Draft for comments

THE MEASUREMENT AND INTERPRETATION OF LEADING TOURISM STATISTICS IN BARBADOS,USING A MODEL OF TOURISM EXPENDITURE/GDP.

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ABSTRACT

This paper highlights some of the problems with tourism statistics in Barbados, particularly the estimate of tourism expenditure, believed to be overestimated. Using a model of Tourism Expenditure/GDP the estimates of expenditure derived were found to be far lower than the official estimate; in addition the new estimates exibit the same cyclical pattern as tourism bank receipts(as reported by CBB Exchange Control but lagged one month for comparability). Since tourism expenditure is used as a basis for "travel receipts",balance of payments credits would also be overstated. When these estimates are substituted into the Balance of payments accounts, the result is an accelerated negative increase in the balance of current and capital flows in the recession and post recession period (1981-87); This trend is consistent with the trend in debt service and probably shows a more realistic picture of the weakness of the economy. However, the adjustment increases the Errors & Omissions in the post recession period, perhaps indicating that unexplained inflows occurred.

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INTRODUCTION

The tourism sector is regarded as the leading foreign exchange earner and an important contributor to Gross Domestic Product. It is important, from time to time, to examine the basis of such perspectives in terms of the reliability of the underlying statistics. There are at least three main types of tourism statistics currently being collected/estimated: viz. tourism expenditure, tourism GDP(i.e.production) and tourism foreign exchange. Given that these statistics appear in official publications it is important that they be methodologically consistent, and appropriately defined, measured and interpreted. It seems logical (and most researchers would agree) that the measurement of statistics on tourism should be informed by the following main criteria:

1. The scope of the definition of tourism.
2. The intended use of the tourism statistics.
3. The perceived Methodological and data constraints.

The current regional tourism imperative is the delineation of a fairly broad definition of tourism in National Accounts and related statistics. It is important to point this out because in Barbados the current narrow view is that tourism is something which goes on in the hotel sector. While of course the hotel sector should remain the focal point, tourism activity arises from all of the following :

1. Expenditure on hotel accomodation and related services.
2. Expenditure on restaurants and duty free shops.
3. Expenditure on transport, local & international.
4. Expenditure on recreational, social or other services.
5. Expenditure by cruise ship passengers on any of the above.

The United Nations therefore suggests the following definition of international tourism (including tourists and excursionists) :

" Persons visiting the country for less than one year, specifically for purposes of recreation or holiday, medical care, religious observances, family affairs, participation in international sports events, conferences and other meetings, study tours and other student programs, as well as persons intransit to another country..... "

This broad view of tourism is often rationalised by consideration of the need to delineate the economic role of the sector within the wider economy . In this regard tourism has been described a a " structurally integrated system of economic enterprises administrative institutions, non-profit organisations an markets operating within a pluralistic structural-institutiona setting." (R. Robinson 1987). It is important that this wide view of tourism be reflected in our three major statistics o tourism.

There is also a functional role for tourism statistics. Th public is concerned with interpreting the "performance" an "foreign exchange benefit" of the industry. In press releases th authorities focus on the Real GDP and Tourism Expenditur statistics. This is convenient if we assume that the public i incapable of comprehending more than one or two touris statistics. Yet, given our reliance on these two statistics it i important that they be periodically evaluated, taking all relate statistics into account.

There is also a pragmatic role for tourism statistics. Th accademic view is that our perception of the performance tourism should be informed by trends in tourism statistic However, the pragmatic view is that trends in tourism statisti should be informed by our perception of the performance of t tourism sector. Obviously there are merits in both approache Using the pragmatic approach we must determine whether we c rationalise the exceptional growth in our statistics on touri

expenditure and nominal GDP with the perceived reality of the new brand of frugal tourist; the latter display a compulsive propensity to save on returned beverage bottles.

This paper critically assesses the measurement of the main types of tourism statistics in Barbados and delineates alternative procedures for their measurement using a computer assisted model of Tourism Expenditure/GDP calculation. (see Appendix 2). Sections (1), and (2), give a detailed examination of tourism expenditure and value added statistics respectively. Section (3) gives a general overview, interpretation and comparison of the major tourism statistics currently in use.

1. TOURISM EXPENDITURE STATISTICS

There are two broad approaches to measuring tourism expenditure. The first approach computes tourism expenditure from sales of all firms which fall under the tourism ISIC categories.
This approach is not used in Barbados because of the small number of firms for which data is available and because tourism firms which are also retailers/producers of other products do not readily differentiate sales accruing exclusively from tourism. The second approach involves the use of periodic surveys of the expenditure patterns of visitors. This more common method is advantageous since it is often not necessary to do these surveys every year though this would be ideal. Researchers frequently derive fairly accurate estimates of visitor expenditure (between survey periods) from trends in related tourism statistics. However the accuracy of the estimates often deteriorates if too much time passes between the making of the estimate and the survey on which it is based (Sobers H.A. 1988). This is one of the problems with the estimates of tourism expenditure in Barbados, based as they are on an expenditure survey which is over thirteen(13) years old.

The estimate of Tourism Expenditure produced by the department of statistics is the sum of expenditure by tourists in three categories, viz: recognised accomodation, unrecognised accomodation and cruise passengers. (See Appendix (1)). Expenditure by tourists in recognised accomodation (hotels guest houses and appartments) is the product of arrivalnights and average rack rates per establishment. Expenditure by tourists in unrecognised accomodation is generally the product of an estimate of tourist nights for this category times an estimate of average expenditure derived largely from the inflation rate. The latter procedure is also employed in the estimation of expenditure by cruise passengers, and expenditure on hotel restaurants and services by tourists who stay in hotels.

