The economic value of America's beaches — a 2018 update

By

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ABSTRACT

Travel and tourism (T&T) is America's largest employer and earner of foreign exchange, and beaches are its leading tourist destination. T&T jobs in the U.S. are difficult to offshore or automate, and their number has been growing at a rate 60% greater than overall job growth. America ran a trade deficit of $502 billion (one billion equals 1,000 million) in 2016, but T&T produced its largest trade surplus of $84 billion, including a surplus of about $28 billion with China. International tourists alone spend $245 billion annually in the U.S., which is more than the $190 billion value of the entire U.S. agricultural crop. T&T generates over $60 billion in local and state taxes that could pay the wages of every firefighter and police officer or every secondary school teacher in the country. Surveys show that beaches are by far the leading U.S. vacation destination with more day visits than are made to all national and state parks and government lands combined. However, the federal government's Office of Management and Budget (OMB) gives low budgetary priority to beach tourism and opposes beach nourishment, despite beach tourism supporting 2.5 million jobs, generating $45 billion annually in taxes, and returning $230 in federal taxes for every $1 the federal government spends on beach nourishment. In contrast, OMB gives high priority to navigation channel dredging that allows foreign products to enter the country more cheaply, costing millions of American jobs and billions in taxes. Foreign countries are increasing T&T infrastructure investments, including beach nourishment, at a faster rate than the U.S. and are grabbing an increasing share of the world market.

ADDITIONAL KEYWORDS: Beach nourishment, recreation, travel and tourism, economic development, jobs.

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Houston (1995; 1996; 2002; 2008; 2013a) highlighted the economic value of America's beaches, noting that the travel and tourism (T&T) industry is becoming increasingly dominant in economies throughout the world. However, few realize that T&T is among America's largest industries, is its largest employer, and produces its largest trade surplus. Moreover, beaches are by far America's leading tourist destination. High-technology industries grab the news, but the U.S. runs a trade deficit in these industries and their jobs are increasingly "offshored" or automated. T&T is difficult to automate or offshore and is providing economic growth, jobs, and a trade surplus that makes the U.S. competitive in a world economy. However, tourists have choices, and the U.S. is neglecting T&T tourist infrastructure investments, including beach maintenance and restoration, in comparison with competing countries. This paper updates Houston (1995; 1996; 2002; 2008; 2013a) and further supports his conclusions on the economic importance of beaches to America's economy.

T&T AND THE ECONOMY

T&T is the world's largest industry, contributing $7.6 trillion in 2016 to the world's Gross Domestic Product (GDP) and exceeding the GDP of all countries other than the U.S. and China (World T&T Council 2017a; International Monetary Fund 2017). Similarly, T&T contributes $1.5 trillion to America's GDP (World T&T Council 2017b). David Scowsill, President of the World T&T Council, said that "the U.S. is a beautiful and strong tourist destination. It currently ranks No. 1 in the world in terms of the sector's contribution to GDP." (World T&T Council 2017c). This $1.5 billion contribution represents 8.1% of U.S. output and makes it the third largest contributor to GDP behind real estate (12.1%) and manufacturing (11.7%) (U.S. Department of Commerce 2017a; World T&T Council 2017b). T&T produces $157.8 billion in annual tax revenue for all levels of government in the U.S., and without this revenue each household would pay $1,250 more in taxes (U.S. Travel Association 2017a). Local and state tax revenue of over $60 billion from T&T is sufficiently large that it could pay the wages of every firefighter and police officer or every secondary school teacher in the U.S. (U.S. Travel Association 2014). T&T in the U.S. is projected grow at an annual rate of 3.7% from 2017-2027 versus overall GDP growth of 2.2%, making it one of the economy's healthiest sectors (World T&T Council 2017b; Congressional Budget Office 2015).

T&T MEANS JOBS IN AMERICA

T&T is both the world's and America's largest employer, providing 298 million jobs throughout the world (9.7% of jobs) and 15.3 million jobs (10.4% of jobs) in the U.S. (World T&T Council 2017a; U.S. Department of Labor 2017a; U.S. Travel Association 2017b). In contrast, all U.S. manufacturing industries from General Motors to Boeing to Intel employ only 12.5 million people, having steadily lost 1.7 million jobs in the past ten years (U.S. Department of Labor 2017b). The worldwide future of manufacturing from 2016-2030 is grim with projected job declines due to automation of 32% in the U.S., 22% in China, and 36% in Japan (McKinsey Global Institute 2017). States compete to attract manufacturing, especially high-technology manufacturing, but few have policies to attract T&T businesses. However, high-tech companies have been moving manufacturing jobs overseas, and since 2004 about 85% of R&D employment growth in U.S. multinational corporations has been abroad (National Science Foundation 2012).

Not only are manufacturing jobs in a long-term decline, but many service-sector jobs face "offshoring" and automation. More than 25% of American service-industry jobs are at risk of being

Figure 1 (right). T&T is America's leading employer and has a job growth rate that is projected to be over 3.5 times greater than the average for all jobs.

Figure 2 (below). The annual value of the entire U.S. agricultural crop is about 30% less than annual spending by international tourists in the U.S.

offshored (Ball State University 2017), and automation is projected to reduce the number of U.S. jobs by 23% in the next 15 years (McKinsey Global Institute 2017). T&T is a rare industry where offshoring or automation is difficult. There can be intense competition among countries for tourists, but if a tourist wants to experience Venice Beach in Los Angeles or South Beach on Miami Beach, the tourist must go to Los Angeles or Miami Beach.

