Creating Regional Tourism Satellite Accounts: the case of Andalusia

Requested comment

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Summary: The regional input-output table constitutes an essential component, both for measuring the impact of tourism as well as for estimating the tourism satellite accounts themselves. This will be explained in greater detail further on.

It is clear that the importance of tourism can be, and has been, measured by means of other procedures, such as the use of multiple “loans” from several spheres to study the impact of tourism on others. However, at the present time, the use of regional IO tables is the best vehicle for carrying out this estimate, accompanied, logically, by an accurate expenditure survey. When adequately combined, both sources - let us call them ‘bases’ – equate to the best possible means, but all this notwithstanding, the exercise is not problem-free.

This paper is dedicated to discussing these problems. In other words, it aims to relate the regional Andalusian experience to the proposal of highlighting the difficulties encountered and the solutions used². As will be seen, the Andalusian situation is one of the best to be found within a regional framework but, as has been said, there is no shortage of difficulties.

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² This main speaker collaborated on creating the first tourism satellite accounts in the region as he likewise collaborated on drawing up different IO tables. I want to make the most of this occasion to express my gratitude to my colleagues for their help in the different statistical teams in the creation of this paper. Although the responsibility is entirely mine, I would like to think that I here represent many of their opinions
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COMMENTS ON THE CENTRAL PAPER

Generally speaking I strongly agree with Mr. Frechtling’s paper, therefore in my comments I shall only clarify some of the aspects mentioned. I also intend to add remarks based on our experience in creating regional tourism satellite accounts in Andalusia, from the year 2000.

I am unable to stray too far from the reality of the situation in Spain, it featuring heavily in my answer and in my own paper. It is well-known that the Spanish situation is, in practice, that of a federal state, with 17 autonomous governments or regions which construct or are planning to construct their own R-TSAs. However the will to cooperate does not necessarily exist when it comes to estimating accounts which could be comparable or still less aggregable. There will therefore be some correct accounts in the sense that they will fulfil the majority of Mr. Frechtling’s requirements, but this does not mean that they can be fully aggregated or compared. Neither is there a central office with administrative authority over the regional offices. This does not however mean that there are absolutely no forms of cooperation, but that this cooperation is along the lines of voluntary agreements of a temporary nature. I do not now wish to expound on a very unusual situation, like the one of Spain, but rather if I bring it up it is because I believe it to be comparable to other regions in different countries. And it will escape nobody’s attention that this situation is in fact an important problem, which needs to be tackled.

The main main speaker highlights two main obstacles to developing an R-TSA, the potential dearth of high quality statistical information and the lack of an adequate methodological framework, ad hoc for the regional problems. While it is clear that these two obstacles are both significant, in my opinion the first is much more of an issue than the second since at the very least the general framework of TSAs should always be interpreted and applied, whilst it is very difficult to set up quality R-TSAs without formidable statistical apparatus. As I outline in my own paper, this system should be composed of two basic tools, an Input-Output-Table (IOT) for the region and a survey on tourist expenditure. In other words, what I want to point out is that setting up R-TSAs is an expensive, indeed very expensive operation and it is therefore only worthwhile considering in regions where the role of tourism is of singular importance or rather, as often occurs in the rather unusual case of Spain, in regions which already have IOTs, to which only need be added a relatively cheaper survey on tourist expenditure.

With regards the methodology, the main main speaker points out the lack of a specification for the regional sphere and the need for its elaboration. Evidently, this would be very advisable and to this end I would like to make the following remarks:

In reality there is no regional methodology that is sufficiently broad, not even in the framework of the UN Accounts, in the SNA 1993, nor in its European application in the designated ESA 1995. It is clear that while there are some brief chapters or specific additional documents, they are not only brief but also extremely general and lacking in precision.

