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ESTIMATING THE MAGNITUDE OF TOURISM IN THE EUROPEAN COMMUNITY DATA DEFICIENCIES AND SOME RESULTS

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1 INTRODUCTION

The main purpose of this paper is to provide estimates of the magnitude of the contribution of total tourism payments to overall economic activity and employment in each of the member states of the European Community (EC) The paper has two subsidiary objectives – to highlight the dearth of reliable financial data relating to the tourism sector and to outline some important economic effects of international tourism payments in the EC The paper is based on part of a larger study prepared for the Commission of the European Communities (see O'Hagan, Scott and Waldron, 1986)

The most complete data set relates to international tourism payments and, as such, it is in relation to this aspect of tourism that most analysis of data is possible However, even these data can be very unreliable, especially when they refer to bilateral tourism flows Nonetheless, even with the inadequate data base, it can be demonstrated that international tourism payments do have important economic effects in the EC All of these issues are discussed in Section 2

The data on international tourism payments do not include payments to international carriers Information in relation to the latter, in fact, is available for only two member states A similar dearth of information exists in relation to domestic tourism payments Thus, to arrive at estimates of total tourism payments (international plus carrier plus domestic) methods for estimating international carrier payments and domestic tourism payments had to be developed These methods, as well as the resulting estimates of the contribution of total tourism payments to overall economic activity, are discussed in Section 3

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Section 4 attempts to ascertain the level of employment (direct and indirect) likely to be associated with this tourism activity Once again, the estimates only indicate broad orders of magnitude, but given the available data they areprobably the best that can be provided Section 5 concludes the paper The most comprehensive and useful definition of tourism is the following

> Tourism travel by a 'tourist', i e a person away from the usual place of residence ('home') for a holiday, business trip, family visit, conference or other meeting (scientific, diplomatic, religious, sporting, etc), excludes travel regularly undertaken to places of work or education, e g daily commuters, comprises
> - international tourism, travel outside the country of residence for at least 24 hours,
> - national tourism travel within the country of residence
> (EUROSTAT 1980, p LVIII)

Tourism payments, as understood in this paper, are all payments associated with tourism so defined Tourism employment includes all direct and indirect employment associated with tourism so defined, but not induced employment

2 INTERNATIONAL TOURISM PAYMENTS

This section will first briefly outline the main sources of information on international tourism payments in the EC The reliability of these data will then be examined in some detail Finally, some important economic effects of international tourism payments in the EC are highlighted

Availability of Data

The main source of data on international tourism payments is the Organisation for Economic Co-operation and Development (OECD), although the World Tourism Organisation (WTO), and to a lesser extent the International Monetary Fund (IMF), also publish data covering all member states of the European Community An immediate problem with the data on international tourism payments published by the OECD and other international organisations is that they are not consistently compiled For example, payments by day trippers are excluded by Spain and the USA, partially excluded by Belgium/Luxembourg and included by all the other OECD member states for which this information is available – and several countries do not state their position one way or the other (see OECD, 1986)

A second difficulty is that while the expenditures of travellers on transportation to the destination may form part of the 'transport' item in balance of payments statistics, they are not included as part of international tourism payments Furthermore, the balance of payments item 'transport' includes both freight and passenger transport Some effort has been made to break down the

transport item into air, sea and other transport, with air and sea transport further divided into freight and passenger services (Commission of the European Communities, 1984) However, these data are available only for the European Community as a whole, and not for individual member states Thus, 'international tourism payments', or 'travel payments', as published in OECD and IMF publications do not include payments to carriers

There are two ways in which the item 'international tourism payments' is measured - either by the bank-reporting method or by the visitors sample survey method The bank-reporting method involves the collection by Central Banks of data on the volume of foreign currency (bank notes, travellers cheques, etc) bought and sold by private individuals While these data are easily collected, as will be seen later they are not necessarily an accurate reflection of the volume of tourism activity The bank-reporting method is used by all the EC countries except the UK and Ireland (see OECD, 1986) These two countries, along with Italy which uses the two methods jointly, conduct regular visitor sample surveys While this method is also inexact, and is much more expensive, it is less open to consistent bias than the bank-reporting method White and Walker (1982) report that some countries also make use of travel agency records to estimate international tourism revenues

In Ireland there are two sources of data on international tourism payments, Bord Failte Eireann (BFE) and the Central Statistics Office (CSO), each of which conducts its own survey of international tourists (See Appendix A for details)

Reliability of Data

Data on aggregate tourism receipts and expenditures for most EC countries appear to be reasonably reliable, especially when the picture over a longer period is observed However, for countries which use the bank-reporting method some rather unusual short-term 'irregularities' can occur For example, Italian international tourism expenditures (at constant prices) increased by 23 per cent in 1973, decreased by 59 per cent between 1973 and 1976 and rose by 32 per cent between 1983 and 1985 There is no corroborating evidence from any other source which suggests that the size of Italian international tourism expenditures fluctuated in this way Nonetheless, in general the data on aggregate tourism payments can be used with some confidence as to their reliability

The same, unfortunately, cannot be said for the disaggregated data, in particular the data relating to bilateral flows The general problem has been admirably highlighted by the OECD (1986) and by White and Walker (1982) (See Appendix B for a discussion of the causes of unreliability) What follows, though, is a more specific illustration of the problem - using data relating to

Ireland It is not the intention of the exercise to suggest that Ireland is unusually deficient in this regard, quite the contrary in fact However, it was for Ireland that the richest set of data was available to us

It is possible to compare two series of data relating to tourism which, by definition, should be equal and, thereby, to comment on the reliability of such data For example, country i's estimate of receipts from country j should equal country j's estimate of expenditures in country i Table 1a illustrates the point in relation to Ireland

The table shows the two estimates for tourism expenditures in Ireland by residents of each of the four countries listed for the period 1974 to 1984 The difference between the Irish and French estimates for tourism expenditures by residents of France in Ireland is remarkable, particularly in the early years Even in the more recent period, the Irish estimate exceeded the French estimate by a factor of two The discrepancies in relation to the two estimates for German expenditure are much less marked, but nonetheless in certain years very significant differences have occurred In a number of years, one source was showing a marked increase, while the other was indicating an actual decline – not very helpful for anyone involved in marketing The USA market, as the data indicate, is much more important for Ireland than the French or German markets, yet very serious discrepancies exist between BFE and USA Department of Commerce estimates of the change in the size of this market from year to year In 1983, the USA authorities indicated that expenditures had dropped by IR £5 7m, and the Irish authorities that they had risen by IR £28 7m The final columns in Table 1a compare estimates for the UK market – the Irish estimate is from BFE and the UK estimate is from the UK Department of Industry, which in fact, receives its data from the CSO in Ireland As may be seen, the BFE estimate has consistently been less than the CSO estimate, and the ratio of the two estimates has been remarkably stable over long periods of time (The main source of the difference appears to be that the CSO estimate includes expenditures by excursionists, which are excluded by BFE)

The results in Table 1b confirm, in a more formal sense, what has been said above When the annual change in estimate A is regressed on the annual change in estimate B then the highest R^2 recorded, O 50, is that for France The R^2 values for the German and USA equations are as low as 0 10 or less In the equations using levels the R^2 values are considerably higher, but five of the eight coefficients are significantly different from what they should be These are indeed striking results

The pairwise comparisons in Tables 1a and 1b are most interesting, not only in the sense that they highlight major discrepancies but also in that they are derived using different methods The four Irish estimates are from the BFE Survey of Travellers, whereas the French and German estimates were derived using the bank-reporting method, the USA estimates from a USA survey of travellers and the UK estimates from survey data provided by the Irish CSO

The bank-reporting method is particularly unreliable (see OECD, 1986, and EUROSTAT, 1986) and this could explain much of the problem with the data for France and Germany in Table 1a As Table 2 illustrates, the French and German estimates, of French and German international tourism expenditures respectively, are suspect not only for Ireland, but for most countries For example the ratio of the Danish and Portuguese estimates to the French estimates for 1984 were 2 06 and 2 37 respectively, worse than the situation for Ireland Even with the survey method, though, large discrepancies can occur, as the Irish/USA comparison in Tables 1a and 1b illustrate It is likely, though, that the receiving country's estimate will be more reliable, no matter what method is used, as it is very difficult to obtain an accurate breakdown of expenditures by country of destination when more than one country is being visited - as is often the case

Some Results

Despite the difficulties described above, it is still possible to demonstrate quite unambiguously, using the available data, that international tourism payments do have a number of significant economic effects in the EC Two such effects will be briefly outlined here the stabilising effect on the balance of payments of the member states and the distributive effect between member states