T&T is the No. 1 U.S. small-business employer and has grown jobs from 2010-2016 at a rate over 60% greater than the average job growth (U.S. Travel Association 2017c; U.S. Department of Labor 2017c). T&T is projected to grow jobs over the next 10 years at an annual rate of 2.5%, which is over 3.5 times the overall projected annual job growth of 0.7% (Figure 1;World T&T Council 2017b; U.S. Department of Labor 2017c). The T&T industry is sometimes said to have low salaries, but the majority of those employed in T&T "earn middle class wages or better" (U.S. Travel Association 2017b). Moreover, the first job of almost a quarter of Americans is in the T&T industry, and they eventually obtain an average career salary of $81,900, which is significantly higher than that of workers whose first jobs are in manufacturing, healthcare, or most other industries (U.S. Travel Association 2017b). Nearly 40% of workers who began their careers in T&T now earn an annual salary of more than $100,000 (U.S. Travel Association 2017c).

T&T IS KEY TO INTERNATIONAL COMPETITIVENESS

The U.S. is a major player in the international T&T industry. International tourists, who represent 10-15% of U.S. tourists and over 15% of tourist spending, spent $245 billion in the U.S. in 2016 (U.S. Travel Association 2017c; U.S. Department of Commerce 2017b). Amazingly, as seen in Figure 2, this is almost 30% greater than the $190 billion in cash receipts for all U.S. agricultural crops, which are grown on over 2 million farms that cover 47% of the area of the continental U.S. (U.S. Department of Agriculture 2017a, b). Moreover, spending by international tourists is an export and is greater than the combined value of exports in the main areas where the U.S. has significant exports – all agricultural products, aircraft, industrial machinery, and medical equipment (Figure 3; U.S. Department of Commerce 2017a; U.S. Census Bureau 2017a). The U.S. ran a trade deficit of $502 billion in 2016, but T&T produced a trade surplus of $84 billion with international tourists spending more in the U.S. than U.S. tourists spend abroad (U.S. Department of Commerce 2017c; U.S. Census Bureau 2017b). This trade surplus is almost $15 billion more than the combined surplus in the main areas where the U.S. has significant exports (Figure 4). The U.S. ran huge 2016 trade deficits with China, Japan, and India of $347 billion, $69 billion and $24 billion respectively, but ran T&T surpluses with them of $27.6 billion, $11.8 billion and $10 billion respectively (U.S. Department of Commerce 2017b, d). China had the world's largest tourism trade deficit of $216.7 billion in 2016, whereas the U.S. had the world's largest tourism trade surplus (World Tourism Organization 2017). China is the world's export champion, but

the U.S. is the world's tourism champion. China sees the need to grow its tourism industry to offset its large tourism deficit, and it spent over 30% more than the U.S. on infrastructure investments in 2016 to attract international tourists (Statistica 2015).

International tourists visiting the U.S. produced estimated tax revenues in 2016 of $23.1 billion (U.S. Travel Association 2017c). Federal and state governments receive 52% and 33% respectively of the tax revenues generated by domestic tourists, but local governments receive only 15%, despite local governments providing most of the infrastructure that supports tourism (U.S. Travel Association 2015). Assuming the federal government receives the same percentage of taxes generated by international tourists as it does from domestic tourists, it received $12 billion in taxes from international tourists in 2016.

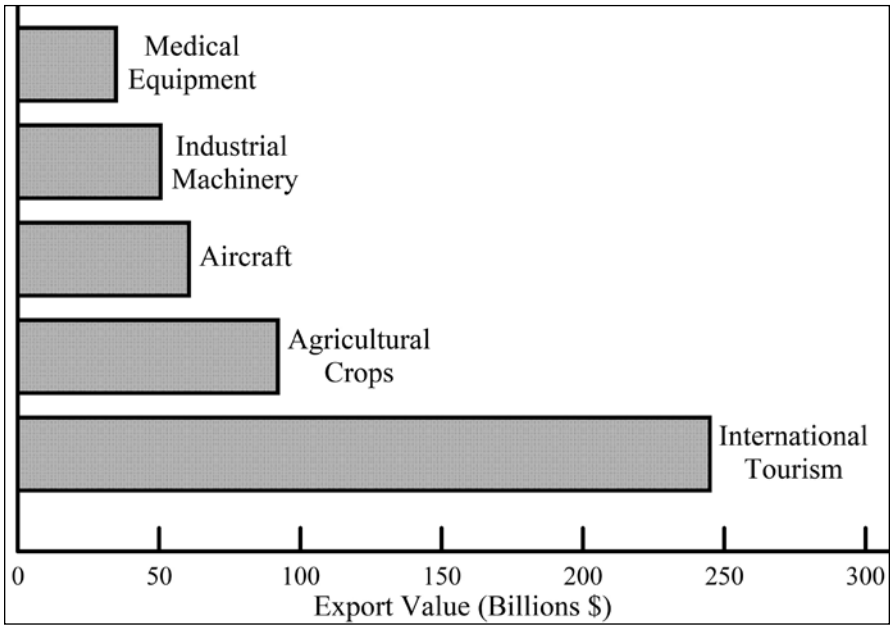
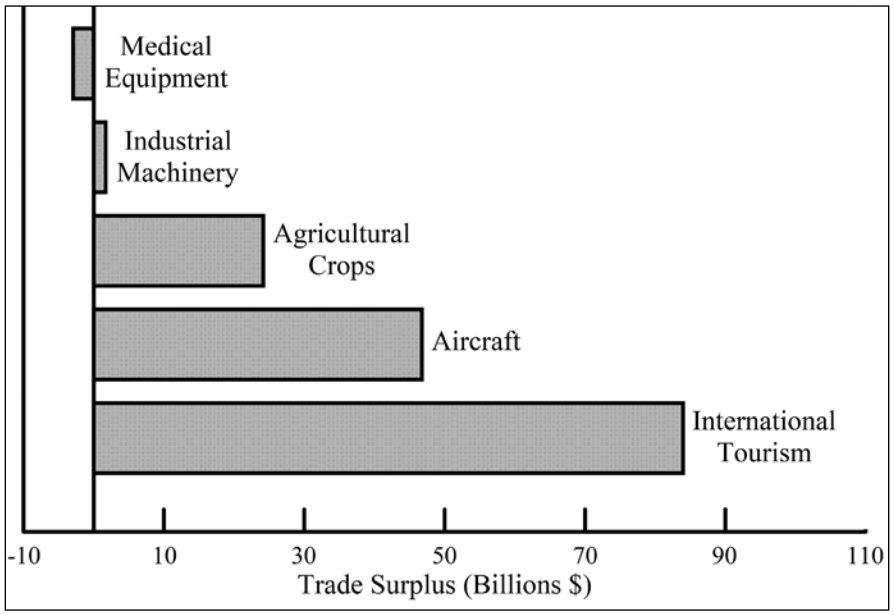


Figure 3. Value of main U.S. export categories versus spending in the U.S. by international tourists.

