

For information

Research Indicators 2016/17

Agenda: 22
HEFCW/18/62

Disclosable

12/07/2018

1 Issue

- 1.1 This paper presents information on a number of aspects of the sector's research activities in 2016/17 in order to help the Council monitor research performance.

2 Corporate Planning Implications / Rationale for paper

- 2.1 In previous years, the Council has received an annual paper which presented information on sources of research income for higher education institutions in Wales. In order to provide a fuller picture of the research base, we have expanded the scope of the paper to include information about the number of researchers and postgraduate research students, and the number of PhDs awarded. A more detailed version of the paper will be considered by the Research, Innovation and Engagement Committee in the autumn.
- 2.2 Our current Corporate Strategy includes a commitment to develop measures by which to monitor the performance of HE providers across the full range of policy areas, including research. Those measures are currently under development, but we envisage that the measures for research will include the areas covered in this paper, together with some additional material on PhD completion rates and REF outcomes.

3 Recommendations

- 3.1 Members are invited to note the contents of the paper.

4 Timing for decisions

- 4.1 There are no decisions arising from this paper.

5 Members' interests

- 5.1 No conflicts of interests have been declared in advance of the meeting other than those held on the formal register of declarations of interest.

6 Further information

- 6.1 Contact Linda Tiller (029 2085 9715; linda.tiller@hefcw.ac.uk).

7 Research Indicators

I CAPABILITY

a) Number of Researchers

7.1 For this paper, researchers are defined as academic staff who are on a research (R) or a research and teaching (R&T) contract. Table 1 shows the number of researchers in Wales and the UK.

- In 2016/17 there were 5,805 researchers (FTE) in the Welsh HE sector, an increase of 270 or 4.8% on the previous year.
- Wales has 4.2% of the total UK researchers. (But it has 4.8% of **total UK** academic staff, when staff on teaching-only contracts are included.)

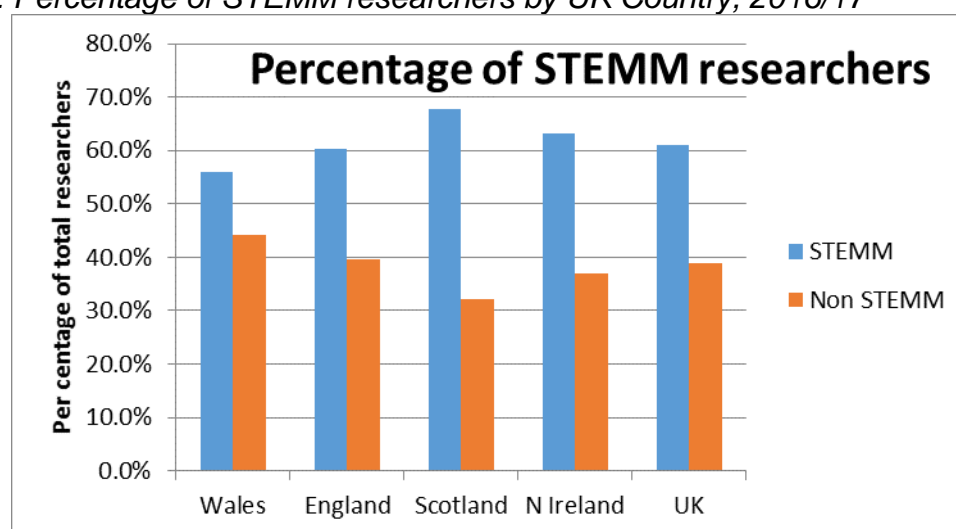
Table 1: Staff on Research and Research & Teaching Contracts

	Staff on R or R&T contracts (FTE)			
	2013/14	2014/15	2015/16	2016/17
Wales	5,570	5,625	5,540	5,805
UK	128,890	133,550	135,640	137,150
Wales as % of UK	4.3%	4.2%	4.1%	4.2%

Source: HESA staff record

7.2 In 2016/17, 55.9% of researchers in Wales were in Science, Technology, Engineering, Mathematics and Medicine (STEMM) subjects. As in previous years, this is the lowest proportion of STEMM researchers in any part of the UK. This shortfall in the number of STEMM researchers is consistent with the findings of the report *The Case for Growing STEMM Research Capacity in Wales*, which was published by the Learned Society of Wales in 2015.

