



Know/INNO



Making the most of knowledge

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KNOWINNO work package 3 (CDH) – Implementation roadmap

Policy and analytical questions

- Doctorate holders hold a degree at the highest end of the educational spectrum. What is the return on investment of their long academic training? What type of jobs do doctorate holders get on the labour market? How do these differ from other tertiary level graduates? What is their particular contribution to innovation and growth?
- Doctorate holders are also specifically trained for research. How is their advanced research training fit to the demand for researchers? What share of doctorate holders go into a research career? How long does it take to get a stable research position? What are the employment sectors most attractive to researchers? Are they satisfied with their employment situation?
- Mobility is often seen as a key vehicle for knowledge transfer. How mobile are doctorate holders between different employment sectors (e.g. higher education and industry) or different positions? What are the characteristics of those who are mobile in terms of age or field of doctorate? At what stage of the career does mobility occur?
- The research landscape is becoming more and more internationalized and there is a global competition for talent. How internationally mobile are doctorate holders? What are the main destinations for mobility? What are the main motives for outward mobility and for returning home? What is the impact of international mobility on career prospects and on the advancement of knowledge?

Objectives

1. Continue to develop and maintain a quality database that will secure a regular monitoring of the labour market outcome, career path and mobility of doctorate holders;
2. Expand the project to cover an additional and growing number of countries worldwide;
3. Exploit the individual-level data to produce a new set of policy relevant comparable indicators and analysis;
4. Continue to improve the CDH survey methodology building on the experience of the 2010 data collection.

Deliverables

- **Web dissemination** of indicators (**month 12**) and working paper with analysis (**month 18**)
- **3 Expert meetings** on micro-data exploitation and empirical analysis involving some of the large non covered economies (**month 6, month 12, month 18**) ;
- **1 Working paper** with analysis of micro-data and empirical analysis involving some of the large non covered economies (**month 23**)
- **1 Working paper** with revised technical guidelines (**month 24**)
- **1 conference (month 24)**. The conference will be devoted to the diffusion of the 2010 data collection results and bring together policy makers, analysts and statisticians interested in the monitoring of employment, career outcomes and mobility of scientists and engineers holding an advanced research degree.

Introduction

This document describes how the KNOWINNO work package 3 on Careers of Doctorate Holders (CDH) will be implemented over the two year period (January 2011 until December 2012) of the grant agreement. It is organised in the following way. The four main objectives and the list of deliverables (a set of indicators, 3 working papers, 3 expert meetings and a final conference) as defined in the original and agreed proposal are reminded above. In the remainder of the document, we describe the actions that will be implemented to meet each of the objectives and we link them to the agreed deliverables. We then give a more detailed timeline of the concrete steps that will be taken to implement the actions. The objectives and deliverables are mapped in a visual way with the timeline in the annexed figure.

Objective 1: Develop the database, indicators and analysis

A total of 25 countries is expected to participate in the OECD/UIS/Eurostat data collection (the complete dataset should be available by end-June)¹. A new staff member will start updating the OECD database and participate in the analysis from mid-March 2011. A series of basic indicators on the demographics, labour market, employment, mobility and satisfaction of doctorate holders will be released on the OECD CDH Web site by December 2011². A working paper will also be prepared and released by June 2012. It will go into more in depth analysis of these indicators, include additional ones as well as comparisons with other types of populations such as other tertiary level graduates, employees or mobile persons where possible. It will describe and place the employment and mobility patterns of doctorate holders vs. the more general context of research and innovation as well as of employment and migration outlook. This task should be updated as far as possible to include Germany provided that a dedicated CDH survey is carried out in this country as foreseen in 2011.

Deliverables: Web dissemination of indicators (month 12) and working paper with analysis (month 18); conference (month 24).

¹ Belgium, Bulgaria, Croatia, Denmark Finland, Germany, Hungary, Iceland, Israel, Latvia, Lithuania, Malta, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Slovenia, Spain, Sweden, Switzerland, Chinese Taipei, Turkey, United States

² <http://www.oecd.org/sti/cdh>

Objective 2: Expand geographical coverage

This data collection already covers new countries as compared to the previous one (Hungary, Israel, the Russian Federation, Slovenia, Chinese Taipei, Turkey). Germany already provides data generated from the Microcensus (the equivalent of the labour force survey), but intends to conduct a dedicated survey in 2011. The results will be included in the analysis when they become available as mentioned above. Brazil is exploring the possibility to generate data from their registers.

For France and the United-Kingdom (UK), the participation of which is missing, a special effort will be devoted to 1) raise the profile of the CDH work in these two countries with a view to engage them in the project and 2) include some evidence on the situation of doctorate holders in these countries using alternative data sources that exist at national level. To do this, the possibility to organise expert meeting 1 below with the French Ministry for higher education and research in May/June 2011 and expert meeting 2 with the Department of business, innovation and skills in the UK in December 2011 will be explored. The possibility to organise expert meeting 3 in Italy in May/June 2012 is also envisaged. The possible use of the first destination and panel surveys existing in France and the UK, as well as in Japan, will be discussed at these meetings (see objective 3).

