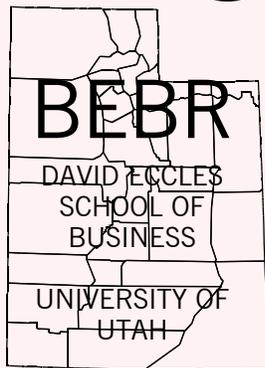


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2001 POPULATION ESTIMATES FOR UTAH

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The population of Utah reached 2,295,971 by July 1, 2001, an increase of 2.2 percent or 49,418 residents, according to estimates produced by the Utah Population Estimates Committee (UPEC). State population growth is decelerating as the economic boom of the 1990s comes to a close. Importantly, this estimate is prior to the 2002 Winter Olympic games, the September 11 terrorist attacks, and the full onset of the national recession. Not surprisingly, natural increase (births minus deaths) contributed over two-thirds of the increase (71 percent). For the fifth year in a row, state births were at all-time record levels, reaching 47,688. Net in-

migration to the state for the year ending July 1, 2001 is estimated to be 14,166 persons.

The areas within the state with the highest rates of growth are Utah County (3.7 percent), portions of the urban fringe (Tooele, 6.9 percent; Juab, 3.1 percent; Wasatch, 3.3 percent; Summit, 4.1 percent), and the southwestern region of the state (Washington, 4.9 percent; Iron, 2.5 percent; and Beaver, 2.9 percent). This is generally a continuation of the regional growth patterns within the state in the 1990s. Meanwhile, nine counties in the southeastern and south central regions of the state either lost population or had no growth.

The U.S. Bureau of the Census (Census), which also produces population estimates for counties, concludes that there was net out-migration from Utah in the year ending July 1, 2001. Further, their revised intercensal estimates for the 1990s have a somewhat different pattern of migration than do UPEC estimates. Over the past decade, Census and UPEC estimates have not diverged so dramatically as they presently do.

This paper is a descriptive review of the UPEC estimates, including a discussion of methods. The results of an experimental housing unit method are reported as well. In addition, the Census estimates (both current and intercensal) are reviewed.

2001 Estimates

According to the Utah Population Estimates Committee, the Utah population increased by an estimated 49,418 persons to reach 2,295,971 by July 1, 2001. This represents a year-over growth rate of 2.2 percent, more than double the national rate of growth of 0.9 percent (Table 1).

Although the economic and population boom of the 1990s began to slow by mid-year 2001, the state experienced its 11th consecutive year of net in-migration, with an estimated cumulative net in-migration to the state over this period of 233,152. This is the second-longest uninterrupted period of positive net in-migration to Utah since UPEC began keeping annual estimates in 1940.¹ An estimated 14,166 more persons moved into

Utah than moved out in the 12 months prior to July 1, 2001, roughly half the level of net in-migration experienced at the peak of the most recent expansion in 1994.²

Because of Utah's young population and relatively high fertility rate, natural increase (births minus deaths) again contributed more to the population growth than did net in-migration. Since 1950, natural increase has accounted for about 78 percent of the population growth in the state. Natural increase (35,251), births (47,688), and deaths (12,437) were at historically high levels in fiscal year 2001. With some exceptions, the number of deaths has generally increased proportionately with the population.³ Births have fluctuated much more, depending upon the number and age structure of women in

childbearing years and age-specific fertility rates. The total fertility rate for Utah women actually declined slightly in 2001 to 2.51 (as compared to 2.59 in 2000), but because the number of young women has increased substantially, births increased to establish new records.⁴ This increase in the number of women in childbearing years is primarily the result of Utah's previous "Baby Boom" which peaked in the early 1980s and whose members are coming of age. The economic expansion of the 1990s attracted many young, job-seeking persons who brought children and continued to have more children once they became residents of the state. This contributed, albeit to a much lesser extent, to the record number of births in fiscal year 2001⁵ (Figures 1, 2 and 3).

