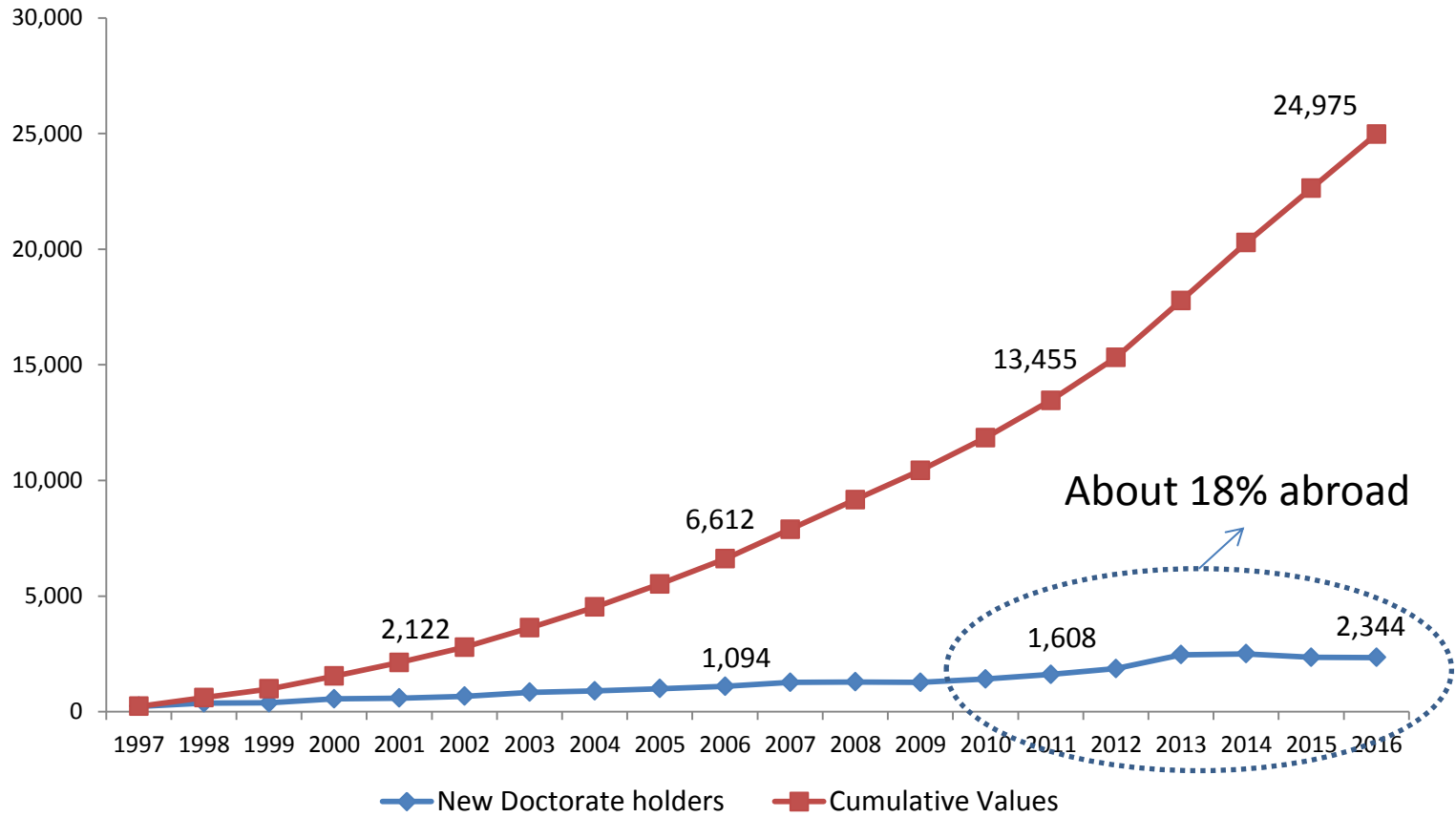


International and sectoral mobility of researchers in Portugal

