Institution: Cardiff University

Unit of Assessment: 19 – Business and Management Studies

Title of case study: Understanding the economic and environmental impacts of tourism

1. Summary of the impact (indicative maximum 100 words)

2012 saw 31.1 million overseas visitors come to the UK and 57.7 million domestic holidays taken by GB residents[1]. However, precise understanding of tourism's economic and environmental impact, particularly at local and regional levels, has historically been weak. Cardiff Business School's (CBS) Welsh Economy Research Unit (WERU) has significantly contributed to developing methodologies to quantify tourism's socio-economic impact at different scales. Their development of the first Tourism Satellite Account for the UK has informed the way national and international agencies conceptualise and measure tourism impacts. Researchers then developed a Tourism Impact Model to assess the impact of new facilities and infrastructure, and of large sporting and cultural events. This has helped event organisers and sponsors, including the Welsh Government, understand how to optimise value for money whilst minimising undesirable environmental impacts.

2. Underpinning research (indicative maximum 500 words)

Since 1996, CBS researchers have been involved in the development of input-output tables for Wales. Such tables are used to show the estimated aggregated monetary transactions of organisations in an economy within a given period, allowing the complex interrelationships between different parts of the economy to be quantified. The Welsh tables are typically produced using a combination of official statistics and survey data. Since 2002, WERU researchers, namely Calvin Jones (Senior Research Associate 98–07, Senior Lecturer 07-12, Chair 12-present), Max Munday (Lecturer 90-98, Senior Lecturer 99-02, Reader 02-05, Professor 05–present) and Annette Roberts (Research Associate 96-00, Lecturer 00-06, Senior Lecturer 06-present), have developed and used input-output tables to assess the economic contribution of tourism within the region. To address the limitations of input-output tables for accurate assessment of regional tourism activity, WERU incorporated the framework into a broader Tourism Satellite Account (TSA) for Wales[3.1]. A TSA is the only internationally accepted way of measuring the economic impact of tourism on an economy, following a series of recommendations and methodologies developed by the UN World Tourism Organisation (WTO). TSAs consist of a series of data tables that provide a way of separating out tourism-related activity and enabling its analysis. During its development, the methodology had been primarily applied at a national level, but WERU adapted it to develop a regional TSA for Wales. This involved considerable manipulation of existing data, as well as the primary collection of data via postal questionnaires and face-to-face interviews. Development of the TSA enabled researchers to estimate the economic importance of tourism to Wales in terms of both output and employment, and subdivided by type, e.g. domestic versus international tourism, something which had not previously been possible for any region globally. Recent work has seen further technical developments, for example, providing alternative methodologies depending on the amount of data available at the regional level[3.2 & 3.3]. As a result of their extensive experience in the area of TSA development, WERU researchers were funded by the Department for Culture, Media and Sport and the EU Directorate-General for Enterprise and Industry (£63,000) to produce the first pilot TSA for the UK. This involved defining the methodological framework and identifying the main data inputs, and providing a strategic action plan to improve the TSA methodology. The study, published in 2004, provided the most comprehensive assessment of the UK tourism sector available at that time.

The next important extension of the work was to consider the environmental consequences of tourism activity[3.4-3.6]. In 2007, having already produced a regional Environmental Satellite Account (ESA) for Wales, WERU combined the TSA data with information from the ESA to explore selected environmental effects of different types of tourist consumption[3.5]. Jones and Munday (with Dr. Andrea Collins from Cardiff School of Planning and Geography) then applied this new methodology, alongside economic analysis, to an alternative problem: the quantitative assessment of the economic and environmental impact of individual sporting events[3.6]. Findings demonstrated the significance of visitor travel behaviour in levering the majority of environmental impacts at large events and how far monitoring and evaluation procedures can be used to mediate visitor travel behaviour. The economic effects were often overstated by event organisers post-event, pointing to the need for tools to provide more accurate evaluations to support public spending choices. This

[1] http://www.visitbritain.org/insightsandstatistics/visitoreconomyfacts/

suite of extensions to the TSA structure was, in Wales, integrated into the Tourism Impact Model (TIM), giving policymakers a flexible tool to consistently and comparably assess the impact of tourism policy on the regional economy and environment. To the researchers' knowledge, the TIM is the only regional policy impact assessment tool that provides both economic and environmental metrics, and is based on a TSA that is published and compiled to international WTO standards.

