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Estimation of the economic impacts of yachting in Greece via the tourism satellite account

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This paper examines the impacts of yachting on the Greek economy. The contribution of yachting to major macroeconomic values and its impact on the Greek economy in 2004 are evaluated with the use of the tourism satellite account (TSA). The method has been applied by several countries to estimate the economic impacts of the traditionally designated tourism-related industries, as well as of all industries participating in the tourist economy, but not for the economic effects of special interest tourism (such as yachting). To date, there has been no application of this method in Greece either for the total tourism industry or for a specific tourism 'sector'. The adaptation of TSA tables, maintaining harmonization with OECD directives and definitions which are approved and accepted internationally, is a precondition of the research. To achieve the research aims, both the theoretical and empirical aspects of yachting in Greece were investigated. Data from public sources have been included in the TSA tables. Since these tables require information with economic value, which is not found in the data recorded by many public services, primary research was conducted to collect this necessary information. The paper concludes by presenting the impacts of yachting on the major macroeconomic values of the Greek economy, such as tourist consumption, gross domestic product, balance of invisible resources, national income, employment, investments and public revenues (taxes).

Keywords: yachting; maritime tourism; tourism satellite account; economic impacts; Greece

JEL classification: C69, L83, O11, R15

Yachting in Greece exhibits an upward trend and is extremely popular among both foreigners and local residents. Despite the need for further development and improvement, the existing network of marinas and harbours for tourist vessels allows visitors the opportunity to enjoy a maritime tour, as well as to acquaint themselves with the many insular and continental locations of Greece. Private maritime touring in Greece is provided by manned leisure vessels (motor yachts, etc) or by sailboats, usually chartered without a crew (Lekakou and Tzannatos, 2001).

The Greeks either own or operate the largest professional fleet worldwide for the supply of yachting services. This activity initially appeared in the 1960s and nowadays offers the opportunity to choose from modern ships of different types, such as sailing boats, motor yachts, sailing yachts, motor sailers, mega yachts, etc. A high percentage of tourists purchasing yachting services are Europeans (German, Italian, British, French, Dutch, etc). Americans prefer motor yachts to sailing boats. Yacht owners constitute two major professional unions. The operation of the enterprise is supervised by the Greek Tourist Organization (GTO) (with regard to tourist agencies) and the Mercantile Marine Ministry (MMM) (for matters concerning ships and yachts). A significant factor in the development of yachting is harbour infrastructure and the possibility of supplying services to passengers of yachts in tourist harbours. When comparing the western Mediterranean countries, Greece falls short, not so much in the number of mooring spots but in the quality of the services provided. Nevertheless, yachting constitutes an important source of income and employment for the coastal and island landfalls, since it is addressed mainly to clientele of a high income level, while demand for the product illustrates a significant increase worldwide (Hall, 2001).

Yachting, like any tourist activity, does not influence just a single specific sector of the economy. Neither the total of tourism nor yachting are included as individual sectors in the national accounts. Therefore, their economic impact on the national economy has not been estimated and, up to now, their contribution has not been appreciated.

The main objective of this paper is the adaptation of the TSA method in order to estimate the economic impacts of yachting on the major values of the national economy. In particular, the paper measures yachting activity and its contribution to the following aspects of the Greek economy:

- Tourist consumption
- Gross domestic product
- Balance of invisible resources
- National income
- Employment
- Investments
- Public revenues (taxes).

Methodology and empirical framework

The tourism satellite account (TSA) provides a means to describe and measure the magnitude of tourism as a form of economic activity in a way that is consistent and comparable with conventional industries (Smith, 2000, p 530).

The method assembles and categorizes information that concerns tourist activity, such as prices, quantities, quality, costs of work and number of workers (Sebbar, 2001, pp 139–151).

The TSA provides a framework for policy analysis of issues related to tourism economics, as well as for model building, tourism growth analysis and productivity measurement. It has been designed in such a way that not all of its elements need to be developed at the outset. In fact, the opposite applies: while the TSA has a comprehensive framework, individual elements and individual tables, each of which is of analytical use in its own right, can be constructed incrementally using a building-block approach. Taken as a whole, the TSA might seem to place considerable resource and data demands on OECD member countries. However, a phased implementation is planned to enable useful data to emerge at an earlier stage and avoid placing excessive demands on countries to provide all the necessary information at one time (OECD, 2000, p 15).