Figure 4. U.S. trade surpluses and deficit in the categories in Figure 3.



BEACHES ARE KEY TO U.S. T&T

Beaches are the leading U.S. tourist destination. John Morrey, general manager of Expedia.com, noted "year in and year out, travelers tell us that there's no vacation they prefer more than one at the beach. When they leave the beach, they immediately begin dreaming of their next visit" (Expedia 2016). An Expedia survey showed beaches are the most popular U.S. vacation destination, outranking historical sightseeing, visiting friends and family, theme parks, skiing, adventure sports, and spectator events (Expedia 2016). About 46% of Americans said they had taken a beach vacation in the past 12 months and 48% said they intended to do so in the next 12 months (Expedia 2016).

These results are like those of an earlier survey that found 72% of Americans expressed a favorable opinion of beach summer vacations, spent 40% of their allotted vacation days at the beach, and 52% planned a holiday at the beach in the next 12 months (ABC/*Washington Post* 2012). TripAdvisor (2017) found that 17 of the 25 most popular summer vacation rental locations were at beaches (TripAdvisor 2017). Beaches also are the world's most popular vacation destination, based on an international survey of 11,115 adults (Expedia 2016). The survey found that 56% of respondents said they had taken a beach vacation in the past year and 75% said they would likely take a beach vacation in the next year. John Morrey, said that "the beach is the world's most popular travel destination by a considerable margin" (Figure 5; Expedia 2016).

Klein *et al* (2004) performed a detailed analysis of tourism in the U.S. and concluded there was "…strong evidence for the unique quality of the coastal zone as a magnet for tourism." Although there are many interior attractions from Yellowstone to the Grand Canyon and from Las Vegas to Branson, Missouri, the popularity of beaches dominates tourism. For example, Los Angeles County beaches had 70 million day visits in 2015 (Los Angeles County 2017). This is twice as many day visits in 2016 as day visits to many of the most popular national parks as seen in Figure 6 (National Park Service 2017a). Houston (2013b) used Florida government data to estimate there were 820-million day visits to Florida beaches in 2012. This compares with 331 million day visits in 2016 to all 388 National Park Service properties, which includes national seashores and monuments and buildings such as the Lincoln Memorial, Washington Monument, and White House (National Park Service 2017a). It has been estimated that approximately 180 million Americans made 2 billion visits in 2001 to beaches (Save Our Shoreline 2001; Clean Beaches Council 2017). Assuming beach visits increased

Figure 5. Beaches are America's leading tourist destination and "the world's most popular travel destination by a considerable margin" (Expedia 2016).

in proportion to the U.S. population increase of 14.4% from 2001 to 2017, about 205 million Americans made 2.3 billion day visits to beaches in 2017 (U.S. Census Bureau 2017c, d). As seen in Figure 7, this is almost 40% more visits than the combined 1.67 billion day visits made to National Park Service lands (331 million), Bureau of Land Management lands (62 million), all state parks and recreation areas (759 million), Corps of Engineers recreation areas (370 million), and all theme parks in the U.S. (148 million) (National Park Service 2017a; Bureau of Land Management 2015; National Association of State Park Directors 2017; Office of the Assistant Secretary of the Army for Civil Works 2016; Themed Entertainment Association 2017). Moreover, many visits to state parks were visits to beaches. For example, state beaches in California account for only 2.7% of California state parks, but account for 72% of visits (King 1999).

Beaches make a large contribution to America's economy. The California Department of Boating and Waterways and Coastal Conservancy (2002) estimated tourists made 659 million day visits to California beaches in 2001 and spent $61 billion. This is 750 million day visits and $93 billion in 2016 dollars when the increase in California's population from 2001-2016 is included along with inflation (Statistica 2016; U.S. Department of Labor 2017d). Multiplying the contribution that California beach visitors make to the national economy ($93 billion) by the ratio of visitors to national beaches (2.3 billion) and to California beaches (750 million) yields an estimate that visitors to all U.S. beaches made $285 billion in direct spending in 2017. This is 28.8% of total tourism direct spending of $990 billion (U.S. Travel Association, 2017c). From section "T&T and the Economy," tourists pay $157.8 billion in taxes. With beach tourists making 28.8% of direct spending, beach tourists generate a proportionate $45 billion in taxes. Local, state, and federal governments receive $7 billion, $15 billion, and $23 billion respectively from beach tourists, using the percentages in the previous section. In addition, direct expenditures by tourists support 8.6 million jobs directly and 15.3 million jobs including direct, indirect, and induced impacts (U.S. Travel Association 2017b). Again, using the 28.8% share, beach tourists support 2.5 million jobs directly and 4.4 million jobs including direct, indirect, and induced impacts.

BEACH RESTORATION PROVIDES A STRONG ECONOMIC RETURN

Beach erosion is the No. 1 concern that beach tourists have about beaches (Hall and Staimer 1995), and it has been a concern to coastal managers in tourist areas for decades (Alexandrakis *et al.* 2015). With about 20,000 mi of eroding shoreline and 2,700 mi of critically eroding shoreline (U.S. Army Corps of Engineers 1994), beach erosion is a serious threat to the nation's beach tourism and, therefore, a threat to the national economy.