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

1. **Jones, C.**, **Munday, M.** and **Roberts, A.** (2003) Regional Tourism Satellite Accounts: A useful policy tool? *Urban Studies*, 40(13): 2777-2794. 10.1080/0042098032000146894
2. **Jones, C.**, **Munday, M.** and **Roberts, A.** (2009) Top down or bottom up? Issues in the development of sub-national Tourism Satellite Accounts, *Current Issues in Tourism*, 12(4): 301–313. 10.1080/13683500802346177 (Available on request from the HEI)
3. **Beynon, M., Jones, C.** and **Munday, M.** (2009) The embeddedness of tourism-related activity: A regional analysis of sectoral linkages, *Urban Studies*, 46(10): 2123-2141. 10.1177/0042098009339428
4. **Jones, C.** and **Munday, M.** (2007) Exploring the environmental consequences of tourism: A Satellite Account approach, *Journal of Travel Research*, 46(2): 164-172. 10.1177/0047287507299592
5. **Jones, C.** (2013) Scenarios for greenhouse gas emissions reduction from tourism: an extended Tourism Satellite Account approach in a regional setting, *Journal of Sustainable Tourism,* 21(3): 458-472. 10.1080/09669582.2012.708039 (Available on request from the HEI)
6. **Collins, A.**, **Jones, C.** and **Munday, M.** (2009) Assessing the environmental impacts of mega sporting events: Two options? *Tourism Management Volume*, 30(6): 828-837. 10.1016/j.tourman.2008.12.006

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

Tourism and leisure sectors increasingly feature in the strategic plans of regional development agencies but often with little evidence to support the role of tourism as a local economic driver. Furthermore, measures of tourism activity have typically centred upon gross expenditure by tourists but this does not reflect the impact on, for example, regional employment or gross value added, both important indicators for regional economic performance. In addition, demand has increased for appropriate monitoring and evaluative mechanisms for assessing and reducing the environmental impact of tourism. WERU research has addressed both these needs.

Tourism Satellite Account development

WERU's development of the first TSA for the UK and their continued involvement with the production of TSAs for Wales has contributed to a change in the international landscape of how governments evaluate and manage tourism, as well as providing an essential foundation on which national and regional governments have built more established infrastructures for monitoring the effects of tourism (beyond simple expenditure).

Jones' participation in the **UN World Tourism Organisation** Committee on Statistics and Tourism Satellite Account provided a pathway by which WERU's research achieved international impact. Research on the development of regional TSAs was presented in a paper written by Jones as part of the organisation's Enzo Paci Papers on Measuring the Economic Significance of Tourism, and thus contributed to their International Recommendations on Tourism Statistics[5.1]. Sections 8.26-8.32 reflect WERU's recommendation that, in regional analyses, three subsets of visitors to a region be identified (international, national, regional). This report was published in 2008 by the **UN Department of Economic and Social Affairs Statistics Division** and now serves as a guide to staff involved in compiling tourism statistics in national statistical offices across the world.

The UK TSA feasibility study by WERU researchers provided the fundamental basis for subsequent **Office for National Statistics'** (ONS) estimates and was "*critical to the formation of the **Tourism Intelligence Unit** (TIU) at ONS*"[5.2] in August 2008. UK Regional Development Agencies partnered with the ONS to develop this unit, with WERU research providing "*a framework for an important part of [the TIU's] work programme to develop a consistent set of TSA results for the UK*"[5.2]. The formation of the TIU "*has led to a more consistent approach to the measurement of tourism in the UK*", with the Department of Culture, Media and Sport employing the TSA results "*to inform them about the performance of tourism in the UK*"[5.2]. The establishment of the TIU is particularly important in light of new European legislation concerning European statistics on tourism (No. 692/2011) which requires Member States to contribute sufficient data to enable the assessment of the macro-economic importance of tourism based on the framework of TSAs. In the

run up to the introduction of this legislation, WERU's development of the UK TSA contributed to a 'Report on the implementation of TSA in 27 EU Member States' which was published by the **European Commission's Directorate-General Eurostat** in 2009[5.3]. This report featured WERU's work developing the UK TSA and acknowledged their contribution to Ireland's TSA.

