THE ECONOMIC IMPORTANCE OF MEETINGS AND CONFERENCES: A Satellite Account Approach

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1 INTRODUCTION

Business tourism, and specifically meetings, conventions and exhibitions (MICE) activities, have long been targeted for growth by governments, industry and other responsible agencies. This focus can be seen at national and city level. There are a number of reasons for this. Firstly, there is an assumption (and some evidence) that business travellers have a higher spend, at least per day, if not per trip, than leisure visitors. Secondly, there may exist the potential to utilize visitor-relevant facilities over a longer period than the traditional holiday peaks. Thirdly, the amenities that a city or country can offer may be extended by development of exhibition and conference facilities that a strong MICE sector can support, with co-benefits for residents, and perhaps for a destination's wider attractiveness.

The focus on MICE is not, however, uncontentious. In order to attract convention traffic, cities will often invest in (or otherwise support) conference

and exhibition facilities that are expensive, and hence are an opportunity cost in terms of alternative policy interventions (Baade et al 2008; Boyle 1997). This is particularly relevant because such facilities are in many places economically marginal, and many even require ongoing public subsidy. The rationale for public support then rests on the economic benefits accruing to the wider economic area consequent on visitor spending or an improved competitive position vis-a-vis other urban areas. This mirrors the policy situation for other visitor-facing facilities that often require public support, such as iconic cultural facilities, and the sports stadia that host major sports events (see for example Coates & Humphreys 2000; Jones 2002). It is unfortunate then that it has traditionally been difficult, if not impossible, to transparently and consistently measure the economic significance of MICE activity for a destination – be that a nation, region or city. Without such measurement, the information necessary to make good policy will not exist – as Sanders (2002) pointed out in a wide review.

There is then a significant gap in policymakers' armoury of evidence to assess the economic (and developmental) impact of new visitor-facing infrastructure. This is important, with conference facilities and related infrastructure often costing very significant sums, and the potential for poor policy and costly implementation in this area well recognised (Flyvbjerg, 2008). This paper presents an approach to measuring the economic impact of MICE activity in terms of the employment and gross value added supported in a reference economy. Here we seek to provide two key contributions. Firstly, to establish whether the economic significance of conference activity can be measured in

a transparent and replicable fashion, enabling reliable comparison between MICE and other economic activities, and between MICE activities in different places. Secondly, to assess whether such analysis is cost effective and useful given prevailing policy contexts (and at different spatial scales). This paper provides a third, related contribution in that it evidences a way in which established satellite accounting methodologies, specifically tourism satellite accounts (TSAs), can be adapted and extended to provide information on the economic scale of other formerly 'hidden' economic activities.

Here, then we show how we adapt and integrate a substantial MICE industry and attendee survey programme to fill this intelligence gap via the development of a pilot meetings satellite account (MSA) for the UK for 2011. The MSA estimates key headline economic indicators for MICE – most critically the gross value added (GVA) and employment directly supported by such activities. Tourism satellite accounting (TSA) methodologies are now widely accepted as the only appropriate way to measure the economic significance of tourism at national level, and our approach takes the TSA analytical model – its conceptual and methodological approach; transparency; embeddedness in national accounting structures; and key outputs – and applies it to MICE activity that is partly, but not wholly, a sub-set of tourism. Along the way a number of adaptations to, and developments of, the TSA are detailed which are required to make the MSA 'fit for purpose' (UNWTO 2006; UNWTO 2008).

In common with tourism in general, MICE happens not in countries but in places – largely in cities – and it is at this spatial scale that many relevant policy decisions arise. We therefore here comment briefly on the difficulties involved in estimating economic significance of MICE at sub-national scale. We also comment on the potential to extend the MCA to include estimates of indirect (multiplier) impacts of MICE activity, and highlight the difficulties inherent in modelling the impacts of such economic activity within established systems of national accounts (SNAs).

This paper will first examine the policy and measurement issues around MICE activity, and details the development of economic models, TSAs (and extensions) that allow a better understanding of the economics of visitation. Following a brief explanation of the background of the project undertaken for Meeting Professionals International (MPI) that allowed MSA development we illustrate the key difficulties and issues that arose during the compilation of the MSA[1], and present some headline results. We then revisit the policy context to consider whether MSA compilation takes us further along a path to understanding the sub-national or indirect impacts of MICE activity; and we finally reflect on whether MICE measurement might be integrated into wider satellite accounting approaches, enabling an on-going understanding of the economic significance of these activities.

2 THE ECONOMICS OF MEETINGS, CONVENTIONS AND EXHIBITIONS

[1] A discussion of survey data collection and difficulties is outside the scope of this paper, but these issues are nonetheless significant (see Black & Grant, 1997; MPI, 2013a for an illustration and some detail)

2.1 *MICE and Destination Development*

There is an increasingly prevalent view across many countries, regions and cities that a strong business tourism offer, and related exhibition and conference facilities are an important element in destination attractiveness, and by extension economic performance (PWC, 2011a; UNWTO, 2006). This follows a relatively straightforward causal argument – more MICE activity means more business visitors and accompanying people, often high spending, and hopefully at times when there is surplus capacity in hotels and restaurants, effectively extending the visitor season. Other, more subtle, arguments occur, for example that a wide range of amenities and facilities is necessary (for cities particularly) to compete in some notional 'attractiveness league' to attract visitors, and also capital investment and valuable highly skilled mobile workers (Hall, 2006). Here, then, responsible agencies might identify a market failure: the economic benefits of MICE activity are not wholly captured by the central attraction – the meeting house, exhibition hall or conference centre – but rather 'leak' into the locality as visitors stay and spend away from the event venue. There may therefore be an under-investment in these merit goods if investors cannot capture the full rent, and public authorities may be justified in encouraging their development through direct investment, tax breaks or subsidies, or other policy support.

