



Careers of doctorate holders (CDH): Employment and Mobility Patterns

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Outline of the presentation

- ✓ Description of the OECD/UNESCO Institute for Statistics/Eurostat CDH project
- ✓ Results of the first large-scale data collection
- ✓ Some comparisons with available French data and some characteristics of the French situation
- ✓ Prospects



Careers of Doctorate Holders (CDH) project

www.oecd.org/sti/cdh

- Why doctorate holders?
 - they are the most qualified in terms of education level and they are specifically trained for research
 - they play a key role in the creation and dissemination of knowledge and innovation
- Objective: collect data on personal, educational, labour market, employment and mobility characteristics of doctorate holders, as well as their perception and satisfaction with work
- A joint OECD/Eurostat/UNESCO project launched by the OECD Secretariat in 2004

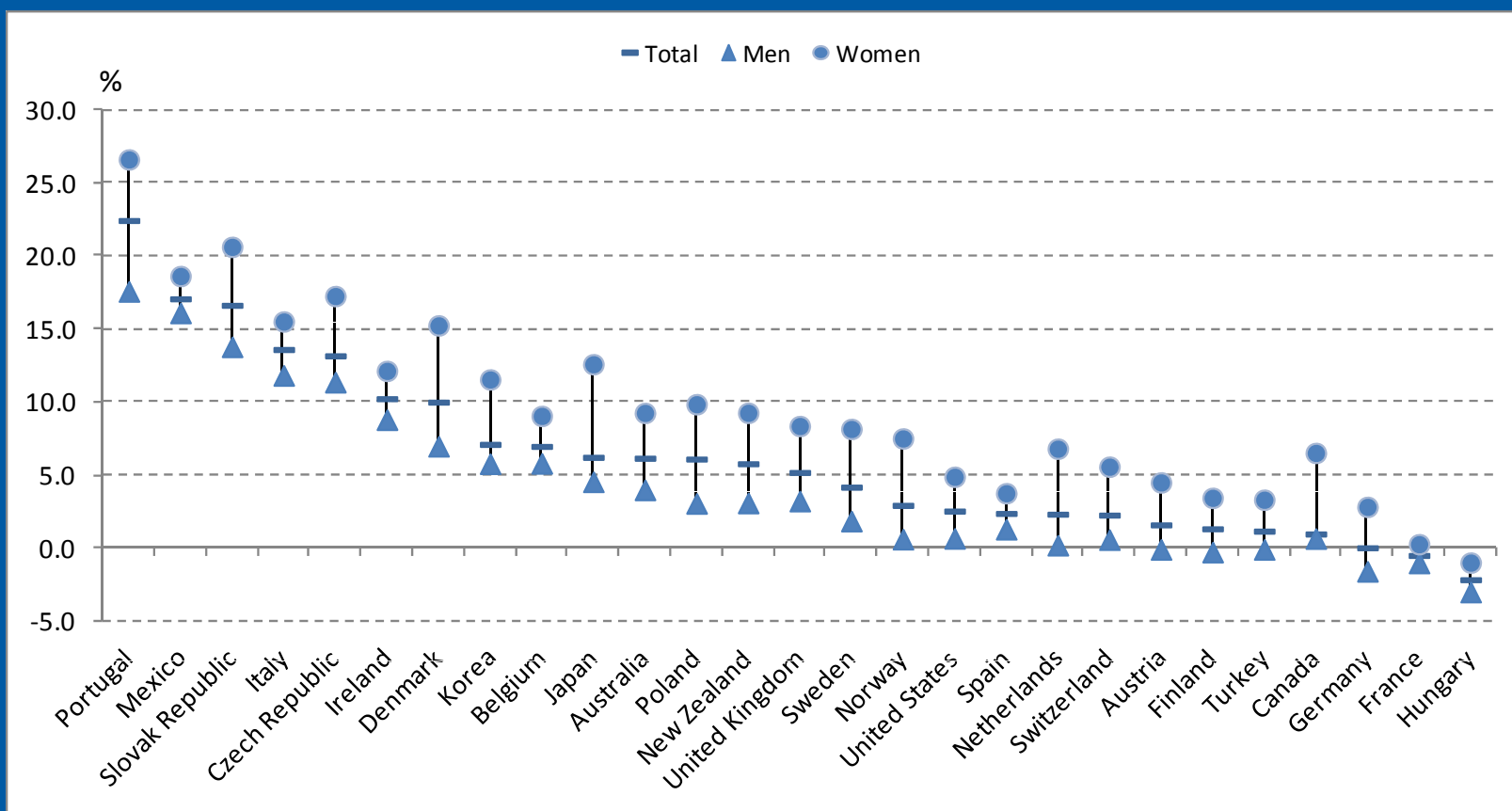


Careers of Doctorate Holders (CDH) project

www.oecd.org/sti/cdh

- An expert group formed of representatives from national statistical bodies (participation on a voluntary basis)
- Technical guidelines: methodological guidelines, model questionnaire and output tables to report data at the international level
 - OECD Working paper DSTI/DOC(2010)1
- First pilot data collection in 2005 (7 countries)
 - OECD Working paper DSTI/DOC(2007)2
- First large scale data collection in 2007 (25 countries) provided a rich set of data
 - OECD Working paper DSTI/DOC(2010)4

