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A Global Database of Domestic and International Tourist Numbers at National and Subnational Level

Summary

We present a new, global data base on tourist destinations. The data base differs from other data bases in that it includes both domestic and international tourists; and it contains data, for the most important destinations, data at national level as well as at lower administrative levels. Missing observations are interpolated using statistical models. The data are freely accessible on the internet.

Keywords: Tourism, Data

JEL Classification: L83

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1. Introduction

Recreation and tourism is one of the largest industries of the world, some even say the largest. Yet, information on tourism is hard to get. Although there is a wealth of data, there are few comprehensive, internally consistent data-sets. If one were to ask the question “Where do tourists go?” the answer would be vague. The World Tourism Organisation collects data at the national level (WTO, 2003), so that the answer would be that “France is the most popular destination of international tourists”. France, however, is a big and diverse country; in Limousin, tourists are few and far between.¹ If one instead turns to survey data, say of German tourists, the most common type of international tourist, one would find reasonable geographical detail for the most popular destinations, but for less popular choices, countries are grouped. 5.8% of German tourists go to the Balearic Islands, and 0.3% to Southern Africa (FUR, 1998). A further problem is that international tourism is only one part. Domestic tourism is important too. Most US tourists never leave their country, but their numbers are far bigger than the Germans’. This paper attempts to fill these gaps. It presents a new data-base that (a) combines domestic and international tourism, (b) has destinations at national and subnational level, and (c) interpolates missing observations.

Section 2 discusses the data, definitions, sources, problems and interpolation algorithms. Section 3 shows and interprets the results. Here, we present maps with all data and tables with selections. The entire data-set will be put in the public domain once peer-reviewed. Section 4 concludes. The Appendix contains a list of all data-sources.

2. The data

2.1. International arrivals and departures

The data on international arrivals and departures for 1995 are taken from the World Resources Databases (WRI, 2000).² Although 1995 is a while back, it is the year with the most comprehensive international coverage; countries are slow to report tourism numbers. There are two major problems with this dataset. Firstly, for some countries, the reported data are arrivals and departures for tourism only. For other countries, the data are arrivals and departures for all purposes. Unfortunately, it is impossible to correct for this.³ Secondly, there are missing observations, particularly with regard to departures.

For arrivals, 181 countries have data but 26 do not. We filled the missing observations with a statistical model, viz.

$$(1) \quad \ln A_i = 5.97 + \frac{2.05 \cdot 10^{-7}}{0.97} Area_i + \frac{0.22 T_i}{0.07} - \frac{7.91 \cdot 10^{-3} T_i^2}{2.21} + \frac{7.15 \cdot 10^{-5} Coast}{3.03} + \frac{0.80 \ln Y_i}{0.09}$$
$$N = 139; R_{adj}^2 = 0.54$$

where A denotes total arrivals, $Area$ is land area (in square kilometre); T is annual average temperature for 1961-1990 (in degrees Celsius) averaged over the country, $Coast$ is length of

¹ This may come as a surprise, as Limousin is both pleasant and beautiful. However, it cannot compete with the its neighbouring departments, which have a better infrastructure as well as a coast (Guillore, personal communication, 2004).

² The reported departures from the Czech Republic were divided by 10; comparison to earlier and later years shows that the 1995 data have a typographical error.

³ However, we did correct the Polish departure data. According to Statistic Poland, only 12% of the reported international departures are tourists (Central Statistical Office Poland, <http://www.stat.gov.pl/english/serwis/polska/rocznik11/turyst.htm>)

coastline (in kilometres), and Y is per capita income; i indexes destination country. This model is the best fit⁴ to the observations for the countries for which we do have data.⁵ The total number of tourists increases from 55.2 million (observed) to 56.5 million (observed + modelled). The 26 missing observations constitute only 2% of the international tourism market.

For departures, the data problem is more serious: 107 countries report but 99 do not;⁶ 46.5 million departures are reported, against 56.5 million arrivals, so that 18% of all international tourists have an unknown origin. We filled the missing observations with a statistical model, viz.,

$$(2) \quad \ln \frac{D_i}{Pop_i} = 1.51 - 0.18 T_i + 4.83 \cdot 10^{-3} T_i^2 - 5.56 \cdot 10^{-2} Border + 0.86 \ln Y_i - 0.23 \ln Area_i$$

$N = 99; R_{adj}^2 = 0.66$

where D denotes departures (in number), Pop denotes population (in thousands) and $Border$ is the number of countries with shared land borders; i indexes the country of origin. This model is the best fit⁷ to the observations for the countries for which we do have data.⁸ This leads to a total number of departures of 48.2 million, so we scaled up *all* departures⁹ by 17% so that the total number of observed and modelled departures equals the total number of observed and modelled arrivals.

2.2. Domestic tourism

For most countries, the volume of domestic tourist flows is derived using 1997 data contained in the Euromonitor (2002) database. For some other countries, we rely upon alternative sources, such as national statistical offices, other governmental institutions or trade associations. Data are mostly in the form of number of trips to destinations beyond a non-negligible distance from the place of residence, and involving at least one overnight stay. For some countries such data format was not available, and we resorted to either the number of registered guests in hotels, campsites, hostels etc., or the ratio between the number of overnight stays and the average length of stay. The latter formats underestimate domestic tourism by excluding trips to friend and relatives; nevertheless we included such data for completeness.

⁴ The estimation procedure started with a large number of explanatory variables, including precipitation, number of world heritage sites, political stability and a range of other indicators. Explanatory variables that are individually and jointly insignificant were eliminated. The shown specification results. We experimented with different representations of temperature (e.g., temperature of the hottest month); the annual average temperature describes the data best.

⁵ The data on per capita income were taken from WRI (2000), supplemented with data from CIA (2002); the data on area and the length of international borders are from CIA (2002); the data on temperature from New *et al.* (1999). All data can be found at <http://www.uni-hamburg.de/Wiss/FB/15/Sustainability>.

⁶ These are mostly African countries and small dependencies; however, data from Pakistan and Taiwan are also missing. Luxemburg is the only OECD country without departures data.

⁷ The estimation procedure started with a large number of explanatory variables. Explanatory variables that are individually and jointly insignificant were eliminated.

⁸ The data on population were taken from WRI (2000), the data on the number of land borders were taken from CIA (2002).

⁹ Scaling up only the interpolated departures leads to distortions, as many small countries do not report departures data. Besides, countries have less of an interest in counting departures than in counting arrivals, so departures are probably underreported even if there are data available. Note that by equating total arrivals and total departures numbers, we assume that tourists visit one country per trip only.

In general, the number of domestic tourists is less than the regional population; however, in 22 countries, people take domestic holidays more than once per year. A look at the characteristics of such countries shows that these are generally rich countries, endowed with plenty of opportunities for domestic tourism and large (or at least medium-sized). This definition fits in particular Scandinavian countries (e.g., 4.8 domestic tourists per resident in Sweden) but also Canada, Australia, and the USA.¹⁰ In the USA, the combination of a large national area, a large number of tourist sites, high income per capita and a willingness to travel long distances contribute to explain why, on average, an average American took a domestic holiday 3.7 times in 1997. Distance from the rest of the world is also important, and this is most probably the explanation for Australia and New Zealand.

We filled the missing observations using two regressions. We interpolated total tourism numbers using

$$(3) \quad \ln \frac{T_i}{Pop_i} = -1.67 + 0.93 \ln Y_i$$

0.83 0.10

$$N = 63; R_{adj}^2 = 0.60$$

The ratio of domestic and international holidays was interpolated using

$$(4) \quad \ln \frac{D_i}{T_i} = -3.75 + 0.83 \cdot 10^{-1} \ln Area_i + 0.93 \cdot 10^{-1} \ln Coast_i + 0.16 \cdot 10^{-1} T_i - 0.29 \cdot 10^{-3} T_i^2$$

1.19 0.42 0.30 0.32 1.11

$$+ \left(0.16 - 4.43 \cdot 10^{-7} Y_i \right) \ln Y_i$$

0.12 1.24

$$N = 63; R_{adj}^2 = 0.36$$

Data sources are as above. The temperature parameters are not statistically significant from zero at the 5% level, but they are jointly significant. “Observations” for 1995 were derived from 1997 observations by dividing the latter by the population and per capita income growth between 1995 and 1997, correcting the latter for the income elasticity of (3) and (4).

For the total (domestic and foreign) number of tourists, the world total is 12.0% higher if we include the interpolated tourist numbers, that is, 4.0 billion versus 3.6 billion tourists. The observed world total include those countries for which we have observed both domestic tourists and international arrivals. For domestic tourists only, the observations add up to 3.1 billion tourists, and 3.5 billion tourists with interpolation, a 12.1% increase.

Note that Equations (3) and (4) can be used to derive international departures, just like Equation (2). The correlation coefficient between these two alternatives is 99.8%. We prefer (2) for its simplicity.

2.3. Regional tourism

Regional tourism data was taken from national statistical offices or tourism authorities. One exception is Canada, for which we had to look at the provincial statistical offices instead. Another exception is the EU, where we relied on the supranational statistical office EuroStat, using data on NUTS2, sometimes NUTS1 or NUTS3¹¹ level. Unfortunately, the EU data does not cover all of the EU countries; none of the accession countries has regional data, and not

¹⁰ Poland, ranking 8th, is particularly active notwithstanding substantially lower per capita income than the rest of the top 10 countries; this may be because (illegal) seasonal labour migration is registered as tourism.

