



**THE CONTRIBUTION OF THE INTERNATIONAL CRUISE
INDUSTRY TO THE GLOBAL ECONOMY IN 2016**

DECEMBER 2017



CRUISE LINES INTERNATIONAL ASSOCIATION

The Global Economic Contribution of Cruise Tourism 2016



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Introduction

Business Research and Economic Advisors (BREA) was engaged by the Cruise Lines International Association (CLIA) to provide estimates of the contribution of the cruise industry to the global economy in 2016.¹ Data on passengers by source and destination market, as well as the global deployment of the global ocean-going cruise fleet were obtained from sources published by CLIA. Research reports on passenger and crew expenditures and the economic impact of the industry in specific national and regional markets were assembled and reviewed.

Methodology

The global impact relied heavily on existing reports by BREA and other researchers and represents an aggregation of the results reported in these studies plus estimates developed for regions where data were not readily available. Most of the global economic contribution reported below is derived directly from studies prepared for CLIA by BREA. Data on passenger and crew visits, direct expenditures of the cruise lines and their passengers and crew and the resulting economic impacts were taken directly from these reports and shown in regional data categories for the United States, the Rest of North America, Europe EU+3 and the Rest of the World.

The data for the United States were taken directly from:

- I. BREA, The Contribution of the International Cruise Industry to the U.S. Economy in 2016, prepared for Cruise Lines International Association, May 2017.

The data for the region of Rest of North America were derived from one current report and extrapolated from an additional study conducted in 2015. These reports were:

- II. BREA, The Economic Contribution of the International Cruise Industry in Canada, prepared for CLIA North West and Partnering Cruise Associations, April 2017.
- III. BREA, Economic Contribution of Cruise Tourism to the Destination Economies, 2014-15 Cruise Year, prepared for The Florida-Caribbean Cruise Association, September 2015.

The estimates for Europe (EU + 3) were derived using extrapolations from the following report:

- IV. BREA and G. P. Wild (International) Ltd., Contribution of Cruise Tourism to the Economies of Europe, 2015, prepared for CLIA Europe, June 2016.

¹ The terms economic contribution and economic impact are used interchangeably throughout this report.

Finally, the estimates for the Rest of the World were estimated by using data taken directly from studies conducted for 2016 for Australia, North Asia and Singapore, while the remainder were extrapolated from studies conducted during the previous two years. These reports were:

- I. BREA, The Contribution of Cruise Tourism to the Australian Economy in FY2016/17, prepared for CLIA Australia, September 2017.
- II. BREA, The Economic Contribution of Cruise Tourism to the North Asia Region in 2016, prepared for CLIA North Asia, May 2017
- III. G.P. Wild, BREA and Moore Stephens, Cruise Tourism and Economic Impact Assessment for Singapore, prepared for the Singapore Tourism Board, August 2017.
- IV. BREA, The Contribution of Cruise Tourism to the Southeast Asia Region in 2014, prepared for CLIA Southeast Asia, September 2015.

Limited data was available for the remainder of Rest of the World, which consisted primarily of South America, New Zealand and the South Pacific. Estimated data for these locations were extrapolated using the following reports.

- V. FGV Projetos, Maritime Cruises: Study on Profile and Economic Impacts in Brazil, prepared for CLIA Abremar Brasil, June 2015.
- VI. BREA, The Contribution of Cruise Tourism to the New Zealand Economy in 2014-15 Cruise Year, prepared for CLIA Australasia, July 2015.

Data taken directly from current studies and studies previously conducted by BREA account for approximately 93 percent of the estimates for total global output coming from cruise tourism. Data on spending by cruise lines and their passengers and crew that were not readily available were extrapolated to 2016 by adjusting average spending rates for inflation as reported by the appropriate government and monetary authorities. Passenger and crew visits were updated with data for 2016 as obtained from the destination ports and other sources. Given the extrapolated visit and spending data, the direct cruise sector expenditures were estimated for each of the markets. The resulting economic impacts were estimated with the same models that were used to estimate the economic impacts for the reported years.

The expenditure and economic impact data reported in these studies were directly included in the estimated impacts for the Rest of World. Estimates for all South America were estimated utilizing the Brazilian data and passenger and crew visit data for the rest of South America. Estimates for the remaining global destinations were estimated from average cruise line, passenger and crew expenditure rates for home port and transit port destinations as derived from the above seven studies. The resulting estimated impacts accounted for 7 percent of the global total output impacts.

Global Economic Impacts

As noted above, the global impact relied heavily on existing reports by BREA and other researchers and represents an aggregation of the results reported in these studies plus estimates developed for regions where data were not readily available. All data that were reported in local currencies, i.e., expenditures, output, income, etc., were converted to US\$ for purposes of aggregation.

As shown in **Table 1**, 129.4 million onshore visits by passengers and crew helped generate \$57.9 billion in direct cruise sector expenditures at destinations and source markets around the world. This \$57.9 billion also includes the direct expenditures of the cruise lines for goods and services in support of their cruise operations.

Table 1–Total Global Economic Contribution of the Cruise Sector – 2016

Category	Current US\$	
	Global	Percent Change from 2015
Passenger and Crew Onshore Visits (Mil)	129.38	5.4%
Total Direct Expenditures (US\$ Bil)	\$57.93	7.1%
Total Output Contribution (US\$ Bil)	\$125.96	7.6%
Total Income Contribution (US\$ Bil)	\$41.09	7.7%
Total Employment Contribution	1,021,681	6.8%

These expenditures generated total (direct, indirect and induced) global output of \$126 billion. For the first time, the production of the cruise industry output required the employment of over 1 million employees (1,021,681 FTE²). These employees earned \$41.1 billion in income. The details of this global contribution are discussed in the following sections of this report.

² Full-time Equivalent

Background: Cruising - A Global Industry

The cruise industry has enjoyed dynamic growth over a period of more than 30 years, driven initially by demand from North America and then by growing demand from Europe and more recently Australasia. **Table 2** sets out the international cruise sector growth between 2006 and 2016. Over this 10-year period, demand for cruising worldwide has increased from 15.1 million passengers to 24.73 million (+64 percent) with a growth rate of 6.7 percent achieved from 2015 to 2016. Over the same 10-year period, global tourist arrivals, mainly land-based tourism, has risen from 856 million in 2006 to an estimated 1,235 million in 2016, or approximately 44 percent³.

Table 2–International Demand for Cruises, 2006 to 2016

Millions of passengers

	2006	2011	2012	2013	2014	2015 ^③	2016	10-Year Growth
North America	10.38	11.44	11.64	11.82	12.21	12.20	12.49	20.3%
Europe ^①	3.44	6.15	6.23	6.40	6.39	6.58	6.67	94.0%
Subtotal	13.82	17.59	17.87	18.22	18.60	18.78	19.16	38.7%
Rest of the World ^②	1.29	2.91	3.03	3.09	3.74	4.4	5.57	331.9%
Total	15.11	20.50	20.90	21.31	22.34	23.18	24.73	63.7%

① Including Russia and Central and Eastern European countries outside the EU+3

② Rest of the world: 2009-2013 data is generally estimated

③ Data for 2015 has been revised from the last report

Numbers may not add due to rounding

Source: CLIA

Since 2006 passengers sourced from North America have increased by 20 percent, and the North America region remains the largest source market, accounting for 51 percent of global passengers. However, global changes in demand have continued the growth in source and destination markets outside of North America, and as a result North America's share of the global source market has steadily declined over the past decade from nearly 69 percent in 2006 to its current 51 percent share.