Average annual growth rate of doctoral degrees 1998-2006

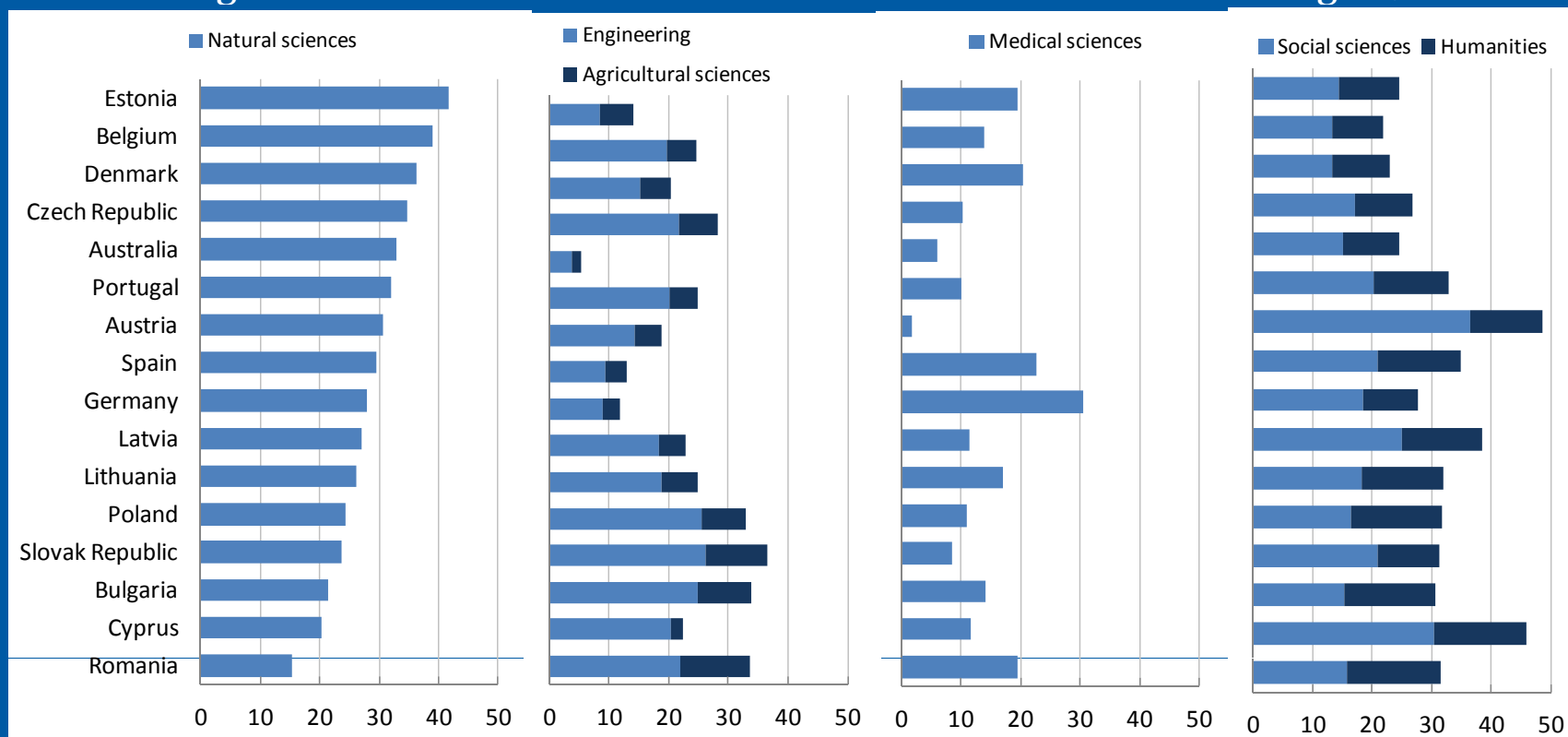


Source: OECD Education database, 2009

Main characteristics of the 1990-2006 doctoral population

- The largest numbers are found in the US and Germany
- 1 to 3% of total tertiary level population in most countries (4.6% in Switzerland)