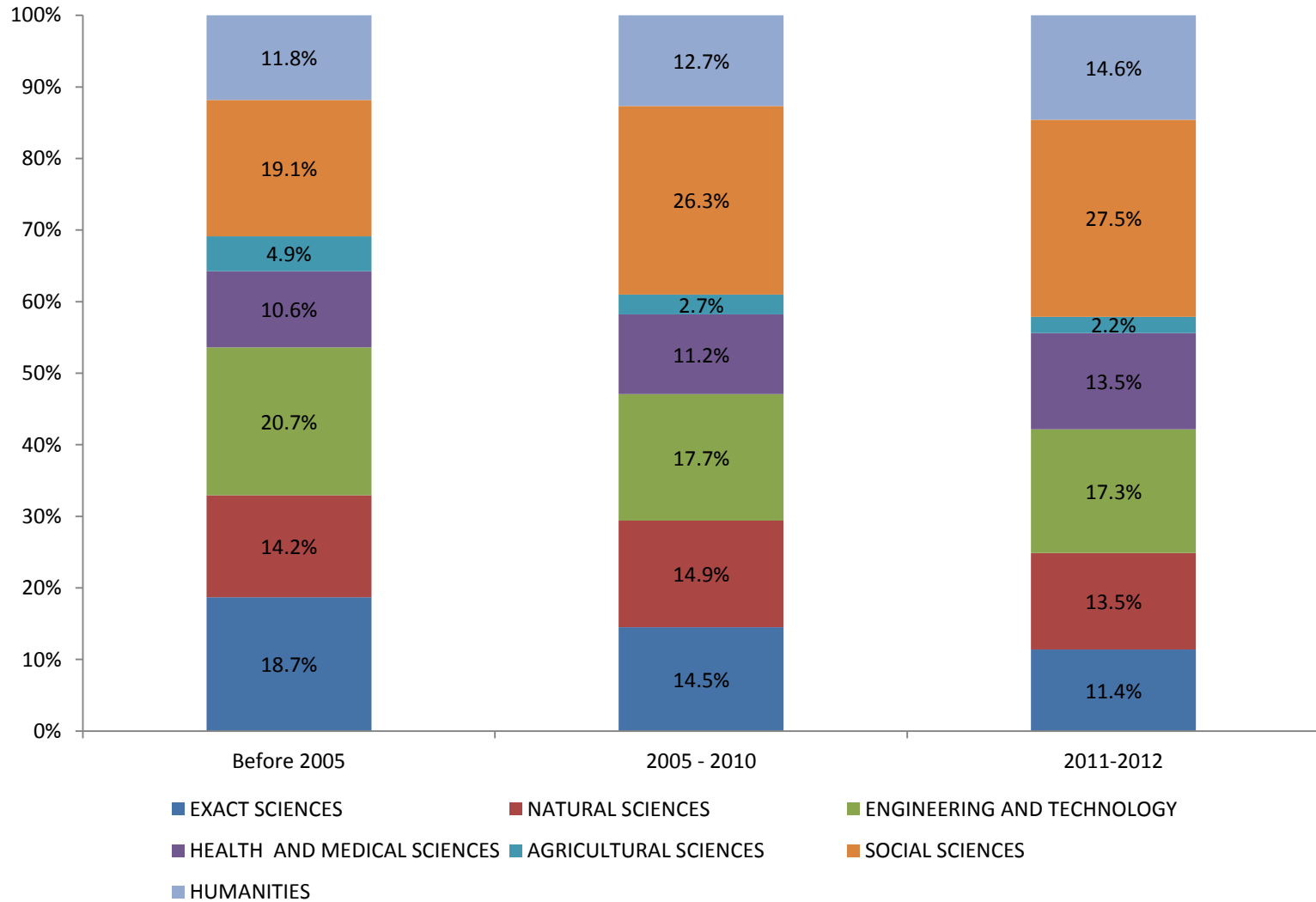
Proxy data and monitoring challenges

Doctorate holders in the period 1997 – 2016 (flow)

