



Federal Ministry  
for Economic Affairs  
and Energy

# Tourism as a driver of economic growth in Germany

*Key indicators for a cross-cutting industry*

*Summary*

## Publishing details

### Publishing details

Published by  
Federal Ministry for Economic Affairs and Energy  
Public Relations Division  
11019 Berlin  
[www.bmwi.de](http://www.bmwi.de)

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### Project partner

Fachhochschule Westküste; Institute of  
Management and Tourismus (IMT)  
and dwif-Consulting GmbH

### Current as at

November 2017

### Design and production

PRpetuum GmbH, Munich

### Images

Nikada – iStock (title), BMWi/Sandra Ludewig  
(p. 2), TUI AG (p. 3), anyaberkut – Fotolia (p. 6),  
monkeybusinessimages – iStock (p. 7), manfredxy –  
iStock (p. 9), DragonImages – iStock (p. 18),  
MPower. – Photocase (p. 20)

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# Introductory remarks by Iris Gleicke

The German government seeks to ensure that its tourism policy has a strategic focus, while at the same time being forward-looking. In order to do this, it needs reliable and up-to-date information. This includes data about tourism's contribution to economic output and employment in Germany.

The present study confirms that tourism plays an important role in our economy. Much of this is owed to our tourism industry and our motivated tourism professionals who provide attractive trips and services that combine good quality with affordable prices. And of course, the German tourism industry also thrives on our open society, our friendliness and our hospitality.

The current edition of the study also shows that there have been some shifts and changes compared with 2012 – the year the previous edition of study was published.

What we now need to do is to work in partnership with the tourism industry to analyse and evaluate the study's findings. This also means identifying long-term trends, scenarios and new prospects for tourism in Germany. This will now become easier thanks to the new study. The current edition provides us with an improved and extended set of data, and analyses this data in line with internationally accepted methods and standards, which will allow us to compare our data with that of the EU, OECD and the World Tourism Organisation (UNWTO).

The factors driving forward the new developments we are seeing are digitisation including the sharing economy, improving mobility, tailor-made travel offers, the influence that our aging population has on travel behaviour as a whole, and rising demand for travel in the emerging economies

Yours,



Iris Gleicke  
Member of the German Bundestag  
Parliamentary State Secretary  
Federal Government Commissioner for the New Federal States  
Federal Government Commissioner for Small and Medium-sized Enterprises and Tourism



as prosperity in these countries grows. Tourism is also increasingly influenced by issues ranging from sustainability and climate change to terrorism and violence.

In order for the tourism industry to thrive, it needs the right legal framework and a good business environment. The German government continues to actively work hard towards achieving these goals. It is pursuing inclusive and lasting growth that ensures that everybody can share in the benefits of prosperity.

I would like to express my particular gratitude to the Federal Association of the German Tourism Industry (BTW) and consultancy firm DIW Econ GmbH for their excellent work in producing this study.

I hope that you will find this study both informative and inspiring.

# Introductory remarks by Dr Michael Frenzel

The tourism industry fulfils our needs and desires for mobility, relaxation and recuperation, leisure experiences, and intercultural understanding. Tourism is also an important driver of economic growth, both in Germany and around the world. Almost three million people in Germany work in tourism and millions of jobs depend on this sector. The strength of these figures and the 4 per cent share of gross value added that the industry generates means that tourism is just as important to the economy as engineering or the financial sector. The current edition of this study looks at these achievements in more detail.

The fact that the tourism industry is a diverse, cross-cutting sector made up of many different facets is still not widely recognised among the general public. Tourism includes weekend trips involving travel by bus, plane, or train, concert trips or visits to restaurants in a city, trips to an amusement park, business trips, as well as just classic holiday trips. Trips taken within Germany, departing from Germany, or arriving in Germany from abroad all help strengthen our domestic tourism industry. This current study provides figures for each of these different categories. We would like to thank the German government for its support which has enabled the new edition of this study to be published.

Although people like to travel, maintaining the economic strength of the tourism industry and stimulating further



growth cannot be taken for granted. This is something that the present study also shows. Over the past few years, other sectors have posted stronger growth. If we want our tourism industry to maintain its economic strength and remain a driving force for jobs, we also need the right business conditions, which includes designing a comparable policy environment to take account of digital change. This current publication includes information on this issue as well.

I hope you enjoy reading this study.

Yours,

A handwritten signature in blue ink that reads "Dr. Frenzel". The signature is fluid and cursive, with the first letters of the first and last names being capitalized.

Dr Michael Frenzel  
President, Bundesverband der Deutschen Tourismuswirtschaft e.V.  
(Federal Association of the German Tourism Industry, BTW)

# Key figures at a glance

## Tourism spending

- In 2015, tourism spending in Germany reached **€287.2 billion**. **Domestic tourists** contributed the largest share, spending a total of **€224.6 billion** (78%), whereas total expenditure by **foreign tourists** amounted to **€39.6 billion** (14%) and other consumption<sup>1</sup> to €23 billion (8%).
- Private trips and business trips contributed approximately 80% and 20% of total expenditure, respectively.
- Food and beverage-serving outlets accounted for the largest share of spending (17.8%). This was followed by expenditure on various consumer goods (other goods) (17.3%), accommodation (12.5%), air passenger travel (7.6%), vehicle fuel (7.2%), as well as sporting, cultural and recreational services (7.1%).

## Effects on gross value creation and employment

- Tourism spending in 2015 generated **direct gross value added of €105.3 billion**. This corresponds to **3.9% of total gross value added** in Germany.
- In 2015, **2.92 million persons** were directly involved in the production and provision of tourism goods and services, which was equivalent to **6.8% of total employment in Germany**. The high share of employment accounted for by this industry shows that tourism is a very job-rich industry.
- Business trips directly generated €18.1 billion of gross value added (17% the tourism industry as whole) and employment for 533,000 persons.
- Beyond that, demand for intermediate goods and services in the tourism industry **indirectly generated €76.1 billion of gross value added** and accounted for employment for **1.25 million persons**.

## The tourism industry compared with other sectors

- The **tourism industry** accounts for **3.9%** of total gross value added – **comparable with retail (3.3%), the manufacture of machinery and equipment (3.5%), and provision of professional and technical services (4.4%)**.
- In terms of the number of persons it employs, the tourism industry ranks very highly when compared to other industries. At 6.8%, it comes in just behind retail (7.5%) and healthcare (7.2%), but ahead of construction and education (both at 5.6%). Other sectors, such as legal, accounting and consulting services or financial services, are substantially smaller both in terms of gross value added (2.8% and 2.6%, respectively) and employment (3.0% and 1.6%, respectively).

## Development since 2010

- The Tourism Satellite Account for the reporting year 2010 put total tourism consumption at €278.3 billion. Compared with the figure for 2015, this system indicates **nominal growth in tourism consumption of 3.2% over this five-year period**. This has resulted in **nominal growth in the tourism industry's direct gross value added of 8.5%**.
- As in the years previous, the tourism industry made an important contribution to Germany's economic output in 2015. However, as total domestic gross value added rose between 2010 and 2015 by 18%, the share of the tourism industry in this gross value added fell from 4.4% to 3.9%.
- Total employment in Germany rose strongly, while the number of persons employed in the tourism industry increased just slightly, rising from 2.86 million in 2010 to 2.92 million in 2015. This meant that the share of the tourism industry in overall employment fell slightly: while 7.0% of the German workforce was employed directly in the tourism industry in 2010, in 2015 this had fallen to 6.8%.

