

Research and Innovation in Wales

April 2019



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Economy, Infrastructure and Skills Committee
National Assembly for Wales
Cardiff Bay
CF99 1NA

Tel: **0300 200 6565**

Email: SeneddEIS@assembly.wales

Twitter: [@SeneddEIS](https://twitter.com/SeneddEIS)

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Research and Innovation in Wales

April 2019



About the Committee

The Committee was established on 28 June 2016. Its remit can be found at: www.assembly.wales/SeneddEIS

Committee Chair:



Russell George AM
Welsh Conservatives
Montgomeryshire

Current Committee membership:



Hefin David AM
Welsh Labour
Caerphilly



Vikki Howells AM
Welsh Labour
Cynon Valley



Mark Reckless AM
Welsh Conservative Group
South Wales East



David J Rowlands AM
UKIP Wales
South Wales East



Jack Sargeant AM
Welsh Labour
Alyn and Deeside



Bethan Sayed AM
Plaid Cymru
South Wales West



Joyce Watson AM
Welsh Labour
Mid and West Wales

The following Members were also members of the Committee during this inquiry.



Mohammad Asghar AM
Welsh Conservatives
South Wales East



Lee Waters AM
Welsh Labour
Llanelli

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Chair's foreword

Wales is on the cusp of an exciting opportunity to radically change the way we develop and support research and innovation. With time being of the essence, the Committee was keen to investigate how this could be grasped.

The Welsh Government intends to bring forward new laws radically re-shaping post-16 education. This has profound implications for our universities, and other Welsh bodies working at the frontiers of knowledge. It also promises a profound impact on business.

At the same time the UK Government has turned on the tap to billions of pounds of additional investment in research and innovation. There is no limit to how much of this funding Wales can leverage in if the nettle is grasped and Welsh investment is increased too.

With this in mind, the Committee was keen to explore the current state of research and innovation in Wales and we wanted to explore the work that has been done by the expert panels led by Professors Diamond and Reid.

Three things became clear.

Firstly, it is clear that the quality of the research being produced in Welsh universities is second to none; there just isn't enough of it. The Committee heard that the volume of excellent research and what the sector called "critical mass", really matters. Building on these successes will need more investment – there is simply no silver bullet here.

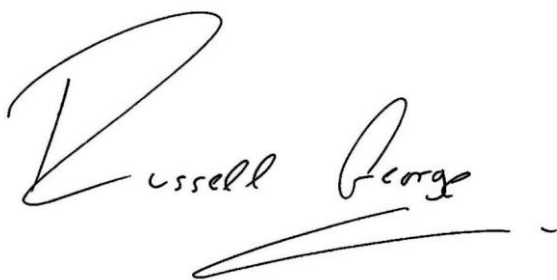
The Welsh Government is fortunate that the work done by Professor Reid looking at how best to secure investment in research and innovation has garnered widespread support. Despite this almost unanimous support, the Welsh Government has not found the money to put the ideas in to action. This delay, as the UK Government invests billions more in research and innovation which Professor Reid's recommendations could unlock, risks Wales missing out and being unable to win its fair share. So, the Committee's top recommendation is that funding for the Reid reforms needs to be given top priority if Wales' universities and businesses are going to be able to win more funding and make a fundamental contribution to Welsh prosperity.

Secondly, particularly when the Committee spoke to business leaders and start-ups, it heard that much, if not most innovation happens far beyond universities and colleges. But given the changes facing that sector, and the role universities play in creating new knowledge, it is natural that they have dominated the conversation. However, there is a need for a vision for Welsh research and innovation that encompasses everyone, and recognition that investment will be needed to create more innovation from cutting edge research conducted in Wales.

Finally, the debates about research and innovation funding and activity are complex and nuanced and not an area where Government should be making detailed decisions. The new body that will be set up to plan and fund research and innovation in Wales needs to be at arms-length, empowered, accountable, and trusted to make the right decisions on the public investment for research and innovation.

The Committee is grateful to the wide range of individuals and organisations that gave their time and expertise to this inquiry. We were particularly grateful to Professor Graeme Reid for his clear and simple explanation of his work at the outset of our inquiry; and to UCL, Scotland House and UK Research and Innovation (UKRI) who hosted Committee members during our visit to London. We would also like to thank the University of South Wales Students' Union for hosting our first oral evidence gathering session, and the graduate entrepreneurs and small business owners who shared their personal experiences of working through the system.

This report is a step on the journey towards the new arrangements for post-16 education in Wales. I hope the discussion it sparks, among stakeholders, and on the floor of the Senedd in a few weeks' time, will contribute to ensuring that changes to the sector put Welsh Universities in a position to compete with the UK's best, and Welsh businesses in a stronger position to innovate and succeed.

A handwritten signature in black ink that reads "Russell George". The signature is written in a cursive style with a large, sweeping initial 'R' and a long horizontal line underneath.

Russell George AM, Chair
Economy, Infrastructure and Skills Committee

Recommendations

- Recommendation 1.** The Welsh Government should consider setting its own target for investment in research and investment in Wales, bearing in mind the OECD average of 2.4 per cent.....15
- Recommendation 2.** Despite the Welsh Government’s claims that it has a vision for research and innovation, it is clear that those in the post-compulsory education sector are not aware of it. The Welsh Government should work with stakeholders – including Further Education – to agree and communicate a vision for all research and innovation activity in Wales. This all-Wales vision should build on the vision developed by HEFCWs, recognising and encompassing business activity which occurs beyond universities. 18
- Recommendation 3.** Without seeing a concrete proposal, it is difficult to reach a firm conclusion. However, the legislation establishing Research and Innovation Wales (RIW) should enshrine the arms-length principle while ensuring that Ministers remain accountable to the National Assembly for Wales.. It should also empower RIW to influence sector activity and adapt to wider changes in the sector over time without further detailed legislation being required..... 19
- Recommendation 4.** The Welsh Government should protect and enshrine the **Haldane Principle** and **Dual Funding System** within the Post-compulsory Education, Training and Research (PCETR) legislation in the same manner as it has been enshrined in the UK Higher Education and Research Act 2017.....21
- Recommendation 5.** The debate regarding the balance between public funding for basic research and for applied research is extremely complex and dynamic. As Research and Innovation Wales (RIW) will be made up of individuals immersed in these debates, it will be far better placed than the Welsh Government to decide how to allocate its funding. The remit of RIW, as established in the forthcoming Post-compulsory Education, Training and Research Bill, should reflect this.....23
- Recommendation 6.** To increase its influence over investment decisions made in London, Welsh research and innovation needs to be better woven into the fabric of UK level discussions and be more visible. The Welsh Government should review whether the mid-level post it has created in response to Professor Reid’s report has sufficient gravitas to drive this effort.24
- Recommendation 7.** If the final remit and scope of Research and Innovation Wales (RIW) includes organisations outside the post-compulsory education sector such as NHS Trusts, technology organisations and businesses, then the Welsh

Government could consider the case for making RIW independent of the proposed Commission for Tertiary Education and Research (CTER), an organisation which will primarily be a strategy planning body for post-16 education..... 26