¹¹ NUTS0 is national, NUTS4 and NUTS5 municipal, and NUTS1-3 are somewhere in between, depending on the country; NUTS4 and NUTS5 are now LAU1 and LAU2.

even all of the original EU countries report regional data; for these countries, we resort to the number of tourist beds.

The regional tourism data comes in all sorts of specifications: tourists, tourists in hotels, bed nights, border crossings, expenditures, hotel capacities (beds), or pleasures parties. For every country for which we have regional information, we used whatever information we had to give each region its share in the nation. We use this share to apportion the national data to the regions.

Thus, in our data base, regional tourism numbers equal the national number (from the international data bases) times the regional share (from the national data base). We do this so that the tourism numbers in countries and parts of countries all derive from a single, internally consistent, international data base. Supplementary, national data is used only for within-country patterns.

For most countries, regional tourism is reported separately for domestic tourists and international tourists. Domestic regional tourism patterns are generally very different than international regional tourism patterns. Some countries report only on international tourists, and a few on domestic and international tourists combined; most countries that report only hotel capacities do not distinguish between domestic and international tourists. For those countries, we assume that domestic and international tourists behave the same, for want of better information: Although the differences between domestic and international patterns are clear, one cannot predict the domestic pattern from the international pattern or vice versa.

Regional tourism data seldom extends over more than a few years, and data is typically more recent than 1995, the base year for our national statistics. We use the year closest to 1995.

We searched for regional tourism data for all countries that are in the top 25 of international, domestic, or total tourist destinations.¹² The countries for which we have regional data cover 79% of all international tourism, 78% of all domestic tourism. For countries without regional data, we use the area of the region, essentially assuming that tourists spread evenly over a country.

3. Results

Table 1 shows the 10 countries with the highest tourism demand, measured in number of tourists. The United States leads in domestic tourism, followed by China, India, Brazil and, surprisingly, the United Kingdom. The top 10 countries cover 77.9% of all domestic tourism. In international tourism, Germany leads, followed by the USA, the UK, Russia and Malaysia. Ranks 4 and 5 are surprising, as is Hungary in rank 10. Probably, temporary labour migration is misclassified as tourism. The top 10 countries cover 60.2% of all international tourism. Table 1 also shows total (domestic plus international) tourism demand. This ranking is dominated by domestic tourism. The top 5 is identical, but below that Germany and France advance at the expense of Poland. The top 10 countries cover 73.4% of world tourism demand.

Table 2 shows the 10 countries with the highest tourism supply, measured in number of tourists. For domestic tourism, supply equals demand. France is the most popular destination for international tourists, followed by the USA, Spain, Italy and the UK. The top 10 destinations cover 52.2% of all supply. Table 2 also shows total (domestic plus international) tourism supply. Again, the ranking is dominated by domestic tourism. The USA is the most popular tourist destination, followed by China, India, Brazil and the UK. France, the most

¹² Countries for which we tried but failed to find regional data are Algeria, Brazil, Chile, Colombia, Egypt, Morocco, New Zealand, Russia, South Korea, Tunisia, and Vietnam.

popular destination for international tourists, ranks sixth. The top 10 covers 72.0% of world tourism supply.

Figure 1 shows the numbers of domestic tourists per country. Countries with larger and richer populations have more domestic tourists. Figure 2 shows the numbers of international departures per country. Countries with larger and richer populations have more international tourists, but compared to Figure 1, income matters more. Another factor is that smaller countries have more international departures. An exception in Figures 1 and 2 is Russia, which has little domestic tourism and a lot of international tourism for its size and income. Figure 3 shows international arrivals. North America, Western and Central Europe, Russia and China are the most important destinations. Tropical countries and countries of the Southern Hemisphere receive only a fraction of international tourists. Figure 4 shows the total number of tourists from and in a country. Figure 4 confirms that domestic tourism dominates international tourism, as already seen from Tables 1 and 2. The clear exceptions are Canada and Russia where there are substantially less tourists coming in than going out. Figure 5 shows the share of international tourists from and in a country. People from larger countries are less inclined to take a foreign holiday (but their numbers still add up, see Figure 1), and people in Western and Central Europe are more so inclined. In Africa, West Asia and Latin America, the pattern is more erratic, also because of the interpolation of data, but people from poorer countries are more inclined to take a foreign holiday (as only the very wealthy travel). The share of international in total tourist numbers is higher in Southern Europe and Mexico than elsewhere in Europe and North America. The pattern for Africa, West Asia and Latin America is again more erratic; however, if the majority of the holiday makers from a country go abroad, then the tourism sector within that country is logically dominated by foreign visitors.

Table 3 shows the 25 regions with the highest share in the tourism market. For international tourists, the three most popular destinations are Paris (Ile de France), London and Hong Kong. Other popular cities are Singapore (11th), Venice (Veneto, 12th), New York (13th), Madrid (20th), Macau (22nd) and Mexico City (Distrito Federal, 24th) although cities like Barcelona (in Cataluña, 8th) and Rome (in Lazio, 19th) also attract many tourists. Outside the cities, the Balearic Islands and the Provence are most popular, followed by the Pearl River Delta (Guangdong),¹³ Andalucia, Ontario and Yucatan (Quintana Roo). Tirol (14th) is the most popular mountain destination; Tirol is popular in summer too.

For domestic tourism, the situation is completely different. The top 4 destinations are in the USA (California, Florida, Texas and New York), followed by Sichuan and Beijing in China and Madhya Pradesh in India. The rest of the top 25 is mostly China, India and the USA. As domestic tourism outnumbers international tourism by far, the list of most popular tourist destinations is almost identical to the list of domestic destinations. Paris, number 1 on the list of international tourist destinations, ranks 24th on the all tourists list (and 84th on the domestic list); London ranks 52nd, Hong Kong 83rd.

The regional distribution of tourists is very skewed. For international tourists, the Gini coefficient is 85%, for domestic tourists even 90%; for all tourists, it is 88%.

Figure 6 shows the regional distribution of domestic and international tourists in North America. For domestic tourists, the US and the southern half of Canada are most popular, with California, Florida, New York, Texas and Ontario standing out. For international tourists, the pattern is different. Firstly, Canada and Mexico gain in importance, because there

¹³ Guangdong derives its popularity from its proximity to and ties with Hong Kong (Chow, 1988); it also borders Macau.

are more people from the US travelling to Canada and Mexico than vice versa. Secondly, the US interior attracts almost no international visitors.

Figure 7 shows the regional distribution of domestic and international tourists in Southeast Asia. Java stands out in domestic tourism, while Thailand and Malaysia are more important for international tourism. In Thailand, domestic tourism is spread more or less evenly over the country, whereas international tourists are concentrated in three places.

Figure 8 shows the regional distribution of domestic and international tourists in East Asia. Domestic tourists in China are more or less evenly spread over the eastern half of the country, but avoid the west and the north. International tourists in China are almost all on the seaboard, particularly Guangdong, and in Beijing. Tourists in South Korea prefer the east over the west. Tourists spread evenly over Japan.

Figure 9 shows the regional distribution of domestic and international tourists in Europe. International tourists are concentrated in selected places along the Mediterranean, the southern Alps, and London. Other areas that stand out for being more popular than the surrounding areas include North-Holland (Amsterdam), Hamburg, Berlin, the area around Prague, and the Baltic coast of Poland; the land-locked heart of South-West France stands out for being less popular. Domestic tourists are more evenly spread than are international tourists. The west of England and Wales, the Atlantic coast of France, northern Germany and Bavaria are important destinations for domestic tourists, while Krete, Mallorca and North-Holland hardly feature on the map.

Together, Figures 6-9 show that domestic tourists and international tourists have different preferences. It is no surprise that long distance travellers would expect different things from a holiday than would short distance travellers. In Western Europe, where distances are shorter, travel agencies, advertisements and reputations are likely explanations.

4. Discussion and conclusion

We present a new, global database of domestic and international tourist numbers at the national and subnational level. The database is publicly available¹⁴ and should serve students of tourism, whether in academia, government or business. We also show selected results.

A few results are worth emphasizing. First, domestic tourism is far more important than is international tourism. Second, China, India, Brazil and Indonesia are important tourism markets, surpassing Germany, France and Japan in either supply or demand or both. Third, cities are magnets for international tourists; domestic tourists show considerably less interest. In general, domestic tourists travel to different places than do international tourists. Fourth, the spatial concentration of tourism is very high.

As with any database, the number of caveats is large. International tourism movements are hard to measure, as tourists mix with other travellers, other travellers disguise as tourists, and some borders are easier to cross unnoticed than others. Domestic tourism movements are even harder to track. We relied as much as we could on comprehensive, internationally consistent databases, but had to supplement this data with data from other sources. Even so, there is a fair degree of interpolation in our database. We use data from different years, and had to re-scale observations to our base year of 1995.