<sup>1</sup> Other consumption comprises imputed rent payments for accommodation services related to the long-term use of real estate by the owner or tenant for tourism purposes, the share of government subsidies linked to tourism that are provided for cultural services, and the acquisition of consumer durables for tourism.

## Digitisation of the tourism industry

- Disruptive business models are changing the tourism industry at a very fast pace. This development is particularly affecting three segments:
  - the brokering of tourist services
  - the accommodation sector
  - passenger transport
- Based on the TSA data for 2015, these changes have not yet had any major impact on the level of importance of the tourism industry in the overall economy. However, as the process of digitisation in the tourism industry is very dynamic, it is reasonable to expect that this situation may change in the future.
- New providers and new customer segments in the sharing economy have the potential to create positive economic effects for Germany's tourism industry. However, as theoretical considerations and anecdotal evidence show, digital platforms that broker tourism services, that are based abroad and that have substantial market power could potentially go on to extract an increasing share of gross value added generated by tourism demand in Germany. Nevertheless, German companies linked to the tourism industry can also use the opportunities of digitisation to extend their reach internationally as a means to generate growth.
- Competition policy and the regulatory framework will play a major role when it comes to shaping future developments in the tourism industry linked to digitisation. Further theoretical and empirical studies will need to be undertaken in order to develop appropriate recommendations for economic policy.



# 1. Introduction

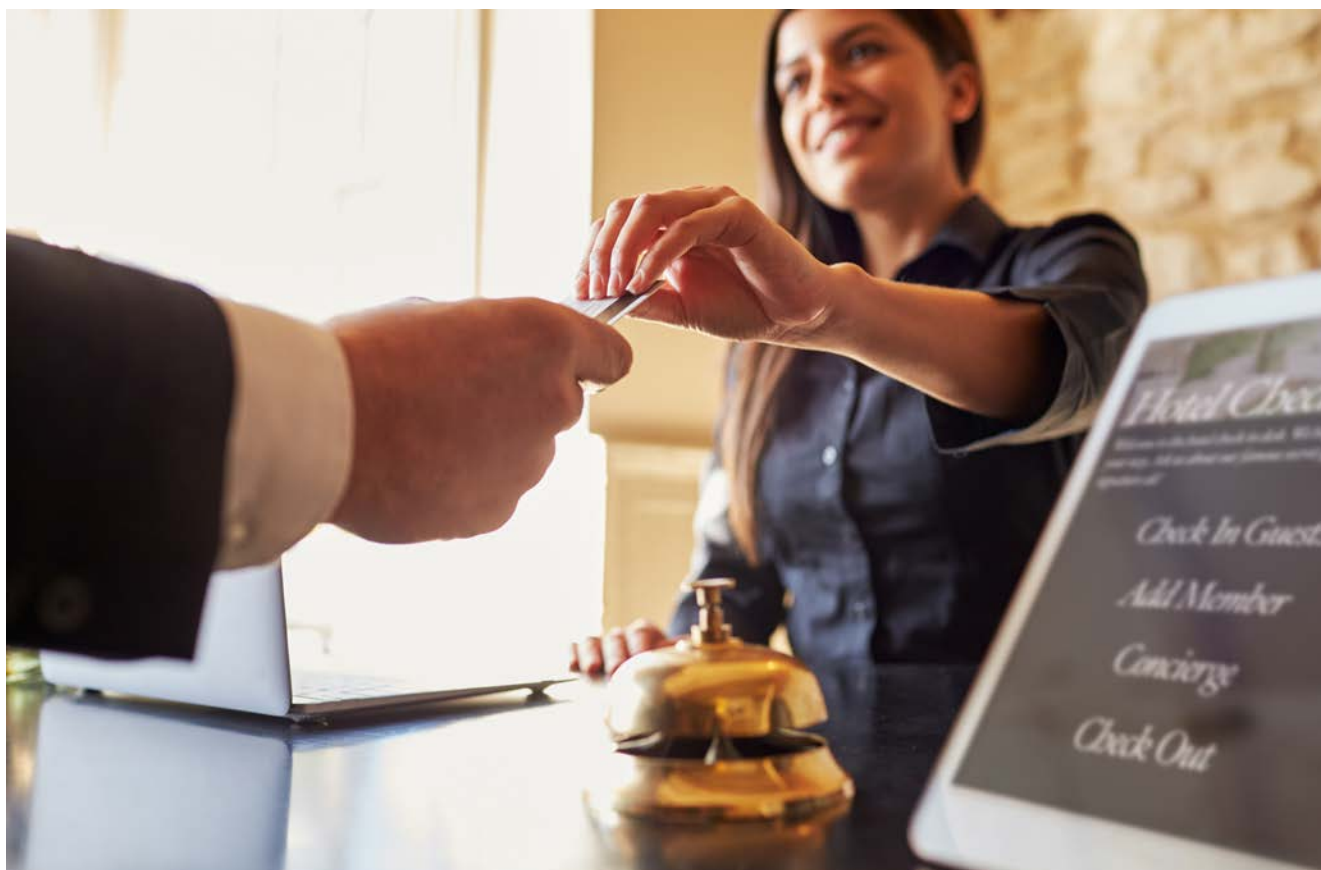
There are no official economic statistics available for the German tourism industry as a whole. However, policymakers want access to reliable and meaningful economic data in order to make the right tourism and economic policy decisions.

The key difficulty in determining the economic strength of the tourism industry is the fact that it is not actually considered as being an industry under the system of industrial classification used by the Federal Statistical Office (*Wirtschaftszweigsystematik* 2008). Under this system, industries are classified according to the type of products they mainly supply. The economic strength of industries such as the manufacture of machinery and equipment or the automotive industry can thus be measured relatively easily by looking at figures for gross value added or employment from official statistics. In contrast, the tourism industry is

defined from the demand side. It combines several parts of other industries such as Accommodation, Food and beverage serving outlets or Land and Air Transport. Goods and services from these industries may likewise be consumed by non-tourists though. This means that restaurant meals consumed by tourists are part of the tourism industry, whereas restaurant meals consumed by locals in their usual environment are not. The tourism industry is thus a **cross-sectoral industry** that encompasses parts of many different industries that supply products to meet demand by tourists.

Since the first comprehensive analysis of the German tourism industry was undertaken in 2010, the trend towards digitisation in the overall economy has advanced at greater speed. This study<sup>1</sup> therefore contains an analysis of the importance of digitisation for the overall strength of the tourism industry, in addition to the results for 2015.

<sup>1</sup> The study by DIW Econ was commissioned by the Federal Association of the German Tourism Industry (BTW) and funded by the Federal Ministry for Economic Affairs and Energy. This abridged version presents the results for 2015. Please note that a more detailed version of this report is also available (German only) considering the results, methodology and data sources in greater depth. In addition, a background report (German only) has also been published which looks more closely at the methodology used. Further information on the methodology can also be found in the unabridged version of the 2012 report (German only), which contains the first comprehensive Tourism Satellite Account developed for Germany – developed by DIW Econ for the reporting year 2010.



## 2. The TSA system

The assessment of the effects of the German tourism industry on gross value added and employment is based on an established reporting system called the Tourism Satellite Account (TSA) and is built around the relevant requirements and definitions used by international organisations.<sup>2</sup> By using the TSA system, we ensure that all of our results are consistent with official economic statistics (such as the ESA, which is also used for calculating GDP) and can be compared with statistics for other countries.

