# Hawaii's Migrant Population: 2006 

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Department of Business, Economic Development \& Tourism Research and Economic Analysis Division
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## 1. Introduction and Summary

## Introduction and Summary

## Introduction:

The American Community Survey (ACS), an annual survey conducted by the U.S. Census Bureau, is now providing new information in the important area of migration. Survey respondents were asked where they lived 1 year ago. This information enables the Census Bureau to calculate the movement of population between areas and are currently being used to calculate the migration component of the Bureau's annual population estimates by the Census Bureau. These data are valuable to states in examining the impact of migrants coming into and going out of their areas.

The American Community Survey was started by the Bureau in 1996 and is currently the largest household survey in the United States. It includes about three million households throughout the nation and contains questions relating to population, housing, social and economic characteristics of our nation's people. Hawaii has been included in the ACS survey since 2000. From 2000 to 2004, the ACS interviewed about 1\% of Hawaii's household population. In 2005, the sample size of the ACS nationwide was expanded and the percentage for Hawaii increased to $1.6 \%$ of our household population. The interview coverage dropped very slightly to $1.5 \%$ of the household population in Hawaii in 2006, but included 598 people in group quarters. The 2006 survey was the first ACS to include information on individuals living in group quarters such as military barracks, college dormitories, and nursing homes. Previous ACS surveys contained only household population information.

For the purposes of this report, the following definitions will be used. "Total population" includes persons 1 year and over who lived in Hawaii during 2006. "Migrant population" includes persons 1 year and over who moved into or out of Hawaii between 2005 and 2006 from (a) another state in the United States or from the District of Columbia (domestic migrant) or (b) abroad which includes Puerto Rico, Guam, U.S. territories or a foreign country (foreign migrant). Because the ACS is conducted in the U.S., people moving out of the country are not included, while people moving into the country from a foreign country or U.S. territory are included. The domestic and foreign migrant groups were combined into a "migrant population" group for most of this report because the number of foreign migrants in the ACS sample was too small to be studied separately.

The U.S. Census Bureau reports data for areas with population of at least 65,000. Kauai County is not included in this data due to the size of its population ( 63,004 in 2006).

Section 2 contains tables, flowcharts and maps displaying the type of movement by people in our state and three of its counties. This section also includes information on the size and movement of people into our state from other states as well as the size and movement of people leaving our state and going to other states.

Section 3 focuses on comparing our state's migrant population with its total population. Were there significant differences between the two groups? Some answers to this
question may be found in Section 3. The decision on whether the differences were significant was based on statistical testing. For more information on the testing, see Appendix A.

## Summary:

Some of the findings about population movement within our state and counties in 2006 were:

- Migrants comprised $6 \%$ of Hawaii's population. Of this migrant segment of the population, domestic migrants comprised five percentage points and foreign migrants comprised one percentage point
- Among the three counties in Hawaii for which ACS data were available, the City and County of Honolulu (7\%) had the highest proportion of migrants in their population, followed by Hawaii County ( $6 \%$ ), and lastly Maui County (4\%)
- Among the three counties for which ACS data were available, the City and County of Honolulu ( $1.6 \%$ ) was the first in percentage of foreign migrants, Maui County ( $0.9 \%$ ) was in second place and Hawaii County ( $0.5 \%$ ) was in third place

The data revealed the following regarding the size and pattern of domestic migration of Hawaii's people:

- 60,825 people moved into Hawaii while 72,333 people moved out of Hawaii. There was a net loss of about 11,500 people due to domestic migration between 2005 and 2006
- A majority of Hawaii residents moved to as well as moved from 5 statesCalifornia, Texas, Washington, Florida and Virginia. Most of the top migration states are the sites of large military installations. About $8 \%$ of Hawaii's population consisted of the military and their dependents and they were one of the most mobile segments of our state's population. Major military locations that may play a part in Hawaii's migration patterns include San Diego and Camp Pendleton California; Norfolk, Virginia; Fort Hood Texas; Virginia Beach, Virginia; and Fort Lewis, Washington

Analysis of the ACS data showed that the migrant population differed significantly from the total population in the following ways:

- higher proportion in the 18 to 44 year age group
- higher percentage of males
- largely of the white race alone category
- more than likely single
- more highly educated
- higher proportion having individual income between $\$ 15,000$ to $\$ 24,999$
- primarily renters


## 2. Size and Movement of Hawaii's Migrants

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## Mobility Status

The tables and flowcharts in the following pages display data on Hawaii's total population by mobility status categories. Within the total population in the state in 2006, about $6 \%$ were migrants. Domestic migrants comprised about $5 \%$ of the total population, while the remaining $1 \%$ was foreign migrants.

During 2006, a total of 77,858 persons who were 1 year and over moved into our state. Of these people, 60,825 came from the U.S. mainland and 17,033 moved here from abroad.

The highest percentage of total migrants was found in the City and County of Honolulu (7\%), followed by Hawaii County (6\%) and lastly Maui County (4\%). Several factors may have contributed to this situation. First of all, the City and County of Honolulu has, by far, the highest concentration of the state's population. Over 71\% of our state's population resides in this county. Secondly, a majority of the population related to the Armed Forces who are stationed in Hawaii live and work in this county. These military personnel and their dependents move between states and internationally much more than the overall population. Lastly, research has shown that migrants tend to settle in locations where there is already a concentration of migrants from the area they originally came from.

Upon closer examination, the distribution of foreign migrants by county varied even more than the distribution of the total migrants. The City and County of Honolulu (1.6\%) had a highest percentage of migrants from abroad with Maui County ( $0.9 \%$ ) in second place and Hawaii County ( $0.5 \%$ ) in third place. Other 2006 ACS data revealed that there was already a large percentage of foreign-born people in the City and County of Honolulu ( $21 \%$ ). In contrast, the percent of foreign-born in Hawaii County was $12 \%$ and the percent of foreign-born in Maui County was $16 \%$.
[Data for Kauai County and Kalawao County not available separately]

| Subject | State of Hawaii 1/ |  | Hawaii County |  | City \& County of Honolulu |  | Maui County |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Estimate | Margin of error 2/ | Estimate | Margin of error $2 /$ | Estimate | Margin of error $2 /$ | Estimate | Margin of error $2 /$ |
| Population 1 year and over | 1,268,771 | +/-1,926 | 169,205 | +/-617 | 898,074 | +/-1,719 | 138,983 | +/-702 |
| Same house 1 year ago | 1,068,029 | +/- 10,297 | 144,414 | +/- 3,681 | 754,323 | +/- 8,370 | 117,646 | +/-3,624 |
| Moved within same county | 117,829 | +/- 8,773 | 13,534 | +/-3,026 | 82,078 | +/-8,130 | 15,018 | +/- 3,126 |
| Moved from different county within same state | 5,055 | +/-1,429 | 1,286 | +/-708 | 2,118 | +/-957 | 430 | +/-357 |
| Moved from different state or abroad | 77,858 | +/- 6,549 | 9,971 | +/- 2,362 | 59,555 | +/- 5,642 | 5,889 | +/- 1,666 |
| Moved from different state | 60,825 | +/- 5,556 | 9,067 | +/-2,298 | 45,139 | +/- 4,607 | 4,706 | +/-1,533 |
| Moved from abroad | 17,033 | +/- 3,429 | 904 | +/-513 | 14,416 | +/- 3,228 | 1,183 | +/-638 |

[^0]Table 2.2-- Percentage Distribution of the Mobility Status of Hawaii Population, by County: 2006
[Data for Kauai County and Kalawao County not available separately]

| Subject | State of Hawaii 1/ |  | Hawaii County |  | City \& County of Honolulu |  | Maui County |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Estimate | Margin of error $2 /$ | Estimate | Margin of error 2/ | Estimate | Margin of error 2/ | Estimate | Margin of error 2/ |
| Population 1 year and over | 1,268,771 | +/-1,926 | 169,205 | +/-617 | 898,074 | +/-1,719 | 138,983 | +/-702 |
| Same house 1 year ago | 84.2\% | +/- 0.8\% | 85.3\% | +/- $2.2 \%$ | 84.0\% | +/- 0.9\% | 84.6\% | +/- $2.6 \%$ |
| Moved within same county | 9.3\% | +/- 0.7\% | 8.0\% | +/-1.8\% | 9.1\% | +/- 0.9\% | 10.8\% | +/- $2.2 \%$ |
| Moved from different county within same state | 0.4\% | +/- 0.1\% | 0.8\% | +/- 0.4\% | 0.2\% | +/- 0.1\% | 0.3\% | +/- 0.3\% |
| Moved from different state or abroad | 6.1\% | +/-0.5\% | 5.9\% | +/-1.4\% | 6.6\% | +/- 0.6\% | 4.2\% | +/-1.2\% |
| Moved from different state | 4.8\% | +/- 0.4\% | 5.4\% | +/-1.4\% | 5.0\% | +/- 0.5\% | 3.4\% | +/- 1.1\% |
| Moved from abroad | 1.3\% | +/- 0.3\% | 0.5\% | +/- 0.3\% | 1.6\% | +/- 0.4\% | 0.9\% | +/- 0.5\% |

[^1]Figure 1-- Mobility Status of Persons in the State of Hawaii Based on Residence One Year Ago: 2006

Figure 2-- Mobility Status of Persons in Hawaii County
Based on Residence One Year Ago: 2006

Figure 3-- Mobility Status of Persons in the City and County of Honolulu Based on Residence One Year Ago: 2006

Figure 4-- Mobility Status of Persons in Maui County Based on Residence One Year Ago: 2006

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## Domestic Migration

Domestic migration in this report is the movement of people in the United States between the 50 states and the District of Columbia.