Percentage distribution of 1990-2006 doctorate holders over fields of degree, 2006

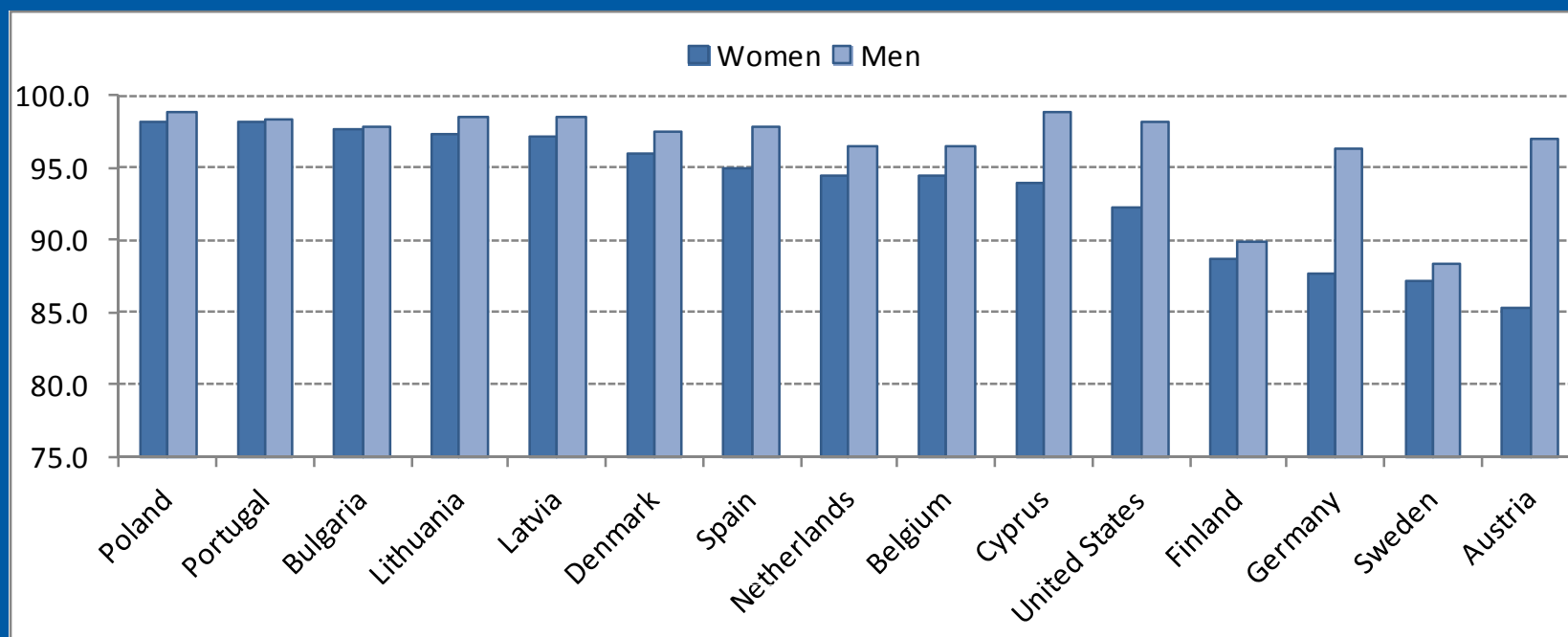


Source: OECD, 2009, OECD/UNESCO Institute for Statistics/Eurostat data collection on careers of doctorate holders.

The labour market of the 1990-2006 doctoral population

- Employment rates of doctorate holders are higher than for other graduates and for the overall population