(i) Stabilising effect on balance of payments

It is generally accepted that balance of payments stability is a desirable aim, so it may be of interest to see whether or not tourism has a stabilising effect on international trade, either by eliminating or reducing a surplus or a deficit in the balance on goods and services excluding tourism It should be pointed out at this stage, however, that a change in the tourism balance does not imply an equal change in the overall balance of payments position, as there is a certain amount of leakage

Table 3 summarises the stabilising effects of tourism on the balance of trade, considering six different effects, of which four are stabilising and two destabilising The stabilising effects are those in which a surplus or a deficit in the balance on goods and services excluding tourism is eliminated or reduced by tourism The destabilising effects are those in which a surplus or a deficit is increased by tourism Of the 154 cases considered, 136 (88%) are stabilising and if those cases in which the tourism balance is less than 10% of the balance on goods and services excluding tourism are ignored, in 114 of 124 cases (92%) there is a stabilising effect In six of the member states (i e Germany, Greece, Italy, the Netherlands, Portugal and Spain), tourism was a stabilising influence in every year since 1972

(ii) Distributive effect between member states

This subsection considers the distributive impact of tourism between member states of the Community First, the share of international tourism receipts in GDP and the tourism balance in individual countries are compared with living

standards, and it is shown that low-income countries have a surplus on tourism account Second, the sources of these surpluses in the low-income countries of the Community are investigated

Table 4 shows the following for each member state for 1984 (a) per capita GDP, (b) the per capita balance on tourism, and (c) the share of international tourism receipts in GDP The table shows that of the five member states whose per capita GDP was lower than the EC average (i e Greece, Ireland, Italy, Portugal and Spain), all had a surplus on tourism account, and in all except Ireland the per capita surplus on tourism was greater than the EC per capita surplus On the other hand, of the six high-income member states, four were in deficit on tourism account, and in Denmark the surplus per capita was less than the corresponding figure for the EC France was the only member state where both GDP per capita and the tourism balance per capita exceeded the EC average

A similar picture emerges from an examination of the importance of international tourism receipts The three member states in which the share of international tourism receipts in GDP was more than twice the EC average (Greece, Portugal and Spain) had the lowest levels of GDP per capita The other low-income countries, Ireland and Italy, also had a higher than average share of international tourism receipts in GDP Although the share was also above average in BLEU and Denmark, it was not as high as that in any of the low-income countries

Another way of looking at this issue is presented in Table 5 In it the direction of the tourism balances in the member states and in the EC from 1972 to 1985 are summarised For high-income countries tourism represented a net outflow in 54 of the 84 cases, for low-income countries, however, there was a net inflow in 68 of the 70 cases

It is also of interest, notwithstanding the data difficulties mentioned earlier, to examine the balance of tourism flows between high-income and low-income member states, in particular the sources of the tourism surpluses in the low-income countries First, two countries, Portugal and Germany, are considered in detail, and then some summary statistics are presented The choice of Portugal and Germany as examples is justified by the fact that the former has the lowest GDP per capita in the EC, while the latter is one of the high-income member states and is by far the most important tourism-generating country in the EC

The Portuguese figures are shown in Table 6 and the German figures in Table 7 It can be seen from the Portuguese data that, of the other member states, only Greece, which has the next lowest GDP per capita, received more in tourism revenue from Portugal than its residents spent in Portugal however, the net balance amounted to only 0 01 ecu (European currency units) per head of the Greek population For each of the other four low-income member states, net tourism expenditure per head in Portugal amounted to less than 0 6

ecu, for each of the high-income member states, the figure was over 1 5 ecu per head The one notable exception to this pattern is the high net expenditure in Portugal by UK residents Nonetheless, the overall picture presented by the Portuguese data confirms that there are significant net tourism flows from high-income to low-income member states

A similar pattern emerges from the German data Only the Netherlands received less in tourism revenue from Germany than its residents spent in Germany For the other four high-income member states, net tourism receipts per capita from Germany were still less than the average for EC (excluding Germany) The outflows from Germany had the greatest impact on three of the five low-income member states - Italy, Spain and Greece, in each of which the net tourism receipts per capita from Germany were more than one-and-a-half times the Community average The other two low-income member states, Ireland and Portugal, seem to have received a relatively low share of the German tourism deficit, but this may be explained by their distance from Germany

A total of 55 country-to-country balances, in fact, can be derived from data provided to us by the National Tourism Authorities of the member states Of these, there are 43(78%) in which there is a surplus in the poorer country of the pair (in terms of 1984 GDP per capita) In the remaining 12 cases, the direction of the flow is from the poorer country to the richer In absolute terms, five of the bilateral flows exceed 500 million ecu, namely the flows from Germany to France, France to Spain, Germany to Italy, Germany to Spain, and UK to Spain In each case, the receiving country has the lower standard of living of the pair In terms of definition of high-income and low-income countries used above, the only flows from low-income countries to high-income countries are from Ireland to Denmark and UK

3 TOTAL TOURISM PAYMENTS

There are three main components in total tourism payments international tourism payments (excluding payments to international carriers), international carrier payments, and domestic tourism payments (including payments to carriers) As mentioned above, data on aggregate international tourism payments are available and are reasonably reliable However, complete data on all the components of total tourism payments exist, to the best of our knowledge, for only two EC countries, namely Ireland and the UK For this reason, the magnitudes of these components have to be estimated, albeit in a rather ad hoc manner, if estimates of the size of total tourism in each member state are to be provided The methods used and the resulting estimates are described in turn below

International Carrier Payments

Data on payments to carriers in respect of transportation of international tourists consist of two components

(a) payments by persons of the same nationality as the carrier in connection with tourism in other countries, and

(b) payments by foreign tourists in connection with tourism in the country in which the carrier is based

The latter component is often available in the breakdown of balance of payments statistics, and is published for certain countries in the OECD reports under the title of 'international fare payments - receipts' The former component, however, is not part of either imports or exports, being a transaction between two residents of the same economic territory It is not generally considered in publications on international tourism, but estimates are available for Ireland and the UK (see CSO, 1985a, and Medlik, 1986) To overcome the problems caused by lack of data, a very crude method of estimation had to be used, it was assumed that the ratios of component (a) above to international tourism expenditures (excluding carrier receipts) and of component (b) above to international tourism receipts (excluding carrier receipts) were the same for all member states

These ratios could be influenced by a number of factors, principally the share of national carriers in the total traffic into a country and the physical accessibility of the country At least for air travel, for which detailed data are available, the share of national carriers in total traffic is known to vary somewhat from country to country, but at Community level these variations should cancel each other out Countries such as Ireland and the UK which have no significant land borders are much less accessible than, say, BLEU which is almost totally landlocked A higher proportion of total traffic to the less accessible countries will be by the more expensive air and sea routes, and a lower proportion by private car Where a private car is used, though, some imputed depreciation and maintenance cost must be added to that of fuel Indeed, for some people the main use made of their car is during the vacation period Despite these reservations, it is impractical to consider using anything other than uniform ratios for all member states

The actual ratios used are based principally on data for the UK and Ireland While the absence of a significant land border makes travel to these countries more expensive, it also allows for the collection of more reliable data The figure used for the first ratio is 0 2, which is the same as that used by Medlik (1986), and slightly smaller than the ratio in Ireland in recent years The figure used for the second ratio is 0 25, again slightly less than the UK ratio of around 0 27 and the Irish ratio of around 0 33 (The ratios for Finland, Germany and Switzerland in 1984 were 0 44, 0 33 and 0 29 respectively) Thus, the figures of 0 20 and 0 25 probably yield conservative estimates of the magnitude of international carrier payments

Domestic Tourism Payments

The estimation of domestic tourism payments creates even greater problems than the estimation of international carrier payments Few EC countries can provide a consistent series of data over time on domestic tourism payments Indeed, not many countries can provide a reliable estimate of domestic tourism payments for even a single year and for those countries that can, the estimates sometimes are not comparable because of differences in definitions used The confusion is compounded further by the fact that the same country can use different definitions in different publications

Despite these problems, an attempt can be made to provide a consistently arrived at estimate for domestic tourism payments in the member states of the European Community For this purpose, two direct sources of data and two concurrent checks are used

(i) Direct Sources

There are two direct sources of information on the size of domestic tourism, namely survey data on payments and bednights data A number of EC countries can provide estimates of domestic tourism payments and these formed the key source of information for estimating domestic tourism in all member states There are problems of comparability and reliability with these data, of course, but reasonably reliable estimates appear to exist for six or seven countries (see Appendix C for details)

