	7	7	3	4	4	13	14	31
United Kingdom	87	76	58	52	25	42	33	51	32	130
TOTAL	**695**	**859**	**400**	**683**	**260**	**483**	**260**	**537**	**451**	**1562**

Table 39 - Distribution of the survey replies per country, level of experience and gender (2006, N=6190)

- SI1.4:% distribution per country (QC) and sector of activity (Q2 response to question 5 of the questionnaire)

Distribution of the survey replies per country and sector of activity (2006, N=6190)			
Country/Sector of activity	**Business Enterprise Sector**	**Higher Education**	**Government**
Austria	10	62	6
Belgium	21	130	10
Bulgaria	0	35	17
Croatia	3	120	21
Cyprus	13	24	8
Czech Republic	13	39	26
Denmark	8	109	36
Estonia	0	37	9
Finland	16	126	60
France	30	281	124
Germany	43	552	72
Greece	8	68	39
Hungary	9	122	56
Iceland	0	16	2
Ireland	6	201	10
Israel	0	22	3
Italy	45	353	241
Latvia	1	5	1
Lithuania	4	76	15
Luxembourg	7	5	10
Malta	1	16	1
Netherlands	12	86	7
Norway	71	96	28
Poland	6	103	12
Portugal	29	418	88
Romania	14	56	40
Slovakia	8	124	44
Slovenia	7	30	19
Spain	40	418	159
Sweden	9	104	12
Switzerland	5	51	8
Turkey	8	72	16
United Kingdom	37	500	49
TOTAL	**484**	**4457**	**1249**

Table 40 – Distribution of the total number of replies per country and sector of activity (2006, N=6190)

- SI1.5:% distribution per country (QC) and scientific domain (JQN response to question 6 of the questionnaire)

Distribution of the survey replies per country and scientific domain (2006, N=6190)									
Country/Scientific domain	**Social & Human Sciences**	**Economics**	**Chemistry**	**Physics**	**Life Sciences**	**Mathematics**	**Information Sciences**	**Engineering Sciences**	**Environment and Geosciences**
Austria	15	20	3	3	21	3	3	7	3
Belgium	40	27	10	6	32	2	8	30	6
Bulgaria	5	3	2	14	10	0	2	7	9
Croatia	30	1	16	14	38	1	7	25	12
Cyprus	10	5	2	0	4	1	6	11	6
Czech Republic	8	7	15	5	14	3	3	20	3
Denmark	44	21	4	6	57	1	4	7	9
Estonia	6	3	4	4	15	0	0	12	2
Finland	30	62	4	5	45	2	19	19	16
France	57	25	38	46	121	13	34	56	45
Germany	105	58	36	146	170	9	27	65	51
Greece	9	7	9	10	22	2	17	19	20
Hungary	12	11	24	36	60	4	2	23	15
Iceland	6	1	1	0	6	0	3	0	1
Ireland	41	1	20	26	56	6	27	32	8
Israel	3	1	0	3	4	0	2	12	0
Italy	91	67	64	109	137	11	27	77	56
Latvia	1	1	1	0	1	0	1	2	0
Lithuania	25	1	8	16	16	1	2	9	17
Luxembourg	4	1	1	0	8	0	4	1	3
Malta	6	0	0	1	5	1	1	4	0
Netherlands	16	25	5	4	28	3	4	11	9
Norway	45	16	11	7	40	2	10	26	38
Poland	11	19	16	13	25	3	7	26	1
Portugal	63	31	31	21	244	3	19	78	45
Romania	13	10	9	12	18	2	3	30	13
Slovakia	26	13	14	16	45	7	14	26	15
Slovenia	7	3	6	13	5	4	5	11	2
Spain	57	53	56	72	192	12	27	86	62
Sweden	16	27	7	9	23	2	10	24	7
Switzerland	6	10	3	8	11	1	5	13	7
Turkey	18	3	3	5	19	1	6	32	9
United Kingdom	164	32	30	38	192	15	26	42	47
TOTAL	**990**	**565**	**453**	**668**	**1684**	**115**	**335**	**843**	**537**

Table 41 – Distribution of the total number of replies per country and scientific domain (2006, N=6190)

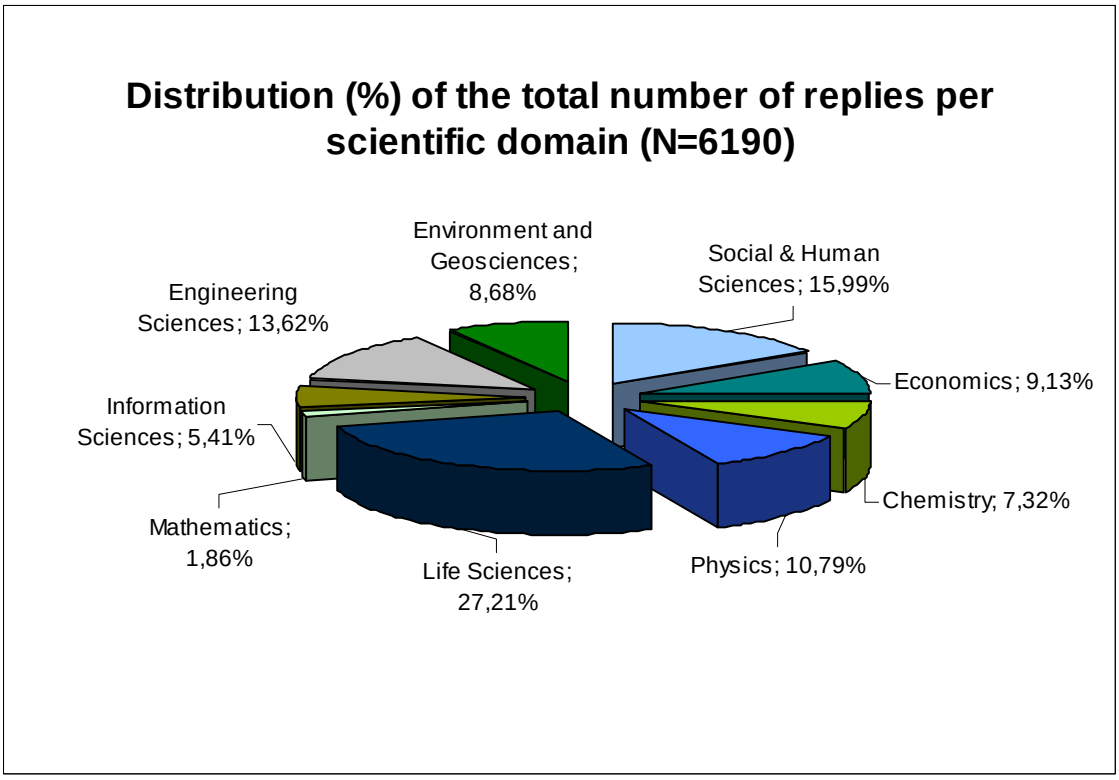


Figure 120 – Distribution (%) of the total number of replies per scientific domain (2006, N=6190)

- SI1.6: % distribution per country (QC) and type of contract (QF4 response to question 4 on the questionnaire)

Distribution of the survey replies per country and type of contract (2006, N=6190)						
Country/Type of contract	Type of contract					
	Full time	Part Time	Permanent	Fixed-term		
				Regular employment	Non-employment	Total
Austria	75	3	41	34	3	37
Belgium	156	5	52	57	52	109
Bulgaria	52	0	46	1	5	6
Croatia	138	6	92	51	1	52
Cyprus	44	1	32	11	2	13
Czech Republic	71	7	40	37	1	38
Denmark	149	4	113	30	10	40
Estonia	38	8	13	31	2	33
Finland	195	7	83	96	23	119
France	409	26	300	73	62	135
Germany	544	123	190	306	171	477
Greece	101	14	67	27	21	48
Hungary	181	6	131	46	10	56
Ireland	209	8	68	70	79	149
Iceland	18	0	16	1	1	2
Israel	24	1	20	3	2	5
Italy	629	10	320	90	229	319
Latvia	6	1	6	0	1	1
Lithuania	85	10	60	32	3	35
Luxembourg	21	1	17	4	1	5
Malta	17	1	18	0	0	0
Netherlands	99	6	60	33	12	45
Norway	187	8	145	32	18	50
Poland	116	5	86	30	5	35
Portugal	516	19	147	66	322	388
Romania	97	13	96	7	7	14
Slovakia	167	9	82	79	15	94
Slovenia	56	0	33	22	1	23
Spain	604	13	242	177	198	375
Sweden	112	13	75	33	17	50
Switzerland	52	12	35	26	3	29
Turkey	92	4	73	19	4	23
United Kingdom	557	29	274	170	142	312
TOTAL	***6.190***		***6.190***			

Table 42 – Distribution of the survey replies per country and type of contract (2006, N=6190)

5.8.2 SI2: Study Results

This chapter presents the study results as obtained after the quality check process.

The average of the remunerations (total yearly salary average) of researchers per country is presented in the following table:

Country/ Level of experience	Remuneration weighted average in EURO
Austria	62.406
Belgium	54.025
Bulgaria	3.351
Croatia	16.671
Cyprus	43.084
Czech Republic	19.120
Denmark	62.872
Estonia	12.019
Finland	41.907
France	52.919
Germany	52.731
Greece	25.484
Hungary	15.605
Iceland	51.314
Ireland	61.518
Israel	42.552

Country/ Level of experience	Remuneration weighted average in EURO
Italy	33.280
Latvia	10.488
Lithuania	13.921
Luxembourg	63.010
Malta	27.911
Netherlands	58.662
Norway	63.160
Poland	12.337
Portugal	27.649
Romania	6.222
Slovakia	9.094
Slovenia	29.771
Spain	32.939
Sweden	58.047
Switzerland	82.725
Turkey	16.249
United Kingdom	55.206

Table 43 – Country Total yearly salary average per country (2006, N=6110, all currencies in EURO)

The results, as presented by the Survey Indicator 2 have been calculated separately for the Marie Curie researchers and for the rest of researchers.

After the quality check process, the final sample of Total yearly salary cost had 6.190 correct replies that were used to present the survey indicators, including 80 answers from Marie Curie fellowships. Those responses (80) have not been considered in the study results analysis, so the final sample considered was 6.110. In the case of the Net yearly salary cost the final sample had 7.018 correct replies, including 84 answers from Marie Curie fellowships, not considered in this chapter. The detailed presentation of the results for the Marie Curie fellowships can be found in chapter 5.8.4.

The results for researchers in EU25 and Associated Countries, excluding Marie Curie researchers, are presented as follows as a relevant part of the present study:

- SI2.1: Country Total Yearly Salary Average, per Gender.

Country Total Yearly Salary Average of researchers in EU25 and Associated Countries per gender (2006, N=6.110, all currencies in EURO)			
Country/Gender	**Female**	**Male**	**Diference Male-Female (%)**
Austria	44.640	69.557	35,82
Belgium	36.608	53.224	31,22
Bulgaria	3.644	4.093	10,98
Croatia	17.385	22.660	23,28
Cyprus	33.851	50.232	32,61
Czech Republic	15.541	23.634	34,24
Denmark	64.901	69.304	6,35
Estonia	7.522	13.182	42,93
Finland	33.800	44.022	23,22
France	46.949	60.419	22,29
Germany	36.827	50.081	26,47
Greece	25.238	29.841	15,42
Hungary	16.686	18.997	12,16
Iceland	46.439	57.971	19,89
Ireland	44.702	59.421	24,77
Israel	49.845	55.478	10,15
Italy	27.039	37.796	28,46
Latvia	17.335	8.337	-107,92
Lithuania	9.481	12.359	23,29
Luxembourg	51.336	65.742	21,91
Malta	26.613	30.324	12,24
Netherlands	39.367	75.684	47,99
Norway	59.592	66.800	10,79
Poland	10.769	15.829	31,97
Portugal	19.788	29.024	31,82
Romania	7.210	7.805	7,63
Slovakia	8.840	10.230	13,59
Slovenia	26.414	31.371	15,80
Spain	23.291	35.786	34,92
Sweden	55.644	63.681	12,62
Switzerland	53.342	92.324	42,22
Turkey	15.339	21.776	29,56
United Kingdom	42.905	61.423	30,15

Table 44 – The average weighted total yearly salary of researchers in EU25 and Associated Countries, per country and gender (2006, N=6110, all currencies in EURO)

In most of the countries, the remuneration of men is higher than for women. Thus, the countries with higher differences (over 35%) are Estonia, Czech Republic, Israel and Portugal. The gap is significantly reduced (difference below 15%) in Bulgaria, Denmark, Greece, Iceland, Malta and Norway.

- SI2.2: Country Total Yearly Salary Average, per Level of seniority

Country Total Yearly Salary Average of researchers in EU25 and Associated Countries per level of experience (2006, N=6.110, all currencies in EURO)					
Country/ Level of experience	**0-4 years**	**5-7 years**	**8-10 years**	**11-15 years**	**> 15 years**
Austria	35.836	48.412	60.988	73.564	86.140
Belgium	26.536	39.547	52.558	65.569	78.580
Bulgaria	1.960	2.618	3.277	3.935	4.593
Croatia	8.953	12.606	16.259	19.912	23.564
Cyprus	20.379	31.126	41.873	52.620	63.367
Czech republic	9.881	14.254	18.627	23.000	27.373
Denmark	42.528	52.157	61.786	71.415	81.044
Estonia	6.712	9.224	11.736	14.248	16.759
Finland	26.102	33.582	41.063	48.544	56.025
France	28.191	39.895	51.599	63.303	75.007
Germany	24.515	37.870	51.225	64.580	77.935
Greece	12.112	18.441	24.771	31.100	37.429
Hungary	9.785	12.540	15.294	18.048	20.803
Iceland	41.418	46.102	50.786	55.470	60.154
Ireland	22.715	41.081	59.447	77.813	96.179
Israel	13.468	20.828	32.211	49.814	77.038
Italy	12.337	22.249	32.162	42.074	51.987
Latvia	5.355	7.784	10.214	12.644	15.074
Lithuania	10.478	12.108	13.738	15.368	16.998
Luxembourg	36.110	48.842	61.574	74.306	87.038
Malta	24.543	26.137	27.731	29.325	30.919
Netherlands	25.646	41.273	56.900	72.527	88.154
Norway	51.399	56.965	62.532	68.098	73.665
Poland	6.659	9.346	12.034	14.721	17.408
Portugal	7.999	17.300	26.600	35.901	45.201
Romania	2.596	4.312	6.028	7.745	9.461
Slovakia	5.546	7.225	8.904	10.583	12.262
Slovenia	15.852	22.440	29.028	35.616	42.204
Spain	13.988	22.958	31.928	40.898	49.868
Sweden	27.632	42.028	56.424	70.820	85.216
Switzerland	39.559	59.990	80.421	100.852	121.283
Turkey	6.993	11.374	15.755	20.135	24.516
United Kingdom	24.607	39.090	53.573	68.056	82.539
EU25 AVERAGE	***19.648***	***27.627***	***35.729***	***44.018***	***52.599***

Table 45 – Country Total Yearly Salary Costs of researchers in EU25 and Associated Countries per level of experience (2006, N=6110, all currencies in EURO)

In order to analyse previous data, the career progression in the different countries is compared in chapter 3.2.

- SI2.3: Total number of Other Advantages.

Number of other advantages / country / gender	Health care		Beneficiary of mandatory pension		Beneficiary of complementary pension scheme		Paid maternity leave		Paid holidays		Beneficiary of unemployement benefits		Beneficiary of accident insurance		Accommodation costs - house / apartment		Car		Family supplement		Children allowances		Others	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Austria	14	41	11	32	0	10	9	14	17	48	8	18	6	18	0	1	0	0	2	9	3	10	1	2
Belgium	23	49	27	59	5	21	21	27	37	78	22	35	18	33	0	4	0	2	0	4	9	29	7	19
Bulgaria	18	22	15	17	5	5	13	6	16	16	9	13	4	11	1	1	0	0	0	0	3	2	1	0
Croatia	48	66	33	40	9	13	46	30	41	57	10	11	10	25	1	0	0	0	1	2	9	14	2	4
Cyprus	5	19	4	18	3	10	8	9	7	28	3	16	1	7	0	2	0	2	1	0	0	0	1	2
Czech Republic	8	29	8	34	3	12	5	8	9	47	1	16	0	4	0	0	0	2	0	1	2	6	0	7
Denmark	7	16	31	90	8	18	28	80	34	106	7	13	10	19	0	0	2	0	0	0	0	5	3	3
Estonia	6	7	7	16	1	0	3	1	9	19	1	9	0	1	0	0	0	0	0	0	1	0	1	1
Finland	70	98	44	74	2	5	37	15	60	92	28	38	26	33	0	1	0	0	0	0	2	10	2	7
France	89	197	67	171	17	57	68	148	111	254	71	135	48	92	10	14	0	0	26	82	25	69	10	21
Germany	85	247	73	217	54	137	34	93	104	293	51	68	34	77	1	6	1	0	38	133	39	117	11	24
Greece	15	30	16	39	7	11	13	9	16	39	4	15	6	16	0	2	0	0	7	9	10	27	1	7
Hungary	19	50	12	52	9	22	8	9	33	101	3	16	1	4	0	0	2	3	7	36	3	13	6	10
Iceland	3	4	5	8	5	7	8	7	9	8	2	4	2	3	0	1	0	0	0	0	0	1	0	2
Ireland	1	16	23	41	11	21	32	17	57	84	19	26	9	22	0	0	0	0	0	0	2	3	6	9
Israel	1	11	4	16	3	8	4	11	4	14	4	7	3	9	0	1	2	0	0	1	0	2	0	1
Italy	61	216	81	260	8	22	85	142	89	271	11	25	57	144	0	9	0	0	6	37	14	50	5	16
Latvia	1	2	1	4	0	0	0	1	2	5	0	2	0	0	0	0	1	0	0	0	0	0	0	0
Lithuania	11	21	18	30	1	7	12	8	25	44	2	8	0	10	1	0	1	1	0	0	0	5	2	1
Luxembourg	3	13	4	15	0	0	4	7	5	15	4	10	5	12	0	0	0	0	0	1	2	3	1	4
Malta	2	5	4	6	0	0	5	3	3	7	1	7	2	3	0	0	0	0	0	0	0	0	2	1
Netherlands	4	18	10	45	8	18	13	18	13	39	7	32	4	12	0	4	0	2	1	3	2	5	4	14
Norway	16	60	35	110	23	61	44	96	47	112	11	59	33	86	0	2	0	1	0	1	3	6	9	16
Poland	20	37	28	37	4	10	28	20	29	45	1	6	9	28	0	2	0	2	2	8	4	7	2	8
Portugal	37	83	57	91	1	3	119	81	70	98	21	28	97	93	0	0	0	0	5	3	9	21	10	19
Romania	41	37	38	38	1	1	37	21	29	29	20	26	14	6	1	0	2	1	3	1	11	14	2	4
Slovakia	19	40	17	46	16	36	17	9	36	82	11	21	1	2	0	3	0	1	1	2	3	25	2	8
Slovenia	13	33	12	33	11	23	14	19	14	37	7	16	6	11	0	0	0	0	0	1	0	4	2	2
Spain	139	320	70	206	11	54	106	151	100	263	82	196	58	130	0	1	0	0	1	14	8	25	7	19
Sweden	14	59	12	52	9	42	17	42	20	83	5	22	9	31	0	0	0	1	0	0	3	13	1	4
Switzerland	1	5	9	33	2	18	5	15	10	39	8	29	9	37	0	0	0	0	3	8	3	26	0	1
Turkey	28	48	10	25	1	11	15	12	12	29	2	6	5	12	1	9	0	7	4	16	6	18	2	6
United Kingdom	36	64	65	130	73	130	126	120	167	261	33	74	23	58	3	3	1	4	1	2	4	8	14	15
TOTAL	**858**	**1963**	**851**	**2085**	**311**	**793**	**984**	**1249**	**1235**	**2743**	**469**	**1007**	**510**	**1049**	**19**	**66**	**12**	**29**	**109**	**374**	**180**	**538**	**117**	**257**

Table 46 – Total Number of other advantages of researchers in the EU25 and Associated Countries (2006, N=6110)

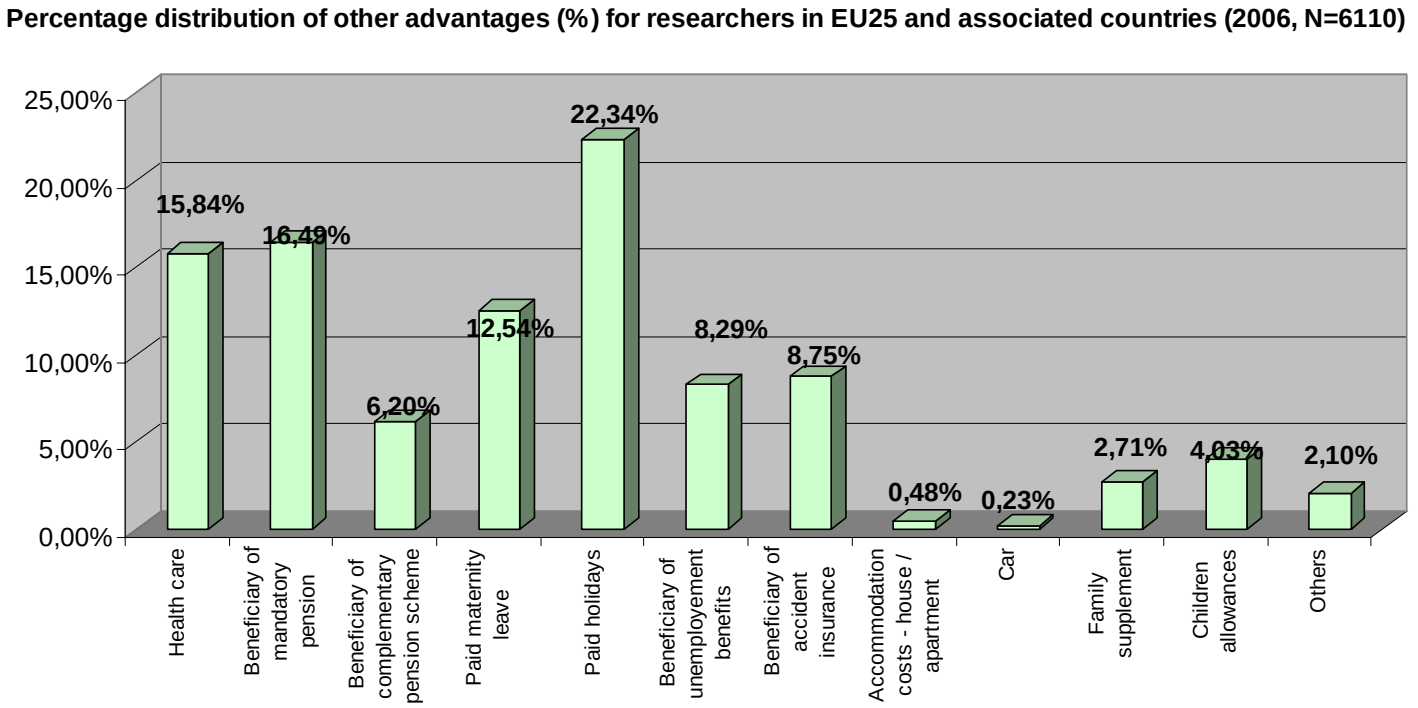


Figure 121 – Percentage distribution of other advantages (%) for researchers in EU25 and Associated Countries, excluding Marie Curie fellowships (2006, N=6110)

- SI2.4: Country employers' charges, employee contribution to social security, holiday pay, personal income tax (in EURO).