Figure 1
Utah Fiscal Year Births, Deaths and Natural Increase
1940-2001

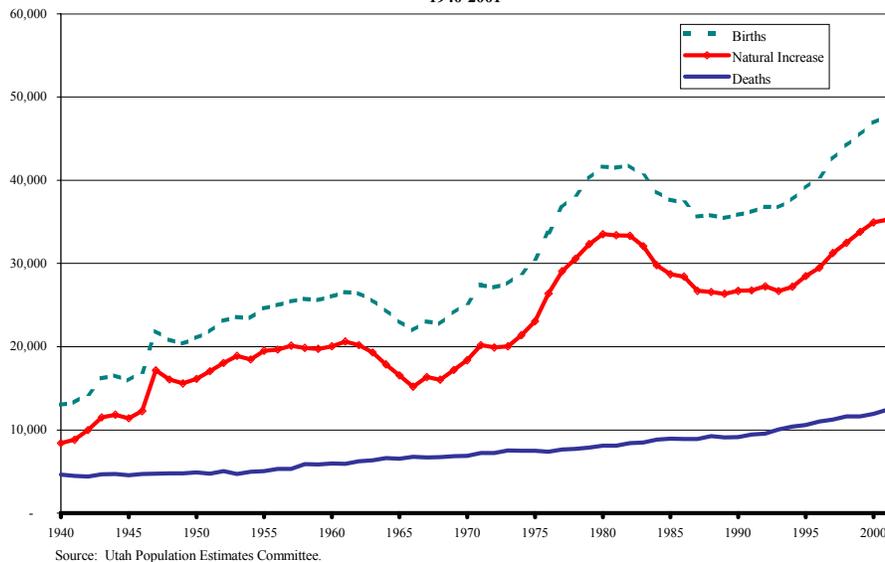
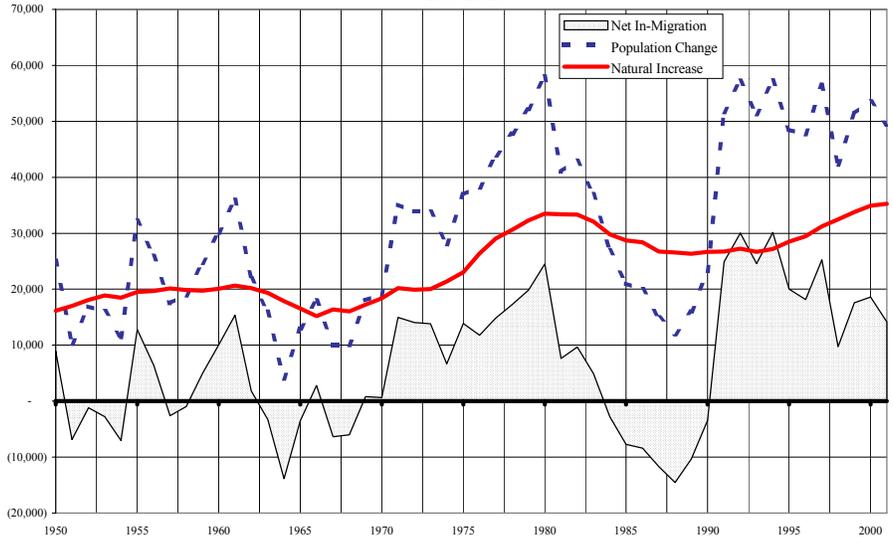
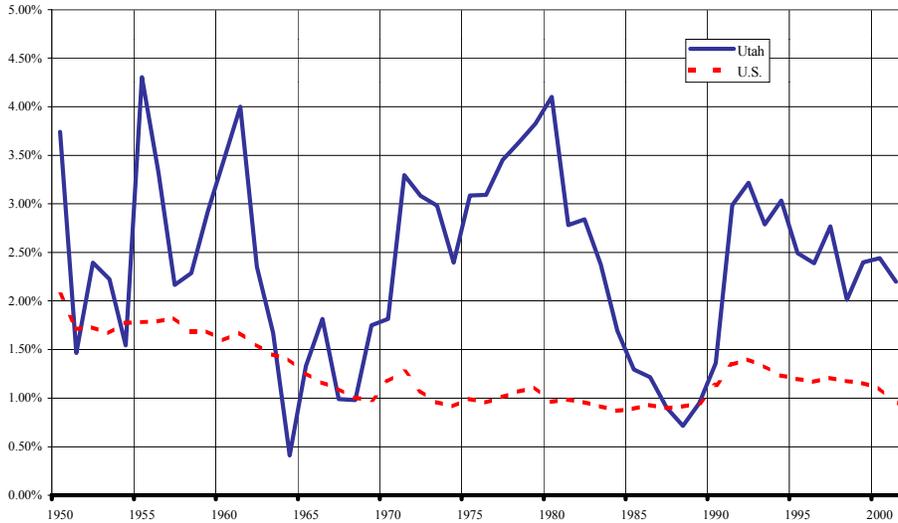