Chart 1: Percentage of STEMM researchers by UK Country, 2016/17

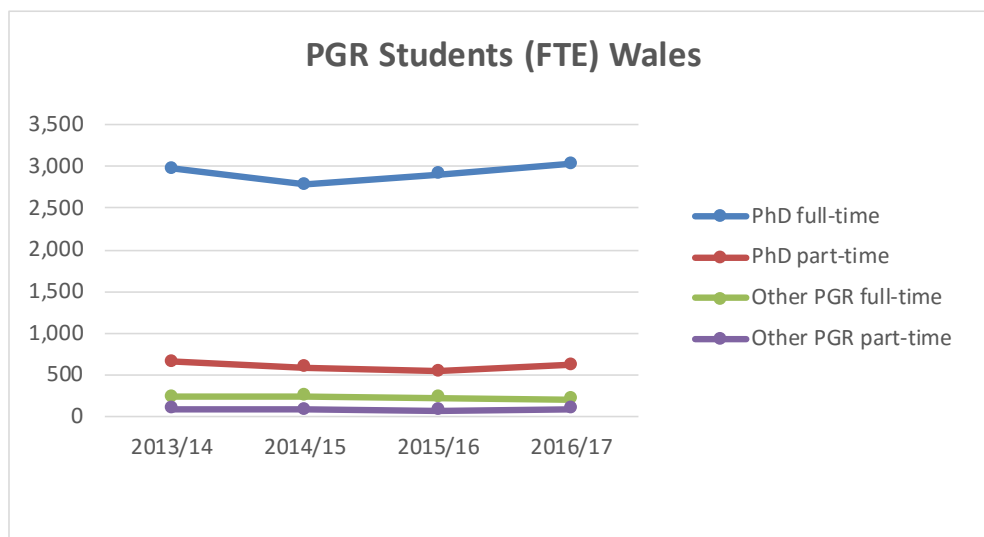


Source: HESA staff record

b) Postgraduate Research Student Numbers

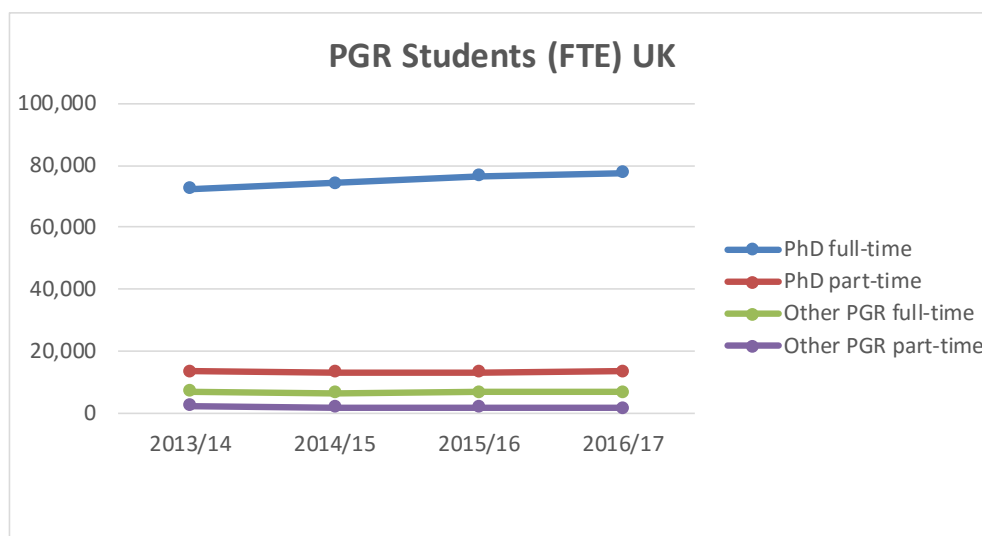
7.3 Trends in Postgraduate Research student numbers in Wales and the UK between 2013/14 and 2016/17 are shown in Charts 2 and 3 below.

Chart 2: PGR students (FTE) Wales



Source: HESA student record

Chart 3: PGR students (FTE) UK



Source: HESA student record

- Full-time PhD numbers in Wales dropped by 7% in 2014/15 but increased by 4% in each of 2015/16 and 2016/17. In the UK as a whole, there has been steady sustained growth throughout the period.
- Part-time PhD numbers in Wales decreased in 2014/15 and 2015/16. They increased in 2016/17, but are still below their 2013/14 level. In the UK as a whole, numbers have remained relatively stable throughout the period.
- In 2016/17, Wales had 4.0% of the total PhD students in the UK, which is a slight increase on the proportion (3.8%) in 2015/16.