Europe has also experienced strong growth over the last decade, with passengers sourced from Europe almost doubling over this timeframe. In 2006 Europe accounted for 23 percent of the global cruise market with 3.4 million passengers. In 2016 this increased to 6.7 million passengers, for a 94 percent growth. Despite this growth, Europe's overall market share only increased to 27 percent of the 2016 global market.

³ [UNWTO Annual Report 2016](#).

The Rest of the World has seen the most significant growth in both passenger numbers and market share. In 2006 the Rest of the World accounted for 8.5 percent of the global cruise market with 1.29 million passengers. In 2016 its market share has increased to 23 percent with 5.57 million passengers. This ten-year passenger growth represents a 332 percent increase, which includes an increase of 27 percent for 2016 over 2015.

To further illustrate the continued dynamic and shifting pattern of growth in the global cruise industry from 2006 to 2011, passengers sourced from Europe increased by 79 percent, those sourced from the Rest of the World increased by 126 percent, while those from North America increased by 10 percent. Over the next five years, Europe's growth slowed to 8.5 percent, expansion in the Rest of the World continued to soar at 91 percent and North America's growth remained at a relatively constant 9.2 percent.

Not surprisingly, the capacity deployed by the cruise industry, as measured by bed days⁴, has followed a similar growth and distribution profile. Overall, the global supply of bed days has increased by 34 percent from 2011 through 2016, increasing from 121.8 million bed days to 163.5 million. Global capacity in 2016 is up 5.9 percent over 2015 (see **Table 3**).

Table 3—Global Deployment of Capacity, 2011 to 2016

Millions of bed days

Region	2011 ^①	2012 ^①	2013 ^①	2014 ^①	2015 ^②	2016 ^②	1-year Growth
Alaska	5.42	5.87	6.25	6.15	6.65	6.77	1.7%
Asia	2.32	3.21	4.72	6.17	11.33	15.06	32.9%
Australia/ NZ/Pacific	4.50	5.49	6.51	7.09	8.36	9.97	19.2%
Caribbean	45.89	44.20	44.66	51.00	53.58	55.07	2.8%
Europe w/o Med	10.92	12.71	14.37	14.88	17.48	19.16	9.6%
Mediterranean	27.75	28.54	28.38	25.14	29.93	30.53	2.0%
South America	4.33	4.80	4.93	4.42	4.27	4.50	5.3%
Rest of the World	20.68	21.01	20.53	20.63	22.81	22.49	-1.4%
Total	121.8	125.8	130.3	135.5	154.4	163.5	5.9%

① Survey of 18 CLIA international cruise brands

② Survey of 38 CLIA international cruise brands

Numbers may not add due to rounding

Source: CLIA

The Caribbean is the principal cruise destination for passengers sourced from North America. While its share of the cruise industry's global deployment has fallen from 38 percent in 2011

⁴ Passenger bed days are the number of days that all berths could be occupied at 100 percent occupancy. For example, a cruise ship with 2,000 lower berths on a 7-day cruise generates 14,000 potential bed days.

to 34 percent in 2016, it remains the largest destination market with 55.1 million bed days deployed in the region during 2016. As shown in Table 3, this represents a 20 percent increase in capacity since 2011 and includes a 2.8 percent increase in 2016 over 2015.

Asia continues to lead the industry growth, and saw its deployed capacity increase by 33 percent in 2016 to 15.1 million bed days. Since 2011, deployed capacity in Asia has risen from 2.3 million bed days to 15.1 million, representing a 549 percent increase. Australia, New Zealand and the Pacific also experienced triple digit growth since 2011, increasing from 4.5 to 10 million bed days in 2016, or an increase of nearly 122 percent.

Including the Mediterranean, Europe has seen its bed day capacity increase by 29 percent over the five-year period, rising from 38.7 million bed days in 2006 to 49.7 million in 2016. Overall, however, the growth in Europe (75 percent) has far outpaced the growth in the Mediterranean (10 percent) over the last five years.

South America saw the smallest change in bed day capacity since 2011, increasing from 4.3 million bed days in 2011 to 4.5 million in 2016, for an overall increase of 3.9 percent. The Rest of the World increased from 20.7 million bed days in 2011 to 22.5 million in 2016, for an 8.7 percent increase.

Thus, the cruise industry is truly a global industry with passengers sourced from around the world and with cruise itineraries destined for countries and ports around the globe. It is also a dynamic industry with overall global growth rate of the cruise industry (64%) exceeding that of the general global tourism⁵ (45%) over the past 10 years. The dynamism also carries over to the geographic distribution of growth which has shifted from North America, to Europe and now to Australasia. As a result, the industry impacts the global economy generating jobs, income and tax revenues in all regions of the world.

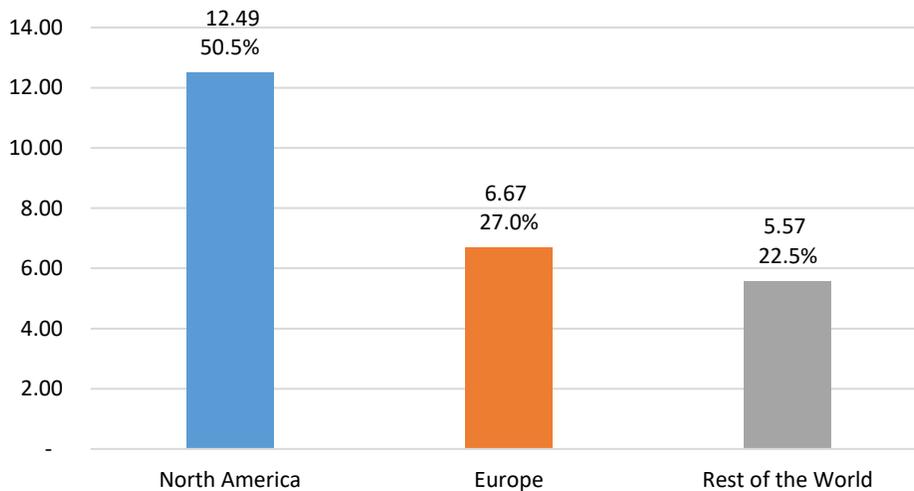
⁵ [UNWTO Annual Report 2016](#).

Source Markets: Where do cruise passengers reside?

As discussed in the previous section, cruise passengers are sourced from around the world. In this section, we focus on the global distribution for 2016. North America accounted for 50 percent of all cruise passengers with 12.49 million passengers. Europe was next with 27 percent and 6.67 million passengers and the Rest of the World accounted for the remaining 23 percent with 5.57 million passengers. The potential for growth in the Rest of the World is illustrated by the fact that it accounts for about nearly 85 percent of the world's population,⁵ but only 23 percent of world cruisers.