	Employer's charges	Employee contribution to SS	Holiday pay	Personal income tax
Austria	13.382	7.624	5.100	13.712
Belgium	12.508	5.299	2.298	18.277
Bulgaria	777	469	552	609
Croatia	5.474	2.573	489	3.367
Cyprus	4.254	2.647	2.095	7.173
Czech Republic	5.363	2.223	431	3.749
Denmark	10.850	5.575	3.769	28.303
Estonia	3.164	1.640	1.138	3.417
Finland	12.579	2.145	2.097	31.411
France	20.786	6.797	2.757	5.653
Germany	8.888	9.190	792	11.148
Greece	5.927	3.440	1.159	5.776
Hungary	5.716	2.030	1.821	5.598
Iceland	9.160	1.922	4.855	15.856
Ireland	9.909	9.215	3.864	27.108
Israel	11.596	4.165	1.089	16.307
Italy	9.860	4.543	2.774	11.744
Latvia	-	-	1.648	476
Lithuania	4.053	3.862	1.633	3.682
Luxembourg	10.254	7.455	5.609	10.817
Malta	2.071	2.224	4.715	7.343
Netherlands	17.188	7.686	4.290	24.430
Norway	10.431	5.059	5.758	19.157
Poland	6.749	2.228	222	1.922
Portugal	8.203	5.829	3.382	10.260
Romania	1.884	799	549	1.139
Slovakia	2.468	978	457	1.132
Slovenia	7.200	3.565	622	5.351
Spain	7.885	2.794	2.212	9.847
Sweden	24.152	9.674	2.128	19.410
Switzerland	13.158	8.084	4.922	14.903
Turkey	4.464	2.545	1.802	3.586
United Kingdom	9.832	10.087	6.067	18.611

Table 47 –Employers' charges (N=3.283), employee contribution to social security (N=2.899), holiday pay (N=1387) and personal income tax (N=3.211) of researchers in EU25 and Associated Countries (2006, all currencies in EURO)

Warning: This table presents the average of the raw data gathered during the survey process. This data is not comparable to the table presenting the remuneration average per country, since the number of responses taking into account does not provide the minimum accuracy level demanded in this type of studies.

- SI2.5: Country Net Yearly Salary Average in EURO

Country	Net Yearly Salary average
Austria	31.552
Belgium	25.408
Bulgaria	3.361
Croatia	12.477
Cyprus	33.865
Czech Republic	11.514
Denmark	35.874
Estonia	7.865
Finland	26.268
France	30.030
Germany	28.351
Greece	20.105
Hungary	9.423
Iceland	33.936
Ireland	34.930
Israel	26.703

Country	Net Yearly Salary average
Italy	21.821
Latvia	9.150
Lithuania	6.340
Luxembourg	45.847
Malta	19.688
Netherlands	36.791
Norway	39.407
Poland	8.059
Portugal	18.111
Romania	5.766
Slovakia	6.055
Slovenia	14.279
Spain	22.930
Sweden	28.075
Switzerland	64.123
Turkey	14.565
United Kingdom	37.001

Table 48 - Country Net Yearly Salary Average (2006, N=6.934, all currencies in EURO)

Note: A different analysis has been carried out for the net yearly salary costs obtained in the survey in order to detect unusual observations. The final sample had 7.018 correct replies, including 84 answers from Marie Curie fellowships. Marie Curie answers has not been considered for the calculation of the country net yearly salary average, as a result the sample had N=6.934.

o SI2.6: Country Total Yearly Salary Average, per sector of activity.

Country Total Yearly Salary Average of researchers in EU-25 and Associated Countries per sector of activity (2006, N=6110, all currencies in EURO)			
Country/Sector	**Business Enterprise Sector**	**Government**	**Higher Education**
Austria	67.844	50.707	63.994
Belgium	65.005	60.316	44.310
Bulgaria	-	4.056	3.829
Croatia	17.002	30.018	18.789
Cyprus	47.812	43.202	48.224
Czech Republic	24.282	17.706	24.673
Denmark	94.267	60.250	69.277
Estonia	-	7.910	12.934
Finland	42.777	42.509	37.833
France	45.301	57.936	56.625
Germany	49.139	53.402	45.355
Greece	24.196	32.607	26.485
Hungary	22.189	19.213	17.866
Iceland	-	49.358	52.561
Ireland	74.097	49.421	52.981
Israel	-	61.991	53.565
Italy	35.674	36.634	33.362
Latvia	12.000	19.564	8.959
Lithuania	21.973	14.536	12.468
Luxembourg	58.615	59.128	71.662
Malta	48.000	19.039	28.301
Netherlands	66.273	47.790	68.179
Norway	67.535	57.376	64.876
Poland	15.921	10.316	14.551
Portugal	18.806	33.088	22.806
Romania	8.917	8.010	6.817
Slovakia	15.242	10.584	9.209
Slovenia	26.921	26.988	32.541
Spain	34.354	32.053	31.197
Sweden	58.071	48.557	63.895
Switzerland	71.188	91.693	86.087
Turkey	21.739	22.250	18.903
United Kingdom	63.140	60.094	52.626

Table 49 - Country Total Yearly Salary Average of researchers in EU25 and Associated Countries per sector of activity (2006, N=6110, all currencies in EURO)

- SI2.7: Country Total Yearly Salary Average, per type of contract

Country Total yearly salary Average of researchers in EU25 and Associated countries per type of contract (2006, N=6110, all currencies in EURO)						
Country/Type of contract	Type of contract					
				Fixed-term		
	Full time	Part Time	Permanent	Regular employment	Non-employment	Total
Austria	64.124	54.091	79.074	45.956	49.624	46.261
Belgium	48.193	52.447	74.249	47.341	22.978	35.729
Bulgaria	3.903	-	4.193	2.441	1.525	1.678
Croatia	20.553	34.336	25.817	12.834	12.638	12.831
Cyprus	48.143	17.341	47.590	49.894	33.705	46.951
Czech Republic	23.599	17.448	27.906	17.501	33.907	17.932
Denmark	69.044	59.852	75.136	52.491	41.801	49.959
Estonia	13.492	8.700	14.723	12.329	4.358	11.846
Finland	40.075	37.818	50.641	36.123	17.580	32.509
France	57.123	60.555	68.441	36.996	24.830	31.293
Germany	51.725	42.971	75.922	45.715	27.021	39.320
Greece	30.709	24.849	36.999	22.054	17.040	19.765
Hungary	18.744	19.075	20.970	14.811	7.872	13.571
Iceland	52.205	-	55.289	12.147	42.920	27.534
Ireland	54.221	50.701	90.211	48.219	27.096	37.148
Israel	56.274	23.043	61.545	23.228	36.521	28.545
Italy	34.932	39.136	49.957	28.938	16.105	19.407
Latvia	10.726	12.000	10.726	-	12.000	12.000
Lithuania	13.780	11.236	15.655	9.459	13.962	9.724
Luxembourg	62.757	56.000	69.872	42.019	18.000	37.215
Malta	29.955	26.539	29.282	-	-	-
Netherlands	68.021	69.782	90.717	45.136	16.451	37.313
Norway	65.650	61.657	68.631	61.013	48.105	56.366
Poland	14.523	9.571	15.849	10.356	11.084	10.441
Portugal	24.545	22.504	46.904	30.774	12.831	15.907
Romania	7.557	7.227	7.616	3.621	10.078	6.850
Slovakia	9.890	10.243	11.746	8.688	6.284	8.304
Slovenia	29.954	-	37.140	20.047	10.800	19.645
Spain	31.913	34.397	49.335	27.012	14.968	20.666
Sweden	63.655	61.565	79.829	44.530	24.452	37.268
Switzerland	94.025	85.774	117.745	65.805	28.854	61.983
Turkey	19.956	25.000	19.954	21.740	16.556	20.839
United Kingdom	54.514	57.786	73.255	44.044	29.823	37.602

Table 50 - Country Total Yearly Salary Averages of researchers in EU25 and Associated Countries per type of contract (2006, N=6110, all currencies in EURO)

5.8.3 Study Results adjusted

The adjustment coefficients defined in Table 5 were used for the correction of the study results. The following tables present the results of the study (distributed per type of indicator SI2) adjusted through the adjustment coefficients, without applying corrective coefficients (PPS).

- Country Total Yearly Salary Average, per country, adjusted through adjustment coefficient

Country/ Level of experience	The average weighted total yearly salary adjusted
Austria	62.406
Belgium	58.462
Bulgaria	3.556
Croatia	16.671
Cyprus	45.039
Czech Republic	19.620
Denmark	61.355
Estonia	11.748
Finland	44.635
France	50.879
Germany	56.132
Greece	25.685
Hungary	15.812
Iceland	50.803
Ireland	60.727
Israel	42.552

Country/ Level of experience	The average weighted total yearly salary adjusted
Italy	36.201
Latvia	10.488
Lithuania	13.851
Luxembourg	63.865
Malta	28.078
Netherlands	59.103
Norway	58.997
Poland	11.659
Portugal	29.001
Romania	6.286
Slovakia	9.178
Slovenia	27.756
Spain	34.908
Sweden	56.053
Switzerland	82.725
Turkey	16.249
United Kingdom	56.048

Table 51 - The average weighted total yearly salary of reserachers per country adjusted through adjustment coefficients (2006, N=6110, all currencies in EURO)

- SI2.1: Country Total Yearly Salary Average, per Gender and adjusted through adjustment coefficient

Country Total Yearly Salary Average of researchers in EU25 and Associated Countries per gender adjusted (2006, N=6110, all currencies in EURO adjusted through adjustment coefficients)			
Country/Gender	**Female**	**Male**	**Diference Male-Female (%)**
Austria	44.640	69.557	35,82%
Belgium	39.614	57.595	31,22%
Bulgaria	3.867	4.345	10,98%
Croatia	17.385	22.660	23,28%
Cyprus	35.387	52.511	32,61%
Czech Republic	15.948	24.253	34,24%
Denmark	63.335	67.632	6,35%
Estonia	7.353	12.884	42,93%
Finland	36.001	46.888	23,22%
France	45.139	58.090	22,29%
Germany	39.203	53.312	26,47%
Greece	25.437	30.076	15,42%
Hungary	16.908	19.250	12,16%
Iceland	45.976	57.393	19,89%
Ireland	44.127	58.656	24,77%
Israel	49.845	55.478	10,15%
Italy	29.413	41.114	28,46%
Latvia	17.335	8.337	-107,92%
Lithuania	9.433	12.297	23,29%
Luxembourg	52.033	66.634	21,91%
Malta	26.772	30.506	12,24%
Netherlands	39.663	76.253	47,99%
Norway	55.665	62.398	10,79%
Poland	10.178	14.960	31,97%
Portugal	20.756	30.443	31,82%
Romania	7.284	7.885	7,63%
Slovakia	8.922	10.324	13,59%
Slovenia	24.625	29.247	15,80%
Spain	24.683	37.925	34,92%
Sweden	53.732	61.494	12,62%
Switzerland	53.342	92.324	42,22%
Turkey	15.339	21.776	29,56%
United Kingdom	43.560	62.360	30,15%

Table 52 – The average weighted total yearly salary of researchers in EU25 and Associated Countries, per gender and country, and adjusted through adjustment coefficients (2006, N=6110, all currencies in EURO)

- SI2.2: Country Total Yearly Salary Average, per Level of seniority and adjusted through adjustment coefficient

Country Total Yearly Salary Average adjusted for researchers in EU25 and Associated countries, per level of experience (2006, N=6110, all currencies in EURO, adjusted through adjustment coefficients)					
Country/ Level of experience	**0-4 years**	**5-7 years**	**8-10 years**	**11-15 years**	**> 15 years**
Austria	35.836	48.412	60.988	73.564	86.140
Belgium	28.715	42.795	56.874	70.953	85.033
Bulgaria	2.080	2.779	3.478	4.176	4.875
Croatia	8.953	12.606	16.259	19.912	23.564
Cyprus	21.303	32.538	43.772	55.007	66.242
Czech Republic	10.139	14.627	19.114	23.602	28.089
Denmark	41.502	50.899	60.296	69.692	79.089
Estonia	6.561	9.016	11.471	13.926	16.381
Finland	27.801	35.769	43.737	51.704	59.672
France	27.104	38.357	49.610	60.862	72.115
Germany	26.096	40.313	54.529	68.745	82.962
Greece	12.207	18.587	24.966	31.345	37.724
Hungary	9.915	12.707	15.498	18.289	21.080
Iceland	41.005	45.643	50.280	54.917	59.555
Ireland	22.423	40.553	58.682	76.812	94.941
Israel	13.468	20.828	32.211	49.814	77.038
Italy	13.420	24.203	34.985	45.768	56.551
Latvia	5.355	7.784	10.214	12.644	15.074
Lithuania	10.425	12.047	13.668	15.290	16.912
Luxembourg	36.600	49.505	62.410	75.314	88.219
Malta	24.690	26.294	27.898	29.501	31.105
Netherlands	25.839	41.583	57.328	73.072	88.817
Norway	48.012	53.211	58.411	63.611	68.811
Poland	6.293	8.833	11.373	13.912	16.452
Portugal	8.390	18.146	27.901	37.656	47.412
Romania	2.623	4.357	6.091	7.825	9.559
Slovakia	5.598	7.292	8.987	10.681	12.376
Slovenia	14.779	20.921	27.063	33.205	39.347
Spain	14.824	24.330	33.836	43.343	52.849
Sweden	26.683	40.584	54.486	68.387	82.289
Switzerland	39.559	59.990	80.421	100.852	121.283
Turkey	6.993	11.374	15.755	20.135	24.516
United Kingdom	24.982	39.686	54.390	69.094	83.798

Table 53 - Country Total Yearly Salary Costs of researchers in EU25 and Associated Countries per level of experience and adjusted through adjustment coefficients (2006, N=6110, all currencies in EURO)

- SI2.3: Total Number of other advantages are the same as the ones shown in Table 46 and Figure 121.

- SI2.4: Country employers' charges, employee contribution to social security, holiday pay, personal income tax, adjusted through adjustment coefficients (in EURO)

	Employer's charges	Employee contribution to SS	Holiday pay	Personal income tax
Austria	13.382	7.624	5.100	13.712
Belgium	13.535	5.734	2.487	19.778
Bulgaria	825	497	586	647
Croatia	5.474	2.573	489	3.367
Cyprus	4.447	2.767	2.190	7.498
Czech Republic	5.503	2.281	443	3.847
Denmark	10.588	5.441	3.679	27.620
Estonia	3.092	1.603	1.113	3.340
Finland	13.398	2.285	2.233	33.456
France	19.985	6.535	2.651	5.435
Germany	9.462	9.783	843	11.867
Greece	5.973	3.467	1.168	5.821
Hungary	5.792	2.057	1.845	5.672
Iceland	9.069	1.903	4.807	15.698
Ireland	9.781	9.097	3.814	26.759
Israel	11.596	4.165	1.089	16.307
Italy	10.726	4.942	3.017	12.775
Latvia	-	-	1.648	476
Lithuania	4.032	3.843	1.625	3.664
Luxembourg	10.393	7.557	5.686	10.964
Malta	2.083	2.237	4.743	7.387
Netherlands	17.317	7.744	4.323	24.614
Norway	9.744	4.726	5.379	17.894
Poland	6.379	2.106	210	1.817
Portugal	8.604	6.114	3.548	10.762
Romania	1.903	807	555	1.150
Slovakia	2.491	987	461	1.143
Slovenia	6.712	3.324	580	4.989
Spain	8.356	2.961	2.345	10.435
Sweden	23.322	9.341	2.055	18.744
Switzerland	13.158	8.084	4.922	14.903
Turkey	4.464	2.545	1.802	3.586
United Kingdom	9.982	10.241	6.160	18.895

Table 54 - Employers' charges (N=3.283), employee contribution to social security (N=2.899), holiday pay (N=1.387) and personal income tax (N=3.211) of researchers in EU25 and Associated Countries, adjusted through adjustment coefficients (2006, all currencies in EURO)

- SI2.5: Country Net Yearly Salary Average adjusted through adjustment coefficients (in EURO)

Country	Net Yearly salary average adjusted
Austria	31.552
Belgium	27.494
Bulgaria	3.567
Croatia	12.477
Cyprus	35.402
Czech Republic	11.816
Denmark	35.009
Estonia	7.687
Finland	27.979
France	28.872
Germany	30.179
Greece	20.263
Hungary	9.549
Iceland	33.598
Ireland	34.480
Israel	26.703

Country	Net Yearly salary average adjusted
Italy	23.737
Latvia	9.150
Lithuania	6.308
Luxembourg	46.469
Malta	19.806
Netherlands	37.067
Norway	36.810
Poland	7.616
Portugal	18.997
Romania	5.825
Slovakia	6.111
Slovenia	13.312
Spain	24.300
Sweden	27.110
Switzerland	64.123
Turkey	14.565
United Kingdom	37.565

Table 55 – Country Net Yearly Salary Averages of researchers in EU25 and Associated Countries adjusted through adjustment coefficients (2006, N=6.934, all currencies in EURO)

o SI2.6: Country Total Yearly Salary Average, per sector of activity and adjusted through adjustment coefficients (in EURO)

Country Total Yearly Salary Average of researchers in EU25 and Associated Countries per sector of activity, adjusted through adjustment coefficients (2006, N=6110, all currencies in EURO)			
Country/Sector	**Business Enterprise Sector**	**Government**	**Higher Education**
Austria	67.844	50.707	63.994
Belgium	70.343	65.269	47.949
Bulgaria	-	4.304	4.064
Croatia	17.002	30.018	18.789
Cyprus	49.982	45.162	50.412
Czech Republic	24.917	18.169	25.319
Denmark	91.994	58.797	67.606
Estonia	-	7.732	12.642
Finland	45.562	45.277	40.296
France	43.555	55.702	54.442
Germany	52.309	56.846	48.280
Greece	24.387	32.864	26.694
Hungary	22.484	19.469	18.104
Iceland	-	48.866	52.037
Ireland	73.143	48.785	52.299
Israel	-	61.991	53.565
Italy	38.806	39.850	36.291
Latvia	12.000	19.564	8.959
Lithuania	21.862	14.463	12.405
Luxembourg	59.411	59.930	72.634
Malta	48.288	19.153	28.471
Netherlands	66.771	48.149	68.692
Norway	63.084	53.595	60.601
Poland	15.047	9.749	13.752
Portugal	19.726	34.707	23.921
Romania	9.009	8.092	6.887
Slovakia	15.383	10.681	9.294
Slovenia	25.099	25.161	30.338
Spain	36.408	33.969	33.062
Sweden	56.076	46.889	61.700
Switzerland	71.188	91.693	86.087
Turkey	21.739	22.250	18.903
United Kingdom	64.103	61.011	53.429

Table 56 – Country Total Yearly Salary Averages of researchers in EU25 and Associated Countries per sector of activity and adjusted through adjustment coefficients (2006, N=6110, all currencies in EURO)

- SI2.7: Country Total Yearly Salary Average, per type of contract and adjusted through adjustment coefficients (in EURO)

Country/Type of contract	Type of contract					
	Full time	Part Time	Permanent	Fixed-term		
				Regular employment	Non-employment	Total
Austria	64.124	54.091	79.074	45.956	49.624	46.261
Belgium	52.150	56.754	80.347	51.228	24.865	38.663
Bulgaria	4.143	-	4.451	2.591	1.619	1.781
Croatia	20.553	34.336	25.817	12.834	12.638	12.831
Cyprus	50.327	18.128	49.749	52.158	35.234	49.081
Czech Republic	24.217	17.905	28.636	17.959	34.795	18.402
Denmark	67.379	58.408	73.324	51.225	40.793	48.754
Estonia	13.188	8.504	14.391	12.050	4.260	11.578
Finland	42.684	40.281	53.938	38.475	18.724	34.626
France	54.920	58.220	65.802	35.570	23.873	30.087
Germany	55.061	45.742	80.819	48.663	28.764	41.856
Greece	30.951	25.044	37.290	22.228	17.174	19.921
Hungary	18.993	19.329	21.249	15.008	7.977	13.752
Iceland	51.685	-	54.738	12.026	42.492	27.259
Ireland	53.523	50.049	89.050	47.599	26.748	36.670
Israel	56.274	23.043	61.545	23.228	36.521	28.545
Italy	37.999	42.573	54.343	31.479	17.519	21.111
Latvia	10.726	12.000	10.726	-	12.000	12.000
Lithuania	13.711	11.179	15.576	9.411	13.892	9.675
Luxembourg	63.608	56.760	70.820	42.589	18.244	37.720
Malta	30.135	26.698	29.458	-	-	-
Netherlands	68.533	70.306	91.399	45.476	16.575	37.594
Norway	61.324	57.594	64.109	56.992	44.935	52.652
Poland	13.726	9.045	14.979	9.787	10.475	9.868
Portugal	25.745	23.604	49.198	32.279	13.458	16.685
Romania	7.635	7.302	7.694	3.659	10.181	6.920
Slovakia	9.981	10.338	11.854	8.768	6.342	8.381
Slovenia	27.926	-	34.625	18.690	10.069	18.315
Spain	33.820	36.453	52.284	28.626	15.862	21.901
Sweden	61.468	59.450	77.086	43.000	23.612	35.988
Switzerland	94.025	85.774	117.745	65.805	28.854	61.983
Turkey	19.956	25.000	19.954	21.740	16.556	20.839
United Kingdom	55.346	58.667	74.372	44.716	30.278	38.175

Table 57 - Country Total Yearly Salary Averages of researchers in EU25 and Associated Countries per type of contract and adjusted through adjustment coefficients (2006, N=6110, all currencies in EURO)

5.8.4 Results for Marie Curie replies

The results obtained for the replies corresponding to researchers with a Marie Curie fellowship are presented as follows. Those countries where no replies of Marie Curie researchers were obtained are not included.