Figure 2
Utah Fiscal Year Components of Population Change
1950-2001



Source: Utah Population Estimates Committee.

Figure 3
Utah and U.S. Resident Population Annual Growth Rates
1950-2001



Source: Utah Population Estimates Committee and U.S. Bureau of the Census.

Table 1
Utah Population Estimates and Components of Change

	July 1 Population	Percent Change	Population Change	Net In- Migration	Net Migration as Share of		Fiscal Year Deaths	Natural Increase
					Previous Year Population	Fiscal Year Births		
1940	551,800					13,038	4,619	8,419
1941	551,000	-0.14%	-800	-9,631	-1.7%	13,293	4,462	8,831
1942	571,200	3.67%	20,200	10,231	1.9%	14,357	4,388	9,969
1943	640,000	12.04%	68,800	57,284	10.0	16,182	4,666	11,516
1944	604,700	-5.52%	-35,300	-47,122	-7.4%	16,536	4,714	11,822
1945	589,100	-2.58%	-15,600	-26,992	-4.5%	15,937	4,545	11,392
1946	638,000	8.30%	48,900	36,649	6.2%	16,955	4,704	12,251
1947	636,000	-0.31%	-2,000	-19,178	-3.0%	21,905	4,727	17,178
1948	653,000	2.67%	17,000	943	0.1%	20,856	4,799	16,057
1949	670,800	2.73%	17,800	2,207	0.3%	20,354	4,761	15,593
1950	695,900	3.74%	25,100	8,966	1.3%	21,027	4,893	16,134
1951	706,100	1.47%	10,200	-6,842	-1.0%	21,801	4,759	17,042
1952	723,000	2.39%	16,900	-1,160	-0.2%	23,116	5,056	18,060
1953	739,100	2.23%	16,100	-2,789	-0.4%	23,573	4,684	18,889
1954	750,500	1.54%	11,400	-7,069	-1.0%	23,439	4,970	18,469
1955	782,800	4.30%	32,300	12,784	1.7%	24,584	5,068	19,516
1956	808,800	3.32%	26,000	6,348	0.8%	24,975	5,323	19,652
1957	826,300	2.16%	17,500	-2,639	-0.3%	25,443	5,304	20,139
1958	845,200	2.29%	18,900	-955	-0.1%	25,760	5,905	19,855
1959	869,900	2.92%	24,700	4,959	0.6%	25,610	5,869	19,741
1960	900,000	3.46%	30,100	10,047	1.2%	26,011	5,958	20,053
1961	936,000	4.00%	36,000	15,371	1.7%	26,560	5,931	20,629
1962	958,000	2.35%	22,000	1,817	0.2%	26,431	6,248	20,183
1963	974,000	1.67%	16,000	-3,317	-0.3%	25,648	6,331	19,317
1964	978,000	0.41%	4,000	-13,863	-1.4%	24,461	6,598	17,863
1965	991,000	1.33%	13,000	-3,553	-0.4%	23,082	6,529	16,553
1966	1,009,000	1.82%	18,000	2,810	0.3%	21,953	6,763	15,190