Setting up an R-TSA shares the same problems as the creation of regional accounting and these problems are primarily linked to the very definition of the regional sphere and furthermore with aspects such as:

- The civil services’ methods of regionalisation
- Methods of regionalisation of multi-regional or multinational companies and treatment of their central headquarters.
- Methods of regionalisation of specific economic activities where, in the case of tourism, transportation should be highlighted, but where many others may be added: financial intermediation services, appendices to transportation, insurance, etc.
However, it should also be acknowledged that many of the problems of regionalisation perhaps have more to do with what could simply be termed “local management” than with real methodological problems. What do I mean by this? Regionalising a hotel chain with a central headquarters in a particular region which, as one might expect, carries out management and administrative procedures, but which may also function as a purchasing centre for various inputs, (also centralising, for example, relationships with financial intermediaries), is always a complex task. It entails decision-making of a more practical, realistic character, rather than of a theoretical nature. Subsequently we see the emergence of an additional problem, in that each region adopts the criteria that appears to them to be most appropriate, or most fitting to their interests, but this of course is not a particularly desirable outcome. This is why general agreements among all of the regions involved must again constitute a vital requirement, although speaking from personal experience I am quite sceptical about this.

Lastly, it should also be emphasized that among all the branches to be regionalised, perhaps the most difficult would be transportation, as the main speaker himself indicates. But I do not fully agree with the idea that it is not possible to regionalise the activity of the central civil services since, in the case of Spain, (with which I am more familiar), much progress has been made in terms of the State, which has been doing this work itself. Whilst it may not be possible to regionalise the entire central government, since there will always be expenditure which cannot be regionalised, nevertheless the vast majority can be imputed.

As I bring to light in my own presentation, the problem of transportation is essential since it is one of the biggest expenses of the trip, yet it is diverted from the tourist’s destination region. This is right, but consequently, as in Andalusia, we see the impact of tourism diminished as regards the national average, even though Andalusia is relatively specialised in the activity. Tourists’ expenses are very varied but it is well known that they are concentrated on a few, very specific costs, above all transportation, accommodation, food and drink. Nevertheless, one of these mainstays often remains in other regions, because the transport companies are not based in Andalusia.

The relative distance of Andalusia from its markets means that foreign tourists prefer to travel here by aeroplane. They frequently do so with companies from their own countries, thus the impact of this cost on Spain or on the region is negligible. But sometimes they may travel with a Spanish company based outside of Andalusia. Tourists from the rest of Spain can reach Andalusia with national non-Andalusian services. The problem that arises here is how much of this activity will need to be assigned to the region.

The ESA proposes a controversial solution which aims to transfer income to the region and which we have been gradually adopting, perhaps going against our region’s tradition which used to be precisely the opposite. The ESA criteria consists of attributing added value to the region which will include wages and salaries of workers who reside in the region – this has always been done and is not under discussion – in addition to operational surplus which would be relative to air traffic. Nothing more has been suggested, but it should be added that inputs acquired by companies in the region will need to be added and a production value will need to be allocated. This will be the sum of the previous added value and this intermediary consumption. As will be seen, this solution is practical and effectively manages to impute added value to the regions but in my opinion it will alter the primary and secondary distribution of income, thereby complicating other estimates such as the disposable income or savings.

Regionalising intermediary consumption would not be possible, or would go against what needs to be included in the regional IO tables. The tables cannot include inputs which do not exist. Income, as is the case with this regionalised surplus, is not included in the intermediate matrix and therefore allows for greater scope.
I could not agree more with what the main speaker outlined as the general principles. Indeed, an authentic R-TSA should be carried out \textit{ex novo}, gathering information and not via methods derived from models or via indirect estimates. However, for very small regions or where tourism lacks importance this solution should not be ruled out, whilst acknowledging that it would belong to a different category of R-TSA.

Finally, as regards the number of accounts that some R-TSAs should include, I quite agree with the main speaker in that they could be reduced to a minimum of five. Now, this question again largely depends on whether the region in question has regional IO tables or not, and could remain more open. As I state in my own paper, although any TSA hinges or rests on demand estimates, there are also many estimates made on supply, as is the case with certain forms of transport or as may be the case with hotels and food and drink. Likewise, table five and six largely depends on the existence of these tables. On the other hand, almost everywhere there is usually no shortage of information for the creation of accounts six and ten. But all in all, and in my opinion, it is account four on consumption that is the most important and requires a specific statistic operation for its elaboration. Furthermore, if it subsequently proves desirable to carry out a study on the impact of tourism, by means of the IO tables, this expenditure account must become a vector of significantly greater breakdown, which is not always easy.