The TSA aims to concentrate and produce tourism statistics, and the need for research, in an upgraded and evolved form (Lagos and Diakomihalis, 2005). The method, after modification and improvement, became an ideal tool for the estimation of:

- tourist consumption per product, per tourism category and total tourist consumption;
- tourist production accounts;
- the supply of tourist goods and services;
- the capital structure of tourism; and
- tourism employment.

The distinctiveness of yachting, as it functions in Greece (and internationally), requires adaptation of the TSA tables to include all the products that are offered in the tourist package or individually, as well as the sectors of the economy that produce 'other goods and services' which yachting tourists purchase, before, during or after the activity. This adaptation certainly cannot deviate from the OECD's definitions, concepts and methods that constitute the theoretical background of the TSA.

The TSA will allow yachting to be measured on a basis comparable with other standard industries, thereby endowing it with the credibility it currently lacks. It offers the following advantages compared to other methods:

- It satisfies completely the aim of research to measure maritime tourism and determine total income and added value.
- It is based on the System of National Accounts 1993 (SNA 93) and on the European System of Accounts 1995 (ESA 95), as well as on the definitions and interpretations of tourism statistics from the World Tourism Organization (WTO, 1999) and United Nations (OECD, 2000) and has been approved by the OECD's Council of Tourism 1999.
- It can approach, after suitable adaptation, the economic reality of maritime tourism.

The OECD guidelines are flexible enough to enable countries to capture the specificity of their tourism industry at the national level. At the same time, they aim to provide a framework which is sufficiently robust for international

comparisons of a country's tourism sectors and for measuring the economic structure and weight of the tourism industry *vis-à-vis* other major sectors of the economy. They provide clear guidance regarding the key indicators (for example, tourism value added – TVA) that need to be developed, as well as their mode of calculation.

The WTO has also developed a conceptual framework for a TSA, which has been used by OECD countries in isolation or in combination with the OECD guidelines to implement their national TSAs (OECD, 2000, p 207).

The TSA as suggested by WTO and EUROSTAT consists of ten tables, though only eight are recommended as suitable for development (as there remain unresolved issues with some tables) and only six are considered 'core' tables (Department for Culture, Media and Sport, UK, 2004).

The OECD manual on TSA recommends a maximum of 14 tables for the net basis approach. In the first eight tables, values are recorded on current prices and on constant prices (of the previous period) in the remaining six tables.

On a gross basis approach, the total tables recommended are 12. Since all the calculations are on a net basis approach and all the data used are in current prices, the Greek TSA, based on the OECD and WTO manual of TSA directives and definitions developed to satisfy the needs of evaluating the economic impacts of yachting on the Greek economy, consists of eight tables, in the following framework (see Appendix):

- Table TSA 1: Production account of yachting, net basis (current prices).
- Table TSA 2: Tourism supply and demand, by type of commodity and type of visitor, net basis, at purchasers' prices (current prices).
- Table TSA 3: Supply by yachting and other industries to meet tourism demand by different types of visitors, net basis (current prices).
- Table TSA 4: Tourism value added of yachting and other industries, net basis (current prices).
- Table TSA 5: Tourism employment of yachting and other industries.
- Table TSA 6: Visitor characteristics, same-day visitors and tourists, net basis.
- Table TSA 7: Yachting gross capital acquisition (current prices).
- Table TSA 8: Yachting gross capital stock (current prices).

Taken together, these tables provide a comprehensive view of yachting as a socio-economic phenomenon. Tables TSA 1, 2 and 3 provide much of the basic economic data on tourism.

Table TSA 1 is the starting point from the supply side: it identifies yachting, its commodity outputs, its intermediate inputs and the resultant value added. Table TSA 2 provides the essential elements of yachting by commodity and type of visitor (since tourism is a demand-based concept). Table TSA 3 indicates which industry's output is acquired by which type of visitor. This table also introduces the *tourism ratio*. The tourism ratio represents the share of production of a 'manufactured' characteristic tourist industry supplying tourists (Diakomihalis, 2006, p 158). It takes the price of one unit, because the first columns of Tables TSA 3 and 4 indicate the supply consumed by the tourists who purchase maritime tourism products, which is the result of empiric researches, and not the total supply of the economy (Diakomihalis, 2006, p 195). Table TSA 4 provides data not only on the TVA of yachting but also for those industries which play a role in satisfying certain important elements

of tourist demand. Table TSA 5 provides data on an especially relevant dimension of tourism; that is, employment. Table TSA 6 is related to Table TSA 2 in that it provides the link between the values of tourism expenditure with the volume and type of visitor. Table TSA 7 provides information on capital acquisition and Table TSA 8 on its stock by type of asset (OECD, 2000).