Figure 1 – Global Distribution of Cruise Passengers by Source Market – 2016

Millions of passengers



Source: CLIA

North America

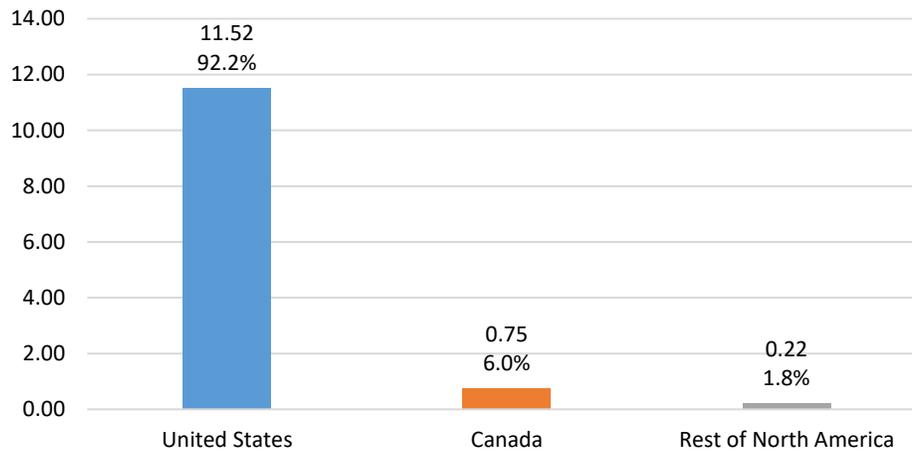
Within North America, 11.52 million passengers were sourced from the United States and accounted for 92 percent of the market's cruise passengers (see **Figure 2**). Canada accounted for 6.0 percent with 750,000 passengers, an increase of 3.6 percent from 2015. The remaining 1.8 percent, or 220,000 passengers, resided elsewhere in North America. This group experienced an increase of 32 percent from 2015. The largest of these other North American source markets are: Mexico, Bonaire, the Bahamas, the Dominican Republic and Barbados. Combined these five countries accounted for 77 percent of the passengers sourced from North American countries other than the U.S. and Canada.

⁵ Population Reference Bureau, [2017 World Population Data Sheet](#), 2017.

In addition to being the largest source market, the United States is also the largest originator of cruises. During 2016, cruises originating from U.S. ports carried an estimated 11.66 million passengers. Thus, passenger embarkations in the United States accounted for just under half (47 percent) of the 24.7 million global embarking passengers. The five largest cruise ports, Miami, Port Canaveral, Port Everglades, Galveston and Long Beach accounted for 68 percent of the passenger embarkations in the United States with 7.9 million passengers¹.

Figure 2 –Distribution of Cruise Passengers Sourced from North America – 2016

Millions of passengers



Source: CLIA

Note: Rest of North America consists of Mexico, Bermuda, Central America and the Caribbean.

Europe

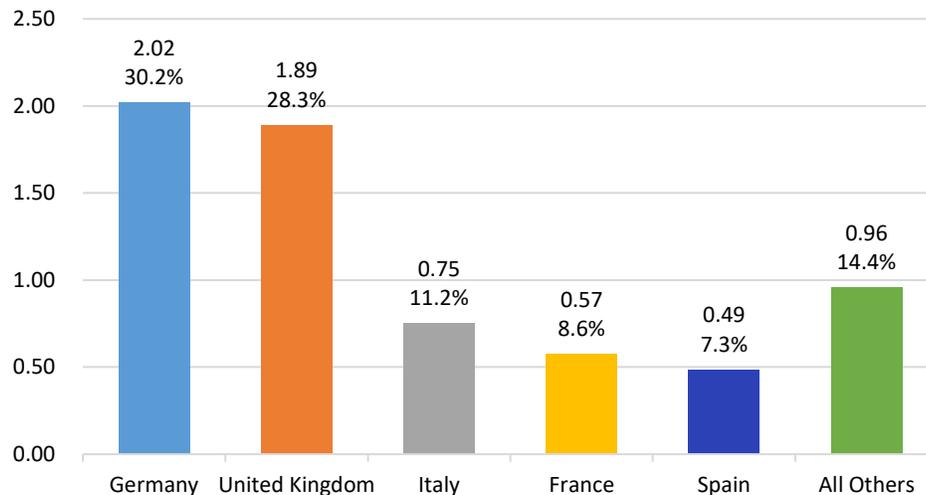
As shown in **Figure 3**, the five largest source countries in Europe accounted for 86 percent of the passengers sourced from Europe in 2016. As in 2015, Germany and the United Kingdom accounted for more than half (59 percent) of the passengers sourced from Europe with a total of 3.9 million passengers. Germany experienced the highest year-over-year growth with an 11 percent increase in the number of passengers in 2016 while the United Kingdom experienced an increase of 5.6 percent. An additional 1.8 million passengers were sourced from Italy, France and Spain, 27 percent of European-sourced passengers. Italy and France experienced declines of 7.3 percent and 6.7 percent respectively, in the number of passengers in 2016, but passengers sourced from Spain experienced an increase of 4.2 percent.

¹ The Contribution of the International Cruise Industry to the US Economy in 2016, BREA

Among the other European countries contributing at least 100,000 cruise passengers were sourced from Austria, Netherlands, Norway and Switzerland. Combined, 450,000 passengers were sourced from these four countries, about 6.8 percent of European sourced passengers. All four experienced a decrease in passengers during 2016. Finally, approximately 500,000 cruise passengers were sourced from the remaining European countries, 7.5 percent of European-sourced passengers.

Figure 3 –Distribution of Cruise Passengers Sourced from Europe – 2016

Millions of passengers



Note: United Kingdom includes Ireland

Source: CLIA

An estimated 6.32 million passengers embarked on their cruise from European ports. This is up from 6.12 million in 2015, or an increase of 3.3 percent. Key European home ports include: Barcelona, Civitavecchia, Copenhagen, Genoa, Hamburg, Marseille, Palma Majorca, Savona, Southampton and Venice. Combined, these ports accounted for about two-thirds of all European embarkations.