The system is built upon the use of the comprehensive TSA tabular system, illustrated in Figure 2-1, and follows guidelines supplied by the UNWTO (TSA: RMF 2008). Using this as a basis, the report calculates total consumer spending by foreign tourists (TSA Table 1) and domestic tourists (TSA Table 2) in Germany. TSA Table 4 presents an overview of tourism spending in Germany by both domestic and foreign tourists. This spending is separated into different categories of visitors<sup>3</sup> (consumption by whom?) and divided up into 14 different product categories (on what was the money spent?).<sup>4</sup>

The aim of developing a Tourism Satellite Account for Germany is ultimately to compare tourism-related demand

<sup>2</sup> See 2008 Tourism Satellite Account: Recommended Methodological Framework (UNSD/Eurostat/OECD/UNWTO 2010) (here TSA: RMF 2008), International Recommendations for Tourism Statistics 2008 (UNWTO 2010) (here IRTS 2008) and European System of Accounts 2010 (ESA 2010) (Eurostat 2014).

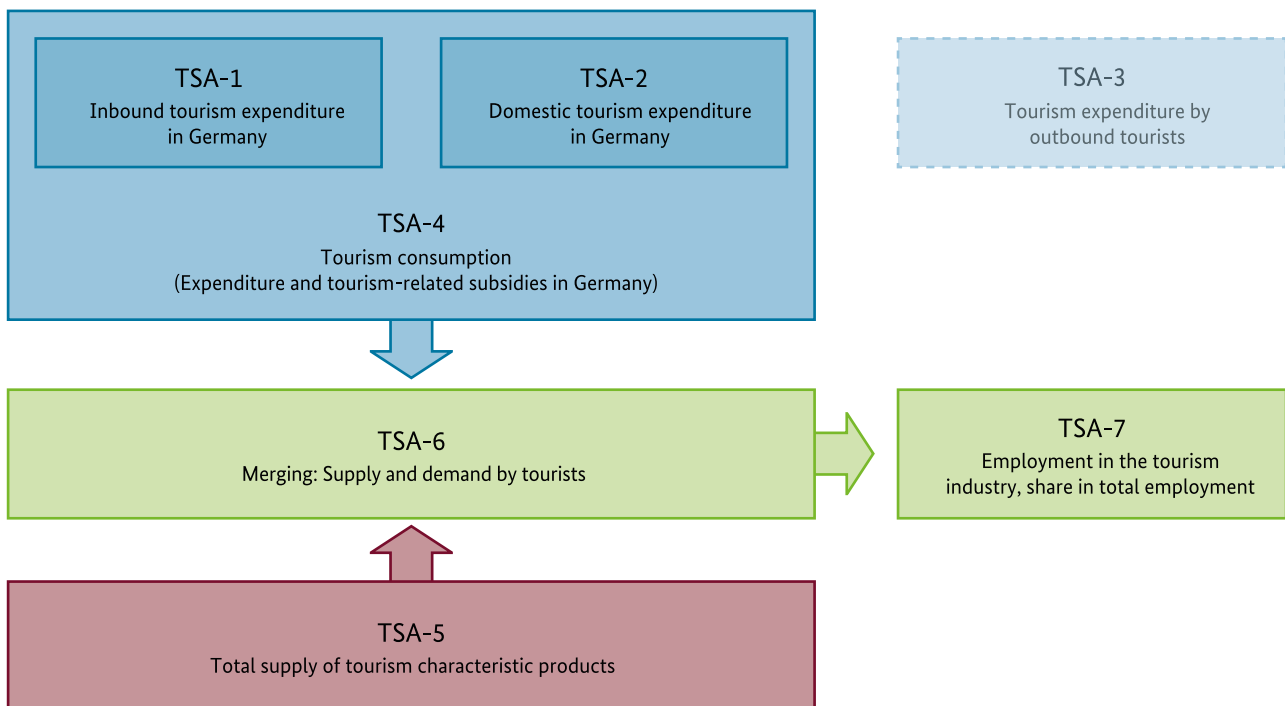
<sup>3</sup> Tourists are defined according to IRTS 2008 (Section 2.9). They are classified as foreign or domestic based on their place of residence. They are also subdivided according to the length of their stay (daytrip and overnight visitors) as well as to the reason for travel (business or private).

<sup>4</sup> Pursuant to IRTS 2008 (Section 5.10), a product is considered to be 'tourism characteristic' if tourism expenditure on this product represents "a significant share of total tourism expenditure" and/or if 'tourism expenditure' on the product represents "a significant share of the supply of the product in the economy".

for goods and services with the supply of these products and to evaluate the impact of tourism demand on the overall economy. Table 6 shows demand for tourism goods and services (TSA Table 4) alongside total tourism characteristic products (i.e. domestic production as well as imports, irrespective of whether demand is by tourists or non-tourists)

(TSA Table 5). This enables us to calculate the specific tourism share for each regular industry (i.e. industry defined by what it supplies).

**Figure 2-1: Tabular system of the Tourism Satellite Account following TSA: RMF 2008**



Source: Flowchart developed by DIW Econ based on TSA: RMF 2008

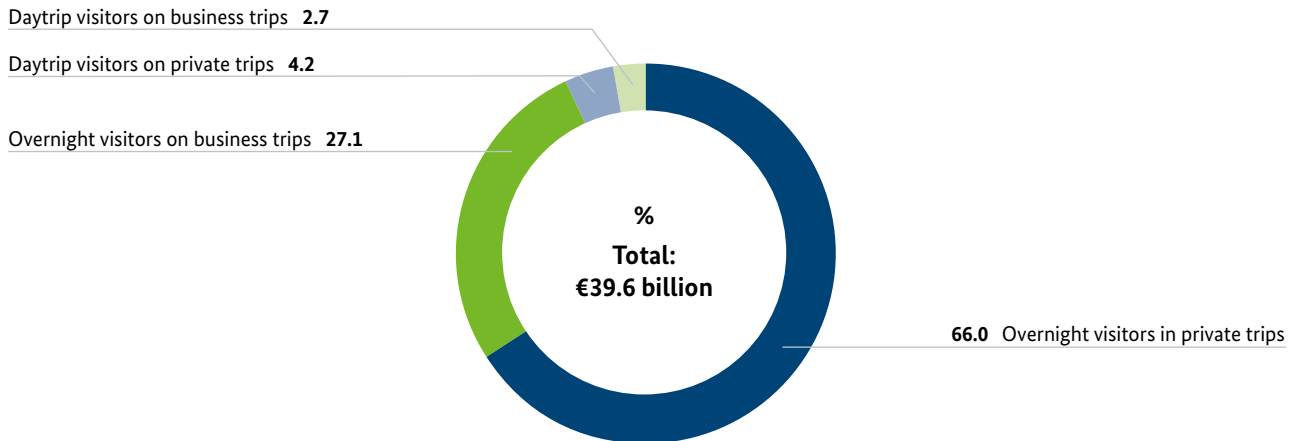


### 3. Results of the German Tourism Satellite Account

The results of the German Tourism Satellite Account are presented in the following manner: first, we calculate tourism demand in Germany in 2015 based on spending by both foreign and domestic tourists. This is then compared with tourism-related supply in order to derive domestic gross value added and employment effects generated by the tourism industry in Germany.