A number of issues present themselves for future work. Obviously, the database will need to be updated to more recent years when those data become available. At the moment, we

¹⁴ This paper have been submitted to a peer reviewed journal. The website containing the database will be disclosed upon publication of the paper. In the meantime, the interested reader can contact the authors.

present the number of tourists per year. Tourism is seasonal, however, and the quarterly or even monthly numbers would be much more useful. Besides the number of tourists, length of stay, expenditures, and resource use would be good additions, as would be a characterisation of the destinations.

Nonetheless, the database here presented is one of a kind, and hopefully as useful to others as it promises to be to us. Updates, corrections, and additions are more than welcome, under the condition that the data will remain in the public domain.

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Table 1. Top 10 tourist origins for domestic holidays, international holidays, and all holidays, by tourist numbers (millions).

| Domestic | | International | | Total | |
|----------------|--------|--------------------|--------|----------------|--------|
| Country | Number | Country | Number | Country | Number |
| United States | 999.0 | Germany | 87.4 | United States | 1058.5 |
| China | 644.0 | United States | 59.5 | China | 649.3 |
| India | 320.0 | United Kingdom | 49.1 | India | 323.6 |
| Brazil | 176.2 | Russian Federation | 25.0 | United Kingdom | 182.7 |
| United Kingdom | 133.6 | Malaysia | 24.2 | Brazil | 179.2 |
| Indonesia | 107.0 | France | 21.9 | Germany | 169.6 |
| Poland | 86.7 | Canada | 21.3 | Indonesia | 109.1 |
| Germany | 82.2 | Italy | 18.7 | Canada | 102.3 |
| Canada | 80.9 | Japan | 17.9 | France | 96.4 |
| Japan | 77.8 | Hungary | 15.3 | Japan | 95.7 |

Table 2. Top 10 tourist destinations, per country, for domestic holidays, international holidays, and all holidays, by tourist numbers (millions).

| Domestic | | International | | Total | |
|----------------|--------|----------------|--------|----------------|--------|
| Country | Number | Country | Number | Country | Number |
| United States | 999.0 | France | 60.0 | United States | 1042.4 |
| China | 644.0 | United States | 43.4 | China | 664.0 |
| India | 320.0 | Spain | 39.3 | India | 322.1 |
| Brazil | 176.2 | Italy | 31.1 | Brazil | 178.2 |
| United Kingdom | 133.6 | United Kingdom | 23.5 | United Kingdom | 157.1 |
| Indonesia | 107.0 | Hungary | 20.7 | France | 134.5 |
| Poland | 86.7 | Mexico | 20.2 | Indonesia | 111.3 |
| Germany | 82.2 | China | 20.0 | Poland | 105.9 |
| Canada | 80.9 | Poland | 19.2 | Canada | 97.9 |
| Japan | 77.8 | Austria | 17.2 | Germany | 97.0 |

Table 3. Top 25 tourism destinations, per region, for domestic holidays, international holidays, and all holidays, by market share (percentage). *Data in italics are interpolated, not observed.*

| International | | | Domestic | | | Total | | |
|--------------------------------|-------------------|-------|-----------------|---------------|-------|-----------------|---------------|-------|
| Region | Country | Share | Region | Country | Share | Region | Country | Share |
| Île de France | France | 3.43 | California | United States | 3.66 | California | United States | 3.29 |
| London | United Kingdom | 1.88 | Florida | United States | 2.49 | Florida | United States | 2.29 |
| Hong Kong | China | 1.80 | Texas | United States | 1.90 | Texas | United States | 1.66 |
| Illes Balears | Spain | 1.71 | New York | United States | 1.71 | New York | United States | 1.62 |
| Provence-Alpes -Côte d'Azur | France | 1.45 | Sichuan | China | 1.52 | Sichuan | China | 1.32 |
| Guangdong | China | 1.34 | Beijing | China | 1.48 | Beijing | China | 1.31 |
| Andalucia | Spain | 1.32 | Madhya Pradesh | India | 1.33 | Illinois | United States | 1.15 |
| Cataluña | Spain | 1.32 | Illinois | United States | 1.31 | Madhya Pradesh | India | 1.14 |
| Ontario | Canada | 1.22 | Jiangsu | China | 1.24 | Jiangsu | China | 1.10 |
| Quintana Roo | Mexico | 1.14 | Shandong | China | 1.23 | Shandong | China | 1.07 |
| Singapore | Singapore | 1.13 | Nevada | United States | 1.17 | Nevada | United States | 1.06 |
| Veneto | Italy | 1.12 | Shanghai | China | 1.13 | Guangdong | China | 1.04 |
| New York | United States | 1.10 | Zhejiang | China | 1.03 | Shanghai | China | 1.00 |
| Tirol | Austria | 1.10 | Rajasthan | India | 1.02 | Zhejiang | China | 0.91 |
| Florida | United States | 1.02 | Guangdong | China | 0.99 | Rajasthan | India | 0.88 |
| California | United States | 0.99 | <i>Amazonas</i> | <i>Brazil</i> | 0.94 | Ontario | Canada | 0.88 |
| Canarias | Spain | 0.86 | Maharashtra | India | 0.94 | <i>Amazonas</i> | <i>Brazil</i> | 0.81 |
| Toscana | Italy | 0.80 | New Jersey | United States | 0.90 | Maharashtra | India | 0.81 |
| Lazio | Italy | 0.76 | Uttar Pradesh | India | 0.88 | New Jersey | United States | 0.80 |
| Comunidad de Madrid | Spain | 0.75 | Pennsylvania | United States | 0.87 | Pennsylvania | United States | 0.77 |
| <i>San Marino</i> | <i>San Marino</i> | 0.74 | Georgia | United States | 0.87 | Georgia | United States | 0.77 |
| Macau | China | 0.74 | Hubei | China | 0.86 | Uttar Pradesh | India | 0.76 |
| Rhône-Alpes | France | 0.73 | Andhra Pradesh | India | 0.82 | Hubei | China | 0.75 |
| Distrito Federal | Mexico | 0.66 | Ontario | Canada | 0.82 | Île de France | France | 0.75 |
| Lombardia | Italy | 0.62 | Liaoning | China | 0.81 | Andhra Pradesh | India | 0.71 |

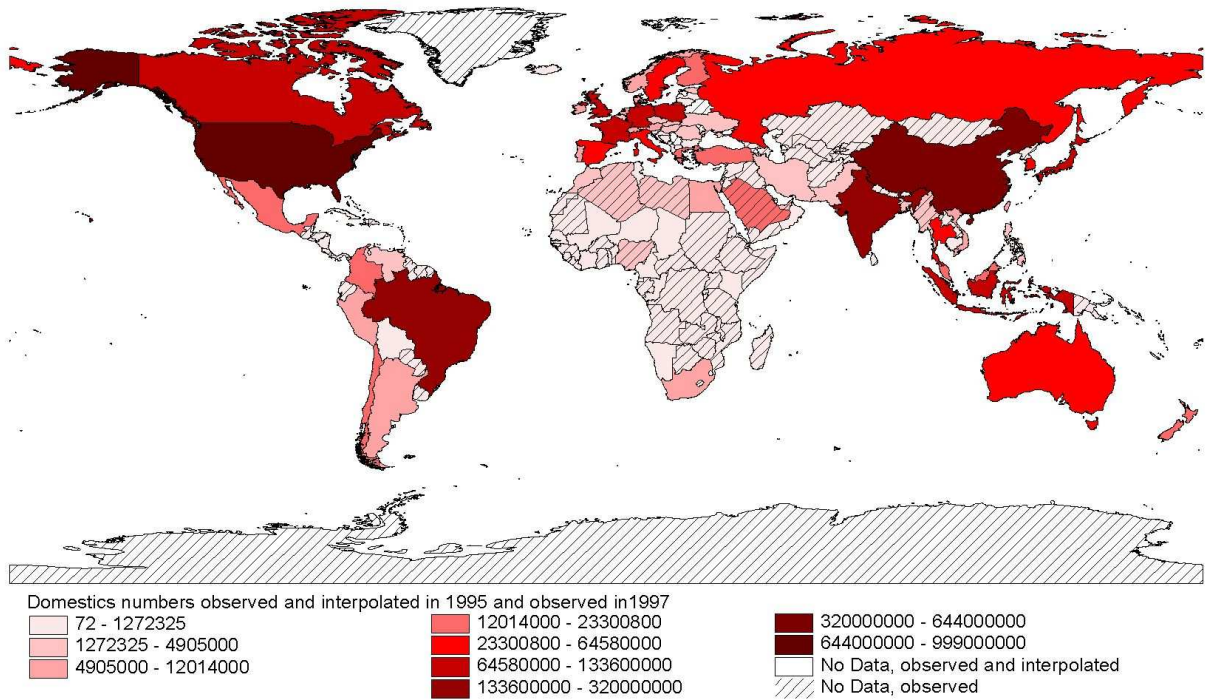


Figure 1. Domestic holidays per country, observed and interpolated (shaded).