This argument certainly has a ring of plausibility, and mirrors other arguments made for public support for other key destination facilities, even where they are privately owned. For example, cities often use mechanisms such as hotel

& sales taxes, tax breaks and subsidies to part-fund or encourage the construction of sports stadia and cultural venues, and with very similar arguments (Jones, 2002; Baade 2008). In some cases the benefit to city or region in comparison to the facility itself is clear. For example, Econactive (2013) estimated that visitors to the Millennium Stadium in Wales spend around £130m per annum on local goods and services, yet the facility itself has a turnover of only £15m.

This reading of the processes of national and local development and growth is not uncontested. There has long been a disconnect between policymakers attitudes to the need for visitor facilities, and academic evidence on their longer-term economic impact (Baade, 2008; Boyle, 1997; Coates & Humphreys, 2000). There are a number of reasons for this. Visitor facing occupations are typically lower wage and lower value adding than the economy average (in developed countries at least) meaning increased visitation activities might imply lower levels of city (or national) GVA per capita, at least in tight labour and capital markets (see Welsh Government, 2010 for a TSA-based, regional example). Secondly, the development process for large infrastructure – whether exhibition hall, conference centre, stadium or other mega project – is subject to political capture by both outside agents and local elites, and may be badly managed or at inappropriate scale if proponents are gripped by city 'boosterism' and then with potential economic impacts overstated (Kidd, 1995; Hall, 2006; Flyvbjerg, 2008). For example, Baade et al (2008) examined 18 national political conventions between 1972 and 2005 and found no correlation between conference hosting and municipal

growth, despite a longstanding argument that such signal events were of significant benefit to the host. Convention proponents might argue that benefits arising from such events are in large part intangible, and hence more difficult to measure with traditional economic tools, but without at *least* a reliable and consistent measure of economic impact for MICE, there may remain the perception that local constituents do not get good economic 'bang for their buck' (Dwyer *et al*, 2007).

2.2 *Estimating the Economic Importance of MICE*

The above debates suggest that in pursuit of good public policy we might at the very least hope for a basic understanding of the economic effects of MICE activity on a destination, for example in terms of jobs and GVA supported, even if this is only for the short term, and limited to measurable visitor and venue spending related effects. Work in tourism points to Input Output (IO) and Computable General Equilibrium (CGE) approaches as useful. These have been long employed to evaluate the economic impacts of tourism and events (Li and Jago, 2013). For example, tourism economic impact has been evaluated within IO frameworks in various countries and regions, such as Antigua (Pollard, 1976), Hong Kong (Lin and Sung, 1983), Singapore (Heng and Low, 1990) and the Seychelles (Archer and Fletcher, 1996). This is despite the limitations of IO analysis, which assumes no inputs and resource constraints, no changes in prices and costs, and fixed proportions between inputs and outputs, and between labour and output (Li and Jago, 2013; Jago and Dwyer 2007). CGE analysis can overcome these limitations but requires far more statistical data to inform the model, which is a significant challenge

for MICE (as well as for tourism) where data on market clearing behaviours, labour behaviour and capital mobility are scarce, and with these important for CGE outputs (See Blake, 2009 for some advances in these areas).

Several studies and reports have evaluated the economic contribution of MICE with a number manipulating IO tables to estimate the gross impact on metrics such as employment and output (see Kim *et al* 2003 for a Korean example). Deery *et al* (2005) applied TSA and IO modelling to evaluate the economic impact of business events in Australia, which revealed that these events brought AUD$11.3 billion of total value added. As one of the first studies of the national economic contribution of MICE this work informed the evaluation approach for a number of further studies (but did not extend or adapt the existing TSA to include MICE features). Four further studies estimated that total gross domestic product contributed by the meetings industry were CAD$11.3 billion in Canada in 2006 (Maratz Research Canada/The Conference Board of Canada, 2008), US$457.9billion in America in 2009 (PWC, 2011a), US$25.1billion in Mexico in 2010 (PWC, 2011b) and DKK15.3billion (total value added) in Denmark in 2010 (VisitDenmark, 2012). However, these studies did not construct – or in any case publish - a comprehensive and fully revealed economic account for the supply and demand side of MICE, and this reduces the replicability and transparency of their findings. A number of studies have captured the economic significance of only part of MICE. For example, Oxford Economics (2012) assessed the economic impact of the UK exhibitions industry using IO modelling and found

that this industry contributed £5.6 billion of valued added to the UK economy in 2010.

The metrics reported in these MICE studies are similar to other sectors' IO based approaches, estimating GDP (or GVA) and employment dependent on meetings activity, and with in some cases, additional analysis of the tax revenue dependent on such activity. Whilst these studies are well resourced and include significant bespoke survey information, they suffer from a number of methodological and contextual limitations. Firstly, as recounted above, they are restricted in their analysis by the mismatch between extant national accounting frameworks and the reality of MICE economic transactions, particularly with regard to business-to-business (B2B) relations, and the purchases of bundled venue and accommodation services from agents (UNWTO, 2008). For example, the PWC approach utilises the well established IMPLAN input-output model but, from a reading of the report, is restricted to an analysis of economic relationships between *existing* sectors, rather than re-structuring commodity or industry classifications (PWC, 2011a).

Secondly, and perhaps arising from their private sector origins, there is little transparency in exactly how for headline GDP and employment estimates have been calculated – either in terms of direct or indirectly MICE-supported activity. This means it is difficult to deduce from prior work just how the compiler or analyst should go about their work to ensure comparability; or indeed to assess whether the existing studies are themselves comparable.

A third issue, related to the above, is that these studies are driven by the MICE sector itself, and with private sector analysts. This means that access to underlying, unpublished national accounting data will be limited, and skills and techniques employed *may* be unsuited to delivering results that are comparable within such contexts. This is particularly relevant as straight IO-analyses have in practice been superseded by TSA approaches as the tools whereby the economic significance of wider visitation is assessed - by governments and in direct terms at least - see the work of the UK's Tourism Intelligence Unit for example[2]. It does not appear that MICE studies, and the pioneering work in developing concepts and approaches for meetings-relevant TSAs (UNWTO 2006; Dwyer *et al* 2007), have benefited from cross fertilisation.