A total of 60,825 people moved into Hawaii from other states (including D.C.) between 2005 and 2006. By far, California was the top origin state of Hawaii's inmigrants. Almost one-fourth of our inmigrants come from that West Coast state. Other states sending large numbers of inmigrants to Hawaii were: Texas (7\%), Virginia ( $6 \%$ ), Washington (6\%), Alaska (5\%), New York (4\%), and Florida (4\%). Over 55\% of Hawaii's immigrants arrived from one of these top 7 states.

The only information available from the full 2006 ACS dataset on people who moved out of the State of Hawaii between 2005 and 2006 was the state data displayed in Table 1.4.

The number of people leaving Hawaii between 2005 to 2006 totaled 72,333. Therefore, a net loss of about 11,500 people may be attributed to domestic migration. The top state attracting Hawaii residents was California, which was the destination for about one-fifth of our total outmigrants. Other states rounding the top of this list were Texas (11\%), Washington (7\%), Florida (6\%), Nevada (5\%), Virginia (5\%) and Oregon (5\%). These 7 states accounted for almost $60 \%$ of Hawaii's outmigrants between 2005 and 2006. It is noteworthy that four are west coast states and two are east coast states.

A comparison of the migration states showed that 5 of the top 7 states appeared in both the inmigration and outmigration state listings - California, Texas, Virginia, Washington and Florida. Not surprisingly, most of the top migration states are the sites of large military installations. About $8 \%$ of Hawaii's population consisted of the military and their dependents. Research shown in last year's 2005 ACS migration report for Hawaii supported the idea that the military and their dependents were one of the most mobile segments of our state's population. Major military locations that may play a part in Hawaii's migration patterns include San Diego and Camp Pendleton California; Norfolk, Virginia; Fort Hood Texas; Virginia Beach, Virginia; and Fort Lewis, Washington.

# Table 2.3-- Domestic Inmigration to the State of Hawaii, by State of Residence: 2006 

[Ranked by largest number. Population 1 year and over. State of residence in 2006 was Hawaii, but different state of residence in 2005. Data based on a sample]

| Rank | Subject | Estimate | Margin of error 1/ | \% <br> Estimate $2 /$ | Margin of error for \% 1/ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total inmigrants | 60,825 | +/- 5,556 | 100.0 |  |
| 1 | California | 14,459 | +/- 2,477 | 23.8 | +/-3.4 |
| 2 | Texas | 4,405 | +/- 1,372 | 7.2 | +/-2.2 |
| 3 | Virginia | 3,423 | +/-1,434 | 5.6 | +/-2.3 |
| 4 | Washington | 3,212 | +/-1,603 | 5.3 | +/-2.6 |
| 5 | Alaska | 2,906 | +/- 1,704 | 4.8 | +/-2.8 |
| 6 | New York | 2,654 | +/-1,227 | 4.4 | +/-2.0 |
| 7 | Florida | 2,456 | +/-954 | 4.0 | +/-1.5 |
| 8 | Colorado | 2,254 | +/- 1,190 | 3.7 | +/-1.9 |
| 9 | Georgia | 2,250 | +/- 1,671 | 3.7 | +/-2.7 |
| 10 | Illinois | 1,996 | +/- 1,224 | 3.3 | +/- 2.0 |
| 11 | Pennsylvania | 1,956 | +/-1,244 | 3.2 | +/-2.0 |
| 12 | North Carolina | 1,785 | +/- 972 | 2.9 | +/-1.6 |
| 13 | Arizona | 1,718 | +/-830 | 2.8 | +/-1.3 |
| 14 | Oregon | 1,487 | +/-818 | 2.4 | +/-1.3 |
| 15 | Nevada | 1,383 | +/- 690 | 2.3 | +/-1.1 |
| 16 | New Mexico | 989 | +/- 624 | 1.6 | +/-1.0 |
| 17 | New Jersey | 745 | +/-496 | 1.2 | +/-0.8 |
| 18 | Oklahoma | 744 | +/- 676 | 1.2 | +/-1.1 |
| 19 | Kentucky | 705 | +/-605 | 1.2 | +/-1.0 |
| 20 | Ohio | 674 | +/- 377 | 1.1 | +/- 0.6 |
| 21 | Tennessee | 666 | +/-444 | 1.1 | +/-0.7 |
| 22 | Connecticut | 627 | +/-386 | 1.0 | +/-0.6 |
| 23 | South Carolina | 560 | +/-477 | 0.9 | +/- 0.8 |
| 24 | Minnesota | 529 | +/-484 | 0.9 | +/-0.8 |
| 25 | Massachusetts | 506 | +/-529 | 0.8 | +/-0.9 |
| 26 | New Hampshire | 500 | +/-544 | 0.8 | +/- 0.9 |
| 27 | Kansas | 496 | +/-502 | 0.8 | +/- 0.8 |
| 28 | Montana | 461 | +/- 745 | 0.8 | +/-1.2 |
| 29 | Maryland | 459 | +/-375 | 0.8 | +/- 0.6 |
| 30 | Maine | 443 | +/-483 | 0.7 | +/-0.8 |
| 31 | Rhode Island | 425 | +/-515 | 0.7 | +/-0.8 |
| 32 | Indiana | 351 | +/-363 | 0.6 | +/-0.6 |
| 33 | Alabama | 332 | +/-350 | 0.5 | +/-0.6 |
| 34 | Utah | 288 | +/-321 | 0.5 | +/-0.5 |
| 35 | Missouri | 284 | +/-164 | 0.5 | +/-0.3 |
| 36 | District of Columbia | 262 | +/-281 | 0.4 | +/-0.5 |
| 37 | Wisconsin | 257 | +/-321 | 0.4 | +/-0.5 |
| 38 | Mississippi | 251 | +/-159 | 0.4 | +/-0.3 |
| 39 | Louisiana | 238 | +/-179 | 0.4 | +/-0.3 |
| 40 | South Dakota | 201 | +/-233 | 0.3 | +/-0.4 |
| 41 | Michigan | 193 | +/-152 | 0.3 | +/-0.2 |
| 42 | lowa | 148 | +/-120 | 0.2 | +/- 0.2 |
| 43 | Wyoming | 101 | +/-169 | 0.2 | +/- 0.3 |
| 44 | Nebraska | 46 | +/-77 | 0.1 | +/- 0.1 |
| 45 | Arkansas | 0 | +/-267 | 0.0 | +/-0.4 |
| 46 | Delaware | 0 | +/-267 | 0.0 | +/-0.4 |
| 47 | Idaho | 0 | +/-267 | 0.0 | +/- 0.4 |
| 48 | North Dakota | 0 | +/-267 | 0.0 | +/-0.4 |
| 49 | Vermont | 0 | +/-267 | 0.0 | +/-0.4 |
| 50 | West Virginia | 0 | +/-267 | 0.0 | +/-0.4 |

1/ Margin of error based on $90 \%$ confidence interval.
2/ Calculated figures were based on more precise figures than those shown in the table. Therefore, figures such as percentages may differ from expected values due to rounding.

Source: U.S. Census Bureau, 2006 American Community Survey; calculations by the Hawaii State Department of Business, Economic Development \& Tourism.


