

Royal Irish Academy Advice Paper Does Ireland need a Minister for Higher Education and Research?

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Key Points

- The main focus of the government regarding education is on primary and secondary level, while third-level education receives less consideration. Higher education (HE) has taken a disproportionate cut to its budget in comparison to other sections of the public service.
- The current governmental model for HE is inefficient and ineffective in supporting the needs and requirements of the HE sector and accordingly should be replaced with a new model.
- Leading-edge research is best conducted within a research-intensive, autonomous HE environment and an effective research strategy is dependent on a well-resourced HE sector. A fragmented HE and research governance model may curtail the quality and vitality of Ireland's research system.
- There are many different models for governing HE and research across Europe and in matters of public policy there is never one right way or one optimal governance structure.
- The litmus test for any proposed model should be whether it would improve the standing of HE and whether this model would improve the co-ordination between the HE and research sectors.
- A review of the various potential governmental models for HE and research in Ireland points to four options: (i) A maximalist model in which there is a minister for higher education and research with full Cabinet status and a separate department entitled Higher Education and Research; (ii) An intermediate model in which there would be a minister for higher education and research with full Cabinet status but crossing two departments; (iii) A junior ministry model in which there is a junior minister overlapping the Department of Education and Skills and the Department of Jobs, Enterprise and Innovation. This option would be enhanced further if the position were to adopt a 'super-junior' status – a minister of state who attends Cabinet; or (iv) Status quo – the maintenance of the status quo whereby HE and research are under the auspices of two separate departments.
- It is the recommendation of this paper that a minister for higher education and research be established following the 2016 general election. This new Cabinet-level ministry of HE and research would enhance the standing of HE as well as generating synergies between HE and research.

I. Introduction

The Royal Irish Academy/Acadamh Ríoga na hÉireann ('the Academy'), Ireland's leading body of experts in the sciences, humanities and social sciences, has set out to explore international best practice on the positioning of higher education and research within central government and to identify the most suitable governmental structure to support higher education (HE) and research within the Republic of Ireland. This paper has been informed by the Academy's forum 'Does Ireland need a Minister for Higher Education and Research?' which was held in Academy House, Dawson Street on 3 July 2015, and by the Academy's Steering Group on Governmental Structures for Higher Education and Research, chaired by Professor Brigid Laffan, MRIA¹.

This paper accepts that there are many factors that influence the quality of a system of higher education; such as a country's history and tradition, the autonomy of its universities, institutional culture and available resources. Central governments and in some countries regional or state governments play a pivotal role in resourcing and steering HE. Education as a policy field is closely linked to national economic and social objectives and has a strong profile in Cabinet, central administration and among the wider public. The significance of HE has grown with widening participation rates, technological and economic developments and changing societal aspirations. HE and research are major areas of public policy, given their significance to the economic, social and cultural wellbeing of a society. There are many different models of governing HE and research across Europe; some HE governance systems have been subject to major reforms, whereas others are either relatively stable or have experienced incremental change. This advice paper addresses five points:

- The current governmental position of HE and research within central government in Ireland
- The crisis context of HE and research in Ireland
- The benefits of HE for Ireland
- The various models currently in place across Europe
- The various potential models for Ireland, and
- The most appropriate governmental model to support HE and research in an Irish context.

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2. The current position of higher education and research within central government in Ireland

a) Higher education

The Irish education system falls under the remit of the Department of Education and Skills and covers education from early childhood to third level (inclusive of further education). Since 1921 the structure of the Department has remained broadly the same. In 2013 the Department's remit in the skills area was extended to include functions previously the responsibility of the Department of Enterprise, Trade and Employment and its agency FÁS. In contrast with some other government departments the nomenclature of the Department of Education and Skills has undergone relatively little change since the 1920s viz:

- Department of Education (1921–1997)
- Department of Education and Science (1997–2010)
- Department of Education and Skills (2010–present)

The Higher Education Authority (HEA) has a statutory responsibility, at central government level, for the effective governance and regulation of higher education institutions and the higher education system. The HEA exercises a central oversight role in the higher education system and is the lead agency in the creation of a co-ordinated system of higher education institutions. The Department of Education and Skills and the HEA are currently accountable to the Minister for Education and Skills.

b) Research

In the research sphere the main research funding departments are the Department of Jobs, Enterprise and Innovation and the Department of Education and Skills, which are responsible for Science Foundation Ireland (SFI) and the HEA respectively, although the Department of Health, the Department of Agriculture, Food and the Marine and the Department of Communications, Energy and Natural Resources also have substantial research budgets.

