Comparison of U.S. Census Bureau's American Community Survey and California Department of Finance Estimates

INTRODUCTION

This is a follow-up to our previous issue of *Profiles* which discussed differences between three commonly used datasets: the decennial U.S. Census, U.S. Census Bureaus' American Community Survey, and the California State Department of Finance estimates (Table 1). It is recommended that the reader review the last issue of *Profiles* which introduced each of the datasets, their methodologies, and examined differences in population counts within Orange County. In this issue we will: focus on the two datasets with annual data, the American Community Survey (ACS) and the Department of Finance estimates (DOF); further discuss the strengths, weaknesses, and applications of each of the datasets; and examine the variables of housing units and housing units by type.

HOUSING COMPARISON

Previously, we used the single indicator of population to introduce and demonstrate the numerical differences and similarities among the datasets. To elaborate further on the differences between the datasets and assist readers and data users in selecting the most appropriate dataset for their purposes, we will review some of the most commonly used housing variables. Though this issue focuses on housing units only, differences amongst the datasets occur in all variables. Housing unit totals for each of the datasets are shown in Table 2 at the county level as well as for available jurisdictions. Due to the ACS survey threshold of 65,000 for the 2006 annual estimates, there are only 14 of 34 cities, plus Orange County as a whole, represented in the 2006 ACS dataset.

Table 1
Geographic Availability of Datasets

Data Source	Type of Data	Lowest Geographic Level
Decennial Census	-Census	-Census Block
American Community Survey (ACS)	-Estimate	-Jurisdictions 65,000+ (currently) -Block Group (beginning 2010)
California Department of Finance (DOF)	-Estimate	-Jurisdiction

The Census 2000 housing unit count for Orange County was 969,484. The 2006 ACS annual estimate reported a housing unit total of 1,023,053; DOF reported 1,024,692. The housing growth between Census 2000 and 2006 ACS was 53,569 (5.5%); using 2006 DOF, it was 55,208 (5.7%). The numerical difference of 1,639 between the 2006 DOF and ACS estimates is three-quarters of Orange County's smallest city (Villa Park: 2,021, DOF 2006).

A comparison was made between the three largest cities to further examine the differences: Anaheim, Huntington Beach, and Santa Ana. DOF and ACS show dissimilar 2006 counts for all three: Huntington Beach differing by 677 (0.9%) units, Anaheim differing by 2,829 (2.8%), and Santa Ana differing by 4,914 (6.5%). Both datasets show similar shares of the total county housing units in 2006. Anaheim's housing unit counts for 2006 differ by 2,829 units, but both datasets report a share of about 10% of the county housing units (ACS: 10.2%, DOF: 9.9%). Huntington Beach had the second largest share with both reporting 7.6% of the county housing units and was followed by Santa Ana with approximately 7.6% (ACS: 7.8%, DOF: 7.4%).

The largest discrepancy between the two datasets is found in Irvine with a difference of 8,400 units (11.2%). Irvine also had the largest difference in shares reporting a 6.5% share from ACS and a 7.3% share from DOF.

ACS reported a decrease in housing units from 2000 to 2006 in two of the 14 cities, Garden Grove (-2,801) and Tustin (-2,301), while DOF estimated decreases for two cities: Laguna Hills (-150) and Tustin (-24). The large decreases in the ACS data are likely due

Table 2
Number and Share of Orange County Housing Units
Census 2000, 2006 American Community Survey, and 2006 California State Department of Finance Estimates