# Table 2.4-- Domestic Outmigration from the State of Hawaii, by State of Residence: 2006 

[Ranked by largest number. Population 1 year and over. State of residence in 2005 was Hawaii, but different state of residence in 2006. Data based on a sample]

| Rank | Subject | Estimate | Margin of error 1/ | $\begin{gathered} \hline \% \\ \text { Estimate 2/ } \end{gathered}$ | Margin of error 1/ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total outmigrants | 72,333 | +/- 8,049 | 100.0 |  |
| 1 | California | 14,421 | +/- 3,382 | 19.9 | +/-4.1 |
| 2 | Texas | 8,183 | +/- 2,937 | 11.3 | +/-3.9 |
| 3 | Washington | 4,703 | +/- 1,485 | 6.5 | +/-1.9 |
| 4 | Florida | 4,274 | +/- 2,047 | 5.9 | +/-2.8 |
| 5 | Nevada | 3,865 | +/- 1,860 | 5.3 | +/-2.5 |
| 6 | Virginia | 3,480 | +/- 2,285 | 4.8 | +/-3.1 |
| 7 | Oregon | 3,269 | +/- 1,821 | 4.5 | +/-2.5 |
| 8 | Arizona | 2,840 | +/- 1,982 | 3.9 | +/-2.7 |
| 9 | North Carolina | 2,807 | +/- 2,896 | 3.9 | +/-4.0 |
| 10 | Colorado | 2,351 | +/- 1,073 | 3.3 | +/-1.4 |
| 11 | South Carolina | 1,729 | +/- 1,494 | 2.4 | +/-2.0 |
| 12 | Maryland | 1,627 | +/- 1,161 | 2.2 | +/-1.6 |
| 13 | Illinois | 1,609 | +/- 688 | 2.2 | +/- 0.9 |
| 14 | New York | 1,240 | +/-821 | 1.7 | +/-1.1 |
| 15 | Alaska | 1,190 | +/- 967 | 1.6 | +/-1.3 |
| 16 | Georgia | 1,120 | +/- 912 | 1.5 | +/-1.2 |
| 17 | Utah | 1,109 | +/-574 | 1.5 | +/-0.8 |
| 18 | Missouri | 1,096 | +/- 709 | 1.5 | +/-1.0 |
| 19 | Louisiana | 930 | +/-886 | 1.3 | +/-1.2 |
| 20 | New Mexico | 868 | +/-952 | 1.2 | +/-1.3 |
| 21 | Kentucky | 859 | +/-611 | 1.2 | +/-0.8 |
| 22 | Montana | 858 | +/- 768 | 1.2 | +/-1.1 |
| 23 | Arkansas | 853 | +/- 615 | 1.2 | +/-0.8 |
| 24 | Oklahoma | 810 | +/-496 | 1.1 | +/-0.7 |
| 25 | Idaho | 786 | +/-554 | 1.1 | +/-0.8 |
| 26 | Indiana | 559 | +/-488 | 0.8 | +/-0.7 |
| 27 | Minnesota | 515 | +/-439 | 0.7 | +/-0.6 |
| 28 | Michigan | 499 | +/-455 | 0.7 | +/-0.6 |
| 29 | New Jersey | 480 | +/-437 | 0.7 | +/-0.6 |
| 30 | Alabama | 352 | +/- 254 | 0.5 | +/-0.3 |
| 31 | South Dakota | 338 | +/-436 | 0.5 | +/-0.6 |
| 32 | Connecticut | 320 | +/-449 | 0.4 | +/-0.6 |
| 33 | Massachusetts | 316 | +/-218 | 0.4 | +/-0.3 |
| 34 | Rhode Island | 263 | +/-200 | 0.4 | +/-0.3 |
| 35 | Pennsylvania | 242 | +/-244 | 0.3 | +/-0.3 |
| 36 | Kansas | 237 | +/-232 | 0.3 | +/-0.3 |
| 37 | Tennessee | 234 | +/-297 | 0.3 | +/-0.4 |
| 38 | Nebraska | 224 | +/-147 | 0.3 | +/-0.2 |
| 39 | Mississippi | 178 | +/-287 | 0.2 | +/- 0.4 |
| 40 | District of Columbia | 123 | +/-202 | 0.2 | +/-0.3 |
| 41 | Maine | 115 | +/-135 | 0.2 | +/-0.2 |
| 42 | North Dakota | 107 | +/-181 | 0.1 | +/-0.2 |
| 43 | Ohio | 106 | +/-121 | 0.1 | +/-0.2 |
| 44 | Iowa | 65 | +/-107 | 0.1 | +/-0.1 |
| 45 | New Hampshire | 60 | +/-98 | 0.1 | +/-0.1 |
| 46 | Vermont | 50 | +/- 84 | 0.1 | +/- 0.1 |
| 47 | West Virginia | 49 | +/- 84 | 0.1 | +/-0.1 |
| 48 | Wisconsin | 24 | +/- 39 | 0.0 | +/-0.1 |
| 49 | Delaware | 0 | +/-261 | 0.0 | +/-0.4 |
| 50 | Wyoming | 0 | +/- 259 | 0.0 | +/- 0.4 |

1/ Margin of error based on $90 \%$ confidence interval.
2/ Calculated figures were based on more precise figures than those shown in the table. Therefore,
figures such as percentages may differ from expected values due to rounding.
Source: U.S. Census Bureau, 2006 American Community Survey; calculations by the Hawaii State Department of Business, Economic Development \& Tourism.
Map 2: Domestic Outmigration from the State of Hawaii, by State of Residence: 2006
(Total =72,333)
(In percent. Population 1 year and over. State of residence in 2005 was Hawaii,
but different state of residence in 2006. Data based on a sample)

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## 3. Characteristics of the Migrant Population

## Selected Age Groups

All age categories displayed in the table below were significantly different for the total population and the migrant population group. A more detailed analysis showed that the migrant population seemed to be more heavily concentrated in the "18 to 24 year" age grouping and somewhat more in the " 25 to 44 year" age category. Both are considered the working age groups. The migrant population also contains a higher proportion of military personnel and dependents than is seen in the general population. This is because an essential part of military service is rotational movement which requires military personnel to move to a different state or a foreign country every few years. Military personnel and their dependents tend to be in the younger age categories. In addition to the above, a small proportion of the " 18 to 24 year" age grouping may be persons attending higher education institutions within our state. For the migrant population, the " 45 to 64 " year age grouping share was also much lower than in the total population.

## Table 3.1a-- Selected Age Groups by Migrant Status for the State of Hawaii: 2006

| Subject | Total <br> population <br> estimate | Margin of <br> error 1/ | Migrant <br> population <br> estimate 2/ | Margin of <br> error 1/ |
| :--- | :---: | :---: | :---: | :---: |
| Population 1 year and over | $1,268,771$ | $+/-1,926$ | 77,858 | $+/-6,529$ |
|  |  |  |  |  |
| Less than 18 years | $22.1 \%$ | $+/-0.2$ | $17.8 \%$ | $+/-2.5$ |
| 18 to 24 years | $9.9 \%$ | $+/-0.1$ | $30.7 \%$ | $+/-2.1$ |
| 25 to 44 years | $28.1 \%$ | $+/-0.2$ | $36.3 \%$ | $+/-3.0$ |
| 45 to 64 years | $25.8 \%$ | $+/-0.1$ | $12.2 \%$ | $+/-1.8$ |
| 65 years and over | $14.1 \%$ | $+/-0.1$ | $3.0 \%$ | $+/-1.0$ |

1/ Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error. The effect of nonsampling error is not represented in these tables.

2/ Migrants were persons who currently live in the State of Hawaii, but lived in another state, Guam, U.S. island areas or a foreign country one year earlier.

Source: U.S. Census Bureau, 2006 American Community Survey; calculations by the Hawaii State Department of Business, Economic Development \& Tourism.

## Dependency Ratio Age Groups

One way to categorize age is by using the dependency ratio age categories . These age breakdowns are sometimes used to calculate a ratio between the dependent portion of our society and the working portion of our society. The dependent portion is comprised of young people that normally do not work ( 5 to 17 years of age) and the elderly who may be too old to work (persons 65 years and older). The working age portion are the ages in between these two groups ( 18 to 64 years of age).