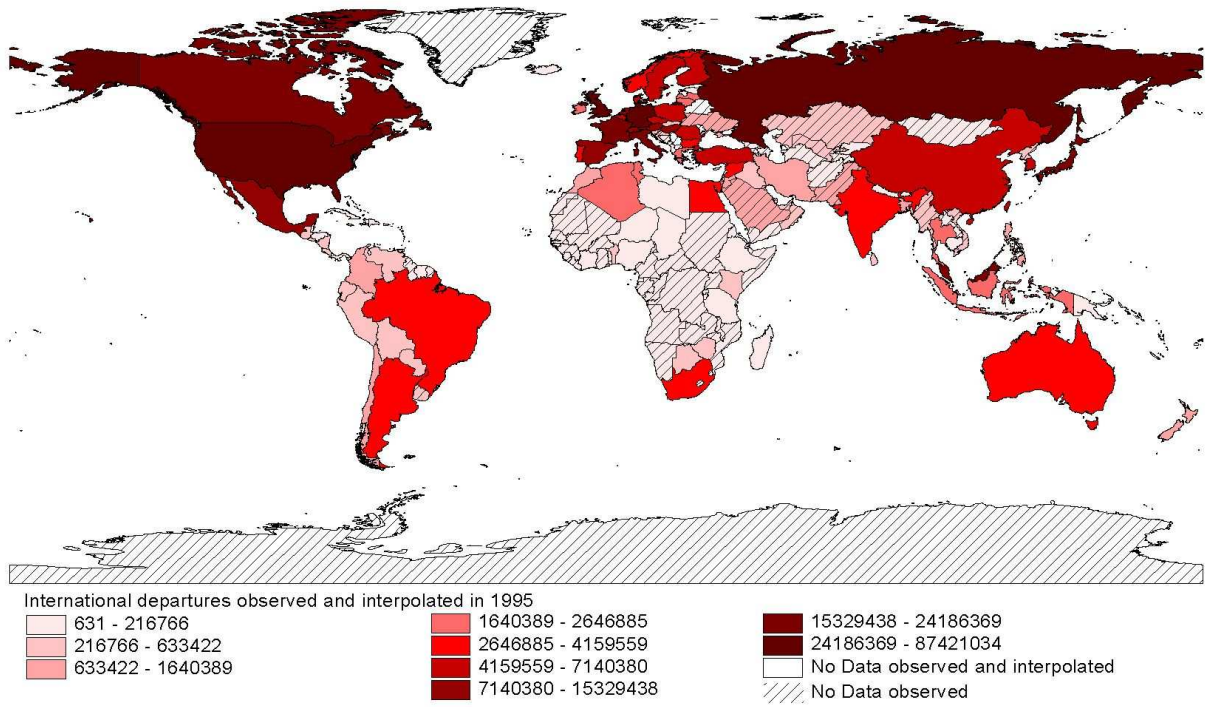


Figure 2. International departures per country, and observed and interpolated (shaded).

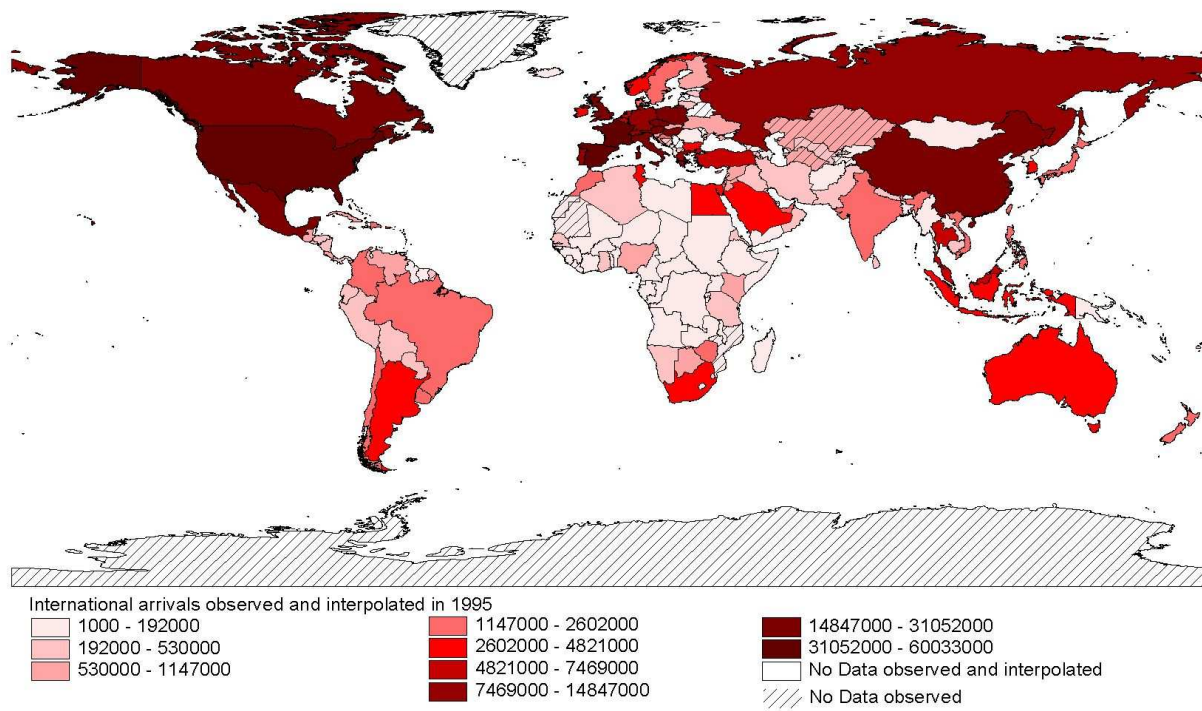


Figure 3. International arrivals per country, observed and interpolated (bottom panel).

0

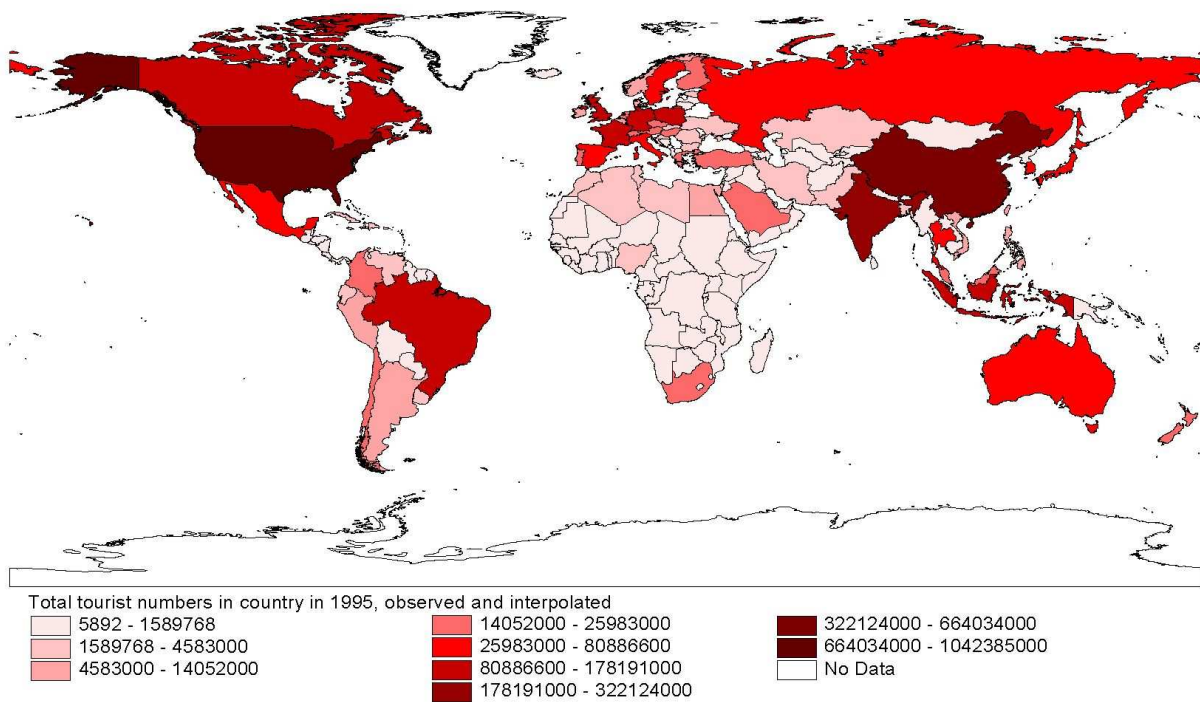
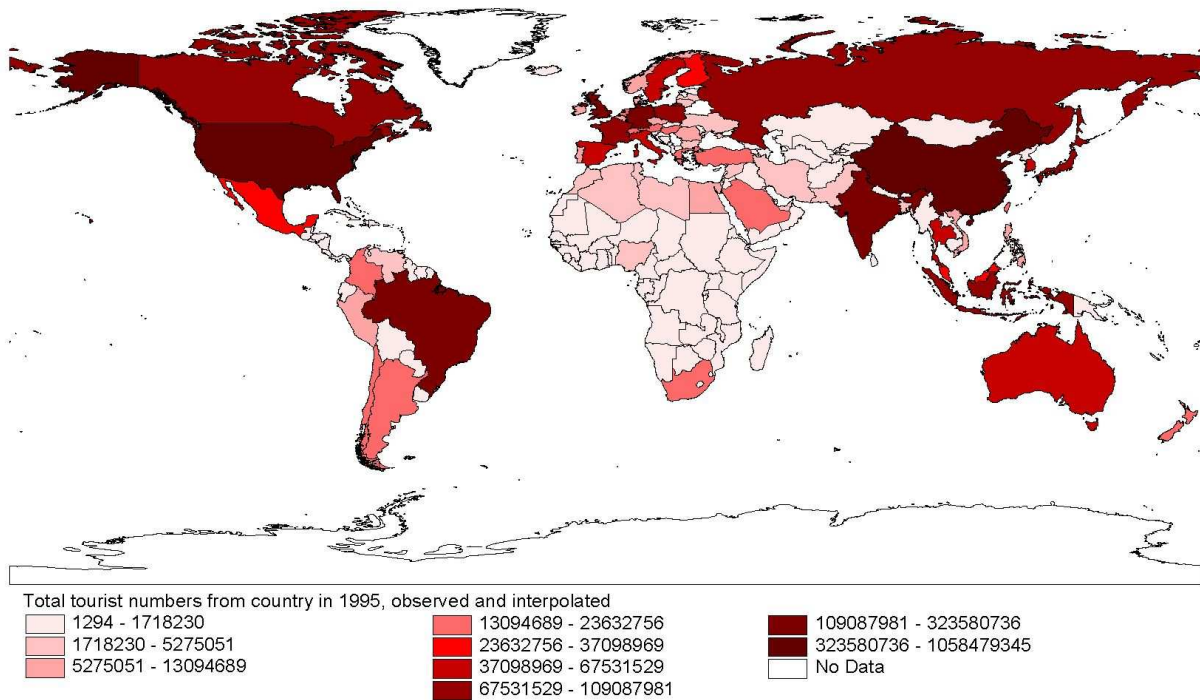