The above procedures suffer from two main drawbacks: firstly, the weighting procedure is based on an outdated survey undertaken in 1974, and secondly, the rack rate overstates average daily expenditure per head. In practice, hotels grant substantial

discounts on the rackrate (often as high as 40%) in an effort to make competitive pricing arrangements with tour operators. The situation is exascerbated by the fact that these discounts vary every year. In addition, sluggish demand, exchange rate fluctuation and the country's image as a high cost destination have put more pressure on hotels to increase discounts in recent years . In fact, the practice of increasing discounts when demand is sluggish (given that this reduces the effective price paid for accomodation) is a least cost way of devaluing the industry in order to compete with cheaper destinations. Obviously the official estimate of tourism expenditure over-states the revenue position of the industry to the extent that this devaluation takes place.

Recognising these basic deficiencies it is proposed that the use of the rack rate be replaced with the more general use of the inflation rate or hotel wages index. There is no reason to suppose that these latter rates will track the fluctuations in the true hotel rate paid by tourists. However, it is assumed that over time the inflation rate and the wage rate ,as indicators of cost, will bear some relationship to and at least serve as a lower constraint on the hotelier's ability/willingness to reduce the trend in the true hotel rate. In any event, the recent trend in both tourism expenditure and hotel rack rates seems significantly out of line with what we know of the industry from comparisons of related statistics. (see section three).

2. TOURISM GDP STATISTICS

Nominal Gross Domestic Product is defined conceptually as the value of the goods and services produced in a country during a callendar year. A series of Nominal GDP has been prepared on an annual basis since 1974 by the Barbados Statistical Service (BSS); the real GDP series has been prepared by the Central Bank since this benchmark year. The procedures used by the BSS are presented firstly.

The tourism sector is specifically defined for National Accounts purposes as the "highest aggregation of industries which are involved in the production of goods and services whose production requires similar processes." (Griffith W. 1988). Thus in Barbados the tourism sector comprises an aggregation of major tourism related divisions and sub-divisions of the International Standard Industrial Classification (I.S.I.C.). However, it is necessary to assume that expenditure by locals does not make a significant impact on the industries classified as touristic. This arises from the fact that the industries are not at present required to separate expenditure by locals from expenditure by tourists. The actual GDP or value-added data has been derived from the annual accounting records of firms in the appropriate categories of the I.S.I.C. since 1976. Value-added is computed as the difference of Sales and Intermediate Inputs; it consists of wages and other payments to labour, operating surplus of firm

and depreciation allowances. However, since 1983 the annual surveys have been in abeyance and GDP has been estimated from arrivals and related data together with the data available in the benchmark surveys. (In this paper no attempt has been made to improve on the Nominal estimates of GDP)

Real GDP (also known as constant price GDP) is defined conceptually as the value of production of goods and services in a country in a given year adjusted for inflation. There are three broad theoretical approaches to the estimation of Real GDP from Nominal GDP. The most common method in large developed countries is the double-deflation procedure; since nominal value-added equals Sales minus Intermediate Inputs, Real value-added is derived as the deflated value of Sales minus the deflated value of Intermediate Inputs. This method is not used because no appropriate price deflators exist for any sector of the National Accounts. (In a related study of manufacturing GDP indicators, which experimented with the use of proxies for these deflators, a significant increase in unexplained error varyation occured (Whitehall 1988)). The related "Output indicator" and " Input indicator" methods estimate Real GDP from respectively, the deflated value of sales and the deflated value of Inputs (or some suitable proxy). It is thus quite common to estimate Real GDP from the varyation in physical output, employment, or the deflated value of wages, depending on data availability or reliability. (note that an index of employment is identical with an index of wages deflated by an appropriate wage rate index. The rational of such procedures is that physical output, wages, employment and the like can, for reasonably moderate periods of time ,be expected to exibit fairly stable relationships to Real GDP.

In Barbados, real Tourism GDP is estimated from the physical output method since no appropriate price deflators exist. The mathematical derivation of the three basic approaches to Real GDP estimation is given in APPENDIX (1).

3. COMPARISON OF LEADING TOURISM STATISTICS

The approximate relationship of the leading tourism and related statistics is as follows:

(1) Tourist Expenditure = Tourism Sales = Travel Credits (BOP).
(2) Tourism Expenditure - discounts - prepayments (to tour-operators etc.) - Hoarding = Tourism Bank Receipts.
(3) Tourism Sales - Intermediate inputs = Nominal GDP
(4) Real GDP may be calculated as the deflated value of Tourist Expenditure or nominal GDP if good deflators are available; in Barbados Real GDP is derived as the benchmark value of Nominal GDP grossed up by the change in tourism nights adjusted over time.

The above procedure for calculating Real GDP from Tourism Nights is conceptually similar and would give the identical results that may be obtained by deflating Tourism Expenditure, if all data were estimated accurately. Unfortunately however there are a number of anomalies. The first anomaly arises from the fact that in the hotel sector discounts represent income that nobody produces or receives. This is because discounts in recent times have become a means of compensating for excessive and uncompetitive rack-rates. Thus a 40% discount in a given year does not mean that hotel revenue will be decreased by this amount. The change in revenue will instead depend on the difference between discounted revenue in the current and previous periods. The reality is that there are comparatively few patrons who do not benefit from substantial discounts on rack rates in hotels. In other words, the hotel rack rate cannot be viewed as the typical or normal value of the service provided by the hotel. The inclusion of the value of discounts will thus over-state income produced and foreign exchange earned ; the result is that Tourism expenditure, Travel Credits and probably Nominal Tourism GDP may all be seriously overstated. This also means that Real GDP would also be overstated if it were calculated by deflation of the Nominal series.