Data in the table below revealed that the total population had a significantly higher percentage of people in the dependency groups of " 5 to 17 " years and " 65 years and over" when compared to the migrant population. This was especially true for the age group 65 years and over, which comprised about $14 \%$ of the total population yet was only $3 \%$ of the migrant group. The dependency ratio for the total population was $48.1 \%$. In contrast, the dependency ratio for the migrant population was $19.9 \%$. Studies have shown that the working age population ( 18 to 64 years of age) move much more than the younger and the older population groups. Data displayed in the table below supported this view, with $79 \%$ of the migrants in the working age category while only $64 \%$ of the total population was in the working age category. Migrants in this 18 to 64 year age category may be coming to Hawaii due to economic reasons such as for employment opportunities as well as non-economic reasons such as good weather or a cosmopolitan population. Another contributing factor to the greater concentration of migrants in the lower age categories was the military population, which contained much younger people than those found in the general population.

> Table 3.1b-- Dependency Ratio Age Groups by Migrant Status for the State of Hawaii: 2006

| Subject | Total <br> population <br> estimate 1/ | Margin of <br> error 2/ | Migrant <br> population <br> estimate 3/ | Margin of <br> error 1/ |
| :--- | :---: | :---: | :---: | :---: |
| Population 1 year and over | $1,268,771$ | $+/-1,926$ | 77,858 | $+/-6,529$ |
| 5 to 17 years | $16.6 \%$ | $+/-0.0$ | $12.7 \%$ | $+/-2.3$ |
| 18 to 64 years | $63.8 \%$ | $+/-0.2$ | $79.2 \%$ | $+/-6.0$ |
| 65 years and over | $14.1 \%$ | $+/-0.1$ | $3.0 \%$ | $+/-1.0$ |

[^2]
## Gender

Significant gender differences could be seen between the total and the migrant populations.

The total population had an equal percentage of males and females. This was not true for the migrant population, however, which had a higher percentage of males. It is most likely the result of Hawaii's military population, which comprises a larger proportion of the migrant group than of the total population. A majority of the military personnel are males.

## Table 3.2-- Gender by Migrant Status for the State of Hawaii: 2006

| Subject | Total <br> population <br> estimate | Margin of <br> error 1/ | Migrant <br> population <br> estimate 2/ | Margin of <br> error 1/ |
| :--- | :---: | :---: | :---: | :---: |
| Population 1 year and over | $1,268,771$ | $+/-1,926$ | 77,858 | $+/-6,529$ |
|  |  |  |  |  |
| Male | $50.0 \%$ | $+/-0.1$ | $54.2 \%$ | $+/-3.0$ |
| Female | $50.0 \%$ | $+/-0.1$ | $45.8 \%$ | $+/-2.9$ |

1/ Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error. The effect of nonsampling error is not represented in these tables.

2/ Migrants were persons who currently live in the State of Hawaii, but lived in another state, Guam, U.S. island areas or a foreign country one year earlier.

Source: U.S. Census Bureau, 2006 American Community Survey; calculations by the Hawaii State Department of Business, Economic Development \& Tourism.

## Race and Hispanic or Latino Origin

The migrant population was significantly different from the total population in all race categories presented in the table below. Prominent differences were that the migrant group was largely white race alone (59\%) as compared with the total population group ( $25 \%$ ). Conversely, migrants were much less likely to be Asian race alone ( $16 \%$ ) when viewed with the total population (40\%). In the Census Bureau's ranking tables based on the 2006 ACS data, Hawaii was ranked \#1 among all states in regarding to the number of persons claiming two or more major races. This is confirmed by data in Table 2.2, with $21 \%$ of the total population in the two or more race category. Yet only $10 \%$ of the migrant population considered themselves to be of two or more races. It should be stated, however, that the migrant population's percentage for two or more races still exceeded the national average, which was $2 \%$ of the population. The dissimilarities between the migrant and total population may be due in part to the mobile military population. Past evidence has shown that Hawaii's military population had a higher proportion of people of the white only and black only race groups when compared to Hawaii's total population.

An examination of the data also revealed that there was no significant difference between the migrant and total population groups in regard to Hispanic or Latino origin.

Table 3.3-- Race and Hispanic or Latino Origin, by Migrant Status for the State of Hawaii: 2006
[Race reflects self-identification by people according to the race or races with which they most closely identify. People were allowed to choose more than one race]

| Subject | Total <br> population <br> estimate | Margin of <br> Error 1/ | Migrant <br> population <br> estimate 2/ | Margin of <br> Error 1/ |
| :--- | :---: | :---: | :---: | :---: |
| Persons 1 years and over | $1,268,771$ | $+/-1,926$ | 77,858 | $+/-6,529$ |
| One race |  |  |  |  |
| White | $26.4 \%$ | $+/-0.2$ | $58.9 \%$ | $+/-3.9$ |
| Black | $2.2 \%$ | $+/-0.2$ | $8.8 \%$ | $+/-2.3$ |
| Asian | $40.1 \%$ | $+/-0.8$ | $16.2 \%$ | $+/-2.8$ |
| Native Hawaiian and Other | $8.7 \%$ | $+/-0.3$ | $4.0 \%$ | $+/-1.8$ |
| $\quad$ Pacific Islander | $1.1 \%$ | $+/-0.2$ | $2.2 \%$ | $+/-0.7$ |
| Some other race | $21.2 \%$ | $+/-0.9$ | $9.5 \%$ | $+/-2.3$ |
| Two or more major races | $7.6 \%$ | $+/-0.1$ | $8.9 \%$ | $+/-1.5$ |
| Hispanic or Latino (of any race) |  |  |  |  |

1/ Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error. The effect of nonsampling error is not represented in these tables.

2/ Migrants were persons 1 years old and over who moved to the State of Hawaii from another state, Guam, U.S. island areas or a foreign country one year earlier.

Source: U.S. Census Bureau, 2006 American Community Survey; calculations by the Hawaii State Department of Business, Economic Development \& Tourism.

## Marital Status

The migrant group differed significantly from the total population group in several marital categories. More migrants were single ( $46 \%$ ) when compared with the general population $(32 \%)$. As would be expected, the opposite situation occurred in regard to married persons where less migrants were married (43\%) as opposed to the total population (51\%).

## Table 3.4-- Marital Status by Migrant Status for the State of Hawaii: 2006

| Subject | Total <br> population <br> estimate | Margin of <br> error 1/ | Migrant <br> population <br> estimate 2/ | Margin of <br> error 1/ |
| :--- | :---: | :---: | :---: | :---: |
| Population 15 years and over | $1,039,527$ | $+/-595$ | 65,132 | $+/-4,995$ |
|  |  |  |  |  |
| Never married | $32.0 \%$ | $+/-0.6$ | $45.8 \%$ | $+/-3.5$ |
| Now married, except separated | $51.2 \%$ | $+/-0.8$ | $42.8 \%$ | $+/-4.2$ |
| Divorced or separated | $10.6 \%$ | $+/-0.5$ | $10.0 \%$ | $+/-2.1$ |
| Widowed | $6.3 \%$ | $+/-0.3$ | $1.4 \%$ | $+/-0.8$ |

1/ Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimat plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error. The effect of nonsampling error is not represented in these tables. (U.S. Census Bureau)

2/ Migrants were persons who currently live in the State of Hawaii, but lived in another state, Guam, U.S. island areas or a foreign country one year earlier.

Source: U.S. Census Bureau, 2006 American Community Survey; calculations by the Hawaii State Department of Business, Economic Development \& Tourism.

## Educational Attainment

Almost all educational categories were significantly different for the migrant versus the total population groups. Overall, people who moved tended to be more highly educated than the general population. A larger proportion of the migrant group held bachelor's degrees $(24 \%)$ than was seen with the total population ( $20 \%$ ). More importantly, the percentage of migrants with "graduate or professional degrees" (19\%) was almost twice as high as the percentage for the general population (10\%).

## Table 3.5-- Educational Attainment by Migrant Status for the State of Hawaii: 2006

| Subject | Total <br> population <br> estimate | Margin of <br> error 1/ | Migrant <br> population <br> estimate 2/ | Margin of <br> error 1/ |
| :--- | :---: | :---: | :---: | :---: |
| Persons 25 years and over | 863,019 | $+/-1,296$ | 40,095 | $+/-3,891$ |
| Less than high school graduate | $11.0 \%$ | $+/-0.6$ | $7.4 \%$ | $+/-2.4$ |
| High school graduate |  |  |  |  |
| (includes equivalency) | $29.5 \%$ | $+/-0.9$ | $17.5 \%$ | $+/-3.3$ |
| Some college or associate's degree | $29.9 \%$ | $+/-0.8$ | $32.2 \%$ | $+/-4.7$ |
| Bachelor's degree | $19.9 \%$ | $+/-0.8$ | $24.3 \%$ | $+/-4.1$ |
| Graduate or professional degree | $9.8 \%$ | $+/-0.5$ | $18.5 \%$ | $+/-3.4$ |

1/ Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error. The effect of nonsampling error is not represented in these tables.