Employment rates of 1990-2006 doctorate holders, 2006



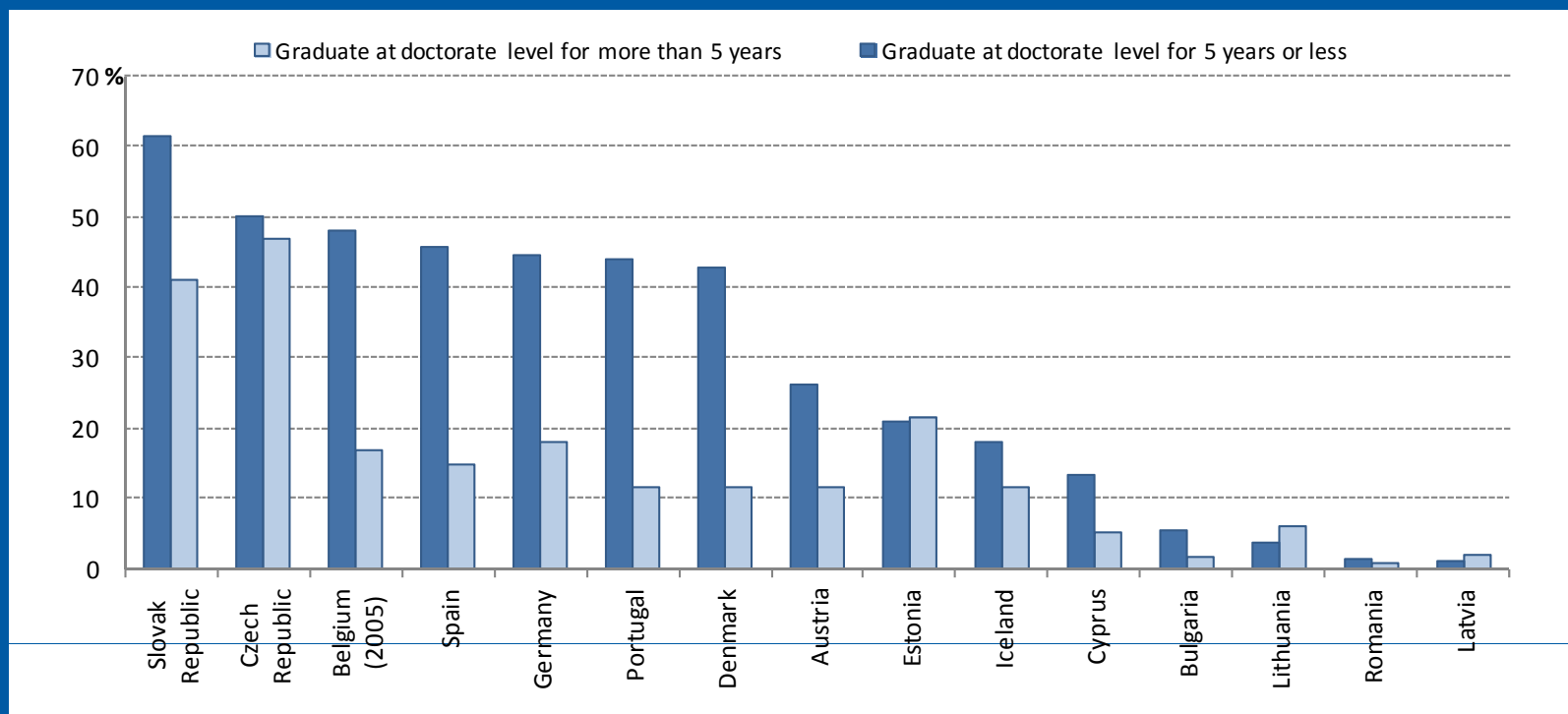
Source: OECD, 2009, OECD/UNESCO Institute for Statistics/Eurostat data collection on careers of doctorate holders.

- Unemployment rates between 2% and 4%, but relatively higher in certain fields, especially humanities, but also science and engineering in certain cases

The labour market of the 1990-2006 doctoral population

- Transition to full employment can take 4 or 5 years
- A non-negligible share of doctorate holders seem to be employed in non-related or lower qualified occupations