Place	Census 2000 (4/1/2000)		ACS 2006 (Annual)		CA Dept. of Finance 2006 (1/1/2007)		Numerical Change		Numerical Difference
	Number	% Share of OC	Number	% Share of OC	Number	% Share of OC	Census 2000 to ACS 2006	Census 2000 to DOF 2006	ACS 2006 and DOF 2006
Aliso Viejo*	16,608	1.7%	-	-	17,980	1.8%	-	1,372	-
Anaheim	99,719	10.3%	104,339	10.2%	101,510	9.9%	4,620	1,791	2,829
Brea	13,327	1.4%	-	-	14,517	1.4%	-	1,190	-
Buena Park	23,826	2.5%	24,594	2.4%	24,209	2.4%	768	383	385
Costa Mesa	40,406	4.2%	40,882	4.0%	40,987	4.0%	476	581	-105
Cypress	16,028	1.7%	-	-	16,540	1.6%	-	512	-
Dana Point	15,682	1.6%	-	-	15,940	1.6%	-	258	-
Fountain Valley	18,473	1.9%	-	-	18,742	1.8%	-	269	-
Fullerton	44,771	4.6%	45,796	4.5%	47,061	4.6%	1,025	2,290	-1,265
Garden Grove	46,703	4.8%	43,902	4.3%	47,197	4.6%	-2,801	494	-3,295
Huntington Beach	75,662	7.8%	77,285	7.6%	77,962	7.6%	1,623	2,300	-677
Irvine	53,711	5.5%	66,536	6.5%	74,936	7.3%	12,825	21,225	-8,400
Laguna Beach	12,965	1.3%	-	-	13,264	1.3%	-	299	-
Laguna Hills	11,303	1.2%	-	-	11,153	1.1%	-	-150	-
Laguna Niguel	23,885	2.5%	-	-	24,831	2.4%	-	946	-
Laguna Woods	12,650	1.3%	-	-	13,629	1.3%	-	979	-
La Habra	19,441	2.0%	-	-	19,902	1.9%	-	461	-
Lake Forest**	20,486	2.1%	-	-	26,384	2.6%	-	5,898	-
La Palma	5,066	0.5%	-	-	5,131	0.5%	-	65	-
Los Alamitos	4,329	0.4%	-	-	4,409	0.4%	-	80	-
Mission Viejo	32,985	3.4%	33,877	3.3%	33,713	3.3%	892	728	164
Newport Beach**	37,288	3.8%	43,851	4.3%	42,580	4.2%	6,563	5,292	1,271
Orange	41,904	4.3%	42,377	4.1%	43,637	4.3%	473	1,733	-1,260
Placentia	15,326	1.6%	-	-	16,436	1.6%	-	1,110	-
Rancho Santa Margarita	16,515	1.7%	-	-	16,793	1.6%	-	278	-
San Clemente	20,653	2.1%	-	-	26,948	2.6%	-	6,295	-
San Juan Capistrano	11,320	1.2%	-	-	11,780	1.1%	-	460	-
Santa Ana	74,588	7.7%	80,289	7.8%	75,375	7.4%	5,701	787	4,914
Seal Beach	14,267	1.5%	-	-	14,538	1.4%	-	271	-
Stanton	11,011	1.1%	-	-	11,087	1.1%	-	76	-
Tustin	25,501	2.6%	23,200	2.3%	25,477	2.5%	-2,301	-24	-2,277
Villa Park	2,008	0.2%	-	-	2,021	0.2%	-	13	-
Westminster	26,940	2.8%	27,593	2.7%	27,398	2.7%	653	458	195
Yorba Linda	19,567	2.0%	21,142	2.1%	21,783	2.1%	1,575	2,216	-641
Unincorporated**	44,570	4.6%	-	-	38,842	3.8%	-	-5,728	-
Orange County	**969,484**	**100.0%**	**1,023,053**	**100.0%**	**1,024,692**	**100.0%**	**53,569**	**55,208**	**-1,639**

Blue highlight represents data mentioned in text.
- Data not available.
*Aliso Viejo was part of unincorporated county during the 2000 Census. The city incorporated in 2001.
**Lake Forest annexed Foothill Ranch and Portola Hills in 2001. Newport Beach annexed Newport Coast and San Joaquin Hills in 2001. Unincorporated County totals decline due to annexations.
Sources: U.S. Census Bureau, 2000, Summary File 1; American Community Survey 2006; CA Department of Finance, 2007 E-5a file.