The second anomaly is that Real Tourism GDP statistics are not very consistent with the nominal data, when inflation is taken into account. Real Tourism GDP grew 18% between 1977 and 1987; this growth rate (less than 2% at an annual average rate) is moderate compared to other GDP categories. However Tourism expenditure and Nominal GDP grew at the phenominal rates of 239% and 207 % respectively. These rates are far in excess of the 115% growth of the Retail Price Index over the period. It is difficult to explain how an industry which grew so rapidly, as indicated by the growth in expenditure, became so debt ridden. At December 1986, the industry's debts outstanding peaked at about $130 M. with overdrafts alone totalling $30 M. Obviously part of the problem may lie with an apparent spate of overconstruction and undercapitalisation in the late '70s. However, this is only a partial explanation in view of the massive additions to capital that should have followed growth of the magnitude indicated by the official estimate of Tourism Expenditure.

The third anomaly is that it is difficult to explain why the balance of payments is so weak when Tourism, the country's main foreign exchange earner, is apparently doing well. The weakness in the Balance of payments is indicated by the height of the debt service ratio (about 25%) and the sevenfold increase in the level of annual debt service payments in as many years. The fact is that the credibility of all of the statistics becomes an issue to the extent that growth in the nominal statistics cannot be explained by the product of the growth rates for Real GDP and Inflation.

Appendix (2) gives the results of a simple model of Tourism Expenditure/GDP calculation (denoted TEG) using seasonally adjusted tourism nights (including cruise nights) times inflation as a proxy for the true hotel rate. The weights were derived from a visitor expenditure survey undertaken by the Barbados institute for Management and Productivity in 1980. In brief, this model shows a more plausible increase of 153-163% for tourism expenditure over the ten year period (1977-87). There is a great deal of similarity between the various estimates in the pre-recession period (1977-80) when to our knowledge discounts were fairly stable. The official estimate shows an increase in tourism expenditure of 113%, compared with increases of 116% and 118% in the estimates of the TEG model; in addition tourism bank receipts grew by 99%, or roughly the same amount. However the estimates diverge markedly thereafter. During the recession period(1981-1983) tourism bank receipts declined 13%, compared with declines of 14% and 19% in the estimates of the TEG model; the official estimate showed a marginal decline of just 4% during this difficult period. During the post-recession period (1984-87) tourism bank receipts increased by 17% compared with increases of 17% and 19% in the TEG model;however the official estimate was again considerably higher at 33% .

This systematic divergence between official estimates of expenditure and receipts gives greater weight to the suggestion that the official estimate of tourism expenditure greatly over-states the revenue position of the industry, because of heavy discounting. It is noteworthy that a stable relationship exits between tourism bank receipts and the estimates of expenditure generated by the Tourism Expenditure/GDP model. in addition tourism bank receipts exibit the same general cyclical fluctuation as the latter using entirely independent sources of data. If the TEG estimates are correct then tourism bank receipts track an acceptably high proportion (about sixty 60%) of expenditure given the obvious leakages and potential for hoarding.

It is not intended to suggest that either of the estimates is accurate, but if the model estimates are better, then the Balance of payments implications could be far reaching. The apparent stability of receipts to calculated expenditure tends to suggest either that there is no tendency to increase hoarding of receipts in difficult periods (perhaps because surplus funds are reduced) or that there is a fixed and systematic outflow of tourism reserves which has little to do with hoarding. This might arise from the fact that the portion of tourism expenditure accruing (and prepaid) to tour operators should increase more or less proportionately with expenditure, (ceteris paribus).

The possibility that tourism expenditure is overstated is an old issue which was also raised by the I.M.F. because of its Balance of payments implications. The period 1982-86 has been marked by

serious Balance of payments weakness and considerable uncertainty/speculation over the exchange rate. This is a situation which often produces unofficial capital flight and shows up in the form of negative errors & omissions in the Balance of payments. The errors are marginally positive at present but would indeed be more positive if it could be determined that tourism expenditure was overstated. The balance of current and capital flows (an indicator of the foreign exchange health of the economy) was marginally negative for most of the recession and post recession period. Correction of the Balance of payments for the reduced estimates of tourism expenditure result in negative and accelerating balances of current and capital flows. This indicates that the country's net foreign earnings position has worsened continually since the onset of the recession. In fact the corrected trend is now almost identical to the trend in debt service over the period 1981-1987. However, the corrected trend of the errors may indicate a significant trend in unexplained/unreported foreign capital inflow during the period. This trend, if correct, is surprising and warrants investigation.

CONCLUSION

It is possible to find methodological/reliability problems with virtually all of the statistics produced in Barbados including, GDP, BOP, Inflation, Employment and Tourism Expenditure. This paper highlights some of the problems with the tourism statistics, particularly Tourism Expenditure, believed by some to be overstated. Using the results of a new model of Tourism Expenditure/GDP calculation the relationship between tourism and related statistics are evaluated for the ten year period 1977-87. The main weakness of the model lies in the failure to account for tourists staying in unrecognised accomodation; this is important because this segment (of arrivals) has been growing rapidly in recent years. Industry specialists believe that this segment largely comprises significant numbers of expatriate Barbadians who spend considerably less per head than the sectoral average although they stay longer. If this is true then the model will overstate GDP and the true estimate of tourism expenditure will be even lower than the already reduced estimate derived.