II OUTPUTS

a) Research Income

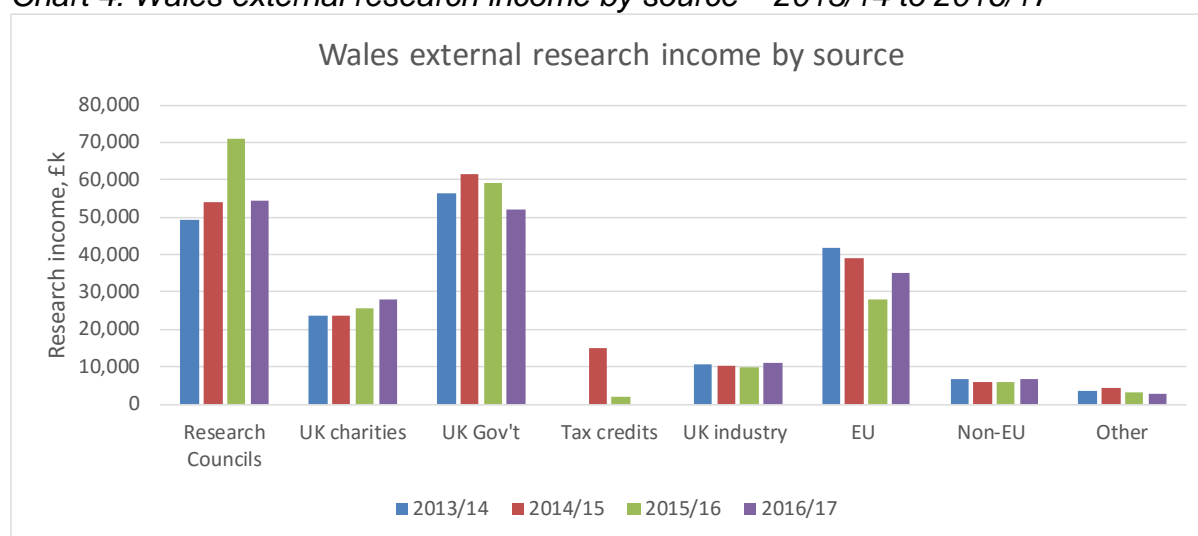
7.4 Research income by source for the Welsh HE sector for the four years 2013/14 to 2016/17 is set out in Table 2 below and shown graphically in Chart 4.

Table 2: External research income in Wales by source – 2013/14 to 2016/17

	Research Councils	UK charities	UK central government bodies	UK tax credits for R&D	UK industry commerce and public Corporations	EU sources	Non-EU sources	Other	Total
	£k	£k	£k	£k	£k	£k	£k	£k	£k
2013/14	49,236	23,684	56,414	n/a	10,524	41,704	6,675	3,526	191,763
2014/15	54,091	23,594	61,596	15,055	10,200	38,884	5,950	4,335	213,705
2015/16	70,805	25,532	59,069	2,057	10,105	27,887	5,879	3,275	204,609
2016/17	54,443	28,069	52,159	0	11,268	35,029	6,579	2,815	190,362

Source: HESA finance record

Chart 4: Wales external research income by source – 2013/14 to 2016/17



Source: HESA finance record

7.5 There are two caveats in relation to the comparability of data between years:

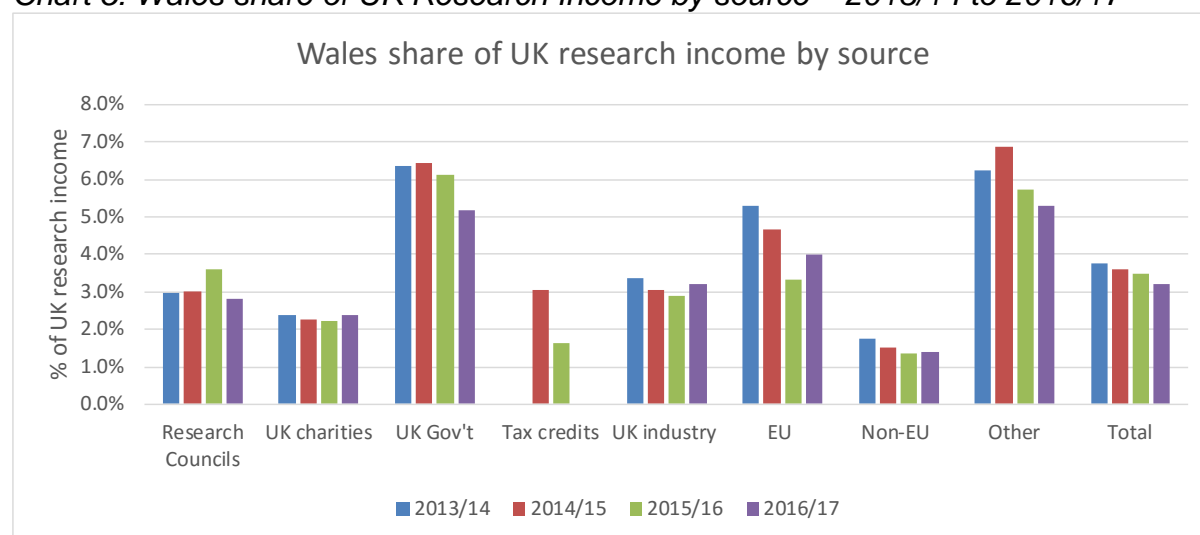
A) New Financial Reporting Standards (*Financial Reporting Standards 102*) were introduced from January 2015 which involved significant changes in the way in which HEIs report financial performance. Institutions can now choose to report the value of a grant in full as soon as any conditions on the funding have been met, rather than over a number of years as expenditure is incurred, as was previously the case. It is therefore necessary to exercise caution when comparing figures from 2015/16 onwards with those for earlier years.