The tables are interrelated so that information can (and does) feed from one to the other, thus allowing the role of tourism in economic activity and employment to be identified at once. These tables are based largely on the tourism economic accounts (TEA), but have been expanded and modified to address some of the issues which the TEA cannot address adequately.

Almost all the data recorded by the public authorities do not contain economic values. Despite this, all the available official statistical elements contribute to the economic approach of the effects of maritime tourism activities within the national economy and, for this reason, have been appraised and included in the process of collating the TSA tables. The precise requirements for the TSA tables have been examined and a list of all available information that is relevant for the TSA has been created. Data collection of the yachting activity, through every official source, was required to complete the research. The insufficiency or ambiguity of certain registered data led to the conduct of primary research, which was focused on the country's yachting enterprises. Such information is derived from the published financial statements of the sector and the enterprises.

The primary research concerns the statistical and economic elements of yachting enterprises and the tourists who consume their products. The empirical research includes:

- a sample of 1,551 bareboats (sailing boats), which accounts for 45.35% of the total of 3,420 professional sailing boats;
- a sample of 150 out of the total 180 manned yachts (motor yachts, motor sailers and sailing yachts), that is 83%;
- interviews of 11 owners of yachting companies, 8 marine managers, 18 executives of chartering bases and 31 skippers.

For the estimation and structure of yachting tourist consumption in the destination ports, empiric research was undertaken using questionnaires and interviews covering a sample of 376 tourists.

Other data were collected by executives of public institutions and services such as the Mercantile Marine Ministry (MMM), the Marine Pension Fund, the Port Authorities, the tax department, the National Statistical Service of Greece (NSSG) and the Greek Tourist Organization (GTO), as well as the professional unions – the Greek Professional Tourist Yacht Owners Union (GPTYOU), the Professional Tourist Bareboat Yacht Owners Union (PTBYOU), the Greek Liaison of Yacht Brokers and Experts (GLYBE) and the Panhellenic Professional Association of Skippers (PPAS) – using personal and telephone interviews, as well as the completion of questionnaires where necessary.

The principles and rules of the TSA methodological framework, as they are determined by the OECD, were applied during the process of completing the TSA tables. At the same time, the methodological framework of national accounts, which is harmonized with SNA 93 and the ESA 95, has been taken into consideration.

Final results

The national accounts 'tables of supply and uses' served as the basic building block for Tables TSA 1, TSA 2 and TSA 3. These tables were examined to determine the industry and commodity detail that would best approximate that needed to complete the TSA.

Most transactions that are recorded in the 'table of uses' are valued at the purchasers' prices. In order to estimate the transactions in basic prices, the 'trade and transport margins', the 'deductible VAT' and the 'net taxes on production: other' have been deducted from the purchasers' prices. The calculation of VAT was undertaken in a manner that was appropriate to the specific acitivities that affect yachting.

The 'trade and transport margins' concern goods only and not services. These are based on the factors of the 'supply and uses tables' (2004) of the Greek National Statistical Service. The percentage of imports for each category of goods has been derived from the same tables.

The intermediate inputs (at purchasers' prices) for yachting have been estimated from the data gathered through primary research. For 'all other industries', intermediate inputs have been evaluated based on the 'Symmetric Input–Output Tables' (NSSG, 2007).

Employment in the yachting field is estimated from the empirical research. The estimation of employment for 'all other industries' came from the combination of the 'employees by category of economic activity, 2005' and 'supply and uses of 2004' tables of the NSSG.

'Net taxes on production: other' – including license fees and dues – have been estimated for yachting, but not for 'other industries' because:

- they are not noteworthy values;
- they do not concern all industries;
- they are stated incorporated with the compensation of employees and gross operating surplus, in the symmetrical input–output table of national accounts (NSSG).

Imputed revenue concerns the estimated value of yacht chartering by their owners when they are using them for their own recreation.

Since there are no primary incomes paid abroad, nor are there primary incomes flowing into the country from abroad, the estimation of value added at purchasers' prices, which also constitutes the impact of the activity on the *gross domestic product* (GDP), is identified with the impact on the *national product* and is estimated at €222.08 million. The impact on the *national income* is appreciated with the deduction of taxes from the national product, a sum that coincides with the value added at basic prices and which amounts to €164.12 million (Table 1).