The main conclusions are, firstly, that tourism expenditure is significantly overstated, because of the failure to account for discounts on the hotel Rack-Rate, particularly since the last recession. Since tourism expenditure is used as the basis for the estimate of travel receipts (in the Balance of payments), the latter are similarly overstated. Secondly, correction of BOP statistics for the extent of this overestimation will result in significantly negative and increasing balances of current and capital flows; this indicates an accelerating deterioration of the country's net foreign earnings position; the corrected trend is virtually identical to the trend seven-fold increase in debt

service in as many years (1981-87). The surprising thing is that despite considerable anxiety over the exchange rate the corrected errors and omissions indicate the possibility of increased unexplained foreign capital inflow over the period. Thirdly, Tourism Bank Receipts, which exibit a fairly stable relationship to the model's estimates of tourism expenditure (approximately 60%), is probably a fairly reliable BOP statistic (though difficult to interpret). Fourthly, it appears that the debt situation of the tourism sector, and of the country in general, partly results from the fact that tourism has grown rather slowly over the period (often lagging the non-tradeable sector); most of the apparent increase in tourism expenditure has been an illusion, explainable away by inflation.

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APPENDIX 2
A MODEL OF TOURISM EXPENDITURE/GDP CALCULATION

In this model Real tourism GDP is calculated as the benchmark value of GDP grossed up by the change in tourism nights adjusted. The latter, denoted TN, are calculated as the sum of the weighted value of Arrival nights (arrivals x average length of stay) and cruise nights, as follows:

$$TN = \sum_{i=1}^{12} (A_i L_i E_i/D + C_i X_i/D)$$

where A denotes arrivals,l denotes average length of stay in accomodation establishments,C denotes cruise ship passengers and E,X refer to base year seasonal average daily expenditure by tourists and cruise passengers respectively, and D denotes the base year annual average daily expenditure by tourists. The weighting procedure involves the calculation of monthly expenditure weights from seasonal patterns indicated in a 1980 BIMAP study. This study gives average daily expenditure in the winter (Dec.15-Apr.15) and summer (Apr.16-Dec.14). The winter and summer values are in general applied to the respective months but for the shoulder Months (April and December) the arithmetic mean of the winter and summer values is used.

Tourism Expenditure (TE) is calculated as the base year average daily expenditure by tourists times tourist nights adjusted times the change in the hotel wages index (and alternatively the Retail Price Index) :

$$TE = D \sum_{i=1}^{12} TN(1+(Wt/Wo)$$

Or,

$$TE = D \sum_{1=1}^{12} TN(1+(Pt/Po)$$

APPENDIX
TOURISM EXPENDITURE GDP MODEL

6/27/1988

TOURIST ARRIVALS									
MONTHS	78	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0
J	28,563.0	33,182.0	34,549.0	34,643.0	31,000.0	30,593.0	32,135.0	37,672.0	37,834.0	39,405.0
F	31,327.0	33,950.0	37,928.0	34,532.0	33,033.0	31,403.0	35,428.0	37,754.0	38,300.0	38,853.0
MAR	32,996.0	34,063.0	35,663.0	30,556.0	27,845.0	32,641.0	37,176.0	39,645.0	44,092.0	39,013.0
A	25,064.0	34,432.0	33,430.0	31,163.0	29,749.0	29,914.0	34,179.0	32,525.0	30,836.0	38,076.0
M	17,671.0	22,752.0	25,292.0	24,588.0	20,949.0	22,337.0	24,372.0	21,777.0	23,547.0	29,088.0
JUN	16,221.0	21,694.0	22,441.0	22,794.0	16,715.0	21,765.0	23,042.0	20,968.0	20,997.0	25,355.0
J	26,894.0	31,340.0	32,782.0	35,462.0	28,039.0	28,906.0	31,726.0	30,024.0	31,160.0	41,738.0
A	31,058.0	37,662.0	36,484.0	33,100.0	29,342.0	30,420.0	33,244.0	31,272.0	31,956.0	38,077.0
SEP	19,614.0	23,958.0	21,442.0	20,592.0	17,190.0	18,038.0	20,810.0	16,453.0	18,017.0	24,161.0
O	23,279.0	26,938.0	25,516.0	23,855.0	19,595.0	23,845.0	23,925.0	21,255.0	23,739.0	31,187.0
N	30,055.0	34,358.0	30,884.0	26,642.0	21,445.0	27,105.0	31,673.0	30,183.0	31,868.0	37,014.0
DEC	34,141.0	36,587.0	33,524.0	34,657.0	28,893.0	31,371.0	39,942.0	39,607.0	37,424.0	39,892.0
YEAR SUM	316,883.0	370,916.0	369,935.0	352,584.0	303,795.0	328,338.0	367,652.0	359,135.0	369,770.0	421,859.0
TOURISM Average Length of stay										
MONTHS	78	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0
J	10.3	9.9	11.7	9.5	9.8	7.8	7.7	7.1	6.9	6.5
F	10.2	10.4	11.7	10.7	10.4	8.6	8.4	7.0	7.4	7.0
MAR	10.0	10.9	10.7	11.2	9.0	7.9	8.0	6.5	7.0	6.6
A	8.5	12.9	10.8	9.6	9.3	7.9	7.3	6.5	6.2	6.1
M	7.1	9.2	11.2	11.2	8.3	6.9	6.9	6.0	6.2	5.8
JUN	7.5	8.3	6.9	8.5	8.2	6.4	5.9	4.9	6.3	6.2
J	8.1	7.7	6.9	9.3	6.7	7.2	6.4	5.9	6.2	6.5
A	8.7	7.5	8.4	10.3	6.1	8.4	7.4	6.5	6.5	7.2
SEP	7.4	6.4	8.9	10.8	6.8	6.9	6.1	5.2	6.0	6.5
O	7.6	7.1	9.6	9.5	7.2	7.4	7.0	6.0	5.6	6.4
N	7.9	7.9	8.9	6.9	9.0	8.7	6.3	6.0	5.6	6.5
DEC	10.6	8.7	10.3	9.2	7.8	7.5	7.0	6.1	6.4	6.7