Ireland's research policy developed significantly in the late 1990s with the publication of the *White Paper on Science, Technology and Innovation (1996)*, the establishment of SFI in 1998 and the decision by Atlantic Philanthropies to support investment in research in what would become the Programme Research in Third-Level Institutions (PRTLTI) with the equivalent exchequer funding through the Department of Education and Science and managed by the HEA. These developments which coincided with the economic boom lead to a substantial increase in funding for research in the higher education sector. The late 1990s and early 2000s saw the establishment of the Irish Research Council for the Humanities and Social Sciences (IRCHSS) and the Irish Research Council for Science, Engineering and Technology (IRCSET) (which were later merged to form the Irish Research Council) – both reporting to the minister and the then Department of Education and Science – as well as the launch of the *Strategy for Science, Technology and Innovation 2006–13*.

Since 1983 the Enterprise Department (Department of Jobs, Enterprise and Innovation) has been the lead department for research strategies in Ireland and is ultimately accountable to the Minister for Jobs, Enterprise and Innovation. In 2011 the portfolio of Minister of State with special responsibility for Skills, Research and Innovation was established. This minister's remit falls within the Department of Education and Skills and the Department of Jobs, Enterprise and Innovation.

3. The crisis context for higher education and research in Ireland

a) Higher education

Despite the rising prominence of HE in Ireland, it is evident that the system has taken a disproportionate cut to its budget during the recent economic crash. According to the HEA, over the period 2007/8 to 2014/15, there has been a decline in state grants for higher education of 38%, with overall funding of higher education falling by 13.5%; this despite student numbers increasing by 25% (HEA, 2015). The culmination of rising student numbers and reduced exchequer support has resulted in funding per student falling by 22% in a five year period (HEA, 2015). To put this into context, since the 2008 crash Ireland and Iceland were the only two countries in the OECD for which real expenditure on higher education per student dropped (OECD, 2014). This is further exemplified by the fact that in 2003 real expenditure per student at second level was just under three quarters (74.2%) that of third level but by 2013 real expenditure per student at second level had surpassed that at third level (Department of Education and Skills, 2013).

From 2008 the budget cuts and the introduction of the Employment Control Framework (ECF) resulted in reduced staffing numbers in the sector. In 2008 there were over 19,000 academic and support staff in the sector but by 2014 this number had been reduced to 17,000, despite student numbers rising by 22%. In effect the staff–student ratio has now risen to 1:19, while the OECD average is 1:14 (HEA, 2015). The contrasting fortunes of higher education to other sectors of the public service in terms of employment numbers was highlighted by the chief executive of the HEA Tom Boland in his speech to the Academy on HE funding in September 2015:

‘While the commitment to reducing public sector expenditure has been resolute, a case has always been made to protect those on the ‘front line’ delivering those essential public services that will protect the nation’s health, education and security. This has meant, for example, that while overall public sector employment numbers have decreased by 10% over the period 2008 to 2014:

- The number of active registered nurses has fallen by only 6%
- The number of doctors has remained relatively static, falling by only 1%
- The number of primary school teachers has actually increased by 5%
- The number of post primary teachers has decreased by 9%.’

Mr Boland added that a reduction of staffing numbers in the HE sector would be acceptable if frontline academic staffing numbers had at least been protected:

‘This would be acceptable if the practitioners of higher education were protected within this cohort, with non-academic resources bearing the brunt of the cuts, in the same way as the doctors, nurses and teachers within wider health and education budgets. However this has not been the case, and we have actually seen an identical decline in the number of academic staff in the sector of 13%’ (HEA, 2015).