#### 3.1 TSA Table 1: Inbound tourism expenditure in Germany

In 2015, total inbound tourism expenditure amounted to €39,6 billion (Figure 3-1). Some €26.1 billion of this (66% of total expenditure) was spent by foreign overnight visitors, who constituted the largest group of foreign visitors in 2015. Foreign overnight visitors on business trips were the second largest group, spending €10.7 billion (27.1% of total expenditure). Spending by foreign daytrip visitors – on both private and business trips – was much lower, at €1.7 billion (4.2%) and €1.1 billion (2.7%) respectively.

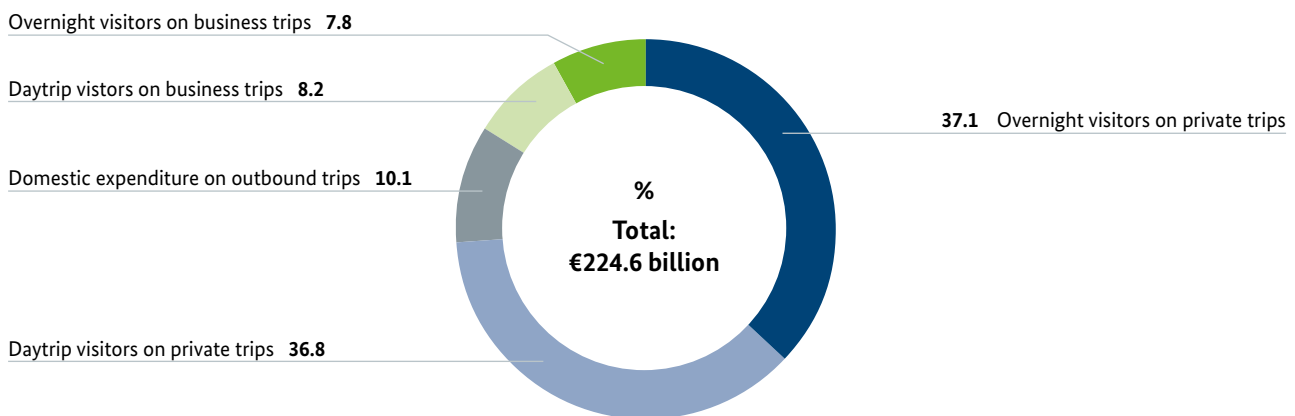
**Figure 3-1: Tourism expenditure by foreign visitors in Germany by group (2015)**

Source: DIW Econ

### 3.2 TSA Table 2: Domestic tourism expenditure in Germany

In 2015, tourists with residence in Germany spent a total of €224.6 billion on the home market (Figure 3-2).

The two largest groups of visitors (private overnight and private daytrip visitors) were almost equal in size, each accounting for around €83 billion (37% of total expenditure). Spending by domestic visitors on business trips – both daytrips and overnight stays – was much smaller, at €18 billion (8% of total expenditure) in each case. Expend-

**Figure 3-2: Domestic tourism expenditure in Germany by group (2015)**

Source: DIW Econ

iture by domestic tourists in Germany also includes spending in Germany as part of trips abroad by domestic tourists. Domestic expenditure on outbound trips accounted for €22.7 billion (around 10%) of total expenditure.<sup>5</sup>

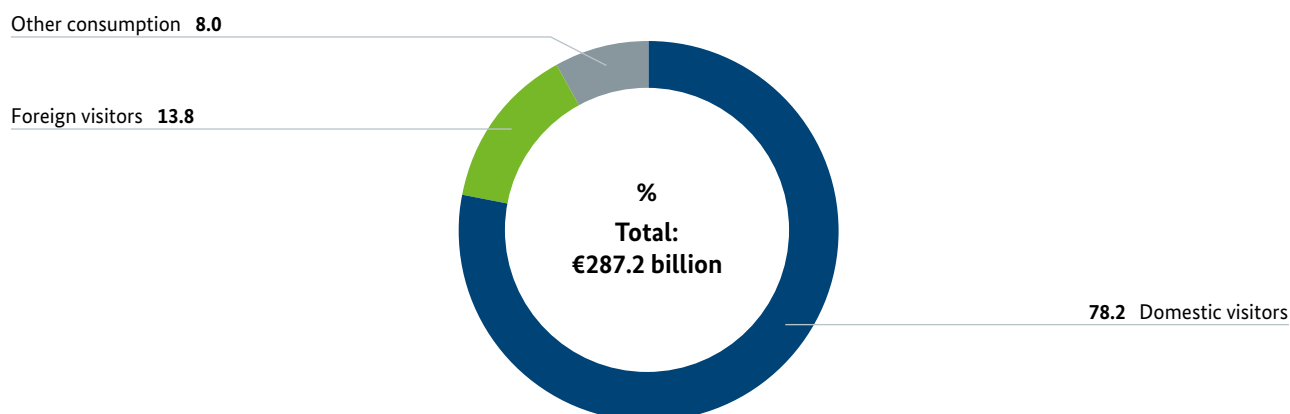
### 3.3 TSA Table 4: Total tourism consumption in Germany

In 2015, total internal tourism consumption amounted to €287.2 billion. In addition to tourism expenditure by foreign (€39.6 billion) and domestic visitors (€224.6 billion), the total figure additionally contains other consumption amounting to €23 billion (8% of overall tourism consump-

tion) (Figure 3-3). Other consumption comprises the share of (actual and imputed) rent payments related to the long-term use of real estate by the owner or tenant for tourism purposes (€3.6 billion), the share linked to tourism of government subsidies that are provided for cultural and sports activities (€10.8 billion), and the acquisition of consumer durables for tourism<sup>6</sup> (€8.6 billion).

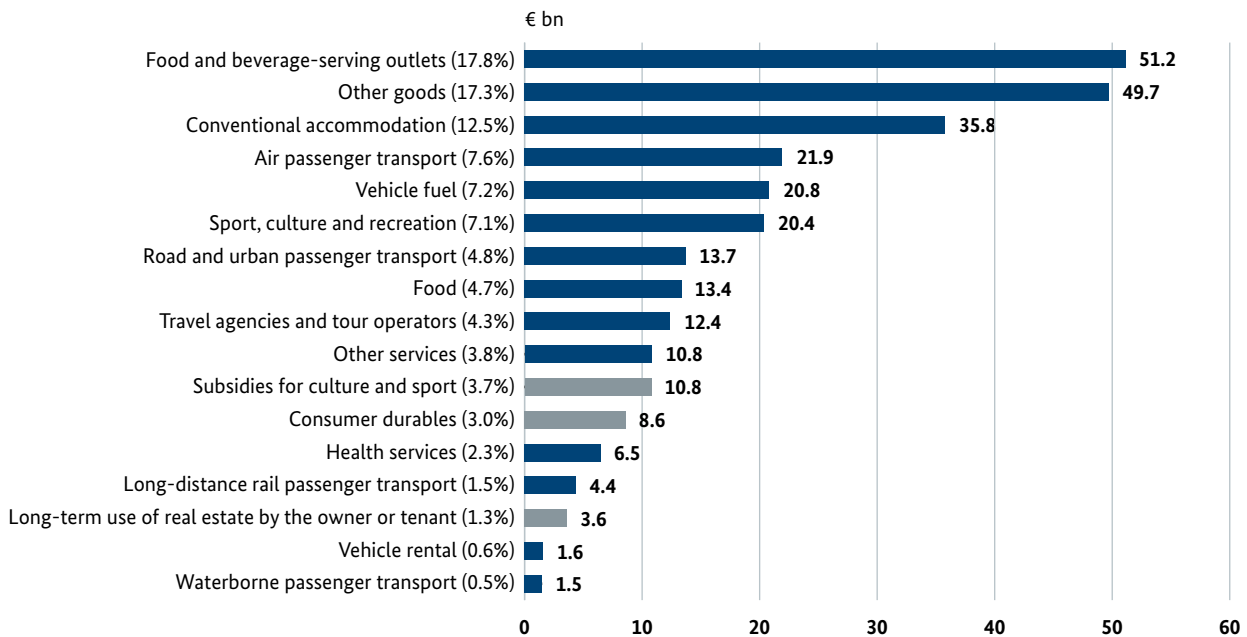
Figure 3-4 shows the distribution of spending by domestic and foreign visitors in Germany in 2015 according to individual product groups. The highest amount of spending went on food and beverage-serving outlets (€51.2 billion or 17.8%), other goods (€49.7 billion or 17.3%) and conventional accommodation (€35.8 billion or 12.5%).