2/ Migrants were persons who currently live in the State of Hawaii, but lived in another state, Guam, U.S. island areas or a foreign country one year earlier.

Source: U.S. Census Bureau, 2006 American Community Survey; calculations by the Hawaii State Department of Business, Economic Development \& Tourism.

## Individual Income

Income differences between the migrant and total population was much harder to discern than with the other indicators. A significant difference was seen in a lower income category of " $\$ 15,000$ to $\$ 24,999$ " where the proportion was larger for migrants ( $21 \%$ ) than for the total population $(17 \%)$. This difference may be due to the fact that a bigger proportion of the migrants were military personnel whose income were lower, but who have government support for housing and other items. On the other side of the spectrum and to a much lesser degree, there was a significant difference in the upper income category of " 65,000 to $\$ 74,999$ " where the migrants had a smaller proportion ( $2 \%$ ) of this income category than the total population (4\%).

## Table 3.6-- Individual Income Distribution (in 2006 Inflation-Adjusted Dollars) by Migrant Status for the State of Hawaii: 2006

| Subject | Total <br> population <br> estimate | Margin of <br> error 1// | Migrant <br> population <br> estimate 2/ | Margin of <br> error 1// |
| :--- | :---: | :---: | :---: | :---: |
| Population 15 year and over |  |  |  |  |
| with income | 929,580 | $+/-5,279$ | 58,127 | $+/-4,667$ |
| $\$ 1$ to $\$ 9,999$ or loss | $19.4 \%$ | $+/-0.7$ | $19.2 \%$ | $+/-2.6$ |
| $\$ 10,000$ to $\$ 14,999$ | $8.8 \%$ | $+/-0.5$ | $9.5 \%$ | +-1.7 |
| $\$ 15,000$ to $\$ 24,999$ | $16.9 \%$ | $+/-0.7$ | $20.9 \%$ | $+/-3.0$ |
| $\$ 25,000$ to $\$ 34,999$ | $15.5 \%$ | $+/-0.5$ | $15.9 \%$ | $+/-3.7$ |
| $\$ 35,000$ to $\$ 49,999$ | $16.2 \%$ | $+/-0.6$ | $14.2 \%$ | $+/-2.8$ |
| $\$ 50,000$ to $\$ 64,999$ | $9.6 \%$ | $+/-0.5$ | $7.7 \%$ | +-1.9 |
| $\$ 65,000$ to $\$ 74,999$ | $3.5 \%$ | $+/-0.3$ | $2.3 \%$ | $+/-0.8$ |
| $\$ 75,000$ or more | $10.1 \%$ | $+/-0.5$ | $10.3 \%$ | $+/-1.8$ |

1/ Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error. The effect of nonsampling error is not represented in these tables.

2/ Migrants were persons who currently live in the State of Hawaii, but lived in another state, Guam, U.S. island areas or a foreign country one year earlier.

Source: U.S. Census Bureau, 2006 American Community Survey; calculations by the Hawaii State Department of Business, Economic Development \& Tourism.

## Poverty Status

There were no significant differences between the migrant and the total population group in regard to the poverty categories shown below.

## Table 3.7-- Poverty Status by Migrant Status for the State of Hawaii: 2006

| Subject | Total <br> population <br> estimate | Margin of <br> error 1/ | Migrant <br> population <br> estimate 2/ | Margin of <br> error 1/ |
| :---: | :---: | :---: | :---: | :---: |
| Population 1 year and over for <br> whom poverty status is determined | $1,235,654$ | $+/-2,882$ | 66,523 | $+/-6,498$ |
|  |  |  |  |  |
| Below 100 percent of the poverty level | $9.3 \%$ | $+/-0.8$ | $9.2 \%$ | $+/-2.2$ |
| 100 to 149 percent of the poverty level | $6.2 \%$ | $+/-0.7$ | $7.6 \%$ | $+/-2.7$ |
| At or above 150 percent of the poverty level | $84.5 \%$ | $+/-1.0$ | $83.1 \%$ | $+/-3.1$ |

1/ Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error. The effect of nonsampling error is not represented in these tables.

2/ Migrants were persons who currently live in the State of Hawaii, but lived in another state, Guam, U.S. island areas or a foreign country one year earlier.

Source: U.S. Census Bureau, 2006 American Community Survey; calculations by the Hawaii State Department of Business, Economic Development \& Tourism.

## Tenure

Only about one-fourth of the people in the migrant group owned the place that they lived in, unlike the total population where about two-thirds owned their place of residence.

One major reason why recent movers did not own their place of residence may be the cost of housing in Hawaii. In ranking tables based on the 2006 ACS data which were produced by the Census Bureau, our state was ranked $2^{\text {nd }}$ highest in median housing value of owner-occupied housing units in 2006 with a median value of $\$ 529,700$. During this same time, the U.S. average was $\$ 185,200$. Another reason is the military population. They are a larger presence in the migrant group than they are in the total population and have a much lower home ownership rate than the overall population.

## Table 3.8-- Tenure by Migrant Status for the State of Hawaii: 2006

| Subject | Total <br> population <br> estimate | Margin of <br> error 1/ | Migrant <br> population <br> estimate 2/ | Margin of <br> error 1/ |
| :---: | :---: | :---: | :---: | :---: |
| Population 1 year and over | $1,231,224$ | $+/-1,926$ | 64,910 | $+/-6,490$ |
| Householder lived in owner-occupied <br> housing units | $62.9 \%$ | $+/-1.1$ | $25.7 \%$ | $+/-3.0$ |
| Householder lived in renter-occupied <br> housing units | $37.1 \%$ | $+/-1.1$ | $74.3 \%$ | $+/-4.1$ |

1/ Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error. The effect of nonsampling error is not represented in these tables. (U.S. Census Bureau)

2/ Migrants were persons who currently live in the State of Hawaii, but lived in another state, Guam, U.S. island areas or a foreign country one year earlier.

Source: U.S. Census Bureau, 2006 American Community Survey; calculations by the Hawaii State Department of Business, Economic Development \& Tourism.

## 4. Technical Notes

## Description of ACS Dataset

Annual data from the American Community Survey have been released for the State of Hawaii since 2002. The number of Hawaii housing units actually used in the survey has grown over the years from about 3,000 units in 2002 to over 7,000 units in 2006.

There were 19,078 persons in the 7,629 housing units surveyed during 2006. Responses were weighted to represent the estimated $1,247,951$ persons in the estimated 500,021 housing units in the State of Hawaii. An additional 598 people in group quarters were also surveyed. The data was then weighted to represent the estimated 37,547 group quarter inhabitants in Hawaii.

## Comparison Issues

People have a tendency to compare of the American Community Survey data with data from the familiar decennial censuses, but there are important differences between the datasets.

The ACS data are collected throughout the year and, therefore, more closely resembles other annual surveys. For example, ACS data are collected on a continuous basis and responses reflect the point in time that the survey was taken. In other words, information for a specific year represented data collected every month over the twelve month period in that year. For the decennial censuses, however, most questions are asked in relation to an April 1 date and data collection efforts focus on only a few months around that April date every ten years.

Secondly, the ACS information is collected from people who have been or will be living in a residence for more than two months, regardless if they have a usual residence at another location. This contrasts with the decennial censuses that determined if a person is a resident of a specific location by his usual place of residence on April 1 of the decennial year.

Thirdly, some of the changes in methodology and definitions have affected specific variables. The Census Bureau Internet site lists the impact of these changes by the specific variables for any interested persons.

Comparison of the data between our previous 2005 migration report and this current 2006 migration report is also difficult. The 2005 report was based on the ACS Public Use Microdata Sample (PUMS) which included about $70 \%$ of the total people surveyed during that year. The current 2006 report utilized predefined Census Bureau tables that contained data from all persons surveyed for the ACS. In addition to that, our 2005 report contained only household population data whereas the current 2006 report contained data encompassing the entire population (both household and group quarters populations). Lastly, because the data utilized for this current report was collected from
all persons surveyed for the ACS, the margin of error is much smaller than the margin of error associated with data from the PUMS dataset.