Deliverables: results of these efforts will be reflected to the extent possible in all deliverables of the project.

Objective 3: Exploit micro-level data

The core CDH data collected through the output tables represent only a subset of the potential use that can be made from the CDH surveys. This part of the work will be conducted with selected and interested countries and will also involve the participation of Eurostat and UIS. This module aims to 1) complement the core data set with new tabulations on specific topics of interest 2) work with researchers having access to microdata at national level to conduct econometric studies³. In addition, the use of the variable on doctoral graduation year would in principle make it possible to conduct comparisons with countries that have only first destination surveys like France, the UK or Japan. This will be investigated with a view to include these countries in a comparative analysis.

The new tabulations and research proposals will be developed at the first expert meeting in May/June 2011. The OECD Secretariat will make preliminary suggestions on topics of interest, covering notably early destinations, mobility and research careers. The second expert meeting in December 2011 will discuss the first results and the third one in June 2012 the final results, as well as their inclusion in a subsequent working paper to be presented at the final conference in December 2012.

Deliverables: 3 Expert meetings on micro-data exploitation and empirical analysis involving some of the large non covered economies (month 6, month 12, month 18) ; working paper with analysis of micro-data and empirical analysis involving some of the large non covered economies (month 23) ; conference (month 24).

³ Experts and/or researchers from the following countries have already indicated interest: Austria, Belgium, France, Portugal, Russian Federation, Spain, United States

Objective 4: Improve methodology

The technical components of the project (methodological guidelines, model questionnaire and output tables) were developed with the group of national experts participating in the project. The first two versions were tested during the 2007 and 2010 data collections. Numerous comments and interactions with the participating countries allow adjustments to be made to the definitions used, drafting of the questions in the model questionnaire, presentation of the output tables, data to be reported and other methodological aspects to be taken into account. A new revision of the technical components is necessary before embarking into the subsequent data collection. The OECD will release a new version of the technical components in the form of a working paper as was done in previous instances. In particular, an evaluation of the new definitions and ways to measure two important and uncovered phenomena, i.e. postdoctoral positions and types of mobility (job-to-job/inter-sectoral mobility, international mobility distinguishing between first-time and multiple mobilities) will be made as well as necessary adjustments for improvement.

This work will be conducted in parallel to the other components of the project and build upon the methodological issues identified in the context of the overall analysis of the data. The work will be launched at the Eurostat task force scheduled in October 2011 and will mainly be conducted in the form of electronic discussions with the CDH expert group and partner organisations.

Deliverable: Working paper with revised technical guidelines (month 24) ; conference (month 24).

Timeline

January-June 2011

Start processing the data into the database
Test the Spanish microdata and coordinate possible inputs from Japanese data sources
Start analysing some of the macro-level data
Contact possible participants/researchers for the micro-data project
Develop 2 or 3 proposals for micro-data analyses

Workshop 1 (May/June 2011) in Paris (?)

- *preliminary results of 2010 data collection*
- *French/UK/Japanese possible contributions and microdata project proposals*

July-December 2011

Finalise database update, prepare indicators dissemination
Coordinate with Eurostat the CDH task force planned in October
Start drafting working paper on macrolevel results
National experts to work on microdata projects

Indicators dissemination (December 2011)

Workshop 2 (December 2011) in London (?)

- *presentation of first round or results from microdata projects*

January-June 2012

Coordinate revision of technical guidelines
Start revision of the output tables
Finalise working paper on macrolevel results
National experts to continue working on microdata projects

Dissemination of working paper on macrolevel results (June 2012)

Workshop 3 (June 2012) in Italy (?)

- *discussion of microdata project results and of their presentation as a working paper*

July-December 2012

Finalise revision of the output tables
Finalise revision of technical guidelines with all partners and prepare working paper
Draft working paper on microdata project results
Organise final conference

Dissemination of working paper on microdata project results (November 2012)

Dissemination of working paper on technical guidelines (December 2012)

Final conference to discuss overall results (December 2012) in Brussels (?)

ANNEX

Objectives	Calendar	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12
Database, indicators, macro-level analysis	<i>Process data into database ; start analysing macro-level data</i>											Indicators on Web	<i>Draft working paper</i>						Working paper					Final conference	
Revision of technical components												Eurostat TF	<i>Coordinate revision of technical guidelines with expert group + Eurostat and UIS</i>											Working paper	
Micro-data projects	<i>Test Spanish micro data ; contact experts/researchers ; develop project proposals</i>					Expert meeting 1	<i>National experts/researchers to work on tabulations and first set of results</i>					Expert meeting 2	<i>National experts/researchers to work on final tabulations and results</i>					Expert meeting 3	<i>Draft working paper</i>			Working paper	Final conference		