\textbf{INTRODUCTION}

Various regions, lacking in input-output tables (IOT) and adequate information on tourist demand, have based the TSA estimate on supply, using a survey of a sample of producers or providers of goods and services to the visitors. The aim of going down this route been to arrive at ratios or percentages of tourist orientation, percentages which, when applied to the production total, would enable the evaluation of the tourism phenomenon. This route, however, has various drawbacks. On the one hand, on many occasions the producer does not know their final market, since other parties market their products. In other cases, even when directly supplying the final demand, the producer does not know whether the client is a visitor or a resident. Lastly, even when they do have this information, it is difficult to know how to distinguish the reason for or nature of the trip, as the system requires that they differentiate between tourists, same- day-trippers and business visitors.

For diverse but fortunate reasons, in Spain there exists a long tradition of creating regional IO tables. Firstly in universities and later in the Regional Statistics Institutes, the majority of regions or autonomous communities have several successive IO tables. However in these, the possibility of analysing the relationship between tourism and the economy often comes up against the lack of availability of a different vector of tourist expenditure. Herein the paradox of having the most expensive and complex tool, the table, and not the most modest, the expenditure survey.

In the case of Andalusia, tables have been drawn up since the benchmark year of 1975, with successive tables in the years 1980, 1990, 1995 and 2000. As will be seen, there has also been a continual tourist expenditure survey since 1999. There are many reasons behind this advantageous situation, but among others should be mentioned the autonomy in different areas such as statistics and tourism policies, European assistance and of course the great financial significance of tourism in Andalusia.

At the heart of the Institute of Statistics of Andalusia (IEA), the table corresponding to the year 2005 is currently being finalised. Both this main speaker and statisticians putting together the Tourism Satellite Accounts in Andalusia have directly participated. As will
become evident, this link has been deliberately established and aims to guarantee a strong connection between both projects, as well as a better estimation of the figures necessary for both sources.

As a general rule, the TSAs should be consistent with the National and Regional Accounting Systems, according to the cases, and this in turn entails starting from two premises: overall figures which have already been worked out and published, those of National or Regional Accounting, and a shared methodological framework (the UN System of National Accounts, the European System of Accounts, ESA, derived from the former, plus the contributions, clarifications and demands of the TSA methodology itself), a framework which in turn guarantees national and international comparison of the results. It should therefore be understood that TSAs are derived from and complement the national or regional accounts and that they by no means compete with or replace these accounts. Both should be consistently integrated.

In any case, it should be pointed out that as well as the appendixed documents, what the ESA is dedicated to in the regional framework is extremely limited, although it officially includes a specific chapter, thirteen. In practice, this area is limited to offering a more simplified system of accounts and a series of criteria for the attribution of specific products and income to a particular region.

In an earlier experience in the year 2000, the IEA produced the TIOAN2000 (IOT), whilst the statistics unit of the Department of Tourism of the Autonomous Government of Andalusia then estimated Andalusia’s first Tourism Satellite Accounts4. On that occasion, the word satellite encompassed various meanings, among others that of dependence. On this occasion however, there has been an attempt to alleviate this problem with the integration of both teams and the combination of mutual efforts5. The issue is that drawing up regional IO tables is a huge, sometimes even heroic undertaking, if I may use the expression. And this is why the statisticians in charge cannot devote all their attention to the estimation of output and products which are characteristic to tourism, but which are not overly relevant to other fields. Let us look at an example. The tourism statistician needs to evaluate the importance of travel agents. Doubtless, for him this is an important task. However, for the tables statistician this activity is buried in the transportation appendices along with other equally relevant and diverse issues such as ports, airports, loading and unloading goods, storage, logistics, parking, railway infrastructure and toll motorways.

Lastly, it should be noted that while cohesion with the Andalusian statistical framework has been fostered, it has not been possible to do the same with the national framework, with Spanish Tourism Satellite Accounts (E-TSA) carried out by the National Institute of Statistics (INE). Hypothetically, coherence between national TSAs and regional TSAs could be brought about through two procedures: through the regionalisation of national data (top-down method) or via direct regional statistical information (bottom-up method), which, aggregate and consolidated, would supply state information. But this second option is hardly used, for many varied reasons.

All this in addition to the regional accounting of the Spanish Autonomous governments as regards state data, since up until now there has never been an official attempt to link both schemes. In this way, in order for regional accounting in Andalusia to be coherent with that of the national level, these A-TSAs are harmonised with the E-TSAs but currently this comparison is still very difficult.

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4 There were however some previous studies which did not come to be published but which served as training and sharing. This main speaker did not collaborate on those essays but did work on drawing up the CTSAs 2000.