CRUIZE PASSG

MONTHS	78	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0
J	19,100.0	17,824.0	26,701.0	17,115.0	16,592.0	13,861.0	14,569.0	13,755.0	17,442.0	22,039.0
F	15,954.0	13,084.0	22,077.0	18,183.0	11,599.0	9,302.0	11,894.0	11,095.0	14,368.0	17,116.0
MAR	19,479.0	15,459.0	18,245.0	19,302.0	15,429.0	15,479.0	10,525.0	13,000.0	17,748.0	23,427.0
A	10,547.0	9,944.0	13,291.0	13,568.0	7,491.0	8,274.0	10,282.0	11,487.0	14,534.0	25,061.0
M	9,897.0	9,226.0	5,891.0	6,946.0	3,402.0	3,262.0	4,861.0	4,897.0	4,767.0	16,174.0
JUN	7,993.0	3,220.0	6,526.0	4,766.0	6,979.0	4,417.0	5,268.0	3,956.0	5,734.0	13,663.0
J	7,247.0	5,627.0	8,746.0	6,295.0	3,946.0	7,331.0	6,470.0	6,165.0	5,897.0	14,655.0
A	5,124.0	6,454.0	6,350.0	6,567.0	4,275.0	8,452.0	5,275.0	4,227.0	5,396.0	13,669.0
SEP	4,391.0	2,372.0	7,807.0	4,650.0	5,188.0	3,244.0	5,240.0	3,722.0	3,829.0	7,825.0
O	5,440.0	4,472.0	6,224.0	6,784.0	8,352.0	6,098.0	3,886.0	8,331.0	11,834.0	20,348.0
N	6,322.0	9,963.0	13,221.0	12,324.0	10,410.0	8,060.0	5,987.0	13,526.0	19,602.0	21,526.0
DEC	14,494.0	12,428.0	21,680.0	19,272.0	17,092.0	14,739.0	14,891.0	18,061.0	24,184.0	29,275.0
YEAR SUM	125,988.0	110,073.0	156,759.0	135,772.0	110,755.0	102,519.0	99,148.0	112,222.0	145,335.0	224,778.0

ARRIVALS

MONTHS	78	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0
J	294,198.9	328,501.8	404,223.3	329,108.5	303,800.0	238,625.4	247,439.5	267,471.2	261,054.6	256,132.5
F	319,535.4	353,080.0	443,757.6	369,492.4	343,543.2	270,065.8	297,595.2	264,278.0	283,420.0	271,971.0
MAR	329,960.0	371,286.7	381,594.1	342,227.2	250,605.0	257,863.9	297,408.0	257,692.5	308,644.0	257,485.8
A	213,044.0	444,172.8	361,044.0	299,164.8	276,665.7	236,320.6	249,506.7	211,412.5	191,183.2	232,263.6
M	125,464.1	209,318.4	283,270.4	275,385.6	173,876.7	154,125.3	168,166.8	130,662.0	145,991.4	168,710.4
JUN	121,657.5	180,060.2	154,842.9	193,749.0	137,063.0	139,296.0	135,947.8	102,743.2	132,281.1	157,201.0
J	217,841.4	241,318.0	226,195.8	329,796.6	187,861.3	208,123.2	203,046.4	177,141.6	193,192.0	271,297.0
A	270,204.6	282,465.0	306,465.6	340,930.0	178,986.2	255,528.0	246,005.6	203,268.0	207,714.0	274,154.4
SEP	145,143.6	153,331.2	190,833.8	222,393.6	116,892.0	124,462.2	126,941.0	85,555.6	108,102.0	157,046.5
O	176,920.4	191,259.8	244,953.6	226,622.5	141,084.0	176,453.0	167,475.0	127,530.0	132,938.4	199,596.8
N	237,434.5	271,428.2	274,867.6	183,829.8	193,005.0	235,813.5	199,539.9	181,098.0	178,460.8	240,591.0
DEC	361,894.6	318,306.9	345,297.2	318,844.4	225,365.4	235,282.5	279,594.0	241,602.7	239,513.6	267,276.4
YEAR SUM	2,813,299.0	3,344,529.0	3,617,345.9	3,431,544.4	2,528,747.5	2,531,959.4	2,618,665.9	2,250,455.3	2,382,495.1	2,753,726.4