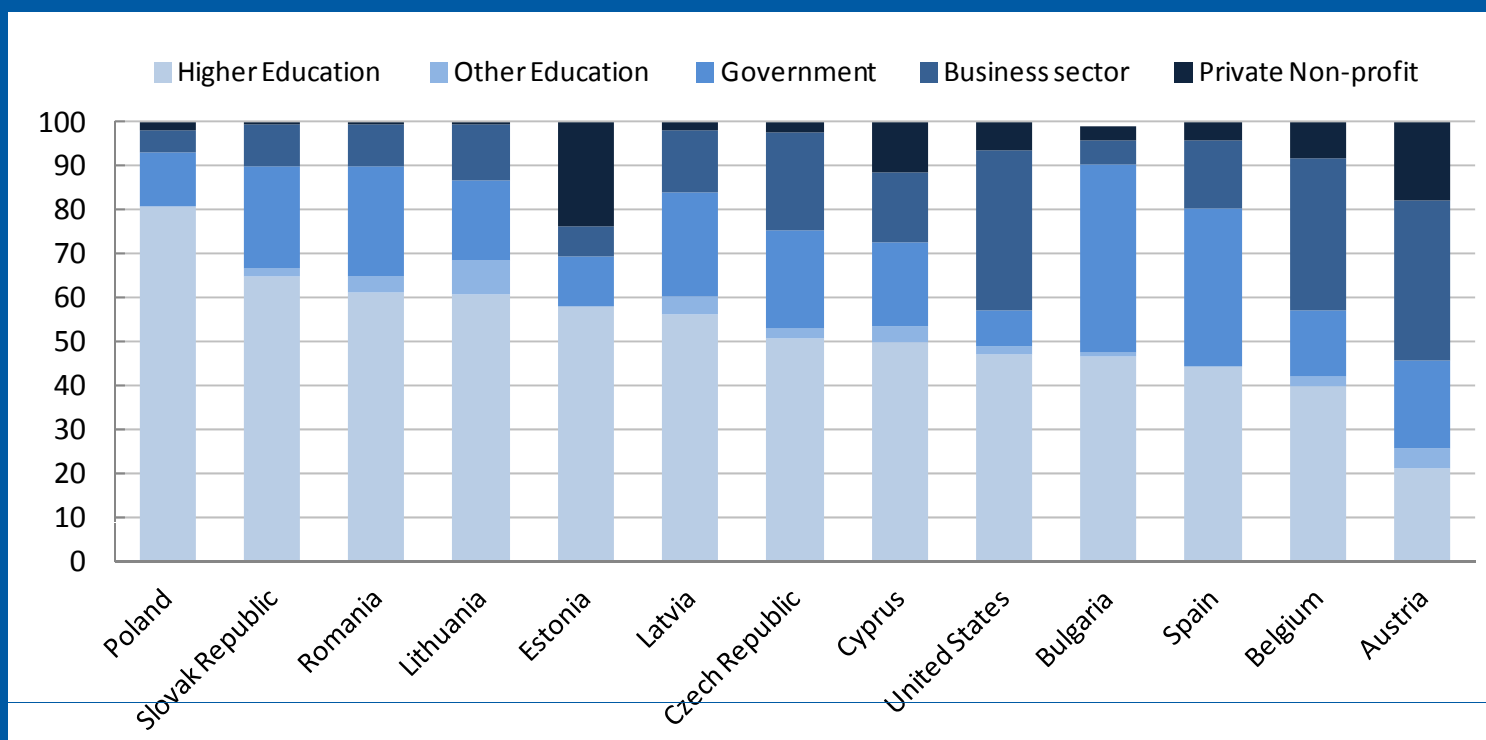
Percentage of 1990-2006 doctorate holders on temporary contracts, 2006



Employment patterns of 1990-2006 doctorate holders

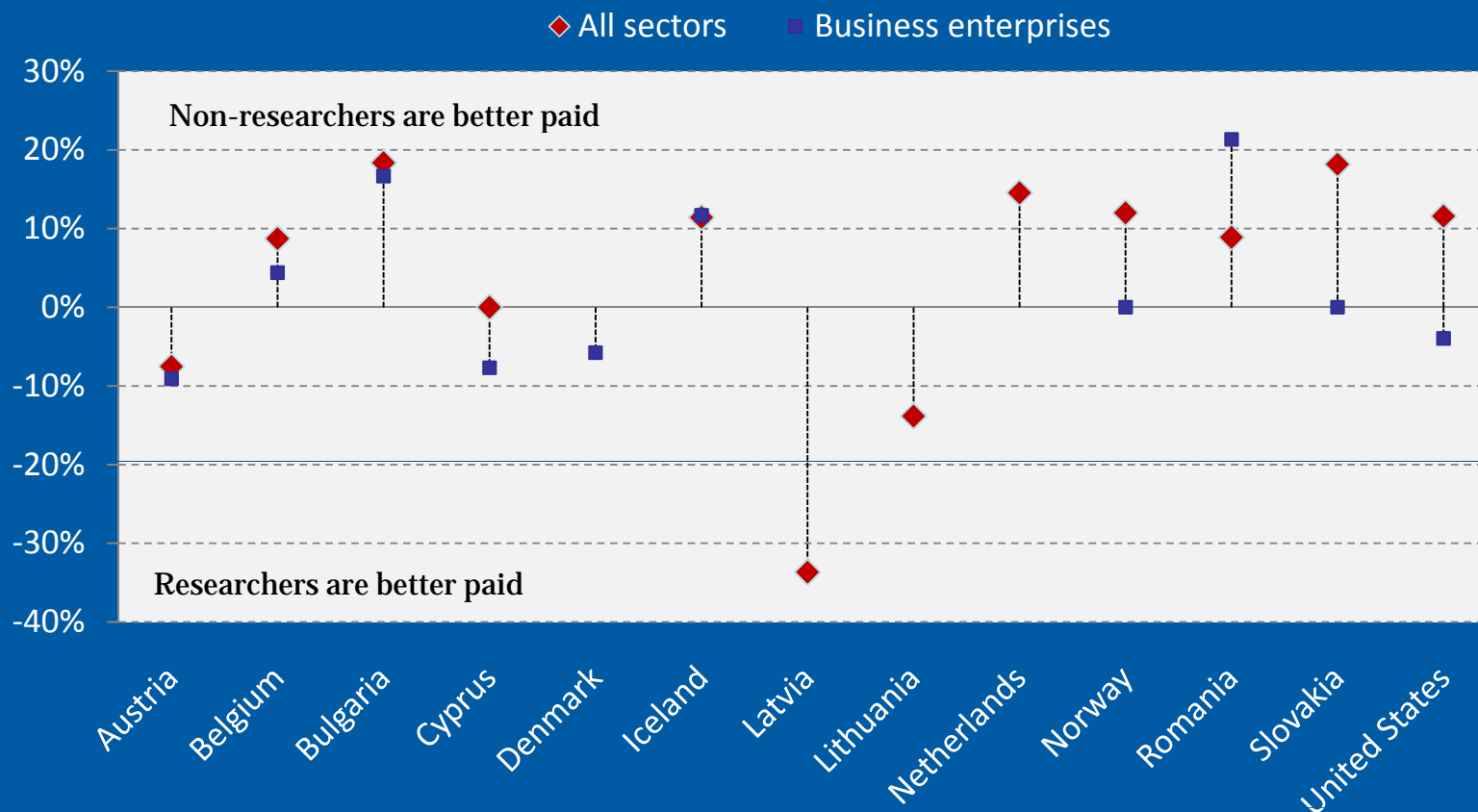
Depending on the countries, 50% to 80% of doctorate holders work as researchers

