

EXECUTIVE SUMMARY

The Office of Insular Affairs (OIA) carries out the Department of the Interior's responsibilities for U.S.-affiliated insular areas. These areas are the territories of American Samoa, Guam, the U.S. Virgin Islands, and the Commonwealth of the Northern Mariana Islands as well as the Freely Associated States (FAS)¹ of the Federated States of Micronesia, the Republic of the Marshall Islands, and the Republic of Palau.

OIA provided \$451 million in grants and payments to the insular areas during FY 2011. This assistance played an important role in the economies of each of these areas by providing financial and technical assistance to promote economic growth, education, public health, and the development of more efficient and effective government. Because of a lack of sophisticated economic data series, such as input-output tables, for these insular areas, territorial and federal leaders are largely deprived of the type of thorough economic analysis that would assist them in making more informed policy decisions.

OIA contracted with RTI International to develop a methodology that, despite data limitations, estimates the economic impact of OIA grants and payments to the insular areas. To meet OIA's needs, RTI canvassed existing secondary data and provided OIA with a methodology for rapidly approximating the economic impact of OIA payments. This methodology was used to estimate the impact of payments on each of the following economic aggregates for each insular area:

- Employment: the number of individuals gainfully employed, which typically consists of full-time and part-time employees but excludes subsistence agriculture and fishing
- Employee compensation: payments made to all employees during the year, including salaries, wages, and other forms of compensation
- Gross domestic product (GDP): a measure of each area's economic output—typically defined as the value of all final goods and services made within the borders of the insular area in a particular year

Table ES-1 summarizes the results of this analysis.

¹FAS are independent nations that were at one time governed by the United States and continue to maintain a close relationship with the United States through the Compact of Free Association, which makes them eligible to receive funds and assistance from U.S. federal agencies.

Table ES-1. Economic Impact Summary of OIA Grants and Payments (FY 2011)

	Total OIA Payments (\$'000, 2010\$)	Total OIA Employment Impact (#)	National Employment Supported by OIA Payments (%)	Total OIA Employee Compensation Impact (\$'000, 2010\$)	National Employee Compensation Supported by OIA Payments (%)	Total OIA GDP Impact (\$'000, 2010\$)	National GDP Supported by OIA Payments (%)
American Samoa	35,176	1,752	11%	23,067	13%	81,103	11%
Guam	73,518	4,918	7%	128,237	8%	328,392	7%
Northern Mariana Islands	16,292	1,369	5%	17,036	5%	35,702	5%
U.S. Virgin Islands	105,691	9,043	20%	262,710	18%	857,203	20%
Micronesia	110,644	8,483	55%	47,234	72%	145,884	55%
Marshall Islands	71,558	4,215	41%	43,740	44%	63,637	41%
Palau	15,677	1,584	14%	19,500	20%	22,858	14%
Total	428,555	31,364	16%	541,523	14%	1,534,778	14%

Note: Approximately \$22.3 million of the total \$451 million was spent outside the seven insular areas that were the primary focus of this study.

Source: RTI estimates.

ES.1 FY 2011 OIA Payments to the Insular Areas

OIA's responsibilities are framed by the long-term security interests of the United States in the western Pacific and serious economic and fiscal problems affecting the U.S. territories. Although each territory's situation is unique, they share common challenges, including limited land and resources, small populations, limited local technical expertise, narrow economic bases, and exposure to natural disasters, such as hurricanes and typhoons. OIA strives to empower the local communities, foster economic development, promote sound management, and improve quality of life while respecting and preserving local cultures.

U.S. per capita GDP was estimated to be approximately \$46,504 in 2009 when adjusting for inflation to 2010 dollars (World Bank, 2011a). By contrast, per capita GDP for the insular areas averages to less than \$20,000, although there is great variability in income across areas (Table ES-2). GDP per capita is lowest in the three FAS areas, ranging from \$2,400 in Micronesia, to \$2,900 in the Marshall Islands, to \$8,300 in Palau. In addition, 2009 GDP per capita is relatively greater in the four U.S. territories, ranging from \$8,100 in American Samoa, to \$17,000 in the Northern Mariana Islands, to \$26,000 in Guam, to \$41,000 in the U.S. Virgin Islands.