7.6 In 2014/15, substantial income was reported under a new heading “UK central government tax credits for R&D expenditure”. This was, however, a short-lived arrangement, as HMRC rules have been changed to exclude universities from eligibility for these tax credits. The inclusion of substantial income from that

source in the figures for 2014/15, largely on a one-off basis, had a somewhat distorting effect on the totals for that year.

- 7.7 The sector's total research income decreased by £14 million in 2016/17. This was primarily due to a drop in Research Council income, which fell from £70.8m in 2015/16 to £54.5m in 2016/17. However, it is likely that this decrease is largely a consequence of the new Financial Reporting Standards (see paragraph 7.5 above) which tend to produce greater volatility between years because large grants can now be reported in full in the year in which they are awarded.
- 7.8 The Welsh HE sector's share of UK research income by source is shown in Chart 5 below.

Chart 5: Wales share of UK Research Income by source – 2013/14 to 2016/17



Source: HESA finance record

- In 2016/17, universities in Wales secured 5.2% of the total UK funding from central government bodies. The European Structural Funds made available by WEFO is recorded largely under this heading. This is an important element of the sector's total research income, which is potentially a concern for the future post Brexit, when Wales may no longer have access to equivalent funding.
 - In 2016/17, Wales had 2.8% of total UK Research Council grant income. This was significantly lower than in 2015/16, when Wales secured 3.6% of the total, the highest proportion Wales had achieved in the last 20 years. However, as noted above, these swings are at least partly due to the effects of the new Financial Reporting Standards, which produce greater volatility between years. Prior to 2015/16, Wales had secured around 3.0% of total UK Research Council grant income for a number of years. We will monitor the 2017/18 figures closely.
- 7.9 HEFCW's Corporate Strategy for the period 2013- 2017 included a target for the annual percentage change in income from Research Councils to exceed the comparable figure for UK higher education institutions, excluding the 'golden triangle' of Oxford, Cambridge and London. For the UK as a whole (excluding the golden triangle), Research Council income in HEIs remained at a similar level between 2015/16 and 2016/17, but in Wales there was a drop

of 23%. The Corporate Strategy target was therefore not achieved in 2016/17, but it had been very comfortably achieved in 2015/16.

- 7.10 A breakdown of the sector's income by individual Research Council in 2016/17 is shown in Table 3 below. Comparative figures for the previous three years are included for Wales percentage share for each Research Council.

Table 3: Research income by Research Council – Wales

Research Council	Research Grant Income of Welsh HEIs 2016/17	Wales as % of UK			
		£k	2013/14	2014/15	2015/16
AHRC	2,212	4.6%	4.9%	4.0%	3.4%
BBSRC	12,853	5.2%	4.8%	4.9%	5.4%
EPSRC	15,321	2.3%	2.4%	3.4%	2.2%
ESRC	5,568	3.2%	3.8%	4.0%	3.9%
MRC	9,167	2.5%	2.5%	3.3%	2.0%
NERC	4,224	4.4%	4.2%	3.8%	3.1%
STFC	3,105	2.1%	2.8%	2.3%	2.4%
Other	1,993	1.3%	1.7%	4.9%	2.3%
Total	54,443	3.0%	3.0%	3.6%	2.8%

Source: HESA finance record

- Despite the overall decrease in Research Council income in Wales in 2016/17, the sector increased its share of the UK total from the Biotechnology and Biological Sciences Research Council (BBSRC), and also marginally increased its share from the Science and Technology Facilities Council (STFC). The sector's share of the UK total for all other Research Councils decreased in 2016/17.