Percentage distribution of 1990-2006 doctorate holders by sector of employment, 2006



Source: OECD, 2009, OECD/UNESCO Institute for Statistics/Eurostat data collection on careers of doctorate holders.

Percentage difference in median gross annual earnings between DH working as researchers v.s. those not working as researchers (2006)



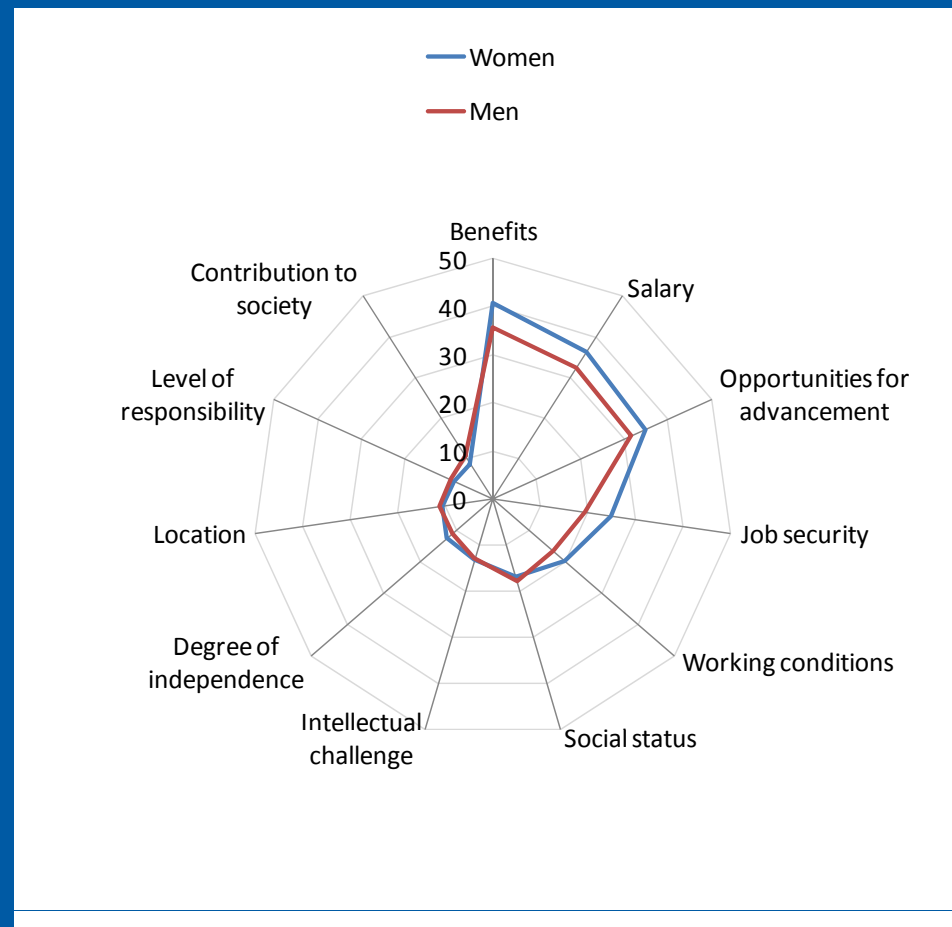
Source: OECD, 2009, OECD/UNESCO Institute for Statistics/Eurostat data collection on careers of doctorate holders.