Recommendation 8. The Welsh Government should review its internal structures for supporting research and innovation early in 2020, to ensure that the joint working the Minister for Education has talked about is happening and effective – both at Ministerial and official level.27

Recommendation 9. Higher education and industry stated that the absence of Innovation and Engagement Funding significantly limited the ability of universities in Wales to engage and collaborate with business. The Committee fully supports HEFCW’s aim to reinstate this funding, and the Welsh Government should provide the funding necessary to achieve this in full, as a matter of urgency.....32

Recommendation 10. Considering the fundamental importance of research and innovation to Welsh prosperity, the Welsh Government should provide the funding to allow HEFCW to achieve its aim of implementing the remaining recommendations of the Reid Review, including creating the Future of Wales and St David’s Funds, in full, as a matter of urgency. Waiting for additional funding to become available as a result of the reforms of student funding risks seeing Welsh Universities fall behind their rivals..... 38

Recommendation 11. If the Future of Wales Fund is intended to incentivise the winning of external funding, particularly from UKRI, it would be consistent for this fund to be available to all bodies eligible to bid for UKRI funding, including National Museum Wales..... 38

1. Background to the inquiry

Influential reports looking at the future of further and higher education in Wales have led to proposals from the Welsh Government to radically reform the post-16 education landscape.

1. In June 2018 the Committee agreed to undertake an inquiry into research and innovation in Wales in advance of a proposed Post-Compulsory Education, Training and Research (PCETR) Bill which will create a new research and innovation body in Wales called Research and Innovation Wales (RIW).¹
2. The primary purpose of the inquiry was to consider the research and innovation related policy proposals made by Welsh Government in its Technical Consultation intended to inform the PCETR Bill and the setting up of RIW.
3. Overall the inquiry has sought to:
 - Allow the Committee to influence key Welsh Government policy whilst that policy is still in development;
 - Develop a deeper understanding of research and innovation in Wales, both of which are fundamental to the Welsh Government's economic aspirations; and
 - Allow improved scrutiny of the PCETR Bill once it is introduced to the National Assembly for Wales.²

Terms of reference

The Committee agreed to look at the following:

- Funding for research and innovation activity, with an interest in:

¹ Since the inquiry began the Welsh Government has updated some terms (PCET to PCETR) and changed the name of the proposed new strategic planning body from TERCW to CTER. In this report the new terms and names are used.

² While it is anticipated that the Children, Young People and Education Committee will lead the formal scrutiny of the Bill, this report forms part of a planned programme of pre-legislative scrutiny by both Committees.

- The balance between funding for basic research (which will have no immediate commercial value) and funding for applied research that has more immediate innovation potential
- The differences between research and innovation funding for universities and funding for businesses.
- How to prevent the research and innovation interests of universities and colleges over-shadowing the research and innovation interests of industry.
- Student and graduate entrepreneurs and the support available to them.
- How universities and business (particularly SMEs) interact with each other, with a particular interest in:
 - How they transfer or absorb the knowledge gained from research.
 - The incentives and rewards for interacting.
 - How interaction can be improved.

Evidence gathering

4. The Committee held a written consultation from Wednesday, 22 August 2018 to Friday, 12 October 2018, which received 19 responses from a wide range of academic and business organisations.

5. The full set of responses can be seen at:

<http://senedd.assembly.wales/mgConsultationDisplay.aspx?id=316>

6. The Committee travelled to London on 25 October 2018 to meet with Professor Graeme Reid and UKRI Strategy Director Rebecca Endean. Members took the opportunity to visit Scotland House to see how another devolved government uses its office in London to influence and promote its research and innovation activity.

7. Oral evidence sessions took place at the University of South Wales' Students' Union building in Treforest (7 November 2018), and at the Senedd (14 November 2018 and 9 January 2019). Full details of the meetings can be seen at:

<http://senedd.assembly.wales/ielssueDetails.aspx?IId=22655>

- 8.** During the session at Treforest, Members met a range of graduate entrepreneurs to hear their experiences of starting and growing a business, and how university research and support had assisted their growth.
- 9.** As part of this inquiry the Committee also commissioned a video of small business owners' views on research and innovation.

2. Research and Innovation Policy

Policy decisions taken at a UK level have a powerful influence over Welsh research and innovation activity.

10. The UK's research and innovation system is highly integrated across the devolved nations and works internationally. This integration can largely be traced back to the existence of United Kingdom Research and Innovation (UKRI), a UK body which distributes a £4.5 billion annual fund that is accessible to all UK universities, many businesses, and to research organisations including National Museum Wales.

11. Organisations access UKRI funding by making competitive bids. At the same time each devolved nation distributes to their universities an annual research grant, the amount of which is based on the quality of research undertaken by the university. This grant is called Quality Related or QR funding. This annual grant of QR funding, together with the UKRI competitive funding which must be won, make up what is known as the Dual Funding System which is discussed further at paragraph 38.

UK Industrial Strategy

12. In 2017 the UK Government published its Industrial Strategy. This sets the ambitious target of achieving the equivalent of 2.4 per cent of UK GDP invested in research and development (R&D) by 2027, with a longer-term goal of 3 per cent. A large proportion of the additional public investment required to achieve this target is being channelled through UKRI.

13. If the investment levels required to reach the Industrial Strategy's target of 2.4 per cent of GDP invested in R&D can be achieved, it would see UK Government public investment rise from around £9.5 billion in 2016-17 to £12.5 billion by 2021-22.

14. This means that the UK Government is making a level of investment in the UK R&D landscape of such magnitude that it will exert a strong influence over Welsh research and innovation activity. This increased investment will be allocated via UK-wide competitive processes.

15. The 2.4 per cent of GDP target, and the additional target of achieving 3 per cent of GDP investment into the "long-term" would require public investment to

rise again to £20 billion by 2027, according to the Campaign for Science and Engineering.

16. In terms of scale and scope, NESTA has stated that the Industrial Strategy requires “a sustained year-on-year increase that we have not seen in a generation”.³ UK Government argues that in total there would be an additional £80billion of investment from both public and private sources by 2027. The opportunities associated with this increased investment will only come to Wales if the Welsh research and innovation base can successfully compete for it.

UK v Welsh investment

17. The amount of Welsh Government research and innovation investment is dwarfed by the amount of UK level investment.

18. Discounting EU funding (which accounted for 18 per cent of Welsh university research income in 2016/17) Welsh Government investment in research and innovation currently amounts to approximately £92million. However, it is likely actually less than this due to a £12.5m funding reduction made by the Higher Education Funding Council for Wales (HEFCW) for the 2018/19 academic year.

19. This £92 million can be compared to the approximately £4.5 billion held by UKRI at the UK level for 2018-19 and growing (this doesn't include the £2 billion England only funding which UKRI also administers).

20. Approximately £3.8 billion of the £4.5 billion is distributed via the seven Research Councils that are part of UKRI. This funding is, in the main, used to fund basic research at the frontiers of knowledge (sometimes called blue-sky research). As well as this, some £830 million is distributed via another body within UKRI called Innovate UK that also administers the Industrial Strategy Challenge Fund. As opposed to the basic-research funded by the Research Councils, Innovate UK funding is of a more applied / commercial nature.