Peter Cassells, Chair of the Expert Group tasked with identifying and considering the issues relating to the long-term sustainable funding of HE in Ireland and with identifying options for change, stated that the current funding arrangements for higher education in Ireland are ‘unsustainable’ (RIA, 2015b).

b) Research

Since 2008 the government has taken a determined approach to target public research investments into specific priority areas they say offer most potential for job creation through economic recovery. In 2012 this policy was reinforced when the government published its research prioritisation strategy. It identified 14 priority areas and six science and technology platform areas in which it would prioritise its competitive research funding programmes. The economic remit of the prioritisation exercise was explicitly stated by Richard Bruton T.D., Minister for Jobs, Enterprise and Innovation in his foreword to the *Report of the Research Prioritisation Steering Group*:

‘The government recognises the critical role of research for policy-making and the fundamental role of research for knowledge. However, we must target the majority of future investment in research, development and innovation in order to ensure that we get the greatest economic return for our investment. We must target that investment on areas that are most likely to create economic value and jobs’. (*Report of the Research Prioritisation Steering Group*, 2011, p. 1).

In line with this strategy, driven by the Department of Jobs, Enterprise and Innovation and supported by SFI, Enterprise Ireland and the IDA, there has been a shift from indirect to direct funding. Conversely, Higher Education Research and Development (HERD) expenditure fell by €100m between 2008 and 2013 as the majority of competitively awarded research and development (R&D) funding across state agencies was streamlined into the prioritised areas, with comparatively limited resources made available for non-prioritised areas through agencies such as the Irish Research Council (RIA, 2014, p. 13).

This imbalanced approach has received widespread criticism² amongst the academic community and beyond, fearing that the reduction in support of fundamental basic research would have a detrimental effect on non-prioritised areas, which in turn would have long-term negative consequences for the entire research ecosystem.

²An open letter to the government criticising its research strategy, signed by 1061 scientists, was published in the Irish Times on 18 March 2015.

The Academy supports a more balanced approach to competitively awarded research funding, an approach which allows for the funding of excellent researchers irrespective of whether their research falls into one of the 14 priority areas. A key case for combining higher education and research under one ministerial portfolio is that it would likely enhance understanding and commitment in government to a research and higher education ecosystem which would improve the balance between basic and applied research.

In December 2015 the government published *Innovation 2020*, Ireland's five-year strategy for research and development, science and technology. The strategy sets out a vision for Ireland to become a global innovation leader by 2020, driving a strong sustainable economy and a better society underpinned by five key factors:

- I. Excellent research in strategically important areas
- II. A strong, innovative and internationally competitive enterprise base
- III. A renowned pool of talent both in Ireland's public research system and in industry that maximises exchange of talent and knowledge
- IV. A coherent joined-up innovation ecosystem
- V. An internationally competitive research system

A key ambition of the strategy is to increase total investment in R&D in Ireland to 2.5% of GNP. In real terms, this would see total expenditure on R&D increase to around €5bn from the current base of €2.8bn. The government has also set out a target of €1.25bn as the amount Ireland hoped to draw down from *Horizon 2020*. The implementation of the strategy will be overseen by the *Innovation 2020* implementation group. The minister with overall responsibility is the minister for jobs, enterprise and innovation, supported by the minister of state for skills, research and innovation.

As outlined in its submission during the consultation phase of the *Innovation* strategy, the Academy believes that leading-edge research is best conducted within 'a research-intensive, autonomous, higher-education (HE) environment, where positive interdisciplinary synergies between scientific discoveries, education and human-capital development, and enterprise and wider civic engagement can be fully exploited' (RIA, 2015c, p. 5). *Innovation 2020* fails to recognise the potential impact that the current funding crisis in HE could have on the research system. It could be posited that the political separation between HE and research has exacerbated this problem.

4. The benefits of higher education

HE benefits the individual that acquires the qualification, the economy that profits from a skilled workforce and the society that thrives from its education. According to the OECD, in the Irish context, having a degree adds about €350,000 in lifetime earnings, which is the highest return of all the OECD member states. According to the CSO Educational Attainment Thematic Report, labour force participation rates amongst those aged 25 to 64 clearly increase as the level of education attained increases; those with a third-level qualification were almost twice as likely to be in the labour force (87%) compared to those with at most primary level education (46%), (CSO, 2012). The unemployment rate amongst HE graduates is just 6% compared to 13.8% for those whose academic attainment level does not exceed the Leaving Cert (OECD, 2015).