BIMAP WEIGHT DEPT. TOURISM 1980=100 av daily exp
TOURISM ARRIVALS

MONTHS	78	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0
J	1.203297	1.203297	1.203297	1.203297	1.203297	1.203297	1.203297	1.203297	1.203297	1.203297
F	1.203297	1.203297	1.203297	1.203297	1.203297	1.203297	1.203297	1.203297	1.203297	1.203297
MAR	1.203297	1.203297	1.203297	1.203297	1.203297	1.203297	1.203297	1.203297	1.203297	1.203297
A	1.050824	1.050824	1.050824	1.050824	1.050824	1.050824	1.050824	1.050824	1.050824	1.050824
M	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352
JUN	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352
J	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352
A	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352
SEP	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352
O	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352
N	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352	.898352
D	1.050824	1.050824	1.050824	1.050824	1.050824	1.050824	1.050824	1.050824	1.050824	1.050824
YEAR SUM	12.000000	12.000000	12.000000	12.000000	12.000000	12.000000	12.000000	12.000000	12.000000	12.000000

BIMAP WEIGHT CRUIZE 1980=100"
CRUIZE

MONTHS	78	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0
J	.961813	.961813	.961813	.961813	.961813	.961813	.961813	.961813	.961813	.961813
F	.961813	.961813	.961813	.961813	.961813	.961813	.961813	.961813	.961813	.961813
MAR	.961813	.961813	.961813	.961813	.961813	.961813	.961813	.961813	.961813	.961813
A	.924725	.924725	.924725	.924725	.924725	.924725	.924725	.924725	.924725	.924725
M	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637
JUN	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637
J	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637
A	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637
SEP	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637
O	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637
N	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637	.887637
DEC	.924725	.924725	.924725	.924725	.924725	.924725	.924725	.924725	.924725	.924725
YEAR SUM	10.948352	10.948352	10.948352	10.948352	10.948352	10.948352	10.948352	10.948352	10.948352	10.948352

ARRIVALS ADJ.

MONTHS	78	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0
J	354,008.6	395,285.1	486,400.6	396,015.2	365,561.5	287,137.2	297,743.1	321,847.2	314,126.1	308,203.4
F	384,495.9	424,860.0	533,972.1	444,609.0	413,384.4	324,969.3	358,095.3	318,004.8	341,038.4	327,261.8
MAR	397,039.8	446,768.1	459,170.9	411,800.9	301,552.2	310,286.8	357,870.1	310,080.5	371,390.3	309,831.8
A	223,871.8	466,747.5	379,393.8	314,369.6	290,727.0	248,331.4	262,187.7	222,157.4	200,899.9	244,068.2
M	112,710.9	188,041.5	254,476.4	247,393.1	156,202.4	138,458.7	151,072.9	117,380.4	131,151.6	151,561.3
JUN	109,291.2	161,757.4	139,103.4	174,054.7	123,130.8	125,136.8	122,128.9	92,299.5	118,834.9	141,221.8
J	195,698.2	216,788.4	203,203.4	296,273.3	168,765.5	186,967.8	182,407.1	159,135.4	173,554.4	243,720.1
A	242,738.7	253,752.9	275,313.9	306,275.0	160,792.5	229,554.0	220,999.5	182,606.1	186,600.2	246,287.1
SEP	130,390.0	137,745.3	171,435.9	199,787.7	105,010.1	111,810.8	114,037.7	76,859.0	97,113.6	141,083.0
O	158,936.7	171,818.6	220,054.5	203,586.7	126,743.0	158,516.8	150,451.4	114,566.8	119,425.4	179,308.1
N	213,299.7	243,838.0	246,927.8	165,143.8	173,386.4	211,843.4	179,257.0	162,689.7	160,320.6	216,135.3
DEC	380,287.6	334,484.6	362,846.6	335,049.4	236,819.4	247,240.5	293,804.1	253,882.0	251,686.7	280,860.5
YEAR SUM	2,902,769.0	3,441,887.4	3,732,299.1	3,494,358.4	2,622,075.3	2,580,253.6	2,690,054.9	2,331,508.9	2,466,142.1	2,789,542.3

CRUIZE NIGHTS ADJ.

MONTHS	78	79.0	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0
J	18,370.6	17,143.4	25,681.4	16,461.4	15,958.4	13,331.7	14,012.7	13,229.7	16,775.9	21,197.4
F	15,344.8	12,584.4	21,233.9	17,488.6	11,156.1	8,946.8	11,439.8	10,671.3	13,819.3	16,462.4
MAR	18,735.2	14,868.7	17,548.3	18,564.9	14,839.8	14,887.9	10,123.1	12,503.6	17,070.3	22,532.4
A	9,753.1	9,195.5	12,290.5	12,546.7	6,927.1	7,651.2	9,508.0	10,622.3	13,440.0	23,174.5
M	8,784.9	8,189.3	5,229.1	6,165.5	3,019.7	2,895.5	4,314.8	4,346.8	4,231.4	14,356.6
JUN	7,094.9	2,858.2	5,792.7	4,230.5	6,194.8	3,920.7	4,676.1	3,511.5	5,089.7	12,127.8
J	6,432.7	4,994.7	7,763.3	5,587.7	3,502.6	6,507.3	5,743.0	5,472.3	5,234.4	13,008.3
A	4,548.3	5,728.8	5,636.5	5,829.1	3,794.6	7,502.3	4,682.3	3,752.0	4,789.7	12,133.1
SEP	3,897.6	2,105.5	6,929.8	4,127.5	4,605.1	2,879.5	4,651.2	3,303.8	3,398.8	6,945.8
O	4,828.7	3,969.5	5,524.7	6,021.7	7,413.5	5,412.8	3,449.4	7,394.9	10,504.3	18,061.6
N	5,611.6	8,843.5	11,735.5	10,939.2	9,240.3	7,154.4	5,314.3	12,006.2	17,399.5	19,107.3
DEC	13,403.0	11,492.5	20,048.0	17,821.3	15,805.4	13,629.5	13,770.1	16,701.5	22,363.6	27,071.3
YEAR	116,805.4	101,973.9	145,413.6	125,784.3	102,457.6	94,719.5	91,684.7	103,515.9	134,116.8	206,178.6