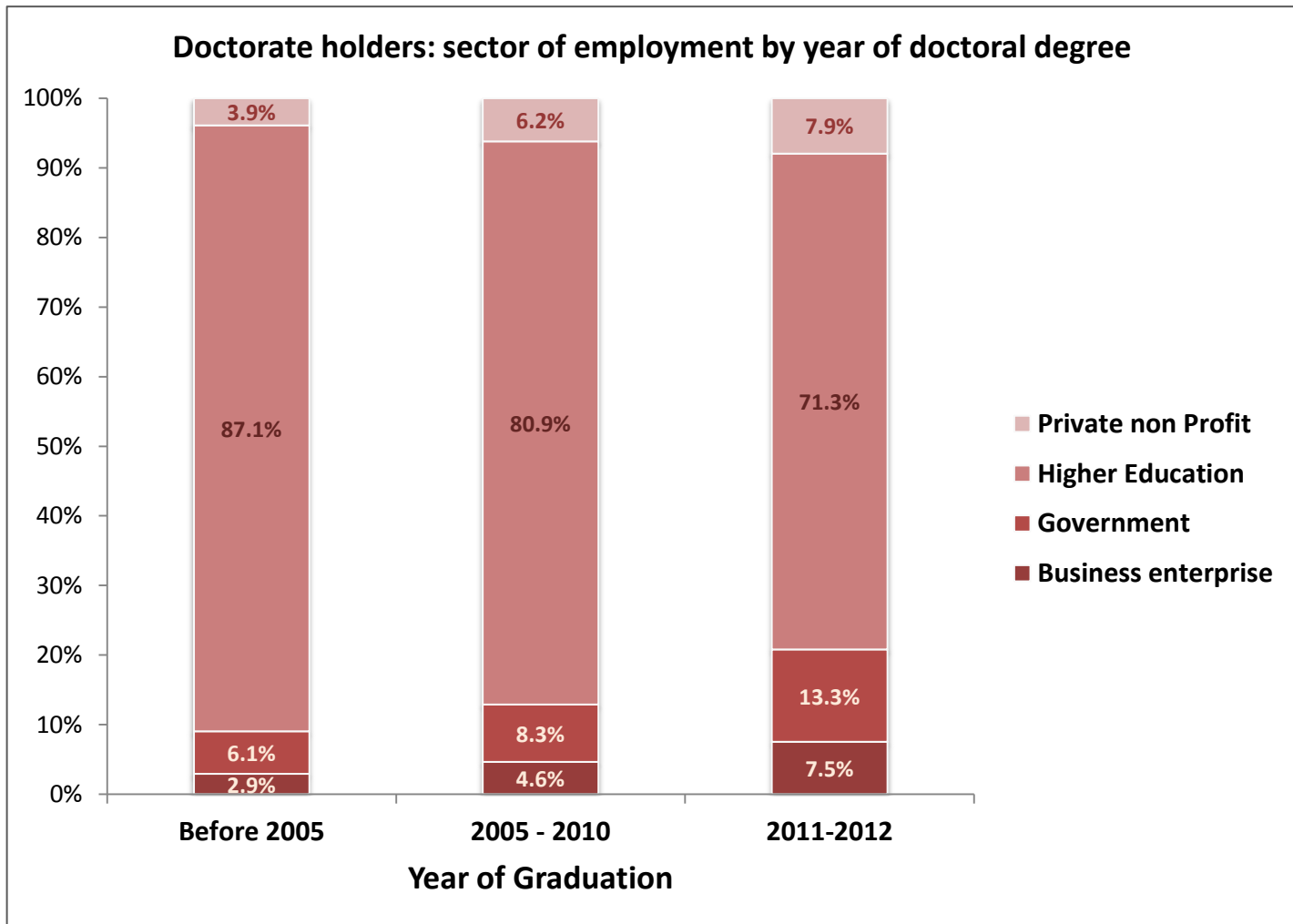


	Doctorate holders in % labour force			
	2012	2013	2014	2015
CHE	35,3	34,3	34,5	34,8
DEU	11,0	11,2	11,8	12,5
FIN	11,1	10,8	11,6	12,3
SVN	8,8	9,1	10,1	11,1
NOR	8,6	8,8	9,3	9,6
DNK	7,3	7,4	8,1	8,8
BEL	6,8	7,2	7,7	8,2
NLD	6,5	6,6	7,1	7,6
LTV	4,7	6,6	7,1	7,6
HRV	8,4	6,8	7,1	7,6
BGR	6,1	6,8	7,1	7,6
PRT	4,5	5,2	5,7	6,2
ESP	6,4	5,2	5,7	6,2

