

## The Power of 8: Knowledge, Innovation and Growth in the North

### Methodology and Data Sources

This study examined the collective economic impact of the 8 universities in the North of England that make up the N8 Research Partnership. The primary focus was the expenditure of the N8 research partnership universities and the impact generated by their activity during the academic and financial year 2014/15. The study also examined the impact of the off-campus expenditure of international students who were studying at the N8 universities in that year.<sup>1</sup> It also analysed the additional injection into the Northern Economy of the expenditure of students from other parts of the UK. The expenditure of Northern students was also analysed, on the basis that it is *retained* in the North by the N8 universities.

The definition of the 'North' and 'Northern Powerhouse Region' for this study was the 3 former Government Office Regions and NUTS 1 statistical regions of the North East of England, the North West of England and Yorkshire and the Humber.

There was a two-step approach to the modelling of the economic impact of the N8 partnership. The collective impact of the N8 universities on the UK economy was modelled, using a purpose-designed economic model of the UK. Analysis was then undertaken, using a Location Quotient approach, to estimate the share of N8 impact on the UK likely to have accrued to the North of England (the 'Northern Powerhouse region' as defined above).

The UK input-output model used was a 'Type II' input-output model based on actual UK data derived from the UK Input-Output Tables (Office of National Statistics) together with Labour Force Survey and Annual Business Inquiry data and the 2008 UK Bluebook. The modelling system was updated in 2013 to reflect productivity increases and related economic changes. Additional data sources included the Producers' Prices Index, ONS Regional Accounts and the most recent regional data available through NOMIS. The core modelling system is based on SIC 2003 classifications and this has been used for the 1 digit aggregate presentation of results. The modelling system used was purpose-designed for UK higher education institutions and is the most recent version of the Universities UK modelling

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<sup>1</sup> In this context 'International students' refers to all students whose permanent domicile is recorded as outside the UK, including other parts of the EU as well as non EU students.

system. The technical specification for the model is included in *The impact of universities on the UK economy* Kelly, McLellan and McNicoll Universities UK 2014.

### **Other data sources and issues arising**

The main source of University data was that published by the Higher Education Statistics Agency (HESA) on HE Finance, staffing and students. This was supplemented with further information provided by the universities on student numbers and on information drawn from individual university annual reports and financial accounts. Estimates were made of the pattern of public/private/international split of income based on analysis of HESA Finance data together with tacit knowledge and observations from previous detailed studies of the income sources of individual universities (making the assumption that the broad pattern of other income sources, e.g. for Residence and Catering, is likely to be similar for most institutions.) Estimates of student expenditure were made drawing on the most recent (2014) Department for Business and Innovation (BIS) student expenditure survey as well as BIS estimates of international student expenditure, undertaken in 2014 for the publication: *International Education: Global Growth and Prosperity* ( BIS 2014) ( figures uprated by the CPI.)

Sources of official information and data for comparators included Office of National Statistics information on GDP and the Labour Market (Labour Market information was primarily drawn from NOMIS.) Other data sources used included Business publications such as the *Business Insider* Magazine rankings of Northern Businesses, information from individual local economic partnership websites and individual company annual reports. The *Higher Education Business and Community Interaction Survey* (HE-BCI) for 2014-15, published by HESA, was also a key source for data on university knowledge transfer activities.