21. The entire £4.5billion allocation to UKRI can be collectively accessed by Welsh universities and the National Museum Wales. Evidence provided to the Committee showed that winning greater amounts of this funding would not only help create a “virtuous circle” of ever more competitive research and innovation activity in Wales, but also serve to replace the EU structural funds Welsh universities have relied upon.

³ NESTA SOURCE

22. The exit of the UK from the EU is likely to have a profound impact on Welsh university research and innovation funding. As Professor Reid explains in his report on Welsh Government Funded Research and Innovation in Wales, the sector has relied disproportionately on EU structural funds rather than competitive external research funding. These require replacement if the sector is not to shrink.

23. These propositions underpin Professor Reid’s review where he explains: “there is no limit to the proportion of UKRI funding that can be won in these competitions and the benefits to Wales that would come from that success”.⁴

24. Recognising that Welsh research and innovation activity and behaviour will remain very much influenced by non-devolved investment decisions made in London, Professor Reid recommended increasing the visibility and influence of Welsh research and innovation activity by establishing a Welsh Research in London Office (WRILO). This recommendation was accepted by the Welsh Government.

Conclusion 1. The UK Government’s Industrial Strategy is the most ambitious increase in UK R&D spending in a generation. This is providing the opportunity for Wales’ universities and National Museum Wales to win transformational amounts of UK funding. Wales’ universities and National Museum Wales have a track record of producing the excellent level of research needed to unlock this funding. But there is work to be done to incentivise and support much more of it, and to ensure that Welsh research and innovation interests are part of the UK-wide conversation.

25. During scrutiny of the Minister, the Committee questioned whether there should be a target for Welsh investment in research and innovation. At present investment is 1 per cent of Welsh GDP,⁵ compared with 1.7 per cent at UK level.

26. The Minister said:

“I think it’s really difficult at the moment for me to, hand on heart, provide a meaningful target, given the uncertainty of the environment in which we are working.”⁶

⁴ Review of Government Funded Research and Innovation in Wales, Professor Graeme Reid. Foreword.

⁵ Statistics from Table 2, Gross Expenditure on Research and Development Scotland 2016 www2.gov.scot/Topics/Statistics/Browse/Business/RD/GERDPubTables

⁶ Para 37, 9 January 2019

27. She cited uncertainty around Brexit, the future of structural funds and the Augur review of post-18 education in England as reasons why it is difficult to set a target for Wales. While acknowledging the benefits of setting a target, she also noted that it wasn't clear why the target for the UK had been set at the rate it had.

Recommendation 1. The Welsh Government should consider setting its own target for investment in research and investment in Wales, bearing in mind the OECD average of 2.4 per cent.

3. The forthcoming Post-Compulsory Education, Training and Research Bill

This chapter discusses six key issues from the evidence presented to the inquiry which relate directly the forthcoming Post-Compulsory Education, Training and Research (PCETR) Bill. It does not address investment, which is discussed in a later chapter.

28. The evidence received shows six key issues in relation to the PCETR reforms which are discussed in turn below. They are:

- 1.** The need to create and invest in a vision for research and innovation in Wales that encompasses private business and recognises the balance of investment;
- 2.** The need for Research and Innovation Wales (RIW), as part of the Commission for Tertiary Education and Research (CTER, or the Commission) to have its arms-length status respected by the Welsh Government and for it to be flexible enough to respond to change many years into the future;
- 3.** Bearing in mind the above, the desirability of protecting the Haldane Principle and the Dual Funding System in the legislation⁷;
- 4.** That, reflecting its arms-length nature, the protection of the Dual Funding System, and the complexities related to research and innovation investment, RIW would be better positioned than the Welsh Government to make funding decisions relating to any balance between basic research and applied research or commercialisation;
- 5.** The need to ensure that RIW can engage with the UK Government without express permission from the Welsh Government; coupled with the need to invest in a Welsh research and innovation advocate of sufficient research eminence and gravitas to represent Welsh research and innovation interests in London; and

⁷ These terms are explained later in this section.

6. The need to consider whether RIW should be established as an entirely separate body from CTER if its remit encompasses the whole Welsh Government innovation agenda and includes several bodies such as local authorities, NHS Trusts and other non-education based bodies.

A vision for all research and innovation in Wales

29. The Committee heard that the Welsh Government should create a vision for Welsh research and innovation. While this vision should recognise the unique and valuable contribution of universities, it should not be solely centred on them. Instead it should also encompass private business and be mindful of the balance of investment in research and development (R&D).

30. Evidence from stakeholders suggests that there is currently no vision or clear policy-objectives from the Welsh Government regarding research and innovation in Wales. This, the Committee heard, made it difficult to evaluate success or to be guided on where investment should be made.

31. Professor Paul Harrison of the University of South Wales argued for the need to communicate “the underlying philosophy and principle around funding and research in Wales”.⁸ He went on to state that this vision would then define the purpose and guide the nature of the public investment.

32. Ian Courtney of Wesley Clover⁹ argued that it was “impossible” to judge the effectiveness of research and innovation policy without “reference to clear public policy objectives for what this whole sphere of activity is about”.¹⁰

33. The Committee received suggestions as to what this vision might encompass. Professor Chris Thomas of Aberystwyth University argued the vision should be based on the interconnectivity of Welsh society and that it should promote this coherence. Dr David Bembo of Cardiff University argued it should encompass the need to maintain the strength of the research base, working with industry, and exploiting emerging industrial opportunities. Dr Rachel Bowen of ColegauCymru argued for any vision to be focussed around collaboration and be inclusive of further education activity.

34. Minister for Education Kirsty Williams said the Welsh Government had set out its vision:

⁸ Para 17, 15 November 2018

⁹ Wesley Clover is the investment group founded by Sir Terry Matthews

¹⁰ Written evidence

“I would argue that the Government has looked to set out a vision in its Economic Action Plan and I would be looking to build upon that. For me, my early analysis of what we need to do is that we need to ensure that we draw more money into Wales from UK funding. So, that’s what I want to do—I want to put a structure in place to make sure we get a bigger share of that money.”¹¹

Recommendation 2. Despite the Welsh Government’s claims that it has a vision for research and innovation, it is clear that those in the post-compulsory education sector are not aware of it. The Welsh Government should work with stakeholders – including Further Education – to agree and communicate a vision for all research and innovation activity in Wales. This all-Wales vision should build on the vision developed by HEFCWs, recognising and encompassing business activity which occurs beyond universities.

The independence of Research and Innovation Wales

35. There are concerns amongst stakeholders that CTER and consequently Research and Innovation Wales (RIW), will not in practice, be at arm’s-length from the Welsh Government. There were also concerns that the PCETR Bill would not future-proof RIW leaving it constrained by overly complex law that would need further law passed to respond to future changes. HEFCW in its response to the Welsh Government consultation stated that the PCET reforms require “legislation to empower the new PCET body – but not constrain it in detail”.¹²

36. Miller Research Ltd, who conducted an analysis of the responses to the Welsh Government’s PCET Technical Consultation, stated that there was a predominant view that “the proposed framework [of TERCW (now CTER)] was seen as too prescriptive” and that the proposed relationship between the Welsh Government and the Commission risked “compromising the arms-length”¹³ nature of the Commission.