In most countries for which information is available, doctoral graduates are better paid when they do not work as researchers, especially outside the enterprise sector

Percentage dissatisfied by criteria (country average)

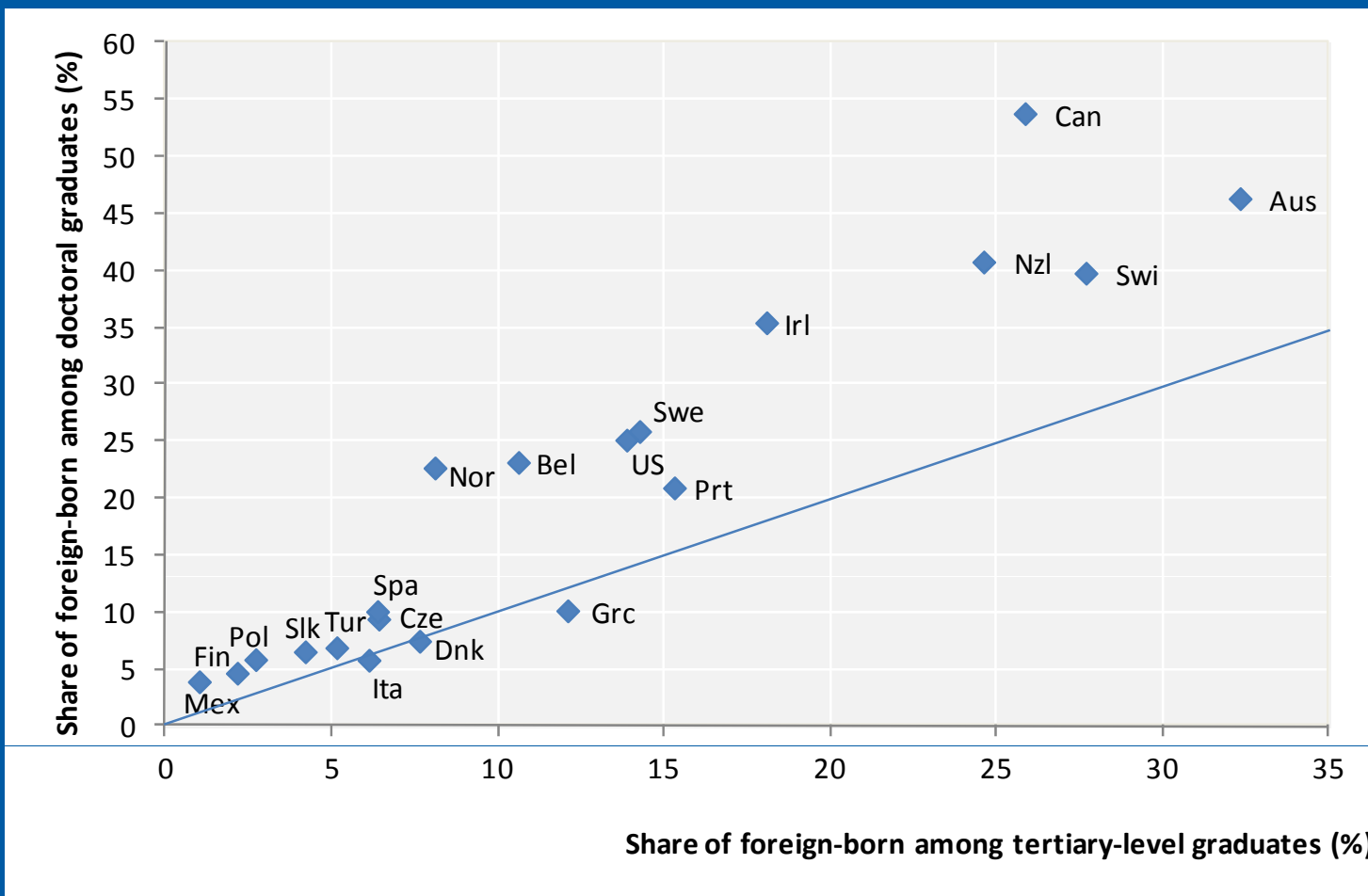
Overall, doctoral graduates are satisfied with their situation but less so in terms of salaries, benefits, job security or opportunities for advancement.

Dissatisfaction appears more prominent in the case of women.



Source: OECD, 2009, OECD/UNESCO Institute for Statistics/Eurostat data collection on careers of doctorate holders.