## Margin of Error and Statistical Testing

The margin of error is a measure of the sampling error associated with each published ACS estimate. The smaller the margin of error, the more precise the estimate will be. A margin of error is the difference between an estimate and its upper or lower confidence bounds. Data users can create confidence bounds by adding (for an upper bound) and subtracting (for a lower bound) the margin of error from the estimate. All published margins of error for the ACS interpreted as providing 90 percent certainty that the confidence interval defined by the upper and lower bounds contains the population parameter or the true value of the characteristic ${ }^{1 /}$.

Two estimates are "significantly different" at the 90 percent confidence level if the difference between them is large enough to infer that there was a less than 10 percent chance that the difference was purely random ${ }^{2 /}$. Statistical testing involves the calculation of the differences between the population estimates and the margin of error for that difference. The calculations for the statistical tests of significance which were used on tables in Section 2 are shown in the Appendix.
${ }^{1 /}$ U.S. Census Bureau, "2006 American Community Survey Frequently Asked Questions" < http://www.census.gov/acs/www/Downloads/2006QandA.pdf> accessed May 12, 2008.
${ }^{2 /}$ Tersine, Tony "Statistical Significance" Powerpoint Presentation [http://www.census.gov/sdc/www/tony.ppt](http://www.census.gov/sdc/www/tony.ppt) accessed May 6, 2006.

## Data Sources and References

Hawaii State Department of Business, Economic Development \& Tourism, 2006 State of Hawaii Data Book (August 2006)
[http://hawaii.gov/dbedt/info/economic/databook/db2006/](http://hawaii.gov/dbedt/info/economic/databook/db2006/) accessed May 13, 2008.
Hawaii State Department of Business, Economic Development \& Tourism, Hawaii's Inmigrant Population: 2005 (December 2006) $<\underline{h t t p}$ :/hawaii.gov/dbedt/info/census/acs hi 2005 folder/acs hi 2005 other files/ACS $\underline{2005}$ \%20inmigrants_final.pdf> accessed April 29, 2008.

Hawaii State Department of Business, Economic Development \& Tourism, Office of Planning GIS Section, migration maps.

Population Reference Bureau, Population Bulletin "The American Community Survey" Vol. 60, No. 3, (September 2003)
[http://www.prb.org/pdf05/60.3The_American_Community.pdf](http://www.prb.org/pdf05/60.3The_American_Community.pdf) accessed May 6, 2008.
U.S. Census Bureau, "2006 American Community Survey Frequently Asked Questions" < http://www.census.gov/acs/www/Downloads/2006QandA.pdf> accessed May 12, 2008.
U.S. Census Bureau, "Accuracy of the Data (2006)" <http://www.census.gov/acs/www/Downloads/ACS/accuracy2006.pdf > accessed April 24, 2008.
U.S. Census Bureau, "American Community Survey 2006 Ranking Tables" <http://factfinder.census.gov/servlet/GRTSelectServlet?ds_name=ACS_2006_EST_G00 _\&_lang=en\&_ts=228774125320> accessed May 13, 2008 .
U.S. Census Bureau, American Factfinder, 2006 American Community Survey "B00001. Unweighted Sample Count of the Population", "B00002. Unweighted Sample Housing Units", "B01003 Total Population", "B26001. Group Quarters Population", "B07003. Residence 1 Year Ago by Sex in the United States", "C07001. Residence 1 Year Ago by Age in the United States", "B07004A. Residence 1 Year Ago by Race (White Alone) in the United States", " B07004A. Residence 1 Year Ago by Race (White Alone) in the United States", " B07004B. Residence 1 Year Ago by Race (Black or African American Alone) in the United States", " B07004C. Residence 1 Year Ago by Race (American Indian and Alaska Native Alone) in the United States", B07004D. Residence 1 Year Ago by Race (Asian Alone) in the United States", " B07004E. Residence 1 Year Ago by Race (Native Hawaiian and Other Pacific Islander Alone) in the United States"; " B07004F. Residence 1 Year Ago by Race (Some Other Race Alone) in the United States", " B07004G. Residence 1 Year Ago by Race (Two or More Races) in the United States", " B07004I. Residence 1 Year Ago by Race (Hispanic or Latino Race) in the United States", "C07008. Residence 1 Year Ago by Marital Status in the United States", "B07009.

Residence 1 Year Ago by Educational Attainment in the United States", "B07010.
Residence 1 Year Ago by Individual Income in the Past 12 Months (in 2006 InflationAdjusted Dollars) in the United States", "B07012. Residence 1 Year Ago by Poverty Status in the Past 12 Months in the United States", "B07013. Residence 1 Year Ago by Tenure in the United States.", "Selected Social Characteristics in the United States: 2006 Hawaii", "B25001 Housing Units", ‘ $<$ http://factfinder.census.gov/servlet/DatasetMainPageServlet? program=ACS\& subme nuId=datasets_2\& lang=en> accessed March 13, 2008.
U.S. Census Bureau, Statistical Abstract of the United States 2008, Table 495
[http://www.census.gov/compendia/statab/tables/08s0495.pdf](http://www.census.gov/compendia/statab/tables/08s0495.pdf) accessed May 13, 2008.
U.S. Census Bureau, "Table. Movers Within and Between States, the District of Columbia, and Puerto Rico"
[http://www.census.gov/acs/www/Downloads/State_to_State_Migrations_Table_2006.xls](http://www.census.gov/acs/www/Downloads/State_to_State_Migrations_Table_2006.xls) accessed April 14, 2008.

Tersine, Tony "Statistical Significance" Powerpoint Presentation [http://www.census.gov/sdc/www/tony.ppt](http://www.census.gov/sdc/www/tony.ppt) accessed May 6, 2006.
U.S. Census Bureau, The American Community Survey 2008 Questionnaire, [http://www.census.gov/acs/www/Downloads/SQuest08.pdf](http://www.census.gov/acs/www/Downloads/SQuest08.pdf) accessed May 14, 2008

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## Appendix

## Statistical Tests of Significance

## Table A-3.1a-- Selected Age Groups by Migrant Status <br> for the State of Hawaii: 2006-Statistical Test of Significance

| Subject | $\begin{gathered} \mathrm{x}=\text { Total } \\ \text { population } \\ \text { estimate } \end{gathered}$ | Margin of Error | $\mathrm{y}=$ Migrant population estimate | Margin of Error | $(x-y)$ <br> Difference | $a=S E$ <br> Total pop estimate | $\mathrm{b}=\mathrm{SE}$ Migrant pop estimate | $\begin{gathered} \text { sqrt }\left(a^{2}+b^{2}\right) \\ c=S E \\ (x-y) \end{gathered}$ | $\begin{gathered} \hline \text { c*1.645 } \\ \text { MOE } \\ (x-y) \\ \hline \end{gathered}$ | Significantly different? 1/ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Population 1 year and over | 1,268,771 | +/- 1,926 | 77,858 | +/-6,529 |  |  |  |  |  |  |
| Less than 18 years | 22.1\% | +/-0.2 | 17.8\% | +/-2.5 | 4.3\% | 0.092 | 1.516 | 1.5 | 2.5\% | yes |
| 18 to 24 years | 9.9\% | +/-0.1 | 30.7\% | +/-2.1 | -20.8\% | 0.064 | 1.302 | 1.3 | 2.1\% | yes |
| 25 to 44 years | 28.1\% | +/-0.2 | 36.3\% | +/-3.0 | -8.2\% | 0.108 | 1.823 | 1.8 | 3.0\% | yes |
| 45 to 64 years | 25.8\% | +/- 0.1 | 12.2\% | +/-1.8 | 13.6\% | 0.075 | 1.100 | 1.1 | 1.8\% | yes |
| 65 years and over | 14.1\% | +/-0.1 | 3.0\% | +/-1.0 | 11.1\% | 0.049 | 0.602 | 0.6 | 1.0\% | yes |

1/ If the absolute value of the difference of the total population estimate and migrant population estimate ( $x-y$ ) is greater than the absolute value of the margin of error for this difference(MOE ( $x-y$ )), then the two estimates (total population estimate and migrant population estimate) are significantly different at the 90 percent confidence level.