- Total Yearly Salary Average, Employers' charges (e.g. social security contribution, pension funds), Employee contribution to social security, Holiday pay, Personal income tax per country and Net yearly Salary received.

	Total yearly salary cost	Employers' charges (e.g. social security contribution, pension funds)	Employee contribution to social security	Holiday pay	Personal income tax	Net yearly salary received
Austria	48.800	-	-	3.490	10.000	30.000
Belgium	30.625	10.248	2.524	1.613	-	19.062
Cyprus	81.500	1.000	1.000	-	27.000	43.500
Denmark	43.165	-	-	-	7.511	23.718
Finland	49.522	-	2.798	2.063	16.507	31.257
France	37.358	8.520	4.748	51	1.850	22.660
Germany	39.943	6.777	26.800	30	8.364	26.305
Greece	37.360	4.140	-	4.600	-	27.300
Ireland	49.610	10.026	9.068	3.000	11.315	35.159
Italy	52.178	6.789	3.581	-	8.139	37.306
Lithuania	16.000	-	-	-	-	16.000
Netherlands	78.000	-	-	-	-	28.000
Poland	18.168	-	-	-	-	18.168
Portugal	28.275	-	-	-	-	28.275
Spain	35.860	13.165	3.581	-	9.084	21.760
Sweden	65.206	23.100	2.436	2.500	11.447	29.941
United Kigdom	61.291	10.552	5.417	6.259	11.018	38.473

- : Not applicable or unreliable

Table 58 – Total Yearly salary average, Employers' charges, Employee contribution to social security, Holiday pay, Personal income tax and Net yearly Salary received for the Marie Curie researchers per country where data are available, (2006, N=80, all currencies in EURO).

Warning: This table presents the average of the raw data gathered during the survey process. This data is not comparable to the table presenting the remuneration average per country in the EU25 and associated countries, since the number of responses taking into account does not provide the minimum accuracy level demanded in this type of studies.

- Total number of Other Advantages

	Health care	Beneficiary of mandatory pension	Beneficiary of complementary pension scheme	Paid maternity leave	Paid holidays	Beneficiary of unemployement benefits	Beneficiary of accident insurance	Accommodation costs - house / apartment	Car	Family supplement	Children allowances	Others
Austria	1	0	0	0	1	1	1	0	0	0	0	0
Belgium	1	1	0	0	2	2	2	1	0	1	0	0
Cyprus	1	0	0	1	1	0	0	0	0	0	0	0
Denmark	0	1	0	2	2	1	1	0	0	1	0	1
Finland	1	1	0	1	1	0	0	0	0	1	0	1
France	2	1	0	0	4	3	0	0	0	0	0	1
Germany	10	7	3	4	16	3	3	2	0	7	7	0
Greece	2	2	0	0	0	2	0	0	0	1	0	0
Ireland	0	0	0	2	3	1	0	0	0	0	0	0
Italy	8	5	1	3	8	1	5	0	0	3	2	2
Lithuania	0	0	0	0	0	0	0	0	0	0	0	0
Netherlands	0	0	0	0	1	0	0	0	0	0	0	0
Poland	1	0	0	0	0	0	0	0	0	0	0	0
Portugal	1	0	0	0	2	0	0	0	0	0	0	0
Spain	2	2	0	0	2	2	1	0	0	0	0	1
Sweden	2	1	2	0	0	2	2	0	0	1	0	1
United Kigdom	6	1	3	2	7	0	0	1	0	3	0	0
TOTAL	***38***	***22***	***9***	***15***	***50***	***18***	***15***	***4***	***0***	***18***	***9***	***7***

Table 59 – Total Number of other advantages for Marie Curie researchers per country (in countries where data are available) (2006, N=80).

5.9 Annex 9: Career Progression

The data in Table 17 can be compiled in different scatter plots presenting the deviations of countries' remunerations in terms of PPS from the country average within EU25 (taken as reference for the rest of remuneration averages), for each of the levels of seniority defined in the study (career progression).

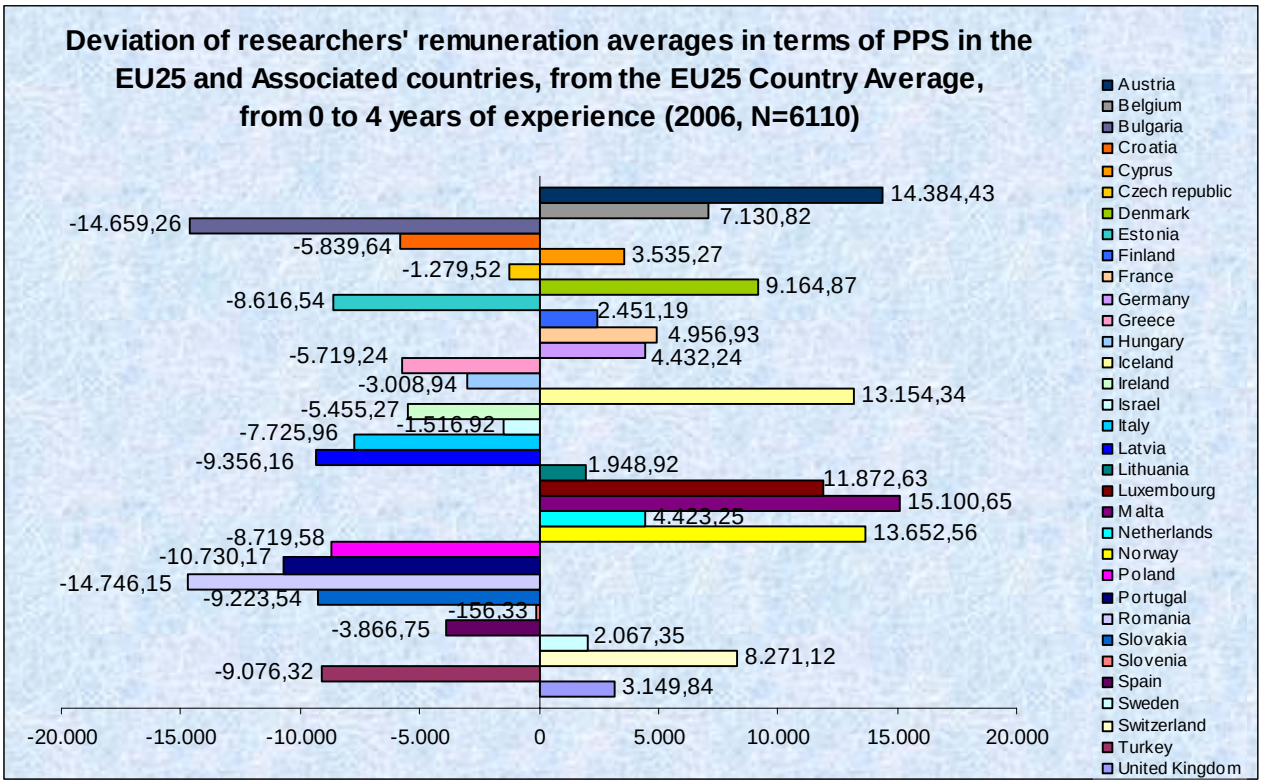


Figure 122 - Deviation of researchers' remuneration in terms of PPS in the different countries from the country average within EU25, for the level of experience 0-4 years.

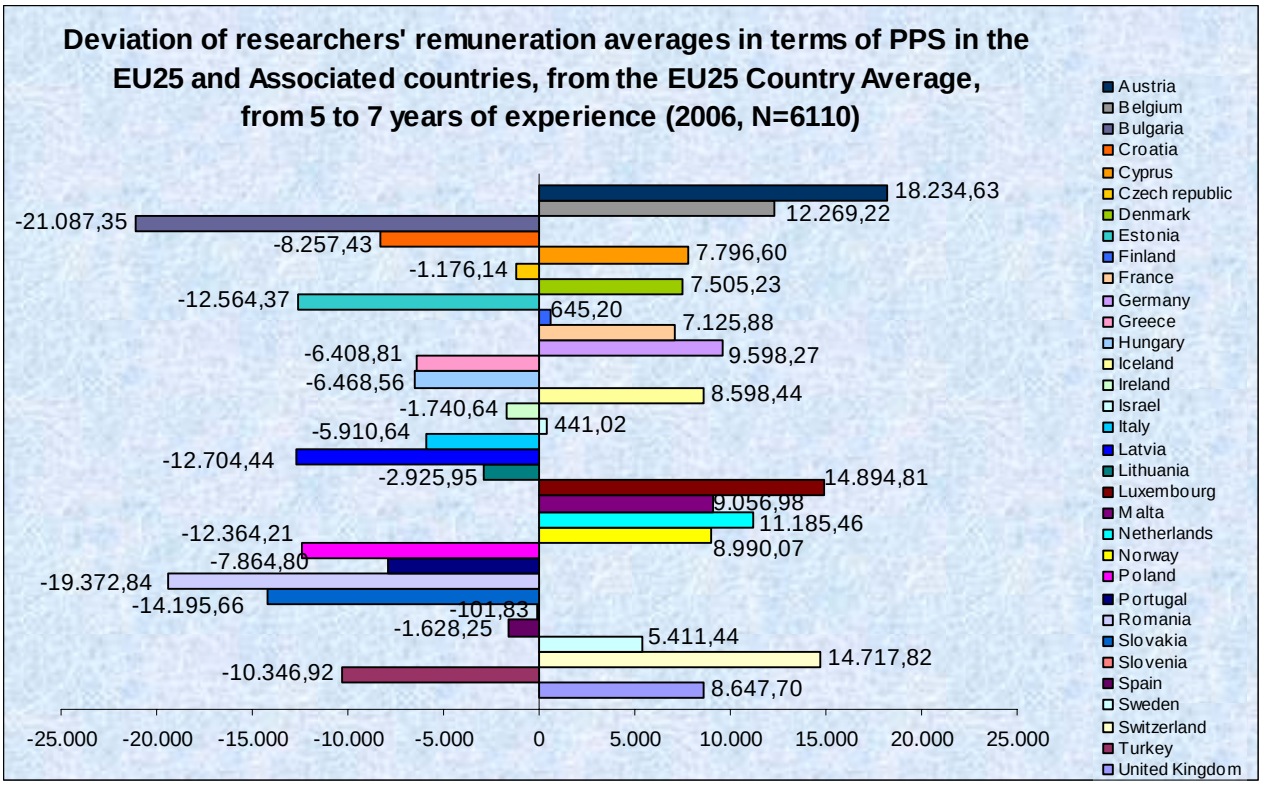


Figure 123 - Deviation of researchers' remuneration in terms of PPS in the different countries from the country average within EU25, for the level of experience 5-7 years.

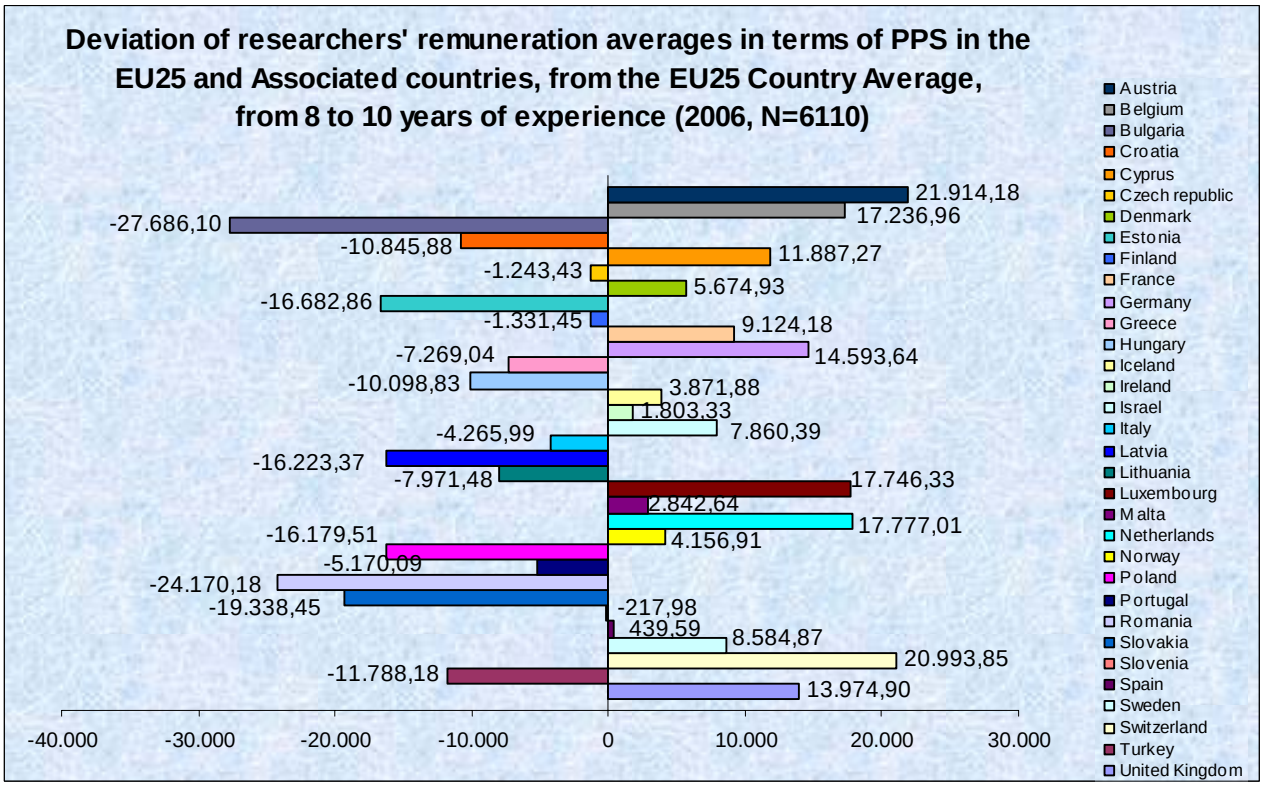


Figure 124 - Deviation of researchers' remuneration in terms of PPS in the different countries from the country average within EU25, for the level of experience 8-10 years.

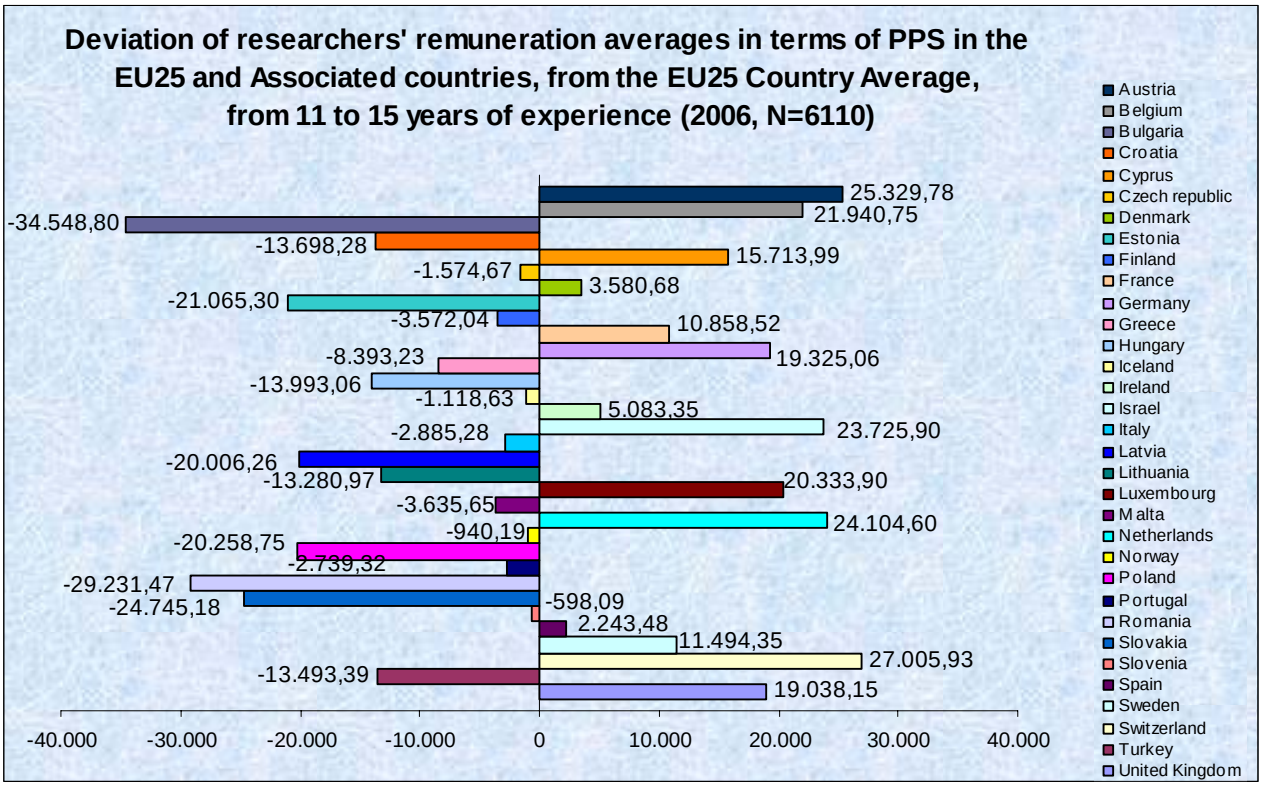


Figure 125- Deviation of researchers' remuneration in terms of PPS in the different countries from the country average within EU25, for the level of experience 11-15 years.

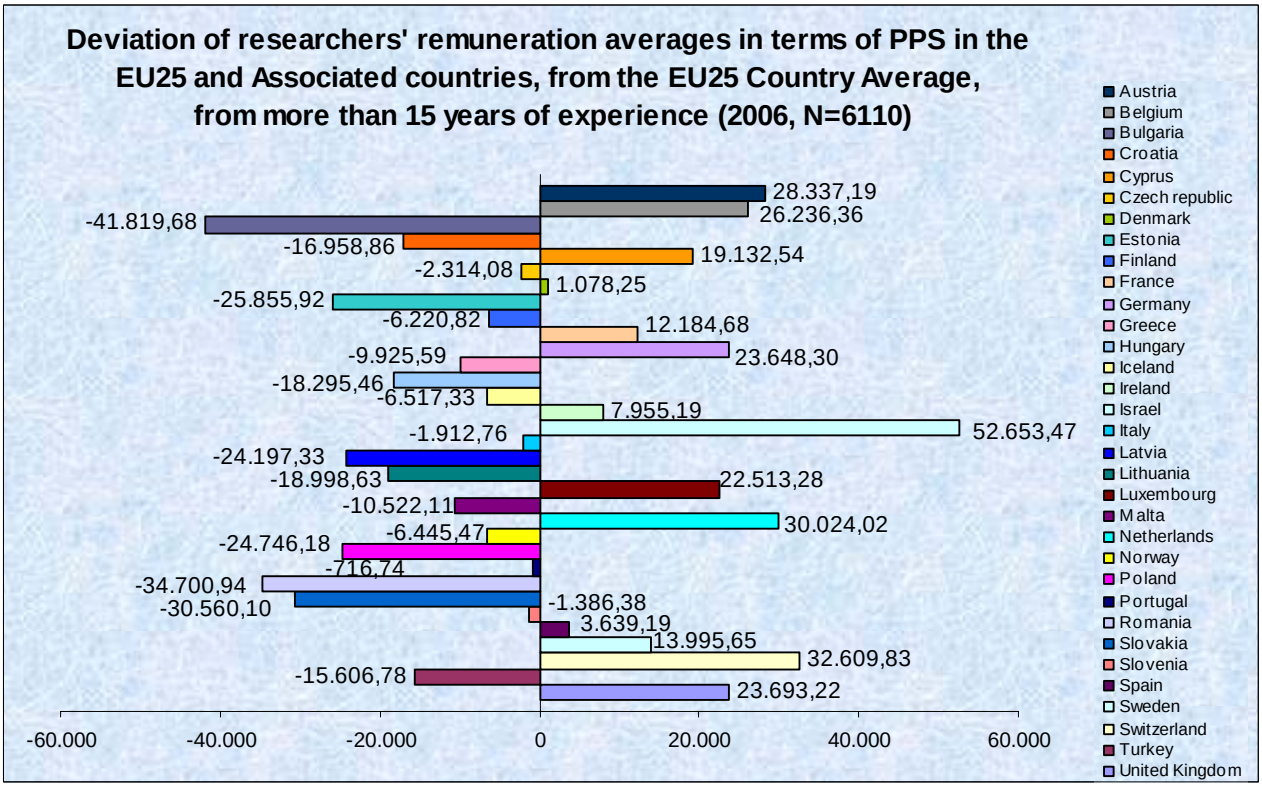


Figure 126- Deviation of researchers' remuneration in terms of PPS in the different countries from the country average within EU25, for more than 15 years of experience.