5 Furthermore the case of tourism is not unique. In the tables from 2005, teams working on satellite accounts on fishing and on culture collaborated. With a lesser degree of integration, another team prepared the first satellite accounts on health.
Various problems explain these facts:

- Firstly, there is no obligation of a legal or administrative nature forcing both statistics to remain integrated or linked in any way.
- There is not always interest on both sides.
- Regional definitions and conventions are very diverse and outside the preferential interest of the national offices. But in practice, these conventions are very important, both in estimating the regional dimensions as well as the strictly tourism-based ones; these alone explain many of the existing discrepancies. Only very recently has the establishment of any rules or conventions begun, thus allowing the regionalisation of certain productive output, but in the field of tourism accounts this still remains to be done. Now, good relations between professionals enable a substantial level of exchange of experiences and knowledge among everybody.6

**FIRST BASE. AN EXPENDITURE SURVEY**

The exercise of creating TSAs must be based on a good estimate of travellers’ expenditure since tourism is essentially a demand phenomenon. Thus the essential source used in Andalusia is the designated *Survey of touristic situation of Andalusia* (ECTA), which the regional statistical institute (Institute of Statistics of Andalusia, IEA), in collaboration with the statistical unit of the Department of Tourism, Trade and Sport, has been carrying out since 1999.

This is a survey with the following characteristics:

- Quarterly.
- Regional scope, encompassing the entire territory of the Autonomous Community of Andalusia, surveying a broad number of issues.
- Objectives: knowledge of the profile of tourists who visit Andalusia, money that they spend and the reasons for and appraisal of their trip. Specifically and as regards expenditure, the volume and composition of this is surveyed, both at the point of origin and during the trip and lastly, that of the stay in the destination. Breakdowns of the large groups of expenditure are requested: accommodation, restaurants, transport, purchases - edible and otherwise - and organised visits in Andalusia (bus, taxes, petrol, tolls, etc), vehicle hire, leisure, among others.

The availability and already considerable ground covered by the ECTA is a guarantee of quality for the creation of regional TSAs but this notwithstanding, two great limitations are immediately obvious.

The first is the lack of detail. In effect, and in contrast to other expenditure surveys which are carried out in the hoped-for tranquillity of the home, the tourist expenditure survey is carried out by tackling the traveller in their place of rest or, in the best case scenario, in the dead time which irremissibly accompanies travelling. In any case, the tourist is asked to perform considerable memory gymnastics and to remember how much they spent at the point of origin and the destination. All this in record time, both to avoid bothering them and so they don’t give up and leave. They are also requested to recall certain details. As we can see, it is not only the tourist’s time that is bombarded by this process but also their memory.

6 In terms of advice and assistance there is much for which to thank the technicians of the INE, the UNWTO and the other regional statistics institutes.
Fortunately, tourists’ expenditure can be characterised by their concentration in specific areas: food and drink, accommodation, transport and total purchases which means that, all this included, there is little margin for overall error. But this does not solve the problem of breaking down the rest of the items to attain the level of detail that is necessary in a tourism vector. This should be multiplied by an IO matrix of regular size; 80 branches of activity as in our case. And in order to perform this exercise it is necessary to go to other sources of an indirect nature, or to make assumptions on expenditure behaviour, which are not always acceptable.

We have seen continued demands for greater breakdowns, from team work creating the TSAs, whilst those who carry out the survey – the Regional Institute of Statistics, IEA – opt for realism and prudence, since it is they who have the arduous task of tackling and pressurising the tourists. Both stances are legitimate, but up until now there has been one clear winner, as the reader can well imagine.

The second important problem is that the ECTA does not include same-day trippers. This is clearly not an unforgivable error, but they simply remain outside its scope of definition.

Same-day tripping, or movement of tourists who do not spend the night, is a phenomenon whose importance escapes few, but about which there is generally very little information. Sometimes there is information, but it is concealed by that recorded in the homes survey, such as the Permanent Survey of Family Budgets which the INE carries out quarterly in Spain. In our case, and given the great size of the region, it is a question of people, mainly residents, going away for the weekend or on bank holidays, generally within Andalusia. We do know that it considerably affects the areas of food and drink, transport within the region and certain purchases. But it is very difficult to quantify all this expenditure.