For all EC countries, except Ireland and the UK, some data on bed-nights spent in hotels and/or registered tourism accommodation by both international and domestic tourists are available and these provide a potential source of information on domestic tourism payments It is hypothesised that domestic tourists in a particular country spend substantially less, per diem, on average, than international tourists in the same country Thus the ratio of domestic receipts per domestic bednight to international receipts per international bednight should be substantially less than unity, where the bednights data cover all registered accommodation The same should be true for hotel bednights, unless international tourists are significantly more likely than domestic tourists to prefer hotel accommodation to other types From the data available, it appears that domestic tourists spend at most half as much per diem as international tourists Unfortunately, the bednights data available are not comparable across countries and even within countries it is often difficult to obtain a consistent, up-to-date and reliable set of data Nonetheless, these data do provide a source of information on domestic tourism and are of some use

(ii) Concurrent checks

Two measures can be used as concurrent checks on the estimates resulting from the direct sources, namely the ratio of domestic to international tourism expenditures and the share of total tourism expenditures in private final consumption (PFC), for each country

If it were reasonable to hypothesise that the ratio of domestic to international tourism expenditures is broadly similar in countries with similar geographic and economic characteristics, then clearly this could – in conjunction with the survey data – provide a key mechanism for estimating the size of domestic tourism The absolute size of domestic tourism receipts will depend on four main determinants the land area of a country, the size of population, variety of geographic factors (mountains, sea, climate, etc), and income per capita of the population The greater the size of any of the first three determinants the greater the expected size of domestic tourism, both in absolute terms and relative to international tourism expenditures by residents of that country However, as income per capita increases it might be expected that domestic tourism expenditures would decline relative to international tourism expenditure

With regard to the first two determinants, of the EC member states, Belgium/Luxembourg, Denmark, Greece, Ireland, the Netherlands and Portugal could be placed in one group and France, Germany, Italy, Spain and the UK in a second group Within these groups, a further subdivision, in terms of geographic factors, is possible – namely between Mediterranean and non-Mediterranean countries Thus, four main groups can be identified small, non-Mediterranean countries (BLEU, Denmark, Ireland, the Netherlands), large, non-Mediterranean countries (Germany, the UK), small, Mediterranean countries (Greece, Portugal), and large, Mediterranean countries (France, Italy, Spain) It seems plausible to suggest that the ratio of domestic to international tourism expenditures should be broadly similar within each of these groups For the first group, in fact, reliable estimates of the ratio of domestic to international tourism exist for Denmark, Ireland and the Netherlands, and the similarity between them is remarkable (see Appendix C)

The second concurrent check, as mentioned, is to examine the share of total tourism expenditures (domestic plus international plus all fare payments) in PFC This ratio should bear some relationship to GDP Specifically, the expectation is that the higher a country's living standards the higher the ratio, as is the case for services in general This proved a particularly useful check on the estimates resulting from the previous sources and in some cases prompted significant revision to be made to the estimates (see Appendix C)

Results

Using the methods outlined above, the resulting estimates of the contribution of total tourism payments to overall economic activity are now examined Table 8 shows the share of tourism receipts in GDP for each member state for 1985 – the breakdown of this total between domestic and international receipts is also indicated

As may be seen, total tourism receipts as a percentage of GDP were highest in Spain (8 6%), followed by Portugal (8 2%), France (6 6%), Greece (6 6%), Italy (6 3%) and Ireland (5 5%) The remaining countries had figures between

3 1% and 4 8% This highlights clearly the major importance of tourism to the economies of the Mediterranean countries Table 8 also shows that even in the non-Mediterranean countries, tourism is a very important contributor to economic activity

Domestic tourism receipts expressed as a percentage of GDP were highest in France (4 5%), followed by Germany (3 1%), Italy (3 1%), Spain (2 5%) and the UK (2 0%) This is not surprising, given the earlier assertion that the countries with the largest land areas and populations should have the largest domestic tourism industries (relative to GDP and international tourism) The percentage for all of the other countries range from 0 8 to 1 3, a result which is reassuringly in line with expectations

From Table 8, it is clear that international tourism is the predominant factor in total tourism in Greece, Portugal and Spain - and, indeed, in BLEU, Denmark and Ireland - whereas domestic tourism assumes this role in France and Germany

Table 9 shows the share of tourism expenditures in PFC for each member state for 1985 - the breakdown of this total between domestic and international expenditures is also indicated

As may be seen, total tourism expenditures as a percentage of PFC were highest in Germany (10 7%), followed by France (9 0%), Ireland (8 3%), Netherlands (8 1%), Denmark (8 0%) and BLEU (7 6%) The remaining countries all had figures below 7%, but in no country was the percentage below 3 9% Thus, expenditures on tourism are clearly of major significance in total consumer expenditures in all member states

In the cases of BLEU, Denmark, Ireland and Netherlands, expenditures on domestic tourism are much lower than on international tourism The opposite is the case for France, Italy and Spain

4 EMPLOYMENT

Introduction

In the European Community, sectoral breakdowns of employment are based on NACE, the General Industrial Classification of Economic Activities within the European Communities (EUROSTAT, 1970) The NACE classes of particular relevance to tourism include 64/65 Retail distribution, 66 Hotels and catering, 7 Transport and communication, 967 Tourism offices and tourism clubs, and 97 Recreational services and other cultural services

Estimating tourism employment from the production side, however, cannot be done by aggregating the employment in these, or in any other combination of sectors The major problem is that since tourism is a multiproduct activity, with numerous peripheral activities, it is difficult to identify the exact proportion of inputs in each separate activity that goes to satisfy tourism demand[1] Those

principally employed in serving tourists are rarely distinguished from others employed in the same or other activities, but not concerned with tourism Thus, hotels are combined with restaurants and other catering activities, output and employment in various modes of transport are shown without their relationship to tourism being specified and employment in smaller sectors such as travel agencies is not usually enumerated separately in retail statistics

If, though, both the level of total tourism receipts and a sectoral breakdown of this total (corresponding to the NACE classification) are known, then it may be possible to use the NACE employment data to arrive at an estimate of tourism employment However, data on the spending patterns of all tourists (domestic and international) are not available for *any* EC country, and for some countries detailed sectoral employment data are not available in the relevant EUROSTAT publications Furthermore, the sectoral breakdowns used for consumption and output/employment are not the same The UK is the *only* country for which tourism employment estimates, and the methodology used, are published (see Morrell, 1982 and 1985, and Medlik, 1986) It is, also, the only country, perhaps, for which enough information on both tourism spending and sectoral employment patterns exists to provide even broad tourism employment estimates For this reason, the methodology of the UK studies is first briefly analysed Following on from this, crude estimates of tourism employment are derived for all EC countries

UK Studies

The first important factor, as mentioned, in attempting to translate data on receipts into an employment estimate is the breakdown of receipts by category of expenditure The more detailed the breakdown, the more reliable the resulting estimate However, four broad categories – 'travel', 'accommodation and meals', 'shopping', and 'entertainment' – are likely to be most important For tourism expenditures in the UK, Morrell (1985) estimated that 'travel' accounts for 27% of the total, 'accommodation and meals' for 39%, 'shopping' for 22%, and 'entertainment' for 7% – together, accounting for 95% If the expenditures on each of these main categories are known, they can then be expressed as a percentage of total national expenditures in those areas For example, for the UK, tourism expenditures on 'travel' and 'accommodation and meals' account for around one half of total national expenditures on these categories If the employment totals in the relevant sectors are known then the tourism share of expenditures can be applied to those totals to get direct tourism-related employment in each sector

Associated with final tourism demand, as with all other components of final demand, is an intermediate demand – for agricultural produce, drink, energy, vehicles and so on This in turn gives rise to the indirect employment associated with tourism Intermediate demand may amount to the equivalent of around 70% of final consumer demand, and, as such, the employment

implications can be substantial Data for the UK indicate that the ratio of indirect employment to direct employment in the tourism sector is as high as 0 69, whereas Irish and Netherlands' data suggest a ratio in the range of 0 30 to 0 35 (See Bord Failte Eireann, 1986, and Netherlands Bord of Tourism, 1985) There are two reasons for believing that the latter estimates may be closer to the mark First, the UK study assumed that, in the economy as a whole, the ratio of the employment associated with intermediate demand to total employment was the same as the ratio of intermediate demand to final consumer demand This seems debatable, as it assumes the same labour intensity of production in meeting both demands Second, and more serious, it is assumed that tourism spending accounts for the same proportion of intermediate demand as it does of final consumer demand This is another very debatable assumption, since the sectors of most importance to tourism have a very low intermediate demand relative to final consumer demand - largely because of the high labour intensity of the sectors From data provided in the study, it would appear that intermediate demand, as a proportion of final demand, in the relevant sectors was only around half of that for other sectors of the economy