Rest of the World

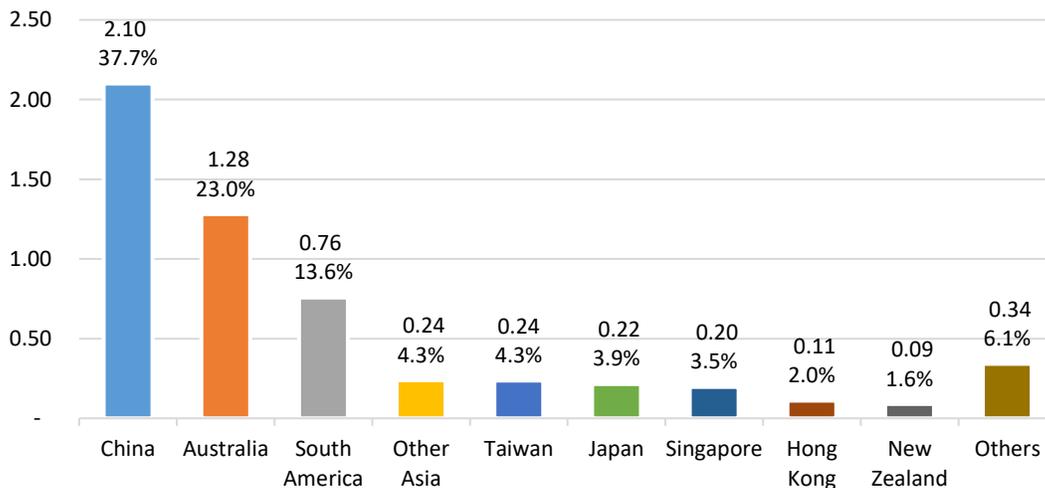
As shown in **Figure 4**, the two principal sources in the Rest of the World are the countries of China with 2.1 million passengers and Australia with 1.3 million passengers. Combined these two countries accounted for about 60 percent of all passengers sourced from the Rest of the World. Both nations experienced strong growth, but growth in China outpaced nearly all other source markets in the world with 113 percent growth. The countries in Asia other than China accounted for 1 million passengers or 18 percent of the Rest of the World. The countries of South America accounted for 758,000 passengers which equates to about 14 percent

of the Rest of the world. Finally, the remainder of the countries of the Rest of the World accounted for 432,000 passengers or 7.8 percent of the Rest of the World.

As discussed in the previous section, The Rest of the World has experienced the most growth among the regional cruise markets with 27 percent in year-over-year growth in 2016. Even with this high growth rate there was considerable variation in growth across the countries in this region. China experienced the largest increase 113 percent in their sourced passengers from 986,000 in 2015 to 2.1 million in 2016. New Zealand, South Africa, Australia and Japan also saw notable increases of 36 percent, 35 percent, 21 percent and 20 percent, respectively. At the same time, passengers sourced from several nations in Asia and South America saw decreases that ranged from 4 percent in India, to 20 percent in Brazil.

Figure 4 –Distribution of Cruise Passengers Sourced from the Rest of the World – 2016

Millions of passengers



Source: CLIA

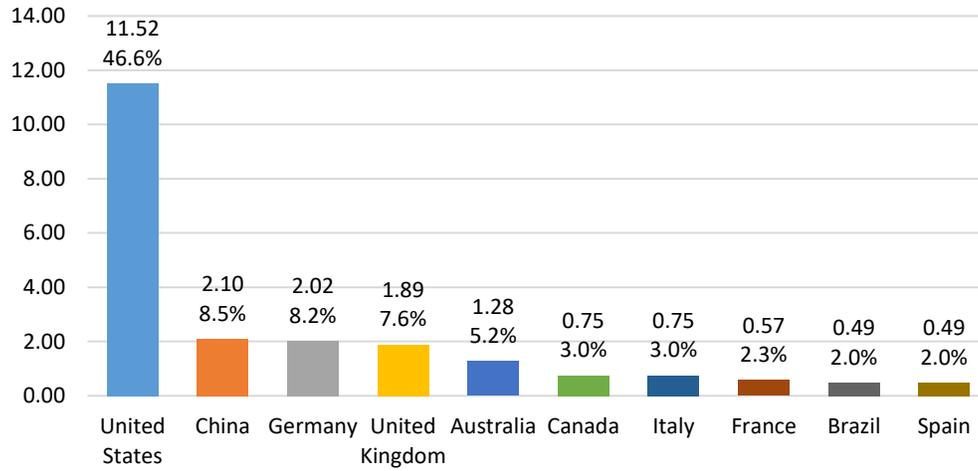
Top 10 Countries

In summary, a total of 21.86 million passengers were sourced from the top 10 countries which accounts for 88 percent of global cruise passengers. As indicated in **Figure 5**, these countries are located in all major global regions.

The United States with 11.52 million passengers was the largest source country by far, accounting for just under half (47 percent) of global cruise passengers. The next two countries combined, China and Germany, accounted for 17 percent of global passengers with a total of 4.12 million passengers. The United Kingdom had 1.89 million passengers and Australia had 1.28 million cruise passengers and accounted for 13 percent of global passengers. The last

five countries: Canada, Italy, France, Brazil and Spain generated a total of 3.05 million passengers, about 12 percent of the global passengers.

Figure 5 -Cruise Passengers Sourced from the Top 10 Countries - 2016

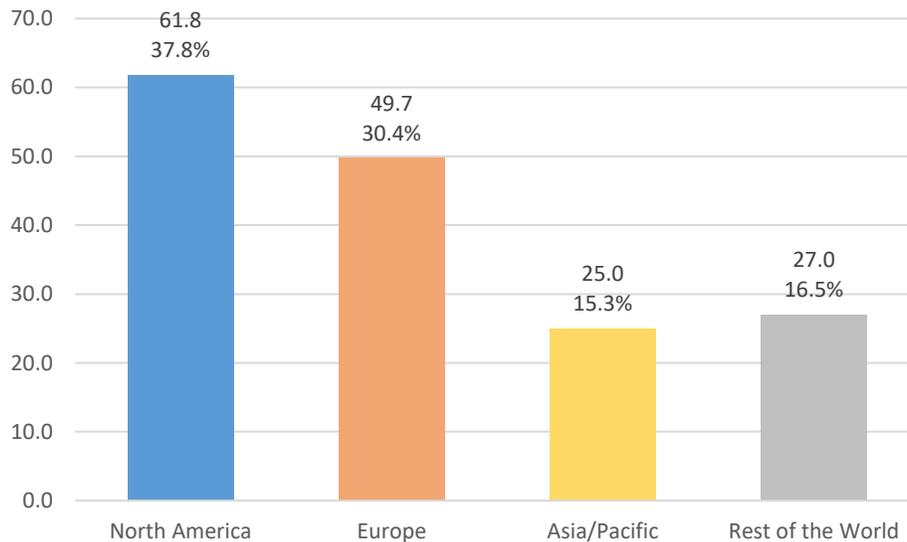


Source: CLIA

Destination Markets: Where are cruise ships deployed?

As discussed in the Introduction, cruise lines deploy their ships around the globe. In this section, we focus on the global distribution of bed day capacity for 2016. As shown in **Figure 6**, North America accounted for 38 percent of the global bed day capacity with 61.8 million bed days, an increase of 2.7 percent from 2015. Europe and the Mediterranean was next with 30 percent and 49.7 million bed days, an increase of 4.8 percent from 2015. The Asia/Pacific region came in with 25.0 million bed days, up 30.4 percent from 2015 and representing 15 percent of the global capacity. The Rest of the World, including South America, accounted for the remaining 16.5 percent with 27.0 million bed days. Bed day capacity decreased by .3 percent in the Rest of the World in 2016.