In our case, we have seen surveys in the years of the tables studying same-day tripping, but execution and interpretation of the survey was difficult. Likewise, the topic itself and the sample group are too vague, this being a fundamental problem. More recently a specific survey of homes has been implemented, to establish people’s habits of travelling without overnight stays. This is a survey which is still in its infancy but which, if everything goes well, will alleviate the problem and thereby fill this gaping hole.

SECOND BASE: INPUT-OUTPUT TABLES.

As has been indicated, in the region there exists a long tradition in drawing up IO tables. For the benchmark year 1995, the framework of the new ESA 1993 was applied, being one of the first Spanish regions to do so. Subsequently the corresponding one was published in the year 2000 and on writing these lines the corresponding one for 2005 is nearly finished. These more recent tables are bigger and more complex and there are eighty branches, creating symmetric tables of origin and destination, under different assessments. In order not to break the series and to allow comparison with previous tables, the symmetric one has also been redone with the criteria of the old ESA.

Our knowledge of the demand, its comparison with the IO framework and the use of the many databases that go hand-in-hand with this source, allows us to be aware of the different sectors’ contribution to tourist consumption and thus the origin of other variables such as added value, employment or generated income. The characteristics of supply may

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7 The research set out is an expenditure survey to the same end as the ECTA. Now, the list of places for the survey was modified, in order to adapt it to the type of visitors investigated and thus it did not include airports, hotels etc. The places where the survey was carried out were those where it was hoped to encounter a high proportion of same-day trippers, such as in restaurants, train and bus stations, monuments, etc.
also be known, that is, the costs structures and output functions. However in our experience we have not been able to differentiate between the characteristics of establishments which mostly produce for tourism, and those which produce to meet demand from residents. That is to say, it has not been possible to obtain distinct yet reliable characteristics for bars and restaurants situated either on the beach or in the centre of town. Let me give you an example. The scarcity of samples, the level of aggregation of the information obtained or the fact that many of the bars do not possess adequate accounting as this is not compulsory, have all impeded this task.

**FINAL TOURISM DEMAND**

The conceptual framework of the Tourism Satellite Account proposed by the World Tourism Organisation introduces the concept of total tourism demand in line with recommendations from the National Accounting System (NAS 93), incorporating *domestic tourism consumption*, *tourism gross fixed capital formation*, and *tourism collective consumption*. However, and for the moment, in Andalusian tourism demand, only the consumption demand from homes and business travellers has been included, leaving the consumption from civil services, both individually and collectively, as well as the acquisition of investment goods, for later on. Much work has been done on the possibilities of including these variables, but finally it was decided that they be excluded, given the difficulty occasioned by their estimate. In the case of the central government, these difficulties were born from the need to target all the town councils in the region (almost 800), to request specific information, which in many cases they have had to draw up *ex novo*. The most significant example in the case of capital formation lies in the need to divide new housing up into that, which is destined for the tourist market, and that which will become first-time homes for residents.

As regards government *service consumption*, the following should be pointed out:

- At the present time, Spain can in fact be likened to a federal state with an extremely complex administrative organisation. In the case of Andalusia, different government services coexist: Central Government and Social Security which belongs to the State, the Autonomous Government of Andalusia with broad autonomy in public services such as health and education, Local Councils made up of Provincial Councils (8), Town Councils, Communities, etc. There are also many varied institutions constituting them: Ministries, Departments, Autonomous Organisations, public sector companies, Foundations and so on and so forth.

- All these services boast initial budgets, output budgets and final or definitive budgets, which from the outset are not easy to reconcile nor are they computerized with compatible systems. They are therefore faced with the erroneous task of meetings and manual computer entry, taking care to standardize irregular information, in accordance with the relative freedom surrounding the legislation on budgets. In the State’s case, there is the additional problem of regionalising its expenses, much progress having been made on this issue although the chunk yet to be allocated is still quite considerable. On the other hand, each of these budgets has a triple presentation, being classified according to different standpoints: the *organic* (in relation to the main expenses administrator), the *functional* (or for the objectives which the assigned resources are aiming to reach) and the *economic* (bearing in mind the economic nature of the expenses to be carried out). As a general rule it was decided that two of the budgets should be worked with, the functional and the economic, both in the definitive budget phase; the economic being necessary for the estimation of the total consumption or the gross capital formation and the functional to assess whether there may be a possible connection with tourism.
Lastly, as is well known, the aforementioned public consumption has been slightly modified in the current version of the ESA. The fundamental objective of the reform was to divide up this element in order to distinguish between public services which are acquired individually: individual consumption, of the type which can only work together or simultaneously: collective consumption (national defence, legislation and the legal system...). In this way, an international comparison between the different types or levels of “States of wellbeing” is facilitated. ESA-9516 expressly points out which are the individual services, specifying: teaching, health and social security and medical care, sporting and recreational services as well as cultural services. Collective consumption expenditure tallies up with the remainder.