5.10 Annex 10: Comparison of researchers remunerations' against the situation of similar professions

The following tables have been prepared in order to determine whether the remunerations of researchers are in line with remunerations in other similar professions per country. The tables present the averages of the raw data per scientific domain gathered during the survey process. In this case, the high segregation of data is an influencing factor (per scientific domain, country and gender) and therefore, **the results do not have the same statistical relevance as for the rest of the study**, and only represent an approximation to the theme.

Austria						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	110.954 €	--	2.4.4	2.4	71.436 €	71.436 €
Economics	31.889 €	31.560 €	2.4.1	2.4	71.436 €	71.436 €
Chemistry	--	--	2.1.1	2.1	63.543 €	41.229 €
Physics	85.000 €	--	2.1.1	2.1	63.543 €	41.229 €
Life Sciences	63.759 €	64.087 €	2.2.1	2.2	62.591 €	48.147 €
Mathematics	78.333 €	--	2.1.2	2.1	63.543 €	41.229 €
Information Sciences	54.280 €	55.000 €	2.1.3	2.1	63.543 €	41.229 €
Engineering Sciences	48.800 €	50.000 €	2.1.4	2.1	63.543 €	41.229 €
Environment and Geosciences	50.523 €	--	2.1.4	2.1	63.543 €	41.229 €

Table 60 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Austria

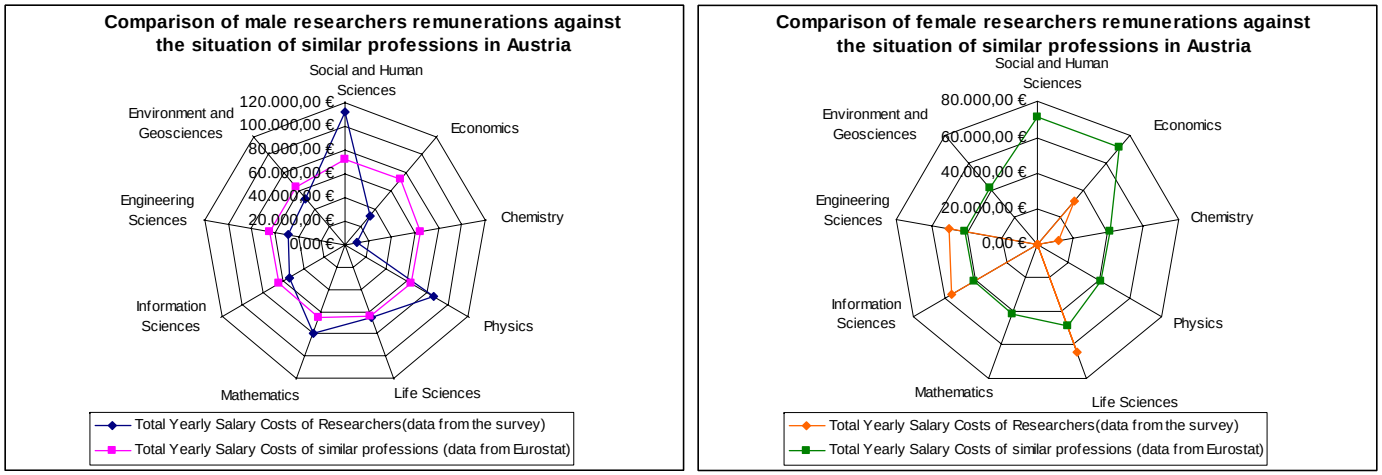


Figure 127 – Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Austria per gender

Bulgaria						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	2.763 €	3.225 €	2.4.4	2.4	3.240 €	2.851 €
Economics	--	4.807 €	2.4.1	2.4	3.240 €	2.851 €
Chemistry	5.500 €	2.441 €	2.1.1	2.1	4.029 €	3.503 €
Physics	4.062 €	3.203 €	2.1.1	2.1	4.029 €	3.503 €
Life Sciences	4.010 €	3.892 €	2.2.1	2.2	2.822 €	2.978 €
Mathematics	--	--	2.1.2	2.1	4.029 €	3.503 €
Information Sciences	--	4.923 €	2.1.3	2.1	4.029 €	3.503 €
Engineering Sciences	--	2.176 €	2.1.4	2.1	4.029 €	3.503 €
Environment and Geosciences	3.798 €	4.292 €	2.1.4	2.1	4.029 €	3.503 €

Table 61 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Belgium

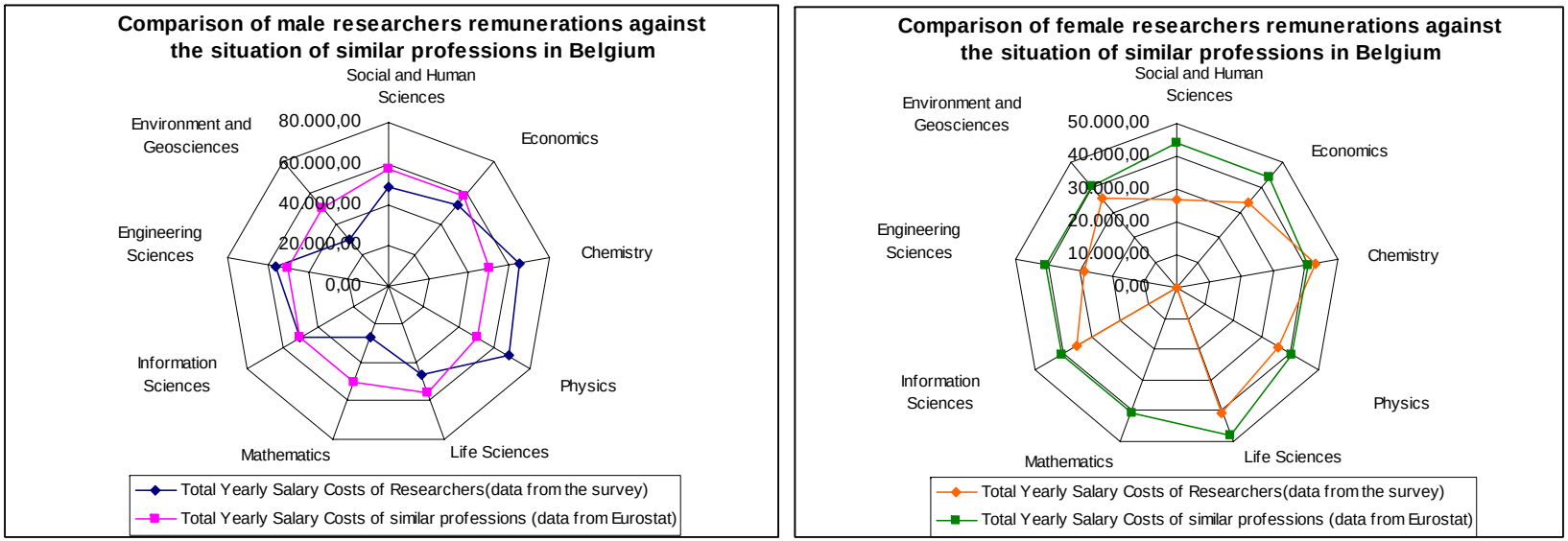


Figure 128 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Belgium per gender

Bulgaria						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	2.762,74 €	3.224,84 €	2.4.4	2.4	3.240,25 €	2.851,27 €
Economics	--	4.807,00 €	2.4.1	2.4	3.240,25 €	2.851,27 €
Chemistry	5.500,00 €	2.440,75 €	2.1.1	2.1	4.028,88 €	3.502,53 €
Physics	4.062,18 €	3.203,49 €	2.1.1	2.1	4.028,88 €	3.502,53 €
Life Sciences	4.009,95 €	3.892,32 €	2.2.1	2.2	2.822,14 €	2.977,78 €
Mathematics	--	--	2.1.2	2.1	4.028,88 €	3.502,53 €
Information Sciences	--	4.922,85 €	2.1.3	2.1	4.028,88 €	3.502,53 €
Engineering Sciences	--	2.176,34 €	2.1.4	2.1	4.028,88 €	3.502,53 €
Environment and Geosciences	3.798,48 €	4.291,66 €	2.1.4	2.1	4.028,88 €	3.502,53 €

Table 62 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Bulgaria

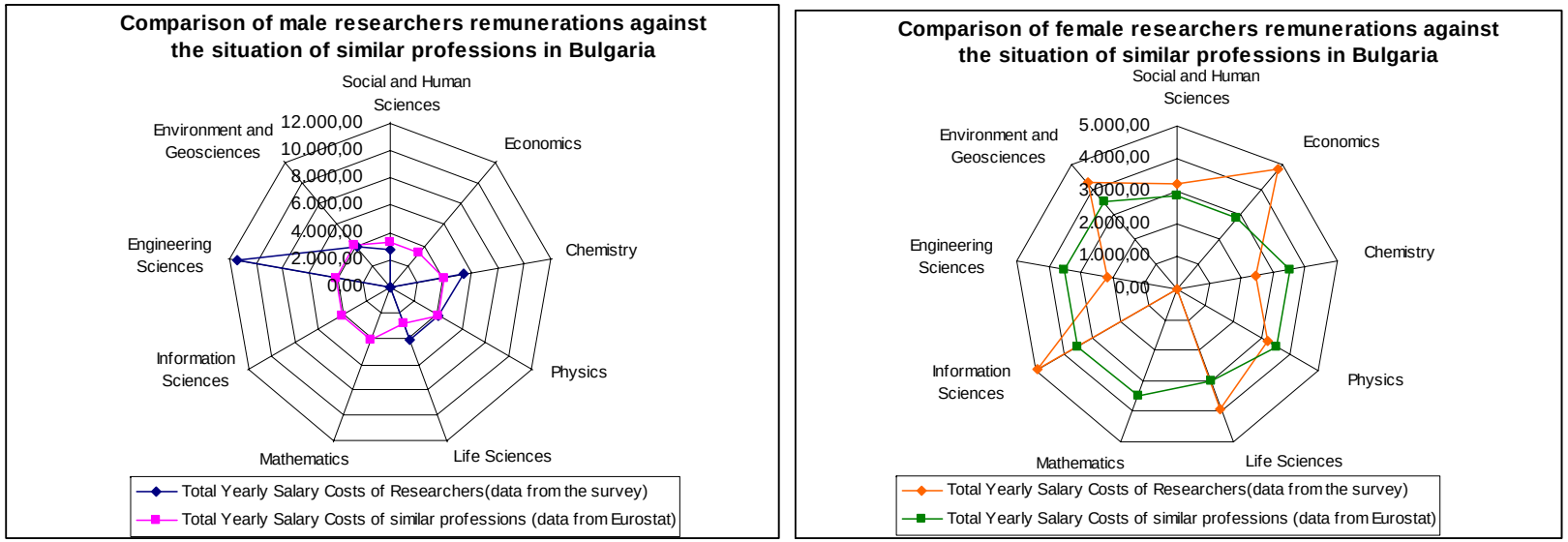


Figure 129 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Bulgaria per gender

Cyprus						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	48.289,82 €	27.792,16 €	2.4.4	2.4	36.496,48 €	24.629,46 €
Economics	56.742,47 €	--	2.4.1	2.4	36.496,48 €	24.629,46 €
Chemistry	52.023,90 €	22.543,69 €	2.1.1	2.1	33.208,43 €	24.881,97 €
Physics	--	--	2.1.1	2.1	33.208,43 €	24.881,97 €
Life Sciences	31.231,68 €	--	2.2.1	2.2	32.504,39 €	19.187,81 €
Mathematics	50.000,00 €	--	2.1.2	2.1	33.208,43 €	24.881,97 €
Information Sciences	46.630,76 €	32.576,73 €	2.1.3	2.1	33.208,43 €	24.881,97 €
Engineering Sciences	63.298,03 €	45.087,38 €	2.1.4	2.1	33.208,43 €	24.881,97 €
Environment and Geosciences	44.221,18 €	43.613,37 €	2.1.4	2.1	33.208,43 €	24.881,97 €

Table 63 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Cyprus

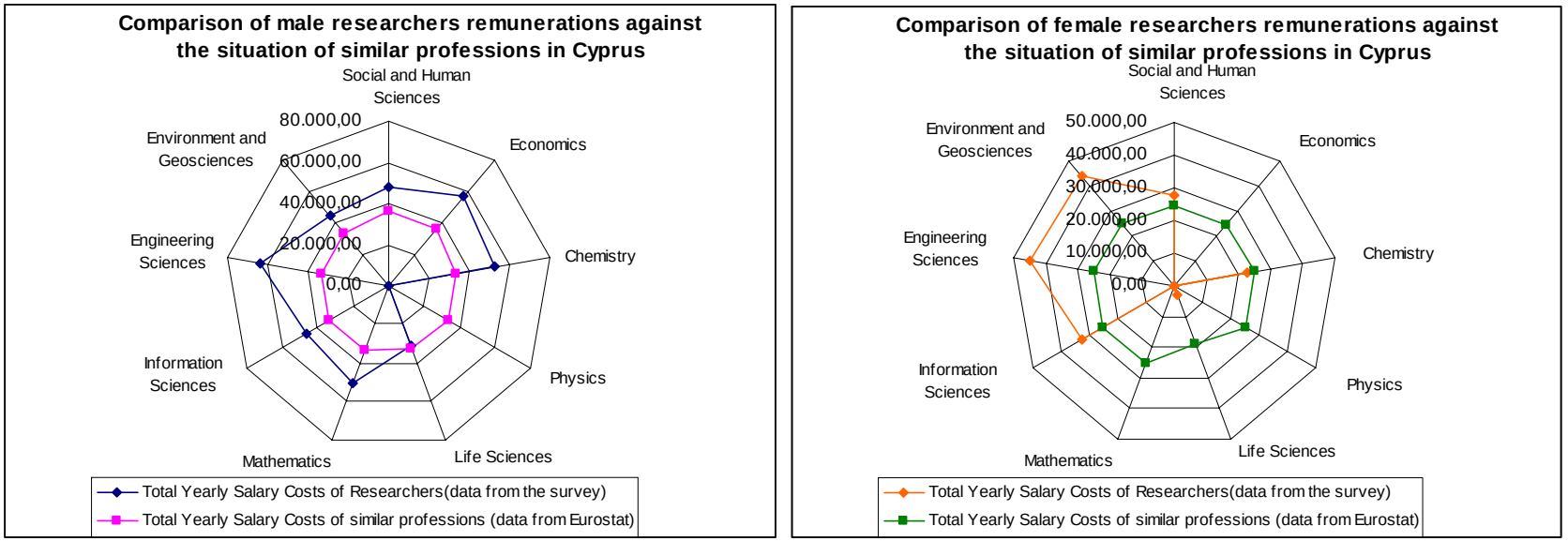


Figure 130 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Cyprus per gender

Czech Republic						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	--	11.302,40 €	2.4.4	2.4	13.504,72 €	9.773,47 €
Economics	27.076,31 €	23.470,14 €	2.4.1	2.4	13.504,72 €	9.773,47 €
Chemistry	23.391,02 €	13.221,45 €	2.1.1	2.1	11.807,81 €	8.553,68 €
Physics	15.790,49 €	--	2.1.1	2.1	11.807,81 €	8.553,68 €
Life Sciences	18.866,30 €	12.404,38 €	2.2.1	2.2	10.713,86 €	9.737,04 €
Mathematics	21.880,74 €	--	2.1.2	2.1	11.807,81 €	8.553,68 €
Information Sciences	17.797,75 €	--	2.1.3	2.1	11.807,81 €	8.553,68 €
Engineering Sciences	20.154,25 €	--	2.1.4	2.1	11.807,81 €	8.553,68 €
Environment and Geosciences	12.174,42 €	--	2.1.4	2.1	11.807,81 €	8.553,68 €

Table 64 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Czech Republic

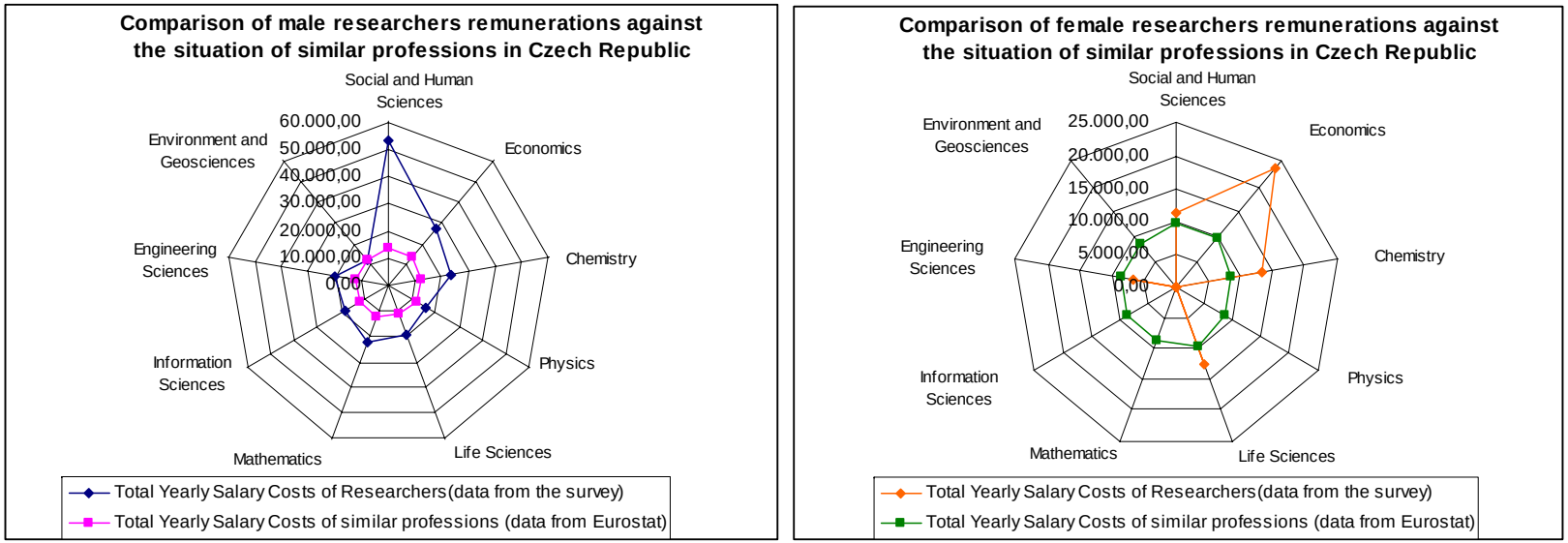


Figure 131 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Czech Republic per gender

Denmark						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	66.347,63 €	60.509,89 €	2.4.4	2.4	62.957,84 €	50.546,22 €
Economics	69.594,19 €	58.511,77 €	2.4.1	2.4	62.957,84 €	50.546,22 €
Chemistry	75.777,80 €	45.734,92 €	2.1.1	2.1	61.055,28 €	54.095,75 €
Physics	72.397,04 €	--	2.1.1	2.1	61.055,28 €	54.095,75 €
Life Sciences	71.320,29 €	67.057,49 €	2.2.1	2.2	53.003,25 €	53.674,07 €
Mathematics	89.387,09 €	--	2.1.2	2.1	61.055,28 €	54.095,75 €
Information Sciences	65.383,50 €	--	2.1.3	2.1	61.055,28 €	54.095,75 €
Engineering Sciences	71.908,04 €	73.766,00 €	2.1.4	2.1	61.055,28 €	54.095,75 €
Environment and Geosciences	74.034,24 €	53.740,10 €	2.1.4	2.1	61.055,28 €	54.095,75 €

Table 65 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Denmark

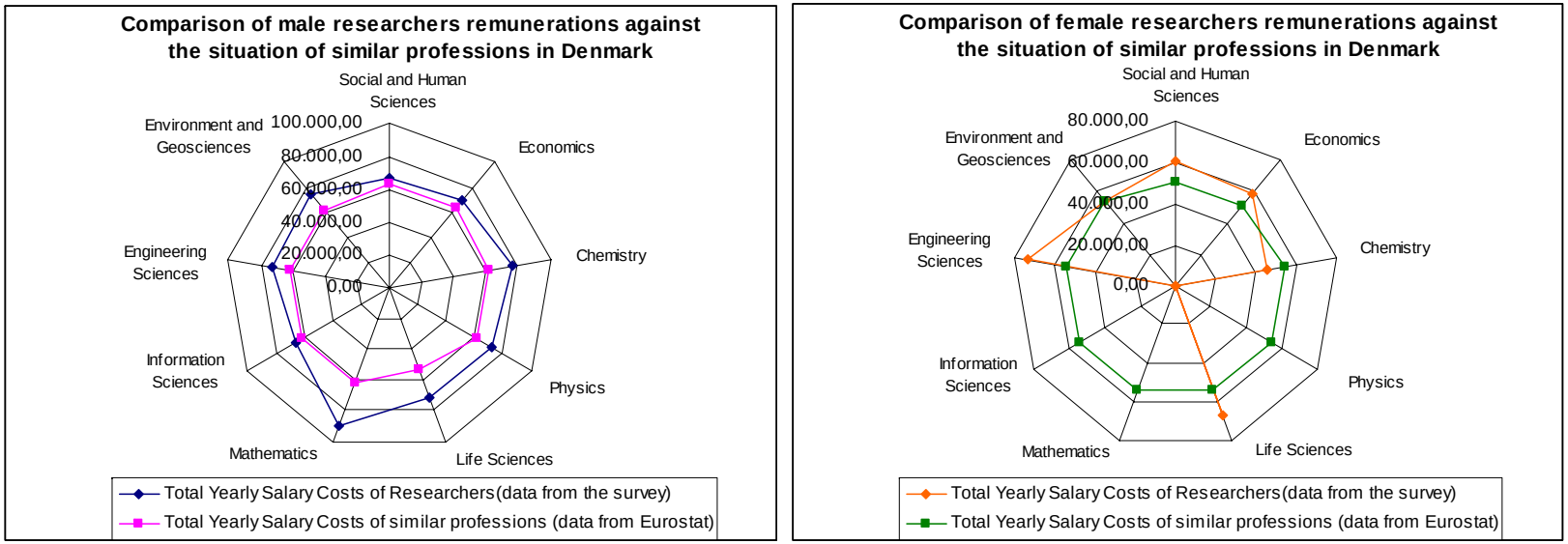


Figure 132 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Denmark per gender