Restoring beaches through beach nourishment can greatly increase their attractiveness to tourists. For example, a New Jersey poll in 1989 found that 74% of respondents said that the New Jersey shore was "going downhill." By 1998, only 27% thought the New Jersey shore was in decline with 86% saying that the shore was one of New Jersey's best features (Zukin 1998). The difference in perceptions from 1989 and 1998 was due to construction of what was then the world's largest beach nourishment project that extended from Sandy Hook to Barnegat Inlet, New Jersey (U.S. Army Corps of Engineers 2001).

The New Jersey beach nourishment project not only attracted millions of tourists but provided critical protection during Hurricane Sandy. Dr. Stewart Farrell, director of Stockton College's Coastal Research Center, has made measurements of New Jersey shoreline position for 25 years and reported after Hurricane Sandy: "Where there was a federal beach fill in place, there was no major damage – no homes destroyed, no sand piles in the streets. Where there was no beach fill, water broke through the dunes" (Associated

Press 2012). The *New Jersey Star-Ledger* (2012) reported that at locations on Long Beach Island, New Jersey, where there was no beach nourishment "the destruction was complete. Older homes were ripped from foundations and tossed about as the ocean met the bay." Based on a damage survey following Hurricane Sandy, Barone *et al.* (2014) concluded that "the presence of maintained federally designed beach nourishment projects including engineered dunes played a significant role in protecting landward structures and infrastructure as the projects absorbed the impacts of the storm waters." Long Beach Township, NJ, Mayor Joseph Mancini, said that had a Corps of Engineers beach nourishment project been in place at the Township prior to Hurricane Sandy (as were projects at adjoining townships that were damaged substantially less), damage at the Township would have been reduced by a remarkable $500 million (*New Jersey Star-Ledger* 2012).

Miami Beach is an example of the economic benefits of beach restoration. Miami Beach had virtually no beach by mid-1970 (Figure 8). As a result, facilities were run down and by 1977 *Time* (1977) magazine reported that "so rapidly has the seven-mile-long island degenerated that it can be fairly described as a seedy backwater of debt-ridden hotels." Beach nourishment from 1978 to 1983 rejuvenated Miami Beach and opened its beaches to the public (Figure 9). Beach attendance, based on lifeguard counts and aerial surveys, soared from 8 million in 1978 to 21 million in 1983 (Wiegel 1992). Klein and Osleeb (2010) noted that tourist spending at Miami Beach increased by 56% or $290 million in the year after completion of the beach nourishment project. This increase was more than five times the $51 million cost of the 1978-1983 beach nourishment (Wiegel 1992). Beach nourishment transformed Miami Beach with visitors to the Greater Miami area in 2016 identifying beaches as Miami's most liked feature and 77.5% visiting its beaches (Greater Miami and the Beaches 2017).

It is insightful to compare the cost of beach nourishment at Miami Beach with benefits. The total cost of beach nourishment at Miami Beach from 1978 to 2017 was about $168 million in 2017 dollars, and the federal share was about 50% or $84 million (Western Carolina University 2017; Miami-Dade County 2017). This cost is spread over 40 years, so the federal cost has been $2.1 million/yr. Overnight tourists at Miami Beach spent $14.2 billion in 2016, including $8.6 billion spent by international tourists (Greater Miami and the Beaches 2017). Therefore, international tourists at Miami Beach make an annual direct contribution to the economy that is about 4100 times the annual federal cost of $2.1 million.

The $4100 in foreign exchange for every $1 of the federal share of beach nourishment contrasts with the U.S. corn crop trade surplus of $11.0 billion that was supported with $4.5 billion in crop subsidies in 2017, yielding a return of $2.44 in foreign exchange for each $1 of federal subsidy (Congressional Budget Office 2017; U.S. Census Bureau 2017a). International tourist spending at Miami Beach produces a greater foreign exchange minus subsidy than the U.S. corn crop. But as seen in figure 10, corn was planted on 142,000 square miles of land (U.S. Department of Agriculture 2017c) and used large quantities of non-renewable resources such as fossil fuels and fertilizers, whereas spending by international tourists was within the

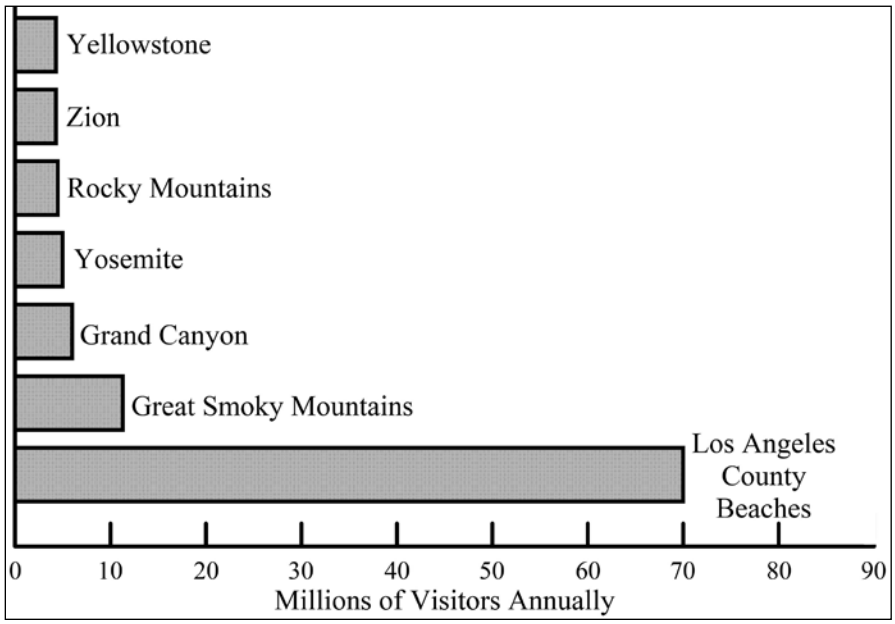


Figure 6. Day visits to Los Angeles County beaches compared with day visits to major national parks.