Figure 6 – Global Distribution of Passenger Bed Days – 2016
Millions of bed days



Source: CLIA

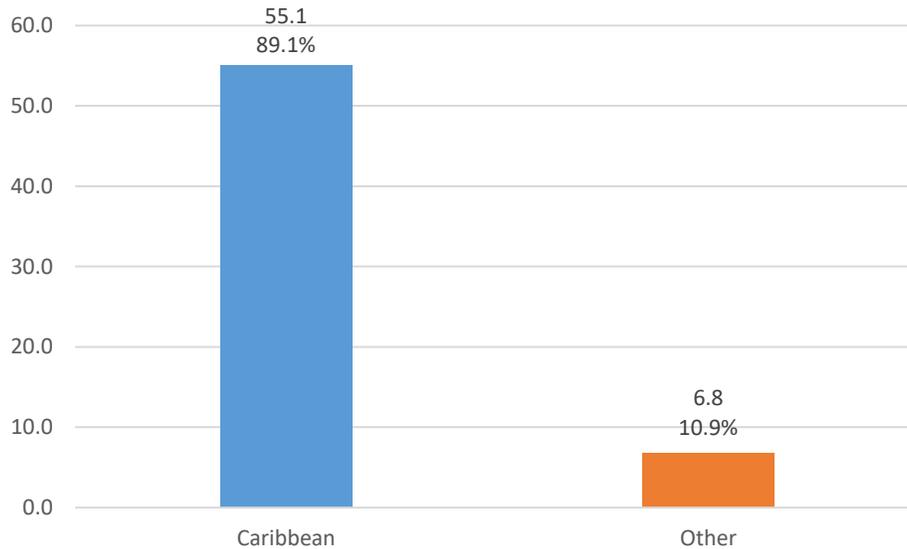
North America accounted for a smaller share of global capacity than global passengers, 38 percent versus 50 percent. Europe, on the other hand accounted for a larger share of capacity than passengers, 34 percent versus 27 percent while the Rest of the World, including Asia/Pacific, had more capacity 32 percent than sourced passengers 23 percent.

North America

Within North America, the Caribbean, with 55.1 million bed days, accounted for 89 percent of the capacity deployed in the market (see **Figure 7**).

Figure 7 –Distribution of Passenger Bed Days in North America – 2016

Millions of bed days



Source: CLIA

BREA in its latest analysis for the FCCA⁶ reported that seven Caribbean destinations had passenger arrivals⁷ more than one million passengers during the 2014-15 cruise year⁸. These were: the Bahamas (3.50 million⁹), Cozumel (2.97 million), St. Maarten (2.05 million), U.S. Virgin Islands (2.04 million), the Cayman Islands (1.61 million), Jamaica (1.49 million) and Puerto Rico (1.49 million). Combined, these seven destinations accounted for about 28 percent of the 55.1 million bed days across the Caribbean.

Within the United States, BREA has estimated that 11.66 million passengers embarked on their cruises from U.S. ports (excludes San Juan, PR) while 5.2 million passengers visited U.S. ports as transit passengers. Relative to 2015, embarkations at U.S. ports during 2016 increased by 6.7 percent while visits by transit passengers were down slightly by 2.8 percent. As noted previously the five largest embarkation ports in the U.S. during 2016 were: Miami (2.55 million), Port Canaveral (2.09 million), Port Everglades (1.84 million), Galveston (0.87

⁶ Economic Contribution of Cruise Tourism to Destination Economies, prepared for Florida-Caribbean Cruise Association, September 2016.

⁷ Passenger arrivals are the number of passengers on cruise ships that arrive at destination ports. Since not all passengers will disembark at a given port, passenger arrivals are larger than passenger onshore visits.

⁸ The 2015-15 cruise year is defined as the 12-month period from May, 2015 through April, 2016.

⁹ This figure excludes arrivals at the private islands in the Bahamas.

million) and Long Beach (0.591 million). Thus, these five ports accounted for 68 percent of embarkations among all U.S. ports.

In total, there were 5.2 million transit visits. The major transit ports were the Alaska ports of Juneau (1.0 million), Ketchikan (948,000) and Skagway (817,000) and the Florida ports of Key West (665,500) and Port Canaveral (269,500). These five ports accounted for about 71 percent of all passenger arrivals at U.S. transit ports.

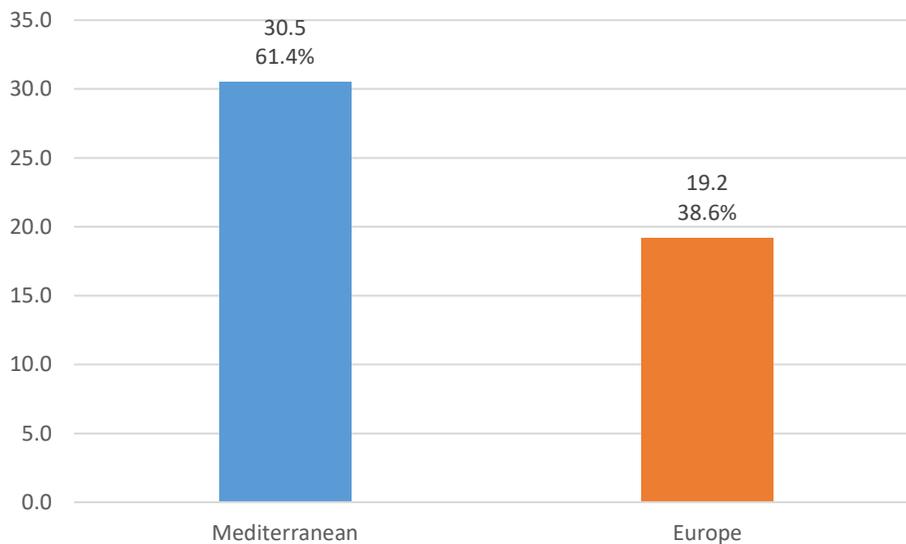
In Canada the principal home ports were Vancouver, Montreal and Quebec. Vancouver, along with Seattle, is a major home port for Alaska cruises and handled a total of 827,000 passengers, while the two ports along the St. Lawrence handled approximately 180,000 home port and transit port passengers. Finally, the ports of Atlantic Canada handled about 530,000 passengers during 2016.

Europe

The Mediterranean accounted for 61 percent of the capacity deployed in Europe during 2016 with 30.5 million bed days (see **Figure 8**). The Mediterranean is a fairly self-contained market with most cruise originating and terminating within the region. As noted previously the major home ports in the Mediterranean are Barcelona, Civitavecchia, Genoa, Venice, and Savona. Major destination or transit ports also include Naples, Marseille, Tenerife, Dubrovnik, Piraeus (Athens) and Las Palmas.

Figure 8 – Distribution of Passenger Bed Days in Europe – 2016

Millions of bed days



Source: CLIA

Notes: The Mediterranean includes the Atlantic Isles while Northern Europe includes the Black Sea.