Estonia						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	12.472,85 €	7.138,65 €	2.4.4	2.4	10.167,30 €	6.928,23 €
Economics	8.511,48 €	10.400,00 €	2.4.1	2.4	10.167,30 €	6.928,23 €
Chemistry	18.273,65 €	--	2.1.1	2.1	9.189,33 €	6.916,66 €
Physics	13.642,65 €	--	2.1.1	2.1	9.189,33 €	6.916,66 €
Life Sciences	15.733,52 €	7.334,86 €	2.2.1	2.2	6.891,38 €	6.620,23 €
Mathematics	--	--	2.1.2	2.1	9.189,33 €	6.916,66 €
Information Sciences	--	--	2.1.3	2.1	9.189,33 €	6.916,66 €
Engineering Sciences	10.920,98 €	11.787,63 €	2.1.4	2.1	9.189,33 €	6.916,66 €
Environment and Geosciences	8.754,30 €		2.1.4	2.1	9.189,33 €	6.916,66 €

Table 66 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Estonia

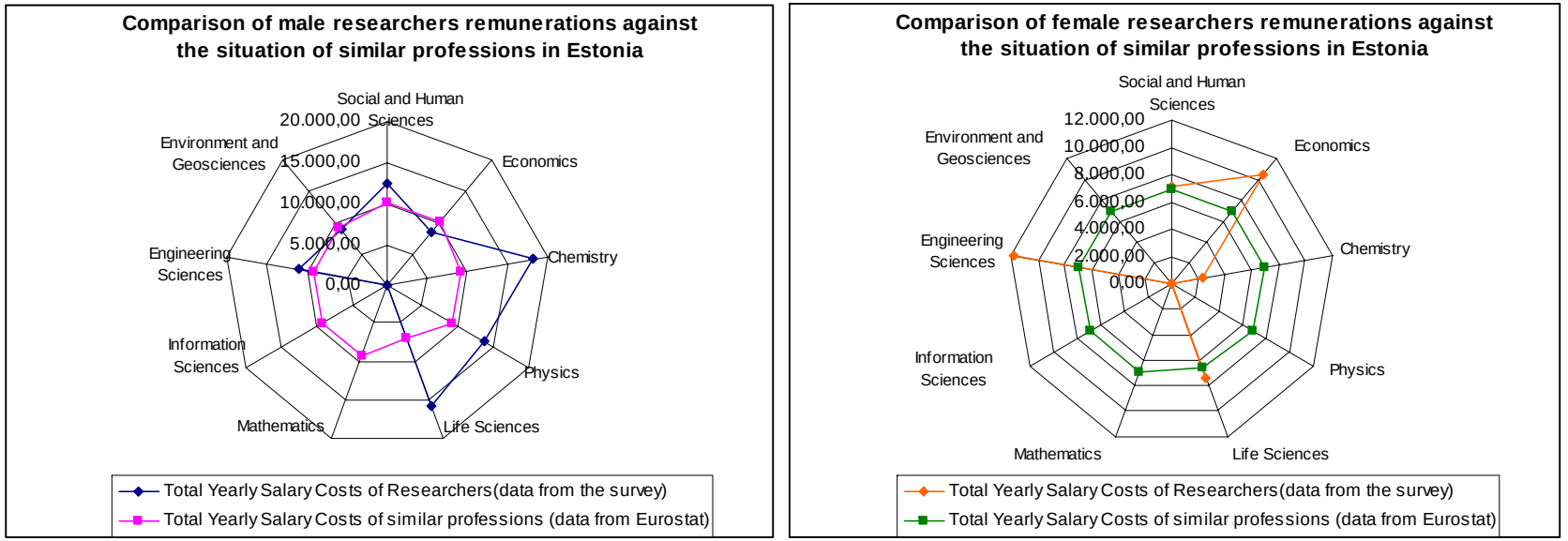


Figure 133 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Estonia per gender

Finland						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	43.857,19 €	29.929,00 €	2.4.4	2.4	46.406,39 €	38.819,35 €
Economics	46.937,53 €	32.662,15 €	2.4.1	2.4	46.406,39 €	38.819,35 €
Chemistry	40.000,00 €	37.400,00 €	2.1.1	2.1	44.744,88 €	40.285,15 €
Physics	48.520,00 €	--	2.1.1	2.1	44.744,88 €	40.285,15 €
Life Sciences	44.046,78 €	38.232,96 €	2.2.1	2.2	80.797,68 €	37.943,03 €
Mathematics	29.750,00 €	--	2.1.2	2.1	44.744,88 €	40.285,15 €
Information Sciences	46.803,88 €	28.833,33 €	2.1.3	2.1	44.744,88 €	40.285,15 €
Engineering Sciences	32.317,00 €	37.945,00 €	2.1.4	2.1	44.744,88 €	40.285,15 €
Environment and Geosciences	43.472,63 €	32.081,50 €	2.1.4	2.1	44.744,88 €	40.285,15 €

Table 67 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Finland

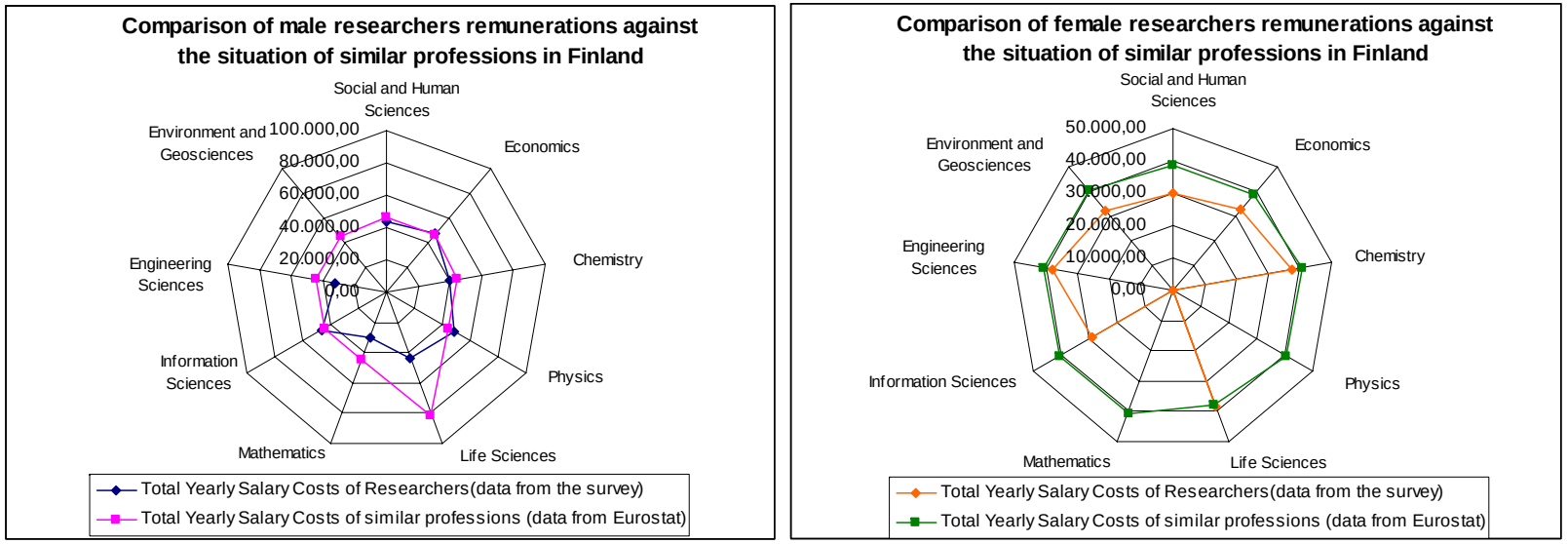


Figure 134 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Finland per gender

France						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	59.769,43 €	41.129,89 €	2.4.4	2.4	64.774,85 €	42.085,67 €
Economics	52.533,89 €	52.632,91 €	2.4.1	2.4	64.774,85 €	42.085,67 €
Chemistry	56.470,52 €	43.743,80 €	2.1.1	2.1	53.311,03 €	43.493,09 €
Physics	54.160,28 €	48.389,07 €	2.1.1	2.1	53.311,03 €	43.493,09 €
Life Sciences	57.013,19 €	39.948,38 €	2.2.1	2.2	60.642,98 €	56.556,98 €
Mathematics	59.970,58 €	--	2.1.2	2.1	53.311,03 €	43.493,09 €
Information Sciences	74.514,81 €	38.368,14 €	2.1.3	2.1	53.311,03 €	43.493,09 €
Engineering Sciences	47.035,23 €	43.508,20 €	2.1.4	2.1	53.311,03 €	43.493,09 €
Environment and Geosciences	50.493,36 €	42.465,53 €	2.1.4	2.1	53.311,03 €	43.493,09 €

Table 68 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in France

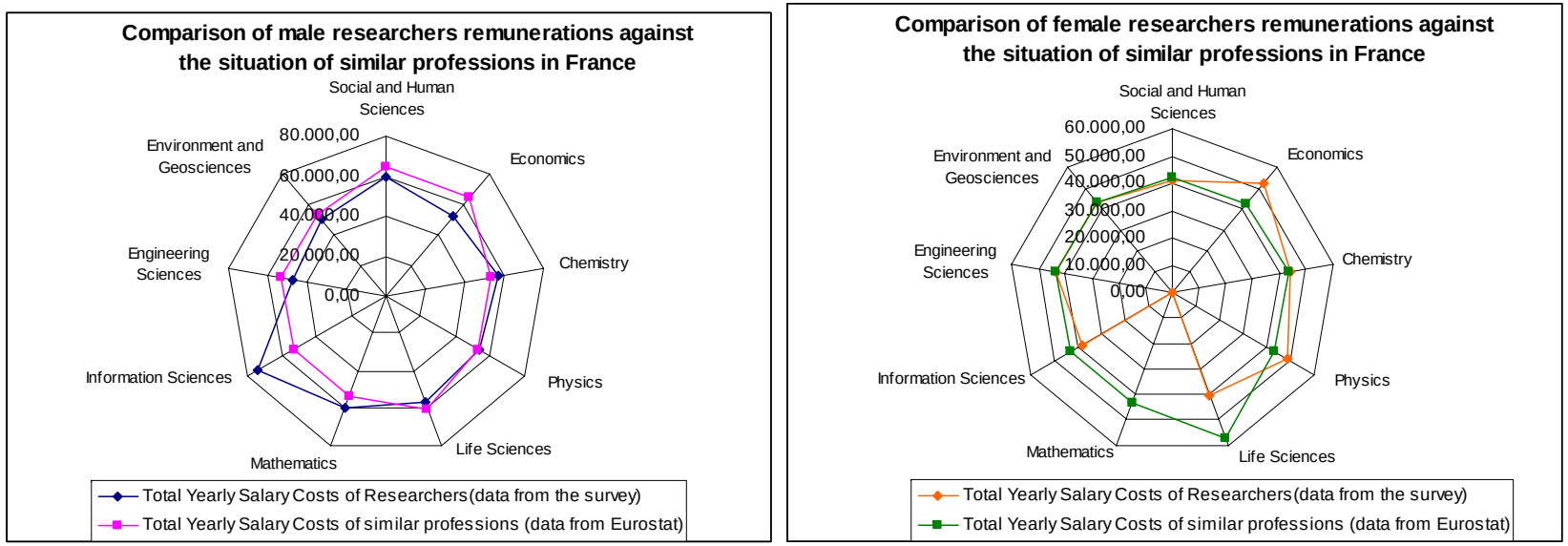


Figure 135 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in France per gender

Germany						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	36.768,73 €	27.541,73 €	2.4.4	2.4	64.736,24 €	47.787,42 €
Economics	51.854,57 €	43.746,70 €	2.4.1	2.4	64.736,24 €	47.787,42 €
Chemistry	53.158,77 €	32.421,80 €	2.1.1	2.1	61.781,83 €	46.981,65 €
Physics	44.017,48 €	39.247,50 €	2.1.1	2.1	61.781,83 €	46.981,65 €
Life Sciences	46.994,45 €	37.818,40 €	2.2.1	2.2	70.007,99 €	50.453,93 €
Mathematics	44.673,33 €	77.250,00 €	2.1.2	2.1	61.781,83 €	46.981,65 €
Information Sciences	51.082,65 €	20.000,00 €	2.1.3	2.1	61.781,83 €	46.981,65 €
Engineering Sciences	59.607,26 €	36.585,67 €	2.1.4	2.1	61.781,83 €	46.981,65 €
Environment and Geosciences	48.274,73 €	37.245,44 €	2.1.4	2.1	61.781,83 €	46.981,65 €

Table 69 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Germany

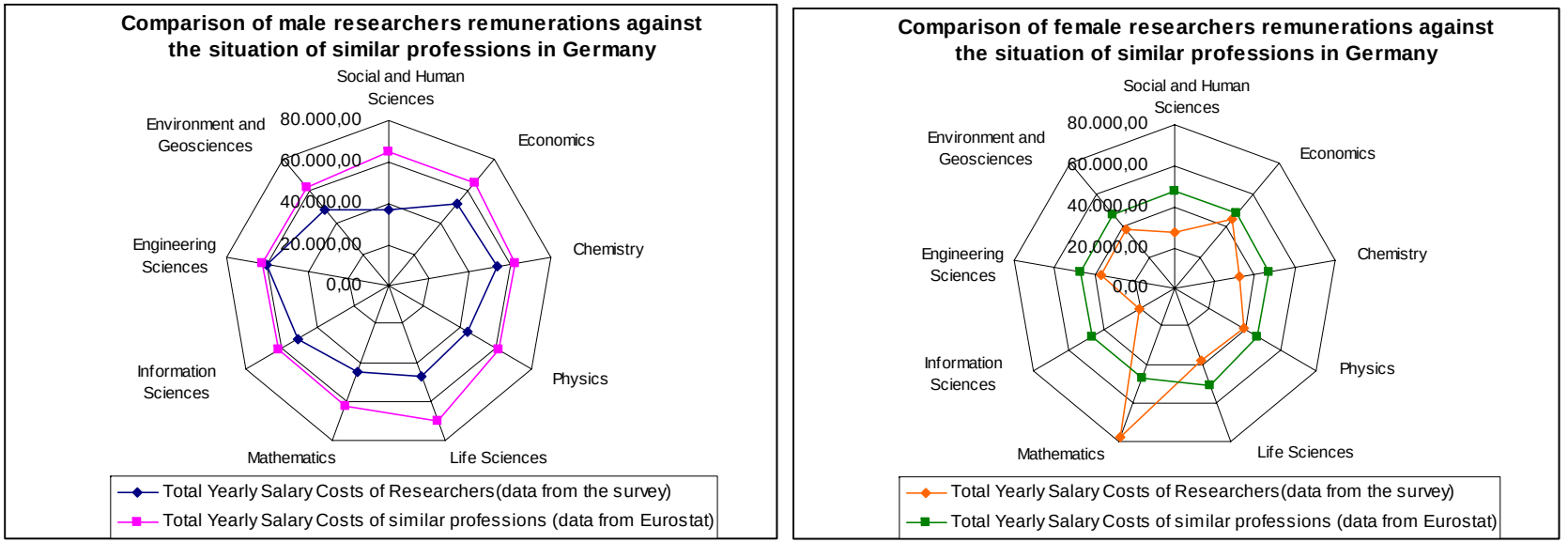


Figure 136 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Germany per gender

Greece						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	36.500,00 €	25.793,33 €	2.4.4	2.4	29.923,79 €	22.809,46 €
Economics	36.350,00 €	26.666,67 €	2.4.1	2.4	29.923,79 €	22.809,46 €
Chemistry	31.863,13 €	13.830,00 €	2.1.1	2.1	34.493,89 €	24.353,57 €
Physics	27.630,56 €	28.756,00 €	2.1.1	2.1	34.493,89 €	24.353,57 €
Life Sciences	29.703,54 €	30.491,27 €	2.2.1	2.2	23.884,56 €	22.348,07 €
Mathematics	42.000,00 €	17.220,00 €	2.1.2	2.1	34.493,89 €	24.353,57 €
Information Sciences	27.902,07 €	21.200,00 €	2.1.3	2.1	34.493,89 €	24.353,57 €
Engineering Sciences	21.269,44 €	14.726,63 €	2.1.4	2.1	34.493,89 €	24.353,57 €
Environment and Geosciences	32.423,94 €	18.358,00 €	2.1.4	2.1	34.493,89 €	24.353,57 €

Table 70 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Greece

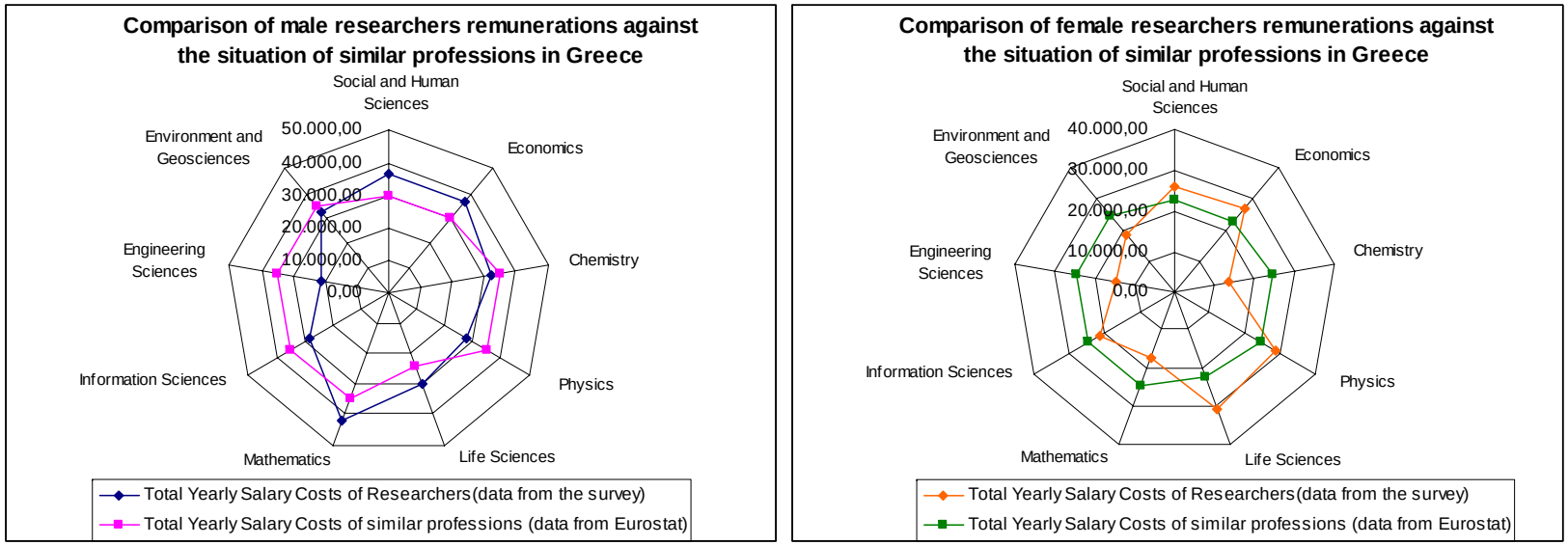


Figure 137 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Greece per gender

Hungary						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	33.077,20 €	19.364,66 €	2.4.4	2.4	12.067,58 €	11.274,33 €
Economics	24.878,41 €	12.754,01 €	2.4.1	2.4	12.067,58 €	11.274,33 €
Chemistry	--	19.190,04 €	2.1.1	2.1	13.251,70 €	10.677,15 €
Physics	17.156,07 €	18.463,68 €	2.1.1	2.1	13.251,70 €	10.677,15 €
Life Sciences	16.902,16 €	17.446,67 €	2.2.1	2.2	11.433,55 €	10.113,48 €
Mathematics	16.650,81 €	--	2.1.2	2.1	13.251,70 €	10.677,15 €
Information Sciences	27.242,13 €	--	2.1.3	2.1	13.251,70 €	10.677,15 €
Engineering Sciences	18.724,71 €	15.922,20 €	2.1.4	2.1	13.251,70 €	10.677,15 €
Environment and Geosciences	14.261,86 €	11.577,08 €	2.1.4	2.1	13.251,70 €	10.677,15 €

Table 71 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Hungary

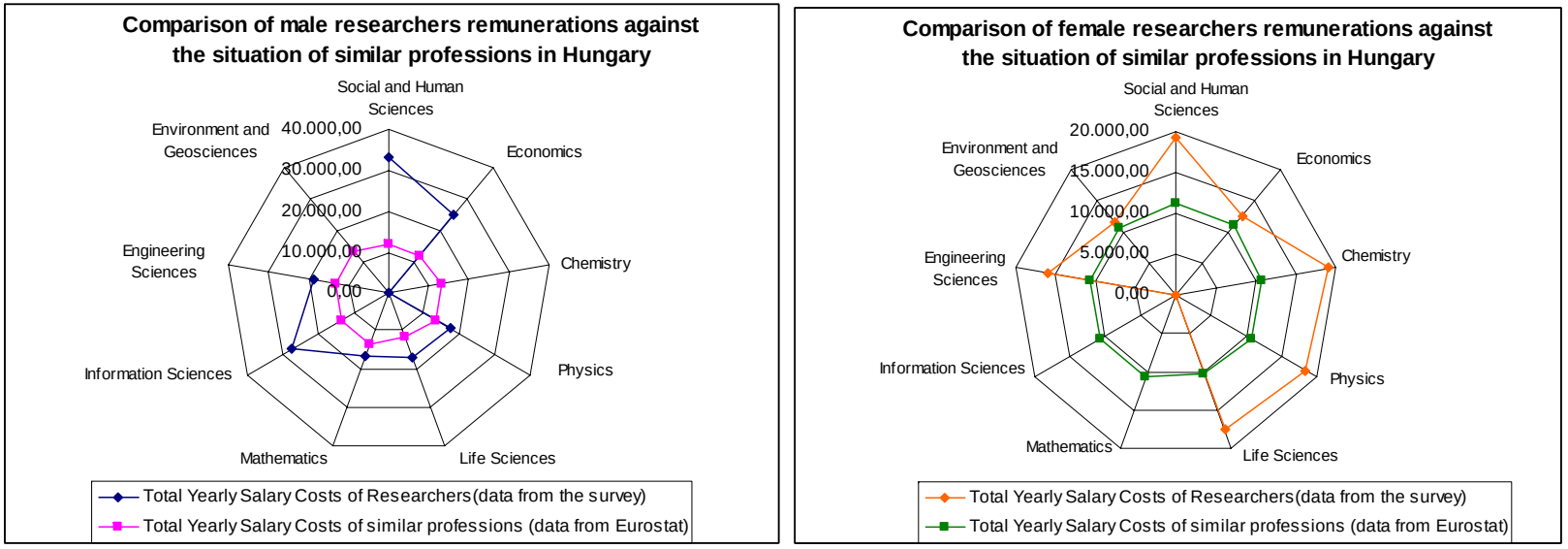


Figure 138 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Hungary per gender