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TOURIST NIGHTS ADJ

MONTHS	78	79	80	81	82	83	84	85	86	87
J	372,379.2	412,428.5	512,081.9	412,476.6	381,519.9	300,468.8	311,755.8	335,077.0	330,902.1	329,400.8
F	399,840.7	437,444.4	555;206.0	462,097.6	424,540.5	333,916.1	369,535.1	328,676.2	354,857.7	343,724.2
MAR	415,774.9	461,636.7	476,719.2	430,365.8	316,392.0	325,174.7	367,993.1	322,584.1	388,460.6	332,364.2
A	233,624.9	475,943.0	391,684.3	326,916.3	297,654.1	255,982.6	271,695.7	232,779.7	214,339.9	267,242.7
M	121,495.8	196,230.9	259,705.5	253,558.6	159,222.2	141,354.2	155,387.7	121,727.2	135,383.0	165,917.9
JUN	116,386.1	164,615.6	144,896.1	178,285.2	129,325.6	129,057.5	126,805.0	95,811.0	123,924.7	153,349.6
J	202,130.9	221,783.2	210,966.6	301,861.0	172,268.1	193,475.1	188,150.1	164,607.7	178,788.7	256,728.4
A	247,287.0	259,481.7	280,950.4	312,104.1	164,587.2	237,056.3	225,681.8	186,358.2	191,389.9	258,420.2
SEP	134,287.6	139,850.8	178,365.6	203,915.2	109,615.2	114,690.3	118,688.9	80,162.8	100,512.4	148,028.7
O	163,765.5	175,788.1	225,579.1	209,608.4	134,156.6	163,929.7	153,900.8	121,961.7	129,929.7	197,369.8
N	218,911.3	252,681.5	258,663.2	176,083.0	182,626.7	218,997.8	184,571.3	174,695.9	177,720.0	235,242.6
DEC	393,690.6	345,977.1	382,894.7	352,870.7	252,624.8	260,870.1	307,574.2	270,583.4	274,050.2	307,931.8
YEAR SUM	3,019,574.5	3,543,861.3	3,877,712.7	3,620,142.6	2,724,532.9	2,674,973.1	2,781,739.6	2,435,024.8	2,600,258.9	2,995,721.0

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CUMULATIVE % GDP(TOUR NIGHTS ADJ)

MONTHS	78	79	80	81	82	83	84	85	86	87
J	31.2	10.8	24.2	-19.5	-7.5	-21.2	3.8	7.5	-1.2	-.5
F	20.8	10.1	25.6	-18.1	-7.8	-21.3	7.4	-2.6	3.3	-1.8
MAR	22.3	10.4	17.7	-15.5	-14.0	-14.5	9.4	-6.0	8.9	-6.4
A	17.5	25.7	8.3	-15.7	-13.0	-14.4	8.7	-7.7	5.7	-1.2
M	15.7	28.6	10.7	-14.1	-16.2	-14.1	8.8	-9.2	6.2	1.0
JUN	16.2	29.5	8.9	-11.8	-17.2	-13.0	7.9	-10.4	7.7	2.9
J	16.4	27.3	7.6	-7.3	-20.5	-10.7	6.7	-10.6	7.8	7.1
A	15.9	24.7	7.7	-5.5	-23.6	-6.3	5.2	-11.4	7.3	9.9
SEP	16.3	23.5	8.7	-4.3	-25.2	-5.8	5.1	-12.5	8.1	11.7
O	15.6	22.4	9.9	-4.5	-25.9	-4.1	4.3	-13.1	8.0	14.2
N	15.9	21.8	9.3	-6.5	-24.3	-2.3	2.5	-12.5	7.5	15.5
DEC	18.7	17.4	9.4	-6.6	-24.7	-1.8	4.0	-12.5	6.8	15.2

TOURISM EXPENDITURE AND RELATED STATISTICS $M.