37. These views were echoed in the evidence taken by the Committee. David Notley of the Innovation Advisory Council remarked:

“If you’re going to set anything up, it has to be dynamic, it has to be capable of transformation, it has to be capable of change. So, you can’t

¹¹ Para 33, 9 January 2019

¹² Written evidence

¹³ Written evidence

set up something that's going to be set in concrete and that's how it's going to work for its entire life cycle."¹⁴

38. Dr Bembo of Cardiff University told the Committee: "I would back the view that the regulatory powers to be established here need to be allowed to develop over time, and they probably have been too prescriptive initially".¹⁵ Dr Rachel Bowen of ColgauCymru demonstrated the link between the need for a vision and any framework that the Commission will need to operate within:

"When some of the proposals set out in the latest 'towards a public good' document are talking about the number of people who should be on Research and Innovation Wales and the split of it, that is too complex, until we've decided what it is we want to do."¹⁶

39. The Minister for Education acknowledged the concerns of the sector and reiterated her commitment to the Haldane Principle whereby research projects are not set decided by government. But she pushed back against suggestions that the Welsh Government oversight was too great in the proposals. She said:

"I don't think it's unreasonable that there will be some Government oversight and that they are able to respond to, appropriately, strategic Government objectives, given that this is public money that that organisation will be spending."¹⁷

Recommendation 3. Without seeing a concrete proposal, it is difficult to reach a firm conclusion. However, the legislation establishing Research and Innovation Wales (RIW) should enshrine the arms-length principle while ensuring that Ministers remain accountable to the National Assembly for Wales.. It should also empower RIW to influence sector activity and adapt to wider changes in the sector over time without further detailed legislation being required.

The Haldane Principle and Dual Funding System

40. University research funding in the UK is based on a model called the Dual Funding System. This system sees universities receive research income throughout the year from two sources.

¹⁴ Para 429, 21 November 2018

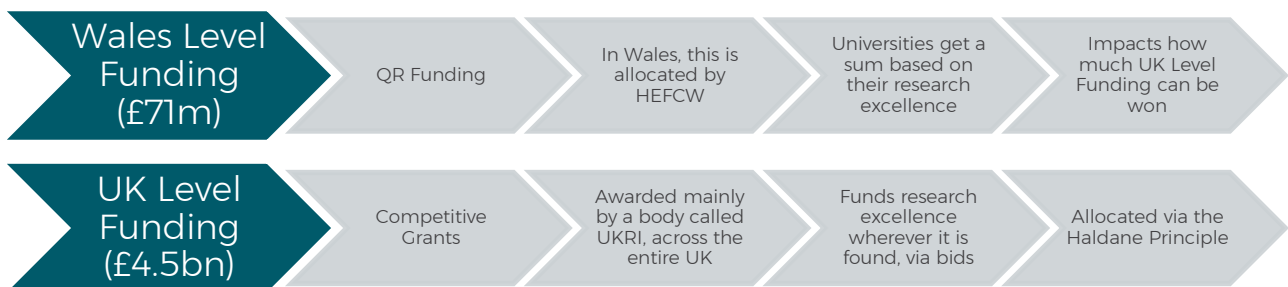
¹⁵ Para 45, 15 November 2018

¹⁶ Para 43, 15 November 2018

¹⁷ Para 87, 9 January 2019

41. The first source is an annual core-grant paid to universities that is based on the quality of their research; because of this, this funding is called Quality Related Funding, or more commonly, QR funding. This QR funding is used by universities to invest in their research bases and in turn enables those research bases to be more competitive at gaining income from the second source under the model: competitive external funding. This external funding can be from charities, private organisations, the NHS or often, UKRI.

Figure 1: Funding sources for Welsh Universities 2018/19



42. Another cornerstone of UK research and innovation funding is the Haldane Principle. Broadly speaking the principle states that decisions about research proposals should be made by peer review and not government.

43. At the UK level there is evidence that the dual support funding model is coming under some pressure. Research by the Campaign for Science and Engineering shows that QR funding has “significantly fallen as a share of total research funding received by HEIs, from a third to a quarter from 2006/07 to 2016/17”.¹⁸

44. When asked if the PCETR Bill should adopt the same approach as the England focussed Higher Education Act 2017 and enshrine both the Dual Funding System and the Haldane Principle in law Professor Chris Thomas of Aberystwyth University stated “absolutely”. He argued that the dual-funding system is:

“...fundamental to our operation and it’s a successful model. It gives you the ability to do the good work now and it also gives you the forward look and the QR is the forward look money.”¹⁹

45. While Professor Harrison of the University of South Wales argued that:

“I think [the Dual Funding System is] absolutely crucial, as my colleagues say. QR funds for long term, it allows us to fund PhD

¹⁸ www.sciencecampaign.org.uk/asset/7DCA0303-AD58-44CB-8EEB010448F39C5D/

¹⁹ Para 53, 15 November 2018

students, fund early career researchers, give them time for academic pursuits. It allows all researchers to do the blue skies research that's unfunded to try out new ideas.”²⁰

46. The Minister for Education committed to retaining dual funding, and decision-making at arms-length from government. She said:

“... the Haldane principles that have existed in the field of research in higher education for well over 100 years now are not going to be compromised by this piece of legislation.”²¹

47. The Haldane Principle has been enshrined within the UK Higher Education Act 2017. Although primarily concerned with England, the Act is relevant to the Welsh research landscape because it deals with the grant funding of UKRI.

48. The Act states that the Secretary of State, when deciding to make the grant to UKRI, must have regard to the Haldane Principle. This is **defined in the Act** as:

“[...] the principle that decisions on individual research proposals are best taken following an evaluation of the quality and likely impact of the proposals (such as a peer review process).”²²

Recommendation 4. The Welsh Government should protect and enshrine the **Haldane Principle** and **Dual Funding System** within the Post-compulsory Education, Training and Research (PCETR) legislation in the same manner as it has been enshrined in the UK Higher Education and Research Act 2017.

Balancing basic and applied research

49. The Welsh Government states in its PCETR consultation that “un-hypothecated QR funding for curiosity-driven research should remain a fundamental component of the funding distributed by RIW”. HEFCW, in its response to the proposals, comment that this statement fundamentally misunderstands or misrepresents the purpose of QR funding.

50. The purpose of QR funding, as explained by Professor Thomas and Dr Bembo, is not to conduct basic research (although universities can use it for that), but to cultivate and maintain an institution’s research base enabling it to become more competitive at winning external funding. Both Professor Thomas and Dr

²⁰ Para 96, 15 November 2018

²¹ Para 89, 9 January 2018

²² Section 103 (3) the Higher Education and Research Act 2017

www.legislation.gov.uk/ukpga/2017/29/section/103

Bembo argued QR funding is the “forward look money” and is available to invest in refreshing the research base.