The impact of the activity on the *balance of invisible transactions* (Table 2) is the total consumption of domestic and imported production by non-resident tourists, because this consumption is identified with the total income flowing into the country accounted for by yachting. Data on the consumption of corresponding products by Greek tourists abroad do not exist. Therefore, this size has not been taken into consideration, which is considered negligible in every case and does not affect the total impact of €383.48 million.

Table 1. Impact on gross domestic product, national product, national income (million €)

Characteristic industry: yachting afreightments	69.84
Characteristic maritime tourism commodities	18.35
All other commodities purchased by tourists	75.93
Value added (at basic values)	**164.12**
Total VAT of characteristic products and all other products purchased by tourists	33.23
Net taxes on production	24.73
GDP at purchasers' prices	**222.08**
Compensation of foreign employees, dividends – commissions paid abroad, rent paid abroad	0
National product	**222.08**
All net taxes on production (including VAT)	–57.96
National income	**164.12**

Source: Diakomihalis (2006, p 225).

Table 2. Impact on the balance of invisible resources (million €).

Total output of domestic and imported production of yachting and all other goods purchased by yacht tourists	383.48
Yachting product consumption by residents abroad	–
Total impact	**383.48**

Source: Diakomihalis (2006, p 226).

Table 3. Public revenues (VAT, net taxes on production and net taxes on production: other) (million €).

VAT	Net taxes on production of yachting	Net taxes on production of all other industries	Net taxes on production: other	Total public revenues
33.23	0.00	24.73	11.05	**69.01**

Source: Diakomihalis (2006, p 226).

The estimation of *public revenues* (Table 3) includes all kinds of taxes collected by the state, which arise from the consumption of yachting products, as well as from all other goods and services consumed by tourists during their yachting tour. The total public revenues generated by yachting are €69.01 million.

The total production of the *trade and transport* sector concerns the proportion of the sector in the purchasers' prices of the goods consumed by tourists. The largest share concerns the margins included in the price of the goods, that is €22.33 million, while a small percentage concerns final supply to enterprises, constituting intermediate consumption, which is accounted for by secondary activities such as storage, packing, etc and is estimated at €3.11 million (Table 4).

Table 4. Wholesale and retail trade and transport margins.

Output	Net taxes on production and imports	VAT	Trade and transport margins	Total supply
24.81	0.31	0.31	–22.33	**3.11**

Source: Diakomihalis (2006, p 228).

It should be observed that the *gross capital acquisition* and *gross capital stock* of yachting have been estimated in Tables TSA 7 and TSA 8. The total values shown in these tables, €48,550,000 and €912,450,000, respectively, are the result of the activity's impact on referred values, national level. The capacity utilization shown in Table TSA 7 is an important indicator of how an industry is using its capital base. The ratio of realized charterings over the maximum possible number of charterings, estimated at 55%, is judged to be a satisfactory index of capacity utilization of the industry's assets.

Tourism consumption for the yachting sector is demonstrated in Table TSA 6 of the Appendix. The tourist consumption attributed to the yachting sector is estimated at €399.61 million, made up of personal consumption (by tourists) of €396.50 million and €3.11 million business consumption within the trade and transport sector taken from other industries. By comparing yachting tourism consumption with total maritime tourism consumption, which has been calculated at €1,473.73 million, with total tourist consumption in Greece, estimated by the World Travel and Tourism Council (WTTC, 2004) at €11.1 billion, with Greece's total economic consumption of €127,586 million, the contribution of the sector to the above values can be evaluated. These indices, depicted in Table 6, show the proportion of yachting's tourist consumption to be 27.08% of total maritime tourism consumption, 3.60% of total tourism consumption and 0.31% of total economic consumption.

Estimates of the economic contribution of yachting to the the major economic values of the Greek economy are presented in Tables 1–4.

In order to estimate the impact of yachting, the major values of the Greek economy, needed for the percentage contribution to the corresponding values of the activity, are presented in Table 5. The degree of yachting's impact on the major economic values of the Greek economy (for 2004) is demonstrated in Table 6.

Among the three major maritime tourism activities (the other two being cruising and coastal tourist shipping), the contribution of yachting to the major economic values (tourist consumption, GDP, balance of invisible resources, balance of services, balance of tourism, balance of trade deficit, national income, public revenues) is estimated to be approximately one-third of total maritime tourism. Yachting ranks first in regard to employment created among the three maritime activities and capital investment in maritime tourism.