Figure 7. Day visits to U.S. beaches compared with day visits to parks and lands.

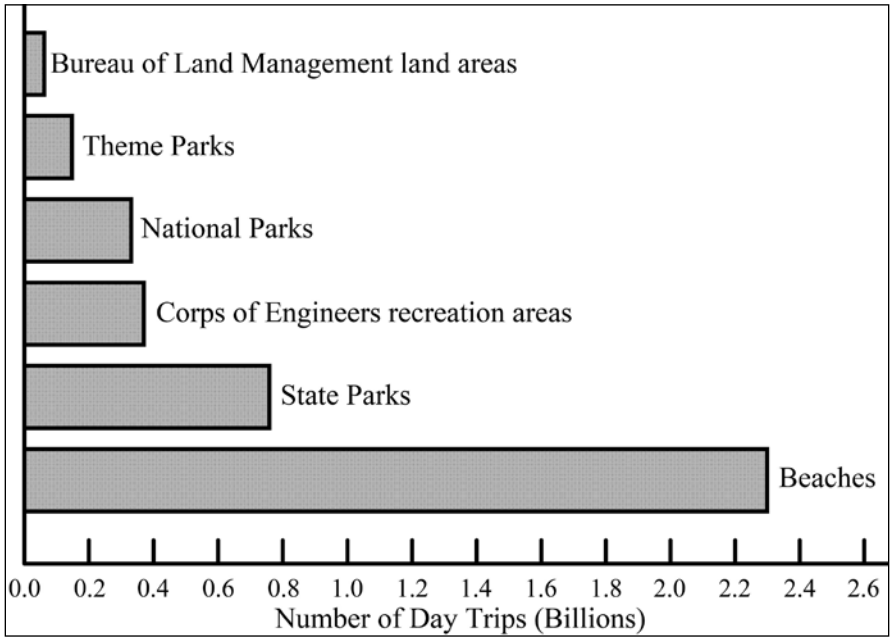


Figure 8 (below). Miami Beach in mid-1970s.

Figure 9 (right). Miami Beach today.

25 square miles of Miami Beach and used comparatively little nonrenewable resources, making tourism very sustainable.

Miami Beach also provides a remarkable return on investment to the federal government in the form of tax revenue. Out-of-state tourists to Florida had $108.8 billion in direct expenditures and generated $13 billion of tax revenue to the federal government in 2015 (Tourism Economics 2016). The number of tourists increased 5.9% from 2015 to 2016 (*Orlando Sentinel* 2017), so these tourists spent about $115.2 billion and generated $13.8 billion of federal taxes in 2016. The $14.2 billion that tourists spent at Miami Beach in 2016 was 12.3% of Florida tourist expenditures, and so it generated a proportionate $1.7 billion in tax revenue to the federal government. Therefore, for every $1 that the federal government spent on beach nourishment at Miami Beach ($2.1 million annually), it received $810 in tax revenue from tourists at Miami Beach. International tourists account for about 61% of total spending at Miami Beach, so they generate about $1 billion annually in tax revenues to the federal government.

It is revealing to compare the national investment in beach nourishment versus tax revenues generated by beach tourists. Currently the federal government spends about $100 million annually on beach nourishment (Alden Street Counseling 2017), and local and state governments pay 50% of costs, accounting for another $100 million (U.S. Army Corps of Engineers 2003). As shown in the previous section, beach tourists generate about $7 billion, $15 billion, and $23 billion annually in local, state, and federal taxes respectively. Figure 11 compares the cost of beach nourishment with taxes generated by beach tourists. For every $1 spent on beach nourishment, $230 in federal taxes are generated by beach tourists.

OMB HINDERS BEACH NOURISHMENT

The American Shore and Beach Preservation Association said in Congressional testimony that "for the past several years, the White House Office of Management and Budget (OMB) has produced an annual attack on the Federal Beach Nourishment Program." (U.S. Government Printing Office 2006). Regardless of the party in the White House, OMB has opposed federal spending on beach nourishment since about 1980. OMB's opposition appears based its beliefs that recreation is not a national priority and recreation is the primary benefit of beach nourishment. However, this is outmoded thinking because recreation drives tourism, and tourism is one of the fastest growth sectors of a modern economy (Deloitte 2018).

Water resource development is guided by principles and guidelines that say the objective of the development is to contribute to national economic development (U.S. Water Resources Council 1983). However, in the case of beach nourishment by the Corps of Engineers, OMB takes the unconventional and inconsistent position that any new economic activity within a beach community can only occur at the cost of economic activity elsewhere in the nation. Therefore, there is no net national economic gain due to restoring a beach (Robinson 2002). OMB says that if one beach disappears, tourists can go to another. Presumably, if all beaches disappear, tourists can play golf or tennis at the country club. However, OMB does not take the same position on other water resource projects including Corps of Engineers' port dredging and flood protection. OMB does not take the position that if one of the 99 ports in the U.S. closes (American Association of Port Authorities 2015), ships can just go to another. It does not say that the federal government should abandon flood protection because people can go to hundreds of thousands of other neighborhoods that are already protected or do not flood.

King and Symes (2003) examine OMB's assumption that people would spend money elsewhere if California's beaches were eliminated, creating no net economic or tax impact for the federal government. They show there is a significant net loss to California and the federal government from a failure to maintain California's beaches. Surveying 2,719 households, they concluded that "a significant number of beach visitors would, in fact, travel outside of California and outside of the U.S. if there were no beaches in California." They estimate that beach goers would instead spend about $3.1 billion in other states and $2.4 billion outside the U.S. Using standard techniques from the U.S. government's Bureau of Economic Analysis, they show that the unavailability of California beaches would produce annual economic losses of $8.3 billion and $6 billion to the California and national economy respectively. Their analysis also shows that for every $1 of federal expenditures on shore

protection for California, the federal government avoids tax losses of $41 to $62.