51. In addition to the debate regarding the nature and purpose of QR funding, the evidence from stakeholders showed that dividing research funding between basic and applied research is too simple a division and that the reality is far more complex.

52. Universities Wales argued that “research and innovation is a complex ecosystem and cannot be simply separated into two ‘types’ of research as described in this [inquiry consultation] question”.²³

53. This view was echoed by Professor Harrison of the University of South Wales who told the Committee:

“I think, over the last few years that, even in research council funding, which is for more long-term blue-skies research, they’re still asking academics and research groups, ‘Okay, well, what difference does this make to society? What’s the pathway to impact?’ Even if that’s a five to 10-year timescale.”²⁴

54. The Committee also received evidence from National Museum Wales that showed research impact occurs across a wide-range of research activity, demonstrating the complexities inherent in labelling research as either basic or applied.

55. David Anderson, of National Museum Wales, explained in relation to research impact “that research should be viewed from a cultural as well as a utilitarian perspective”²⁵. He went on to explain that despite receiving no mention within either the PCETR proposals or the Reid review, National Museum Wales’ basic research activity was being translated into real-world impact, providing the example of the Museum’s contribution and potential for public engagement research:

“I’ve got a colleague who works on diatoms; they’re freshwater algae. [...] she’s feeding directly into programmes [...] to improve the water quality. So, that’s a direct impact on the environment.”²⁶

²³ Written evidence

²⁴ Para 96, 15 November 2018

²⁵ Para 80, 21 November 2018

²⁶ Para 54, 21 November 2018

56. This issue of complexity was taken further by the evidence of other stakeholders. The University of Wales Trinity St David stated that basic and applied research “are not mutually exclusive”.²⁷ Cardiff Metropolitan University drew the attention of the Committee to the fact that research and innovation exists within a complex eco-system, whilst the University of South Wales argued that the implication that universities “may not necessarily help solve immediate challenges facing Wales [...] is incorrect”.²⁸

57. The funding debate goes beyond universities and National Museum Wales in to the wider economy and how research is translated in to commercial opportunities. Wesley Clover argued that “successful economies require funding for pure research and commercialisation”.²⁹ They argued for a greater emphasis on commercialisation, noting that 90 per cent of UK R&D spending is spent on “traditional types of HE centred long-term research”.³⁰ They stated that this is contrary to their experience of commercialising a product which has been more expensive in time and money than conducting the basic research leading up to it. In their view, whilst both types of funding require parity of esteem, the balance should shift from the current 90-10 per cent split, toward “more 60-40 per cent”.

Recommendation 5. The debate regarding the balance between public funding for basic research and for applied research is extremely complex and dynamic. As Research and Innovation Wales (RIW) will be made up of individuals immersed in these debates, it will be far better placed than the Welsh Government to decide how to allocate its funding. The remit of RIW, as established in the forthcoming Post-compulsory Education, Training and Research Bill, should reflect this.

UK-level engagement and representation in London

58. In his report, Professor Reid recommended the establishment of a Welsh Research and Innovation Office in London (WRILO). The Welsh Government has accepted this recommendation and will shortly appoint someone to lead this work.

59. However, in its PCETR proposals the Welsh Government proposes that “RIW would not be expected to engage directly with the UK Government unless specific permission was to be granted by the Welsh Government”. This is arguably

²⁷ Written evidence

²⁸ Written evidence

²⁹ Written evidence

³⁰ Written evidence

directly at odds with the independent advice provided by Professor Reid in his review and is not in-line with the evidence received from the sector that Welsh research and innovation needs to better position itself and be more visible at the UK level.

60. During the Committee’s visit to London, it became apparent that to fulfil the ambition inherent in establishing WRILO, investment would be needed in more than office-space. In order to achieve the aim of Welsh research and innovation becoming woven into the fabric of the UK research and innovation debate, the Committee was told that the Welsh Government would need to appoint an eminent researcher to represent Welsh interests.

61. Professor Chris Thomas of Aberystwyth University argued that WRILO should be led by a charismatic research expert:

“It [shouldn’t] be just an office processing paper and arranging things. My ideal leader would be visionary, charismatic, forward-facing. Professor Graeme Reid would be excellent. Somebody who can command attention from Wales, to pull us to them and the world to Wales.”³¹

62. However, the Welsh Government has not advertised for an eminent researcher, instead advertising a mid-level Welsh Government post to operate WRILO.

63. The Minister for Education argued that the job of influencing was a team effort and noted the role that Chief Scientific Advisor Professor Peter Halligan was already playing. She told the Committee:

“... that soft power, that influencing—you know, it just can’t be left to that one particular individual or a team of people. But we recognise that we need to be where the discussions are happening and that’s why we’re taking forward the office in London.”³²

Recommendation 6. To increase its influence over investment decisions made in London, Welsh research and innovation needs to be better woven into the fabric of UK level discussions and be more visible. The Welsh Government should review whether the mid-level post it has created in response to Professor Reid’s report has sufficient gravitas to drive this effort.

³¹ Para 141, 15 November 2018

³² Para 60, 9 January 2019

Should RIW be entirely separate from CTER?

64. The Learned Society of Wales drew the Committee’s attention to data held by Scottish Government on GERD figures (Gross Expenditure on R&D), which incorporates both HERD (Higher Education Expenditure on R&D) and BERD (Business Expenditure on R&D).³³

65. During 2016, Welsh Higher Education expenditure (HERD) at £266million was lower than that spent by businesses (BERD) which amounted to £440 million. This demonstrates that significant research and development activity occurs outside Wales’ eight universities. This balance is replicated at the UK level.

66. Building on this theme, both the Federation of Small Businesses (FSB) and the Innovation Advisory Council Wales argued that, particularly amongst small-medium enterprise (SMEs) a considerable amount of innovation activity is made up of incremental, non-technological innovation involving little intellectual property, an area where, argued David Notley of the IACW, “Universities have less to offer”:

“It might sound like semantics, but I personally am uncomfortable with this idea of linking research and innovation in that way, [...]. A lot of the innovation that we see in companies that we work with is not based on research. It’s based on incremental evolutionary change and transformation.”³⁴

67. He also explained that many businesses don’t see universities as an important source of innovation and that better ways need to be found to make innovation interventions relevant to SMEs:

“...we currently work with well over 500 high growth SMEs across Wales and less than 10% have a meaningful working relationship with a University.”³⁵

68. Therefore, in the Committees view, if CTER were to end up encompassing the whole Welsh Government research and innovation agenda, including private commercial innovation activity and business support activity, this would not reflect the actual balance between higher education and other innovation activity in the Welsh economy.

³³ Written evidence

³⁴ Para 571, 21 November 2018

³⁵ Para 432, 21 November 2018

69. Professor Reid discussed the inclusion of innovation activity within the remit of CTER. He argued that “research and innovation support could work effectively whether or not innovation functions are absorbed into the new [CTER]”.³⁶ However, he also warned that if it were subsumed into CTER “there would be a significant risk that higher and further education interests would outweigh those of business innovation”.³⁷ The nature of this risk is more apparent once the balance of R&D spending and innovation activity is considered.