Table 3
Comparison of Housing Unit Composition for Select Orange County Jurisdictions[1]
2006 American Community Survey (ACS) and 2006 California State Department of Finance Estimates (DOF)

City	Single Family Detached			Single Family Attached			2 to 4 Units			5+ (Apartments)			Mobile Homes[2]			Total Housing Units		
	ACS	DOF	ACS-DOF Diff*	ACS	DOF	ACS-DOF Diff*	ACS	DOF	ACS-DOF Diff*	ACS	DOF	ACS-DOF Diff*	ACS	DOF	ACS-DOF Diff*	ACS	DOF	ACS-DOF Diff*
Anaheim	44,618	43,663	955	7,635	9,064	-1,429	11,923	10,394	1,529	34,263	34,004	259	5,900	4,385	1,515	104,339	101,510	2,829
Buena Park	13,990	14,181	-191	1,531	1,911	-380	1,730	1,450	280	6,823	6,376	447	520	291	229	24,594	24,209	385
Costa Mesa	15,518	15,733	-215	5,000	4,171	829	5,717	5,920	-203	13,704	14,067	-363	943	1,096	-153	40,882	40,987	-105
Fullerton	23,716	23,948	-232	4,066	3,847	219	3,551	3,742	-191	13,884	14,603	-719	579	921	-342	45,796	47,061	-1,265
Garden Grove	22,792	26,775	-3,983	4,619	4,489	130	5,171	3,414	1,757	9,219	10,691	-1,472	2,101	1,828	273	43,902	47,197	-3,295
Huntington Beach	38,853	38,564	289	9,829	9,467	362	7,652	9,866	-2,214	17,729	16,924	805	3,222	3,141	81	77,285	77,962	-677
Irvine	24,614	27,631	-3,017	16,032	14,591	1,441	3,408	4,966	-1,558	21,757	26,726	-4,969	725	1,022	-297	66,536	74,936	-8,400
Mission Viejo	24,143	24,474	-331	3,694	4,021	-327	709	1,201	-492	5,131	3,928	1,203	200	89	111	33,877	33,713	164
Newport Beach	20,061	19,186	875	8,266	7,166	1,100	3,899	5,520	-1,621	10,428	9,845	583	1,197	863	334	43,851	42,580	1,271
Orange	24,151	24,989	-838	4,283	5,149	-866	4,972	4,718	254	7,997	7,442	555	974	1,339	-365	42,377	43,637	-1,260
Santa Ana	37,086	33,758	3,328	5,513	6,609	-1,096	6,866	7,491	-625	26,430	23,608	2,822	4,394	3,909	485	80,289	75,375	4,914
Tustin	8,212	8,697	-485	2,591	3,807	-1,216	3,568	3,110	458	7,958	8,955	-997	871	908	-37	23,200	25,477	-2,277
Westminster	16,270	14,880	1,390	1,697	2,553	-856	2,555	2,089	466	3,795	4,808	-1,013	3,276	3,068	208	27,593	27,398	195
Yorba Linda	16,713	17,147	-434	2,269	2,395	-126	364	570	-206	1,586	1,360	226	210	311	-101	21,142	21,783	-641
Orange County	515,777	518,327	-2,550	126,913	127,849	-936	88,459	90,977	-2,518	256,374	255,442	932	35,530	32,097	3,433	1,023,053	1,024,692	-1,639

[1] Jurisdictions displayed are those with 2006 ACS population of 65,000 or greater.
[2] Mobile refers to mobile homes, vans, cars and other movable living facilities.
* Positive differences represent ACS data being higher than DOF. Negative differences represent DOF estimates being higher than ACS.
Sources: American Community Survey 2006; CA Department of Finance, 2007 E-5a file.

to sampling size because cities have confirmed that there were no demolitions of that magnitude.