There may also occur the suspicion that studies funded by industry may be subject to a development context that encourages the estimation of bigger numbers, or, for example, the neglect of opportunity cost. Whilst this may indeed be the case, the effects should not be overstated, as there is ample evidence that such 'optimism bias' occurs across many public policy interventions, irrespective of the founders and funders (Flyvbjerg, 2008).

2.3 *Levering Tourism Satellite Accounts for MICE Analysis*

Given the above discussion, it is plain that a transparent, replicable approach to MICE economic impact estimation, embedded in systems of national accounts (SNA), is a laudable and policy-relevant objective. The development

[2] http://www.visitengland.org/england-tourism-industry/etip/tourism_intelligence_unit.aspx

of Tourism Satellite Accounting methodologies by UNWTO and partners, particularly since the Nice conference of 1991 has provided an ideal context within which to understand the economic significance of MICE.

The TSA reveals the economic scope and scale of visitor activities in just the transparent, replicable and SNA-contextualised manner described above (albeit with a number of limitations that are discussed below). Here, the supply of tourism-characteristic and related products (such as accommodation, hospitality and transport) is detailed and reconciled with the demand for those products from visitors – be these domestic, international arrivals, day-excursionists or business travellers (UNWTO 2008; see Table 1 for an abbreviated schema). The supply of tourism products is also disaggregated in the TSA between supplying industries – for example, serviced meals might be supplied by the restaurant *or* accommodation industries and with these industries potentially having different production characteristics and economic consequences. The TSA then has a number of benefits. Critically, the reconciliation of supply and demand gives rise to 'tourism ratios' on industry and product supply – we can estimate, for example, what percentage of restaurant output is consumed by visitors as opposed to residents (Frechtling, 2010). The application of these ratios to key industry metrics such as value added and employment can then provide an estimate of tourism-dependent value added and employment for that industry, and by aggregation, all industries (UNWTO, 2008; and see Office for National Statistics, 2012 for a practical application).

The critical advance of TSA approaches over earlier tourism impact, is that they are contextualised within, and largely arise from, wider economic measures that originate from national statistical agencies, and adhere to international recommendations. This means they can be used to examine the economic scale of tourism relative to other industries and in other places – for example across the European Union (EUROSTAT, 2010). TSAs have also been extended to establish even wider impacts and in application to specific policy problems – for example, examining the environmental impact of visitation, and the impact of specific visitor events (Jones and Munday, 2007; Collins et al 2009). These extensions, it should be noted, are equally applicable in theory to a developed MSA.

Despite these strengths TSAs bring significant limitations, some shared with other impact approaches, and some that are very specific to satellite accounts. Most critical, here is the restriction to the direct impact of tourism activity – with indirect (supply chain & induced income effects) explicitly excluded (UNWTO, 2008; Smeral 2006). This raises a central issue. Although TSAs are often conflated with IO and CGE modelling as a way of understanding tourism impact, it is a fundamentally different tool and serves a different purpose. A TSA is a static account that captures only the direct contribution but not the total economic impact of tourism, while IO and CGE modelling can evaluate (at least within their theoretical constraints) the total impact (direct plus indirect). This limitation of the TSA is carried to the MSA - calculating direct expenditure spent by meeting attendees, organisers and venues, but not evaluating the indirect and induced impacts. The MSA, like

the TSA is part of a national account, but not an economic model – and, not unimportantly for policymakers, will typically produce smaller estimates of economic impact than modelling approaches (Jones and Munday, 2008).

The TSA then has moved on the game for a visitor economy formerly poorly served in national statistical systems, restructuring and disaggregating industry or commodity classifications traditional final demand to better reveal visitor spending. However, TSA developments fail to fully serve the purposes of MICE. For example, TSAs typically do not distinguish between event venues and event organisers in their assessment of economic impact, but an understanding of the nature and scale of transactions between these agents is vital to a proper estimate of related gross value added. The treatment of travel agencies and tour operators within TSAs highlights similar issues relating to margins on re-sold services (see Smeral, 2006; UNWTO, 2008). As Jones and Munday (2008) also point out, their reliance on national statistical sources usually delays publication until well after the reference year, limiting their usefulness in policy. Nonetheless, the lessons of TSA development, in terms of concept and general approach, as well as its structures, are a very useful starting point for an understanding of the economics of MICE as relates to a host economy.

MICE is not wholly, of course, a subset of tourism, with some (perhaps smaller) meetings undertaken within the usual environment of attendees, and perhaps in some cases minimal trip related expenditure. There is also a

predominance of B2B transactions that is unusual in a tourism context, and these require careful thought. Nonetheless, the TSA area of interest overlaps to a considerable extent with MICE activity, and the key methodologies used in the estimation of visitor-dependent value added and employment are applicable here, albeit so far with little impact on practical application as discussed in 2.2 above (Dwyer *et al* 2007).

TSA structures are, however, not themselves *immediately* amenable to producing an understanding of MICE activity. Problematically, TSA structures are not sufficiently disaggregated to identify key players on the MICE field. For example, in the UK the TSA *does* distinguish exhibition and conference services, but does not separate these between venues and event organisers (or even make it clear whether these are both fully included in this sector) despite the fact they will have very different production and value-adding functions and labour intensities. Nor is it possible to attribute (for example) accommodation and transport spend by MICE attendees to the MICE 'industry' in the TSA despite the rationale for the trip depending fully on the MICE activity. There is thus required a significant further disaggregation and potentially re-ordering of TSA structures, on both the demand and supply side, to fully understand the economic significance of MICE.