Part-time employment could be much more prevalent in tourism-related sectors than in other sectors of the economy and adjustment must be made for this fact For example, in the UK almost 50% of workers in hotels and catering are part-time - in retailing the figure is around 40% and for entertainment it is over 30% Thus, tourism employment expressed as a proportion of total employment could be considerably less when the numbers employed are converted to a full-time job-equivalent basis

For the purpose of this discussion the most important factor in the UK study is, perhaps, the estimate of the ratio of tourism's share in employment to tourism's share in GDP If it could be assumed that this ratio was similar for all countries (no data exist against which this hypothesis could be tested), and if the estimates of total tourism receipts calculated using the methods outlined earlier were used, then clearly estimates of tourism employment for all member states would result This ratio was estimated by Morrell (1982) at around 1 32, which would suggest an extraordinarily labour-intensive tourism sector in the UK However, if adjustment for lower indirect employment and the high part-time content of tourism employment is made to the Morrell (1982) estimate the ratio drops to about 1 05 Tourism receipts are, of course, a gross value and not a value added (i e gross sales minus imported inputs) measure, as is GDP Thus, the ratio would be considerably above one if imported inputs were netted out, implying that a figure of 1 05 still suggests a labour intensive tourism sector

Results

For the reasons mentioned above, it could reasonably be assumed that the ratio of tourism's share in employment to tourism's share in GDP is at least 1 05 in each of the member states Some may suggest that this is too low, but it is better, perhaps to err on the conservative side given the somewhat exaggerated claims that have been made in some quarters in the past concerning employment in tourism Needless to say, the resulting estimates will only indicate very broad orders of magnitude

Table 10 provides an estimate of total employment associated with tourism in each of the member states, both in absolute terms and as a percentage of total employment These estimates, as outlined earlier, include direct and indirect employment they exclude the employment associated with expenditures on day-trips and they also exclude any induced employment that may result when the incomes of those in direct and indirect employment are spent and re-spent in the economy Given the way the figures were calculated, direct employment accounts for around three-quarters of the totals indicated in Table 10

The total number of full-time job equivalents in meeting tourism demands in the EC in 1985 was almost 7 4 million In absolute terms, not surprisingly, France, Germany, Italy and the UK had the highest levels of employment, i e full-time job equivalents Each of them had the equivalent of more than one million people fully employed in meeting tourism demands, and just under one million people were employed in Spain

A more useful measure, perhaps, of the importance of employment in tourism is its share in total employment As may be seen in Table 10, employment in tourism amounted to 6 0% of total employment in the Community in 1985 Because of the estimation method used, the estimate of employment in tourism, as a percentage of total employment, had to be higher in countries with a higher share of total tourism receipts in GDP In particular, it was highest in Spain (9 1%), followed by Portugal (8 6%), France (6 9%), Greece (6 9%), Italy (6 7%) and Ireland (5 8%) The remaining member states had percentages below the Community average, but nonetheless employment in tourism amounted to a not insignificant proportion of total employment in all of these countries

Table 11 highlights an interesting and important fact, namely the large differences that may exist between a country's share in EC tourism receipts and its share in EC tourism employment

As may be seen, France (25 1%), Germany (22 3%), Italy (16 6%), UK (14 2%) and Spain (10 8%) accounted for the largest shares of total tourism receipts the next highest share was 2 9%, for the Netherlands Greece (1 6%), Portugal (1 3%) and Ireland (0 8%) had the lowest shares

When employment shares are examined, the rankings change significantly, and the shift in some individual country shares is quite dramatic France (20 1%) accounted for the highest share of employment followed by Italy (19 0%), Germany (17 6%), UK (14 6%) and Spain (13 2%) the Netherlands (2 3%), Denmark (1 5%) and Ireland (0 8%) had the lowest shares As is evident from the above, the share for Germany drops substantially when employment rather than receipts is used A more significant change, in the opposite direction, occurs in the case of Greece and Portugal Combined, they accounted for 2 9% of EC tourism receipts in 1985, but for 8 3% of employment These changes result from the large variations in GDP per person employed between member states of the Community

5 CONCLUSION

There appears to be considerable ambiguity in some member states of the EC concerning the significance of the tourism sector The most fundamental point that is made, perhaps, is that since no economic sector produces exclusively for tourism, no production sector 'tourism' actually exists As such, it is argued that while one can speak about a rail transport or hotel sector, one cannot talk of a tourism sector Even looking at tourism from a demand side there are ambiguities As conventionally defined, tourism demand includes the demands of people travelling for business reasons as well as those visiting friends/relatives or those travelling for leisure/rest motives It excludes payments by excursionists (i e those not staying away from home overnight), although much of this expenditure may be holiday/leisure – related Yet, since every trip to the local pub or leisure centre cannot be included, some minimum time or distance limit must be introduced

Given the above, it is not surprising, perhaps, that the data problems highlighted in the paper relating to tourism payments exist Apart from the dearth of statistics on a whole range of matters relating to tourism, it has been shown that even with the data that do exist there are very serious inconsistencies Nowhere was this better illustrated than in Table 1[2] It is unlikely that these data difficulties could be overcome, though, without a very substantial increase in the costs of collecting the data, an increased cost that would have to be justified in terms of the benefits that might ensue

Politicians, the media and others frequently make reference to the importance of tourism, particularly in terms of its contribution to employment and to the balance of payments A range of measures have been introduced at the European Community level to facilitate and encourage the free flow of tourists in the EC and many member governments have referred to the employment growth potential of the tourism sector Clearly, then, despite the conceptual and data difficulties outlined above, some attempt at quantifying the economic significance of tourism – in a manner that will yield consistently arrived at, and therefore comparable, estimates – is needed if the claims made are to be

substantiated or otherwise The main purpose of this paper was to provide preliminary estimates in relation to some aspects of this issue The methods used were inevitably ad hoc, and consequently results indicate only broad orders of magnitude

The first result of the paper related to the marked stabilisation effects (i e when a surplus or deficit in the balance of goods and services excluding tourism is eliminated or reduced by tourism) of international tourism on the balance of payments position of the member states of the EC A second result was that the low-income countries of the EC tend to have large surpluses on their tourism accounts, in contrast to the high-income countries which tend to have deficits This is mainly a reflection of the fact that in general there are large net tourism flows from the high-income to the low-income member states of the Community This chiefly results from the climatic and other comparative advantages of the low-income countries with regard to international tourism, a fact that might be more adequately recognised in EC industrial and regional policy

The paper also highlighted the contribution that total tourism makes to overall economic activity in the EC Tourism receipts came to 5 5% of GDP in the Community in 1985 - ranging from 8 6% in Spain, to 5 5% in Ireland to 3 1% in the Netherlands Tourism expenditures accounted for 8 1% of PFC in the Community, Germany having the highest (10 7%) and Greece the lowest (3 9%) percentage respectively - the figure for Ireland was 8 3% The number of full-time job equivalents generated by tourism demand (direct and indirect) exceeded seven million in the Community in 1985, four of the member states having more than a million employed Expressed as a proportion of total employment in each country, Spain had the highest (9 1%) and the Netherlands the lowest (3 3%) level of tourism employment respectively

It is clear, then, that tourism in the European Community accounts for a large proportion of personal consumer expenditure and, therefore, indirectly for high levels of employment It also has important balance of payments and trade implications, particularly for the low-income Mediterranean states It is now time, perhaps, that this importance was recognised in the form of improved statistics and increased emphasis not just on tourism but on the services sector in general

FOOTNOTES

1 Some countries have tried in recent years either to integrate tourism statistics into their national accounts or to build satellite accounts for tourism around the national accounts The prime movers have been Australia, France, Peru and Spain and the WTO has assumed the responsibility for international co-ordination of their efforts (WTO, 1983)

This approach involves looking beyond the present situation in which international and national economic activity classifications do not specify tourism activity The WTO has proposed a tourism accounting scheme which is integrated into the national accounting system, and in this scheme sectors of economic activity are classified as characteristic-tourism activities and tourism-connected activities according to whether tourism consumption in the sectors amounts to more or less than 50% of final consumption Two different methods of estimating the proportion of production or value-added in the branch of activity which goes to tourism are suggested The direct or supply-based method (via producers) is recommended for characteristic-tourism activities, and the indirect or demand-based method (via consumption surveys and administrative and accounting records) is recommended for tourism-connected activities Needless to say, cost is a major factor in implementing such proposals and it remains to be seen whether or not any progress will be forthcoming

2 Ireland is, perhaps, better placed with respect to tourism data than most other European countries and this can be partly explained by the fact that sea and air, as opposed to rail and private car, are the main means of transport into and out of the country

Table 1a Tourism Expenditure (IR £m) in Ireland, 1974–1984
Some Differing Estimates