| Subject | $\begin{gathered} \mathrm{x}=\text { Total } \\ \text { population } \\ \text { estimate } \end{gathered}$ | Margin of Error | $\begin{aligned} & \hline y=\text { Migrant } \\ & \text { population } \\ & \text { estimate } \\ & \hline \end{aligned}$ | Margin of Error | $(x-y)$ <br> Difference | $a=S E$ <br> Total pop estimate | b=SE <br> Migrant pop estimate | $\begin{gathered} \text { sqrt }\left(a^{2}+b^{2}\right) \\ c=S E \\ (x-y) \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { c*1.645 } \\ \text { MOE } \\ (x-y) \\ \hline \end{gathered}$ | Significantly different? 1/ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Population 1 year and over 21 | 1,268,771 | +/- 1,926 | 77,858 | +/-6,529 |  |  |  |  |  |  |
| 5 to 17 years | 16.6\% | +/- 0.0 | 12.7\% | +/-2.3 | 3.9\% | 0.026 | 1.428 | 1.4 | 2.3\% | yes |
| 18 to 64 years | 63.8\% | +/- 0.2 | 79.2\% | +/- 6.0 | -15.4\% | 0.139 | 3.630 | 3.6 | 6.0\% | yes |
| 65 years and over | 14.1\% | +/- 0.1 | 3.0\% | +/-1.0 | 11.1\% | 0.049 | 0.602 | 0.6 | 1.0\% | yes |

1/ If the absolute value of the difference of the total population estimate and migrant population estimate ( $x-y$ ) is greater than the absolute value of the margin of error for this difference $(\mathrm{MOE}(x-y)$ ), then the two estimates (total population estimate and migrant population estimate) are significantly different at the 90 percent confidence level. 2/ Categories do not include population between 1 and 4 years of age, so percentages do not sum to 100 .
Table A-3.2-- Gender by Migrant Status
for the State of Hawaii: 2006 - Statistical Test of Significance

| Subject | $\begin{gathered} \mathrm{x}=\text { Total } \\ \text { population } \\ \text { estimate } \end{gathered}$ | Margin of Error | $\mathrm{y}=$ Migrant population estimate | Margin of Error | $(x-y)$ <br> Difference | $a=S E$ <br> Total pop estimate | b=SE <br> Migrant pop estimate | $\begin{gathered} \hline \text { sqrt }\left(a^{2}+b^{2}\right) \\ c=S E \\ (x-y) \\ \hline \end{gathered}$ | c*1.645 MOE ( $\mathrm{x}-\mathrm{y}$ ) | Significantly different? 1/ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Persons 1 years and over | 1,268,771 | +/-1,926 | 77,858 | +/- 6,529 | 1,190,913 |  |  |  |  |  |
| Male | 50.0\% | +/- 0.1 | 54.2\% | +/-3.0 | -4.2\% | 0.078 | 1.824 | 1.83 | 3.0\% | yes |
| Female | 50.0\% | +/- 0.1 | 45.8\% | +/-2.9 | 4.2\% | 0.083 | 1.758 | 1.76 | 2.9\% | yes |

[^3] Table A-3.3-- Race and Hispanic or Latino Origin by Migrant Status
for the State of Hawaii: 2006 - Statistical Test of Significance

| Subject | $\mathrm{x}=$ Total population estimate | Margin of Error | $\begin{aligned} & y=\text { Migrant } \\ & \text { population } \\ & \text { estimate } \end{aligned}$ | Margin of Error | $(x-y)$ <br> Difference | $a=S E$ <br> Total pop estimate | $\mathrm{b}=\mathrm{SE}$ <br> Migrant pop estimate | $\begin{gathered} \text { sqrt }\left(a^{2}+b^{2}\right) \\ c=S E \\ (x-y) \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { c*1.645 } \\ \text { MOE } \\ (x-y) \\ \hline \end{gathered}$ | Significantly different? 1/ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Persons 1 years and over | 1,268,771 | +/- 1,926 | 77,858 | +/- 6,529 |  |  |  |  |  |  |
| One race |  |  |  |  |  |  |  |  |  |  |
| White | 26.4\% | +/- 0.2 | 58.9\% | +/-3.9 | -32.5\% | 0.122 | 2.358 | 2.36 | 3.9\% | yes |
| Black | 2.2\% | +/- 0.2 | 8.8\% | +/-2.3 | -6.6\% | 0.105 | 1.421 | 1.42 | 2.3\% | yes |
| Asian | 40.1\% | +/- 0.8 | 16.2\% | +/- 2.8 | 23.9\% | 0.487 | 1.685 | 1.75 | 2.9\% | yes |
| Native Hawaiian and Other Pacific Islander | 8.7\% | +/- 0.3 | 4.0\% | +/-1.8 | 4.7\% | 0.195 | 1.113 | 1.13 | 1.9\% | yes |
| Some other race | 1.1\% | +/-0.2 | 2.2\% | +/-0.7 | -1.1\% | 0.108 | 0.446 | 0.46 | 0.8\% | yes |
| Two or more major races | 21.2\% | +/- 0.9 | 9.5\% | +/- 2.3 | 11.7\% | 0.553 | 1.376 | 1.48 | 2.4\% | yes |
| Hispanic or Latino (of any race) | 7.6\% | +/- 0.1 | 8.9\% | +/-1.5 | -1.3\% | 0.040 | 0.935 | 0.94 | 1.5\% | no |

[^4]| Table A-3.4-- Marital Status by Migrant Status for the State of Hawaii: 2006 - Statistical Test of Significance |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Subject | $\begin{gathered} \mathbf{x}=\text { Total } \\ \text { population } \\ \text { estimate } \end{gathered}$ | Margin of Error | $\mathbf{y = M i g r a n t}$ population estimate | Margin of Error | $(x-y)$ <br> Difference | $a=S E$ <br> Total pop estimate | $\mathrm{b}=\mathrm{SE}$ Migrant pop estimate | $\begin{gathered} \text { sqrt }\left(a^{2}+b^{2}\right) \\ c=S E \\ (x-y) \end{gathered}$ | $\begin{gathered} c^{* 1} 1.645 \\ \text { MOE } \\ (x-y) \\ \hline \end{gathered}$ | Significantly different? 1/ |
| Persons 1 years and over | 1,039,527 | +/-595 | 36,168 | +/- 9,539 |  |  |  |  |  |  |
| Never married | 32.0\% | +/- 0.6 | 45.8\% | +/-3.5 | -13.8\% | 0.389 | 2.099 | 2.135 | 3.5\% | yes |
| Now married, except separated | 51.2\% | +/- 0.8 | 42.8\% | +/-4.2 | 8.3\% | 0.493 | 2.559 | 2.606 | 4.3\% | yes |
| Divorced or separated | 10.6\% | +/-0.5 | 10.0\% | +/-2.1 | 0.6\% | 0.312 | 1.296 | 1.333 | 2.2\% | no |
| Widowed | 6.3\% | +/-0.3 | 1.4\% | +-- 0.8 | 4.9\% | 0.191 | 0.492 | 0.528 | 0.9\% | yes |

$1 /$ If the absolute value of the difference of the total population estimate and migrant population estimate ( $x-y$ ) is greater than the absolute value of the margin of error for
this difference( $\operatorname{MOE}(x-y)$ ), then the two estimates (total population estimate and migrant population estimate) are significantly different at the 90 percent confidence level.
Table A-3.5-- Educational Attainment by Migrant Status
for the State of Hawaii: 2006 - Statistical Test of Significance

| Subject | $x=$ Total population estimate | Margin of Error | $\mathrm{y}=$ Migrant population estimate | Margin of Error | $(x-y)$ <br> Difference | $a=S E$ <br> Total pop estimate | $\mathrm{b}=\mathrm{SE}$ <br> Migrant pop estimate | $\begin{gathered} \text { sqrt }\left(a^{2}+b^{2}\right) \\ c=S E \\ (x-y) \\ \hline \end{gathered}$ | $\begin{gathered} \hline c^{* 1} 1.645 \\ \text { MOE } \\ (x-y) \\ \hline \end{gathered}$ | Significantly different? 1/ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Persons 25 years and over | 863,019 | +/- 1,296 | 40,095 | +/- 3,891 |  |  |  |  |  |  |
| Less than high school graduate | 11.0\% | +/- 0.6 | 7.4\% | +/- 2.4 | 3.6\% | 0.346 | 1.487 | 1.527 | 2.5\% | yes |
| (includes equivalency) | 29.5\% | +/- 0.9 | 17.5\% | +/-3.3 | 11.9\% | 0.527 | 2.013 | 2.080 | 3.4\% | yes |
| Some college or associate's degree | 29.9\% | +/- 0.8 | 32.2\% | +/-4.7 | -2.4\% | 0.479 | 2.849 | 2.889 | 4.8\% | no |
| Bachelor's degree | 19.9\% | +/-0.8 | 24.3\% | +/-4.1 | -4.5\% | 0.457 | 2.486 | 2.527 | 4.2\% | yes |
| Graduate or professional degree | 9.8\% | +/- 0.5 | 18.5\% | +/-3.4 | -8.7\% | 0.306 | 2.067 | 2.090 | 3.4\% | yes |

1 / If the absolute value of the difference of the total population estimate and migrant population estimate ( $x-y$ ) is greater than the absolute value of the margin of error for
this difference $(\operatorname{MOE}(x-y))$, then the two estimates (total population estimate and migrant population estimate) are significantly different at the 90 percent confidence level.

