Tourism Satellite Accounts: Progress in Wales and the UK

Calvin Jones, Welsh Economy Research Unit, Cardiff Business School
Cardiff University, Jonesc24@cf.ac.uk

Introduction and Background: Measuring the Tourism Economy

This paper reports on a project undertaken in Wales, to develop a Tourism Satellite Account (TSA). A TSA is an extension to a set of national (or in this case, regional) accounts that enables, for the first time, a consistent comparison of the value of tourism with other economic activities, and with tourism elsewhere.

The measurement of tourism in *economic* terms has historically been very difficult. This is because tourism is not an industry (in the same way as, say, electronics, or insurance for example). Rather, a wide range of products is purchased by visitors from their destination (in this case Wales) before, during and after any tourist visit. It is the economic value (to Wales) of *all* these purchases made, and the employment dependent upon the production and distribution of these goods, that we should think of as the 'tourist economy'.

Following the above, measures of the economic importance of tourism which rely only upon enumerating visitor expenditure will be misleading, as not all expenditure will be on Welsh goods and services, and hence not all expenditure will support Welsh incomes and employment. For example, when a tourist purchases an item of clothing in a Welsh shop for £50, it is only the retail margin which directly supports economic activity in Wales. The value-added associated with the production of the imported good itself, and any sales taxes, leave the Welsh economy.

Equally, counting up all employment in 'tourist related industries' such as hotels or recreation will also be inaccurate. Such measures ignore that some employment in other industries is dependent upon tourism, and conversely, that not all employment in tourism industries will be tourism-dependent if industry sales rely in part on the purchases of people who are not visitors (for example in the case of a hotel bar used by local residents).

The Tourism Satellite Account

In order to overcome the measurement difficulties outlined above, the World Tourism Organisation (WTO) has championed the development of the **Tourism Satellite Account** (TSA). The TSA enables us to measure the true economic 'worth' of tourism, and for the first time to examine the *nature* of value-added due to tourism. The TSA method also enables us to estimate with some accuracy how much employment is dependent upon tourism. WTO, the Organisation for Economic Co-operation and Development (OECD) and EUROSTAT have adopted the method as the most appropriate way of assessing the economic contribution of tourism for nation-states.

A Satellite Account is an extension to a System of National Accounts (SNA) which enables an understanding of the size and role of economic activity which is usually 'hidden' with such accounts. For example, an SNA will not distinguish between a newspaper purchase by a tourist or by a local resident. Within the TSA these purchasing groups are separated (usually tourists are further separated into different types). This enables the estimation of key variables such as how much individual industries depend upon tourists, and, by extension, how much value-added and employment is supported by tourists. The first pilot set of accounts was developed for the UK during 2004.

The TSA as suggested by WTO and EUROSTAT consists of ten tables, though only eight are recommended as currently suitable for development (there remain unresolved issues with TSA Tables 8 and 9), and only six are considered 'core' tables (TSA Table 7, employment and TSA Table 10, non-monetary indicators, are not directly linked to the SNA) The illustration below outlines what information is contained in the TSA.

Table 1- Tourism Satellite Account – The Constituent Tables

TSA Table	Coverage	Notes
1	Inbound tourism expenditure	Part of aggregate demand; i.e. an export
2	Domestic tourism expenditure	Part of domestic total consumption
3	Outbound tourism expenditure	Not generally linked to other TSA tables so is often not estimated
4	Domestic 'tourism final consumption'	Synthesised from Tables 1 & 2
5	Production of tourism commodities	For example the services and products of 'tourist related' industries but also of non-tourist related industries
6	**Domestic supply & consumption by product**	A reconciliation of Tables 4 & 5. The heart of the TSA
7	Employment & labour use	Structure not yet fully agreed
8	Tourism Fixed capital formation (investment)	Not currently reported
9	Tourism Collective Consumption	Not currently reported
10	Non-monetary Indicators	e.g. tourism volumes/nights; types of tourist etc. Structure can reflect most useful indicators

Many nations have developed pilot accounts, including, as stated, the UK in 2004. However, few *regions* have developed TSAs; those in Norway and Canada, and several in Spain. However, even here regional results are usually top-down allocations of national totals rather than 'bespoke' regional tourism accounts. Recently, work has been undertaken in Wales and Scotland to develop 'bespoke' TSAs for these regions.

The Tourism Satellite Account for Wales is, then, along with the Scottish account developed in 2004, innovative and novel. The Welsh TSA is in its second iteration and (like the UK and Scottish accounts) relates to the year 2000, although key estimates have been 'rolled forward' to 2003. As with the UK project, year 2000 was chosen to provide a "benchmark" year prior to the upheavals of foot and mouth and September 11th 2001.