Another issue relevant to the use of TSA as a basis for MICE economic impact is their relative narrowness of scope – at least compared to the policy questions at hand. TSAs are, by their very nature, static accounts that relate to a past time-period (often, fairly far-past). They are, the UNWTO makes

clear, only concerned with enumerating the *direct* economic benefits of tourism spending, excluding multiplier (supply chain and induced) effects. In practice they also exclude capital and public expenditure impacts, although this is to do more with conceptual and statistical uncertainties than with a definitive system bound (Smeral, 2006). Critically, for MICE applications, TSAs are most usually found applied to the national context, with data and institutional issues meaning regional applications are rare and city-level applications almost unheard of (although the work of Statistik Austria for Vienna is notable here[3]).

This lack of timeliness and of local results has stymied the wider use of TSAs for a considerable period (Jones & Munday 2008). A meetings satellite account that starts from a TSA perspective will share many of these limitations, initially at least. In presenting the project to build an MSA, we address the transformations necessary to create the MSA from a TSA base, and examine the prospects for extending the TSA analysis to include more policy and locally relevant results.

3. FROM TSA TO MSA: THE STUDY IN BRIEF

3.1 *MSA - A Conceptual Framework*

Table 1 illustrates a simplified conceptual framework of building MSAs. The original TSA includes tourism activities both relevant to the MICE, such as activities of tourists who attend meetings, exhibitions and business shows,

[3] http://statistik.gv.at/web_en/statistics/tourism/tourism_satellite_accounts/index.html

and not relevant to the MICE, such as activities of tourists who travel mainly for other purposes e.g. visiting friends and family or leisure. In constructing the MSA we identify and separate those portions of economic activity which are relevant to the MICE and which are not. In addition to the usual TSA 'supply side', we collate data relating to other MICE activities; such as the supply of specific MICE products and interactions between MICE industries (these not identified in TSAs). On the demand side, to the spending of business/MICE visitors we must add consumption of MICE attendees that are *not* visitors (attendees at meetings or conferences within their 'reference economy'; UNWTO, 2008), and other MICE consumption (e.g. exhibitors' spend, discussed later).

Table 1 then shows the overlapping TSA and MSA conceptual structures; the grey cells comprising the MSA. The element on the demand side which is common is business visitors to conferences and meetings.

Table 1 - Conceptual Relationship between the Tourism and Meeting Satellite Accounts (summary)					
Economic Supply	Economic Demand				
	Tourism Satellite Account		Meeting	Satellite	Account
	Domestic Resident leisure visitors	Arriving leisure visitors	MICE visitors & accompanying persons	MICE attendees (locally resident)	Exhibitors conference spend
Tourism MICE Characteristic and Related Products					
Accommodation products					
Hospitality and Catering products					
Transport products					
Conference and Exhibition Products					
…					
Non tourism/MICE products					

3.2 *The Study in Brief*

The compilation of the MSA was supported by (and in turn enabled) a comprehensive evaluation of the economic impact of MICE activity in the UK. Data collection (both primary and secondary) was eased by the collaboration and support of the industry, relevant associations, NGOs and government. The study identified five key stakeholders for survey on both the demand side (meeting attendees and exhibitors) and the supply side (meeting organisers, venue managers and destination management organisations).

The five stakeholders' revenue and spend, disaggregated by location and source/commodity are key inputs to the MSA (Table 2). Significant elements assessed included exhibitors' spend on exhibition specific products such as rental of exhibition stands, and on wider commodities; meeting organisers' spend on rental of the venues, planning and production; venues' spend on their suppliers such as catering, construction of the venues and other facilities; and Destination Management Organisations who subsidise meeting organisations. This information was collected in addition to extensive surveys of MICE attendees' behaviour and spend.

Table 2 Summary of data collected	
Survey Audience	**Types of Data Collected**
MICE host/organisers	The type of MICE (conference, exhibition, trade show or incentive), the total number of delegates, the number of delegates categorised by origin region/country, MICE length, expenditure on different supplies (venue hire, food and beverage, equipment, administration, advertising, keynote speaker and insurance) and revenue (registration fees, sponsorship, government and fees from exhibitors)
Venue managers	Number of MICE held, number of MICE under different categories (conference or exhibitions, small, medium or large), the total number of delegates, the number of delegates attending different types of meetings, seating capacity, building type (purpose built, unusual or unique venue, small hotel)
Governments and NGOs	Spend on supporting the MICE industry (advertising and promotion, subsidies), budget breakdowns and sources of revenue, changes in spending over recent years
Attendees (and their friends and family)	Number of accommodation nights for the MICE, number of extra nights for personal/professional reasons, the number of friends/family travelling with delegates, total spend in attending MICE
Exhibitors (and their friends and family)	Number of accommodation nights for the MICE, number of extra nights stayed, expenditures on the MICE (space rental, stand construction cost, equipment hire, electricity, advertising, hire of temporary staff, display material, freight), other expenditures on tourism-related products and services (accommodation, shopping, transport, food and beverage, entertainment, tours)

Source: Table 3, Final Report, MPI (2013b)

Surveys were designed for these stakeholders and these online surveys were distributed through databases provided by the MICE industry representative body. Meeting attendees, exhibitor data, and additional responses from meeting organisers and venue managers were also gathered through online panel recruitment. Using panel surveys, responses from international attendees were collected from France, Germany, Ireland and the USA, which consist of the majority of business visits to the UK (60%). Compared with other studies evaluating the economic impact of the meetings industry and the size of the industry in those countries, the number of survey responses received in our study (Table 3) is favourable.