Figure 4. Total number of tourists from a country (top panel) and in a country (bottom panel).

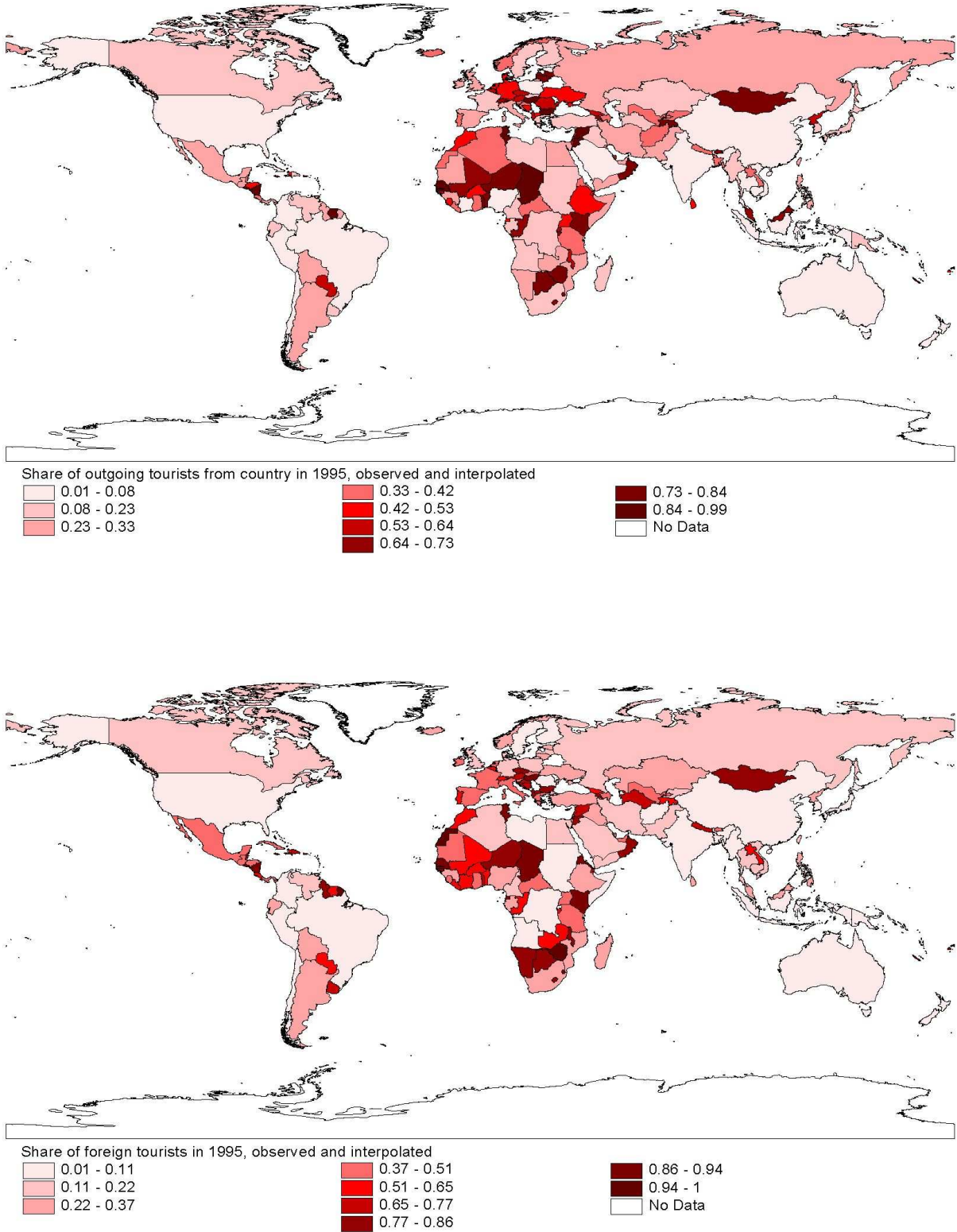


Figure 5. The share of outbound tourists in all tourists from a country (top panel) and the share of international tourists in all tourists in a country (bottom panel).

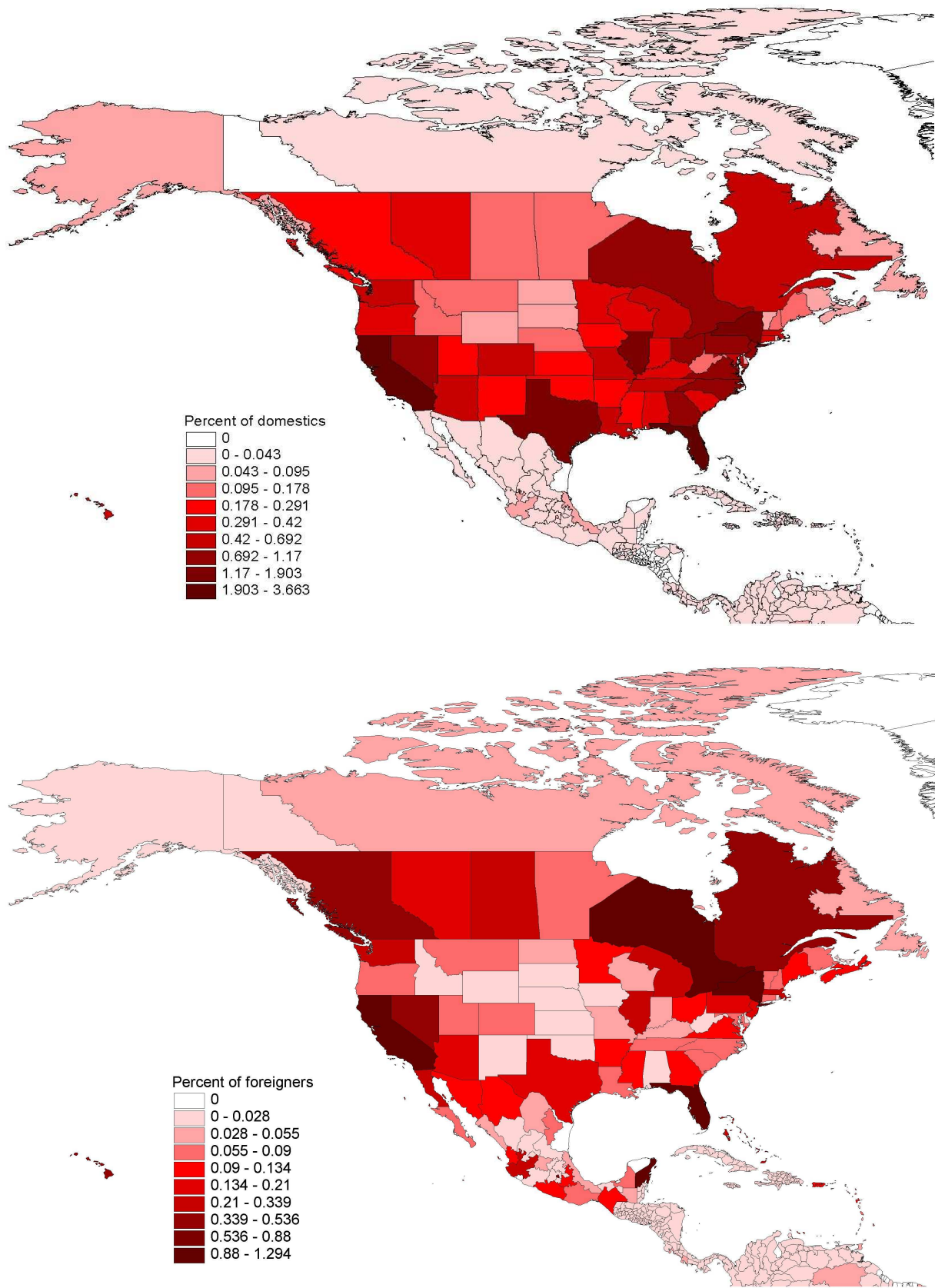


Figure 6. Regional share of tourists in North America, domestic (top panel) and foreign (bottom panel).