Yachting's contribution to tourism consumption, GDP, national income, public revenues and employment is less than 1% in each case. On the other hand, it contributes 2.61% to the balance of invisible resources, 2.48% to the balance of services, 4.77% to the balance of tourism and 1.51% to the balance of trade deficit.

Table 5. Basic economic values of the Greek economy.

Year 2004	Current prices (€ million)
Gross domestic product (at purchasers' prices)	168,417
Gross national income (at purchasers' prices)	167,129
Net national income (at purchasers' prices)	152,591
Net available national income	152,795
Gross capital acquisition	42,428
Balance of trade	–25,436
Balance of invisible resources	14,719
Balance of services	15,467
Final consumption	127,586
Public revenues	45,117
Travel and tourism industry employment	260,000
Travel and tourism economy employment	660,000
Total employment	4,310,000

Source: WTTC (2004); Bank of Greece (2006); NSSG (2007).

Table 6. Yachting's impact on major macroeconomic values of the Greek economy.

	Total maritime tourism (%)	Tourism industry (%)	Total tourism economy (%)	Total national economy (%)
Tourism consumption	27.08	–	3.60	0.31
Gross domestic product	27.34	2.39	0.96	0.13
National income	29.96			0.11
Balance of invisible resources	28.15			2.61
Balance of services	28.15			2.48
Balance of tourism	28.15			4.77
Balance of trade deficit	28.15			1.51
Public revenues (taxes)	37.55			0.15
Investments*	58.65		0.87	0.11
Yachting direct employment**	57.44	3.55	1.40	0.21
Total (including 'all other industries') direct employment for yachting	50.57	4.76	1.88	0.29
Total employment (direct, indirect, imputed) for yachting	50.57	12.10	4.77	0.73

Note: *For the cruise industry, only repairs that take place in Greek shipyards are included.

**Total employment in Greece (National Statistical Service of Greece, 2004) is 4,312,000 jobs. Travel and tourism industry employment for Greece was estimated at 260,000 jobs in 2004 (WTTC, 2004). Travel and tourism economy employment for Greece was estimated at 660,000 jobs in 2004 (WTTC, 2004).

Source: Diakomihalis (2006, p 232).

Conclusions

Yachting ranks second among the three maritime tourism activities in Greece, the other two being cruising and coastal tourist shipping, in respect of size, degree of organization and the time of its appearance in the tourist market. It ranks third with regard to the number of maritime travellers. In 2004, about 234,000 tourists purchased yachting services, compared to 815,000 cruising tourists and 4,000,000 coastal tourist shipping passengers. However, in a comparison of average tourist spending, yachting ranks first, with an average spending of €1,700 per person, while each cruise passenger spends €1,100 and each coastal tourist shipping passenger €45. For an appropriate comparative analysis, the spending per day per tourist (PDPT) is required. Since the average duration of a yachting charter is estimated at 7 days, the average portion of the cruise spent in Greece is 3.5 days,[1] while the spending of the coastal tourist shipping passenger occurs only the day of the daily sea tour. It appears, therefore, that on a PDPT basis, cruise passengers spend €314, yachting tourists €243 and coastal tourist shipping passengers €45. Decomposing PDPT expenditures into those that comprise the package tour and 'all other industries' spending, we find that:

- An average cruise passenger spends €204 per day for the cruise fare and other services included in the package tour and €110 for on-board and offshore consumption.
- An average yachting tourist spends €125 per day to charter a yacht and for other services included in the package tour and €118 for offshore consumption.
- An average coastal tourist shipping passenger spends €19 for a daily sea tour, including all services of the package tour and €26 for 'all other industries' consumption.

The aggregate of average tourist spending and the number of tourists of each maritime tourism 'sector' comprise the magnitude of impacts on the major macroeconomic values of the Greek economy, where cruising ranks first, followed by yachting. However, exceptions appear: (a) in the impact on employment, where yachting overcomes cruising, 51% to 31% (18% for coastal tourist shipping employment), due to the greater number of proprietors and individuals who are occupied exclusively in the supply of yachting services; (b) in gross capital acquisition (59% to 29%) due to recording only the repairs of cruise ships which take place in Greek shipyards; and (c) in gross capital stock values due to the lack of cruising investment in Greek shipyards on the one hand and to a practically unattainable estimation of cruising gross capital stock on the other, since, according to Greek tax law, the majority of cruise lines are not obliged to register financial statements.