70. When asked if RIW should (if its scope was widened beyond higher and further education) therefore be split from CTER in the same way that UKRI has been split from the higher education regulator in England (the Office for Students) Professor Harrison of the University of South Wales said:

“I think that the UKRI and the Office for Students model is the right one. Research and Innovation Wales will have a much broader remit than just university research; I think it will encompass other organisations. It’s quite a different prospect from education, if you like.”³⁸

71. HEFCW in its response to the PCET Technical Consultation also pointed out that:

“...fundamentally, it seems illogical that a sub-unit of an organisation which has a (post-compulsory) education focus should be responsible for providing funding to organisations which are far removed from the education sector.”³⁹

Recommendation 7. If the final remit and scope of Research and Innovation Wales (RIW) includes organisations outside the post-compulsory education sector such as NHS Trusts, technology organisations and businesses, then the Welsh Government could consider the case for making RIW independent of the proposed Commission for Tertiary Education and Research (CTER), an organisation which will primarily be a strategy planning body for post-16 education.

The balance of R&D investment and Cabinet responsibility

72. At the outset of the inquiry responsibility for research and innovation in Wales lay with the Cabinet Secretary for Economy and Transport (now Minister for

³⁶ Review of Government Funded Research and Innovation in Wales, Professor Graeme Reid. p26

³⁷ Review of Government Funded Research and Innovation in Wales, Professor Graeme Reid. p27

³⁸ Para 48, 15 November 2018

³⁹ Written evidence

Economy and Transport), but funding for Wales' universities and colleges lay with Cabinet Secretary for Education (now Minister for Education). Following the cabinet reshuffle in December 2018, responsibilities and funding lie with the Minister for Education.

73. When asked whether this structure provided more clarity the Minister for Education stated:

“I have responsibility now for science, research and innovation within the Cabinet, and I think that that is a useful addition to my responsibilities given that, obviously, as Minister for Education, I’m interested from the age of three right through to postgraduate levels.”⁴⁰

“...officials have established a research and innovation co-ordinating committee, because otherwise we’re in danger, potentially, of losing sight of that cross-cutting responsibility. That committee will include the Welsh Government office for science, the Welsh European Funding Office, as long as it continues to exist, innovation and skills officials, higher education officials, health officials to try and co-ordinate that level of activity.”⁴¹

74. One of the underlying reasons for the Committee choosing to undertake this inquiry was a concern that reforms of the post-compulsory education sector could have a negative impact on research and innovation in the wider economy where most R&D investment is made. While the new cabinet responsibilities ensure a clear line of accountability, it will be vital to take stock to ensure that the needs of industry are not drowned out by the strong and coherent voice of the further and higher education sector.

Recommendation 8. The Welsh Government should review its internal structures for supporting research and innovation early in 2020, to ensure that the joint working the Minister for Education has talked about is happening and effective – both at Ministerial and official level.

⁴⁰ Para 8, 9 January 2019

⁴¹ Para 9, 9 January 2019

4. Investment in Research and Innovation

This chapter highlights the relative under-investment in research and innovation by the Welsh Government and considers the recommendations contained in its own pieces of independent advice – the Diamond and Reid reviews.

75. The Committee has heard that there is considerable under-investment in Welsh Government-funded research and innovation activity in Wales even as investment levels increase at the UK level and in England and Scotland.

76. This key issue of under-investment will make it more difficult for Welsh universities to meet the challenge of needing to win more external funding competitions to in-turn increase the ability of Wales to attract wider private research and development investment in what Professor Thomas of Aberystwyth University calls a “virtuous circle”.

77. Professor Reid made several recommendations in his report that are intended to reverse this under-investment and to increase the coherence and competitiveness of research and innovation activity in Wales.

78. The additional investment recommended by Professor Reid amounts to almost £85 million a year. Despite accepting all of Professor Reid’s recommendations (themselves built on Professor Sir Ian Diamond’s preceding research and innovation-related recommendations, which the Welsh Government also accepted) the Welsh Government so far has not provided any significant funding or investment for them.

Welsh research and innovation is under-funded

79. HEFCW points to several indicators of under-investment in Welsh research and innovation including:

- Out of the total amount of QR funding provided by the UK nations, the share of Welsh universities amounts to 3.9 per cent, despite Wales having 5 per cent of the UK’s population; and

- Funding constraints which necessitated the withdrawal of its Innovation and Engagement fund of £8million (a fund used to collaborate and engage with businesses).⁴²

80. Universities Wales in its submission to the inquiry argued that relative QR funding levels in Wales are significantly below England and Scotland, stating that the relative Scottish QR funding is almost double the Welsh.

Table 1 Funding levels across the nations for 2018/19

Funding council	QR funding	Innovation and Engagement funding
Research England	£1,600m	£210m
Scottish Funding Council	£242m	£19m
Higher Education Funding Council for Wales	£71m	£0

81. Stakeholders in their responses to the inquiry described the low level of QR funding as a very significant issue.

82. Professor Sir Ian Diamond in his review concluded “the Review Panel believes that QR funding remains essential and that it should be maintained at least at the current level of £71m per annum in real terms over the next five years”.⁴³ However, as HEFCW states in its evidence, this has not been achieved even in cash-terms over the three academic years following the Diamond report.

83. The Reid Review argues that there is a strong correlation between the level of QR-funding and the total amount of research income a university receives. In other words, QR-funding is the key to unlocking the external funding that Welsh universities will need to win to sustain and grow their research activity.

84. Professor Thomas argued:

“When you have this forward investment [QR-funding] you are more competitive, you win more of these UK-wide funds, which will go elsewhere in the UK if they weren’t coming to Wales [...]”⁴⁴

85. The Committee heard that QR-funding achieves this due to a variety of factors including its use to:

⁴² Written evidence

⁴³ Review of Higher Education Funding and Student Finance Arrangements in Wales, Professor Sir Ian Diamond. p 11

⁴⁴ Para 72, 15 November 2018

- refresh the research base with new early-career researchers;
- provide funding for networking and positioning; and
- enable universities to fund the difference between the full economic cost of a research project and the level of grant received – a matter which the Committee heard, particularly hampers the winning of external funding.

86. Dr Bembo of Cardiff University explained:

“...we [therefore] have to look very closely at the finances in making decisions as to whether we can actually get on to the starting grid with some of these major competitions, because of the cash match funding [provided by QR-funding] that’s required.”⁴⁵

87. Professor Thomas explained to the Committee:

“Most grand challenge projects these days and projects that are funded tend to involve a network, [...] there needs to be the kind of investment in this pre-grant-proposal networking. Those funds have tended to have been stripped out of the universities in Wales as funds became tighter and our QR has diminished relative to what we’re expected to do; we haven’t been able to invest in those.”⁴⁶

88. Many stakeholders also pointed out the investment gap has recently been widening with increases in research and innovation funding announced by the Scottish Funding Council (SFC) (£11.6 million for 2018/19) and Research England (£70m for 2018/19). Whilst the consequential from this increase in the Research England budget has been passed on by the Scottish Government to the SFC, the Welsh Government, has not used its own consequential in the same manner.