The Welsh Tourism Economy

Results from the TSA show that in 2000, total visitor expenditure in Wales was **£3.5bn**. The most important portion was that due to day visitors at £1.5bn. The TSA estimates that, of non-day visitor spending, 64% was holiday related, 20% business tourism and 16% Visiting Friends and Relatives (VFR) and other (tourism day-visit spending is all leisure-related).

Comparison of tourism *spending* in Wales with the output of tourism related *industries* in Wales provides us with an estimate of *direct* tourism-related value-added. For 2000, this was estimated at **£1.1bn**. This was **3.7%** of whole-economy value-added in Wales in that year. It is important to remember that this figure does not include indirect value-added that occurs, for example, in the supply chain as tourist-facing businesses purchase goods and services from other Welsh businesses (Table 3).

The TSA also tells us how *dependent* different industries in Wales are upon visitor spending. Different industries sell different proportions of their commodities to tourists. Important products in this respect include:

- Accommodation (serviced and non-serviced) (85% tourist-dependent)
- Restaurants and bars (51%)
- Transportation services (10%)
- Recreation (8%)
- Tourist attractions (100%)

Around 9% of sales in the retail and distribution sector, including motor fuel sales, are tourist-dependent. Comparison with figures for the UK reveal that the accommodation and restaurant sectors in Wales are more dependent on tourists than in the UK as a whole (although proportionately smaller), whilst transportation sectors in Wales are far less tourist dependent.

This latter finding is probably explained by the relative lack of non-road transport infrastructure in Wales, and the consequent reliance by tourists on private transport. It also illustrates that a proportion of tourism value-added arises from well-developed international transport infrastructure (air and seaports).

Tourism-Dependent Employment in Wales

If we apply the tourism ratios outlined above to the different industries which produce those commodities (often more than one industry will produce a commodity) we can estimate the amount of employment which is dependent on tourism in Wales. Typically, not all jobs in a given "tourist" industry are tourism-dependent as

Table 2 - Tourism Consumption by Purpose of Visit (2000)

Purpose of visit	***£m***	
Holiday Tourism	1,220	*64%*
Business Tourism	390	*20%*
Visiting Friends and Relatives/Other	300	*16%*
Spending by Welsh residents before a trip abroad	130	-
Day Visitors	1,450	-
Total Tourism Consumption	**3,495**	**-**

Table 3 - Derivation of Tourism Value-Added from Gross Visitor Consumption

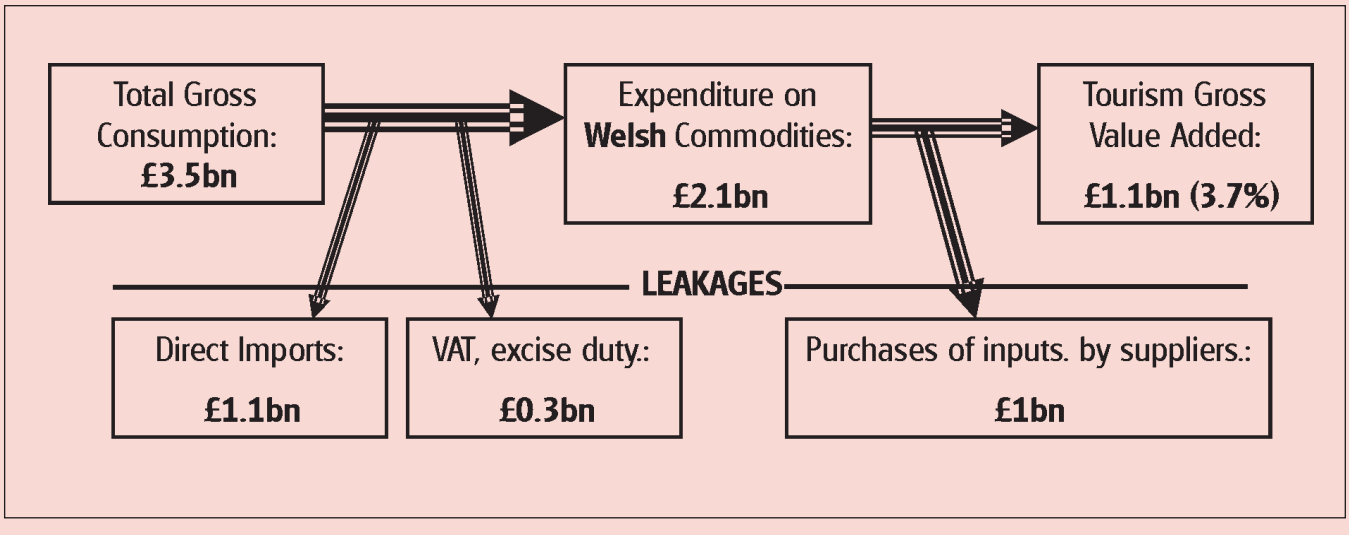

Table 4 - TSA Results – British Isles Comparisons (2000)