Economic and environmental impact analyses

From 2002 to 2010, WERU were involved in the consultation and stakeholder engagement exercises which led to the creation of a dedicated **Major Events Unit (MEU) within the Welsh Government** in 2009 and, subsequently, in the development and publication of Wales' first major events strategy (Major Events Strategy for Wales 2010 – 2020)[5.4]. For example, Jones contributed a written report and oral evidence to the **Welsh Government Communities and Culture Committee** cross party enquiry into major events and their impacts (2010)[5.5]. "*In particular, WERU contributed to the development of an assessment framework and criteria which enables government to assess the value of events in an objective and equitable way. This framework has been welcomed by the events industry in Wales, the UK and internationally*"[5.4]. Impact analyses conducted by WERU on events inside and outside Wales (e.g. Rugby World Cup, Wales Rally GB, Tour de France grand depart), provide "*an important reference point for the MEU which regularly draws upon the research to provide the evidence base for funding and policy advice to ministers. For example, WERU research into the economic impact of the Heineken Cup Final was a key consideration in the decision to provide funding for the 2014 Final to be held at the Millennium Stadium*"[5.4]. Beyond Wales, WERU's research has contributed to preparations for the 2014 Commonwealth Games in Glasgow (Legacy lessons from past large-scale sporting events: Review of evidence, 2012) and debates surrounding the potential economic benefits of the 2014 Tour de France Grand Depart in Yorkshire ('Yorkshire seeks Tour de France windfall in 2014', 2013).

The **Tourism Impact Model (TIM)** is a unique policy tool which was developed in response to demand from organisations such as **Visit Wales**[2]; they found that TSAs had limitations, including the absence of 'indirect' tourism impacts and their essentially static and historical nature. In contrast, the TIM allows policy-makers to answer the future-orientated 'what if' questions and to consider the indirect effects of tourism. **Visit Wales** use both the TIM and TSA "*to develop an accurate, reliable and transparent understanding of the economic significance of tourism in Wales, which enables* [them] *to assess a number of tourism policy interventions*"[5.4]. In the face of increasing public scrutiny of government expenditure the **Welsh Government** has used WERU's research to justify specific projects. For example, WERU's impact analysis of the newly opened Wales Coast Path in 2011-12, which led to economic impact estimates of £16m, features both on the Welsh Government website (Wales coast path visitor spending) and in a news article[5.6] which reported that a further £1.15m would be spent on the path network in 2013-14. A similar report, published in 2011, was also used by **Ramblers Cymru** and the **British Mountaineering Council** (who were involved in commissioning the work) to promote and support their agendas.

WERU have also used the TIM and related analyses to support local authorities in developing tourism strategies. An example of this is the impact analysis of Swansea City Football Club's Premier League Status, carried out for **City and Council of Swansea** (January 2013). This study has been used by the Council's Premier League Steering Group (representatives of the Council, Welsh Government, Stadium and Police) in "*planning and organising a range of operational and marketing services*" and has "*influenced the Council's own economic/tourism development and marketing activity*"[5.7]. In particular, "*obtaining an estimated value of the substantial economic impact [£58m] has generated a greater focus on the importance of exploiting the opportunity*"[5.7]. Following Cardiff City's promotion to the Premier League (April 2013), the report was also used by **Cardiff Council's Tourism Analyst** in a report regarding ways the council could capitalise on the economic, sporting and cultural benefits of the promotion[5.7]. Beyond Wales, this research has also contributed to a **House of Lords** debate (July 2013) having featured in a Library Note provided to participants (Debate on 25 July: Contributions of English Premiership Football to the UK)[5.8].