Since the publication of the *Investment in Education* report in 1962, economic development in Ireland has been linked to higher education. Ireland became one of the first European countries to understand the importance of HE to the economy. The numbers participating in HE have grown from 21,000 in 1965 to 190,000 in 2015. This rapid increase in HE participation has led to the Irish labour force becoming one of the most skilled in the OECD. The availability of English-speaking, well educated graduates in the EU has become the cornerstone of Ireland's FDI strategy, which has attracted inward investment from the US alone of nearly \$300 billion since 1990 (Amcham, 2015). Domestically the economy benefits from increased HE participation amongst the workforce as HE graduates bring new skills and advanced knowledge to their workplaces, increasing overall productivity in the economy. Graduates of HE on average across their various occupations also offer a net return to the state through higher taxation of about €220,000 per graduate, which is the highest return of all the member states and double the OECD average (OECD, 2014).

In addition to the economic impact of HE on the economy through higher wages, increased tax revenue, reduced social transfer expenditure and enhanced skills in the economy, there is a significant economic impact from outputs from higher education institutions themselves. Research carried out by Zhang *et al.* on the economic impact of higher education institutes in Ireland (based on an input–output analysis) indicates that higher education has a multiplier effect of 4.0 – the gross income of Irish institutions was €2.6bn in 2011 and generated a gross output of €10.5bn, a rate consistent with higher education institutes in the UK (Zhang *et al.*, 2014).

HE has benefits for a society far beyond the aforementioned economic metrics. According to the OECD, individuals with higher levels of academic attainment are more likely to actively engage in society, in terms of voting, volunteering and participating in public life. Graduates are more likely to have better health, less likely to commit a crime and are more likely to pass down an appreciation for education and its benefits to the next generation (OECD, 2013).

5. Governmental models of higher education and research across Europe

There are many different models of governing HE across Europe and in matters of public policy there is never one right way nor one optimal governance structure. Some HE governance systems have been subject to major reforms whereas others have been either relatively stable or have experienced incremental change. Table I illustrates the taxonomy of ministries currently in existence across Europe:

Table I Categorisation of higher education ministries in Europe (selected countries)

Type of ministry	Countries applicable
Ministries for higher education and research (science)	France, Luxembourg, Sweden, Belgium, France, Norway
Ministries for education and research	Italy, Denmark, Portugal
Ministries for education	Poland
Ministry for education, culture and science	Netherlands
Ministry for education and culture	Finland
Ministry for education, culture and sport	Estonia
Ministry for science, research and economics	Austria
Other combinations (departmental structure)	Business innovation and skills – England; education and skills (HE and research – indirect) and Department of Jobs, Enterprise and Innovation (research – direct) – Ireland; non-departmental – Scotland

Source: Royal Irish Academy, Report of Proceedings, *Does Ireland need a Minister for Higher Education and Research?* (2015)

A review of the different systems points to the existence of three prevailing models:

1. A 'research and economy' led system
 2. A 'HE and research' led system
 3. A 'hybrid' led system
- A 'research and economy' led system is a model that locates higher education in the sphere of science, research and the economy. In this model HE is removed from a direct administrative link to the lower levels in the educational system. This is the model adopted in Austria and England.
 - A 'HE and research' led system is a model that has a separate ministry for HE and research. In this model, HE is again removed from other levels of education and integrated with research. This is the model that is adopted in Denmark and France.
 - The hybrid model is the model in which HE is part of a Ministry of Education and Skills and direct funding for research is part of a business ministry. This is the model found in Ireland.

Both the ‘research and economy’ and ‘higher education and research’ models bring together HE with science and research, whereas the hybrid model divides these two interconnected fields. In many countries today HE is no longer located within the educational sphere but in the sphere of science, innovation, competitiveness and technology. In various countries the tendency in recent reforms is to co-locate HE and research under one administrative body. These bodies are an important feature of the higher education and research structures because of the principle of institutional autonomy. Examples of such bodies are illustrated in Table 2.