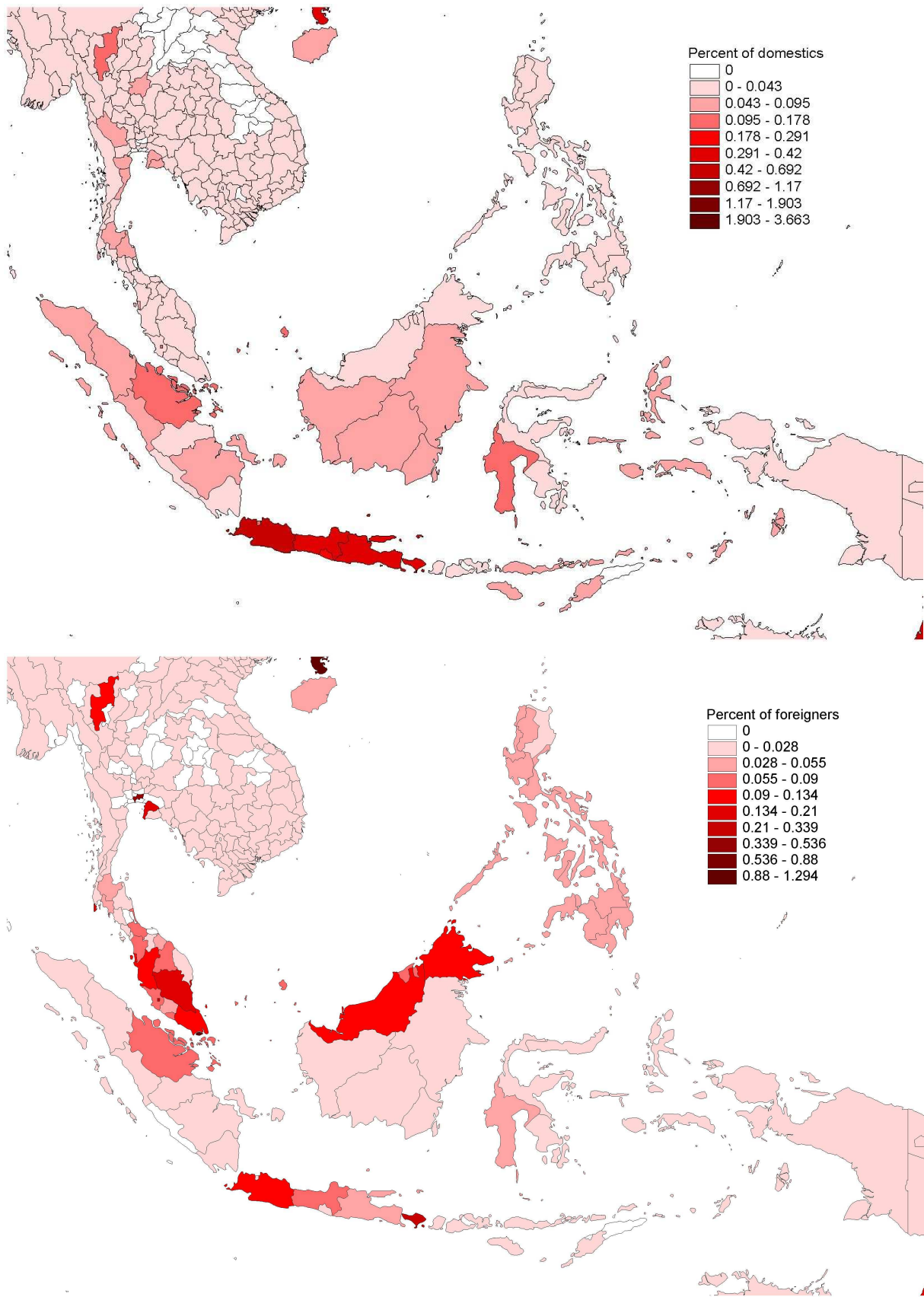


Figure 7. Regional share of tourists in South-East Asia, domestic (top panel) and foreign (bottom panel).

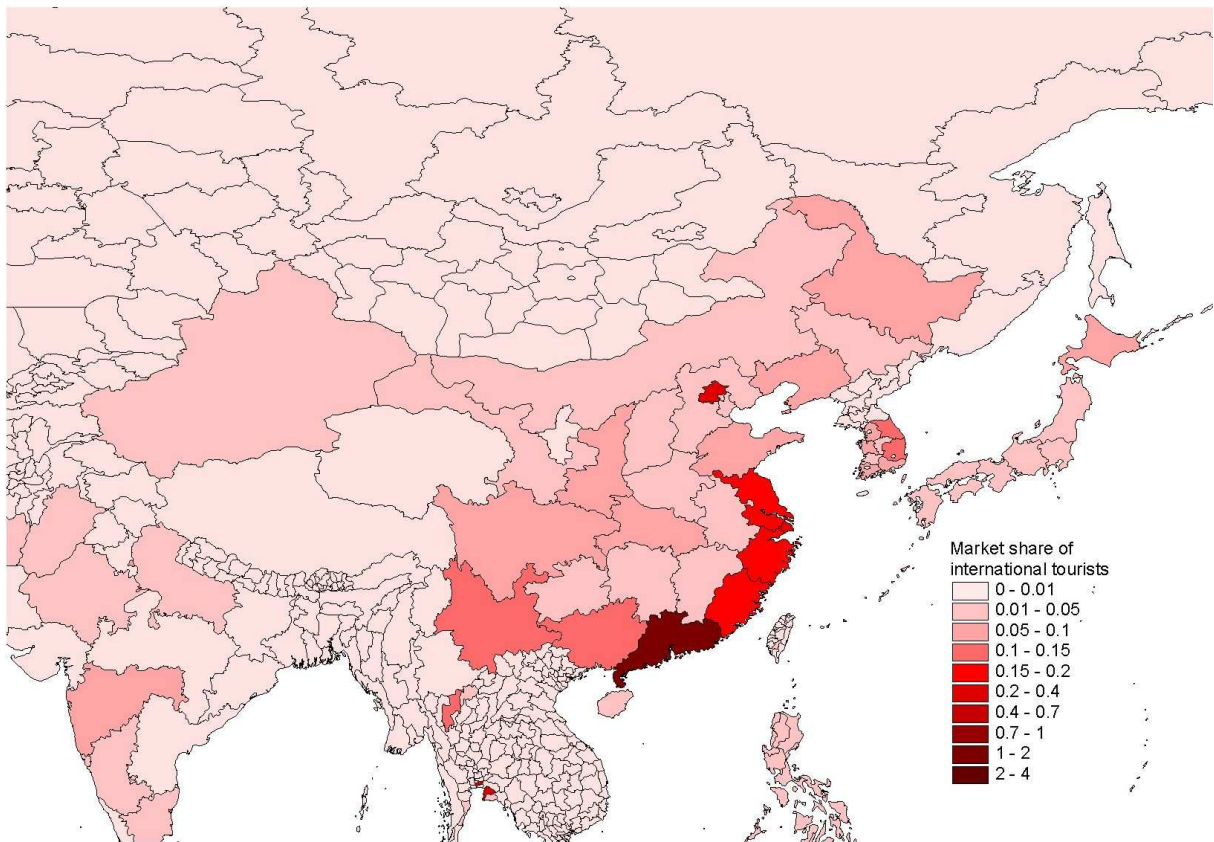
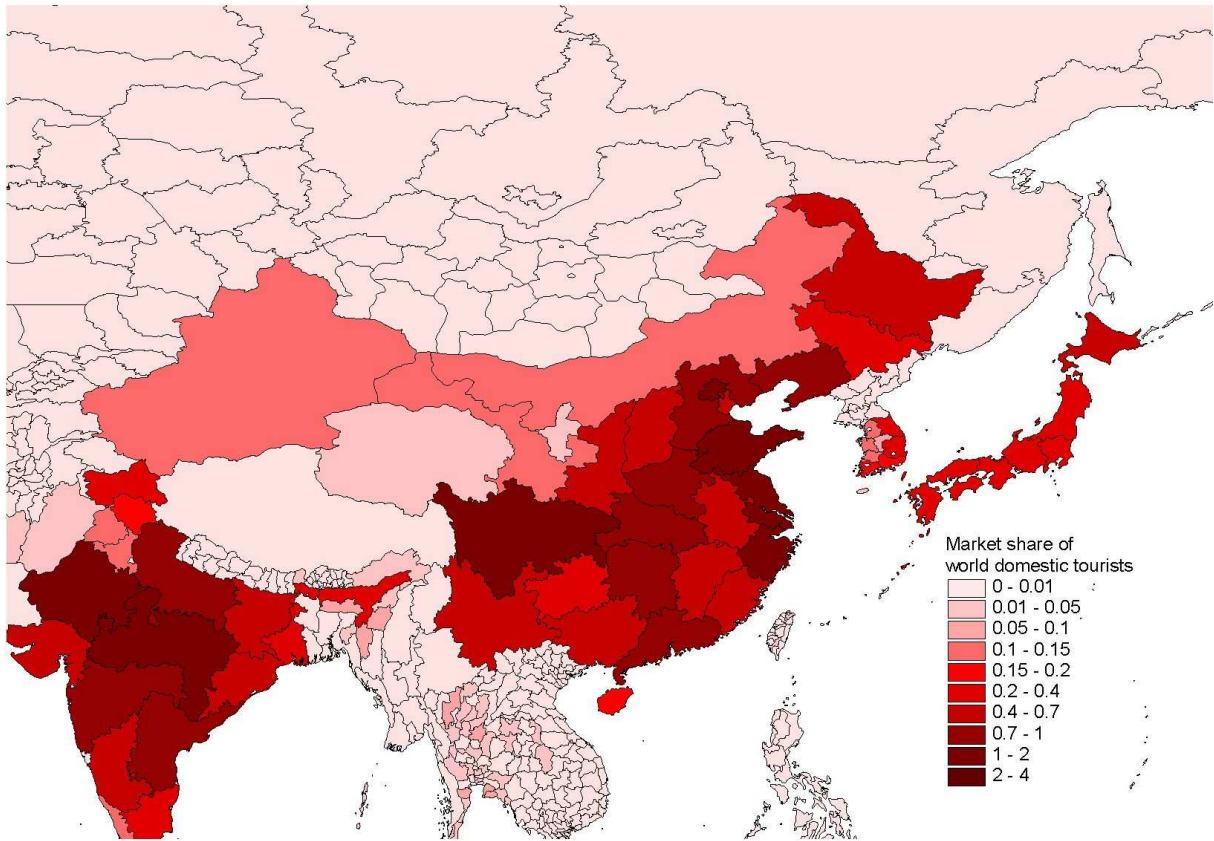