Yachting's contribution to the main values of the Greek economy is relatively small; it is, however, particularly important to the economy of the islands and to coastal destinations. For many destinations, it constitutes one of the main economic activities of their residents. Local income and employment created constitute the most important effects of maritime tourism activities on the local economy (Lowyck and Wanhill, 1992). Yachting contributes to all major values

of the local economy of the regions that have developed this specific interest tourism.

Endnotes

1. From the average time of the cruise, which is 7 days, passengers spend 50% of their holiday in Greek territory (3.33 days in Greek ports). Tourists on 3–4 day cruises spend all of their holiday in Greek ports. The final share of stay in days spent in Greek ports which satisfies the total of cruise passengers is considered to be 3.5 days.

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Appendix overleaf

Appendix – Tourism satellite account tables

Table TSA 1. Production account of characteristic maritime tourism (yachting) industries, net basis* (current prices).

Characteristic maritime tourism (yachting) industries	Yachting	Ownership of yachts	Transport	Travel agencies	Hotels and health spas	Single purpose consumer durables	Retail, wholesale and transport margins	Other	Total domestic supply
Output (at basic prices)									
Characteristic commodities (in million €)								–	
Yachting chartering revenues	136.07							–	136.07
Yachting imputed revenues		1.12						–	1.12
Transfer (transport: bus, taxi, air, water)			7.59					–	7.59
Travel agent/organizer margins				15.36				–	15.36
Hotels and health spas					2.96			–	2.96
Single-purpose consumer durables						1.32		–	1.32
Total output of characteristic maritime tourism (yachting) commodities								–	164.41
Other	–	–	–	–	–	–	–	–	–
Total output at basic prices	**136.07**	**1.12**	**16.26**	**15.36**	**5.25**	**1.32**	**24.81**	**–**	**302.48**
Intermediate inputs (at purchasers' prices)	67.35	0.00	5.25	4.62	2.21	0.57	9.85	–	**138.36**
Value added (at basic values)	68.72	1.12	11.01	10.74	3.04	0.75	14.96	–	**164.12**
Compensation of employees	27.32	0.00						–	
Gross operating surplus	30.35	1.12						–	
Net taxes on production: other	11.05	0.00						–	
Number of employees	8,730	0	229	305	83	18	593	–	11,886
Other employed	500							–	500

Note: *Net treatment of package tours.
Source: Diakomihalis (2006, pp 205–206).

Table TSA 2. Tourism supply and demand by type of commodity and by type of visitor: net basis* at purchasers' prices (current prices).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Supply at basic values			Net taxes on products	VAT	Retail wholesale and transport margins**	Total supply at purchasers' prices	Total domestic supply (7–2)	Total domestic use at purchasers' prices (14+ all other uses)	Domestic supply acquired by type of visitor, at purchasers' prices				Total domestic tourism demand (10+11+12+13)	Tourism use as per cent of domestic supply (14/8*100)	Non-resident supply acquired by				Total non-residents supply to residents (17+18+19)
	Domestic output	Imports	Total supply							Non-residents	Residents					Non-residents	Households	Business	Government	
											Households	Business ***	Government ***							
Characteristic commodities																				
Yachting chartering revenues	136.07	0.00	136.07	0.00	5.44	0.00	141.51	141.51	141.51	137.27	4.25	0.00	0.00	141.51	100	0.00	0.00	0.00	0.00	0.00
Yachting imputed revenues	1.12	0.00	1.12	0.00	0.04	0.00	1.16	1.16	1.16	0.00	1.16	0.00	0.00	1.16	100	0.00	0.00	0.00	0.00	0.00
Transfer (transport: bus, taxi, air, water)	7.59	0.00	7.59	1.21	0.66	0.00	9.46	9.46	9.46	9.18	0.28	0.00	0.00	9.46	100	0.00	0.00	0.00	0.00	0.00
Travel agent/ organizer margins	15.36	23.04	38.40	1.92	6.85	0.00	47.17	24.13	24.13	23.41	0.72	0.00	0.00	24.13	100	22.35	0.69	0.00	0.00	23.04
Hotels and health spas	2.96	0.00	2.96	0.30	0.24	0.00	3.50	3.50	3.50	3.40	0.11	0.00	0.00	3.50	100	0.00	0.00	0.00	0.00	0.00
Single-purpose consumer durables	1.32	0.00	1.32	0.21	0.26	0.00	1.79	1.79	1.79	1.74	0.05	0.00	0.00	1.79	100	0.00	0.00	0.00	0.00	0.00
Total output of characteristic maritime tourism (yachting) commodities	164.41	23.04	187.45	3.64	13.51	0.00	204.59	181.56	181.56	174.98	6.57	0.00	0.00	181.56	100	22.35	0.69	0.00	0.00	23.04
	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
All other commodities purchased by visitors	138.07	16.13	154.20	21.09	19.72	0.00	195.02	178.89	178.89	170.51	5.27	3.11	0.00	178.89	100	15.65	0.48	0.00	0.00	16.13
Total economy	302.48	39.17	341.65	24.73	33.23	22.33	399.61	360.44	360.44	345.49	11.85	3.11	0.00	360.44	100	37.99	1.18	0.00	0.00	39.17
Total households' (residents and non-residents) tourist consumption of yachting							396.50													