	Wales	Scotland	Ireland*	UK
Tourism Consumption	£3.5bn	£7.4bn	€6.8b	£90bn
Tourism Gross Value-added (% of economy)	3.7%	3.0% (3.8%*)	3.8%	2.9%
Tourism Employment	76,000	130,000	147,000**	1,260,000
(as % of all workers)	6.2%	5.0%	8.6%**	4.7%

*Scottish GVA re-worked on same basis as UK & Wales
**Ireland employment estimates include *indirect* employment thus not comparable.
Abstracted from DCMS (2004); Hayes and Boag, 2004; Deegan et al. 2004

some turnover and hence incomes will depend on non-visitor demand.

The TSA for 2000 gives an estimate of **76,000** tourism-dependent workers in Wales for this year, including self employed and owner-managers. This comprises around **6.2%** of all workers in Wales. If we convert this to full-time equivalent jobs, we achieve an estimate of **59,000** FTEs or **5.5%** of all FTEs in Wales, showing that tourism-related employment is relatively more seasonal and/or part-time in nature. By far the largest portion of tourism dependent jobs are in restaurants and bars, at 29,000. Meanwhile, in hotels and other accommodation, 18,400 jobs are tourist-dependent.

It should not be forgotten that the above figures relate to *direct* employment only, and do not take account of multiplier effects which are discussed below.

The figures above imply that tourism is more labour intensive (and hence lower value-added) than most other industries in Wales. However, this varies widely across tourism industries, with transport sectors in particular having very high levels of value-added per employee.

Comparative Statistics: Wales and the Rest of the British Isles

Results from TSAs undertaken elsewhere suggest that the tourism economy in Wales is, in terms of relative scale and importance, much the same as for Scotland and the UK as a whole. However, in Wales value-added is concentrated much more in 'hospitality' sectors such as accommodation, food and retail than for the UK, where transport services are proportionally more important. This is because Wales cannot lever much of the spending associated with international arrivals or inter-regional public transport due to the lack of infrastructure in the region.

Tourism in Wales Since 2000

Although the TSA is benchmarked to year 2000, key estimates can be 'rolled on' using more recent information on tourism consumption. Undertaking this exercise illustrates the difficulties experienced by the sector during 2001 and 2002, when tourism gross value-added dropped from £1.12bn to £1.07bn before recovering to perhaps £1.14bn in 2003. This real decline in tourism consumption has meant that for 2003, the best estimate of tourism gross value-added as a proportion of whole economy is **3.3%.** During this period, tourism dependent employment declined by an estimated 3,000 jobs although employment has since recovered to beyond its level in 2000.

Modelling the Impact of Tourism on the Rest of the Economy

The key results from the TSA are interesting and informative, telling us as they do about the overall levels of *direct* tourism value-added in Wales, this totalling £1.1bn in 2000 and comprising 3.7% of all value-added. However, this is not the full extent of tourism's impact. As tourism industries demand inputs to service the needs of their customers, and as workers in tourism industries spend their wages, there will be indirect (supply chain and wage-related) impacts.

We are unable to estimate indirect value-added and other variables without further manipulation of the TSA. This manipulation essentially turns the tourism 'account' into a tourism 'model'. This Personal Computer-based model is known as the *Tourism Impact and Planning Model for Wales (TIPM*). Its development is crucially dependent upon the Welsh TSA but it is important to remember that the TSA and TIPM are not the same: TIPM is a modelling tool which requires some restrictive assumptions that are not needed for the TSA.

The modelling of tourism in Wales indicates an overall (direct and indirect) total for Welsh tourism value-added of **£1.7bn**. Thus, the direct and indirect impact of tourism in Wales in 2000 amounted to around **5.6%** of Welsh value-added.

TIPM allows us to examine the indirect effects of tourism activity in other ways, including the impact upon incomes and employment, and output or profits of Welsh-based companies. For example, directly and indirectly, tourism supported **80,000** FTE jobs or **7.5%** of Welsh FTE employment in 2000.