Figure 8. Regional share of tourists in East Asia, domestic (top panel) and foreign (bottom panel).

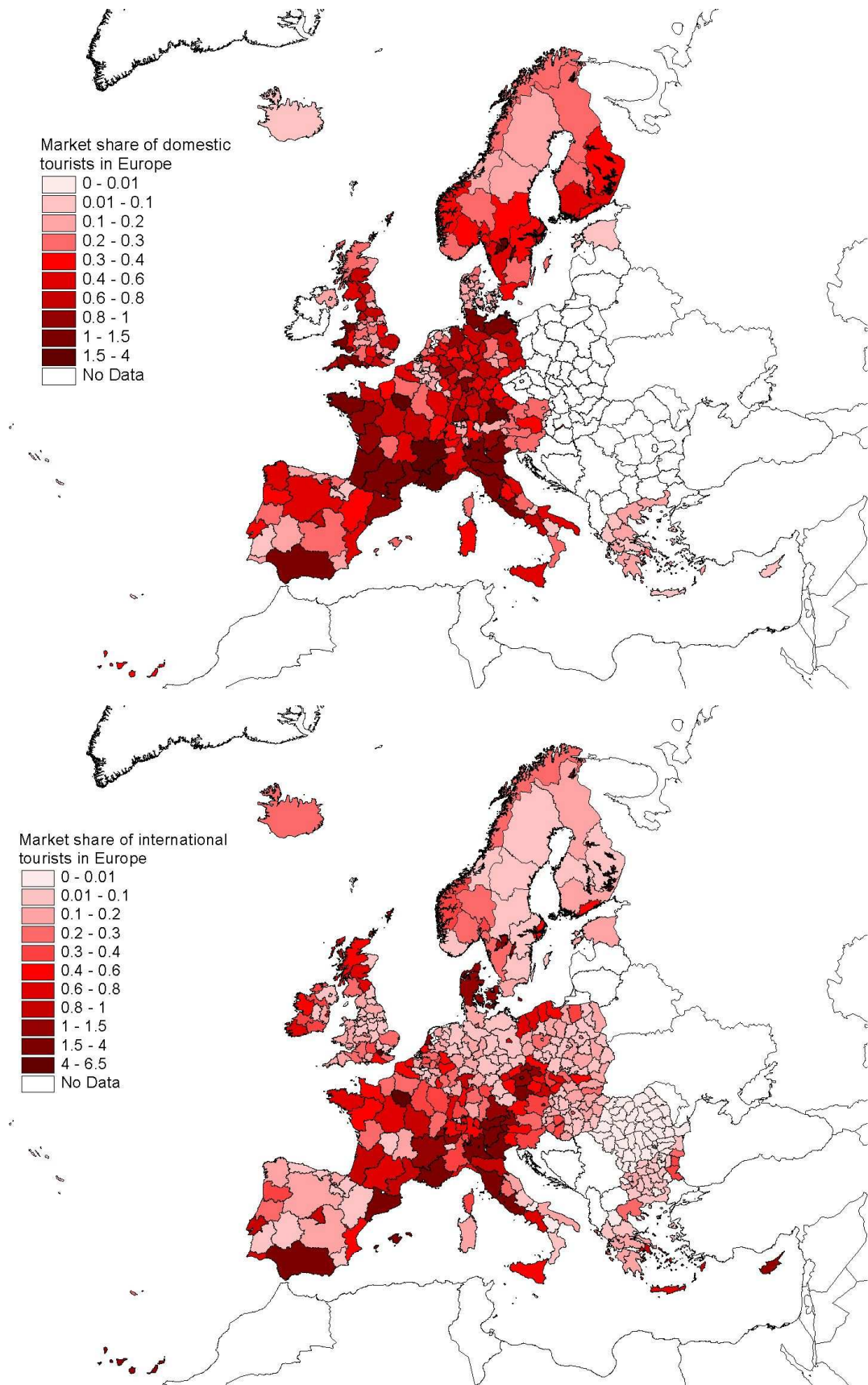


Figure 9. Regional share of tourists in Europe, domestic (top panel) and foreign (bottom panel).

Appendix Data sources

International tourism

WRI, 2002: *World Resources Database 2002-2003*. World Resources Institute, Washington, D.C., USA. <http://www.earthtrends.wri.org/>

Domestic tourism

| Country | Source | Link | Year |
|------------------------|---|---|------|
| Albania | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Argentina | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Australia | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Austria | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Belgium | Nationaal Instituut voor de Statistiek, Statistiek van Toerisme en Hotelwezen | http://www.statbel.fgov.be/figures/d73_nl.asp#1 | 1997 |
| Bosnia and Herzegovina | Federal Office of Statistics | http://www.fzs.ba/Podaci/OSNOVNE%20INFORMACIJE%20%20FEDEng.htm | 2001 |
| Brazil | Tourism in the Northeast of Brazil, Banco do Nordeste, Fortaleza, Brazil | http://www.bnb.gov.br/english/progturismo/conteudo/pg-06.htm | 1998 |
| Bulgaria | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Cambodia | Leisure Cambodia | http://www.leisurecambodia.com/Leisure_Cambodia/No.09/phrase_month.htm | 2000 |
| Cameroon | | http://www.tourism-21.org/f/infos/stats/cameroun.htm | 1999 |
| Canada | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Chile | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| China | National Tourism Administration | http://www.chinatour.com/data/data.htm | 1997 |
| Colombia | El Pais, 14th January 2003 | http://elpais-cali.terra.com.co/paionline/notas/Enero142003/A814N1.html | 2002 |
| Cote d'Ivoire | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Croatia | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Cuba | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Cyprus | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Czech Rep | Statistical Office | http://www.czso.cz/eng/figures/9/92/e190899/data/tab4.pdf | 1997 |
| Denmark | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Egypt | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Estonia | | http://www.hurmaster.ee/eng/tourism1.htm | 1997 |
| Fiji | Bureau of Statistics | http://www.statsfiji.gov.fj/f_tourism.html | 2001 |
| Finland | Statistics Finland | http://www.mek.fi/web/MekEng/publish.nsf/(PublishedSheets2)/6E68D04CECBC7560C2256D750025FACC?openDocument&sheetList=TourismStatistics | 2002 |
| France | INSEE - Direction du Tourisme - Partenaires régionaux | http://www.tourisme.gouv.fr/STAT-CONJ/statistiques.htm#hotellerie | 2000 |
| Germany | Federal Statistical Office | http://www.destatis.de/basis/e/tour/tourtab8.htm | 1997 |
| Greece | National Tourism Organization | http://www.gnto.gr/2/01/eb10012.html | 1997 |