89. HEFCW stated:

“...we would strongly argue that, if businesses and other organisations become eligible to receive Welsh Government research funding, this must come from additional resources, and not from research funding which would otherwise have gone to universities.”⁴⁷

⁴⁵ Para 68, 15 November 2018

⁴⁶ Para 117, 15 November 2018

⁴⁷ Written evidence

90. This view was shared amongst many of the non-university respondents with Airbus arguing that:

“Continued investment in the university sector is essential to ensure that UK universities are able to undertake world-leading, cutting edge research. Reducing investment in university research risks undermining the next generation of technologies, and risks damaging Wales’ medium-term research capability.”⁴⁸

91. Professor Reid, in his review, also stressed the fundamental importance of QR funding stating that “QR funding should be the highest priority in Welsh funding for science, research and innovation”.⁴⁹

Support for university and business collaboration⁵⁰

92. Prior to 2013/14 HEFCW’s Innovation and Engagement Fund was intended in part to provide the funding for universities to collaborate and engage with businesses, resulting in additional external income being earned by universities.

93. In his report, Professor Reid argued that the current absence of Innovation and Engagement funding in Wales has had consequences for the level of external income generated by Welsh universities. He showed that at the same time as Innovation and Engagement funding was withdrawn completely, the level of external income has dropped.

94. Professor Sir Ian Diamond in his report shows evidence that “each pound of [Innovation and Engagement funding] generates around £7.90 in [external] income [for a university]”.⁵¹

95. With regard to both collaborating and engaging with business, Dr Bembo of Cardiff University explained the value of Innovation and Engagement funding:

“...a key word is ‘trust’. It’s the time and the people investment needed to build that trust that is required before you can unlock investment

⁴⁸ Written evidence

⁴⁹ Review of Government-funded Research and Innovation in Wales by Professor Graeme Reid p17

⁵⁰ The evidence received via video from SMEs will be included in the final report, the themes they raised are reflected in this section

⁵¹ The Review of Higher Education Funding and Student Finance Arrangements in Wales (The Diamond Review) p61,

from both sides of the collaboration and build something bigger. That takes time and, therefore, it takes resources and investment.”⁵²

96. Dr Bembo went on to argue the advantages Innovation and Engagement funding can offer business and universities:

“We’ve touched on higher education and innovation funds already and their value to the sector in Wales [...] it not only gives you a sustained base of knowledge exchange professionals, [...] to help you to work on those long-standing embedded relationships with key partners, but it also allows you to be responsive to new opportunities when they come along [...] those deep relationships with companies, take a lot of nurturing, a lot of face-to-face time, a lot of mutual understanding, before they can be competitive on a UK-level basis, and that’s not something you can do on the basis of hand-to-mouth funding.”⁵³

97. However, the Committee also received evidence from Wesley Clover which argued that the appetite from business to engage with universities is low.

“Whilst there is seen to be considerable virtue in encouraging university/business relationships to promote innovation the reality is the level of demand for [those relationships] does not match the level of activity that goes into encouraging them.”⁵⁴

98. The Committee also heard from several small businesses via video evidence. The Committee heard that these small businesses can find it difficult to engage with universities, sometimes finding it difficult to know who within a university they can contact. It was also explained that small businesses can lack the capacity to put together and manage the sort of large funding bids which might see them collaborate with universities. Higher education representatives explained that this sort of grant support, networking activity and being able to offer internet portals for businesses to use are the sort of resources Innovation and Engagement funding enabled, and one reason why its reinstatement would lead to an improvement in business and university collaboration.

Recommendation 9. Higher education and industry stated that the absence of Innovation and Engagement Funding significantly limited the ability of universities in Wales to engage and collaborate with business. The Committee fully supports HEFCW’s aim to reinstate this funding, and the Welsh Government

⁵² Para 229, 15 November 2018

⁵³ Para137, 15 November 2018

⁵⁴ Written evidence

should provide the funding necessary to achieve this in full, as a matter of urgency.

Bringing together innovators, researchers and venture capitalists

99. The Committee took evidence on the wider innovation and commercialisation agenda and activity within Wales including hearing from student entrepreneurs at several higher education institutions.

100. Even among those who had been successful in receiving support for their business idea, there was a suggestion that earlier intervention to encourage young people to think about innovation and entrepreneurship would be beneficial.

101. In relation to student entrepreneurs and entrepreneurs in general, Wesley Clover said: “Wales, similarly to the United Kingdom generally, has failed to create the conditions where there exists an intense relationship between researchers, innovators and venture capitalists”.⁵⁵

102. Data produced by the [British Venture Capital Association](#), the industry representative body, illustrates the level of recent Welsh venture and private equity capital activity. In 2017 venture and private equity activity in Wales accounted for only 0.5% of the United Kingdom total. Whilst venture and private equity funding are not the only sources of investment funds it serves as a useful proxy for all investment activity.

103. During its meeting with student entrepreneurs at the University of South Wales the Committee heard that a significant obstacle to success was not a lack of university support, which is well-received by students, but the wider issue of gaining access to the external funding necessary to scale-up or develop their ventures.

104. Supporting this view, Wesley Clover argued that “on closer inspection [data for average \[graduate\] start-up company turnover](#) and their ability to attract external investment suggests much of the potential has yet to be realised”.⁵⁶

105. Wesley Clover also warned that universities building incubators for new start-ups was not in itself enough to create successful spin-out companies. They said:

“Many universities have applied capital funds for the construction of premises intended to provide accommodation for student founded

⁵⁵ Written evidence

⁵⁶ Written evidence

companies to incubate and grow. Whilst this can be welcomed the provision of accommodation alone is not sufficient to create the conditions for success. Of greater value is the ability to surround a good idea with people with appropriate skills and experience and appropriate forms of finance.”⁵⁷

The role of “place” in winning external funding

106. The primary source of external research and innovation funding available to Welsh universities and National Museum for Wales is the £4.5billion UKRI allocation. However, there is no specific allocation or ring-fenced amount for any UK region – the funding is instead “dedicated to supporting excellent research, irrespective of its UK location”.

107. The implications of this means of funding for Wales are two-fold:

- First and foremost, it means Welsh universities are in direct and open competition with other UK universities. Therefore, it is the relative research and innovation performance of Welsh universities that will come to matter more and more (in other words they will need to out-compete rivals), particularly as Welsh universities transition away from EU structural funding;
- Secondly, allocating funding in this way can result in the geographical concentration of excellent research as the strong get stronger. The often-cited example of this concentration is the “Golden Triangle” of Oxford, Cambridge and London which receives almost half of all UK public investment in research.

108. Wales, with its smaller, more rural university sector where half of its institutions are located outside the most densely populated southern third of the country is already at some disadvantage in terms of the critical mass needed to increase its competitiveness.

Conclusion 2. UKRI describe research and innovation activity as a “contact sport” where critical mass and connections matter. This means that Wales’ geography and relatively low population density pose a particular structural problem for Welsh research and innovation activity. The solutions needed to address this structural problem go beyond research and innovation policy.