Iceland						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	74.058,53 €	53.850,29 €	2.4.4	2.4	52.049,71 €	37.646,28 €
Economics	--	38.628,00 €	2.4.1	2.4	52.049,71 €	37.646,28 €
Chemistry	--	45.066,00 €	2.1.1	2.1	59.608,68 €	59.179,61 €
Physics	--	--	2.1.1	2.1	59.608,68 €	59.179,61 €
Life Sciences	35.075,38 €	39.684,88 €	2.2.1	2.2	63.918,14 €	57.656,43 €
Mathematics	--	--	2.1.2	2.1	59.608,68 €	59.179,61 €
Information Sciences	77.256,00 €	--	2.1.3	2.1	59.608,68 €	59.179,61 €
Engineering Sciences	--	--	2.1.4	2.1	59.608,68 €	59.179,61 €
Environment and Geosciences	--	53.650,00 €	2.1.4	2.1	59.608,68 €	59.179,61 €

Table 72 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Iceland

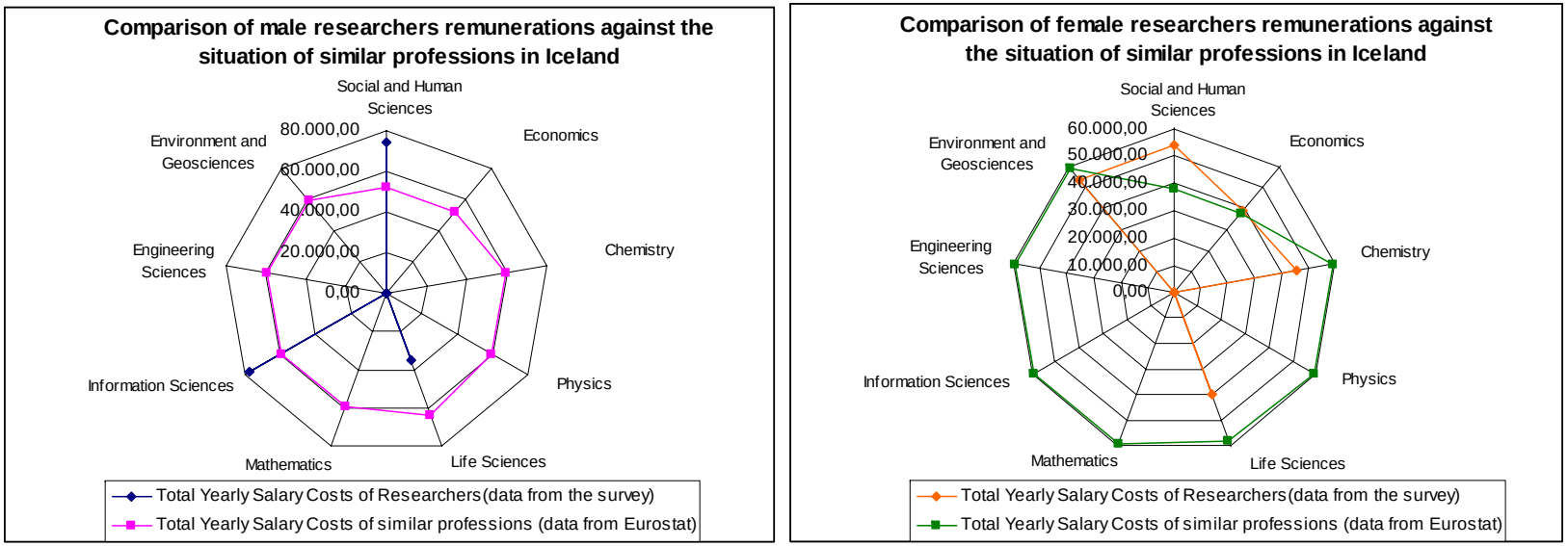


Figure 139 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Iceland per gender

Ireland						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	62.408,27 €	39.232,04 €	2.4.4	2.4	50.292,94 €	44.912,39 €
Economics	--	--	2.4.1	2.4	50.292,94 €	44.912,39 €
Chemistry	88.937,80 €	50.400,10 €	2.1.1	2.1	47.535,51 €	41.642,16 €
Physics	46.470,35 €	39.671,00 €	2.1.1	2.1	47.535,51 €	41.642,16 €
Life Sciences	61.130,06 €	53.070,30 €	2.2.1	2.2	53.436,18 €	40.313,00 €
Mathematics	54.996,75 €	82.500,00 €	2.1.2	2.1	47.535,51 €	41.642,16 €
Information Sciences	58.026,00 €	44.539,00 €	2.1.3	2.1	47.535,51 €	41.642,16 €
Engineering Sciences	48.539,36 €	31.243,86 €	2.1.4	2.1	47.535,51 €	41.642,16 €
Environment and Geosciences	48.326,00 €	36.010,60 €	2.1.4	2.1	47.535,51 €	41.642,16 €

Table 73 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Ireland

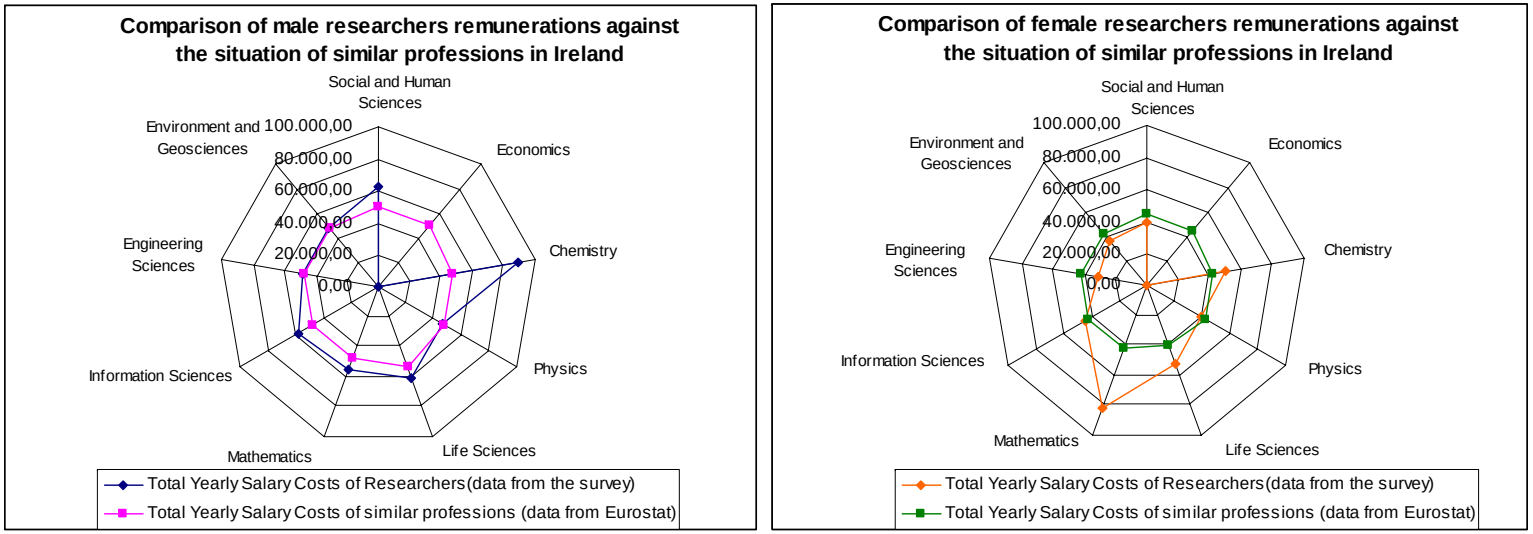


Figure 140 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Ireland per gender

Italy						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	29.160,98 €	21.605,02 €	2.4.4	2.4	79.350,35 €	84.790,83 €
Economics	42.527,52 €	38.136,80 €	2.4.1	2.4	79.350,35 €	84.790,83 €
Chemistry	46.036,00 €	37.606,25 €	2.1.1	2.1	85.666,92 €	69.862,51 €
Physics	39.234,52 €	26.439,52 €	2.1.1	2.1	85.666,92 €	69.862,51 €
Life Sciences	38.532,74 €	34.237,66 €	2.2.1	2.2	69.396,40 €	-
Mathematics	52.315,50 €	29.400,00 €	2.1.2	2.1	85.666,92 €	69.862,51 €
Information Sciences	31.637,08 €	35.000,00 €	2.1.3	2.1	85.666,92 €	69.862,51 €
Engineering Sciences	32.939,18 €	21.470,20 €	2.1.4	2.1	85.666,92 €	69.862,51 €
Environment and Geosciences	40.150,44 €	22.627,60 €	2.1.4	2.1	85.666,92 €	69.862,51 €

Table 74 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Italy

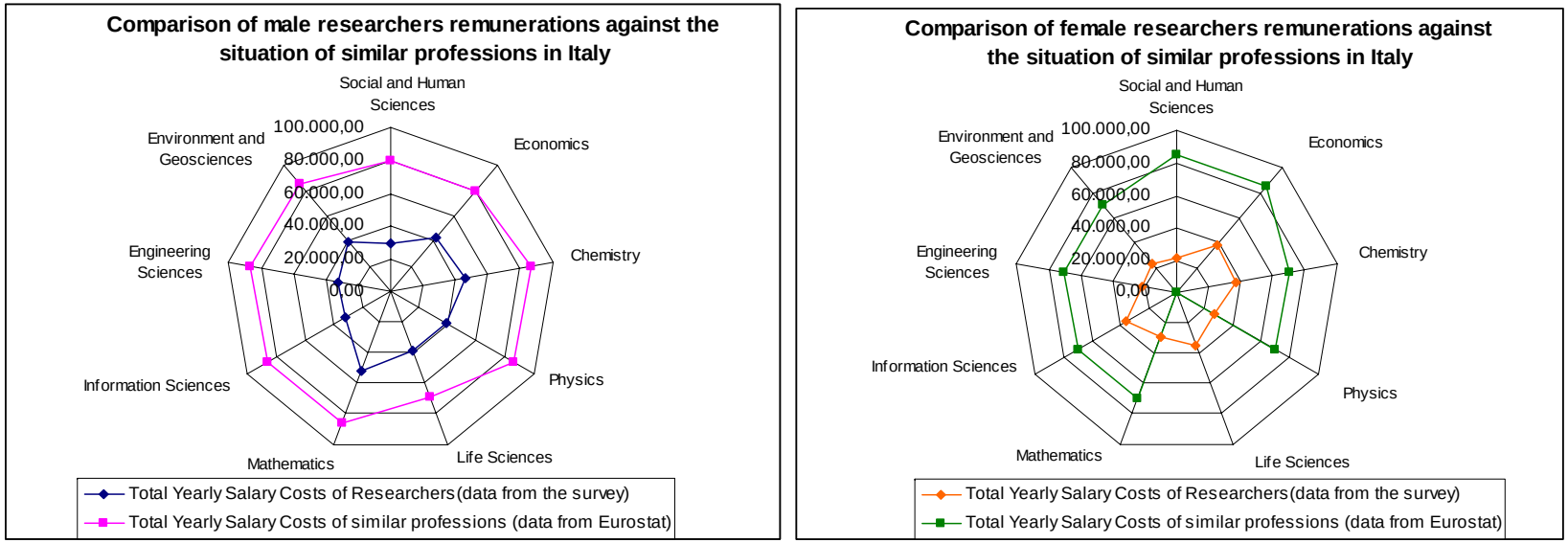


Figure 141 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Italy per gender

Latvia						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	13.500,00 €	--	2.4.4	2.4	6.406,41 €	5.155,10 €
Economics	--	12.000,00 €	2.4.1	2.4	6.406,41 €	5.155,10 €
Chemistry	13.759,20 €	--	2.1.1	2.1	7.297,24 €	6.042,82 €
Physics	--	--	2.1.1	2.1	7.297,24 €	6.042,82 €
Life Sciences	--	--	2.2.1	2.2	3.999,05 €	5.358,98 €
Mathematics	--	--	2.1.2	2.1	7.297,24 €	6.042,82 €
Information Sciences	--	--	2.1.3	2.1	7.297,24 €	6.042,82 €
Engineering Sciences	11.931,81 €	--	2.1.4	2.1	7.297,24 €	6.042,82 €
Environment and Geosciences	--	--	2.1.4	2.1	7.297,24 €	6.042,82 €

Table 75 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Latvia

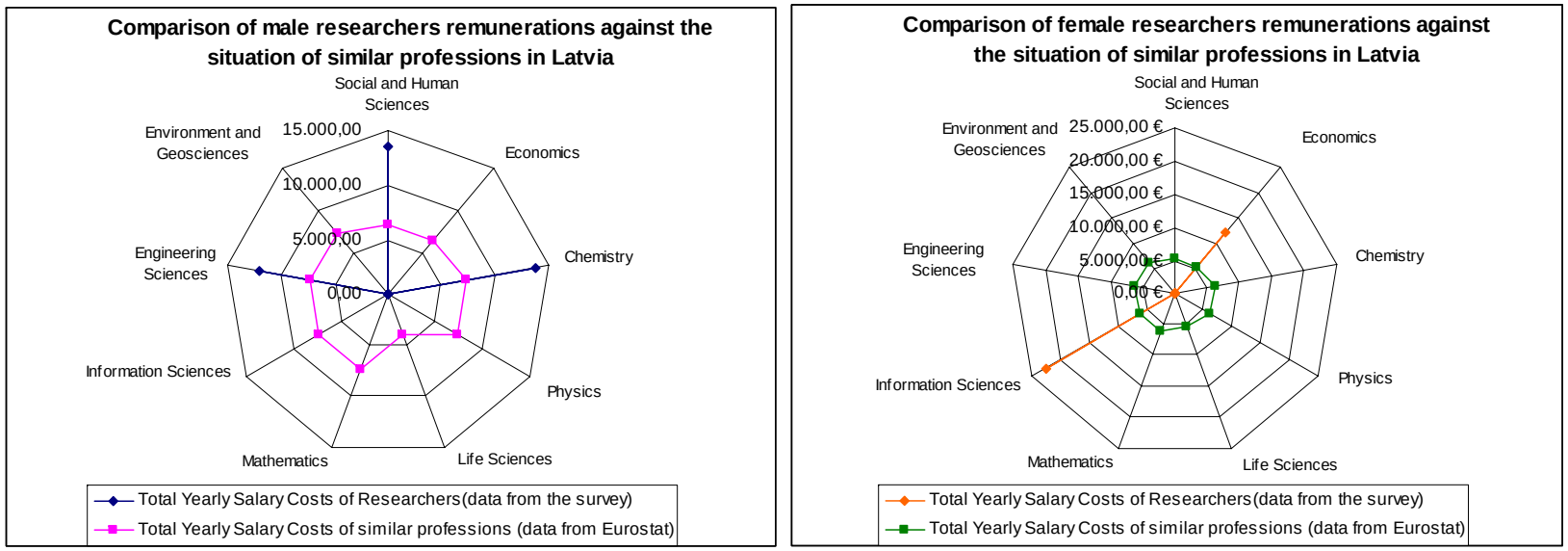


Figure 142 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Latvia per gender

Lithuania						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	15.336,34 €	--	2.4.4	2.4	5.662,99 €	4.958,73 €
Economics	--	--	2.4.1	2.4	5.662,99 €	4.958,73 €
Chemistry	13.288,60 €	6.506,75 €	2.1.1	2.1	6.962,83 €	6.366,76 €
Physics	10.067,61 €	7.134,79 €	2.1.1	2.1	6.962,83 €	6.366,76 €
Life Sciences	8.908,27 €	8.115,52 €	2.2.1	2.2	5.734,36 €	5.014,75 €
Mathematics	--	--	2.1.2	2.1	6.962,83 €	6.366,76 €
Information Sciences	8.709,60 €	--	2.1.3	2.1	6.962,83 €	6.366,76 €
Engineering Sciences	15.055,13 €	16.925,97 €	2.1.4	2.1	6.962,83 €	6.366,76 €
Environment and Geosciences	10.194,35 €	6.855,02 €	2.1.4	2.1	6.962,83 €	6.366,76 €

Table 76 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Lithuania

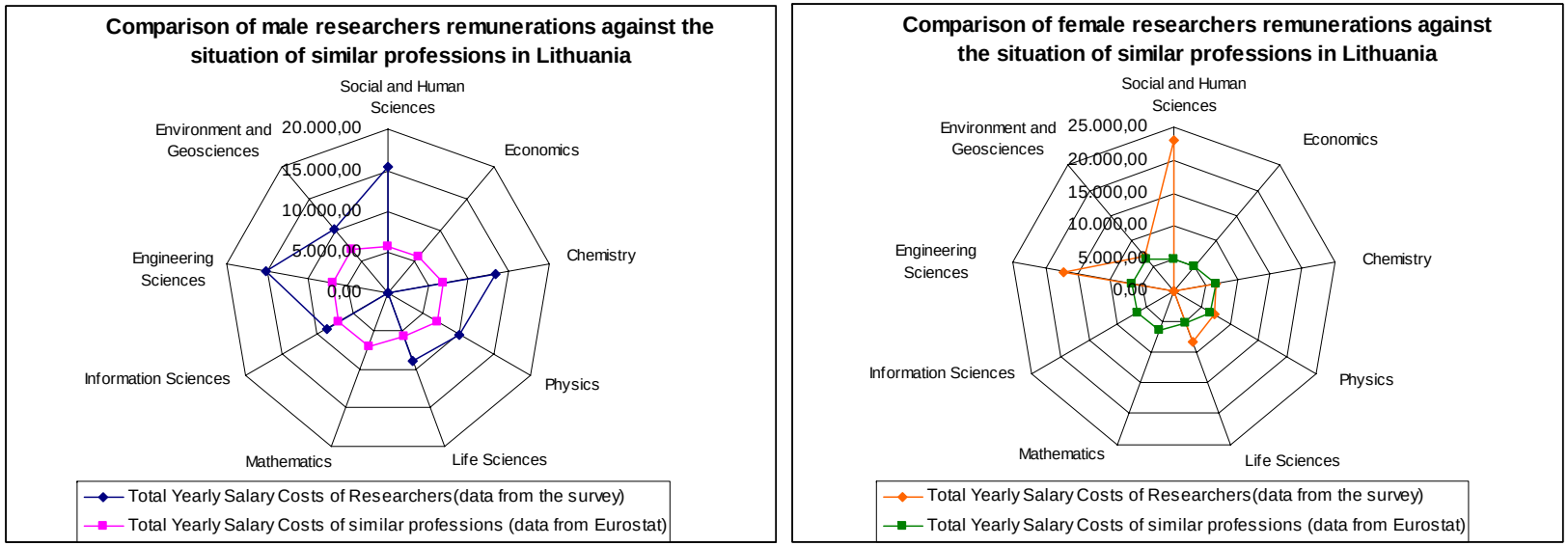


Figure 143 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Lithuania per gender

Luxembourg						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	68.447,80 €	--	2.4.4	2.4	61.578,26 €	50.346,68 €
Economics	--	48.750,00 €	2.4.1	2.4	61.578,26 €	50.346,68 €
Chemistry	--	--	2.1.1	2.1	55.075,67 €	54.205,70 €
Physics	--	--	2.1.1	2.1	55.075,67 €	54.205,70 €
Life Sciences	62.833,33 €	32.712,00 €	2.2.1	2.2	58.097,79 €	60.394,06 €
Mathematics	--	--	2.1.2	2.1	55.075,67 €	54.205,70 €
Information Sciences	69.881,00 €	--	2.1.3	2.1	55.075,67 €	54.205,70 €
Engineering Sciences	57.899,00 €	--	2.1.4	2.1	55.075,67 €	54.205,70 €
Environment and Geosciences	60.826,50 €	--	2.1.4	2.1	55.075,67 €	54.205,70 €