**Figure 3-3: Total tourism consumption in Germany (2015)**



Source: DIW Econ

- 5 Domestic expenditure on outbound trips includes, for example, spending by German tourists on travel-agency, tour-operator and other travel-broker services in Germany when booking foreign travel, as well as transport costs, such as expenditure on fuel, that are still incurred in Germany.
- 6 Spending on consumer durables, where information on the use of these items for tourism purposes is available. This includes spending on camper vans and caravans, travel accessories, bicycles and camping equipment.

**Figure 3-4: Total tourism consumption in Germany by product category (2015)**

Note: Product categories marked in grey are the three components of other consumption, which accounts for 8% of total tourism consumption. Any discrepancies due to rounding.

Source: DIW Econ

### 3.4 Economic importance of tourism

#### 3.4.1 Value added and employment effects generated by tourism

Demand by tourists generates turnover in various sectors of the economy, creating gross value added and employment. Gross value added is the most important indicator for assessing the economic strength of an economy or of an individual sector. It covers not only depreciation, but also total income earned from labour and capital. The direct and indirect gross value added and employment effects generated by tourism can be determined by looking at the share of each product category that can be attributed to tourism, at input-output calculations by the Federal Statistical Office, and at detailed supply and use tables.<sup>7</sup>

Total tourism consumption (see Section 3.3) in 2015, worth €287.2 billion, created direct gross value added of €105.3 billion (see Table 3-1). This corresponds to 3.9% of total gross value added in Germany.

In 2015, there were 2.92 million persons directly involved in the production and provision of tourism goods and services. This was equivalent to 6.8% of total employment in Germany, which shows that tourism is a very job-rich industry.

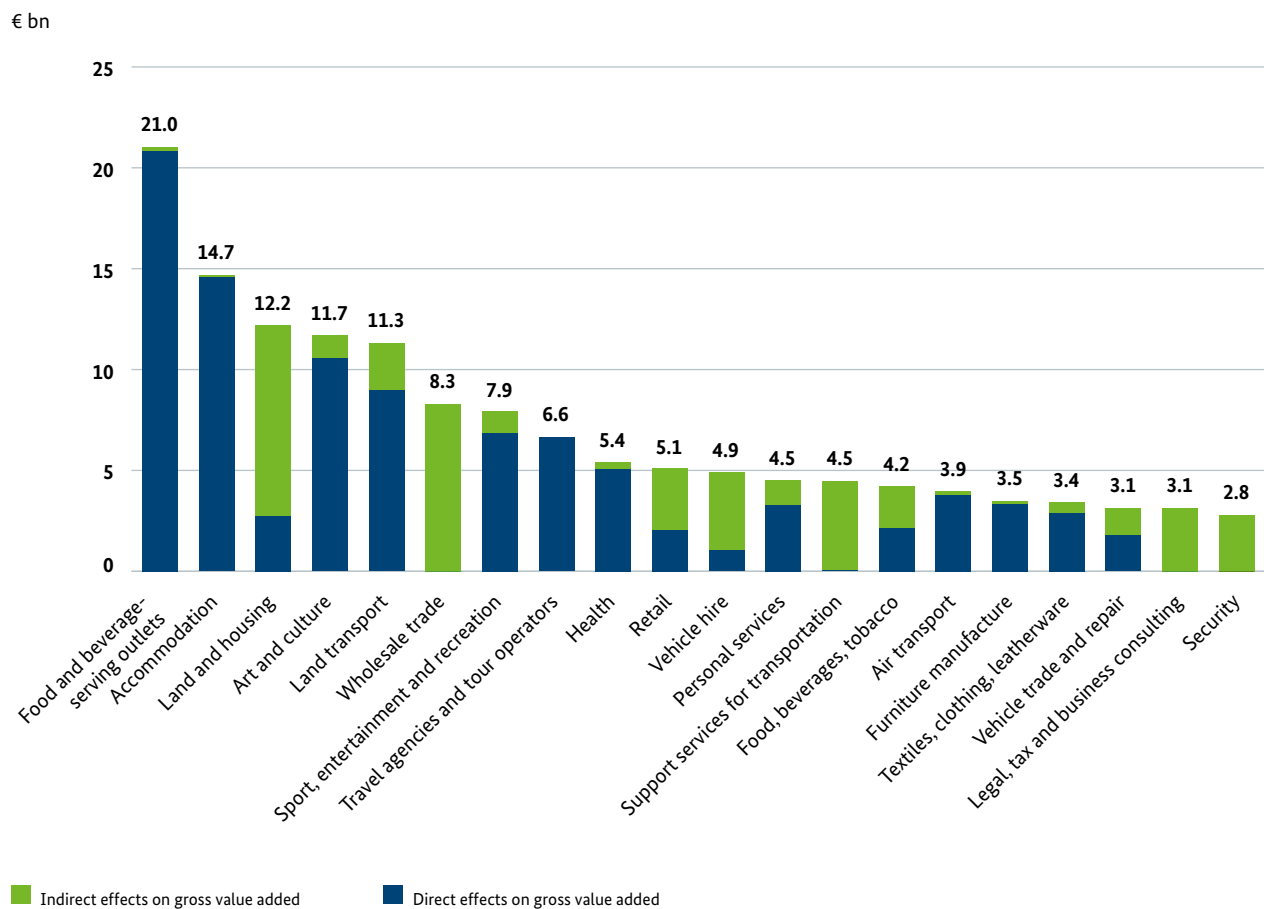
Business trips directly generated €18.1 billion of gross value added (17% of the tourism industry as whole) and employment for 533,000 persons.

<sup>7</sup> The Tourism Satellite Account has been developed based on supply and use tables used to comprise a highly detailed product system. These tables, which are not publicly available, were provided by the Federal Statistical Office as part of a special statistical breakdown.

**Table 3-1: Value added and employment generated by tourism in Germany (2015)**

| Tourism in 2015                | Direct effects |       | Indirect effects | Total effects |
|--------------------------------|----------------|-------|------------------|---------------|
|                                | Absolute       | %*    |                  |               |
| Gross value added (in € bn)    | 105.3          | 3.9 % | 76.1             | 181.4         |
| Employment (number of persons) | 2,919,000      | 6.8 % | 1,248,000        | 4,167,000     |
| Share of business trips        |                |       |                  |               |
| Gross value added (€ bn)       | 18.1           | 0.7 % | 14.3             | 32.5          |
| Employment (number of persons) | 533,000        | 1.2 % | 228,000          | 761,000       |

\*Share of tourism in the overall economy. Any discrepancies due to rounding. The number of persons is rounded to thousands Source: DIW Econ.