⁵⁷ Written evidence

The Welsh research base produces high quality research

109. The Welsh university research base “punches above its weight” according to a study conducted on behalf of HEFCW by Elsevier. This report shows that published research by Welsh researchers was increasing in impact and becoming more international. It also found that Welsh researchers are more productive than the UK average, making the research base efficient.

110. In evidence to the Committee, Professor Thomas of Aberystwyth University explained that the quality of Welsh research was also very high. In the most recent UK wide Research Excellence Framework exercise conducted in 2014 almost a third of submitted Welsh research was considered “world leading” and almost half as “internationally excellent”.

The goal – scaling-up Welsh research and innovation activity

111. However, whilst Wales’ research base produces high quality research and operates efficiently, stakeholders have argued that it is too small and suffers from under-investment. This has resulted in Wales securing less than its 5 per cent population share of UKRI funding. A 2015 report by the Leadership Foundation argued that a key reason for being unable to meet this target was a deficit of some 600 STEMM (Science, Technology, Engineering, Maths and Medicine) researchers – demonstrating the importance again of critical-mass and research base size.

112. The Welsh Government has already received independent advice on how to tackle the challenges facing Welsh research and innovation via the Diamond and Reid reviews. Both reviews placed the level of financial investment in research and innovation at the heart of their recommendations.

113. These recommendations and their outcomes are summarised below. All focus on increasing the scale of research and innovation activity and developing the necessary critical mass and attracting external investment:

- Professor Diamond recommended sustaining QR-funding at £71 million a year in real-terms from 2016/17. The Welsh Government accepted this recommendation, but QR-funding has fallen in both cash and real-terms to below £71 million in 2018/19.
- Professor Diamond recommended re-creating an Innovation and Engagement style fund of £25 million to enable collaboration between universities and business. The Welsh Government has accepted this recommendation, but it has not yet been funded.

- Professor Reid reiterated both of the recommendations mentioned above and also recommended the creation of two further funds: the Future of Wales Fund (£30 million a year) and the St David's Investment Fund (£25 million a year of additional funding).

114. Professor Harrison of the University of South Wales explained that “we will need to compete more as the structural funds from Europe are expected to decrease – we’re going to have to”.⁵⁸ He went on to say:

“But it’s going to be a challenge because we are not on a level playing field with the rest of the UK.”⁵⁹

115. The Future of Wales Fund recommended by Professor Reid is intended to change the behaviour of Welsh universities with regard to competitive funding. It would do this by incentivising and rewarding Welsh researchers for moving away from EU structural funds and winning funding from outside Wales, including from UKRI. A similar fund is already in-place and being operated by the Scottish Funding Council for 2018/19.

116. Professor Reid argued in his report that:

“The incentive properties of judicious formulaic funding were demonstrated recently when the introduction of research impact to the basis of QR allocation provoked a significant change in culture and behaviour in the academic community, releasing previously untapped potential.”⁶⁰

117. The Committee however heard evidence from National Museum Wales which disagreed with Professor Reid’s view that the Future of Wales Fund should in the first instance be available only to universities, arguing that it would be “scandalous”⁶¹ if they were not able to access the Future of Wales Fund.

118. Regarding innovation activity, Professor Thomas of Aberystwyth University called for Wales to be bolder in sharing its successes:

“What is missing, and it relates back to London offices and all the rest of it, is the visibility. If you travel the world, Scotland and Ireland have been

⁵⁸ Para 163, 15 November 2018

⁵⁹ Para 163, 15 November 2018

⁶⁰ Review of Government-funded Research and Innovation in Wales by Professor Graeme Reid p23

⁶¹ Para 110, 21 November 2018

there, doing it well, and so has Finland, and Denmark as well, and we are not doing that.”⁶²

119. This view aligns Professor Reid’s conclusion that there is a lack of coherence and visibility in Welsh Government innovation activity and funding. To this end Professor Reid recommended the creation of a more coherent innovation brand and the consolidation and alignment of the various innovation activities and funding streams under a single St David’s Investment Fund. This would include £25 million of additional funding a year and would bring all Welsh Government innovation activity under one brand.

120. Taken together, the additional investment called for by Professor Reid would have the potential to:

- Stabilise the Welsh research base by protecting QR-funding at £71million a year in real-terms;
- Improve university and business engagement, encourage more applied research activity and help attract external business investment via the reinstatement of an Innovation and Engagement Fund;
- Incentivise and reward universities for winning external funding through the Future of Wales Fund, itself enabled and underpinned by the stabilisation of QR-funding; and
- Create a more coherent and globally visible Welsh innovation brand underpinned by a coherent funding mechanism – the St David’s Investment Fund.

121. The Committee challenged the Minister for Education on why the recommendations had not been funded. She said:

“I have accepted the recommendations of the Diamond report, but I have made it very clear, when introducing the Diamond reforms, that we couldn’t do it all overnight, and that there would have to be a process by which, [...] resources would become available to fund other areas of the Diamond review. [...] So, I would expect us to be in a position of looking to HEFCW to support QR by 2020—I think the 2020-

⁶² Para 195, 15 November 2018

21 year—and, potentially, hopefully an innovation and engagement fund at that particular time.”⁶³

122. On 15 March 2019, the Education Minister announced £6.6m of funding to be managed by HEFCW in order to “strengthen the current Welsh research base”.⁶⁴ The money has been allocated as part-funding of the recommendations from the Reid Review.

Recommendation 10. Considering the fundamental importance of research and innovation to Welsh prosperity, the Welsh Government should provide the funding to allow HEFCW to achieve its aim of implementing the remaining recommendations of the Reid Review, including creating the Future of Wales and St David’s Funds, in full, as a matter of urgency. Waiting for additional funding to become available as a result of the reforms of student funding risks seeing Welsh Universities fall behind their rivals.

Recommendation 11. If the Future of Wales Fund is intended to incentivise the winning of external funding, particularly from UKRI, it would be consistent for this fund to be available to all bodies eligible to bid for UKRI funding, including National Museum Wales.

⁶³ Para 74, 9 January 2019

⁶⁴ <https://gov.wales/newsroom/educationandskills/2019/extra-6-6-m-for-research-in-welsh-universities/?lang=en>

Annex A: Witnesses

Date	Name and Organisation
25 October 2018	Professor Graeme Reid, University College London
	Dr Emma F Baxter, University College London
	Andrew Chisholm, Wellcome Trust
	David Thompson, Scottish Government
	Rebecca Endean, UK Research and Innovation
15 November 2018	Professor Paul Harrison, University South Wales
	Dr David Bembo, Cardiff University
	Dr Rachel Bowen, Colleges Wales
	Professor Chris Thomas, Aberystwyth University
21 November 2018	David Notley, Innovation Advisory Council for Wales
	Ben Cottam, Federation Small Businesses
	Ian Courtney, Wesley Clover Corporation
	Simon Gibson, Wesley Clover Corporation
9 January 2019	Kirsty Williams AM, Minister for Education
	Huw Morris, Welsh Government
	Professor Peter W Halligan, Welsh Government