The doctoral population is more internationalized than that of other tertiary-level graduates

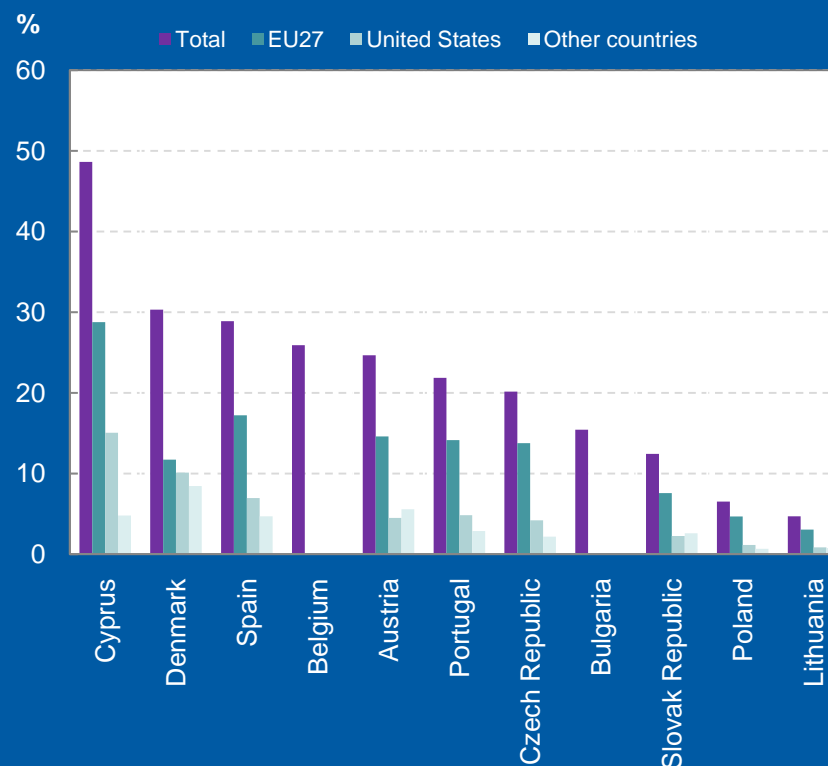


Source: Database on immigrants in OECD countries, 2009.

International mobility of 1990-2006 doctorate holders

- At least 15% to 30% of European citizens with a doctoral degree have lived or stayed abroad in the past ten years, generally in another European country
- There are also important flows of Asian (especially Chinese and Indian) doctorate holders towards North America
- Returns flows are also important and increasing
- Family and personal reasons are important in the decision to return to the home country

Percentage of national citizens having lived/stayed abroad in the past ten years, 2006



Source: OECD, 2009, OECD/UNESCO Institute for Statistics/Eurostat data collection on careers of doctorate holders.

The French situation

- France does not participate in the CDH project but some data exist:
 - “Generation xxxx” surveys from the Céreq have a sample of doctoral graduates
 - Some data can be drawn from the employment survey
- We (Mohamed Harfi and Laudeline Auriol) used these in “La note de veille no 189” du Centre d’analyse stratégique to make comparisons with the CDH results:
http://www.strategie.gouv.fr/IMG/pdf/Notedeveille189_Emploi_des_docteurs.pdf

The French “exception”

- Graduation rates at doctoral level in France are below the EU and OECD averages and the production of doctoral degrees is stagnating
- Contrary to the other countries, a doctoral qualification does not provide an employment premium in France compared to Master degree level

Tableau 1 : Taux de chômage en France des titulaires de doctorat, trois ans après l'obtention du diplôme

	1997	1999	2001	2004	2007
Ensemble des docteurs	8	7	7	11	10
Dont : - Conventions CIFRE	3	6		6	6
- Allocataires de recherche		9		9	6
Diplômés d'école d'ingénieurs	5	2	2	6	4
Titulaire d'un DESS (1)	10	7	5	11	7

Source : Enquêtes du Céreq, situation trois ans après l'obtention du diplôme des titulaires de doctorat en 1994, 1996, 1998, 2001 et 2004. (1) Appelé aujourd'hui Master professionnel.

The French “exception”

- Doctoral degrees in France are more than in the other countries in competition with other higher qualifications due to the specificities of the French higher education system (i.e. the “Grandes Écoles” and other business and engineering schools)
- The analysis makes a number of proposals on how to improve this situation (improve information on recruitment needs, better integrate doctoral programs with PRES, associate higher schools with doctoral programs, increase the share of doctorates financed by enterprises, improve official recognition of doctoral degrees notably in official salary scales)

Next steps and prospects

- A new data collection is underway on the situation of doctorate holders on 1st Dec. 2009
 - First results on the impact on the economic crisis
 - New participating countries (Brazil, Hungary, Israel, Slovenia, Turkey, ...)
 - Improved methodology
- Data expected by end 2010, processed and analysed in 2011



Thank you!

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