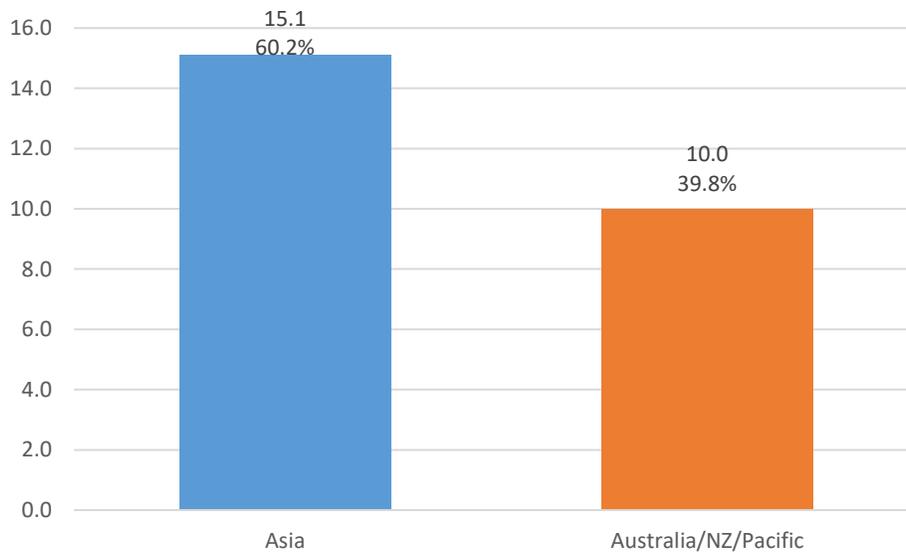
Cruise lines also deployed an estimated 19.2 million bed days in Northern Europe. Like the Mediterranean, most cruises originate and terminate within the region. The principal home ports are Copenhagen, Hamburg and Southampton. Major cruise destinations in Northern Europe include Bergen, Cadiz, Helsinki, Lisbon, Rostock/Warnemunde, St. Petersburg, Stockholm and Tallinn.

Asia/Pacific

As noted previously the Asia/Pacific destination market accounted for 25 percent of the cruise industry's global bed day capacity, up from 13 percent in 2015. As shown in **Figure 9**, the Australia/South Pacific region accounted for 40 percent of the capacity deployed in this market with 9.97 million bed days. Sydney serves as the primary homeport in the region with cruises primarily destined for New Zealand and South Pacific destinations as well as other Australian ports.

Figure 9 – Distribution of Passenger Bed Days in Asia/Pacific – 2016

Millions of bed days



Source: CLIA

The Asia region, led by China, accounted for 60 percent of the capacity deployed in the market with 15.1 million bed days, an increase of 110 percent from 2015.

Rest of the World

The Rest of the World accounted for 7 percent of the cruise industry's global capacity with 27.0 million bed days. South America was the largest sub region within this destination market with 4.5 million bed days, 17 percent of the region's capacity.

Passenger and Crew Onshore Visits

As shown in **Table 4**, the cruise industry generated over 129 million passenger and crew visit days at ports around the globe. These consisted of 24.7 million passenger embarkations, 80.1 million transit passenger visits and 24.5 million crew visit days. European ports accounted for 35 percent of the global passenger and crew visits, while ports throughout North America accounted for 48 percent.

Table 4—Passenger and Crew Onshore Visits – Global and Regional Markets – 2014

Millions of Visit Days

Category	Global	Regional Markets			
		United States ^①	Rest of North America ^②	Europe (EU+3) ^③	Rest of World ^④
Passenger Embarkations	24.73	11.66	1.55	6.35	5.18
Transit Passengers	80.10	5.20	30.67	32.53	11.70
Crew	24.54	7.21	5.69	6.41	5.23
Total	129.38	24.08	37.91	45.29	22.10
Percent Change from 2015	5.4%	4.2%	1.7%	3.1%	19.9%

① United States consists of all US ports including those in Alaska and Hawaii.

② Rest of North America consists of ports in Bermuda, Canada, the Caribbean, Central America & Mexico.

③ Europe EU+3 includes the ports of the 27-member states of the EU plus Iceland, Norway & Switzerland.

④ Rest of the World consists of ports in South America, Asia, the South Pacific and Australia.

Of the 24.7 million cruise passengers sourced from around the world, 11.7 million, 47 percent, embarked on their cruise from a port in the United States. Of these 61 percent boarded cruises from Florida's five cruise ports, Miami, Port Canaveral, Port Everglades, Tampa and Jacksonville. Another 1.6 million passengers, 6 percent of the global total, embarked on cruises from other ports in North America. The principal embarkation ports were San Juan in the Caribbean and Vancouver in Canada.

European ports with 6.4 million passenger embarkations accounted for another 26 percent of global passenger embarkations. The major embarkation ports in Europe included Barcelona, Civitavecchia, Palma Majorca, Piraeus (Athens) and Savona Venice in the Mediterranean and, Copenhagen, Hamburg and Southampton in northern Europe. Combined, these nine ports accounted for almost two-thirds of the passenger embarkations in Europe.

A total of 5.2 million passengers embarked on cruises at ports around the Rest of the World, 21 percent of the total. Sydney and Singapore were the major home ports in the Rest of the World.

On a conventional seven-day itinerary, the typical cruise ship makes between three and four calls in addition to the home port call. Thus, the 24.7 million cruise passenger embarkations generated another 80.1 million visits at transit calls at ports around the globe.

The ports in Europe now account for the largest share at 32.5 million transit passenger visit days, 41 percent of the total. Europe's major transit ports included Barcelona, Civitavecchia, Dubrovnik, Marseille, Naples and Piraeus in the Mediterranean and Bergen, Lisbon, St. Petersburg, Stockholm and Tallinn in Northern Europe. The ports of the Rest of North America are next at 38 percent and 30.7 million transit visits. The Caribbean, including Mexico and Central America accounted for the majority of these visits. The ports of the United States generated 5.2 million transit passenger visits, 6.5 percent of the total. The principal transit ports in the United States are in Alaska, Florida and California. Finally, ports in the Rest of the World received 11.7 million transit passenger visits. The principal transit ports in this region were in Australia and Southeast Asia.

Finally, crew onboard cruise ships also disembark and visit in both home and transit ports. Based upon data collected as part of regional and port specific cruise studies, BREA has estimated that between 40 percent and 45 percent of crew disembark at each port call. Thus, on a global basis cruises generated an estimated 24.5 million crew visits.

The ports of the United States and Europe generated 7.2 million and 6.4 million crew visits, respectively. Combined this accounted for 56 percent of global crew visits. The Rest of North America and the Rest of the World generated 5.7 million and 5.2 million crew visits, respectively.

Direct Expenditures Generated by Cruise Tourism

The direct expenditures generated by cruise tourism were analyzed for three segments: i) cruise passengers, ii) crew members and iii) cruise lines. Passengers purchased pre- and post-cruise vacations, shore excursions, souvenirs and other retail goods while crew purchased a similar set of goods and services with a heavier concentration on retail goods. In addition, cruise lines purchased a variety of goods in support of their cruise operations, including food and beverages, hotel supplies, bunker fuel, and utilities while in port. Cruise lines also made payments for a variety of services in support of their global cruise operations, including travel agent commissions, expenditures for advertising and promotion and other professional and business services. As shown in **Table 5**, the estimated direct global spending by cruise lines and their passengers and crew totaled \$57.9 billion during 2016.