The total households' (residents and non-residents) tourist consumption is a little less than the total supply. The difference concerns the final supply of the trade and transport industry, which does not constitute margins but consequent services (as storage, packing, etc) to other industries and is treated as businesses' intermediate consumption.

Note: *Net treatment of package tours; **trade and transport margins; ***as intermediate consumption. If data cannot be obtained separately, these items can be reported together.

Source: Diakomihalis (2006, pp 207–208).

Table TSA 3. Supply by characteristic tourism and other industries to meet tourism demand by different types of visitors: net basis* (current prices).

Output (at basic prices) *Characteristic commodities (in million €)*	1 Total domestic supply	2 Tourism consumption Non-residents	3 Tourism consumption Residents Households	4 Tourism consumption Residents Business	5 Tourism consumption Government	6 Total tourism demand (2+3+4+5)	7 Tourism ratio (6/1)
Yachting chartering revenues	136.07	131.99	4.08	0.00	0.00	136.07	1.00
Yachting imputed revenues	1.12		1.12	0.00	0.00	1.12	1.00
Transfer (transport: bus, taxi, air, water)	7.59	7.36	0.23	0.00	0.00	7.59	1.00
Travel agent/organizer margins	15.36	14.90	0.46	0.00	0.00	15.36	1.00
Hotels and health spas	2.96	2.87	0.09	0.00	0.00	2.96	1.00
Single-purpose consumer durables	1.32	1.28	0.04	0.00	0.00	1.32	1.00
Total output of characteristic maritime tourism (yachting) commodities	**164.41**	**158.40**	**6.01**	**0.00**	**0.00**	**164.41**	1.00
Other	–	–	–	–	–	–	–
Total output at basic prices	**302.48**	**289.31**	**10.06**	**3.11**	**0.00**	**302.48**	1.00
VAT (of characteristic industries and other industries)	33.23	32.19	1.04	0.00	0.00	33.23	
Net taxes on production	24.73	23.99	0.74	0.00	0.00	24.73	
Total	**360.44**	**345.49**	**11.84**	**3.11**	**0.00**	**360.44**	1.00
Net taxes on production: other	**11.05**						

Note: *Net treatment of package tours.
Source: Diakomihalis (2006, p 209).

Table TSA 4. Tourism value added of characteristic industries and other industries: net basis* (current prices).

	Output (at basic prices)	Intermediate consumption (at purchasers' prices)	Value added (at basic prices)	Tourism ratio	Tourism value added (TVA)
Characteristic commodities (in million €)					
Yachting chartering revenues	136.07	67.35	68.72	1.00	68.72
Yachting imputed revenues	1.12	0.00	1.12	1.00	1.12
Transfer (transport: bus, taxi, air, water)	7.59	2.45	5.14	1.00	5.14
Travel agent/organizer margins	15.36	4.62	10.74	1.00	10.74
Hotels and health spas	2.96	1.25	1.71	1.00	1.71
Single-purpose consumer durables	1.32	0.57	0.75	1.00	0.75
Total output of characteristic maritime tourism (yachting) commodities	164.41	76.23	88.18	1.00	88.18
Other	–	–	–	–	–
Total output at basic prices	302.48	138.36	164.12	1.00	164.12
VAT (of characteristic industries and other industries)	33.23				33.23
Net taxes on production	24.73				24.73
Total	360.44	138.36			222.08
Net taxes on production: other	11.05				

Note: *Net treatment of package tours.
Source: Diakomihalis (2006, p 210).

Table TSA 5. Tourism employment of characteristic industries (yachting) and other industries.