	France			Germany			USA			UK		
	A	B	C	A	B	C	A	B	C	A	B	C
1974	2 4	0 4	6 75	5 4	2 3	2 33	28 3	20 1	1 41	49 6	66 8	0 74
1975	3 9	0 5	7 41	5 8	4 4	1 32	30 7	24 8	1 24	56 3	75 0	0 75
1976	4 7	1 2	4 04	7 9	5 7	1 38	36 8	46 1	0 80	60 2	79 0	0 76
1977	7 3	1 0	6 96	10 9	10 1	1 08	46 8	55 6	0 84	83 1	96 6	0 86
1978	9 4	1 7	5 42	12 8	13 2	0 97	48 3	57 3	0 84	105 0	122 3	0 86
1979	12 3	4 2	2 89	17 2	13 3	1 29	51 9	56 2	0 92	121 6	144 0	0 84
1980	12 8	5 6	2 27	17 3	17 7	0 98	44 9	50 0	0 90	145 2	152 5	0 95
1981	14 8	6 8	2 19	17 2	19 2	0 89	60 1	52 0	1 16	147 8	172 2	0 86
1982	17 6	9 3	1 89	18 8	20 3	0 93	88 7	73 2	1 21	157 4	182 4	0 86
1983	14 7	7 8	1 88	21 7	20 8	1 04	117 4	67 5	1 74	165 9	194 1	0 85
1984	14 8	8 7	1 71	21 0	22 7	0 92	130 5	97 7	1 34	195 1	224 8	0 87

A = estimate published by Bord Failte Eireann B = estimate published for partner country
C = A/B

Sources Bord Failte Eireann, *Tourism Numbers and Revenue,* Research and Marketing Department, Dublin, 1985, Ministere du Commerce, de L'Artisanat et du Tourisme, "Le Tourisme et la Balance des Paiements de 1973 a 1984", in *Collection No 2 de l'Economie du Tourisme,* La Documentation Francaise, Paris 1985, Deutsche Bundesbank, *Statistische Beihefte zu den Monatsberichten der Deutschen Bundesbank Reihe 3 Zahlungsbilanz statistik,* February 1986, No 2, USA Department of Commerce, *Survey of Current Business,* annual, Government Statistical Service, *Business Monitor MA6 Overseas Travel and Tourism,* annual

Table 1b Regression of Estimate A on Estimate B

Country	Equation	R^2
France	$A = 4\ 37^* + 1\ 41^*\ B$	0 90
	$\Delta A = 0\ 39 + 1\ 03\ \Delta\ B$	0 50
Germany	$A = 3\ 22^* + 0\ 80^*B$	0 95
	$\Delta\ A = 2\ 25^* - 0\ 34^*\Delta B$	0 10
USA	$A = -\ 15\ 50 + 1\ 42B$	0 77
	$\Delta A = 8\ 28 + 0\ 25^*\Delta\ B$	0 07
UK	$A = -\ 9\ 78 + 0\ 92^*B$	0 99
	$\Delta A = 4\ 10 + 0\ 66\ \Delta\ B$	0 37

* Indicates that coefficient for intercept (slope) is significantly different from 0(1) at 5% significance level (2-tail test)

Table 2 Difference between Estimates of German and French Tourism Expenditures in Various Countries, 1984

	Den	France	Ger	Irl	Neth	Port	Spain	UK
A	2 06	–	1 82	1 70	0 91	2 37	1 43	0 89
B	0 92	0 78	–	0 92	0 56	0 93	1 15	0 65

A = ratio of destination country estimate to French estimate

B = ratio of destination country estimate to German estimate

Sources Data kindly provided by National Tourist Boards of the various countries

Table 3 Stabilising Effects of Tourism on Member States Balance of Payments, 1972–1985

Effect	Frequency	
	All cases [154]	Tourism Balance ≥ 10% of Balance excluding Tourism [124]
Stabilising		
Deficit becomes surplus	5	5
Surplus becomes deficit	3	3
Deficit decreases	83	65
Surplus decreases	45	41
Destabilising		
Deficit increases	8	3
Surplus increases	10	7

Table 4 Significance of International Tourism in Relation to Living Standards, 1984

Country	GDP per capita [ecu]	Tourism Balance per capita [ecu]	Share of International Tourism Receipts in GDP [%]
High-Income			
Denmark	13,620	18	2 4
Germany	12,710	- 175	0 9
France	11,410	76	1 5
Netherlands	10,824	- 131	1 2
BLEU	9,795	- 35	2 1
UK	9,446	- 13	1 3
EC	9,314	31	1 8
Low-Income			
Italy	7,701	145	2 5
Ireland	5,939	24	2 9
Spain	5,301	228	4 8
Greece	4,203	130	4 0
Portugal	2,409	92	5 0

Table 5 Direction of Tourism Balance, 1972-85

Country [1]	Number of Years in which Tourism was an Inflow	Number of Years in which Tourism was an Outflow
High-Income		
Denmark	7	7
Germany	0	14
France	14	0
Netherlands	0	14
BLEU	0	14
UK	9	5
EC	9	5
Low-Income		
Italy	14	0
Ireland	12	2
Spain	14	0
Greece	14	0
Portugal	14	0

[1] Countries ranked in order of 1984 GDP per capita

Table 6 Net Tourism Revenue Flows to Portugal, 1984

Source Country [1]	Surplus ['000ecu]	Balance per capita of Source Country [ecu]
High-Income		
Denmark	7,756	1 51
Germany	102,367	1 67
France	100,121	1 83
Netherlands	29,003	2 01
BLEU	23,164	2 27
UK	220,400	3 91
EC (excl Portugal)	500,855	1 61
Low-Income		
Italy	2,186	0 04
Ireland	2,047	0 58
Spain	13,889	0 36
Greece	-78	- 0 01

[1] Countries ranked in order of 1984 GDP per capita

Table 7 Net Tourism Revenue Flows from Germany, 1984

Destination Country [1]	Deficit ['000ecu]	Balance per capita of Destination Country [ecu]
High-Income		
Denmark	40,676	7 96
France	909,173	16 62
Netherlands	-29,502	- 2 05
BLEU	38,888	3 81
UK	364,295	6 46
EC (excl Germany)	6,074,556	23 32
Low-Income		
Italy	2,723,493	47 82
Ireland	24,137	6 83
Spain	1,504,559	39 19
Greece	381,727	38 51
Portugal	117,110	11 56

[1] Countries ranked in order of 1984 GDP per capita

Table 8 Tourism Receipts as a Percentage of GDP, EC, 1985

Country	Domestic	International plus carriers	Total
BLEU	1 3	3 2	4 5
Denmark	0 8	3 4	4 2
France	4 5	2 1	6 6
Germany	3 1	1 7	4 8
Greece	1 1	5 5	6 6
Ireland	1 3	4 2	5 5
Italy	3 1	3 2	6 3
Netherlands	1 1	2 0	3 1
Portugal	1 2	7 0	8 2
Spain	2 5	6 1	8 6
UK	2 0	2 2	4 2
EC	2 8	2 7	5 5

Table 9 Tourism Expenditures as a Percentage of Private Final Consumption, EC, 1985

Country	Domestic	International plus carriers	Total
BLEU	2 0	5 6	7 6
Denmark	1 4	6 6	8 0
France	7 0	2 0	9 0
Germany	5 1	5 6	10 7
Greece	1 6	2 3	3 9
Ireland	2 4	5 9	8 3
Italy	5 0	1 5	6 5
Netherlands	1 9	6 2	8 1
Portugal	1 8	2 4	4 2
Spain	3 8	1 3	5 1
UK	3 3	3 4	6 7
EC	4 6	3 5	8 1

Table 10 Full-time Job Equivalents Generated by Tourism Expenditure, 1985

Country	Tourism Employment ['000]	Tourism Employment/ Total Employment [%]
BLEU	180	4 7
Denmark	114	4 4
France	1,487	6 9
Germany	1,300	5 1
Greece	260	6 9
Ireland	62	5 8
Italy	1,405	6 7
Netherlands	172	3 3
Portugal	355	8 6
Spain	980	9 1
UK	1,081	4 4
EC	7,393[1]	6 0

[1] If the method used for the individual member states was applied to the EC as a whole a lower estimate of 7 176 million would result

Table 11 Shares in EC Aggregate [percentages]

Country	Total Tourism Receipts	Total Tourism Employment
BLEU	2 8	2 4
Denmark	1 8	1 5
France	25 1	20 1
Germany	22 3	17 6
Greece	1 6	3 5
Ireland	0 8	0 8
Italy	16 6	19 0
Netherlands	2 9	2 3
Portugal	1 3	4 8
Spain	10 8	13 3
UK	14 2	14 6

APPENDICES

A The Irish Surveys

There are four regular surveys related to the Irish tourism industry, two conducted by the Central Statistics Office (CSO) and two by Bord Failte Eireann (BFE) They are as follows

(a) The Country of Residence Survey, which is carried out by the CSO A very large number of persons entering and leaving Ireland are each asked a single question "What is your country of permanent residence?"