Table 5–Direct Cruise Sector Expenditures – Global and Regional Markets – 2016

Billions of US\$

Category	Regional markets				
	Global	United States	Rest of North America	Europe (EU+3)	Rest of World
Home Port Passengers	\$8.81	\$3.40	\$0.63	\$1.98	\$2.80
Transit Passengers	\$7.58	\$0.65	\$2.98	\$2.33	\$1.62
Passenger Total	\$16.39	\$4.05	\$3.61	\$4.31	\$4.42
Crew	\$1.40	\$0.34	\$0.53	\$0.16	\$0.37
Cruise Lines ^①	\$40.15	\$17.30	\$1.40	\$16.22	\$5.24
Total	\$57.93	\$21.69	\$5.53	\$20.69	\$10.03
Percent Change from 2015	7.1%	3.9%	2.9%	5.1%	22.6%

^① Expenditures by cruise lines consists of purchases of goods consumed and used on ships, port charges and fees, travel agent commissions, administrative expenses and wages paid to shore side employees and crew among others.

On a global basis, passengers spent an estimated \$16.4 billion during home and transit port calls, accounting for 28 percent of total cruise sector direct expenditures. Crew spent another \$1.4 billion, 2.4 percent of the total. Finally, cruise lines spent an estimated \$40.2 billion on cruise operations, 69 percent of the total.

On a regional basis, the United States and Europe had similar direct expenditure totals, \$21.7 and \$20.7 billion, respectively. Thus, they accounted for about 37 percent and 36 percent of the total global direct expenditures, respectively. Since the U.S. serves primarily as a source market for cruises to the Rest of North America, expenditures by home port passengers account for 77 percent of passenger and crew spending in the United States. In Europe, on the other hand, cruises originate and make port calls within the European market. As a result,

expenditures by transit passengers are more than that by embarking passengers (\$2.3 vs. \$2.0 billion).

Expenditures by cruise lines were also similar in both the United States and Europe, \$17.1 billion in the U.S. and \$16.6 billion in Europe. The key difference is that shipbuilding, including maintenance and refurbishment, accounted for a far more significant percent of the expenditures by cruise lines in Europe than in the United States.

Prior to 2013 total direct spending had been higher in Europe. Starting in 2013 spending in the United States has consistently been above that in Europe, with this difference reaching \$1 billion in 2016. Much of this change has to do with the relative growth rates in passenger embarkations within the US (+17 percent) versus the growth across Europe (+5.0 percent).

As alluded to above, the Rest of North America is principally a destination market for cruises originating in the United States. The \$3.0 billion in expenditures by transit passengers in this region, accounted for 72 percent of all passenger and crew spending in the region. The \$1.4 billion in cruise line spending in the Rest of North America was largely concentrated in Canada and accounted for about 25 percent of the total spending in the region. In total, the \$5.5 billion in direct cruise sector expenditures in the Rest of North America accounted for 9.5 percent of global direct spending.

The \$10.03 billion in direct expenditures in the Rest of the World accounted for 17 percent of global direct spending. The Home Port passengers of this region spent the highest proportion within their category than any other category. Compared with all other regions, home port passengers in the Rest of the World accounted for a higher percentage of their regions total spend, accounting for 28 percent of all spending. This is nearly twice as much as the next closest region, the United States' 16 percent. Passenger spending is also the driving factor in the overall growth of this region. Finally, cruise lines spent \$5.2 billion, accounting for 52 percent of direct spending within the region. These expenditures consist primarily of the presence of cruise administrative offices and the construction and refurbishment of ships in Asia.

As shown in **Table 6**, passenger and crew expenditures were concentrated in three categories, travel to home port, tours & local transit, and retail & other. Combined these three categories accounted for 77 percent of the global expenditures of passengers and crew. On average \$137.4 in expenditures was generated by each visit.

Table 6–Global Passenger and Crew Spending by Category – 2016

Millions of US\$

Categories	Total	Home Port Passengers	Transit Passengers	Crew
Visit Days (Millions)	129.38	24.73	80.10	24.54
Accommodations	\$1,787	\$1,782	\$2.1	\$2.9
Travel to Home Port	\$4,425	\$4,425	--	--
Food & Beverages	\$2,287	\$758	\$1,080	\$449
Tours & Local Transit	\$3,329	\$850	\$2,294	\$186
Retail & Other	\$5,955	\$995	\$4,203	\$758
Total	\$17,782	\$8,808	\$7,579	\$1,396
Average Spend per Visit	\$137.44	\$356.10	\$94.61	\$56.86
Percent Change from 2015	11.8%	16.5%	7.2%	9.9%

Economic Contribution Generated by Cruise Tourism in 2016

The objective of this analysis is to quantify the contribution of the spending generated by cruise tourism to the global economy during 2016. The quantification consists of the measurement of the direct expenditures and the resulting impacts on output, employment and income. The contribution analysis consists of three elements: i) the direct economic contribution, ii) the indirect economic contribution and the iii) the induced economic contribution.

The direct expenditures generated by the cruise industry and its passengers and crew that were quantified and discussed in the previous section, are the driving force of the industry's contribution to the global economy. These expenditures generate direct employment and employee income in support of providing the goods and services purchased by the cruise lines and their passengers and crew.

The indirect contribution results from the subsequent demand for goods and services generated by the directly impacted businesses. For example, food processors must purchase raw foodstuffs for processing; utility services, such as electricity and water, to run equipment and process raw materials; transportation services to deliver finished products to the cruise lines or wholesalers; and insurance for property and employees.

The induced contribution is generated by the spending of the employees of the cruise lines and their suppliers. The income of these employees is used to purchase a broad range of consumer goods and services including such goods as autos, food, clothing, furniture, health care and so forth. As a consequence, the induced contribution is concentrated in the final demand for final goods produced for the household sector.

As discussed in the Introduction, the estimates of the global direct, indirect and induced contribution are the sum of the impacts estimated for the regional markets. The regional estimates for 2016 are taken directly from published economic impact studies for 2016, extrapolated impacts for regions where studies were conducted in the past two years and estimates developed by BREA for those regions where recent economic impact data are unavailable.

Direct Economic Contribution

The \$57.9 billion in global direct cruise tourism expenditures account for a 7.1 percent increase over 2015 and by themselves generated a significant contribution to the global economy. As shown in **Table 7**, these direct expenditures generated 491,061 FTE jobs, up 6.8 percent from 2015, paying \$17.8 billion in employee income, up 6.9 percent from 2015. They include the shore side employees and crew of cruise lines.