**Figure 3-5: Direct and indirect gross value added created by tourism demand according to field of production**

Note: This graph shows the 20 industries that benefit most strongly from tourism demand.

Source: DIW Econ

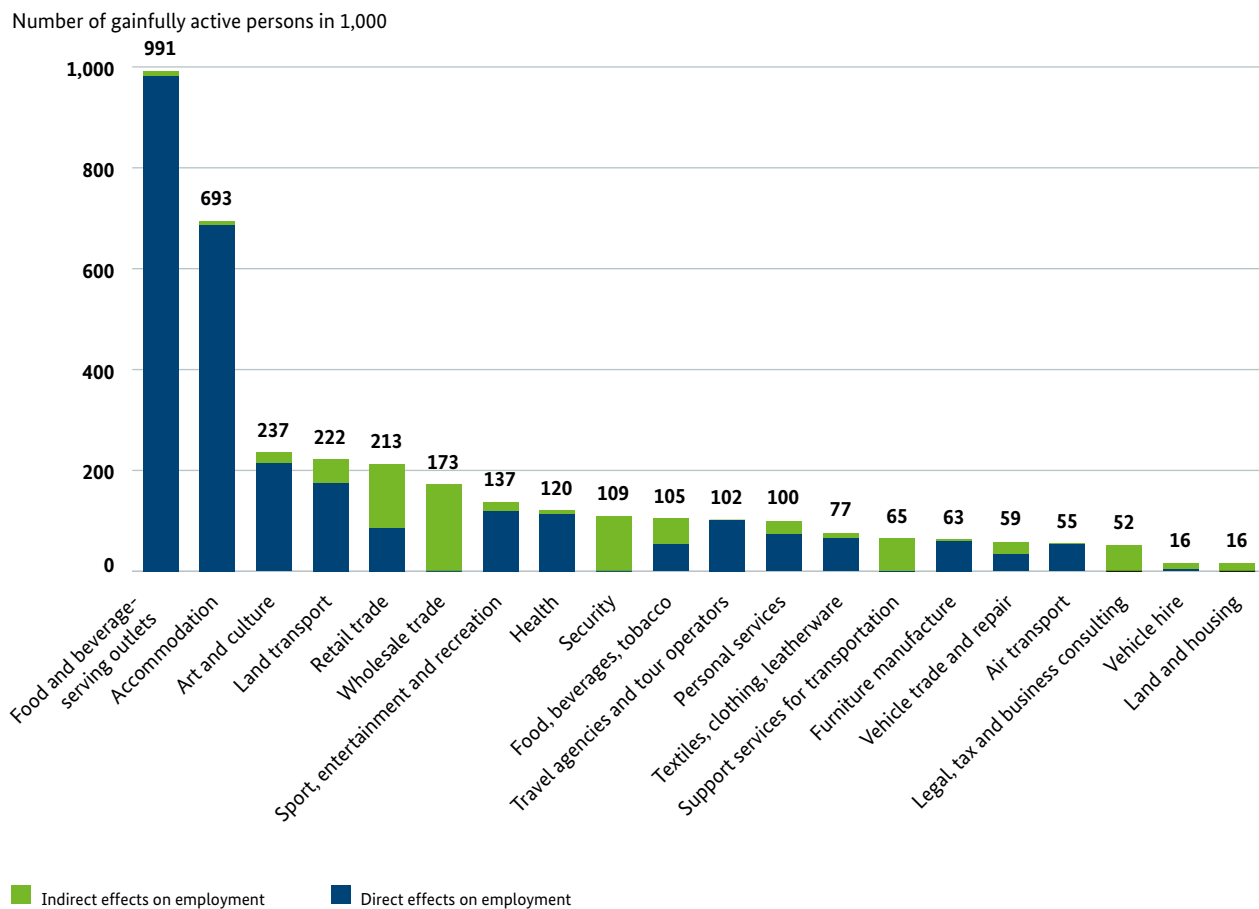
In addition to the direct generation of products demanded by tourists, the resulting demand for intermediate goods also makes an indirect contribution to added value and employment. In 2015, demand for intermediate goods and services in the tourism industry indirectly generated €76.1 billion of gross value added and provided employment for 1.25 million persons (see table 3-1).

Figure 3-5 shows the sectors of the German economy which profit most strongly from this demand as measured by the sum of direct and indirect gross value added. Figure 3-6 illustrates the employment effects resulting from this.

The largest share of gross value added and (especially) employment generated by tourism comes from the traditional branches of tourism catering and accommodation, which together generated gross value added of more than €35 billion and provided employment for 1.68 million persons.

Figures 3-5 and 3-6 also show that some sectors of the German economy profit strongly from tourism demand even if they are not involved in the production of tourism products at all, or only to a very small extent. These include wholesale and retail trade, security services, and transport

**Figure 3-6: Direct and indirect employment effects according to field of production**



Note: This graph shows the areas of production that benefit most strongly from tourism demand.

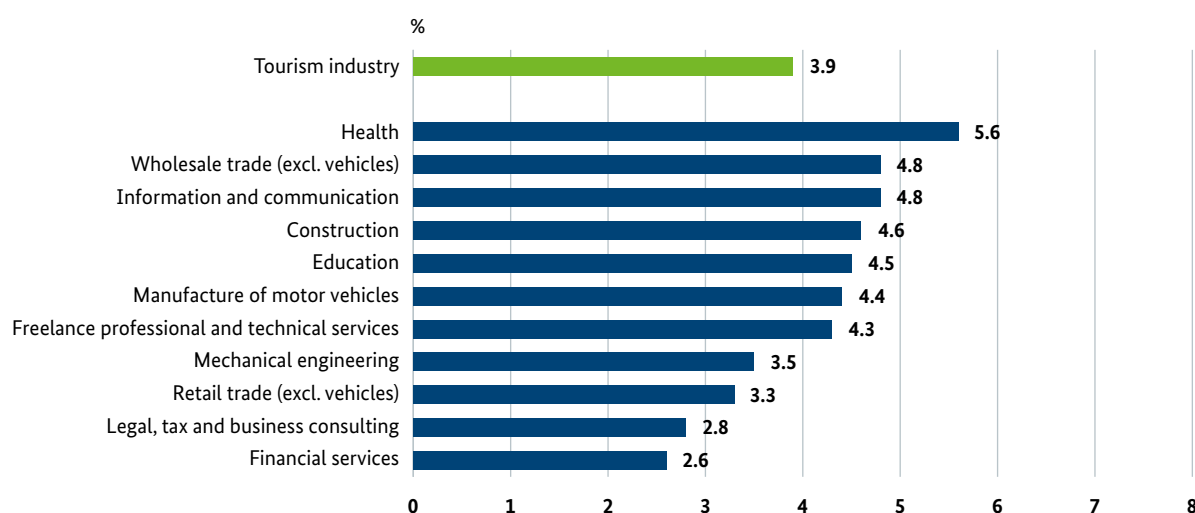
Source: DIW Econ

services.<sup>8</sup> The latter sector, for example, which also includes the operation of airports, indirectly benefits from tourism demand for passenger transport services in the aviation sector, which directly generated domestic gross value added of €3.9 billion. In addition, a significant proportion of the gross value added and employment generated indirectly in support services for transportation (€4.5 billion and around employment for 65,000 persons respectively) (see Figure 3-6) derives from tourism demand for flights.