(b) The CSO Passenger Card Inquiry, in which all passengers arriving or departing on chosen trains, aircraft and boats are asked to state the following the type of ticket, the reason for journey, and the country of permanent residence Irish residents returning home and foreign residents leaving the country are asked to provide the following details of their trip nights spent, cost of ticket or package holiday, and expenditure Cross-border road traffic is not covered by this survey, apparently for security reasons, but the Northern Ireland Tourism Board (NITB) communicates the results of its surveys to the CSO

(c) The BFE Survey of Travellers, for which Bord Failte sample outgoing (homeward bound) passengers only Their sampling scheme differs from that used by the CSO in that they cover a much larger number of departures, but only sample a small number of passengers on each departure The total number of persons covered is much less than the number covered by the CSO survey While the CSO survey uses a card filled in by the traveller, the BFE survey involves a twenty-minute interview Again, there are problems with cross-border traffic, partially overcome by using the results of the NITB surveys

(d) The BFE Home Holiday Survey is an annual survey of a sample of all Irish residents which collects information on holiday habits, including expenditure and which is used to calculate estimates of domestic tourism expenditures, among other things The survey, which is carried out every autumn, is based on a stratified quota sample of homes All those surveyed are asked to estimate their tourism expenditures over the previous twelve months

B Causes of Unreliability of Tourism Payments Data

The causes of the unreliability noted in the main text are many, but faulty estimation methods are undoubtedly the dominant factors These will be considered first and then a variety of other causes will be briefly discussed

(i) Faulty estimation methods

The methods used to estimate tourism receipts and expenditures are inherently flawed The survey method, while reliable in principle, is often based in practice on a tourist's recollection on returning home of his/her expenditures The diary method used for Family Budget Surveys would undoubtedly be more accurate For the bank-reporting method to work effectively, particularly in the absence of strict exchange controls, details of residence and destination would have to be recorded for every relevant foreign exchange transaction and both partner countries would have to be notified of every relevant transaction The keeping of such detailed records, though, is considered impractical While the survey method involves greater expense than the bank-reporting method as presently operated, it would probably be cheaper than a more accurate implementation of the bank-reporting method indeed commercial banks are unlikely to agree at all to the collection of detailed information which is not really relevant to their own operation

In the meantime, the absence of detailed records means that certain transactions are wrongly accredited, leading to biased results, as the following examples illustrate

(a) Foreign currency is attributed to that country where it is the legal means of payment (see EUROSTAT, 1986), at least in EC countries Thus an Irish tourist using sterling or US dollars in a country which operates the bank-reporting method is assumed to be from the UK or the USA respectively Similarly, if the Irish authorities relied on the bank-reporting method then such a tourist would be assumed to be going to the UK or USA respectively

(b) Funds taken abroad by Italian tourists (and exchanged for local currency) and later repurchased by non-Italian residents to be spent during their trips in Italy appear neither as expenditures nor receipts (OECD, 1986) If these funds were returned to Italy by the foreign bank, then they would be correctly identified This problem is not specific to Italy, as it is not clear for many countries under what circumstances such funds would be either reported or returned physically to the source country Neither is it clear whether such transactions appear as receipts and/or expenditures for the other country

(c) International tourists on average spend only 85 to 95 per cent of the foreign currency that they purchase (This is the case in Denmark, at least (See OECD, 1986)) Strictly speaking, the excess, when reconverted, should appear as a negative amount in the tourism account

(ii) Other causes

Differences in the definition of a tourist and of tourism receipts are undoubtedly a cause of inconsistencies in tourism statistics Recent OECD reports on the international comparability of tourism statistics have clarified the position considerably (OECD, 1983 and 1986) and the tables in these reports give details of the differences which exist between member countries Some countries also cause confusion by the choice of regions included in the statistics For example, Bord Failte Eireann publishes series on total overseas tourism receipts, total out-of-state tourism receipts, and total-out-of-state visitor receipts (i e receipts from tourists and day trippers) the latter both including and excluding carrier receipts The Belgium/BLEU and Britain/UK distinctions present similar problems

All international tourism revenue flows are measured in two currencies The effective exchange rate between the currencies will, however, vary from transaction to transaction, and the exchange rate used to compare aggregates should be an appropriate weighted average The seasonal nature of tourism, however, means that, particularly where exchange rates are volatile, a simple annual average may be inappropriate, but this may be all that is available

All economic data are regularly revised by national statistics offices in the interests of greater accuracy This policy occasionally 'backfires' when two international organisations (e g EUROSTAT and OECD) are sent different figures for the same variable The authors have also traced substantial discrepancies between data provided by international organisations back to human error in transcription

In some countries, including Ireland, as seen earlier, there is an amount of duplication in the collection of tourism statistics, with both the national statistics office and the national tourism organisation collecting data on tourism, possibly using different methods and definitions There are significant discrepancies between the estimates for receipts generated by BFE and those generated by the CSO However, the discrepancies are eliminated before publication of the figures by reducing all the BFE receipts estimates to about two-thirds of their original level

The two bodies are conducting a joint examination of possible causes of these differences Apart from the different sampling techniques used, other causes suggested include

- failure to include credit-card and cheque-book expenditure in answer to the CSO question,

- underestimation of cross-border expenditure,

- a bias towards higher-expenditure tourists in the BFE selection scheme

C Estimating Domestic Tourism Payments

The tables in this appendix show the ratios used to assess the reliability of two sets of estimates of domestic tourism expenditure – those provided by the National Tourism Organisation and those arrived at by the authors In each case, column (i) refers to the former and column (ii) to the latter

Data were not available from all countries for any one year, so the ratios for different countries refer to different years, as follows BLEU, Netherlands (1982), France (1983), Denmark, Portugal, Spain, UK (1984), and Germany, Greece, Ireland, Italy (1985) In using these data to make estimates for other years, it is suggested that tourism's share in PFC is the factor least likely to change from year to year In particular, Tables 8 and 9 were constructed on the basis of this assumption The tables in this appendix are preceded by a discussion of the arguments in favour of the authors' estimates

(i) Large Mediterranean countries

Estimates were available for two of the three countries in this group, but in each case they seemed to be much too large Bednights ratios of 2 5 in each case were very high The domestic/international ratios were expected to be higher than for the other groups, but not to the extent observed Finally, the PFC shares were higher than for any of the other member states, even though in terms of GDP per capita France and Spain are only second and seventh of the nine states which provided estimates

As a result, the estimates for France and Spain were considerably scaled down to conform more with the pattern of ratios in Tables A1–A3 The estimate for Italy was then derived from these

The bednights ratios for France and Spain remain high and this must lead one to question seriously the reliability of the bednights figures for these countries

(ii) Large non-Mediterranean countries

There was one estimate in this group (for the UK) but reliable, up-to-date bednights data against which it could be checked were not available Nevertheless, on the basis of the methodology used and the PFC ratio, the UK figure seems broadly correct

As expected,the domestic–international ratio for the UK is higher than for the small countries and lower than for the large Mediterranean countries This ratio was used as the starting-point in generating an estimate for Germany The associated bednight ratios are reasonable and, while the PFC share is high, this was not unexpected given the unusually high German expenditures on international tourism

(iii) Small Mediterranean countries

These two countries also have the lowest living standards in the Community Taken separately, neither of their estimates could have been questioned on the basis of any of the three checks Comparing the two countries with each

other, however, suggested that either the Greek estimate was too low or the Portuguese estimate too high The later possibility was ruled out on the basis of the low all-accommodation bednights ratio, so the Greek estimate was adjusted upwards somewhat

(iv) Small non-Mediterranean countries

While this was the largest group, it was also the least troublesome In the light of what has been said above, the estimates for Denmark and the Netherlands seem extremely reliable The Netherlands' bednights ratios are easily explained a strong tendency among domestic tourists towards low-cost camping holidays brings down the all-accommodation ratio, the hotel bednights data was accompanied by a warning that domestic hotel bednights are grossly under-estimated, and this brings up the hotel ratio

The BLEU situation is complicated by the exclusion of Luxembourg for the purposes of defining domestic tourism - the original estimate was for holidays by Belgians in Belgium, excluding stays with family and friends of 1-3 nights Similarly, bednights data cover Belgians in Belgium only and can be ignored By comparison with the rest of the group, a domestic-international ratio of 0 5 for BLEU can be seen to be appropriate The associated PFC share is in line with GDP per capita

Table A 1 Ratio of Domestic Receipts (per domestic bednight) to International Receipts (per international bednight)[1]