Table ES-2. Economic Characteristics by Insular Area (2010)

	Estimated Population (#)	Estimated Employment (#)	Estimated Employee Compensation (\$'000, 2010\$)	GDP (\$'000, 2010\$)	GDP per Capita (2010\$)
American Samoa	55,519	15,434	181,812	714,531	10,193
Guam	159,358	68,363	1,596,381	4,564,665	25,659
Northern Mariana Islands	53,883	27,897	355,350	727,744	14,131
U.S. Virgin Islands	106,405	45,495	1,447,841	4,312,597	36,860
Micronesia	111,064	15,418	65,670	265,148	2,402
Marshall Islands	54,038	10,320	98,887	155,800	2,883
Palau	20,472	11,678	99,615	168,522	8,331
United States	308,745,538				46,504

Note: 2010 population estimates were obtained from the 2010 U.S. Census (2011a) and the World Bank (2011b). Data on estimated 2009 GDP and GDP per capita for the four U.S. territories were collected from BEA (2011) and are presented in real 2010 terms. Data on estimated 2008 population, GDP and GDP per capita were obtained for the three FAS from World Bank (2011a, 2011b). Finally, 2009 GDP per capita for the United States was from the World Bank (2011a, 2011b). RTI constructed estimated employment and employee compensation statistics from the most recent secondary sources available and represent various years. The construction of this data for each insular area is explained in more detail in the full report.

For FY 2011, OIA provided \$451 million in technical assistance, grants, and payments to the insular areas, of which a large majority is considered mandatory, essential assistance to provide basic services or defined by law, while only a small percentage is considered discretionary (OIA, 2011b). OIA payments fund health care, education, government operations, roads, and other types of social and physical infrastructure. From a budgetary standpoint, payments can be separated into three primary categories (Table ES-3):

- *fiscal payments*, which are the return of taxes collected by the U.S. federal government to Guam and the U.S. Virgin Islands, as required by law
- *Assistance to Territories*, which provides general technical assistance, finances education and health care operations, funds and maintains essential infrastructure, and supports environmental initiatives, including brown tree snake control and the Coral Reef Initiative
- *Compact of Free Association*, which distributes annual payments to FAS, per their treaties with the United States, and provides support to the U.S. western Pacific territories and Hawaii to offset the impact the Compact has on regional social infrastructure

Table ES-3. FY 2011 OIA Payments by Insular Area

	Assistance to Territories (\$'000, 2010\$)	Compact of Free Association—Current (\$'000, 2010\$)	Compact of Free Association—Permanent (\$'000, 2010\$)	Fiscal Payments (\$'000, 2010\$)	Total OIA Payments (\$'000, 2010\$)
American Samoa	35,162	—	14	—	35,176
Guam	11,691	—	16,827	45,000	73,518
Northern Mariana Islands	14,362	—	1,930	—	16,292
U.S. Virgin Islands	5,691	—	—	100,000	105,691
Micronesia	2,011	1,577	107,056	—	110,644
Marshall Islands	3,512	2,077	65,969	—	71,558
Palau	1,677	14,000	—	—	15,677
Other ^a	11,090	—	11,229	—	22,319
Total	85,195	17,654	203,025	145,000	450,874

^a This other category represents payments being spent outside the seven insular areas, such as Washington, DC; Hawaii; and others.

Source: RTI estimates based on detailed budget information provided by OIA (2011a; 2011b).

ES.2 Study Methodology

Total economic impacts are the sum of direct economic impact and indirect/induced economic impact resulting from recipient organizations' consumption of goods and services and household spending by organizations' employees. RTI reviewed employment, employee compensation, and activity trends for each insular area to estimate the direct impact of OIA payments.

Indirect/induced impacts were estimated using economic base analysis (EBA). The reasoning underlying EBA is that an individual region's economic activity is derived from its "base" or "primary" sectors, which are defined as those sectors whose revenue is received primarily from outside the region. Base sectors often include manufacturing, mines, agriculture, and fisheries that produce goods for export and activities that are funded by the U.S. federal government and aid organizations.

RTI's selection of EBA as an analytical strategy was motivated by the importance of offering OIA a methodology for estimating economic impacts that could be applied using data currently available and that could be updated as needed, either for future fiscal years' payments or as new economic data are made available for the insular areas.

In addition to its primary analysis of the seven insular areas, RTI also conducted a supplemental analysis of the economic impact of OIA spending on Washington, DC, and Hawaii. Because input-output statistical data were available for these two areas, RTI used IMPLAN, a static input-output model of economic activity, to quantify the impact OIA spending has on each economic region.

ES.3 Economic Impact Results

Using the analytical methodology described above, RTI estimated the direct, indirect/induced, and total economic impacts of OIA payments on each insular area in terms of employment, employee compensation, and GDP.