Table 3 Survey responses received from each stakeholder group

	Sample size	Received
Meeting Organisers	2,530	253
	Survey Panel	295
	Sub-total	548
Venues	1,451	254
	Survey Panel	203
	Sub-total	457
Destination Management Organisations	230	33
Attendees – domestic	Survey Panel	1,174
– international	Survey Panel	443
	Sub-total	1,617
Exhibitors – domestic	Survey Panel	255
– international	Survey Panel	440
	Sub-total	695
2012 Event Attendees and Exhibitors[4]	Survey Panel	110
Total	-	**3,460**

Source: Table 4, Final Report, MPI (2013b)

Each stakeholder survey included two parts; part 1 investigating the size of the meetings industry, such as the number of meetings and venues, and the

[4] Live event attendee and exhibitor surveys were for 2012 while the others were for 2011.

breakdown of the meeting types; part 2 collecting financial data such as the spending and revenue involved in meeting hosting, and their breakdown by commodity. Table 2 summarizes the data collected for each of the five surveys. A profile of the industry is constructed, based on both primary data and secondary sources (including Office for National; Statistics, 2012 and Eventia, 2012). The intention throughout the design and implementation of the primary work was to follow the principle of the framework of evaluating the economic impact of the meetings industry laid down by the UNWTO (2006); that is to compile, extend and adapt the TSA to include the activities of the meetings industry.

The primary data collected are used to estimate the average values and compositions for both the demand side, such as the average spend and the composition of spend on different items by MICE attendees, and supply side such as the average number of MICE held, the average revenue/spend by the organisers/venues and the composition of revenue/spend by different items. To increase the validity of the results, and where possible, triangulation was undertaken between the surveys; for example, the average spend by different types of MICE attendees was collected from both the attendee survey and organiser survey, and cross checked for reliability. Secondary data aided our estimate of the 'population'; i.e. the total number of meetings, meeting attendees and meetings venues, with sources including Office for National Statistics, People 1st, Eventia, Venuefinder, Britain for Events and the UK Department for Business Innovation & Skills. By using both primary and secondary information, the profile of the MICE industry can be established.

Considering the purpose and length limit of this paper, the details of the profile are not included (see MPI, 2013a for detail). This process yielded data important in MSA construction as survey response averages applied to our population estimate provided MSA supply-side cell estimates. For example, the average revenue from accommodation services supplied by each venue, calculated from the responses to the venue survey and applied to the total number of venues estimated from the secondary resources, yielded our estimate of that meeting and exhibition venues supplied around £225m of accommodation services to attendees in 2011 (and of course having sought a representative sample throughout the survey process).

The primary work undertaken resulted in the most comprehensive study yet to assess the direct economic impact of the UK meetings industry through development of a specific MSA, and also included its indirect economic impact using IO modelling. The full results of the study, including exhaustive detail on survey methods and results, and discussion of the non-MSA results are included in two separate reports – the profile report and the final economic impact report (see MPI, 2013a and MPI, 2013b).

4 ISSUES AND APPROACHES: COMPILING A MEETINGS SATELLITE ACCOUNT

4.1 *Reframing the Supply Side*

Achieving headline estimates of gross value added and dependent employment for the meetings industry requires the compilation of a satellite

account to the (in this case UK) system of national accounts (SNA) that can decompose the output of relevant industries into inputs, taxes, payments to labour and then other value added. This was achieved through manipulation and further refinement of the extant Tourism Satellite Account for the UK (Office for National Statistics, 2012). Essentially, then our MSA is a 'satellite-to-a-satellite', with the existing relevant product and industry in the UK TSA – Exhibitions and Conferences - disaggregated into two, more appropriate supplying industries and supplied products – meeting and conference organisers (and organisation services), and meeting and exhibition venues (and their related services). The UK TSA then gains an extra column and row via this subdivision[5].

In order to replicate the 'make matrix' of the established Table 5 of a standard TSA (from whence key economic indicators are estimated) for each of our new industries (columns) we must estimate their constituent products – what products is it that these industries supply? Whilst most industry output is of the core product (the 'triangular' cell in the make matrix) there may be significant other commodities produced – for example, as earlier explained, for 2011 we estimate that meeting and exhibition venues supplied around £226m of accommodation services, and almost £750m of food and beverage services (see Table 4). The UK TSA of course gives no indication of the appropriate split of products for each of the revealed industries, or indeed the appropriate split of output between them. Little or no guidance is available from other

[5] The most recent TSA for the UK during this compilation was for base year 2009. These data were inflated to the 2011 survey year via reference to appropriate UK GVA deflator series. The UK TSA is now available for 2011

SNAs and TSAs globally. Here, then the information gleaned from the survey detailed in Section 3 above is critical; in understanding the behaviours of the industries in question and then estimating the overall production function (the relevant 'use' column in input-output terms) for that industry as well as products supplied. The survey data also enabled our estimate of directly employed and subcontracted labour, elements usually outside the purview of standard TSA Table 6, but critical in our estimate of meeting dependent employment. A critical arising from this survey was an indication also of transactions between meeting organisers and meeting venues – in terms mostly of hire fees. The integration of these two industries within the MSA structure helps in avoiding any double counting of activity, employment or value added.

Here, we made the decision to effectively supplant the existing UK TSA estimate of the overall size of the meeting industry with our owned, gleaned from the extensive survey work (with industry and attendees) described earlier. The UK TSA does not benefit from any additional primary survey data for the exhibition industry and we consider our data of better quality (and at the time more recent). This does, however mean that the MSA is not fully consistent with the results of the UK TSA (although they are in any case for different base years). We make an appropriate adjustment from other (non-tourism) industries and products to ensure our estimate of the overall size of the UK economy in 2011 remains reasonable.