	All bednights		Hotel bednights	
	(i)	(ii)	(i)	(ii)
BLEU	0 1	0 3	0 5	1 6
Denmark	0 4	0 4	0 5	0 5
France	2 5	1 9	n a	n a
Germany	n a	0 5	n a	0 8
Greece	(0 5)	(0 7)	(0 5)	(0 7)
Ireland	n a	n a	n a	n a
Italy	n a	(0 5)	n a	(0 8)
Netherlands	(0 2)	(0 2)	(1 4)	(1 4)
Portugal	0 3	0 3	0 5	0 5
Spain	n a	n a	2 5	1 2
UK	n a	n a	n a	n a

[1] In arriving at the figures in brackets it was assumed that the ratio of domestic to international bednights was the same as in the nearest year for which data were available - 1981 for Greece 1984 for Italy and 1983 for Netherlands

Table A 2 Ratio of Domestic Expenditures to International Expenditures

	(i)	(ii)
Large Mediterranean Countries		
France	7 3	5 5
Italy	n a	4 9
Spain	10 5	5 1
Large Non-Mediterranean Countries		
Germany	n a	1 3
UK	1 4	1 3
Small Mediterranean Countries		
Greece	0 7	1 0
Portugal	1 1	1 1
Small Non-Mediterranean Countries		
BLEU	0 2	0 5
Denmark	0 5	0 5
Ireland	0 5	0 6
Netherlands	0 5	0 5

Table A 3 Ratio of Total Tourism Expenditures to PFC[1]

	(i)	(ii)
Denmark	8 0	8 0
Germany	n a	10 7
France	11 3	9 0
Netherlands	8 1	8 1
BLEU	6 2	7 6
UK	6 8	6 7
Italy	n a	6 5
Ireland	7 8	8 3
Spain	9 4	5 1
Greece	3 4	3 9
Portugal	4 2	4 2

[1] Countries ranked in order of 1984 GDP per capita

References

Bord Failte Eireann, 1986 *Tourism Facts 1985,* Dublin, June

Central Statistics Office, 1985a "Statistics of Numbers and Expenditure of Visitors to Ireland and Irish Visitors Abroad, 1984", *Irish Statistical Bulletin,* Dublin, Stationery Office, March

Central Statistics Office, 1985b "Annual Balance of International Payments 1984", *Irish Statistical Bulletin,* Dublin, Stationery Office, June

Commission of the European Communities, 1984 *European Communities' Study on International Trade in Services*, Geneva, September (submission to GATT)

Eurostat, 1970 *NACE General Industrial Classification of Economic Activities within the European Communities,* Luxembourg, Reprinted 1985

Eurostat, 1980 *Statistical Yearbook Transport, Communications, Tourism 1977,* Luxembourg

Eurostat, 1986 *International Trade in Services Analysis of Available Data on Tourism,* Luxembourg, July

Medlik, S , 1986 *Paying Guests,* London, Confederation of British Industry

Morrell, J , 1982 *Employment in Tourism, Parts I and II,* London, British Tourist Authority

Morrell, J , 1985 *Employment in Tourism,* London, British Tourist Authority

Netherlands Board of Tourism, 1985 *Tourism in the Netherlands (Ref SPO 006),* Heidschendam, Netherlands Board of Tourism

OECD, 1983 *International Comparability of Tourism Statistics published by OECD Member Countries (Arrivals and Nights),* Paris

OECD, 1986 *International Comparability of Tourism Statistics Published by OECD Member Countries (Receipts and Expenditures),* Paris

O'Hagan, J W , Scott, Y and Waldron, P , 1986 *The Tourism Industry and the Tourism Policies of the Twelve Member States of the Community* (report prepared for Directorate General for Transport, Tourism Service, Commission of the European Communities), Brussels, November

White, K J and Walker, M B , 1982 "Trouble in the Travel Account", *Annals of Tourism Research,* 9

World Tourism Organisation, 1983 "Determination of the Importance of Tourism as an Economic Activity within the Framework of the National Accounting System" *(Addendum B 5 2 1 to the report of the secretary-general on the execution of the general programme of work for the period 1982-1983),* Madrid, April

DISCUSSION

D Jennings I would like to first thank the Society for giving me the opportunity to propose a vote of thanks to the authors of tonights' paper

Fifteen years ago John O'Hagan presented another very interesting paper on tourism to the Society In the discussion on that paper it was noted that international harmony in the field of tourism statistics was, it was hoped, on the way The United Nations had recently been doing some work in the area

Since then tourism has been one of the major growth industries of the World Visits abroad by UK residents (one of tourisms major 'generators') rose from 11 million in 1974 to 22 million in 1985 However, harmonization is absolutely no nearer as Messrs O'Hagan and Waldron have highlighted so well here tonight

The Statistical Office of the European Community has acknowledged this, and they are to assess the feasibility of a community-wide harmonised system of tourism statistics It remains to be seen, however, how far they will get What direction such a harmonised system will move in is anyone's guess It is difficult to see Ireland or the UK changing their methods (which are generally agreed to be the most desirable), on the other hand what can the countries on mainland Europe do to improve their situations The vast, and free, movement of people by road and rail among these countries makes the carrying out of worthwhile traveller surveys as good as impossible We in Ireland, with a relatively insignificant land frontier, have not yet solved the problem of estimating our own cross-border flows satisfactorily

It is worth noting here that the United States and Canada publish data on the travel flows (physical and financial) across their common border This data is derived from a survey carried out jointly by the immigration and customs authorities of both countries The move towards the abolition of customs formalities at internal EEC frontiers (the so-called completion of the internal market) militates against the success of such a survey in the EEC context

What countries have at present in the area of tourism statistics is, we may be sure, what each considers the best available in the circumstances Countries using the bank reporting method will, while acknowledging certain defects, be well able to defend their method and to point to the advantages they see it having over other methods (not the least of which is its cost)

The fact that the normally conservative statistical offices of several of the countries which use the bank-reporting method publish detailed country analyses of their tourism and travel receipts and expenditure is proof of this

The use of traveller surveys is no panacea either The figures for the US in the authors' table 1a actually only tell half the story of the difficulties which can arise When account is taken of the fact that the original Bord Failte estimate has been reduced by about one third (as stated in Appendix B) it will be seen that the three survey-based estimates of US expenditure in Ireland differ by something of the order of 100%!

And this is not just an Irish problem The 1984 estimates of US spending in the UK made, using surveys, by the US Bureau of Economic Analysis and the UK Department of Employment also differed by over 30%

Despite the significant data deficiencies the paper does draw some reasonable conclusions from what data is available The stabilising effect which tourism and travel has on intra-EEC balances of payments is well proved in the paper The tables which best do this are, in my opinion, the frequency count tables 3 and 5 which summarise the position over a 14 year period The tourism balances for the year 1984 in table 4 can be subject to pretty violent changes from year to year and one years' figure may not therefore be properly representative For instance the UK tourism and travel balance went from approximately + £500 million sterling in 1985 to - £500 million in 1986

As tourism is more and more being seen as the big growth area of the future its ability to generate employment is of great interest The estimate of 'tourism' employment in Ireland of 62,000, derived using what appear to be a very reasonable set of assumptions, makes the Tourist industry more than one third the size of Agriculture and nearly as large as the Building and Construction Industry as far as employment is concerned There is also of course an employment content in our import tourism which should not be forgotten The travel agents,tour operators and a fair proportion of Aer Lingus, B & I Line and ICL employment rely on the Irish visitor abroad

In conclusion I would like to thank the authors for doing an excellent job in wading through the unharmonised morass of EEC tourism statistics and presenting us with such an interesting and useful paper on the importance and potential of tourism

Alan W Gray Firstly I would like to congratulate the two authors on an important paper and I admire their courage in attempting the study given the data problems The authors set out three objectives in relation to this paper Firstly to provide estimates of the contribution of tourism to economic activity in each of the member countries Secondly to highlight the dearth of financial data relating to tourism and thirdly to outline some effects of tourism payments