- 7.11 The following more detailed analyses of research income are attached:

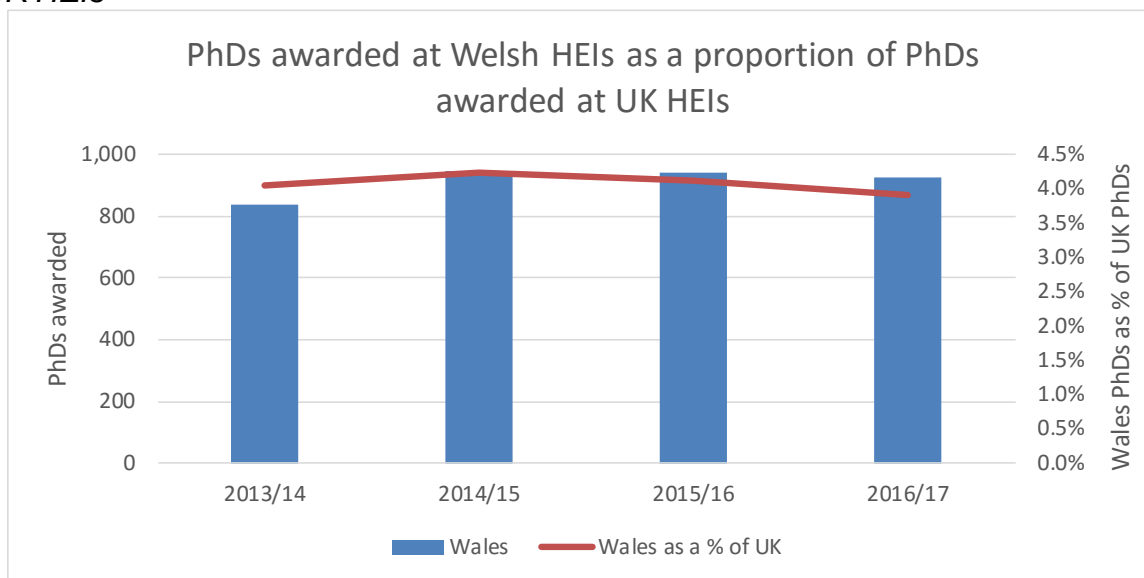
- Total research income (including QR) in 2016/17 by institution (Table at **Annex A**)
- Proportion of total research income (including QR) by source in 2016/17 (Table at **Annex B**)
- Research income (including QR) by source for a longer time series (Chart at **Annex C**)
- Total external research income by institution over time and Research Council income by institution over time (Charts at **Annexes D and E**).

b) PhDs Awarded

- 7.12 The number of PhD degrees awarded by universities in Wales and the proportion these PhDs represent of PhDs awarded in the UK as a whole over the last four years is shown in Chart 6 below.

- In 2016/17, universities in Wales awarded 925 PhDs, down very slightly from 2015/16 (940).
- In 2016/17, the PhD degrees awarded by institutions in Wales represented 3.9% of the UK total, slightly lower than in each of the previous three years.

Chart 6 PhDs awarded at Welsh HEIs: totals and as proportion of PhDs awarded at UK HEIs



Source: HESA student record

8 Financial Implications

- 8.1 There are no immediate financial implications arising from this paper. However, information on the issues covered in the paper is expected to inform consideration of the most appropriate future funding arrangements for research.

9 Communications implications

- 9.1 We will present a more detailed version of this paper to the Research, Innovation and Engagement Committee at its meeting in October. Additionally, in order to meet a Corporate Strategy commitment, we are currently developing measures by which to monitor the performance of HE providers across the full range of policy areas, and these will be published. We expect that the measures for research will include the areas covered in this paper.

10 Diversity and Equal Opportunity Implications

- 10.1 This paper has no direct implications for age, disability, marital/civil partnership, maternity/pregnancy, race, religion or belief, sex, sexual orientation, any other protected characteristic or Welsh Language.

11 Risk

Risk	Action to address risk
If the sector fails to meet the Welsh Government's expectation of improved research performance and increased research income, its standing with Welsh Government may be affected.	<p>This paper is provided in order to help the Council monitor sector performance. It takes account of capability (numbers of staff and students) as well as outcomes.</p> <p>A more detailed version of the paper will be considered by the Research, Innovation and Engagement Committee in the autumn.</p>