Doctorate holders: fields of science by year of doctoral degree

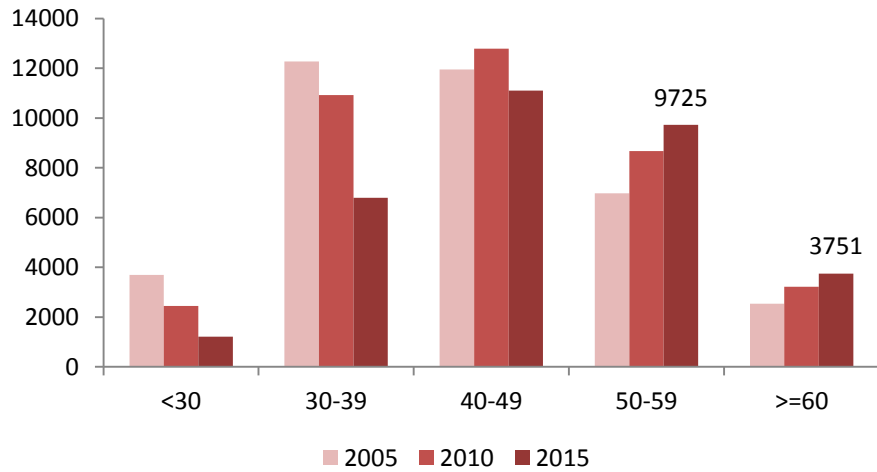


Source: CDH survey 2012

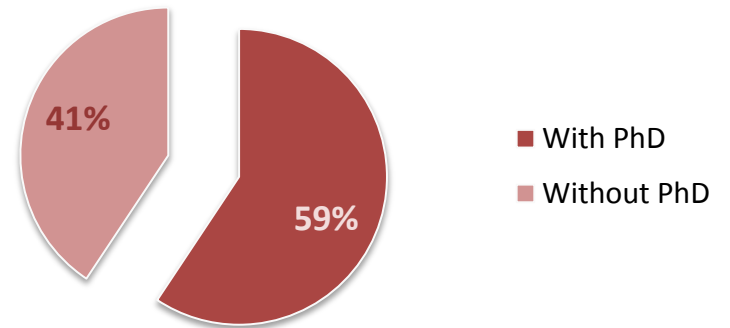


Source: CDH survey 2012

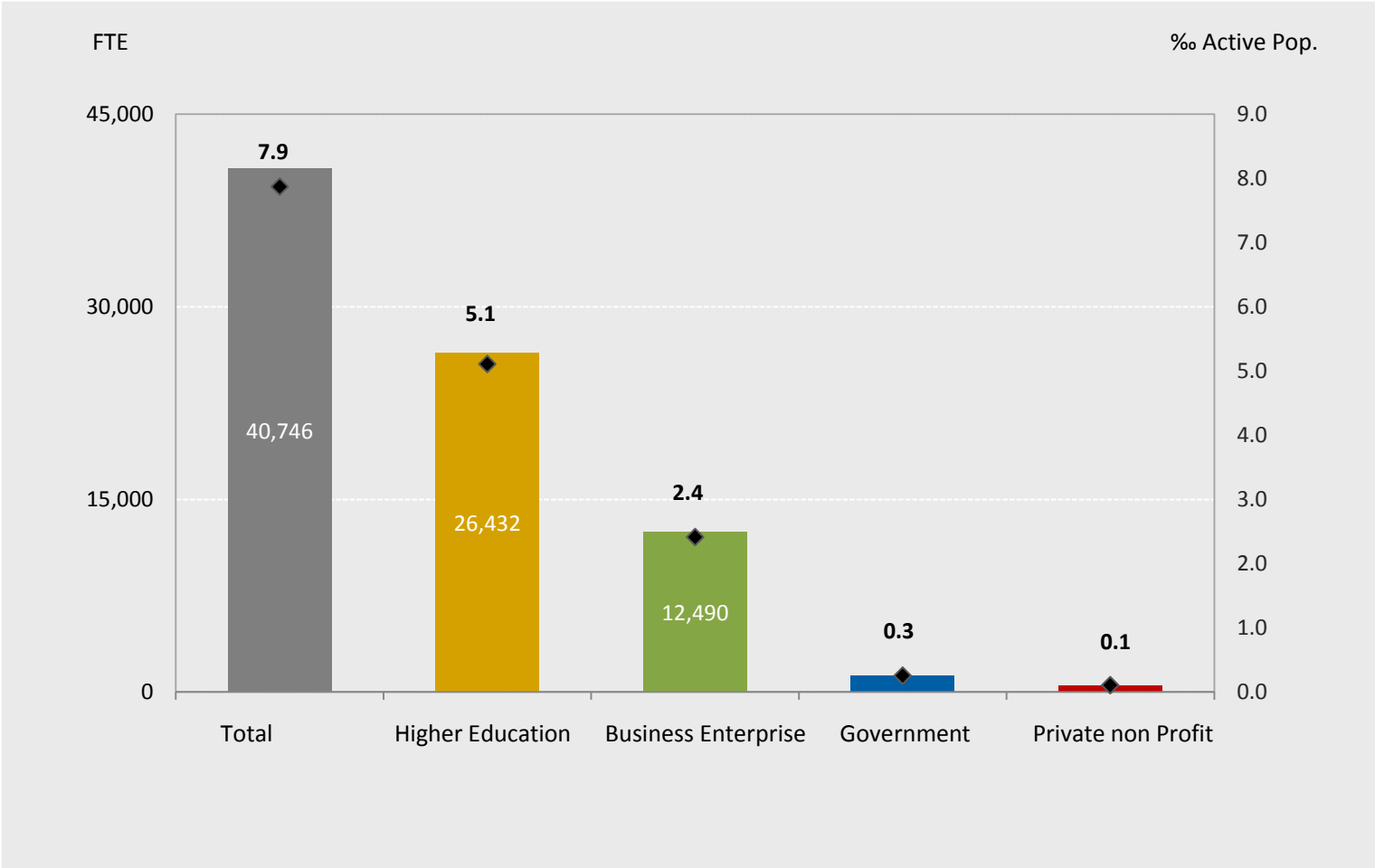
Ageing of teaching staff in higher education