I would like to focus my comments particularly on the question of data reliability On the issue of the dearth of and reliability of financial data the authors quite rightly pointed out divergences between expenditure data from different sources and suggests that estimates derived from the bank-report method are likely to be less reliable that the visitor sample survey method It is also suggested that the receiving country's estimate are likely to be more reliable no matter what method is used If these conclusions (which are generally accepted by most commentators) are correct they are very important in indicating which data sources should be used It may be useful therefore to consider these questions The basis for these conclusions relate to three main factors (i) the well known problems of the bank-reporting

method (ii) the difficulty of obtaining accurate breakdown of expenditure by country of destination when more than one country is being visited and (iii) some illustrative results which show unlikely results for certain countries such as Italy I would be interested to know if the unusual short term irregularities for Italy were also evident if one examined the data for expenditure from the countries of origin and if this was not the case whether this changes the conclusions regarding the merits of always using the receiving country's estimate I would also be interested to see a comparison for the survey data and the bank-reporting method for Italy which uses the two methods jointly It may also be worthwhile comparing visitor numbers with the expenditure data in order to shed some light on the merits of the different data sources Finally I would be interested in the authors views on the extent to which the above conclusions are more certain in particular cases In particular the under-recovery of expenditure in destination countries is likely to be greater for small destination countries (for example Ireland may be omitted for some origin country data and included in with the UK) Also some countries data are thought to be unusually complete and thorough (for example Canada and the UK) and I would be interested if this factor should be taken into account in deciding on what data source to use

Having considered the question of data reliability I would like to comment on the main results of the paper Firstly concerning the stabilising effect on the balance of payments the data presented convincingly illustrates the stabilising effect of tourism I would be interested in the authors views of why this is the case On the effects of the flows from high income countries to low income countries and the fact that low income countries have a surplus on tourism account this is in line with what one would expect

Concerning the results on the significance of the tourism sector the paper highlighted estimates of the contribution that total tourism makes in terms of contribution to GDP and in terms of the number of full-time job equivalents generated In order to generate these estimates the authors had to use the published data on international tourism payments and had to make approximate estimates of international carrier payments and domestic tourism payments Given the absence of data for most countries this was a very difficult task Using estimates for Ireland and the UK the authors derive estimates for international carrier payments for other countries While this is, as acknowledged by the authors, a crude measure, I think the figures which they derive are plausible and I cannot suggest a better approach In estimating domestic tourism payments even greater problems were faced by the authors Firstly some survey data was available and two checks on the estimates were used, namely the ratio of domestic to international tourism expenditures and the share of total tourism expenditures in private final consumption It is difficult to evaluate these two concurrent checks but I would be interested to see if these two variables changed significantly over time in the countries for which data is available

In estimating employment figures for tourism the results in the paper are derived on the basis of an assumption that the ratio of tourism share in employment to tourism share in GDP is similar for all countries The key question relates to the validity of this assumption

The authors correctly point out that no data exists against which the hypothesis could be tested I would be interested to see however whether there was data on the ratio of tourism's share in employment to tourism's share in GDP for non EEC countries and how this compared with the estimate used in this study It may also be interesting to compare the ratio of some other sectors (for e g manufacturing or agriculture) share in employment to their share in GDP and how this varies for different European countries It is possible that the nature of tourism in the different countries or the differences in labour costs, could alter the assumption that the ratio was similar for all countries Unless the comparisons suggested above shed some light on the issue I think the authors have no choice but to stick with their original assumption

Finally I would like to congratulate the authors on their courageous approach to this study and to commend them on the innovation which they showed in overcoming the data problems which exist

E W Henry I wish to be associated with the vote of thanks to the authors of tonight's paper, for providing a very useful and thorough piece of work within an EC framework

As an input-output (I-O) practitioner, I offer a brief comment In compiling I-O transactions, one is confronted with the problem of sub-dividing Export Tourism (denoted "Expenditure by Non-Residents" in the National Accounts) into sectoral shares, first at purchaser prices, and then (usually) at basic prices Given the latter breakdown among the sectors of the I-O model being used, one can then apply the Leontief inverse to the Export Tourism vector at basic prices, to estimate direct-plus-indirect GNP or employment required or implied by such final demand Similar estimates could be made for domestic tourist expenditure, given the appropriate final demand vector at basic prices

The methodology of these estimates assumes that GNP or employment is distributed evenly with sales or output along each row of the transactions table, "evenly" meaning "in direct proportion to" William K O'Riordan explained all of this clearly in his paper to the Society on 18 October 1984, entitled "Induced employment in marketed services sectors in Ireland, 1975" If one requires full man-year-equivalent estimates of employment generated by tourist expenditure of any variety, then obviously all sectoral employment data fed into the model must be expressed in full man-year units So if some occupations take only four months of each year, then numbers of persons must be divided by 3, and so on, in preparing the basic employment coefficients per annual flows of output

I gave an I-O contribution along the lines just mentioned to Brian Deane of Bord Failte Eireann for his paper of 4 July 1986 entitled "An Employment Growth Area The Tourism Industry" The paper was read to the Conference on "Unemployment - the Challenge to Society" at the Dublin College of Catering, organised by the Dublin Institute of Technology In the paper, employment estimates were given for different kinds of tourist expenditure in Ireland in recent years, and under different modelling assumptions All tourist expenditure is assumed to have a direct-plus-indirect impact Export tourism, by causing a new stimulus of buying-power, may be assumed to have a further "induced" impact There are arguments for and against including Government taxation rows and current outgoing columns within the inter-industry (interacting) matrix I leave it to my listeners to contact Brian Deane for further information

Finally, I state the obvious, in pointing out that the employment and GNP estimates thus derived become more reliable as the quality of the basic data improves You must work at the input detail to improve numerical precision

Sean D Barrett It is a pleasure to be associated with the proposer and seconder of the vote of thanks to our authors As a colleague of the authors and someone with a direct interest in tourism promotion I found much of value in the paper

The authors state that Ireland has made more progress than most countries in assembling data on tourism This applies to matters of definition in this field The Eurostat definition of a tourist, cited by the authors, includes business and family trips in addition to holiday trips The Irish CSO more appropriately classifies the broader groups as visitors and describes as tourists only those who classify themselves as tourists The proportion of visitors to Ireland classifying themselves as tourists has fallen from 49% in 1975 to 38% in 1984

The authors make a strong case that "the diary method used for Family Budget Surveys would undoubtedly be more accurate" than relying on the tourist's recollection on returning home

The paper's examples of divergences between Ireland's estimates of the tourist expenditures here and the estimates provided by the home countries of the tourists are striking It appears that French tourists consistently under-report to their own government the tourist expenditures abroad and it would be interesting to speculate why this is so The disparities are not confined to expenditures but may effect the numbers of tourists also Ireland frequently reports some 36,000 Canadian tourists here while the Canadian authorities report about 52,000

The authors test two hypotheses in relation to tourism flows and find broad support for both Tourism flows tend to be from countries with a balance of payments surplus to deficit countries and from low to high income countries There are of course exceptions to every rule and the US balance of payments deficit co-exists with a large tourism import The record of France in

maintaining a tourism surplus over the fourteen years covered by the authors' survey suggests that other hypotheses to explain tourism flows might be examined such as that tourists move towards warmer climates and low indirect taxes

Ireland's case differs from the authors' general model Surveys show that many French and German tourists found the country bad value for money in the first half of this decade Spain now has a higher GNP per head than Ireland but presents an attractive alternative to a holiday at home for Irish people and there is little tourist traffic from Spain to Ireland Incidentally, distance does not explain the low share of the German market held by Ireland compared to the Greek share Policies on the exchange rate and access transport may be better explanations of Ireland's failure

The authors contrast the employment and tourism receipts shares in the EC of Greece and Portugal with the German experience They state that Morrell's UK data indicate "an extraordinarily labour intensive tourism sector in the UK " Morrell may be correct if the UK tourist sector resembles Greece and Portugal more than Germany We have some pieces of evidence that tourism in the UK is labour intensive and a low wage sector As the authors remind us, it has a large proportion of part-time workers It has a large immigrant labour force which presumable causes downward pressure on wages and a low rate of unionisation By comparison in Dublin the hotel sector is heavily unionised Hotel charges have risen faster than prices in general and the hotel share of overnight stays by visitors is only 14%

Ireland has a lower share of the EC's tourism labour force than its GDP per head would lead one to expect This may indicate within the hotel sector the presence of a relatively high wage low GNP economy coupled with a large informal accommodation sector

The policy implications for us in Ireland from this paper are challenging In too many cases Ireland is shown to be an odd man out when favourable developments for tourism are reviewed The problems of the public finances have made Ireland a relatively high cost tourist destination The cost problems of the hotel sector, examined in the NESC Report, present a private sector case of Baumol's disease The White Paper on Tourism found that the number of air tourists to Ireland from Britain fell by 50% between 1975 and 1983 Spain, Greece and Italy had aviation policies, if anything, more conservative than Ireland but developed air access by charter airlines Ireland's welcome change of policy on air transport access since May last should therefore help our tourist sector A final case in which Ireland is the odd man out is the assumption that tourism's export marketing costs should be financed by the public sector This has reduced our ability to assess the effectiveness of marketing expenditures in addition to causing problems for our exchequer

Accurate statistics are indispensable for good policy Our authors tonight and Mr Jennings have provided us with much useful material I await with interest the decisions of Mr Gray and the policy-makers