### 3.4.2 Comparison of the tourism industry with other sectors of the German economy

In order to assess the relative economic importance of the tourism industry, we compare value added and employment generated by tourism with a range of other important economic sectors. Tourism accounts for 3.9% of total gross value added, ahead of the manufacture of machinery and equipment, the retail sector and the financial services sector, which generate between 2.6% and 3.5% of overall gross value added (see Figure 3-7).

**Figure 3-7: Share of gross value added of sectors with similar relative size in the German economy (2015)<sup>9</sup>**



Source: DIW Econ based on figures for domestic product by the Federal Statistical Office (2016)

<sup>8</sup> The exact name of the sector is 'Warehousing and support services for transportation'. This includes the operation of airports, for example.

<sup>9</sup> At the time of reporting, data on gross value added and employment in 2015 are only available for 18 broadly defined economic sectors. With the exception of information and communication, construction and education (sections I, F and P), the results shown in Figure 3-7 and Figure 3-8 relate to more narrowly defined economic sectors. Here, the distribution is based on updated figures for 2014 and also incorporates figures for the share of the individual economic sectors in gross value added/employment of the broadly defined sectors in 2015. Note: Due to possible discrepancies in aggregation levels, it does not make sense to add up the figures for the various sectors.

Tourism is a very job-rich industry and makes a large contribution to the economy in terms of the number of persons it employs (see Figure 3-8). The industry accounts for 6.8 per cent of total employment, which means it provides much greater employment effects than the manufacture of machinery and equipment and motor vehicle production, which each provide around half this share (2.6% and 2.0% respectively).

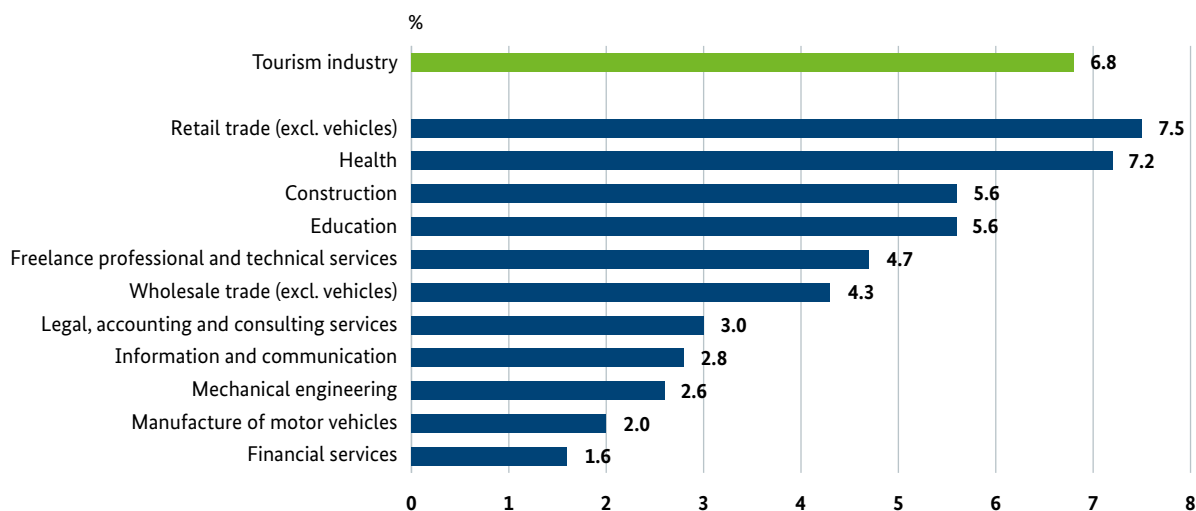
### 3.4.3 Comparison of current figures with those from 2010

By comparing current findings with TSA results from 2010, we can see how figures have changed over time.<sup>11</sup> It should be noted, however, that the 2010 Tourism Satellite Account was still based on the now obsolete WZ 2003 Statistical

classification of economic activities and the corresponding product classifications.<sup>12</sup> In terms of the product categories used, this reorganisation is quite considerable, which means that changes in a specific values between 2010 and 2015 do not necessarily reflect actual development but can also result from from this change in categories under the new system of statistical classification used.<sup>13</sup>

The Tourism Satellite Account for 2010 showed that tourism consumption in that year was worth €278.3 billion (Table 3-2). Compared with the figure for 2015, this system indicates nominal growth in tourism consumption of 3.2% over this five-year period.<sup>14</sup> This results in nominal growth in the tourism industry's direct gross value added of 8.5%.

**Figure 3-8: Share of employment of sectors with similar relative size in the German economy (2015)<sup>10</sup>**



Source: DIW Econ based on figures for domestic product by the Federal Statistical Office (2016)

<sup>10</sup> See footnote 9.

<sup>11</sup> See DIW Econ (2012) The Economic Impact of Germany's Tourism Industry (abridged version, English).

<sup>12</sup> As time goes on, new economic activities develop and existing activities become less important (e.g. taxis replacing horse-drawn carriages). This requires classifications to be modified to reflect new realities, and to be done so in line with the updates of the European System of National Accounts (ESA).

<sup>13</sup> For example, a major reorganisation of the system of product classification used has been taking place in the area of rail passenger transport. In the comparative study, rail passenger transport was still subdivided into 'passenger transport on state railways' and 'passenger transport on private railways' and included both local and long-distance transport services. In the special statistical breakdown for the current reporting year, 'long-distance rail passenger transport' is cited separately, while figures for local rail passenger transport are subsumed within 'domestic local passenger transport'. The supply-side categories used have thus fundamentally changed, which means comparing values for supply and demand is of little use.

<sup>14</sup> The consumer price index published by the Federal Statistical Office for 2015 is 106.9 (2010 = 100). This indicates that there has been a decline in real terms in overall tourism consumption.

As in the years previous, the tourism industry made an important contribution to Germany's economic output in 2015. However, as total domestic gross value added rose between 2010 and 2015 by 18 %<sup>15</sup> (in current prices the respective year), the share of the tourism industry fell from 4.4 % to 3.9 %. This means that other sectors grew more strongly than tourism.<sup>16</sup>

Total employment in Germany rose more strongly, while the number of persons employed in the tourism industry increased just slightly, rising from 2.86 million in 2010 to 2.92 million in 2015. This means that the share of the tourism industry in overall employment fell slightly: while 7.0 % of the German workforce was employed directly in the tourism industry in 2010, in 2015 this had fallen to 6.8 %.

At a disaggregate level, there are shifts in relative importance of individual product categories. This is particularly due to a fall in the number of domestic daytrip visitors and

consequently in spending by this group. The decline in this group, which was still the most important single group in 2010, caused a drop in tourist spending on fuel, as day visitors mostly travel by car (own vehicle), as well as a fall in 'other goods' (shopping) which account for a significant proportion of average spending by this group.

In contrast, other product groups have experienced substantial growth.<sup>17</sup> This includes the accommodation sector, which has benefited from a positive trend in the number of visitors staying overnight, as well as services provided by travel agencies and tour operators. The increase in the number of overnight visitors has also more than compensated for the fall in the number of day-trippers when it comes to tourism spending in food and beverage-serving outlets and shops. There has also been a positive development in sports, recreation, leisure and culture, as well as passenger transport (road and rail). The value added generated by domestic airlines was, however, on the whole weak – a trend that contrasts with the growth of airports and foreign airlines.