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|--------------------|--|---|-------|
| Hong Kong | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Hungary | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Iceland | Statistics Iceland | http://www.hagstofa.is/template44.asp?PageID=932 | 2002 |
| India | Express Hotelier & Caterer (January 6, 2003) | http://www.tourismofindia.com/misc/time.htm | 2000 |
| Indonesia | Tourism Indonesia (2003) | http://www.tourismindonesia.com/news/270303.asp | 2001 |
| Ireland | Research & Strategic Planning Fáilte Ireland | http://www.failteireland.ie/downloads/Domestic_Brief_2002.doc | 1997 |
| Italy | Istituto Nazionale di Statistica- Rilevazione sul movimento nelle strutture ricettive 1999 | http://www.istat.it/Comunicati/Fuori-calle/il-Turismo-nel-1999-e-le-aspettativ.htm | 1999 |
| Japan | Statistics Bureau of the Ministry of Public Management, Home Affairs, Posts and Telecommunications | http://www.stat.go.jp/english/data/shakai/2.htm | 1996 |
| Kenya | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Korea, Rep | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Latvia | Central Statistical Bureau | http://www.csb.lv/Satr/rad/N1a.cfm?akurs03=N1a | 1997 |
| Liechtenstein | Amt für Volkswirtschaft / Statistik | http://llvweb.liechtenstein.li/lisite/html/liechtenstein/index.jsp?treeId=WIRT_en_EN&topicId=0.2.2&sync=true | 1995 |
| Lithuania | Statistics Lithuania, State Border Guard Service, Department of Tourism | http://www.tourism.lt/statist/compendium.htm | 1997 |
| Luxembourg | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Macau | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Macedonia | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Malaysia | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Mali | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Mexico | | http://nt.presidencia.gob.mx/Informes/2002Fox2/website/docs/pdfs/2info_anexo_344-348.pdf | 1997 |
| Morocco | Haut Commissariat au Plan, Direction de la Statistique | http://www.statistic.gov.ma/tourisme.htm | 2000 |
| Netherlands | Centraal Bureau voor de Statistiek, Continue Vakantie Onderzoek, and Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| New Zealand | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Norway | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Oman | Ministry of Commerce & Industry, Directorate General of Tourism | http://www.mocioman.gov.om/tourism/statistics.html | 1997 |
| Pakistan | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Peru | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Philippines | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Poland | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Portugal | Instituto Nacional de Estatistica | http://www.ine.pt/prodserv/indicadores/quadros.asp?CodInd=56 | 2 002 |
| Puerto Rico | Puerto Rico Business Review, (2003) Vol 27 N.4, Government Development Bank | http://www.gdb-pur.net/Economia/PRBusiness/PRBusinessEsp.htm | 2001 |
| Romania | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Russian Federation | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Singapore | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |

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|----------------------|--|---|------|
| Slovakia | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Slovenia | Tourism, Hotels and Restaurants Association | http://www.gzs.si/sloexport/default.asp?MenuID=51&Menu=Tourism%20and%20Catering#stat | 1997 |
| South Africa | The Mercury, 13 December 1996 | http://www.und.ac.za/und/indic/archives/indicator/winter97/Tdomest.htm | 2000 |
| Spain | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Swaziland | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Sweden | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Switzerland | Reisemarkt Schweiz, St. Gallen. 1999 and 2000/01 | http://old.stnet.ch/marketing/pass/files/Switzerland02.pdf | 1998 |
| Taiwan | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Thailand | Tourism Authority | http://www.tat.or.th/stat/web/static_index.php | 1997 |
| Tunisia | Central Bank, Annual Report, 2002 | http://www.bct.gov.tn/francais/download/report/fiche9.pdf | 2000 |
| Turkey | Ministry of Tourism, Accommodation Statistics | http://www.tursab.org.tr/english/profile/domestic.htm | 1998 |
| United Arab Emirates | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| United Kingdom | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| United States | Euromonitor | http://www.euromonitor.com/gmid/default.asp | 1997 |
| Viet Nam | UNDP Viet Nam Country Office | http://www.undp.org.vn/mlist/develop/031999/post62.htm | 1997 |

Regional tourism

| Country | Source | Year | Notes |
|--------------------------------|--|---|---|
| Argentina | Secretaria de Turismo y Deportes (2003) | 2002 | Number of hotel beds |
| Australia | Bureau of Tourism Research http://www.btr.gov.au/ | 1996 (international) 1998 (domestic) | International and domestic visitor nights |
| Austria | EuroStat | 1995 | Arrivals of residents and non-residents, NUTS2 |
| Belgium | EuroStat | 1995 | Arrivals of residents and non-residents, NUTS2 |
| Bulgaria | EuroStat | 1995 | Total arrivals, NUTS3 |
| Canada | Statistics Canada (2004) | 1998 | Trips |
| Alberta | Alberta Advantage (2003) | 1998 | Person trips |
| Prince Edward Island | Tourism PEI (2003) | 1998 | Pleasure parties |
| Nova Scotia | Nova Scotia Department of Tourism and Culture (2004) | 2002-3 | Non-resident visitation |
| Quebec | Tourisme Quebec (2004) | 2002-3 | Number of tourists |
| Ontario | Ontario Ministry of Tourism and Recreation (2004) | 2001-2 | Overnight visits |
| Manitoba | Ryan Schultz, Travel Manitoba, personal communication, 2004 | 2001-2 | Person visits |
| Saskatchewan | Statistics Saskatchewan (2003) | 1998 | Purchases of goods and services |
| British Columbia | BC Stats (2003) | 1998 | Visitor entries |
| Yukon, NW Territories, Nunavut | Yukon Department of Tourism and Culture (2004) | 1998 | Border crossings |
| Newfoundland | This study | 1995 | Ratio of international visitors to Canadian visitors assumed equal to that of Quebec |
| New Brunswick | This study | 1995 | Ratio of international visitors to Canadian visitors assumed equal to that of Quebec and Nova Scotia averaged |
| China | China Statistical Yearbook 2002 http://www.stats.gov.cn | 2001, 2003 | Number of domestic and foreign tourists |
| Cyprus | EuroStat | 1995 | Number of beds, NUTS3 |
| Czech Republic | EuroStat | 1995 | Number of beds, NUTS3 |
| Denmark | EuroStat | 1995 | Arrivals of residents and non-residents, NUTS3 |

| | | | |
|-----------------|---|---------------------|--|
| Finland | EuroStat | 1995 | Arrivals of residents and non-residents, NUTS2 |
| France | EuroStat | 1995 | Arrivals of residents and non-residents, NUTS2 |
| Germany | EuroStat | 1995 (Saxony: 1998) | Arrivals of residents and non-residents, NUTS2 |
| Greece | EuroStat | 1995 | Arrivals of residents and non-residents, NUTS2 |
| Hungary | EuroStat | 1995 | Number of beds, NUTS3 |
| India | http://www.directories-today.com/i_tourism.htm | 1997 | Number of foreign tourists; only for the 10 most popular states |
| Indonesia | Bureau of Planning and Statistics http://www.bps.go.id/sector/tourism/tables.shtml | 1998 | Number of domestic and foreign hotel guests |
| Ireland | EuroStat | 1995 | Number of beds, NUTS3 |
| Italy | EuroStat | 1995 | Arrivals of residents and non-residents, NUTS2 |
| Japan | Statistics Bureau | | Number of employees in all lodging places for domestic tourists, hotels for foreign tourists |
| Malaysia | http://www.tourism.gov.my/statistic/statistics.asp | 2000 | Number of domestic and foreign tourists; data for cities and tourist resorts |
| Mexico | Secretaria de Turismo http://datatur.sectur.gob.mx/jsp/index.jsp | 2003 | Number of domestic and foreign tourists; missing data for Colima, Tamaulipas and Yucatan |
| Netherlands | EuroStat | 1994 | Arrivals of residents and non-residents, NUTS2 |
| Norway | EuroStat | 1995 | Arrivals of residents and non-residents, NUTS2 |
| Poland | EuroStat | 1995 | Number of beds, NUTS3 |
| Portugal | EuroStat | 1995 | Arrivals of residents and non-residents, NUTS2 |
| Romania | EuroStat | 1995 | Number of beds, NUTS3 |
| Slovakia | EuroStat | 1995 | Number of beds, NUTS3 |
| South Africa | Foreign: Statistics South Africa http://www.statssa.gov.za/publications/P6442/P6442December1996.pdf http://www.statssa.gov.za/publications/P6442/P6442January1997.pdf Domestic: Rule <i>et al.</i> (2001) | 1995-7 | Number of foreign bednights; number of domestic tourism trips |
| Spain | EuroStat | 1995 | Arrivals of residents and non-residents, NUTS2 |
| Switzerland | EuroStat | 1995, 1998 | Arrivals of residents and non-residents, NUTS2 |
| Sweden | EuroStat | 1995, 1998 | Arrivals of residents and non-residents, NUTS2 |
| Thailand | Tourism Authority of Thailand | 2003 | Number of domestic and foreign hotel guests |
| Turkey | http://www.tourismturkey.org/ | 1997 | Number of beds in licensed accommodation establishments by region, downscaled to province |
| UK | EuroStat | 1998 | Arrivals of residents and non-residents, NUTS2 |
| USA | ITA (2004a,b), US Census Bureau (2002) | 1999 | Expenditures by domestic tourists, number of foreign tourists |
| Other countries | This study | 1995 | Number of domestic and foreign tourists proportional to the area of the region |

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