OMB also unreasonably restricts the inclusion of recreation benefits in cost/benefit calculations for Corps of Engineers' coastal projects. The California Coastal Commission (2013) notes that OMB has a policy that "recreation benefits are limited to 50% of the total benefits required for justification to ensure recreation is incidental to plan formulation." Therefore, recreation benefits must be incidental, and if storm-damage reduction benefits are less than 50%, OMB is opposed to the project.

OMB relegates beach recreation to a lower priority than navigation in the Corps of Engineers, and this is archaic thinking that contributes to America's disadvantage in world markets and costs jobs (Figure 12). For example, OMB assigns a high priority to the dredging of deeper channels in the Ports of Los Angeles and Long Beach in Los Angeles County to allow larger ships to bring in goods at lower prices. From January-October 2017, China was the main country using these ports with $151.6 billion in imports to the U.S. and only $15.1 billion in exports to China for a trade deficit of $136.6 billion — a pace that would result in a full-year 2017 deficit of $164 billion (USTradeNumbers.com 2018 a, b). This deficit is 47% of the $347 billion trade deficit with China that has cost America 3.4 million jobs and, therefore, has caused a proportionate loss of 1.9 million jobs (U.S. Census Bureau 2017e; Alliance for American Manufacturing 2017). OMB's policy subsidizes China in competition with American companies and puts Americans out of work. In contrast, OMB assigns a low priority to restoring recreational beaches in Los Angeles County, even though Chinese tourists alone spent $11 billion in Los Angeles County in 2016 (Figure 12) (*Los Angeles Times* 2017; *China Daily* 2017). Each $1 million in tourist spending supports nine jobs (U.S. Travel Association 2017b), so Chinese tourist spending alone supports 99,000 jobs in Los Angeles County.

Ninety percent of the benefits due to the beach nourishment at Miami Beach from 1978-1983 were recreation benefits, and the project would have not have proceeded had the current OMB opposition to beach nourishment been in place (Wiegel 1992). Yet, international tourists spend

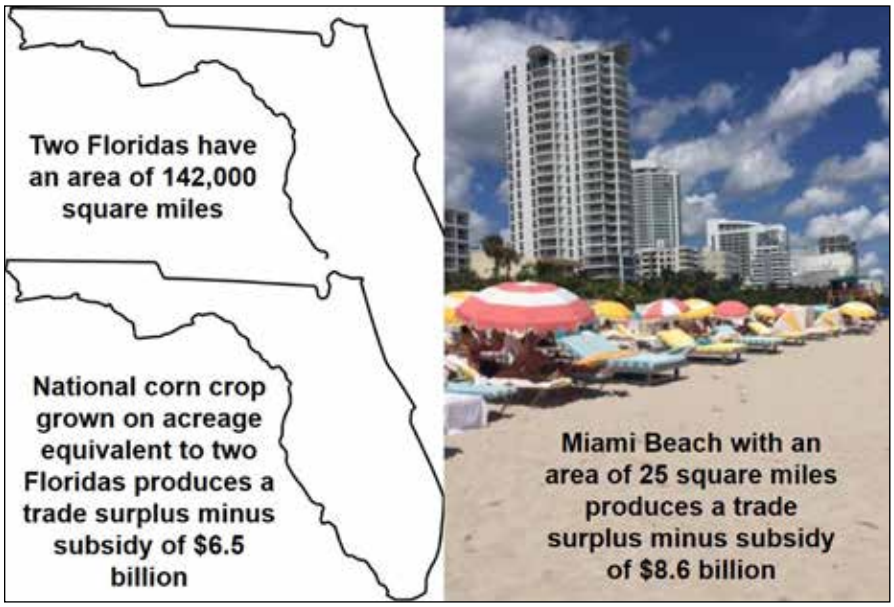
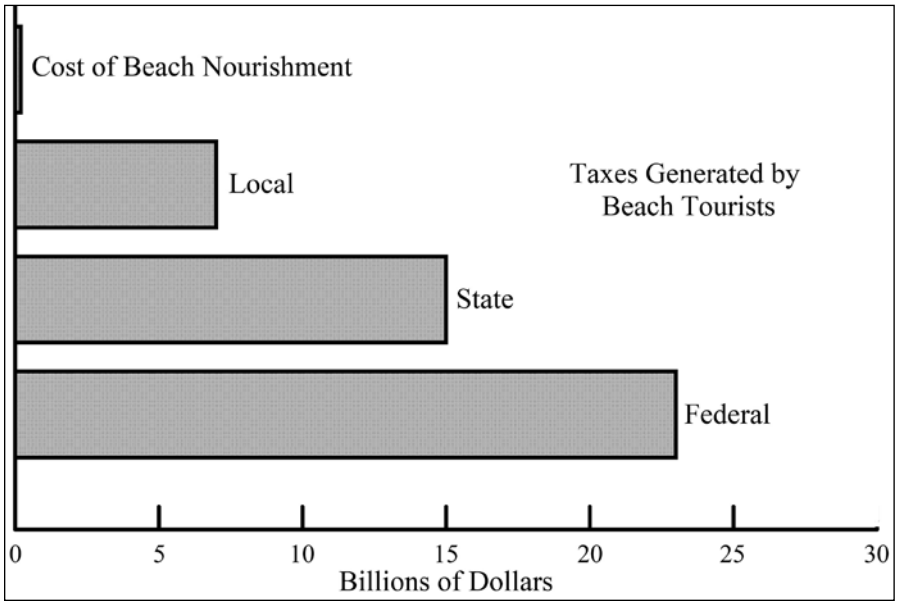


Figure 10. Trade surplus minus subsidy for corn crop compared with international tourists spending minus beach nourishment subsidy at Miami Beach.

Figure 11. Annual cost of beach nourishment compared with annual local, state, and federal taxes generated by beach tourists.



