How well does Cumbria innovate?

In his new column **Professor Frank Peck** of the University of Cumbria's Centre for Regional Economic Development explains the latest economic data. This month: innovation

In the debates surrounding business growth and productivity, no topic is more keenly discussed than the rate of innovation. In a business context, innovation is commonly used to refer to the introduction of new or improved products, processes or methods. In an economy that is increasingly exposed to global market forces, it is not hard to appreciate why this concept is considered vital.

So how does Cumbria score in the league tables on business innovation? Several recent studies have attempted to answer this question by ranking the English counties (or, more precisely, Local Economic Partnership areas) on a range of criteria that capture the inputs and outputs associated with innovation.

Innovation needs inputs of money and talent. In this regard, private sector R&D expenditure in Cumbria ranks in the bottom quartile (31st out of 39 LEP areas). The county also has a very limited number of FTEs in technology sectors that have been prioritised by UK government funding (rank 36). Some aspects of "talent" seem more promising - Cumbria ranks quite well on proportion of science, engineering and technology professionals (rank 13) but low on numbers graduating with science, technology, engineering and maths (STEM) degrees. The percentage of residents with "higher-level" qualifications of NVQ level 4 is also comparatively low.

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As for outcomes for the local economy, the data suggest the county does reasonably well in terms of job creation (rank 19), but net new firm formation is comparatively low (rank 31). The number of patents for new products per head of population is also relatively low (rank 34). On productivity, Gross Value Added (GVA) per head seems close to average (rank 23) but GVA per hour is well down the rankings (36). Surveys of small and medium-sized businesses in the county also record comparatively low incidence of product and process innovation (rank 38).

So what does all this tell us? These data seem at odds with what many observe in prominent businesses across Cumbria. The county hosts production sites of many companies that are leading edge in their sector. Besides significant expertise in high technology areas associated with the nuclear industry and subsea technologies, other prominent examples include multi-site businesses such as Pirelli, Innovia Films, M-Sport, Iggesund Paperboard, James Cropper, GSK, Stobart Group to name but a few. These cases demonstrate that examples of innovation are far from absent in Cumbria. The county also hosts an array of smaller businesses that have a proven capacity for innovation in a variety of fields including engineering, tourism, food products and logistics.

These leading innovative companies show what is possible – world-class innovation can and does happen in Cumbria. The rankings, however, suggest that innovation may be less widespread than in other areas of England.

There is clearly much more to be done in terms of research to understand how innovative practices disseminate and filter between firms and across key sectors in the county. This suggests that finding ways to break down knowledge silos and facilitate knowledge exchange has a vital role to play in improving the competitiveness of the Cumbrian economy.

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Innovation rankings for Cumbria

RESEARCH CRITERIA WITH CUMBRIA'S RANKING OUT OF 39 ENGLAND LEP AREAS

● INPUTS OF MONEY Business Enterprise R&D expenditure by FTE 2013.	31
Innovate UK grants £s per FTE 2010-15.	39
● INPUTS OF TALENT % in "science, engineering & technology professions" 2013-14.	13=
% of residents qualified to NVQ4 and above 2013.	25
No. of STEM first degree with honours, qualifiers 2013-14.	36
No. of STEM Doctorates 2013-14.	33=
● KNOWLEDGE ASSETS Inventor population with patents 5 -10 years old in Oct 2014.	36
Total publication output past 2 years.	35
Percentage FTE in 5 science & technology sectors (ONS) 2013.	36
● INNOVATION OUTPUTS AND IMPACTS Average annual patents 2007-11 per 100,000 residents.	34
Net business birth and death rates 2012.	31
UKCIS product/process innovation (% enterprises 2008-10).	38
Employment rates for 16-64 age group 2013-14.	19=
GVA per capita 2013.	23
GVA per hour 2013	36

For further details, see Business Research and Innovation Activity in Cumbria: A Review of the Evidence. Research Paper of the Centre for Regional Economic Development, University of Cumbria Business School, February 2016.