Future Development of the Welsh TSA

The Welsh Tables are now fully consistent with EUROSTAT and World Tourism Organisation concepts,

Table 5 - Estimated Tourism-Dependent Employment in Wales, 2000-2003

Year		Persons	FTEs
2000		76,300	58,800
2001		75,800	58,400
2002		72,700	56,100
2003		77,900	60,000

Table 6 - Key Results from the Tourism Impact and Planning Model for Wales

£m 2000	*Direct*	*Indirect*	*Total*	*Multiplier*	*Approx % of Wales*
Output/Demand	2,080	1,220	3,300	1.60	-
Gross Value-added	1100	610	1,710	1.55	5.6%
Employment (FTEs)	58,800	20,840	79,740	1.35	7.5%

Notes:
The figures here are not identical to those reported in the Wales TSA due to the algebraic manipulation necessary to achieve economic multipliers.
Figures will not add due to rounding

definitions and methodology, with Wales perhaps one of the first regions globally to reach such a stage. Recent refinement of the TSA in Wales has included;

- Disaggregation of tourism products, to report guest houses/B&Bs and non-serviced accommodation separately (not available at UK level)
- Limited disaggregation by purpose of visit; holiday, business and VFR/other
- Development of TSA Table 7 – Employment in tourism industries

There are a number of areas where the TSA can be refined to provide more policy-useful information and contribute more fully towards tourism strategy and planning in Wales. These developments vary in cost and benefits, and discussions with WTB will decide the most appropriate next steps. However, issues under consideration are detailed in the following paragraphs.

Improved Consumption Data – Data on tourists' spending are not reliable and accurate at the UK-regional scale. However, in 2005 WTB will likely undertake primary research to supplement existing national surveys. The next iteration of the TSA will use any new data to improve estimates of overall visitor consumption and hence key headline outputs such as tourism value-added and tourism-dependent employment.

Timely Indicators – The full TSA is only available several years after its "reference year" and even annual estimates are often more than a year out of date. Work is underway in Scotland which seeks to link TSA outputs with quarterly estimates of value-added in the economy to provide timely indicators of industry progress. Whilst Wales does not currently have a similar GVA time-series, the next phase of work will investigate the applicability of this work and that undertaken elsewhere to the Welsh case.

Sub Regional Indicators – Tourism is an extremely uneven activity in Wales and it is likely that for many coastal and rural areas (including some of the most deprived) tourism comprises a far higher share of GVA than for the nation as a whole. It is difficult to assess this contribution at present. The next phase of the report will examine methodologies to produce "key" TSA estimators for sub-regions of Wales, including value-added and tourism industry employment. It is not possible (or desirable) to produce full TSAs for sub-regions as the cost and data implications would be extremely significant.

Progress in the Rest of the UK
As noted earlier, pilot TSAs have been developed for both the UK and for Scotland. Also during 2004, pilot studies were undertaken for the Crown Dependencies (Jersey, Guernsey and the Isle of Man), Northern Ireland and for English Regions. In each of these cases it is not currently possible to develop a full TSA as they do not benefit from the economic accounting structures that are available for the UK, Wales and Scotland.

It is difficult to envisage much further progress in English Regions in particular without a significant increase in the level of resources allocated to both tourism consumption data and regional accounting in England. So far, there is little evidence that Regional Development Agencies can lever this kind of improvement in the statistical base, given their relatively low level of resources and lack of direct influence on the priorities of the Office for National Statistics. The devolved authorities and agencies in Wales and Scotland have meanwhile been more successful in identifying increases in resource for basic data collection and analysis which forms the basis for the TSA and, potentially, other high-value outputs.

Conclusions
With its adoption by OECD, World Tourism Organisation and EUROSTAT, the TSA has emerged as the only internationally acceptable way to measure the economic significance of tourism. At a TSA conference in November 2004, EU representatives made it clear that member states would in future be required to provide information to EUROSTAT that would be of use in constructing TSAs. Thus, development of these accounting systems within the UK may be important in justifying future funding and support for tourism activities and facilities, including EU grant aid.

It is clear that Wales and Scotland are ahead of other regions in the UK (and arguably the UK itself) in TSA development. English regions will find it difficult to keep pace unless underlying statistical systems (that is, well developed sets of regional accounts) improve markedly, either as provided by the Office for National Statistics, or as individual Regional Development Agencies commission or undertake this fundamental work. However, the strong support for the method by the Board on the one hand, and VisitScotland and the Scottish Executive on the other, suggests that, in the short term at least, the statistical and analytical gap may widen further.

Endnotes:

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