

Institution: Plymouth University
Unit of Assessment: 19
Title of case study: The Determinants of Economic Performance in Rural Areas
<p>1. Summary of the impact (indicative maximum 100 words)</p> <p>The case study developed a set of acceptable benchmarks of economic performance using readily available data which are indicative of key policy-relevant facets of local economic performance, and it proposed a method for modelling rural economic performance, which is transferable to other UK environments and beyond. In doing so, this study has informed Defra's 'Rural Evidence Base', and has contributed to the development of subsequent rural policy. This impact case study is based on a Defra award (2003-2004 plus a nine month extension) led by the Director of SERC Professor Sheela Agarwal.</p>
<p>1. Underpinning research (indicative maximum 500 words)</p> <p>There has been growing interest amongst policy-makers and researchers in the distinction between 'leading' and 'lagging' rural areas. Various studies undertaken in the UK, Europe and Canada, for example, the Dynamics of Rural Areas (DORAs) (Bryden and Hart, 2001), Rural Employment (RUREMPLO) (Terluin and Post, 2000) and the 'New Rural Economy' (Reimer, 2003), have sought to distinguish 'leading' and 'lagging' areas and to compare their characteristics. However, despite these studies, there was still a dearth of knowledge of the underlying factors that explained the uneven geography of economic performance across rural England, and of the most appropriate mechanisms and policies to foster improvements. This was surprising in light of Defra's (Department of Environment, Food and Rural Affairs, UK) Public Service Agreement (PSA 4) commitment spanning 2001-2004 and 2005-2008 to 'reduce the gap in productivity between the least performing quartile of rural areas and the English median by 2006. Building on this short-coming, this study examined the determinants of economic performance of 149 English rural Local Authority Districts (LADs). A Three Stage Least Square (3SLS) estimation procedure was employed to jointly determine the influence of a wide range of indicators representing economic, human, cultural and environmental capital, as well as less tangible or 'soft' factors on three distinct components of economic performance: productivity, employment and labour market participation. The results revealed that a range of facets of economic and human capital, including the three key drivers of productivity (skills, investment and enterprise), spatial factors (peripherality and accessibility), and other key factors (economic structure, government infrastructure, road infrastructure, and occupational health), were significant determinants of economic performance in rural areas. The study findings reinforced a raft of previous studies that examined aspects of rural economic performance (e.g. Bryden et al., 2004; Terluin and Post, 2000), and in doing so, highlighted the value of the proposed model and methodology. Indeed, in recognizing the endogeneity of the three dependent variables leading to the specification of a structural model using a simultaneous equation framework, this approach marked a major improvement upon previous studies of rural economic performance which implemented less rigorous empirical evaluation. Moreover, such an approach was intended to be transferable to that it may be adjusted and applied relatively easily to measure economic performance in other geographical contexts. However, given the over-arching aim of the UK Government's rural policy to create sustainable communities, perhaps this study's true value are the many ways that are highlighted in which rural policy may improve rural economic performance.</p> <p>The project was initially scheduled to be undertaken in the period 2003-2004 but a nine month extension was granted after Professor Andrew Errington, a key contributor to the study's technical direction tragically died, and to accommodate further quantitative analysis requested by Defra for which additional funding was provided (£10,000). The study originated and was led and managed solely by Plymouth University staff, most notably Professor Sheela Agarwal, assisted by Dr Sanzidur Rahman and by the late Professor Andrew Errington. In addition, Dr Paul Courtney, a former PhD student at Plymouth University supervised by Professor Errington, and Professor</p>

Malcolm Moseley both of the University of Gloucester's Countryside and Community Research Unit were sub-contracted primarily to help with qualitative data collection and to peer-review the research design and analysis. Plymouth University was thus responsible for the project's technical direction and completion involving the writing of an in-depth literature review, construction of a rural data-base, quantitative analysis and structural equation modelling, qualitative research design, half of the qualitative data collection, all of its analysis, and the final report writing; this input equated to 90% of the work required to complete the project. In their support and advisory role, Dr Paul Courtney and Professor Malcolm Moseley contributed 10% to this project.

2. References to the research (indicative maximum of six references)

1. Determinants of the relative economic performance of rural areas (Defra, 2003-2004, c.£73,000 plus £10,000 to undertake further quantitative analysis), Agarwal, S. Rahman, S. and the late Errington, A. (University of Plymouth) and Courtney, P., and Moseley, M. (University of Gloucestershire)
2. University of Plymouth and the University of Gloucester (2004) *Determinants of Relative Economic Performance of Rural Areas. Final Report*. Research report prepared by Defra, University of Plymouth, Plymouth.
3. Plymouth University- Agarwal, S., Rahman, S. and Errington, A. (2009) Measuring the determinants of relative economic performance of rural areas. *Journal of Rural Studies* 25, 309-321 (doi:10.1016/j.jrurstud.2009.02.003)
4. University of Gloucestershire – Courtney, P. and Mosley, M. (2008) Determinants of local economic performance: Experience from rural England. *Local Economy* 23 (4), 305-318. (doi: 10.1080/02690940802408029).
5. Plymouth University - Agarwal, S. and Rahman, S. (2008) The Determinants of relative economic performance of rural areas. Paper presented to the Royal Geographical Society (with the Institute of British Geography) annual conference 'The Culture of Enthusiasm', London, 27-29th August 2008.
6. Agarwal, S. (Plymouth University) and Courtney, P. (University of Gloucester) (2002) Investigating local area competitiveness: the case of British seaside resorts. Paper delivered to the North America Regional Science Council Conference, San Juan, Puerto Rico, 14-16th November 2002 (this work is based on a similar methodology to that employed by this project).