Table 77 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Luxembourg

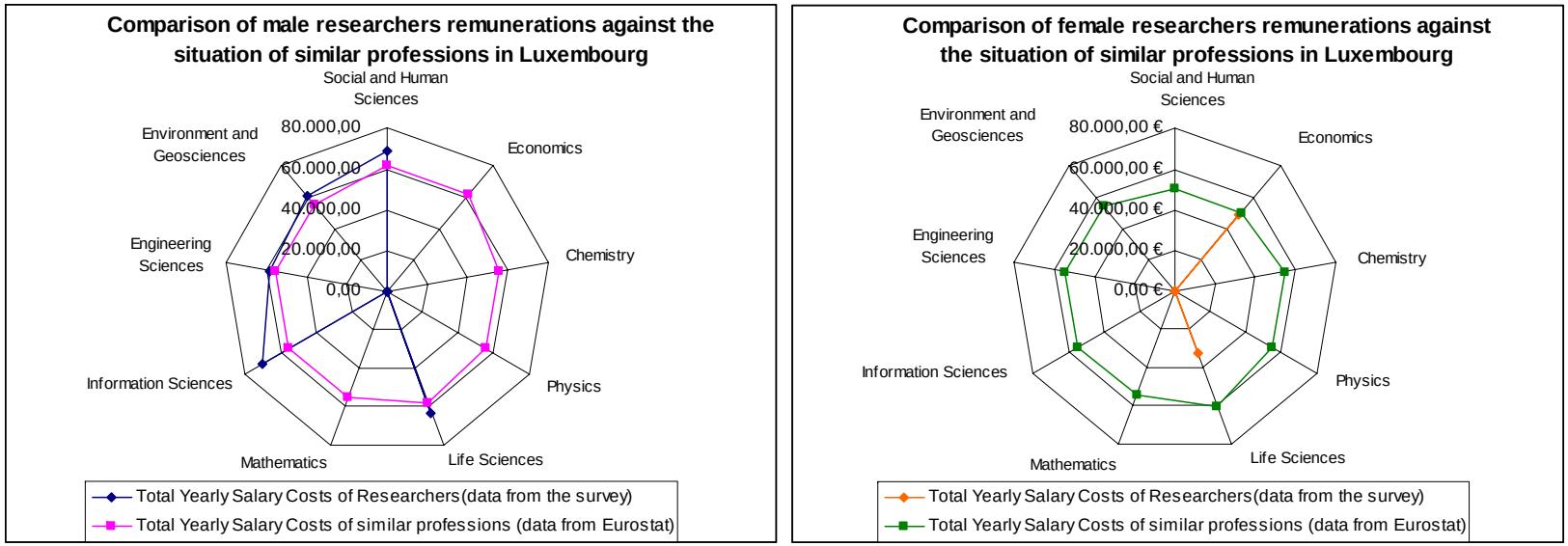


Figure 144 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Luxembourg per gender

Malta						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	32.677,19 €	17.632,91 €	2.4.4	2.4	19.043,94 €	18.747,42 €
Economics	--	--	2.4.1	2.4	19.043,94 €	18.747,42 €
Chemistry	--	--	2.1.1	2.1	20.869,49 €	16.955,28 €
Physics	27.861,96 €	--	2.1.1	2.1	20.869,49 €	16.955,28 €
Life Sciences	35.262,41 €	25.874,47 €	2.2.1	2.2	26.063,55 €	13.945,92 €
Mathematics	22.057,39 €	--	2.1.2	2.1	20.869,49 €	16.955,28 €
Information Sciences	--	--	2.1.3	2.1	20.869,49 €	16.955,28 €
Engineering Sciences	28.126,65 €	--	2.1.4	2.1	20.869,49 €	16.955,28 €
Environment and Geosciences	--	--	2.1.4	2.1	20.869,49 €	16.955,28 €

Table 78 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Malta

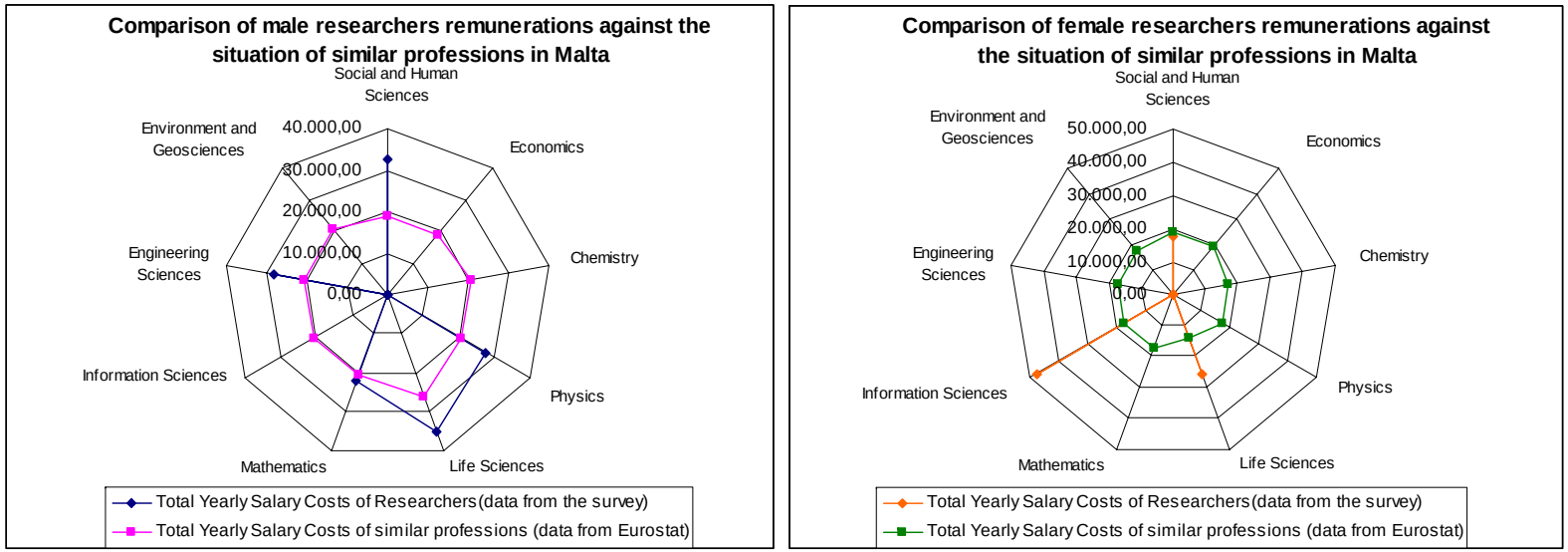


Figure 145 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Malta per gender

Netherlands						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	81.010,91 €	51.497,40 €	2.4.4	2.4	59.159,89 €	40.949,17 €
Economics	72.540,67 €	52.382,86 €	2.4.1	2.4	59.159,89 €	40.949,17 €
Chemistry	52.000,00 €	39.200,00 €	2.1.1	2.1	50.657,97 €	45.919,33 €
Physics	51.900,00 €	--	2.1.1	2.1	50.657,97 €	45.919,33 €
Life Sciences	71.586,42 €	23.808,33 €	2.2.1	2.2	63.929,12 €	37.934,56 €
Mathematics	40.000,00 €	--	2.1.2	2.1	50.657,97 €	45.919,33 €
Information Sciences	40.280,20 €	64.144,00 €	2.1.3	2.1	50.657,97 €	45.919,33 €
Engineering Sciences	--	--	2.1.4	2.1	50.657,97 €	45.919,33 €
Environment and Geosciences	82.976,50 €	--	2.1.4	2.1	50.657,97 €	45.919,33 €

Table 79 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in The Netherlands

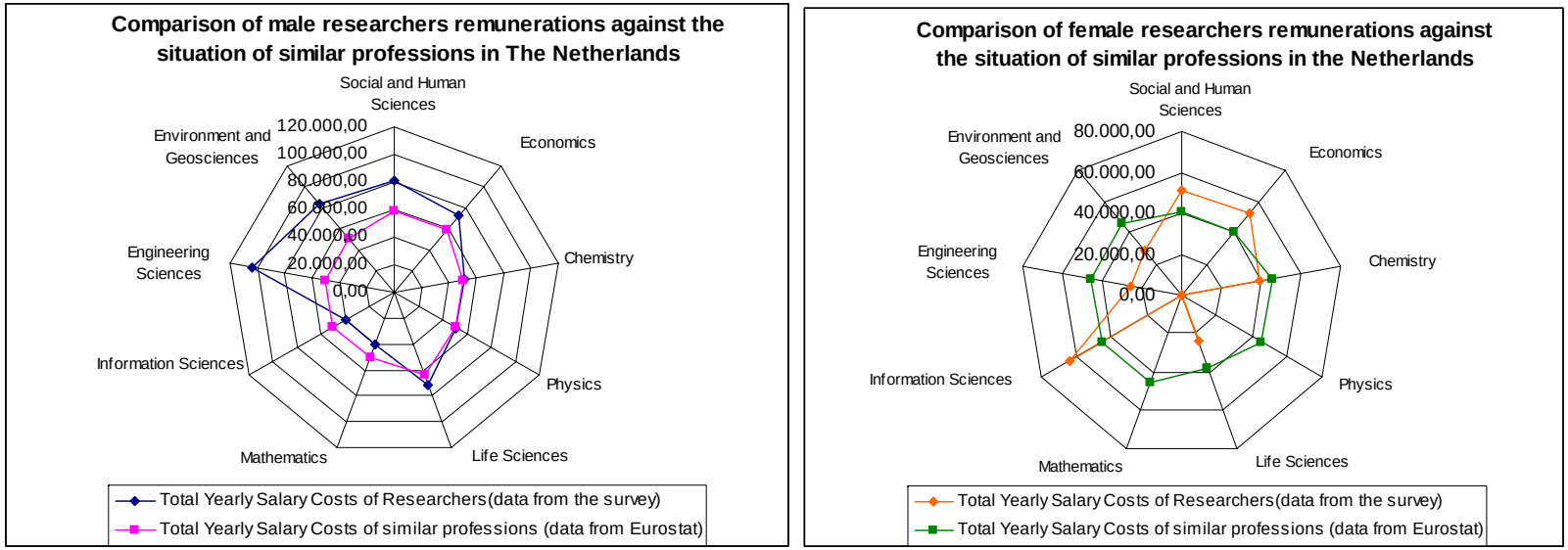


Figure 146 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in The Netherlands per gender

Norway						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	61.170,86 €	59.133,45 €	2.4.4	2.4	60.541,24 €	51.937,69 €
Economics	67.898,05 €	60.670,67 €	2.4.1	2.4	60.541,24 €	51.937,69 €
Chemistry	73.407,70 €	59.110,29 €	2.1.1	2.1	62.180,81 €	53.326,68 €
Physics	72.314,94 €	--	2.1.1	2.1	62.180,81 €	53.326,68 €
Life Sciences	63.691,17 €	56.924,41 €	2.2.1	2.2	73.952,46 €	54.742,60 €
Mathematics	68.990,40 €	--	2.1.2	2.1	62.180,81 €	53.326,68 €
Information Sciences	62.354,15 €	44.716,00 €	2.1.3	2.1	62.180,81 €	53.326,68 €
Engineering Sciences	67.805,84 €	58.437,42 €	2.1.4	2.1	62.180,81 €	53.326,68 €
Environment and Geosciences	70.307,99 €	64.507,31 €	2.1.4	2.1	62.180,81 €	53.326,68 €

Table 80 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Norway

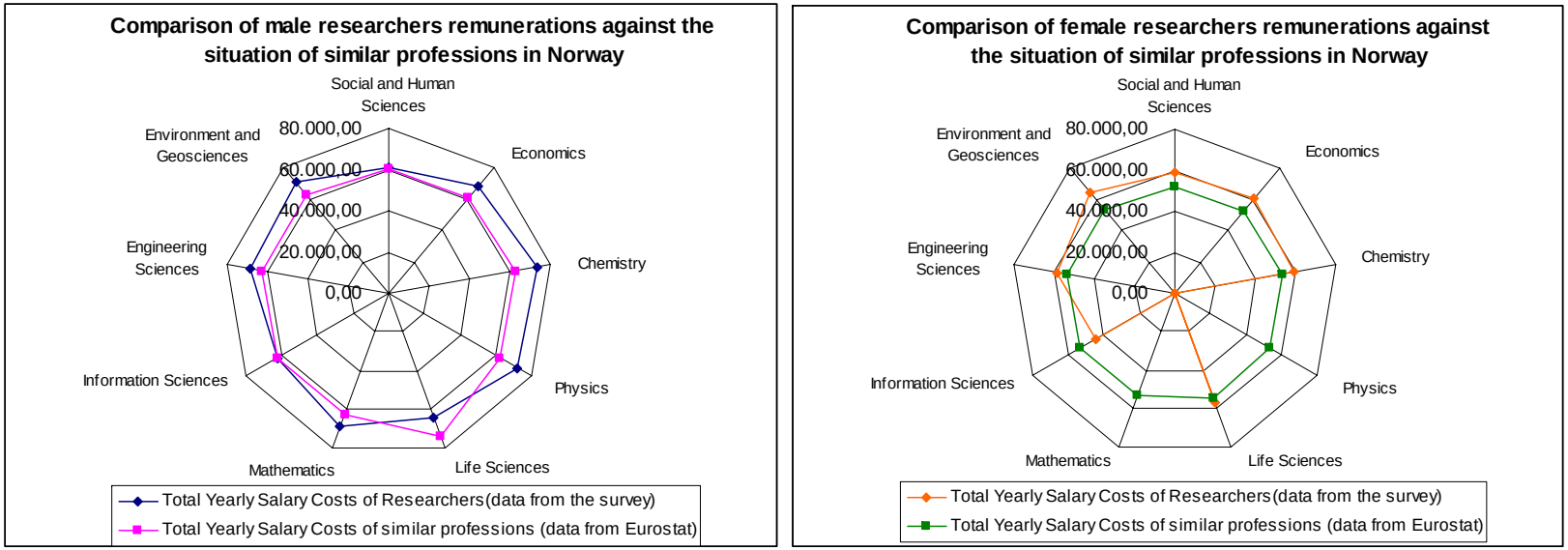


Figure 147 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Norway per gender

Poland						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	8.208,29 €	7.057,46 €	2.4.4	2.4	12.681,42 €	10.290,27 €
Economics	11.442,02 €	13.595,97 €	2.4.1	2.4	12.681,42 €	10.290,27 €
Chemistry	11.733,35 €	10.324,38 €	2.1.1	2.1	13.749,01 €	10.895,46 €
Physics	16.024,19 €	16.316,58 €	2.1.1	2.1	13.749,01 €	10.895,46 €
Life Sciences	18.488,43 €	9.159,69 €	2.2.1	2.2	10.124,15 €	9.364,94 €
Mathematics	--	--	2.1.2	2.1	13.749,01 €	10.895,46 €
Information Sciences	13.343,33 €	--	2.1.3	2.1	13.749,01 €	10.895,46 €
Engineering Sciences	15.772,63 €	9.151,09 €	2.1.4	2.1	13.749,01 €	10.895,46 €
Environment and Geosciences	12.293,04 €	--	2.1.4	2.1	13.749,01 €	10.895,46 €

Table 81 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Poland

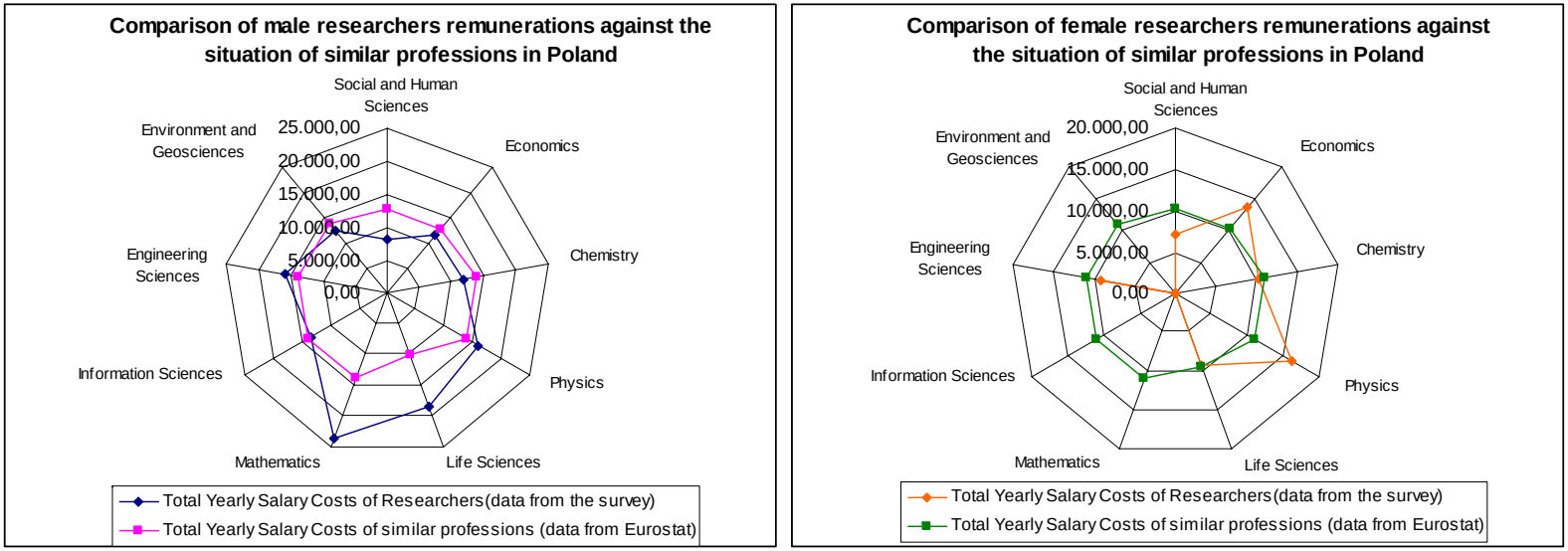


Figure 148 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Poland per gender

Portugal						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	35.744,16 €	18.633,64 €	2.4.4	2.4	26.974,02 €	26.777,68 €
Economics	43.199,53 €	24.912,13 €	2.4.1	2.4	26.974,02 €	26.777,68 €
Chemistry	22.499,55 €	19.908,64 €	2.1.1	2.1	34.385,99 €	30.376,00 €
Physics	39.973,88 €	21.742,75 €	2.1.1	2.1	34.385,99 €	30.376,00 €
Life Sciences	21.597,58 €	16.518,17 €	2.2.1	2.2	30.990,62 €	29.147,72 €
Mathematics	--	--	2.1.2	2.1	34.385,99 €	30.376,00 €
Information Sciences	23.747,87 €	22.292,40 €	2.1.3	2.1	34.385,99 €	30.376,00 €
Engineering Sciences	32.594,94 €	20.747,83 €	2.1.4	2.1	34.385,99 €	30.376,00 €
Environment and Geosciences	19.015,89 €	20.094,77 €	2.1.4	2.1	34.385,99 €	30.376,00 €

Table 82 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Portugal

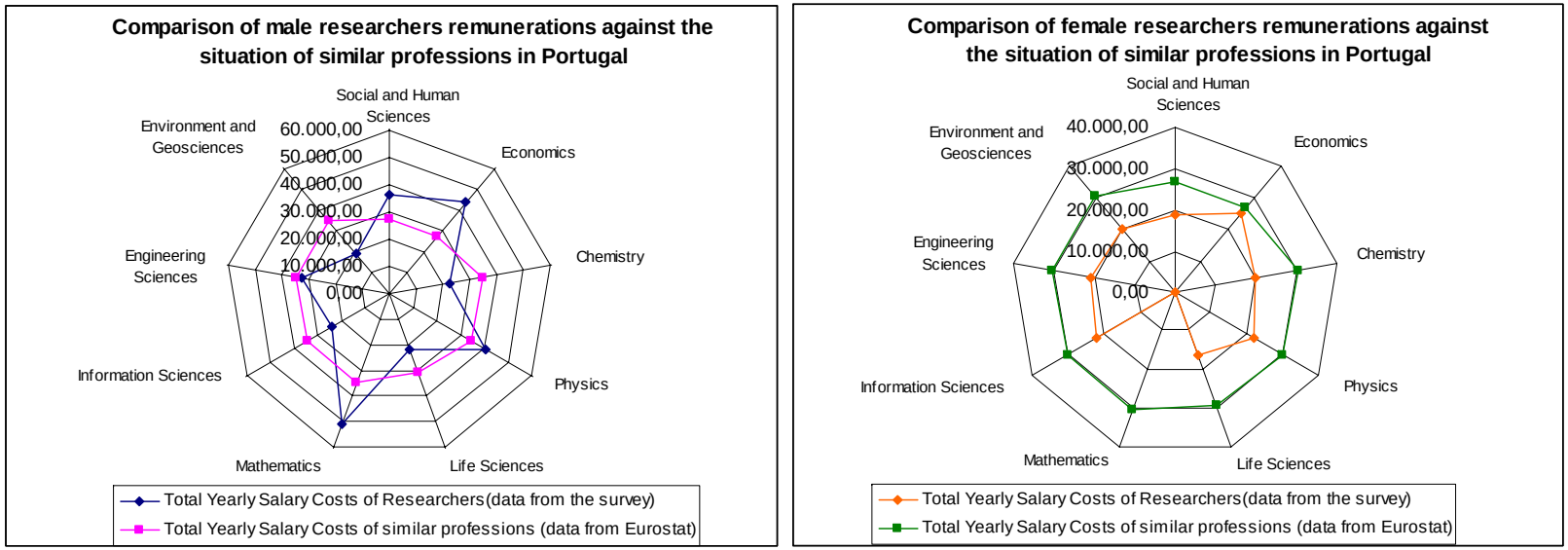


Figure 149 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Portugal per gender

Romania						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	6.381,06 €	8.218,82 €	2.4.4	2.4	4.573,21 €	4.290,16 €
Economics	8.058,87 €	5.022,49 €	2.4.1	2.4	4.573,21 €	4.290,16 €
Chemistry	4.288,02 €	--	2.1.1	2.1	4.812,18 €	4.045,37 €
Physics	9.904,32 €	10.833,63 €	2.1.1	2.1	4.812,18 €	4.045,37 €
Life Sciences	4.802,38 €	4.017,56 €	2.2.1	2.2	3.249,83 €	3.588,09 €
Mathematics	--	6.452,72 €	2.1.2	2.1	4.812,18 €	4.045,37 €
Information Sciences	8.259,59 €	9.923,54 €	2.1.3	2.1	4.812,18 €	4.045,37 €
Engineering Sciences	8.755,45 €	4.818,86 €	2.1.4	2.1	4.812,18 €	4.045,37 €
Environment and Geosciences	6.267,22 €	7.012,07 €	2.1.4	2.1	4.812,18 €	4.045,37 €