$4,100 dollars annually at Miami Beach for every $1 of the federal annual cost of this beach nourishment. If Miami Beach had remained in the condition shown in Figure 8, it is not credible that 100% of the $8.6 billion that international tourists spend at Miami Beach (and $1 billion in federal taxes) would all be spent elsewhere in the U.S. As was the case for California, there are many competing beaches outside the U.S., and the U.S. would have lost billions in tourist spending at Miami Beach had the beach not been nourished.

OMB relegates beach recreation to a low priority in the Corps of Engineers but assigns a high priority to lake and river recreation projects that require far more funding for operation and maintenance than is required to maintain beaches. The Corps of Engineers (2017a) notes that "the U.S. Army Corps of Engineers is one of the nation's leading federal providers of outdoor recreation with more than 400 lake and river projects in 43 states." There are 4,628 Corps' recreation areas with 110,735 marina slips; 90,773 camping sites; 33,105 picnic sites; 2,022 playgrounds; 959 swimming areas; 3,671 boat ramps; and 367 fishing docks (U.S. Army Corps of Engineers 2013). The President's 2018 budget provides $932

Figure 12. Comparison of illogical and prejudicial priorities set by the Office of Management and Budget.

million in operation and maintenance funding ($542 million for operations and $390 million in maintenance) for recreation facilities on about 270 Corps' lakes that were formed during construction of flood-control projects (U.S. Army Corps of Engineers 2017b).

With 370 million annual day visits and a budget of $932 million, the federal government spends $2.52 for each day visit to a Corps' lake. The National Park Service has 331 million day visits and a budget of $4.3 billion (National Park Service 2017b), yielding $12.99 per day visit. Beaches have 2.3-billion day visits and the annual federal contribution to beach nourishment averages about $100 million, yielding a cost per day visit to the federal government of $0.04 (Figure 13). If beach recreational benefits were included in Corps' projects on at least an equal footing with navigation and recreation associated with flood control, benefit/cost ratios for beach nourishment projects would be large, leading to more U.S. jobs, a decreased trade deficit, and enhanced recreational benefits for Americans.

WORLDWIDE COMPETITION FACING THE U.S.

Houston (1996) noted that America's economic competitors know full well the importance of T&T to their economies, employment, and international competitiveness. Germany and Japan have out spent the U.S. in infrastructure investment for decades, including spending freely to maintain their beaches as infrastructure investments (Houston 2013a). Spain has extensive beaches and is a major competitor of U.S. tourism. The U.S. and Spain were tied in 2016 in the number of international tourists visiting each, but Spain's tourism was up 10.3% from 2015 to 2016, whereas the U.S. tourism declined 2.4% (Figure 14; World Tourism Organization 2017). Spain ranked number one in the world in T&T competitiveness from 2015-2017, whereas the U.S. slipped from ranking fourth in 2015 to ranking sixth 2017 (World Economic Forum 2017). In the early 1990s, Spain conducted a five-year program to both restore existing beaches and build new ones, spending more than the U.S. spent for beach restoration over a 40-year period (Ministerio de Obras Publicas y Transportes 1993; Houston 2013a). Spain continues restoring beaches, placing an annual average of 13.1 million yd^3 of beach nourishment (ClimateChangePost 2017). In contrast, despite having a coastline more than twice that of Spain, Florida has averaged annual placement of only 5.7 million yd^3 of beach nourishment (Western Carolina University 2017). The wisdom of Spain's extensive beach restoration is seen in the fact that Spain is experiencing a tourist boom with one sixth of its economy linked to tourism (Tourism Review 2017). Almost 90% of international tourists to Spain choose coastal regions for their vacations (Yepes and Medina 2005).

U.S. LOSING LEAD

In the early 1990s the U.S. was dominant in world T&T. The U.S. T&T Administration (1993) said that "there is probably no country in the world that has a greater comparative advantage in tourism than the United States." The *Wall Street Journal* (1994) highlighted the U.S. domination of world T&T, noting that the U.S. received over 45% of the developed world's T&T revenues and 60% of its profits. However, in 1996 Congress abolished the U.S. T&T Administration, whose primary function was marketing U.S. tourism internationally. The National Oceanic and Atmospheric Administration (1998) noted because of the abolishment that "the U.S. is (the) only country in the developed world without a government-funded National Tourism Office and (it) bodes badly for the country's future tourism growth."

The decline of the dominance of the U.S. T&T industry started playing out in earnest in the 1990's as America's share of the global inbound tourism market dropped from 45% to 35% from 1993 to 2005 and to 17% from 2005 to 2016 (Houston 2013a; World Tourism Organization 2017). Had the U.S. maintained its 35% share of the global tourism market in 2005, it would have had an additional $245 billion of spending and $23 billion in taxes annually from international tourists (U.S. Travel Association 2015; U.S. Travel Association 2017b; U.S. Department of Commerce 2017b).

There are many alluring tourist attractions worldwide that give consumers ample choices and produce stiff worldwide competition. If Florida beaches become rundown, European tourists can choose Spanish or Greek beaches. If Hawaiian beaches decline, Japanese

tourists can choose Australia's Gold Coast beaches that have been extensively nourished. In fact, there is evidence that international tourists are shifting away from U.S. beaches. From 2015-2016, the number of international tourist visits to Spain grew by 10.5%, whereas the number of international tourist visits to Florida dropped 5% (World Tourism Organization 2017; VisitFlorida 2017). Waikiki Beach, Hawaii, has had severely eroding beaches, and the number of day visits by Japanese tourists in 2015 was less than the number in 1990 despite an increase of over 60% in the number of Japanese tourists traveling abroad (Hawaii.gov 2017; JTB Tourism Research and Consulting Company 2017). In contrast, Australia, has many nice beaches and forecasts the number of Japanese tourists visiting Australia will increase about 50% from 2017-2025 (Tourism and Events Queensland 2017). Hawaii was spurred into action to address eroding Waikiki beaches when a study showed that if the erosion continued, there would be an annual loss in tourist revenues of $2 billion and tax revenues of $150 million (Hawaii Tourism Authority 2012).