Having raised the complexity of the matter, as regards individual consumption related to tourism, it was thought that an estimate would need to be made of the expenditure in health and sporting, recreational and cultural services which travellers can enjoy, those of teaching and social security seeming less important. The health services fall under the regional government’s umbrella, whilst cultural and sporting services are provided by practically all. Concerning public health, perhaps the most important of these different types of consumption, the decentralised Spanish system could encourage the availability of information on care for nationals who are not resident in a particular region. Information and expenditure ascribable to foreign tourists could be drawn together, but care for tourists from the region itself may be difficult to scrutinise. In terms of cultural and recreational services, their estimate requires procedures, which are not much different to those of the public services, since these services (museums, theatres...) do not often distinguish between consumption by residents or by tourists.

As regards collective tourist consumption, past experience proves that the budgetary information available does not allow for a sufficiently accurate estimate here. In effect, although we may have the functional budget at our disposal, containing a programme classification, which is better adapted for this purpose than the economic classification, these are too generic to be simply attributed to tourist activity.

CAPITAL FORMATION

The new ESA has broadened the definition of capital formation along with the requirements for its estimation and publication. In general terms it is a case of knowing not only the manufacturer of capital goods and the content of the old IO tables but also the purchaser of said goods. Thus if one has an IO table, one would also have a double-entry table featuring the producer and the consumer of the capital goods.

A second stage commences with the description of this matrix, consisting of the demarcation of the capital formation section, which can be attributed to tourism. The TSA methodology entails carrying out three types of demarcation:

a) Estimation of the capital formation of tourist activity
b) Estimation of the capital formation in tourist infrastructure carried out by government services or any other agent.
c) Estimation of the remaining capital formation necessary to provide the tourists with goods and services.

As regards sections b and c and in some small way a, it should be pointed out that the problem of demarcation lies not only in the estimation of figures but also in the very designation of the capital goods necessary for the supply of tourist services, as well as in the amount of use of said services by tourists. To give an example, a road which ascends to a
ski slope to then tail off there without connecting towns, could be considered as tourist infrastructure, but a road which rolls along the coast would not only be tourism infrastructure, but could also be so despite seeing greater or less usage according to the seasons of the year. This is of course a significant problem.

One solution is to link capital formation to tourist output of the different industries, as a means of demarcation. But while this procedure does boast the immeasurable advantage of producing results, it is conversely very simple. And whilst generally this connection may be stable, the annual picture may feature substantial errors. A second solution would be that of direct estimation, especially as regards section a. But whilst adequate information may be obtained for the years where IO tables exist - given that in the surveys questions are also asked about capital formation, in other years the task would be far more complex. It is clear that new surveys on services, which are being published in Spain (both by the INE and by regional institutes), include information on acquired investment, but this information is still too limited and vague to obtain conclusive results.

Lastly, the information published in Spain, whether for the entire country or for specific regions, shows that of the three classes or types of formation – gross fixed capital formation, changes in inventories and acquisitions of valuable objects, it is fixed capital that is most significant, and within this section, that of construction stands out with figures amounting to over 50% of the total. However, there is hardly any information on investment in housing for tourists, (second home, apartments for holiday letting), despite its noteworthy importance. This difficulty in estimating accommodation for tourists in the recent context of great expansion in construction activity, (both on the coast as has become traditional, and inland), has in the end become the final limitation to setting up a capital formation vector, which could be added to that of final consumption. However it does not seem risky to forecast that within a reasonable timeframe this end may be reached.

REMARKS ON THE ESTIMATION OF CHARACTERISTIC BRANCHES OF THE INDUSTRY

As has been indicated, the figures which turn the cogs of tourism can be classified in three or four main groups of expenditure. Whilst this does facilitate estimation, at the same time greater effort and means are required for said estimation. Our experience permits us to comment now on several aspects.