**Table 3-2: Comparison of results for 2010 and 2015 with regard to tourism expenditure, gross value added, and employment**

|                           | 2010      | Δ (abs.) | Δ (%)   | 2015      |
|---------------------------|-----------|----------|---------|-----------|
| Total tourism consumption |           |          |         |           |
| € bn                      | 278.3     | +8.9 bn  | +3.2 %  | 287.2     |
| Gross value added         |           |          |         |           |
| € bn                      | 97.0      | +8.2 bn  | + 8.5 % | 105.3     |
| Share of overall economy  | 4.4 %     | -0.5 pp. |         | 3.9 %     |
| Employment                |           |          |         |           |
| No. of persons            | 2,859,000 | +60,000  | +2.1 %  | 2,919,000 |
| Share of overall economy  | 7.0 %     | -0.2 pp. |         | 6.8 %     |

15 See figures for domestic product by the Federal Statistical Office from 2016 (Fachserie 18 Reihe 1.4).

16 Based on figures for domestic product from the Federal Statistical Office, above-average growth was seen in sectors including IT and information service providers, the brokering and hiring-out of workers, and the production of motor vehicles.

17 For a comparison of the individual product groups used in 2010 and 2015, see Section 4.1 of the background report on the Tourism Satellite Account (DIW Econ 2017).



## 4. Digitisation of the tourism industry

### 4.1 Market changes following the development of digital business models

Digitisation is radically changing the tourism industry: transaction costs are falling, and the use of big data and disruptive business models by digital platforms are transforming existing markets at a very fast pace.

**Network effects change the way in which travel services are brokered and can lead to the creation of platforms with considerable market power**

The emergence of online platforms that broker various products and services (e.g. hotel rooms) is a highly discussed phenomenon. From an economic point of view, these platforms act as multi-sided markets that generate

indirect and/or direct network effects<sup>18</sup> – effects that are leading to the rapid growth of digital exchange platforms with the potential to obtain considerable market power. Agents (e.g. hotel operators) that are not able to switch from one particular brokering platform (e.g. [HRS.de](https://www.hrs.de) or [booking.com](https://www.booking.com)) to an alternative, or would incur high costs if they did so, are forced to pay higher brokerage fees than if there was real competition among different platforms. Small and medium-sized accommodation providers in particular are often dependent upon large brokering platforms for gaining better access to the market and for increasing their visibility on the internet. This can lead value added to be siphoned away from the companies and towards the brokering platforms. If the brokering platforms are based abroad, this takes value creation away from Germany.

<sup>18</sup> A direct network effect is produced when the participants on one side profit directly from an enlargement of their own group. Indirect network effects are produced when the enlargement of one user group generates an indirect benefit for that same group by attracting more participants on the other side of the market.

### Sharing economy platforms reduce transaction costs and enable new suppliers and consumers to gain access to the market

Technological innovations are enabling sharing economy platforms to increasingly lower transaction costs between suppliers and consumers. This is making it quicker and easier for the different market participants to be linked up with one another. The key aim here is to match supply and demand in a targeted way through the use of complex matching algorithms and by ensuring that both sides are equally well-informed on the other through the use of peer-to-peer evaluation systems. This lowers market entry costs, which also benefits additional providers of tourism products and integrates these (often private) providers into the market.

### Big data analysis lead to the creation of new, tailored products

Start-ups in the platform economy have a 'digital DNA' that is an important factor in how successful they are in competition. These platforms are focused on data and analysis, which enables them with the flexibility and speed they need to adapt to current market conditions. Large volumes of data, also known as 'big data', enable companies in the platform economy to offer solutions that are tailored to the needs of individual customers. This puts conventional businesses in a dilemma. On the one hand, companies that have access to customers' personal data (e.g. Google, Facebook, Airbnb) are their competitors; on the other hand, the innovative capacity and the success of traditional companies is increasingly more dependent on their working together with digital pioneers.

## 4.2 Analysis of digitisation within the TSA system

The TSA system is a descriptive reporting system that identifies the overall economic importance of the tourism industry based on tourism demand in the different product areas across the economy. It does not distinguish between 'digital' turnover and 'non-digital' turnover. The TSA system does, however map the structure of the tourism industry, meaning that changes in structure as a result of digitisation may become visible.

Three sub-sectors of the tourism industry are particularly affected by digitisation: **the brokering of tourist services, accommodation, and passenger transport.**

In all three sub-sectors, we see a positive development in overall and tourism-related production values. Linked to this, Germany has also recorded an increase in gross value added associated with these areas which matches or exceeds, in some cases significantly, the increase in gross value added across the overall economy. These three sub-sectors are thus not responsible for the relative decline in the share of tourism in overall economic output. At the time of the study, no major negative effects on production values and value added in tourism which could be linked back to digitisation were visible in the TSA system.

This present report is not able to offer any insights on how the tourism industry would have developed otherwise had the digitisation processes described above not taken place. It is possible for domestic value creation to have been both higher or lower. However, the information we have on bookings made over digital platforms in 2015 suggests the overall effects of digitisation on value added in Germany were limited.<sup>19</sup> Based on anecdotal evidence and theoretical considerations, as well as the fast advancement of digitisation in the tourism industry, we are, however, likely to see relevant effects on the structure and economic importance of the tourism industry over the coming years.

When it comes to the debate on digital platforms, different sales channels and the market entry of new providers, various issues of competition policy arise. For example, it must be examined whether existing regulations need to be adapted/new regulations introduced in order to create fair conditions for competition between new market participants and existing suppliers. Amendments/new regulations must not be allowed to hinder innovation. Given the speed of growth of the platforms in question, these are pressing issues that need to be addressed swiftly.

19 For more details, see Section 4.2.3 of the main report.



## 5. Conclusion

This current study seeks to assess the importance of the German tourism industry to the overall domestic economy, and to analyse its structure in 2015.

The results show that tourism is of significant importance to Germany's economic output. In 2015, tourism demand, worth €287.2 billion, led to the creation of gross value added of €105.3 billion. This represents a 3.9% share of total gross value added in the German economy. Beyond this, the study also shows that tourism is a job-rich industry. Some 2.92 million persons are directly involved in the production of tourism goods and services – equivalent to 6.8% of the overall labour market. This means that the tourism industry accounts for a greater share of overall economic output than the manufacture of machinery and equipment or the retail sector. Its employment effects are greater than those generated by the construction sector and only just lower those of the health sector.

Compared with the results of the study in 2010, there has been a slight increase in tourism consumption and value

added generated by tourism. The growth of the tourism industry is, however, below the average growth of the overall economy. The more restrained growth in the tourism industry can be traced back to a decline in the number of daytrip visitors and consequently to the level of spending by this group – although this was partially compensated by a rise in the number of overnight visitors. This development has also brought about a shift in the structure of tourism consumption: products that were primarily demanded by daytrip visitors are being consumed at a relatively lower level (e.g. spending on fuel and shopping/'other goods' has fallen), whereas demand for products that are consumed to a greater extent by overnight visitors (e.g. hotel accommodation and travel brokering services) has grown. Domestic value added generated by airlines was weak overall.

The digitisation of the economy is radically transforming the tourism industry. This development is particularly affecting three segments: business models for the brokering of tourist services, accommodation, and passenger trans-

port are all undergoing deep transformation. But based on the results of the TSA system, it is not possible to observe any developments in these three segments that would drive a decline in the share of tourism in overall economic output. However, as the process of digitisation in the tourism industry is very dynamic, it is reasonable to expect that this situation may change in the future – whether across the sector as a whole, or across the entire economy. As the discussion on digitisation continues, the focus will be on issues of competition policy, particularly in the context of the sharing economy and the market position of digital platforms.