Estimates of local employment supported by OIA payments are presented in Table ES-4. Based on RTI's analysis of the economic structure of each insular area, it was determined that for every 1 job directly supported by OIA payments, approximately 1.92 jobs were supported elsewhere in each insular economy, on average. Base employment multiplier estimates ranged from 1.98 in American Samoa to 3.68 in the Northern Mariana Islands.

Table ES-4. Estimated Employment Impact of OIA Payments (FY 2011)

	Direct Employment Impact (#)	Indirect/Induced Employment Impact (#)	Total Employment Impact (#)	National Employment Supported by OIA Payments (%)
American Samoa	885	867	1,752	11%
Guam	1,550	3,368	4,918	7%
Northern Mariana Islands	372	997	1,369	5%
U.S. Virgin Islands	2,551	6,492	9,043	20%
Micronesia	3,050	5,433	8,483	55%
Marshall Islands	1,872	2,343	4,215	41%
Palau	523	1,061	1,584	14%
Total	10,803	20,561	31,364	16%

Source: RTI estimates.

In the cases of the Marshall Islands and Micronesia, a significant portion of national employment is directly and indirectly supported by OIA payments. Approximately 55% of total recorded employment in Micronesia was either directly or indirectly supported by OIA payments. These data do not include subsistence agriculture or fishing.

Estimates of the amount of employee compensation supported by OIA payments are presented in Table ES-5. Based on RTI's analysis of the economic structure of each insular area, we determined that for every \$1.00 of employee compensation directly supported by OIA payments, approximately \$2.00 of employee compensation was supported elsewhere in the insular economy, on average. Base employee compensation multiplier estimates ranged from 2.07 in the Marshall Islands to 4.13 in the Northern Mariana Islands.

Table ES-5. Estimated Employee Compensation Impact of OIA Payments (FY 2011)

	Direct Employee Compensation Impact ('000, 2010\$)	Indirect/Induced Employee Compensation Impact ('000, 2010\$)	Total Employee Compensation Impact ('000, 2010\$)	National Employee Compensation Supported by OIA Payments (%)
American Samoa	10,667	12,400	23,067	13%
Guam	36,388	91,848	128,237	8%
Northern Mariana Islands	4,127	12,909	17,036	5%
U.S. Virgin Islands	81,152	181,558	262,710	18%
Micronesia	15,855	31,378	47,234	72%
Marshall Islands	21,146	22,594	43,740	44%
Palau	6,803	12,697	19,500	20%
Total	176,139	365,384	541,523	14%

Source: RTI estimates.

In the cases of the Marshall Islands and Micronesia, a significant portion of national employee compensation is directly and indirectly supported by OIA payments. For example approximately 72% of total estimated recorded employee compensation in the Federated States of Micronesia is either directly or indirectly supported by OIA payments.

Estimates of the amount of GDP supported by OIA payments are presented in Table ES-6. Based on RTI's analysis of the economics of each insular area, we determined that for every \$1.00 of GDP directly supported by OIA payments, approximately \$2.92 of GDP was supported elsewhere in the insular economy on average. As a result, a significant portion of national employee compensation is directly and indirectly supported by OIA payments. For example, approximately 55% of total GDP in Micronesia is either directly or indirectly supported by OIA payments.

Table ES-6. Estimated GDP Impact of OIA Payments (FY 2011)

	Direct GDP Impact (‘000, 2010\$)	Indirect/Induced GDP Impact (‘000, 2010\$)	Total GDP Impact (‘000, 2010\$)	National GDP Supported by OIA Payments (%)
American Samoa	40,970	40,132	81,103	11%
Guam	103,494	224,897	328,392	7%
Northern Mariana Islands	9,695	26,007	35,702	5%
U.S. Virgin Islands	241,829	615,374	857,203	20%
Micronesia	52,453	93,430	145,884	55%
Marshall Islands	28,261	35,377	63,637	41%
Palau	7,544	15,314	22,858	14%
Total	484,248	1,050,530	1,534,778	14%

Source: RTI estimates.

In addition to the analysis of the seven insular areas, RTI also conducted a supplemental analysis of the economic impact of OIA operations in Washington, DC, and Hawaii. RTI estimated that approximately \$7.5 million of OIA’s operating budget was spent in Washington, DC and approximately \$13.3 million in Hawaii for OIA operations and to offset the impact Compact provisions have on Hawaii’s social infrastructure. To estimate the economic impacts, RTI used IMPLAN modeling software to construct input-output models of each region. Using these models, RTI estimated that OIA’s operations and payments would create approximately 40 employees in Washington, DC, receiving \$4.5 million of employee compensation and 184 employees in Hawaii receiving \$9.8 million of employee compensation.