TABLE 4: Production (Make) accounts of UK MICE industries and other industries (summarised) 2011 Estimate (at basic prices) (£ million)

Products	Accom. for visitors	Food and beverage serving industry	…	Sport, recreation & culture	Meeting Organisations	Meeting Venues	TOTAL	Other industries	Output of domestic producers (at basic prices)
Accommodation services for visitors	11,827	296	…	43		226	12,392	277	12,669
Food and beverage serving services	8,401	60,615	…	506		743	70,477	15,753	86,230
Railway passenger transport services	-	-	…	-		-	9,235	-	9,235
Road passenger transport services	-	-	…	-		-	4,049	2,877	6,926
Water passenger transport services	-	-	…	-		-	5,537	3	5,541
Air passenger transport services	-	-	…	-		-	16,388	391	16,779
Transport equipment rental services	75	53	…	243		-	6,574	6,167	12,741
Travel agencies & other reservation services	-	-	…	3		-	2,351	-	2,351
Sport, recreation & culture activities	-	-	…	24,515	194	-	24,710	489	25,199
Exhibitions & Conferences - Organisers			…	-	6,391	-	6,391	1,339	7,729
Exhibitions & Conferences - Venues	155		…	-	-	4,701	4,856	371	5,227
Other consumption products	161	600	…	3,182	2,578	793	21,549	2,537,141	2,558,690
TOTAL OUTPUT	20,618	61,563	…	28,492	9,163	6,463	184,508	2,564,807	
TOTAL INTERMEDIATE CONSUMPTION (at purchasers prices)	12,154	31,447	…	17,188	5,644	3,981	106,243	1,310,360	1,416,603
TOTAL GROSS VALUE ADDED (at basic prices)	8,464	30,117		11,304	3,519	2,482	78,265	1,254,447	1,332,712

4.2 *Estimating Meeting Demand*

Our survey of over 1,600 meeting delegates provided information on the average spending by category of attendees and their accompanying persons with this grossed up to estimated overall visitor numbers (reliant also on extant secondary data (see MPI, 2013a; Eventia, 2012; Oxford Economics, 2012). Reported categories were necessarily adjusted to fit the MSA structure. A critical element here is the re-allocation of meeting fees, which often comprise, in part, an indirect payment for accommodation services. Here, then our industry survey helps us undertake the appropriate reallocation, whilst following TSA practice and reporting organiser output *net* of these non-value adding purchases (but gross of relevant fees). It should be noted that this treatment is not replicated for payments to event venues by meeting organisers. Unlike for accommodation, a visitor could not arrive at a venue with no input from an event organiser and receive the same MICE service. We therefore treat venue hire, implicitly then, as an input to the production of MICE services and do not reallocate attendee spend to venue services.

Also on the demand side is the spending of exhibitors at conferences (where our survey with over 800 respondents was available for estimation purposes). This is conceptually rather unsound: exhibitors are themselves more usually companies or organisations, rather than a component of final demand. However, embedding the spending of exhibitors into the MSA supply side proved challenging. Each exhibitor has a 'home industry' and these range widely – publishing, recreation, technology for example, depending on the subject of the exhibition. This would mean altering every industry of the TSA to reveal exhibition payments to venues and meeting organisers.

With no data available on the 'home industry' of exhibitors in UK-aggregate (let alone to estimate the size of payments by exhibitor-industry), the preferable option was to treat exhibitors as a final demand factor to the MSA supply side, and thus incorporate the economic activity consequent on that spending, albeit at the expense of conceptual purity.

Following this reallocation, and appropriate discounting of sales tax, we estimate total MICE consumption at £34bn for 2011 in the UK. Almost two thirds of this consumption arose from spending by UK-based attendees and accompanying persons (£21.2bn or 62%). Most of the rest – a significant £10.7bn, or 32% was from non-UK based MICE attendees – hence showing the UK meetings industry is a significant exporter. Of the remainder, 4% was income earned by the UK MICE industry from meetings that occurred overseas, and 2% was payments made by exhibitors (see Table 5). Overall, 25% of spend accrued to meeting organisers; 20% to accommodation; around 9% each to food and beverage and air transport services; and 17% to non-tourism/MICE services.

Table 5 - Demand for MICE Commodities and other Commodities in the UK, 2011, £million

	UK resident Attendees (inc. accompanying and exhibitors)	ROW resident Attendees (inc. accompanying and exhibitors)	Organisers revenue from overseas (exports by organisers)	Operation spend by exhibitors	Internal meeting demand (total)
Accommodation services for visitors	4,705.2	2,214.3			6,919.5
Food and beverage serving services	2,061.3	1,101.6			3,163.0
Railway passenger transport services	1,411.6	418.6			1,830.2
Road passenger transport services	1,187.5	705.0			1,892.6
Water passenger transport services	201.7	88.1			289.8
Air passenger transport services	1,053.1	1,839.7			2,892.8
Transport	425.7	242.4			668.1

equipment rental services					
Travel agencies & other reservation services	291.3	187.3			478.6
Sport, recreation & culture activities	806.6	517.8		49.4	1,373.8
Exhibitions & Conferences - Organisers	5,265.1	1,788.6	1374		8,427.7
Exhibitions & Conferences - Venues				172.5	172.5
Other consumption products	3,697.0	1,619.4		598.8	5,915.2
Total	**21,106.0**	**10,722.9**	**1374**	**820.8**	**34,023.7**

4.3 *MICE Directly Supported Value Added and Employment*

Compilation of the supply side and the demand side for the MSA enables our estimate of directly supported gross value added and employment. This process is conceptually identical to that undertaken in estimating headline outputs from tourism satellite accounts (albeit slightly simplified from UNWTO, 2008 to reflect data constraints): for each revealed commodity, total domestic supply is estimated and adjusted for relevant taxes to purchaser prices. Any imports are added (not particularly relevant here, airfares excepted) to arrive at total supply of products. This supply is reconciled with total meeting-related demand for that product to achieve the meetings ratio on supply. For example we estimate that 11% of Air passenger transport services supply is directly related to meeting activity. This ratio is then applied to the gross value added (from the MSA) and employment (estimated from the MICE surveys and other published sources see MPI, 2013a and 2013b) for the relevant industry (e.g. here Air passenger transport) to achieve meetings-dependent GVA and employment (in full time equivalents) for that industry. The sum of dependent GVA and employment for all industries, MICE related, tourism or

otherwise, is then provides the estimate of the overall gross value added and employment directly supported by MICE activity in the UK in 2011.