	Number of employees	Other employment	Total employment	Total hours (thousands)
Characteristic industries				
Yachting	8,730	500	9,230	18,101
All other industries	3,156		3,156	6,193
Retail, wholesale and transport	593		593	1,164
Fuel	100		100	196
Clothing – footwear – leather	26		26	51
Food services (restaurant – snack bar)	511		511	1,003
Food – beer – wine – liquor	233		233	457
Tobacco products	16		16	31
Books – newspapers – magazines	40		40	78
Traditional craftsmanship – jewellery – pottery	104		104	204
Entertainment – clubs – festivals	106		106	208
Tour operators (excursions to museums, archaeological sites)	181		181	355
Banking – insurance – medical services	32		32	63
Travel agent/organizer margins	305		305	598
Transfer (transport: bus, taxi, air, water)	229		229	449
Hotels and health spas	83		83	163
Single-purpose consumer durables	18		18	35
Navigation services (skipper)	550		550	1,079
All other goods and services	29		29	57
Total all industries	11,886	500	12,386	24,294

Source: Diakomihalis (2006, p 211).

Table TSA 6. Visitor characteristics.

	Tourists									
	Tourists (non-residents)		Tourists (residents)						Total	
	227.193		7.027						234.219	
	Personal		Personal		Government		Business		Total expenditure	Average expenditure
Characteristic industries	Total expenditure million €	Average expenditure €	Total expenditure million €	Average expenditure €	Total expenditure	Average expenditure	Total expenditure	Average expenditure	234,219 million €	€
Yachting chartering revenues	137.26	604.18	4.25	604.18					141.51	604.18
Yachting imputed revenues		0.00	1.16	165.09					1.16	4.95
Travel agent/organizer margins	9.18	40.39	0.28	40.39					9.46	40.39
Transfer (transport: bus, taxi, air, water)	45.75	201.39	1.42	201.39					47.17	201.39
Hotels and health spas	3.40	14.94	0.11	14.94					3.50	14.94
Single-purpose consumer durables	1.74	7.64	0.05	7.64					1.79	7.64
Total output of characteristic yachting commodities	**197.33**	**868.55**	**7.26**	**1,033.63**					**204.59**	**873.50**
All other industries										
Fuel	19.89	87.57	0.62	87.57					20.51	87.57
Clothing – footwear – leather	9.04	39.79	0.28	39.79					9.32	39.79
Food services (restaurant – snack bar)	40.70	179.15	1.26	179.15					41.96	179.15
Food – beer – wine – liquor	40.70	179.15	1.26	179.15					41.96	179.15
Tobacco products	2.72	11.95	0.08	11.95					2.80	11.95
Books – newspapers – magazines	7.24	31.85	0.22	31.85					7.46	31.85
Traditional craftsmanship – jewellery – pottery	25.32	111.43	0.78	111.43					26.10	111.43
Entertainment – shows – festivals	6.33	27.88	0.20	27.88					6.53	27.88
Tour operators (excursions to museums, archaeological sites)	10.85	47.78	0.34	47.78					11.19	47.78
Banking – insurance – medical services	1.80	7.94	0.06	7.94					1.86	7.94
Transfer (transport: bus, taxi, air, water)	10.85	47.78	0.34	47.78					11.19	47.78
Hotels – health spas	2.72	11.95	0.08	11.95					2.80	11.95
Navigation services (skipper)	5.27	23.18	0.16	23.18					5.43	23.18
All other goods and services	2.72	11.95	0.08	11.95					2.80	11.95
Total all industries	**186.15**	**819.36**	**5.76**	**819.36**					191.91	819.36
Total consumption of all industries	**383.48**	**1,687.91**	**13.02**	**1,852.99**					396.50	1,692.86
Output of the trade and transport industry consumed by businesses							3.11		3.11	
Total of personal and business tourism consumption									**399.61**	

Source: Diakomihalis (2006, p 212).

Table TSA 7. Characteristic maritime tourism industries' (yachting) gross capital acquisition at current prices (€).

Produced non-financial fixed capital formation					
Yachts and sailing boats	Buildings and other fixed assets	Mobile equipment	Computer and other electronic equipment	Other	Total
48,000,000	–	200,000	150,000	200,000	48,550,000

Source: Diakomihalis (2006, p 221).

Table TSA 8. Characteristic maritime tourism industries' (yachting) gross capital stock at current prices, end of period (€).

Net produced non-financial fixed capital stock						
Yachts and sailing boats	Buildings and other fixed assets	Mobile equipment	Computer and other electronic equipment	Other	Total	Capacity utilization
908,100,000		2,500,000	850,000	1,000,000	912,450,000	55%

Source: Diakomihalis (2006, p 221).