Table 2 Categorisation of intermediate bodies for higher education and research in Europe (selected countries)

Intermediate bodies with broad responsibilities in funding, accountability, quality, policy and analysis	Ireland, England, Scotland, Wales , Romania
Intermediate bodies with specific responsibilities either in funding, criteria setting or strategic advice	Belgium, Denmark, Italy, Latvia
Intermediate bodies for funding research	Almost all European countries except Greece and Malta

Source: Royal Irish Academy, Report of Proceedings, *Does Ireland need a Minister for Higher Education and Research?* (2015)

The Cabinet configuration that accompanies these models differs across countries. In some such as France, the minister for higher education and research has full Cabinet status, whereas in others it is the responsibility of a senior Cabinet minister with a broader portfolio assisted by a minister without full Cabinet rank, as is the case in England.

6. What is the most appropriate government model to support higher education and research in an Irish context?

In discussing the advantages and disadvantages of establishing a ministry for HE and research in an Irish context, it is important to tease out what this might mean and how this minister would be supported administratively. Therefore four options are presented below:

A maximalist model – Under a maximalist model, there would be a minister for HE and research with full Cabinet status and a separate department entitled Higher Education and Research.

An intermediate model – Under this model there would be a minister for higher education and research with full Cabinet status but crossing two departments – the Department of Education and Skills and the Department of Jobs, Enterprise and Innovation.

A junior ministry model – Under this model there is the integration of education, science and research but the minister for HE and research would not have full Cabinet status. This option would be enhanced if the position were assigned a ‘super-junior’ status – a minister of state who attends Cabinet.

Status quo – The maintenance of the status quo whereby HE goes under the remit of the minister for education, while the national research strategy falls under the remit of the minister for jobs, enterprise and innovation with both ministers being supported by the minister of state with special responsibility for skills, research and innovation.

The advantages and disadvantages of the four options identified here are outlined in Table 3.

Table 3 The advantages and disadvantages of potential governmental models for higher education and research

Model	Advantages	Disadvantages
<p>1. Maximalist</p> <p>Cabinet minister and ministry</p>	<p>HE would have the weight of full Cabinet status.</p> <p>Research and HE would be under one department and one minister.</p>	<p>The constitutional limitation on Cabinet seats in Ireland means that establishing a full minister for any policy sphere must reach a very high benchmark in governance terms.</p>
<p>2. Intermediate</p> <p>Cabinet minister but across two separate departments</p>	<p>HE would have the weight of full Cabinet status.</p>	<p>The constitutional limitation on Cabinet seats in Ireland means that establishing a full minister for any policy sphere must reach a very high benchmark in governance terms.</p> <p>The creation of a single minister but with a divided administrative authority is a recipe for bureaucratic confusion.</p>
<p>3. Junior ministry</p> <p>‘Super junior’ option</p>	<p>Integrates research and higher education across two ministries and raises its profile and input with a direct presence at the Cabinet table.</p>	<p>A ‘super-junior’ minister of state does not have full Cabinet status.</p> <p>HE and research are divided between two large ministries with challenges in co-ordination.</p>
<p>4. Status quo</p> <p>Full minister for education</p> <p>Minister of state for skills, research and innovation</p>	<p>Overlaps the Department of Jobs, Enterprise and Innovation with the Department of Education and Skills.</p>	<p>HE competes within education for attention vis à vis the other levels of education .</p> <p>HE and research are divided between two large ministries with challenges in co-ordination.</p>

In identifying the most appropriate governmental model for HE and research, this paper puts forward a litmus test for each model based on two questions:

- How does this model increase the status of HE and research?
- How does this model improve the co-ordination between HE and research?

Status quo

Before addressing the alternative models that have been put forward, it is important to evaluate the status quo. As has been outlined in this paper HE has taken a disproportionate adjustment to its budget. Given demographically driven demands for further investment in primary and secondary level education, it can be posited that the downward trend in HE funding could continue. Even with strong recommendations from the Cassells Expert Group, it is far from certain that these policies would be implemented without a full Cabinet portfolio dedicated to HE. The current configuration is no longer fit for purpose and if it continues could be seriously damaging in terms of under investment. The status of HE is minimal under the current model. The priorities of HE are a secondary consideration compared to those of primary and secondary education, and this model maintains the existing fragmentation between HE and research. Therefore it fails the first litmus test of this paper.