Table 7—Direct Cruise Sector Economic Contribution – Global and Regional Markets – 2016

Billions of US\$

Category	Global	Regional Markets			
		United States	Rest of North America	Europe (EU+3)	Rest of World
Output (\$ Billion)	\$57.93	\$21.69	\$5.53	\$20.69	\$10.03
Share of Global		37.43%	9.54%	35.71%	17.32%
Income (\$ Billion)	\$17.78	\$7.38	\$1.04	\$5.99	\$3.36
Share of Global		41.53%	5.83%	33.71%	18.93%
Employment	491,061	158,226	58,081	185,842	88,912
Share of Global		32.22%	11.83%	37.85%	18.11%
Percent Change from 2015					
Output (\$ Billion)	7.1%	3.9%	2.9%	5.1%	22.6%
Income (\$ Billion)	6.9%	6.1%	4.7%	3.0%	17.4%
Employment	6.8%	4.5%	5.5%	5.9	14.2%

The table also shows the regional distribution of the direct economic contribution. Europe's direct economic contributions accounted for 36 percent of the global direct contribution of the cruise industry. The \$20.7 billion in direct expenditures in Europe generated 185,842 FTE jobs paying an estimated \$6.0 billion in employee income. As noted previously Europe's ship-building industry represents a significant component of the direct economic contribution of the cruise industry in Europe.

The United States accounted for 37 percent of global direct contribution to the cruise industry with \$21.7 billion in direct expenditures. These expenditures generated an estimated 158,226 FTE jobs paying \$7.4 billion in employee income. Given the significant headquarters and home port operations in the U.S., the direct economic contribution is heavily weighted toward those industries that supply goods and services to the cruise ships, i.e., cruise ports, suppliers of food and beverages, fuel and equipment, and administrative support services such as, advertising, accounting and professional services and transportation services, including travel agents.

In the Rest of North America, the cruise industry's direct expenditures of \$5.5 billion generated 58,081 FTE jobs paying \$1.0 billion in employee income. The share of the global economic contribution in this region ranged from 5.8 percent for the income contribution to 12 percent for the employment impact. The impacts in this region are largely generated by passenger and crew spending, which accounted for 75 percent of the region's direct expenditures. Because these impacts primarily affect the retail trade and tour sectors, which have relatively low wages and productivity, the share of the employee income impact is lower than the share of the employment impact.

Finally, the direct expenditures of \$10.0 billion in the Rest of the World generated 88,912 FTE jobs paying \$3.4 billion in employee income. The overall global share in each of these categories has increased noticeably over the last three years. Driven by growth in capacity and the resulting visits predominantly in Australasia, the global share of direct output in the Rest of the World has increased from approximately 8.7 percent in 2013 to 17 percent in 2016. Employment share has increased from 11 percent to 18 percent, and the income share has increased from 9.7 percent to 19 percent over this same three-year period.

Indirect and Induced Economic Contribution

As discussed previously, the indirect and induced contributions are generated by the spending of the directly impacted businesses and their employees. Consequently, these impacts spread throughout the global and regional economies. The specific indirect and induced impacts are determined by the structure of the individual economies and as a result can vary significantly from region to region. As shown in **Table 8**, the \$57.9 billion in direct cruise tourism expenditures generated an additional \$68.03 billion in indirect and induced output. This is an increase of 8.0 percent from 2015. It also generated \$23.3 billion in employee income, up 8.3 percent from 2015; and 530,620 FTE jobs, up 6.8 percent from 2015.

Table 8—Indirect and Induced Cruise Sector Economic Impact—Global and Regional Markets—2016
Billions of US\$

Category	Global	Regional Markets			
		United States	Rest of North America	Europe (EU+3)	Rest of World
Output (\$ Billion)	\$68.03	\$26.07	\$4.48	\$29.46	\$8.02
Share of Global		38.33%	6.58%	43.30%	11.79%
Income (\$ Billion)	\$23.32	\$13.19	\$0.99	\$6.32	\$2.81
Share of Global		56.57%	4.23%	27.12%	12.07%
Employment	530,620	231,206	41,045	195,584	62,785
Share of Global		43.57%	7.74%	36.86%	11.83%
Percent Change from 2015					
Output (\$ Billion)	8.0%	4.9%	0.1%	10.3%	15.3%
Income (\$ Billion)	8.3%	7.1%	2.9%	8.8%	15.6%
Employment	6.8%	5.3%	3.6%	5.7%	19.5%

As with the direct contribution, the United States and Europe together account for the majority about of the global indirect and induced contribution. While Europe accounted for a larger percentage of the global output contribution than the U.S., the United States accounted for a larger percentage of the global employment and income contribution. The Rest of North America accounted for between 4 percent and 8 percent of the global indirect and induced

economic contributions while the Rest of the World each accounted for between 11 percent and 12 percent.

Total Economic Contribution

Combining the direct, indirect and induced contributions, cruise tourism generated an estimated \$126.0 billion in total output of goods and services throughout the global economy during 2016, an increase of 7.6 percent over 2015. Because of the production of this output, 1,021,681 FTE jobs were required, an increase of 6.8 percent over 2015. The workers who were employed in these jobs were paid \$41.1 billion in income, a total that accounts for a 7.7 percent increase over 2015 (see **Table 9**).

Table 9—Total Cruise Sector Economic Contribution – Global and Regional Markets – 2016

Billions of US\$

Category	Global	Regional Markets			
		United States	Rest of North America	Europe (EU+3)	Rest of World
Output (\$ Billion)	\$125.96	\$47.76	\$10.00	\$50.15	\$18.05
Share of Global		37.9%	7.9%	39.8%	14.3%
Income (\$ Billion)	\$41.09	\$20.57	\$2.02	\$12.32	\$6.18
Share of Global		50.1%	4.9%	30.0%	15.0%
Employment	1,021,681	389,432	99,125	381,426	151,697
Share of Global		38.1%	9.7%	37.3%	14.9%
Percent Change from 2015					
Output (\$ Billion)	7.6%	4.5%	1.6%	8.1%	19.2%
Income (\$ Billion)	7.7%	6.7%	3.8%	5.9%	16.6%
Employment	6.8%	5.0%	4.7%	5.8%	16.3%

The table also shows the regional distribution of the direct economic contribution. Europe has the largest total output contribution of \$50.2 billion and accounted for about 40 percent of the total global output contribution of the cruise industry. This output resulted in employment of 381,426 FTE workers paying an estimated \$12.3 billion in employee income. The employment and income contribution accounted for 30 percent and 37 percent of the total global income and employment contribution, respectively. These were second behind the United States.

The total output contribution in the United States was \$47.8 billion, 38 percent of the total global output contribution. The \$47.8 billion in total output generated an estimated 389,432 FTE jobs paying \$20.6 billion in employee income. As noted above the employment and income contributions were the highest among the four regional markets and accounted for 50

percent and 38 percent of the total global income and employment contributions, respectively.

For the Rest of North America, the cruise industry's total output contribution of \$10.0 billion generated 99,125 FTE jobs paying \$2.0 billion in employee income. The share of the global economic contribution in this region ranged from 4.9 percent for the income contribution to 9.7 percent for the employment impact. As noted previously, these impacts primarily affect the retail trade and tour sectors, which have relatively low wages and productivity, thus the share of the global employee income contribution is lower than the share of the employment contribution.

Finally, the total output contribution of \$18.1 billion in the Rest of the World generated 151,697 FTE jobs paying \$6.2 billion in employee income. The share of the global contribution were 14.3 percent for the total output contribution, 15.0 percent for income contribution, to 14.9 percent for total employment contribution



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