1967	1,019,000	0.99%	10,000	-6,350	-0.6%	23,030	6,680	16,350
1968	1,029,000	0.98%	10,000	-6,029	-0.6%	22,743	6,714	16,029
1969	1,047,000	1.75%	18,000	798	0.1%	24,033	6,831	17,202
1970	1,066,000	1.81%	19,000	612	0.1%	25,281	6,893	18,388
1971	1,101,15	3.30%	35,150	14,966	1.4%	27,400	7,216	20,184
1972	1,135,10	3.08%	33,950	14,046	1.3%	27,146	7,242	19,904
1973	1,168,95	2.98%	33,850	13,810	1.2%	27,562	7,522	20,040
1974	1,196,95	2.40%	28,000	6,621	0.6%	28,876	7,497	21,379
1975	1,233,90	3.09%	36,950	13,897	1.2%	30,566	7,513	23,053
1976	1,272,05	3.09%	38,150	11,761	1.0%	33,773	7,384	26,389
1977	1,315,95	3.45%	43,900	14,824	1.2%	36,707	7,631	29,076
1978	1,363,75	3.63%	47,800	17,220	1.3%	38,289	7,709	30,580
1979	1,415,95	3.83%	52,200	19,868	1.5%	40,216	7,884	32,332
1980	1,474,00	4.10%	58,050	24,536	1.7%	41,645	8,131	33,514
1981	1,515,00	2.78%	41,000	7,612	0.5%	41,509	8,121	33,388
1982	1,558,00	2.84%	43,000	9,662	0.6%	41,773	8,435	33,338
1983	1,595,00	2.37%	37,000	4,914	0.3%	40,555	8,469	32,086
1984	1,622,00	1.69%	27,000	-2,793	-0.2%	38,643	8,850	29,793
1985	1,643,00	1.29%	21,000	-7,714	-0.5%	37,664	8,950	28,714
1986	1,663,00	1.22%	20,000	-8,408	-0.5%	37,309	8,901	28,408
1987	1,678,00	0.90%	15,000	-11,713	-0.7%	35,631	8,918	26,713
1988	1,690,00	0.72%	12,000	-14,557	-0.9%	35,809	9,252	26,557
1989	1,706,00	0.95%	16,000	-10,355	-0.6%	35,439	9,084	26,355
1990	1,729,22	1.36%	23,227	-3,480	-0.2%	35,830	9,123	26,707
1991	1,780,87	2.99%	51,643	24,878	1.4%	36,194	9,429	26,765
1992	1,838,14	3.22%	57,279	30,042	1.7%	36,796	9,559	27,237
1993	1,889,39	2.79%	51,244	24,561	1.3%	36,738	10,055	26,683
1994	1,946,72	3.03%	57,328	30,116	1.6%	37,623	10,411	27,212
1995	1,995,22	2.49%	48,507	20,024	1.0%	39,064	10,581	28,483
1996	2,042,89	2.39%	47,665	18,171	0.9%	40,495	11,001	29,494
1997	2,099,40	2.77%	56,516	25,253	1.2%	42,512	11,249	31,263
1998	2,141,63	2.01%	42,223	9,745	0.5%	44,126	11,648	32,478
1999	2,193,01	2.40%	51,382	17,584	0.8%	45,434	11,636	33,798
2000	2,246,55	2.44%	53,539	18,612	0.8%	46,880	11,953	34,927
2001	2,295,97	2.20%	49,418	14,166	0.6%	47,688	12,437	35,251

Source: Utah Population Estimates Committee.