Junior ministry ‘Super junior’ option

This option of a super junior minister of state for higher education and research would increase the current status of HE and research within central government. It would fall short of exerting the same influence that could be achieved in establishing a full Cabinet minister, but would help to overcome the fragmentation between HE and research that is present in the existing model. This is not the ideal option but one that could be considered by government if the constitutional restraints are too difficult to overcome.

Intermediate (Cabinet minister two departments)

It was found that the intermediate option, of Cabinet minister across two departments, would enhance the status and influence of HE with its elevation to Cabinet, as well as bridging the gap between HE and research. A similar example is the current situation in Agriculture and Defence where one minister is responsible for both departments. However, in this example there is no other senior minister in either department, which would be the case in Education and Jobs. This could prove very difficult to manage administratively.

Fine Gael also supported a similar model to this in their Green Paper.

‘Fine Gael proposes: Moving primary responsibility for the development of policy and delivery of third-level education to a new Technology, Skills, Innovation and Higher Education Department. We do not propose that this department would be in addition to existing departments. Instead, we suggest the current departmental structure could be reconfigured.’ (Fine Gael Green Paper, 2009, p. 20).

Maximalist (full Cabinet minister and department)

The key advantage of a minister for HE and research with full Cabinet status is the recognition and ministerial attention that the sector would receive in Cabinet deliberations and the budgetary process. This would conceivably allow for further attention to the issue of sustaining HE funding. A specific minister for HE and research would have his/her sole focus placed on the higher education and research sector, removed from the competing demands of primary and secondary education. Another advantage would be the synergies generated in having the two largest research departments vis à vis HE and research under one ministerial portfolio.

The key argument against the maximalist model is that there are constitutional provisions on Cabinet size in Ireland, which limit the size of Cabinet to 15 members. (The decisions around Cabinet configuration are made by the taoiseach of the day.) Given the many benefits that HE has to the country – such as producing a well-educated workforce, a 70% wage premium for graduates, higher rates of tax revenue, lower rates of welfare expenditure and better health outcomes – there is a clear case for a specific ministry for HE.

Another argument put forward is whether HE would actually lose out if it does not have the full political weight of the education sector behind it. On closer analysis this argument does not hold much weight, as has been outlined previously HE has suffered in the shadow of primary and secondary education.

Recommendation

In assessing the benefits and drawbacks of each proposed model, this paper concludes that the status and influence of HE would be enhanced in a new Cabinet level ministry of HE and research. Furthermore, this paper believes that sufficient synergies would be generated between the largest two research departments, HE and research, within one ministerial portfolio – the maximalist model. There are various scenarios to show how this ministry would be developed. At a minimum one would expect the higher education section in the Department of Education and Skills, the HEA, the IRC and SFI all to fall under the remit of the new minister. This ministry could be augmented further with the addition of further education, SOLAS and, possibly, the labour market interventions of the Department of Social Protection.

Conclusion

Higher education and research are central to maintaining prosperity and social innovation in the 21st century. Many countries are devoting considerable resources to ensuring that their HE systems are adapting to the demands of a knowledge economy and society. The Irish system of HE and research is facing multiple challenges. Despite the rising prominence of higher education in Ireland, the system has taken a disproportionate negative adjustment to its budget during the recent economic crash.

Although resource pressures are to the fore, with the recent publication of Ireland's innovation strategy, *Innovation 2020*, and the imminent publication of the Cassells Expert Group report on the Future Funding Options of Higher Education in Ireland, neither of these reports address the political deficiencies that arise from not having an integrated senior ministry for HE and research. There are many different models for governing HE and research across Europe and in matters of public policy there is never one right way or one optimal governance structure. In assessing each model for an Irish context, this paper has concluded that a full Cabinet ministry for HE and research would enhance the status of HE and research in Cabinet while generating the synergies needed to ensure that leading-edge research is effectively supported within a research-intensive, autonomous HE sector.

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