3. Details of the impact (indicative maximum 750 words)

Defra has been the main, direct beneficiary of this project in two substantive ways. First, it has helped this organisation work towards achieving its Public Service Agreements (PSAs) (2001-2004¹ and 2005-2008²) set by central government on rural economic development³⁻⁶. Second, it has contributed to the re-shaping of rural development policy, most notably by informing the design and implementation of a package of mechanisms that are attempting to improve the productivity of rural areas^{5,7,8}. It is in this latter context that this project arguably has also had an impact albeit indirectly upon local communities across rural England as some are likely to be beneficiaries of such measures^{7,8,10}.

In terms of enabling Defra to achieve its PSAs, this project was commissioned specifically 'to provide evidence which underpins Defra's policy formulation and development'³. Through our expertise in data collection and interpretation we became a central part of a rural evidence base⁴, developed by Defra to help achieve its PSAs, by strengthening its knowledge and understanding of particular rural issues, particularly productivity and economic performance, and of the most appropriate policies and mechanisms to address such issues in future national government policy-making and local authority intervention. Productivity and its spatial variability have in fact remained of key governmental concern and are central to the UK government's Rural Economy Growth

Review undertaken in Autumn 2011⁵, and subsequent research has been undertaken by Defra (2005)⁶ on the determinants of productivity which directly draws upon this study in two notable ways. First, in seeking to establish a statistical understanding of the factors that determine productivity, the 2005 study⁶ employs a similar methodology to this project. Second, it focuses on, and examines in more depth, the role played by spatial considerations such as rurality and connectivity that were highlighted as being important in this study⁹.

With respect to the second way in which this project has directly benefited Defra, this being the re-shaping of rural development policy^{5,7,8}, several of the recommendations highlighted in this study have been incorporated into the package of measures that form part of the Government's Growth Review (2011)⁵, and which now comprise the government's rural policy^{7,8}. For example, this study⁹ drew attention to the need to create local economic hubs or clusters of related businesses in rural areas in order to overcome pre-existing barriers to investment, which pool scarce capital and human resources and which encourage skills development, technology and knowledge transfer. Indeed, the Government's Growth Review (2011)⁵ made provisions for the formation of a Rural Growth Network (RGN) consisting of small enterprise hubs, and the creation of a rural economy grant for micro- and SME businesses. Moreover, this study⁹ emphasised the need to 'rural proof' the provision of skills, education and on-the-job training currently in demand in rural areas and the need to identify current and future gaps in provision, all of which have been encompassed in the 2011 Growth Review⁵ evidenced by the creation of a skills and knowledge transfer grant (up to £20 million) to fund a flexible and locally targetable skills training programme and rural proofing¹⁰.

It is in this latter context that this project is also having an impact albeit indirectly upon local communities across rural England as some are likely to be beneficiaries of these current policy initiatives⁸. Indeed, there is much evidence in English rural areas of the creation of local economic hubs and/or clusters of related businesses, a key recommendation of this study⁹ and one which has been included within current rural policy⁸. For example, five pilot rural growth networks have been created in Swindon and Wiltshire, Durham and Northumberland, Devon and Somerset, Cumbria and Coventry and Wiltshire⁸. Many more impacts of the package of measures informed by this study, on rural communities are likely to emerge in the near future^{8,10}; the £20 million skills and knowledge transfer programme is being launched in Autumn 2012¹⁰, whilst the lessons learnt from the pilot rural growth networks are currently being disseminated to Local Enterprise Partnerships who are themselves responsible for supporting rural economic growth and development⁸.

5. Sources to corroborate the impact (indicative maximum of 10 references)

1. Defra (2000) Public Service Agreement 4 – Rural Affairs (2001-2004)
<http://www.publications.parliament.uk/pa/cm200506/cmselect/cmenvfru/693/69308.htm>
(accessed 10/10/12).
2. Defra (2004) Public Service Agreement 4 (2005-2008)
<http://webarchive.nationalarchives.gov.uk/20100809200801/http://www.defra.gov.uk/corporate/busplan/spending-review/psa2004.htm> (accessed 10/10/12).
3. Defra (2012) Rural Evidence Base
<http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=ProjectList&Completed=0&AUID=1604> (accessed 10/10/12).
4. Defra (2011) Rural Communities Evidence Plan 2011/2012.
<http://www.defra.gov.uk/publications/files/pb13509-ep-rural-communities.pdf> (accessed 10/10/12).
5. Defra (2011) Rural Growth Review.
<http://www.archive.defra.gov.uk/rural/documents/economy/rural-economic-growth-review-111129.pdf> (accessed 10/10/12).
6. Defra (2005) Understanding the Drivers of Productivity through Regression. Online:
<http://www.defra.gov.uk/statistics/files/Drivers-of-Productivity.pdf> (accessed 10/10/12).
7. Defra (2009) Resilience and opportunity: the government's response to the report of the rural advocate: England's rural areas: steps to release their economic potential. Online:
<http://archive.defra.gov.uk/rural/documents/policy/rural-advocate-response.pdf>

- (accessed 08/04/2013).
8. Defra (2012) Rural Statement 2012 online:
<http://www.defra.gov.uk/publications/files/pb13814-rural-statement.pdf> (accessed 12/10/12).
 9. University of Plymouth and the University of Gloucester (2004) *Determinants of Relative Economic Performance of Rural Areas. Final Report*. Research report prepared by Defra, University of Plymouth, Plymouth.
 10. Defra (2013) £20 million to provide rural businesses with work-based training.
<http://www.defra.gov.uk/news/2012/03/13/rural-business-training/> (accessed 08/04/2013)