In parallel with their economic impact research, WERU have expanded the TIM to include estimates of the environmental consequences of tourism. This development has enabled economic and environmental trade-offs, for example, between jobs and increased greenhouse gas emissions, to be revealed and quantified within a common analytical framework for the first time. This has been welcomed by the Welsh Government, for which sustainable development is a key

[2] The tourism team of the Economy, Science and Transport Department within the Welsh Government.

theme. The TIM has been adopted as the key evaluative tool to understand the impact of the £120m **Environment for Growth** initiative (2006-2013), funded by the European Regional Development Fund[5.9]. The initiative comprises six strategic projects aimed at developing the outdoor visitor economy in Wales, managed by the Welsh Government, Visit Wales, CADW (the Welsh Government's historic environment service) and Countryside Council for Wales. Projects are subject to common monitoring and evaluation procedures and WERU were asked to provide a central management service for this. In this role, WERU have provided monitoring forms, a guidance pack, centralised data analysis, and have delivered a series of workshops for project managers to build capacity in the field of economic analysis[5.9]. The application of the model has so far involved the collection of visitor data on a consistent basis across almost 200 sites/projects.

The TIM model has also been used to evaluate policy interventions in sectors other than tourism. WERU have undertaken a number of projects for **Environment Agency Wales** which have enabled them to make the case to Welsh Government to continue funding beneficial programmes of work. For example, they used WERU's research "*to demonstrate the value of work undertaken to reduce flood risk in protecting jobs*", strengthening "*justification for additional funding*"[5.10]. Through working with WERU researchers, staff have "*gained confidence in exploring the economic dimension of* [their] *work, to the extent that this is now common practice … a significant achievement which should not be under-estimated*"[5.10]. Through changes such as these, WERU's research has helped make the case for "*interventions that are likely to be more sustainable*"[5.10].

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

1. United Nations World Tourism Organisation (2008) International Recommendations on Tourism Statistics. Jones named as a participant of the UNWTO Committee on Statistics and Tourism Satellite Account (p *iv*). Evidence of the influence of research on regional analysis in sections 8.26-8.32. Available at: http://unstats.un.org/unsd/publication/Seriesm/SeriesM_83rev1e.pdf
2. Statement: Head of the Tourism Intelligence Unit, Office for National Statistics. Corroborating WERU's contribution, in particular that of Jones, to the TIU's work.
3. European Commission's DG Eurostat (2009) Report on the implementation of TSA in 27 EU Member States. Corroborating WERU's contribution to the UK (p.307-8) and Ireland TSAs (p.248). Available at: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-09-021/EN/KS-RA-09-021-EN.PDF
4. Statement: Acting Director of Marketing, Visit Wales, Welsh Government. Corroborating the use of WERU research in informing development of the Major Events Strategy for Wales 2010 – 2020 and establishing the Major Events Unit.
5. Documents relating to appearance of Jones in front of the National Assembly for Wales Inquiry for Major Sporting Events in Wales (2010), including: report submitted to the committee; transcripts from 28 Jan (Jones evidence p16-26) and 11 Feb (discussion of Jones' evidence p6-7); and, the final report (reference to Jones' evidence p20). All available from: http://www.assemblywales.org/bus-home/bus-third-assembly/bus-committees/bus-committees-scrutiny-committees/bus-committees-third-ccc-home/bus-committees-third-ccc-agendas.htm?ds=2/2010
6. BBC News Wales (2013) Wales coastal path brings £16m economic boost, 30 January 2013. Corroborating use of WERU research by the Welsh Government to justify spending. Available at: http://www.bbc.co.uk/news/uk-wales-21259987
7. Statement: Head of Economic Regeneration & Planning, City and Council of Swansea. Corroborating the use of the WERU report by the Council.
8. Transcript of House of Lords debate into English Premier League Football (25 July 2013). Corroborating use of research by parliament, specifically, Lord Watson of Invergowie (p27, paragraph 2). Available at: http://www.publications.parliament.uk/pa/ld201314/ldhansrd/text/130725-0001.htm#13072523000350.
9. Environment for Growth Monitoring & Evaluation website. Corroborating use of WERU methodologies by Welsh Government in evaluating projects. www.e4g.org.uk/homepage.aspx
10. Statement: External Funding Advisor, Natural Resources Wales (formerly Environment Agency Wales). Corroborating the use of research by the EAW.

All documents and web pages were saved as pdf on or before 18.09.13 and are available on request from the HEI.