## Table A-3.6-- Individual Income in the Past 12 Months

 (in 2006 Inflation-Adjusted Dollars) by Migrant Statusfor the State of Hawaii: 2006 - Statistical Test of Significance

| Subject | x=Total population estimate | Margin of Error | $\begin{gathered} \mathrm{y}=\text { Migrant } \\ \text { population } \\ \text { estimate } \end{gathered}$ | Margin of Error | $(x-y)$ <br> Difference | $a=S E$ <br> Total pop estimate | $\mathrm{b}=\mathrm{SE}$ Migrant pop estimate | $\begin{gathered} \text { sqrt }\left(a^{2}+b^{2}\right) \\ c=S E \\ (x-y) \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { c } 1.645 \\ \text { MOE } \\ (x-y) \\ \hline \end{gathered}$ | Significantly different? 1/ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Population 15 year and over with income | 929,580 | +/- 5,279 | 58,127 | +/- 4,667 |  |  |  |  |  |  |
| \$1 to \$9,999 or loss | 19.4\% | +/- 0.7 | 19.2\% | +/-2.6 | 0.2\% | 0.413 | 1.605 | 1.657 | 2.7\% | no |
| \$10,000 to \$14,999 | 8.8\% | +/-0.5 | 9.5\% | +/-1.7 | -0.7\% | 0.287 | 1.046 | 1.085 | 1.8\% | no |
| \$15,000 to \$24,999 | 16.9\% | +/- 0.7 | 20.9\% | +/-3.0 | -4.0\% | 0.442 | 1.840 | 1.893 | 3.1\% | yes |
| \$25,000 to \$34,999 | 15.5\% | +/- 0.5 | 15.9\% | +/- 3.7 | -0.4\% | 0.332 | 2.230 | 2.254 | 3.7\% | no |
| \$35,000 to \$49,999 | 16.2\% | +/- 0.6 | 14.2\% | +/-2.8 | 2.0\% | 0.382 | 1.721 | 1.763 | 2.9\% | no |
| \$50,000 to \$64,999 | 9.6\% | +/- 0.5 | 7.7\% | +/-1.9 | 1.9\% | 0.309 | 1.161 | 1.202 | 2.0\% | no |
| \$65,000 to \$74,999 | 3.5\% | +/-0.3 | 2.3\% | +/-0.8 | 1.2\% | 0.183 | 0.514 | 0.546 | 0.9\% | yes |
| \$75,000 or more | 10.1\% | +/- 0.5 | 10.3\% | +/-1.8 | -0.2\% | 0.287 | 1.122 | 1.158 | 1.9\% | no |

1/ If the absolute value of the difference of the total population estimate and migrant population estimate ( $x$ - $y$ ) is greater than the absolute value of the margin of error for
this difference(MOE ( $x-y$ )), then the two estimates (total population estimate and migrant population estimate) are significantly different at the 90 percent confidence level.
Table A-3.7-- Poverty Status in the Past 12 Months
by Migrant Status for the State of Hawaii: 2006 - Statistical Test of Significance

| Subject | $\mathrm{x}=$ Total population estimate | Margin of Error | $\mathrm{y}=$ Migrant population estimate | Margin of Error | $\begin{gathered} (x-y) \\ \text { Difference } \\ \hline \end{gathered}$ | $a=S E$ <br> Total pop estimate | b=SE <br> Migrant pop estimate | $\begin{gathered} \text { sqrt }\left(a^{2}+b^{2}\right) \\ c=S E \\ (x-y) \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { c*1.645 } \\ \text { MOE } \\ (x-y) \\ \hline \end{gathered}$ | Significantly different? 1/ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Population 1 year and over for whom poverty status is determined | 1,235,654 | +/- 2,882 | 66,523 | +/- 6,498 |  |  |  |  |  |  |
| Below 100 percent of the poverty level | 9.3\% | +/-0.8 | 9.2\% | +/-2.2 | 0.1\% | 0.459 | 1.335 | 1.412 | 2.3\% | no |
| 100 to 149 percent of the poverty level | 6.2\% | +/- 0.7 | 7.6\% | +/- 2.7 | -1.4\% | 0.397 | 1.649 | 1.696 | 2.8\% | no |
| At or above 150 percent of the poverty level | 84.5\% | +/-1.0 | 83.1\% | +/-3.1 | 1.4\% | 0.591 | 1.886 | 1.977 | 3.3\% | no |

1/ If the absolute value of the difference of the total population estimate and migrant population estimate $(x-y)$ is greater than the absolute value of the margin of error for
this $\downarrow$ difference $(\operatorname{MOE}(x-y))$, then the two estimates (total population estimate and migrant population estimate) are significantly different at the 90 percent confidence level.
Table A-3.8-- Tenure by Migrant Status for the
State of Hawaii: 2006 - Statistical Test of Significa

| Subject | $\begin{gathered} \mathbf{x}=\text { Total } \\ \text { population } \\ \text { estimate } \end{gathered}$ | Margin of Error | $y=$ Migrant population estimate | Margin of Error | ( $x-y$ ) <br> Difference | $\mathrm{a}=\mathrm{SE}$ <br> Total pop estimate | $\mathrm{b}=\mathrm{SE}$ Migrant pop estimate | $\begin{gathered} \text { sqrt }\left(a^{2}+b^{2}\right) \\ c=S E \\ (x-y) \\ \hline \end{gathered}$ | $\begin{gathered} \mathrm{c}^{*} 1.645 \\ \text { MOE } \\ (\mathrm{x}-\mathrm{y}) \end{gathered}$ | Significantly different? 1/ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Population 1 year and over | 1,231,224 | +/- 1,926 | 64,910 | +/- 6,490 |  |  |  |  |  |  |
| Householder lived in owner-occupied housing units | 62.9\% | +/-1.1 | 25.7\% | +/-3.0 | 37.2\% | 0.695 | 1.824 | 1.952 | 3.2\% | yes |
| Householder lived in renter-occupied housing units | 37.1\% | +/- 1.1 | 74.3\% | +/-4.1 | -37.2\% | 0.695 | 2.472 | 2.568 | 4.2\% | yes |

1/ If the absolute value of the difference of the total population estimate and migrant population estimate ( $x$ - $y$ ) is greater than the absolute value of the margin of error for
this difference(MOE ( $x-y$ )), then the two estimates (total population estimate and migrant population estimate) are significantly different at the 90 percent confidence level.


[^0]:    1/ Data for Kauai County and Kalawao County were not available separately, but are included in the state total.
    2/ Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error. The effect of nonsampling error is not represented in these tables.

    Source: U.S. Census Bureau, 2006 American Community Survey; calculations by the Hawaii State Department of Business, Economic Development \& Tourism.

[^1]:    1/ Data for Kauai County and Kalawao County were not available separately, but are included in the state total.
    2/ Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error. The effect of nonsampling error is not represented in these tables.

    Source: U.S. Census Bureau, 2006 American Community Survey; calculations by the Hawaii State Department of Business, Economic Development \& Tourism.

[^2]:    1/ Categories do not include the population between 1 and 4 years of age, so percentages do not sum to 100

    2/ Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error. The effect of nonsampling error is not represented in these tables.

    3/ Migrants were persons who currently live in the State of Hawaii, but lived in another state, Guam, U.S. island areas or a foreign country one year earlier. Categories do not include the population between 1 and 4 years of age, so percentages do not sum to 100 .

    Source: U.S. Census Bureau, 2006 American Community Survey; calculations by the Hawaii State Department of Business, Economic Development \& Tourism.

[^3]:    1 If the absolute value of the difference of the total population estimate and migrant population estimate ( $x-y$ ) is greater than the absolute value of the margin of error for

[^4]:    1/ If the absolute value of the difference of the total population estimate and migrant population estimate ( $x-y$ ) is greater than the absolute value of the margin of error for
    this difference(MOE $(x-y)$ ), then the two estimates (total population estimate and migrant population estimate) are significantly different at the 90 percent confidence level.