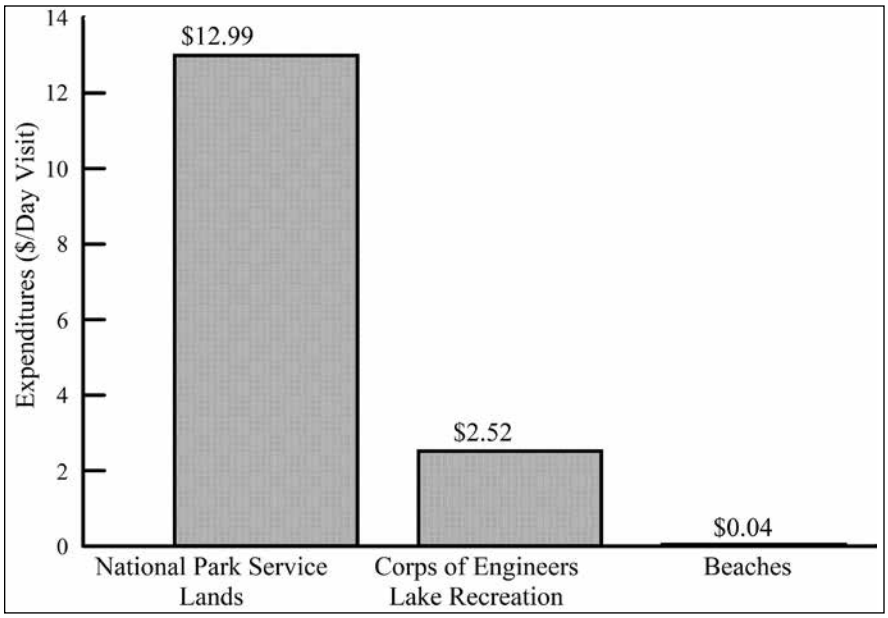
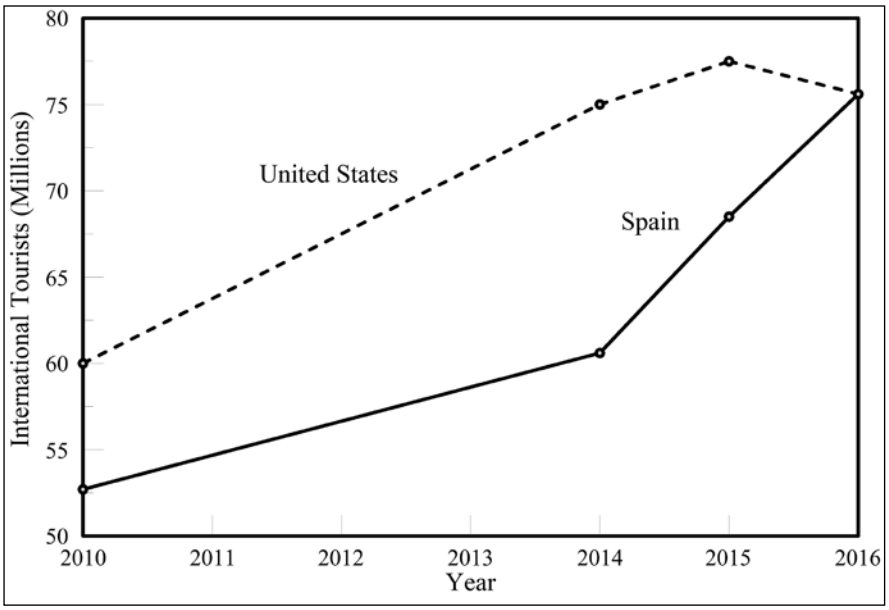


Figure 13. Federal expenditures per day visit.

Figure 14. Growth in number of international tourists visiting the United States and Spain.



THE FUTURE

The World T&T Council has found that "a very strong and positive relationship exists between T&T Investment and T&T demand" (World T&T Council 2014). It noted that the U.S. and Canada currently have good T&T infrastructure, but of the 27 countries in the Americas, only the U.S. and Canada were at risk of complacency because of insufficient plans for future investment in T&T infrastructure. Spain already has a higher T&T infrastructure rating than the U.S. (World T&T Council 2014, World T&T Council 2017d). The U.S. in 2016 was No. 1 in the world in the contribution of T&T to its GDP, T&T capital investments, and T&T export surplus. However, in projections from 2017-2027, the U.S. ranks 136 of 180 countries in the world in expected growth in the T&T contribution to GDP, 117 in T&T capital investments growth, and 124 in T&T export surplus growth (World T&T Council 2017e). The future of T&T in the U.S. is not rosy because of its insufficient projected T&T investment including maintenance of beaches. Although the U.S. has been the world's leading tourist draw, it has less than half projected leisure tourism spending growth from 2017-2027 compared to countries with few attractions such as Uganda, Tonga, Benin, and Niger (World T&T Council 2017f).

CONCLUSIONS

T&T is a key and growing driver of the U.S. economy. It is America's largest employer and earner of foreign exchange and beaches are its leading tourist destination. Maintaining beaches through beach nourishment provides a remarkable return on investment to all levels of government. However, OMB works against beach nourishment while at the same time supporting navigation channel dredging that reduces the cost of imported goods, thereby costing American jobs. OMB also supports significant operation and maintenance costs for recreation at Corps' lakes but opposes beach nourishment that supports coastal recreation at much lower costs. OMB's archaic and illogical economic policies continue to jeopardize America's competitive advantage in T&T that is led by America's beaches.

The main conclusion one draws today is the same as that noted by Houston (1995): "Without a paradigm shift in attitudes toward the economic significance of travel and tourism and necessary infrastructure investment to maintain and restore beaches, the U.S. will continue to relinquish a dominant worldwide lead in its most important industry."

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