The differences between the datasets are also observed within the types of housing units. Table 3 shows the housing units by type for the 14 cities above the ACS threshold. Beyond the total housing unit count differences, discrepancies in unit type are likely due to sampling and mode of data collection. To more easily display the differences, the highlighted items in Table 3 show the housing types in which ACS and DOF differ by more than 500 housing units. It is also important to note that the differences between the ACS and DOF data are absolute numbers though for purposes of this report, differences are reported as negative and positive. As shown, there are four cities that show differences in four of the housing unit types. Buena Park and Yorba Linda are the only two cities with no differences greater than 500 units.

This table also shows where the larger housing unit discrepancies exist within the cities. For instance, Irvine has a difference of 8,400 units between the two datasets; over half of the unit difference is accounted for by the category of 5 units or more (apartments). Santa Ana differs most in the single family dwellings with a difference of 3,328, followed by Anaheim which differs most in the 2 to 4 unit category (1,529).

WHAT WORKS FOR YOU?

The accuracy and geographic availability will determine the usage of each of these datasets. In the following section we will discuss how each of the datasets could be used by various types of agencies and will limit the discussion to the ACS and DOF as these are the two sources that produce annual datasets.

American Community Survey (ACS)

Though anecdotal reports of problems with ACS have been reported throughout Orange County, it is still a commonly used source of data. The ACS will continue to have a large number of variables that can be used to analyze Orange County's population. Government agencies and programs may select this source based upon the availability of data and who their audience is.

State governments have had many uses of the census long form's sample data for program planning and evaluation that are similar to those of federal agencies. Many states have programs that must respond to requirements of the federal government. For example, the Department of Housing and Urban Development (HUD) asks that state and jurisdictional plans include an assessment of the housing needs of families residing in a

Table 4
American Community Survey Release Schedule By Jurisdiction Size

Type of Data	Population Size of Area	Data for the Previous Year Released in the Summer of:							
		2003	2004	2005	2006	2007	2008	2009	2010+
Annual estimates	250,000+	X	X	X	X	X	X	X	X
Annual estimates	65,000+				X	X	X	X	X
3-year averages	20,000+						X	X	X
5-year averages	Census Tract and Block Group								X

Source: U.S. Census Bureau

jurisdiction. These are developed, in part, from long form sample data on demographic and housing unit characteristics for individual census tracts in the area. ACS will make it possible to have updated census tract data every five years.

Data users in need of detailed socioeconomic characteristics have historically been limited to the decennial census updates which the long form sample data produces. Most jurisdictions rely heavily on the detailed socioeconomic information contained in the long form for a variety of applications involving program planning and allocation of resources. The ACS will provide similar information on an annual basis for jurisdictions larger than 65,000.

Generally, smaller jurisdictions will not benefit as much from the ACS as larger areas, if only because larger areas will have estimates published more often (Table 4). One-year, 3-year, and 5-year period estimates will be released for areas with at least 65,000 people, and 3-year and 5-year period estimates for areas with at least 20,000 people. In Orange County, sixteen cities will benefit from the 3-year averages that will be released starting in 2008, while four Orange County cities will have to wait for the 5-year period estimates in 2010 due to population counts under 20,000.

Department of Finance

Though the California Department of Finance does not offer as many variables as the ACS offers, it does provide data on an annual basis for all jurisdictions.

It is also data based upon input directly from local jurisdictions and total count rather than sample data. Each jurisdiction is asked to update their housing stock inventory through an annual reporting to the state. Jurisdictions are also able to revise their data for previous years if the need arises. If revisions to prior years are made, DOF can also revise historical estimates along with each yearly release.

The DOF numbers also have value due to the fact that the State uses these estimates in their budgeting and allocation of funds to jurisdictions, such as vehicle license fees. With their release, jurisdictions look to these annual estimates for reference in their own budget planning efforts as well as for purposes such as size and ranking within their county or the state.

CONCLUSION

The objective of this two-part analysis was to further examine differences between two commonly used and readily available datasets. Population and housing data compared at the county and local level show distinct differences. As stated before, each source has their merits and shortcomings. It is important for the user to understand these issues and the differences between reporting methodologies to assess which is most appropriate for their use. Instead of using just one of the sources, the user may find it beneficial to report both.