HOTELS AND SIMILAR ESTABLISHMENTS

The estimation of hotel output is one of the most attainable given the entirely tourist-geared nature of the activity, since almost the totality of the accommodation service is for this purpose. The INE shows that a very small number of people may reside in a hotel, this being their usual residence. Likewise we note that while residents may sporadically use a hotel in their normal surroundings, this use is clearly peripheral and does not contradict the previous assertion.

On the other hand it is possible to obtain information which contrasts both the supply and the demand. Thus, the IO table – and the annual regional accounts – draw together the activity in a specific branch, of which there is already a broad series. In practice, the impression exists that this information is the most reliable and has therefore prevailed. This is also further evidence of the importance of using regional data from a regional accountant or an IO table.
As far as demand is concerned, the ECTA asks about this expense in a very specific way, although package tourists or those that made the payment at their point of origin do not always know or remember the amount. But all in all there is much information available and the part concerning tourism does not need to be distinguished, which greatly facilitates the task.

**PROPERTY LETTING**

It is important to distinguish between two very different cases of property letting, the real and that known as “fictitious”. Regarding the first, there are no major or particular problems of comprehension or estimation. However the European System of Accounts, (ESA), adds several conventions which have singular repercussions on these accounts. Thus, on the one hand, it indicates that the acquisition of housing would constitute investment expenditure. Secondly, and in accordance with and derived from the previous point, it is established that this good generates an output, an income and a fictitious consumption for its owner, an “imputed income”. The estimate of this imputed income should be based on the rent that the landlord “saves” at the end of the year, but although in principle it may seem easy to apply this criteria, it should be mentioned that the renting market in Spain is very restricted and that consequently there is a serious lack of information on the prices and other relevant information.

A case which singularly concerns tourism is that of the so-called second home or holiday home, a place where the owners go on a temporary basis, such as at weekends or during other periods of free time. This “imputed income” must be estimated in the satellite accounts, but in addition to the aforementioned difficulty, there is also that of the lack of a census which would collect accurate information on the number and circumstances of these properties. This all makes the assessment somewhat tricky.

All in all we are facing the task of estimating a figure of considerable importance or magnitude, on which there is hardly any information. When previously drawing up Andalusian accounts, these shortages obliged us to calculate top-down, exceptionally, or if preferred, to regionalize the national figure, bearing in mind the Andalusian impact on the whole. Allow me to raise one last issue on imputed rent which may not have been clearly solved. It is not clear in our opinion whether these lettings should be estimated for the entire year or just for the time period when the housing is actually used, given that these second holiday homes stand empty most of the time. And, as will be observed, the decision made here would greatly impact the results.

**FOOD AND DRINK PROVISION SERVICES**

The source for calculating the figures of food and drink expenditure must be the expenditure survey (ECTA) and the survey on same-day trippers; entailing measurement from the demand. It is probably tourists’ most important expenditure during their trip and yet there is only one way to estimate, given that residents also use the food and drink services on a daily basis.

This limitation does not restrict us from using other indirect means of comparison.

In our case, the output or supply is annually estimated by the Andalusian regional accounts, just as it is collected as a specific branch in the different IO tables. We can obtain information on the intermediate destination of the output of restaurants and bars, precisely from the years when the tables were created. If we add the expense of total consumption of the residents, supplied by sources such as the Permanent Survey of Family Budgets by the
INE for the region – as long as this data is sufficiently representative – this results in a balance, which would remain at the disposal of tourists. Or which could be compared with what tourists evidently spend.

TRANSPORTATION

Passenger expenditure on transport has been one of the most difficult to estimate. By its very nature it is already difficult to assess: companies’ residency is very often simply theoretical; their activity may be carried out in the same region or outside it; the services can be used by residents and non-residents, along with many other variables. But the main problem on this issue is that of the regionalisation of national companies that operate throughout Spain, regionalisation which was carried out by the IEA and which is included in the regional accounting and IO tables.