This analysis suggests MICE in the UK directly supported £20.6bn of gross value added in the UK, with around £8bn (39%) within the MICE industry itself – venues and organisers. MICE supported £3.7bn of Accommodation GVA and £1.6bn in Food and beverage serving. MICE supported 423,000 full-time equivalent jobs in 2011, with only 8% (33,000) of these in MICE industries, showing the extremely high level of value added per employee in these activities. The sectors to benefit most in employment terms were Accommodation (133,000 FTEs or 31%); Food and beverage serving (almost 55,000) and Road transport services (45,000). We estimate around 1.9% of all UK FTE employment was directly MICE-dependent in 2011 (Table 6)

Table 6 MICE Directly dependent gross value added and directly dependent Employment in the UK, 2011

Industries	GVA (£ million)	Employment (FTE)
Accommodation services for visitors	3,738	133,228
Food and beverage serving services	1,671	54,607
Railway passenger transport services	899	15,585
Road passenger transport services	700	45,951
Water passenger transport services	101	273
Air passenger transport services	692	6,605
Transport equipment rental services	210	1,772
Travel agencies & other reservation services	633	15,711
Sport, recreation & culture activities	588	25,025
Meeting Organisations	3,449	14,755
Meeting Venues	2,220	18,399
Other consumption products	5,737	87,006
Total	20,639	423,445

5.4 Our Results in Context

Our analysis suggests that MICE activity is of considerable importance when compared to other UK economic activity. Specifically, the Office for National Statistics (2014) estimated tourism overall created some £53bn of gross value added in the UK in 2011, thus with MICE around 40% as significant. Interestingly, MICE dependent FTE employment was only 27% of UK tourism dependent FTE employment in 2011 (423,000 compared to 1.55m). This indicates, as our industry/activity analysis reinforces, that some elements of MICE activity are very high value-adding per person employed. MICE activities supported around as much gross value added in the UK in 2011 as road transport (£19.7bn) and legal activities (£20.6bn) and more than, for example, film and broadcasting (£12.3bn) and pharmaceuticals (£13.3bn) (Office for National Statistics, 2013). Internationally, it is difficult to compare results due to the differing methodologies and concepts involved (for example other studies do not quote SNA-compliant gross value added). For illustration however, or proportion of UK employment that was directly MICE dependent in 2011, 1.9%, compares with a figure for the US of about 1.2% for 2012 (PWC 2011a)

5 EXTENDING THE MSA

5.1 *The Meetings Satellite Account: A Useful Tool?*

Estimates of directly supported value added and employment are a necessary but not sufficient to understand the overall economic significance of any activity, and this is as true of visitor-related activities. MICE-dependent consumption will result in additional economic activity in companies supplying directly-affected venues, transportation and hotels. There may be subtle skills, branding or infrastructural impacts that result from

increased levels of MICE in a place. Critically, MICE activity occurs, and is concentrated in, towns and cities within an economic reference area and not spread evenly across it, and hence an understanding of the 'economic geography' of MICE is extremely important in understanding developmental outcomes.

None of the above elements are included in TSAs and hence in our core MSA. This is quite correct and appropriate given the TSAs status within a static system of national accounts, but limits considerably the usefulness of the TSA in policy determination and audit (Jones & Munday 2008). Here, then we examine the potential to extend the MSA in two fashions – to include the indirect (supply chain) and induced (wage-related) effects of MICE attendance and consumption; and second, to provide a sub-national accounting of such activity

5.2 *The Indirect Impacts of MICE Activity*

A number of TSA developments have extended the accounting framework to include elements that should more properly be considered economic models. These models range from relatively straightforward Input-Output analyses to those where TSAs are situated within complex computable general equilibrium (CGE) frameworks, with much of this work progressed in Australia. In theory, then such methodologies can be applied to the MSA to similarly provide estimates of economic activity that is supported in the supply chain to MICE-involved organisations, and by the wages of those involved in MICE (directly or in that supply chain). 'All' that is required it is that which is required for parallel TSA extensions: the full integration of the MSA into a set of symmetrical input output national accounts (usually industry-by-industry) for the country and year at hand. Such integration is a key first step, even for more complex

modelling approaches. Two things are therefore required: a national IO table of the requisite structure and timeliness, and sufficient (financial) data on the activities of MICE-involved organisations, and meetings attendees to fill the relevant new cells in the extended IO Table.

In the UK, this would imply understanding the spending of MICE organisations and attendees across 124 industry/commodity categories (or perhaps some aggregation of these). Essentially, then with the MSA already providing details for the 'make matrix' associated with MICE activity, the extension requires similar detail for the 'use' matrix. The scale and scope of the surveys undertaken for the UK project certainly provides sufficient data to make this attempt, especially as the important indirect impacts will arise from key supplying sectors (MICE itself, accommodation, food and transport) that can be well accounted. The problem for the project at hand is a lack of a framing structure. So-called 'analytical' (symmetrical) input-output tables for the UK were not available for later than base-year 2005 at the time of MSA compilation, making the integration of the MSA into the UK system of national accounts somewhat problematic. Further, these Tables do not benefit from developments made in the UK TSA – so, for example, hotels, bars and catering are a single sector, and exhibition activity is not revealed at all[6].

Whilst these issues are problematic, none is insurmountable. Over time, TSA developments made by ONS should properly be reflected in the structure and results of wider Input-Output analyses. If, then the UK TSA were adapted to reveal MICE

[6] http://www.ons.gov.uk/ons/rel/input-output/input-output-analytical-tables/index.html An added complication is the difference in SIC classification used to build the UK IO Tables, and Tourism Satellite Account

activity – a relatively straightforward process as this paper shows – future TSA integration would potentially enable official 'multipliers' to be published for MICE sectors and demand as well as for tourism more generally.

What would remain then is the implementation of appropriate and targeted data collection methodologies, either via survey or administrative sources (or both), to ensure the quality of MICE analyses over time. Whether this resource is available, or can be made so in a similar vein to UK TSA development, either in a UK labouring under austerity or more generally, is an open question.