Teaching staff with and without PhD in Higher Education Institutions

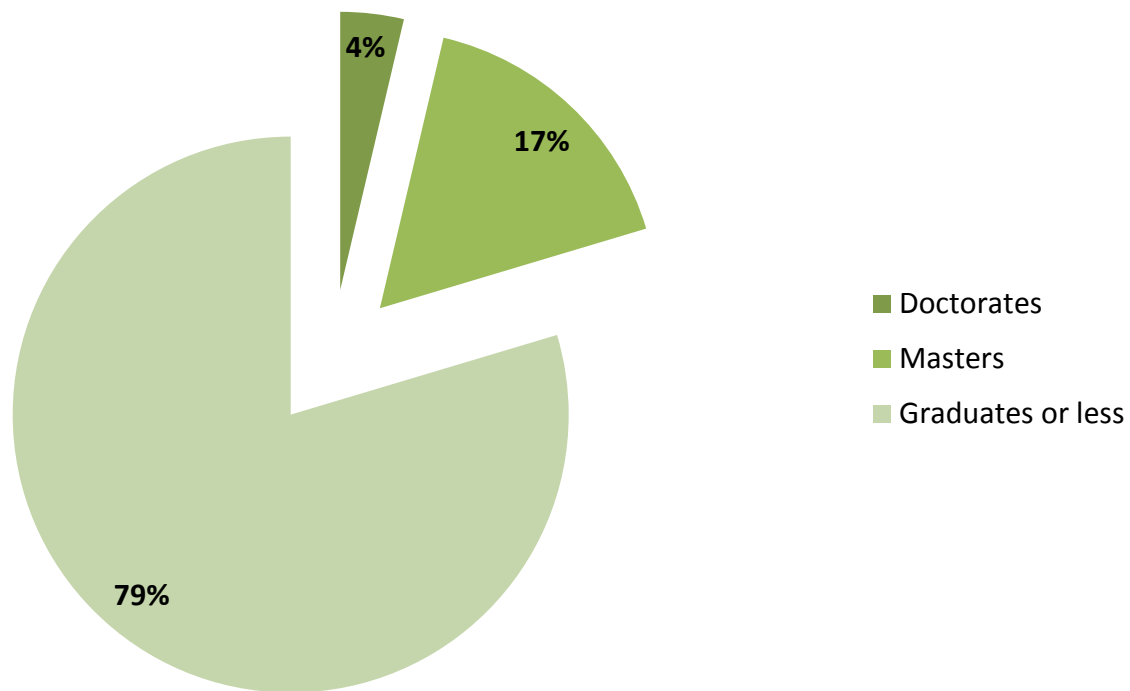


Researchers (FTE and active population permilage), by sector of performance – 2016^p