Table 83 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Romania

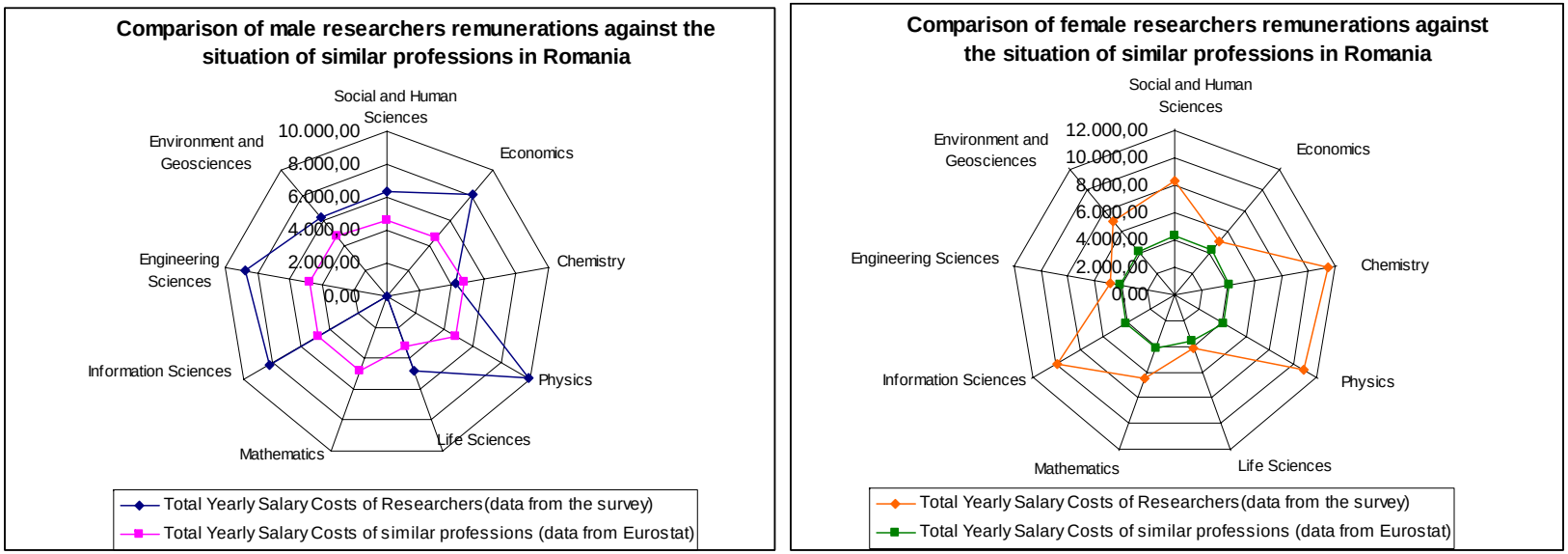


Figure 150 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Romania per gender

Slovakia						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	8.578,90 €	10.542,68 €	2.4.4	2.4	11.633,09 €	7.321,33 €
Economics	9.707,74 €	7.429,41 €	2.4.1	2.4	11.633,09 €	7.321,33 €
Chemistry	9.938,17 €	7.061,33 €	2.1.1	2.1	9.218,04 €	7.542,22 €
Physics	10.968,93 €	8.261,70 €	2.1.1	2.1	9.218,04 €	7.542,22 €
Life Sciences	9.424,79 €	7.247,36 €	2.2.1	2.2	10.377,50 €	9.050,60 €
Mathematics	12.585,97 €	11.497,05 €	2.1.2	2.1	9.218,04 €	7.542,22 €
Information Sciences	8.844,65 €	4.302,28 €	2.1.3	2.1	9.218,04 €	7.542,22 €
Engineering Sciences	11.246,72 €	6.178,70 €	2.1.4	2.1	9.218,04 €	7.542,22 €
Environment and Geosciences	9.279,13 €	7.849,44 €	2.1.4	2.1	9.218,04 €	7.542,22 €

Table 84 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Slovakia

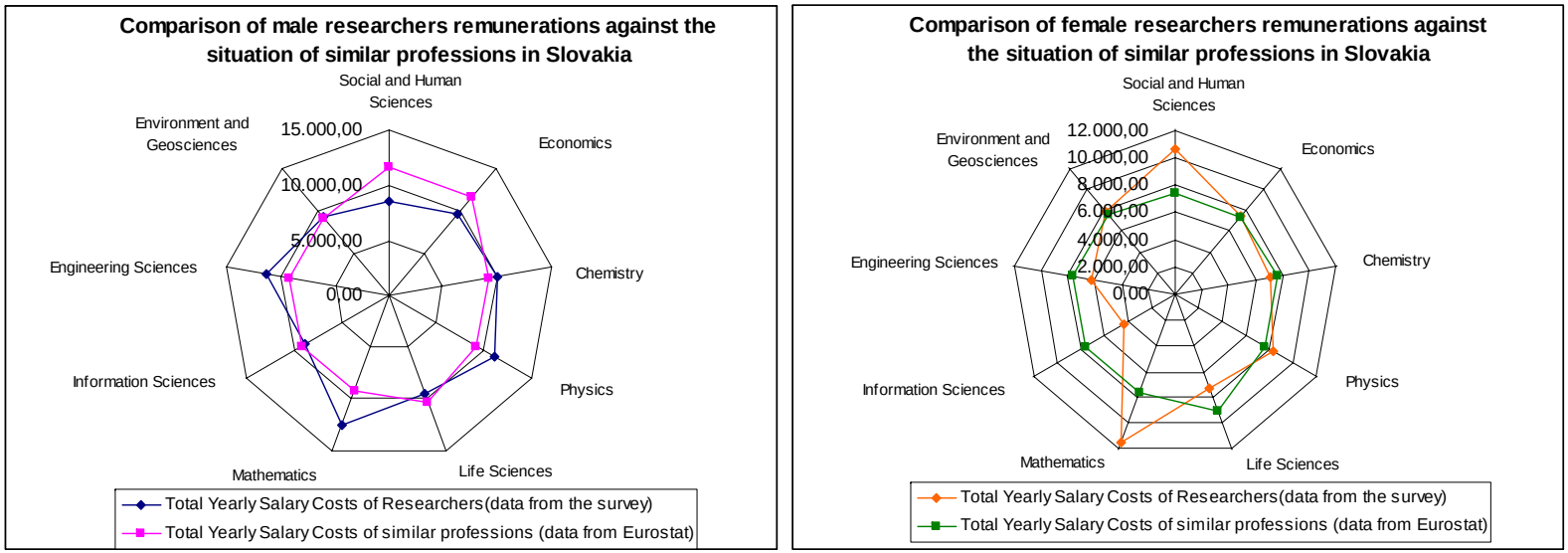


Figure 151 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Slovakia per gender

Slovenia						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	32.089,63 €	31.093,75 €	2.4.4	2.4	26.337,15 €	23.898,22 €
Economics	26.771,59 €	33.352,00 €	2.4.1	2.4	26.337,15 €	23.898,22 €
Chemistry	--	16.280,64 €	2.1.1	2.1	25.115,33 €	22.458,58 €
Physics	39.388,48 €	18.508,40 €	2.1.1	2.1	25.115,33 €	22.458,58 €
Life Sciences	34.437,56 €	31.842,45 €	2.2.1	2.2	27.468,49 €	27.147,31 €
Mathematics	16.514,49 €	20.845,00 €	2.1.2	2.1	25.115,33 €	22.458,58 €
Information Sciences	29.663,24 €	--	2.1.3	2.1	25.115,33 €	22.458,58 €
Engineering Sciences	22.047,87 €	26.572,30 €	2.1.4	2.1	25.115,33 €	22.458,58 €
Environment and Geosciences	--	--	2.1.4	2.1	25.115,33 €	22.458,58 €

Table 85 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Slovenia

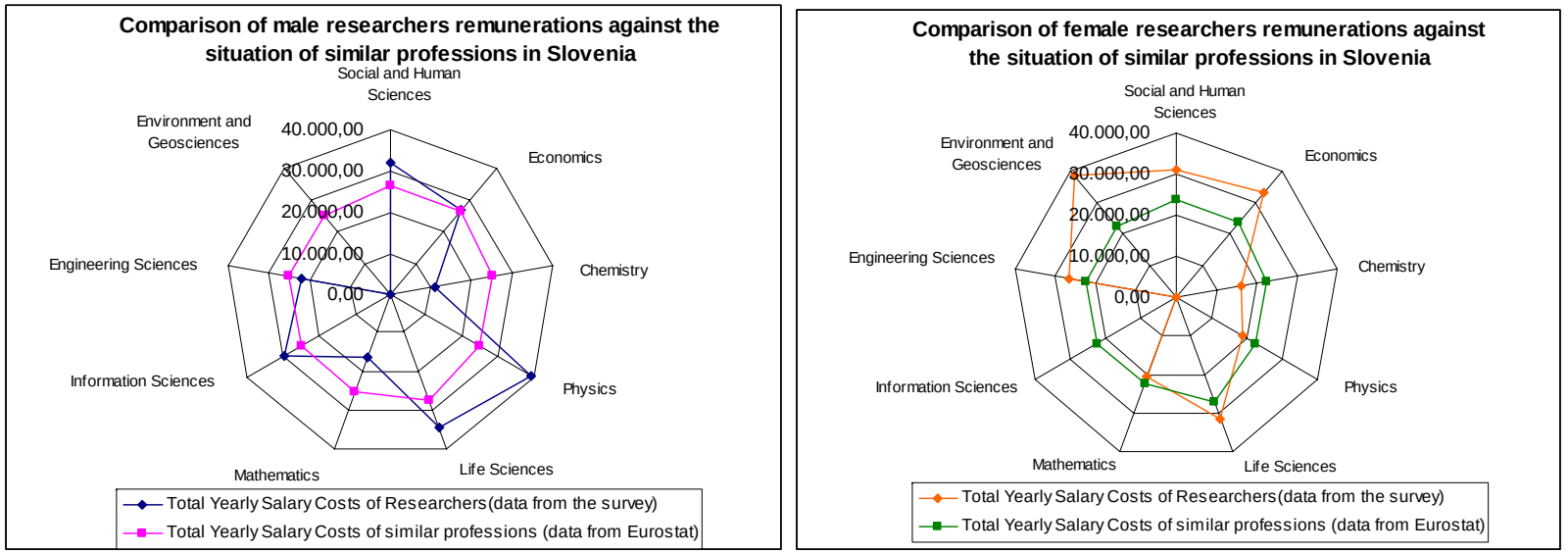


Figure 152 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Slovenia per gender

Spain						
Scientific domain	Total Yearly Salary Costs of Researchers (data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	27.301,36 €	16.806,03 €	2.4.4	2.4	46.657,13 €	30.443,00 €
Economics	42.978,21 €	33.668,95 €	2.4.1	2.4	46.657,13 €	30.443,00 €
Chemistry	39.091,03 €	20.295,65 €	2.1.1	2.1	42.138,20 €	31.056,36 €
Physics	27.197,34 €	16.067,00 €	2.1.1	2.1	42.138,20 €	31.056,36 €
Life Sciences	36.522,72 €	22.138,99 €	2.2.1	2.2	37.110,78 €	28.704,75 €
Mathematics	45.389,20 €	41.107,00 €	2.1.2	2.1	42.138,20 €	31.056,36 €
Information Sciences	26.058,67 €	25.893,25 €	2.1.3	2.1	42.138,20 €	31.056,36 €
Engineering Sciences	34.315,56 €	25.434,72 €	2.1.4	2.1	42.138,20 €	31.056,36 €
Environment and Geosciences	29.210,45 €	14.846,83 €	2.1.4	2.1	42.138,20 €	31.056,36 €

Table 86 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Spain

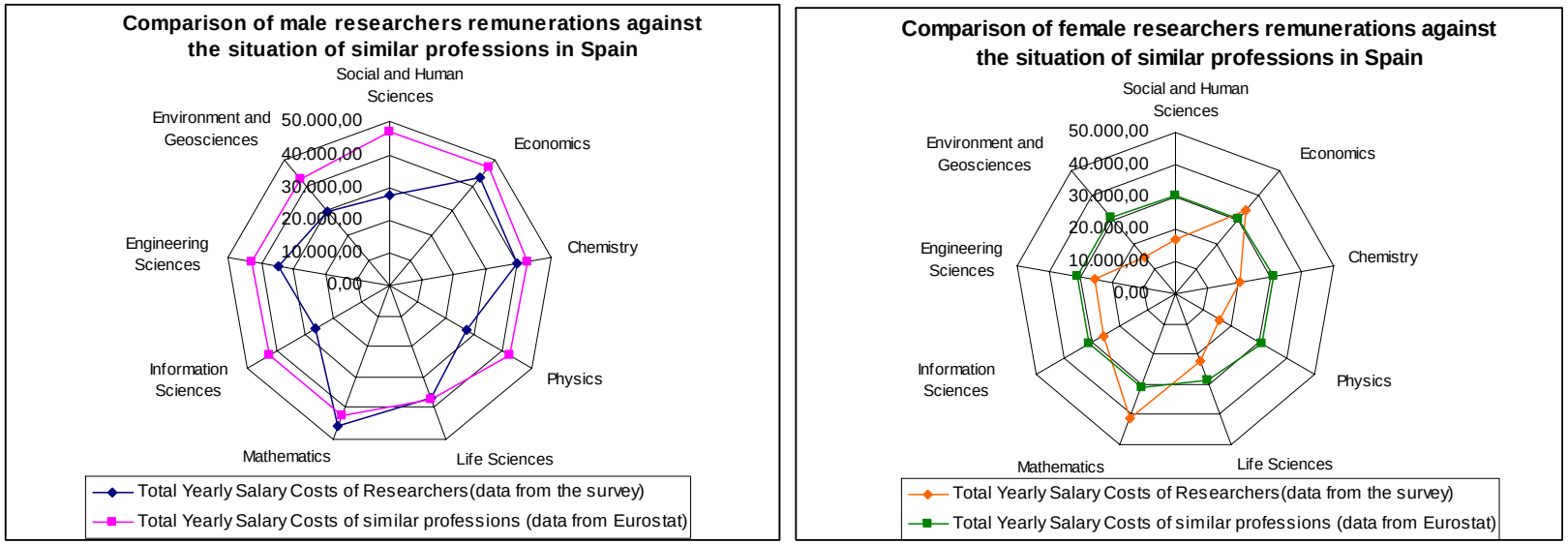


Figure 153 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Spain per gender

Sweden						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	61.472,92 €	41.684,12 €	2.4.4	2.4	47.401,35 €	36.306,64 €
Economics	63.749,44 €	60.491,60 €	2.4.1	2.4	47.401,35 €	36.306,64 €
Chemistry	55.358,28 €	52.933,28 €	2.1.1	2.1	43.359,44 €	36.068,79 €
Physics	47.657,75 €	32.671,51 €	2.1.1	2.1	43.359,44 €	36.068,79 €
Life Sciences	59.345,93 €	61.762,34 €	2.2.1	2.2	51.446,46 €	42.483,59 €
Mathematics	76.576,16 €	--	2.1.2	2.1	43.359,44 €	36.068,79 €
Information Sciences	72.551,91 €	64.314,00 €	2.1.3	2.1	43.359,44 €	36.068,79 €
Engineering Sciences	68.335,61 €	75.033,00 €	2.1.4	2.1	43.359,44 €	36.068,79 €
Environment and Geosciences	61.227,11 €	--	2.1.4	2.1	43.359,44 €	36.068,79 €

Table 87 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in Sweden

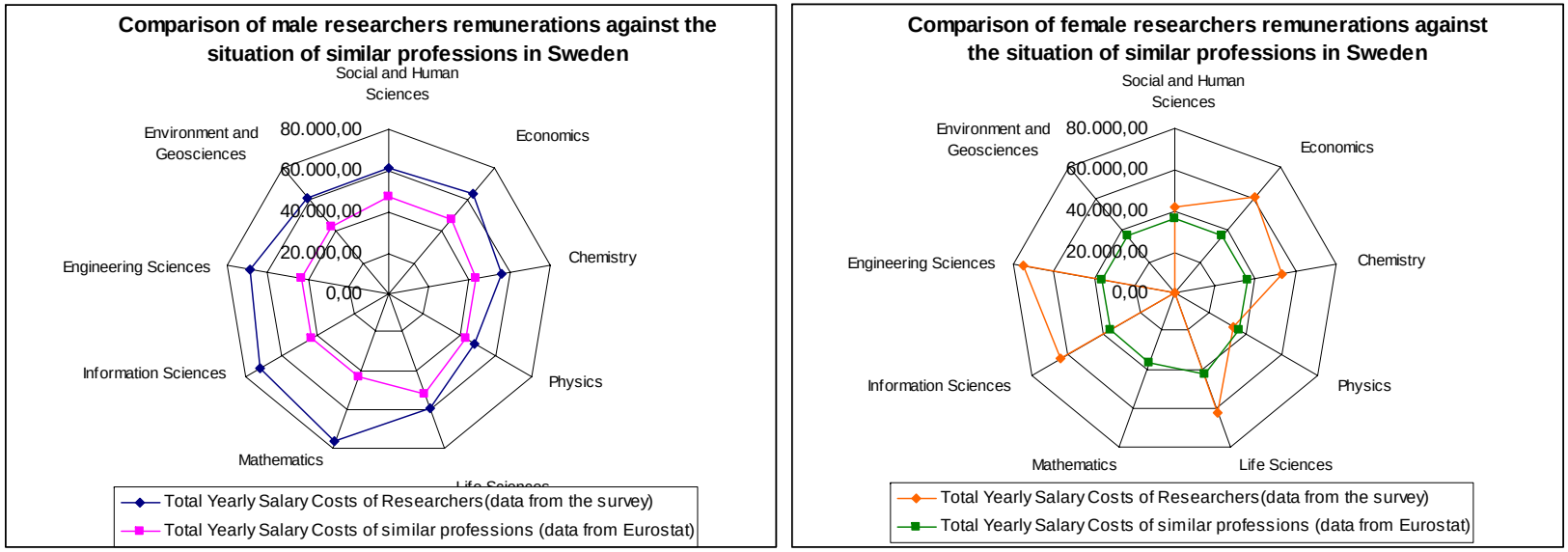


Figure 154 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in Sweden per gender

United Kingdom						
Scientific domain	Total Yearly Salary Costs of Researchers(data from the study)		Equivalent(s) profession(s) defined by ISCO classification	Category with available data in Eurostat	Total Yearly Salary Costs of similar professions (data from Eurostat)	
	Male	Female			Male	Female
Social and Human Sciences	58.495,40 €	40.766,10 €	2.4.4	2.4	68.124,28 €	50.370,38 €
Economics	79.467,56 €	51.811,96 €	2.4.1	2.4	68.124,28 €	50.370,38 €
Chemistry	53.669,37 €	--	2.1.1	2.1	56.650,04 €	45.772,34 €
Physics	53.728,20 €	62.755,27 €	2.1.1	2.1	56.650,04 €	45.772,34 €
Life Sciences	65.355,39 €	44.793,64 €	2.2.1	2.2	52.280,20 €	46.371,77 €
Mathematics	61.242,02 €	35.170,56 €	2.1.2	2.1	56.650,04 €	45.772,34 €
Information Sciences	52.506,71 €	29.699,19 €	2.1.3	2.1	56.650,04 €	45.772,34 €
Engineering Sciences	58.621,80 €	44.338,05 €	2.1.4	2.1	56.650,04 €	45.772,34 €
Environment and Geosciences	56.276,63 €	--	2.1.4	2.1	56.650,04 €	45.772,34 €

Table 88 - Comparison of researchers' remuneration per scientific domain against the situation of similar professions in the United Kingdom

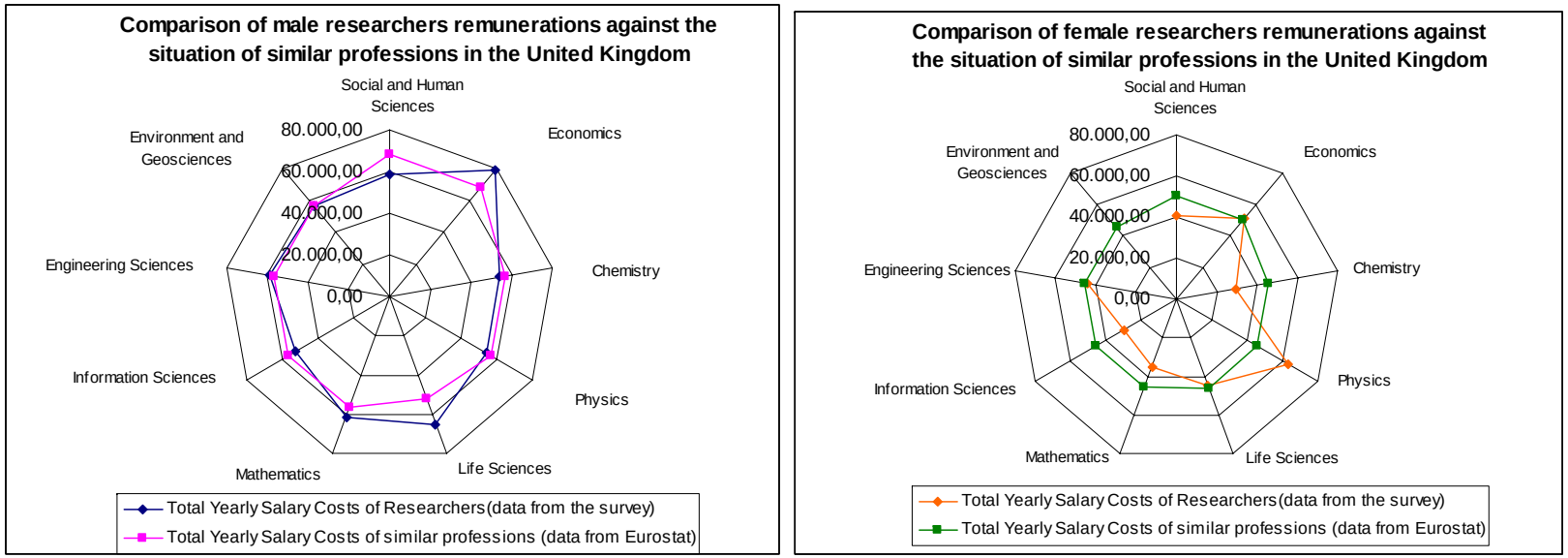


Figure 155 - Comparison of researchers' remunerations per scientific domain against the situation of similar professions in the United Kingdom per gender

5.11 Annex 11: Bibliography and information sources

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