5.3 *MICE Activity at Sub-National Scale*

The issues in extending the MSA to assess indirect economic impact at national scale are statistical and data related: challenging, but doable. Extending MSA approaches to sub-regional analysis implies considerably greater difficulty. There is again, however, much path-finding already done in the TSA field, with satellite accounts developed for a number of sub-national places, usually regions (NUTS 1 areas in Europe). Here, the requirement is either for a set of regional accounts that can 'host' a TSA analysis rich in bespoke local data (a 'bottom up' approach; Jones et al, 2003) or, in the absence such a regional account, for a disaggregation of national TSA headline indicators (GVA and employment) to constituent regions based on tourism indicators such as arrivals or expenditure ('top-down'; Braendvang et al 2001; UNWTO, 2008). For regions that have developed TSA accounts, their extension into an MSA is possible, given an appropriate investment in what is often difficult data collection around MICE activities (Black and Grant, 1997). Conversely, in a top-down approach, central statistical agencies might apportion the economic activity reported

by national MSAs to regions based on indicators such as number of meetings held in that region[7]. There are significant issues with both approaches. Firstly, the number of regions globally with well-established and fully-fleshed tourism satellite accounts capable of evolution into an MSA is limited, and is not increasing at a rapid pace. Secondly, we do not know of any national statistical agency committed to the development and publication of MSAs within a satellite accounting framework, and with complementary data collection and collation (although this is not such a great leap from established TSAs). The integration of MSA publication into national statistical systems is a prerequisite for top-down regional MSA development, and thus the latter seems a fairly long-term prospect at best. Even if completed, any top-down allocation would be crude at best, for example unable to take account of different types of MICE activity that occur in different regions, and with differing economic consequences (Jones *et al*, 2003).

Perhaps a wider question to ask is how often *either* of the above approaches be 'worth it', in terms of improving relevant policy (initial advocacy value aside). As noted earlier, MICE activities (and relevant policy issues) arise mostly in urban areas, and such cities are only occasionally the same administrative areas as the regions that might benefit from regional accounts – usually where this occurs, it is the capital (see the earlier Vienna case). Any suggestion that a TSA-based approach is the appropriate one for understanding MICE at subnational level then excludes most urban areas from such understanding, and refuses insight to municipal policymakers, unless national authorities are prepared to disaggregate results to city level. Using the region as the unit of analysis, even as the framework for a bespoke, 'bottom-up'

[7] For the outline of such an attempt made as part of this project, see: http://www.mpiweb.org/UKEIS/ReportFinal

approach, would hide the significant differences in the sorts of MICE activity that occurs in large cities as opposed to towns and outlying areas – and hence their differing economic character.

7. CONCLUSION

This paper has presented a first attempt to transparently replicate key tourism satellite account Tables and results for meetings, incentives, conference and exhibition (MICE) activities, and to tentatively suggest that such a development might, by improving understanding of the economic effects of such activity, be a step to better public policy in this area. This paper presents a number of contributions.

Firstly, preceding Sections show that it is certainly possible to refashion existing TSA frameworks and structures into a 'first-cut' meetings satellite account, with a modest amount of structural alteration. There are some conceptual decisions to be made, for example regarding the treatment of indirectly purchased services (such as accommodation), but established World Tourism Organisation (2006; 2008) guidance is fit for the purpose of helping the MSA compiler chart a reasonable path. The reconciliation of supply and demand, and the estimation of key metrics, such as dependent gross value added and employment, follow well developed and discussed TSA approaches and with results that seem intuitively reasonable.

A second key learning here, and very notable, is that any attempt to populate the MSA structure with reliable and topical data is only possible following an extensive

research effort that includes meeting attendees; exhibitors; organisers and venues. Our study extended across a number of countries, and was structured to allow (as far as possible) the opportunity to gross up survey data to reasonable estimates of UK-aggregate activity in the absence of established metrics. This effort was industry-resourced and wholly additional to the UK statistical offices' own TSA efforts, which were fully used in MSA development. To compile an MSA is therefore not a trivial task, due mostly to the need for data on attendee and industry economic behaviours that are far in excess of those gathered in business or tourism surveys, or in administrative datasets. Whilst the re-engineering of the TSA to enable an MSA is then possible, it is only worthwhile if there exist the data to populate the new structure, both currently and embedded into ongoing data collection. Given the currently fragmented and incomplete approach to MICE data collection across many nations, such a data collection strategy is a tall order.

A third key point regards the extension of the MSA to below-nation level. Tourism Satellite Accounting has moved usefully to lower spatial scales (see Jones *et al* 2003; Braendvang *et al* 2001) but these are very involved and protracted estimations and still only move the 'game' down to the region – one level below the nation. In some cases this is also the MICE destination (Madrid and Vienna for example) but for most places, a regional MSA would still be inadequate to inform policy processes at the relevant city-scale, opening the issue about whether the effort would be cost effective. A related question here is how far city-level politicians and stakeholders would be able to understand and willing to incorporate the results of MSA analyses into policy processes: as many authors have noted, city 'boosterism' and the lure of new

infrastructure leaves limited space for sober and conservative quantitative analysis to influence policy. (Boyle 1997; Flyvbjerg, 2008; Baade 2008).

Constructing an MSA requires identifiable benefits and beneficiaries to offset the clear costs. These benefits are open to question at least in national terms, and for the 'core' MSA that does not include indirect effects or other interesting metrics. It is unclear how far tourism satellite accounts, long established in many countries, have significantly influenced tourism policy in their reference countries and regions (Smeral 2006). In some cases, such policy relevance has required considerable extension beyond the core accounting framework (the policy use of CGE models in Australia and environmental extensions in the UK being cases in point). Whilst national governments set the tone and overall policy for tourism and visitation, the 'on the ground' decisions on resource allocation, land attribution, and funding of venues are most likely made at municipal level. At this spatial scale, for most of the world at least, statistical systems and relevant data are inadequate to describe any but the most basic economic characteristics. Satellite account approaches to MICE that can inform a more robust policy in this area are thus probably some way off.

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