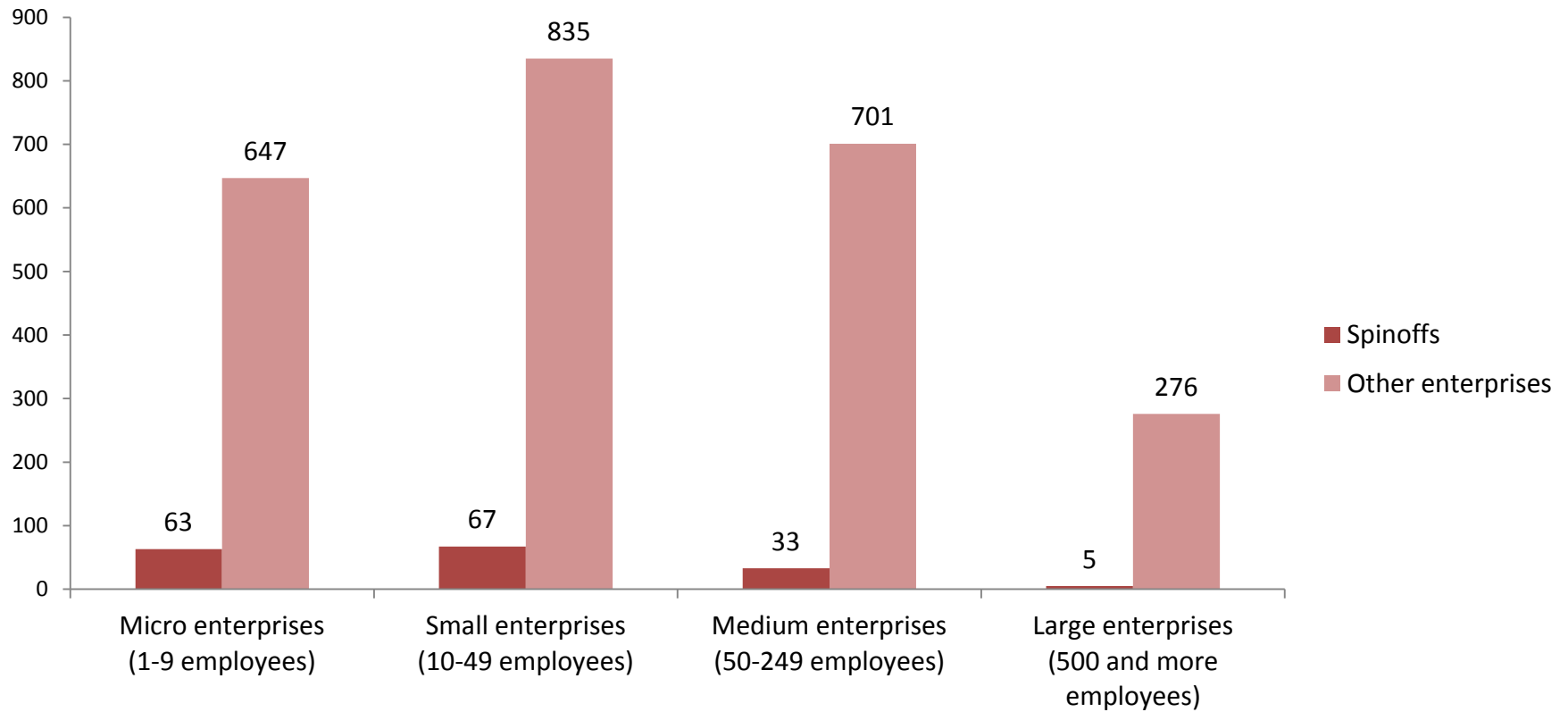
Source: R&D survey 2016 (provisional data)