As has been mentioned, the figures which turn the cogs of tourism are mostly concentrated on four main expenses: accommodation, food and drink, transport and purchases. Therefore transportation is an essential component of the final result, in the magnitude of tourism in a state or region. It may be that the visitor travels to their destination, in this case Andalusia, with a transport operator from their own region or country, in which case the expense incurred falls outside the region. But they may travel with a national company, in which case the cost affects the region insofar as how big a percentage of said company is designated to Andalusia. Hence this regionalisation exercise is obligatory, although the task is never easy. It must be observed that the totality of air transport and the vast majority of sea transport still referring to passengers – will be of a touristic nature given that the passage would be purchased by a same-day tripper travelling outside their region, returning to their usual place of abode within the same day, without spending a night away, but still leaving their normal surroundings.

Rail transport will also be tourist-based in the case of long journeys and even largely in the case of inter-regional journeys. The expectation is that tourists on local trains be in the minority. Finally, the case of transport by road will be more disparate, some figures and the proportion of tourists being estimated which, in our case, can be done by means of the ECTA.

Now, the “statistical tradition” of the region has been very prudent and conservative when it comes to regionalising these and other national companies, given that it was thought that the financial repercussions in the region would be very limited, whereas its estimation would conversely be very difficult. After all, when there is information available in this respect, the salaries of workers who are resident in the region can be regionalised, but in almost no case has Andalusia been attributed any part of the operational surplus, the other component of the company’s added value. This explains that transport in the region has some very moderate figures as regards the internal level, and comparatively high figures as regards imports.

However this criteria has been modified in recent times, equipping the region with a greater share of the national companies in accordance with indications from Eurostat and the INE. The new criteria proposed is the allocation of the total output to the unit of local economic activity where the mobile team is based. Nevertheless there is a possibility that, for rail and air transport, descending procedures may be established in order to break down the national dimensions.
But all this notwithstanding, the quota of some forms of transportation assigned to the region continues to be very moderate, highlighting the difficulty of this imputation, especially regarding passenger air traffic. And, as is logical, all this has had repercussions both on the relative importance of transport in the magnitude of tourism in the region, and on the importance of Andalusian tourism itself on the national whole.

**SUPPORT AND AUXILIARY TRANSPORT ACTIVITIES**

There is a vast collection of services attached to passenger traffic, the bill for which is not directly picked up by the traveller. These goods and services are consumed both by Andalusian transport companies and the rest of Spain and the world, this destination not being indifferent to the results of its evaluation. In fact, when purchased by an Andalusian company or a resident in Andalusia, they would be considered to be intermediate consumption, while if said services were bought by a non-resident company they would be considered as exports. Herein the difficulty of evaluating these exports which doubtless are closely linked to tourism, or instead of evaluating them, of placing them within the TSA framework, given that they do not have an immediately obvious location. Perhaps the system, the methodology, so demanding and rigorous in most cases, presents us with a small fissure here since it does not appear to be able to adequately distinguish the best way to include them. To this is added the now traditional problem of distinguishing between consumption by non-residents of the area and exports, the concepts of vague borders.

In order to better understand what we are mean, we would be talking for example about a foreign aeroplane travelling to an Andalusian airport and using the services provided by the airport as well as other provisioning services such as catering and fuel or cleaning.

The solution employed has been that of including the exportation of additional services in the consumption account, locating them specifically in non-resident consumption, although without specifically distinguishing the amount. But this solution has both advantages and disadvantages. On the one hand, it is interesting and necessary to include these exports in the TSA, given that they claim to include the total tourism demand. Yet on the other hand, whilst their addition to the consumption avoids their exclusion or non-evaluation, it converts this concept into a more confused dimension, making its comparison with the rest of the total consumption in regional and national accounts difficult. This is why it would seem to be more adequate, where possible, to exclusively identify it independently within the total tourism demand.

In our case therefore, this intermediate consumption has been evaluated and included in the case of purchase by non-resident companies, that is, in Andalusia it could be considered as exports, assessing the use of airports, ports and additional RENFE services. In all these cases, information on supply provided by the IOTs has once again been brought into play. The abundant information available from airports and their peripheral shipping of merchandise has not made their evaluation much more complex, whereas in the other aforementioned cases it was firstly necessary to establish whether they were primarily concentrated on goods or on passengers. The number and type of vessels entering Andalusian ports was the ratio used in order to estimate the tourist quota in the ports. In the case of RENFE it was necessary to distinguish between more cases but all in all, the amount of passenger traffic moving out of the region seemed to be the best indicator for the correct attribution of the additional RENFE services, activity that is fundamental for another part of this public company.
BIBLIOGRAPHICAL REFERENCES