	78	79	80	81	82	83	84	85	86	87 (7
(1)Tour Bank Recpts.	157.7	197.2	263.7	291.3	231.1	253.3	265.7	284.5	284.5	312.0
%	19.0	25.0	33.7	10.5	-20.7	9.6	4.9	7.1	.0	9.7
(2) BSS Tour Exp $M	271.5	369.7	473.7	523.7	502.2	503.2	560.7	618.1	647.3	751.0
%	22.6	36.2	28.1	10.6	-4.1	.2	11.4	10.2	4.7	16.0
(3)CBB (P) Tour Exp $M	282.8	375.6	470.5	503.3	417.8	431.8	469.9	427.3	462.4	550.7
%	29.9	32.8	25.3	7.0	-17.0	3.4	8.8	-9.1	8.2	19.1
(4)CBB (W) TOUR EXP	293.1	421.4	470.5	588.6	443.0	473.9	512.4	477.7	516.8	608.8
%	26.6	43.8	11.7	25.1	-24.7	7.0	8.1	-6.8	8.2	17.8
(5)REAL TOUR GDP %	18.7	17.4	9.4	-6.6	-24.7	-1.8	4.0	-12.5	6.8	15.2
RPI 1980=100	79.9	90.4	103.5	118.6	130.8	137.7	144.1	149.7	151.7	156.8
RPI %	9.5	13.2	14.5	14.6	10.3	5.3	4.6	3.9	1.3	3.4
HOTEL WAGES 1980=100	80.0	98.0	100.0	134.0	134.0	146.0	151.8	161.7	163.8	167.5
%	6.7	22.5	2.0	34.0	.0	9.0	4.0	6.5	1.3	2.3
(2)-(4) $M	-21.6	-51.7	3.2	-64.9	59.2	29.3	48.3	140.4	130.5	142.2
BALANCE OF PAYMENTS $M.										
ERRORS & OMISSIONS	40.3	11.0	-28.9	-71.0	3.6	10.0	7.0	18.0	8.0	-45.0
Adjusted by (3)	29.0	5.1	-25.7	-50.6	88.0	81.4	97.8	208.8	192.9	155.3
Adjusted by (4)	18.7	-40.7	-25.7	-135.9	62.8	39.3	55.3	158.4	138.5	97.2
CURRENT & CAPITAL BAL	18.0	11.1	43.0	-16.1	12.0	2.0	.0	71.0	18.0	8.0
Adjusted by (3)	29.3	17.0	39.8	-36.5	-72.4	-69.4	-90.8	-119.8	-166.9	-192.3
Adjusted by (4)	39.6	62.8	39.8	48.8	-47.2	-27.3	-48.3	-69.4	-112.5	-134.2
DEBT SERVICE			-33.7	-35.0	-61.8	-85.3	-106.4	-156.3	-187.2	-269.0

(1) Tourism Bank Receipts are the sum of receipts from hotels and tourists by commercial banks, lagged one month for comparability with expenditure data.
(3) Central Bank estimate of Tourism Expenditure (Tourism nights adj. times av. daily expenditure in base year times inflation.
(4) Central Bank estimate of Tourism Expenditure (Tourism nights adj. times av. daily expenditure in base year times hotel wage rate.
(5) Real Tourism Gdp is computed as tourism nights adjusted for seasonal base year expenditure weights.
(7) The Balance of Payments are adjusted by subtracting from Travel Credits the difference of the BSS estimate and (3), (4) alternatively.

TOURISM EXPENDITURE AND RELATED STATISTICS $M.

	81	83	84	85	86	87 (77-87)	PERIOD %	POST-RECESS. (84-87) %	RECESSION (81-83) %	PRE-RECESSION (77-80) %
(1)Tour Bank Recpts.	291.3	253.3	265.7	284.5	284.5	312.0				
%	10.5	9.6	4.9	7.1	.0	9.7	135.5	17.4	-13.0	99.0
(2) BSS Tour Exp $M	523.7	503.2	560.7	618.1	647.3	751.0				
%	10.6	.2	11.4	10.2	4.7	16.0	239.1	33.9	-3.9	113.9
(3)CBB (P) Tour Exp $M	503.3	431.8	469.9	427.3	462.4	550.7				
%	7.0	3.4	8.8	-9.1	8.2	19.1	153.0	17.2	-14.2	116.2
(4)CBB (W) TOUR EXP	588.6	473.9	512.4	477.7	516.8	608.8				
%	25.1	7.0	8.1	-6.8	8.2	17.8	162.9	18.8	-19.5	103.2
(5)REAL TOUR GDP %	-6.6	-1.8	4.0	-12.5	6.8	15.2	17.7	7.7	-26.1	52.4
RPI 1980=100	118.6	137.7	144.1	149.7	151.7	156.8				
RPI %	14.6	5.3	4.6	3.9	1.3	3.4	114.9	8.8	16.1	41.9
HOTEL WAGES 1980=100	134.0	146.0	151.8	161.7	163.8	167.5				
%	34.0	9.0	4.0	6.5	1.3	2.3	123.3	10.3	9.0	33.3
(2)-(4) $M	-64.9	29.3	48.3	140.4	130.5	142.2				
BALANCE OF PAYMENTS $M.										
ERRORS & OMISSIONS	-71.0	10.0	7.0	18.0	8.0	-45.0				
Adjusted by (3)	-50.6	81.4	97.8	208.8	192.9	155.3				
Adjusted by (4)	-135.9	39.3	55.3	158.4	138.5	97.2				
CURRENT & CAPITAL BAL	-16.1	2.0	.0	71.0	18.0	8.0				
Adjusted by (3)	-36.5	-69.4	-90.8	-119.8	-166.9	-192.3				
Adjusted by (4)	48.8	-27.3	-48.3	-69.4	-112.5	-134.2				
DEBT SERVICE	-35.0	-85.3	-106.4	-156.3	-187.2	-269.0				

(1) Tourism Bank Receipts are the sum of receipts from hotels and tourists by commercial banks, lagged one month for comparability with expenditure data.
(3) Central Bank estimate of Tourism Expenditure (Tourism nights adj. times av. daily expenditure in base year times inflation.
(4) Central Bank estimate of Tourism Expenditure (Tourism nights adj. times av. daily expenditure in base year times hotel wage rate.
(5) Real Tourism Gdp is computed as tourism nights adjusted for seasonal base year expenditure weights.
(7) The Balance of Payments are adjusted by subtracting from Travel Credits the difference of the BSS estimate and (3), (4) alternatively.