Educational level of research staff in business enterprises

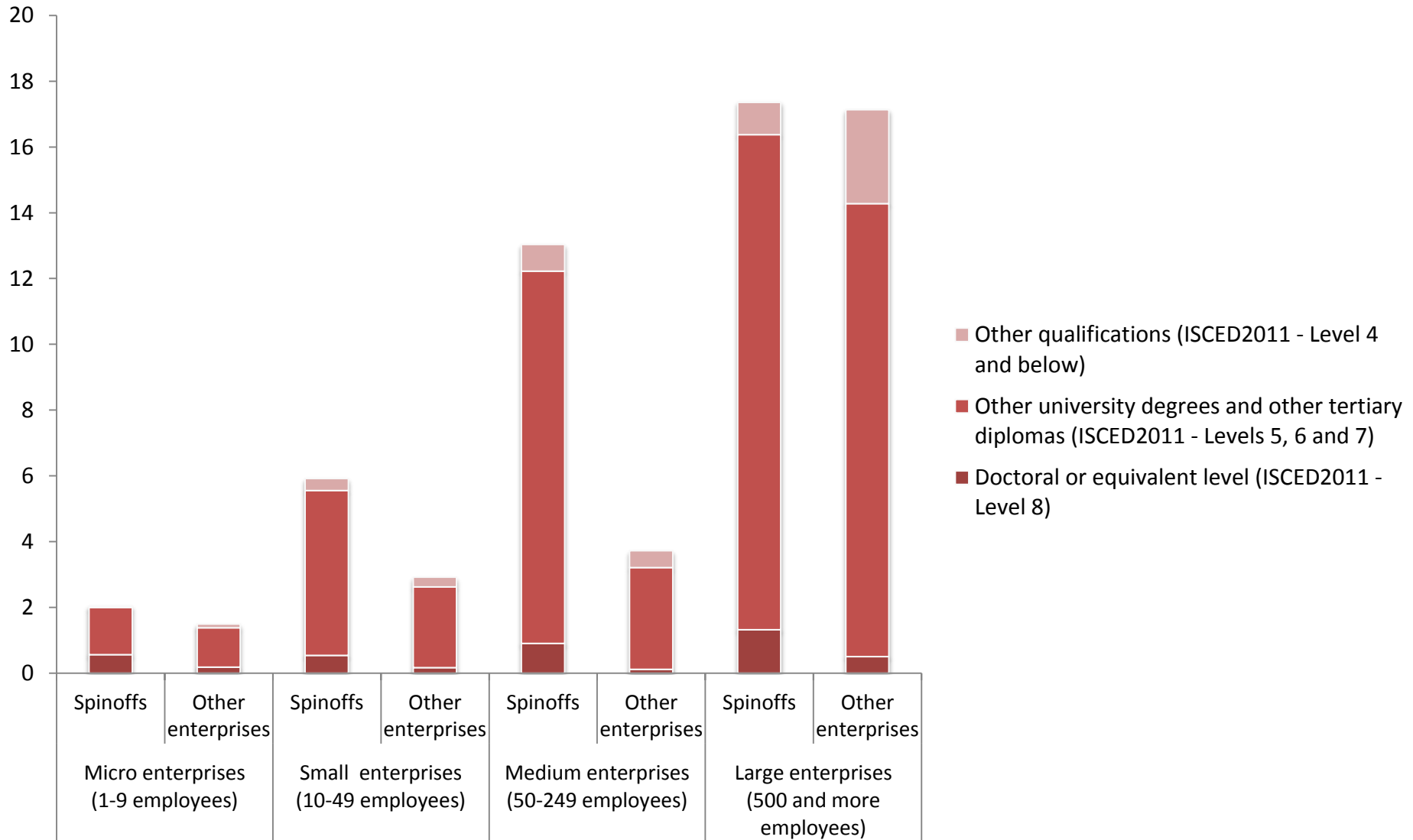


Source: R&D survey 2015

Enterprises that reported to R&D survey 2015



Mean number of researchers (FTE) per enterprise



Source: R&D survey 2015

Challenges and constraints in monitoring international and sectoral mobility of researchers

- Portuguese statistics in R&D have different sources and there is a certain imbalance between the more complete sources of employment in the public sector, especially in higher education institutions, and the scarce sources of employment in the private sector or abroad. Even the R&D survey does not have mandatory individual listings in the Business Enterprises sector.
- Known difficulties in producing reliable statistics on mobility, especially when it comes to international mobility.
- There is potential for the progressive improvement of the statistical sources through the implementation of the Scientific Employment Observatory and its administrative data collection, extended to researchers in higher education who are not teaching.

➤ Proxy data on international mobility can also be obtained by tracking authors' affiliations in the international databases of indexed publications such as Scopus and the Web of Science but there are some difficulties and constraints:

1 - It is an effective method only for researchers who publish regularly (which is rare for R&D in companies, for example);

2 - To follow the researchers in their international mobility it is necessary to have the databases of all the publications of the world, while we currently have only access to the databases of publications in Portuguese institutions.