County Growth Patterns

The population of 20 counties increased from July 1, 2000 to July 1, 2001, while nine nonmetropolitan counties, primarily in the southeastern and south central region of the state either had no growth or lost population. Tooele (6.9 percent) was the fastest growing county followed by Washington (4.9 percent), Summit (4.1 percent), Utah (3.7 percent), Wasatch (3.3 percent), Juab (3.1 percent), Uintah (3.0 percent), Beaver (2.9 percent) and Iron (2.5 percent). This is largely a continuation of the growth patterns of the past decade with the expansion of the metropolitan area into adjacent perimeter areas and the further development of the southwestern corner of the state. These counties, with few exceptions, were also the most rapid growth counties of the 1990s. Growth rates have actually accelerated in 2001 as compared to the average annual growth rates for the 1990s in Tooele, Uintah, Utah and Rich counties. Growth has decelerated or turned negative for all other counties. Those counties losing population in 2001 were Emery (-2.9 percent), Garfield (-2.8 percent), Carbon (-2.6 percent), Piute (-2.2 percent), San Juan (-2.1 percent), Grand (-1.3 percent), Millard (-1.1 percent) and Wayne (-0.2 percent). These nonmetropolitan counties have in general lost employment as the mining, construction, oil

and gas, tourism and agricultural sectors of the southeastern and south central regions of the state have declined (Table 2 and Figure 4).

While each county and community has its own unique history and characteristics, there are shared long-term economic growth and development experiences within particular regions of the state. The four Wasatch Front counties (Weber, Davis, Salt Lake and Utah) have evolved from agriculture, mining and federal government (defense) dependent economies to an economically integrated and diversified metropolitan area. Collectively, these four counties are home to nearly 1.75 million Utahns with 76 percent of the state's population. After increasing from a 62 percent share in 1940 and 69 percent share in 1950 to 75 percent in 1970, these Wasatch Front counties have maintained roughly three-quarters of the state's population. This has corresponded in time with the economic transformation of the state and the emergence of the "New Utah."⁶ Among these, Salt Lake County is the largest, although its 40 percent share of the state total has declined slightly. Utah County has recently been the most rapidly growing, with its share of the state's population increasing from 11.9 percent in 1950 to 16.8 percent in 2001 (Table 3).

Over the past six decades the smaller rural counties of Utah have experienced wide variations in growth or declines of population. These fluctuations have resulted from economies based on natural resources and agriculture, as well as disproportionate reliance on a few large employers (e.g., federal defense-related employment, etc.) This lack of diversification results in a high exposure to commodity price fluctuations, natural resource cycles, structural changes within these industries of specialization, and the decisions of large employers. In consequence, some counties have fewer residents today than they did 60 years ago (Garfield, Piute, Rich). As some communities have more recently become specialized in tourism in order to replace lost or declining industries, they have consequently become vulnerable to fluctuations in this sector as well.

Over time the Wasatch Front urban area has expanded into and absorbed contiguous rural areas such as portions of Summit, Tooele, Wasatch and Juab counties. As the urban fringe expands into new areas, there is generally an initial burst of population growth. Eventually, as the area becomes more fully integrated into the metropolitan region, population growth stabilizes and can eventually approach capacity or "build-out." The

Table 2
Components of Population Change in Utah by County and Multi-County District

County/MCD	July 1, 2000 to July 1, 2001					Components of Population Change 2000-2001			
	July 1 Population		Population Change 2000-2001			Births	Deaths	Natural Increase	Net In-Migration
	2000	2001	Amount	Percent	Percent Rank				
Beaver County	6,023	6,198	175	2.9%	8				8
Box Elder County	42,860	43,245	385	0.9%	20	783	279	504	-119
Cache County	91,897	93,372	1,475	1.6%	15	2,189	428	1,761	-286
Carbon County	20,396	19,858	-538	-2.6%	27	291	179	112	-650
Daggett County	933	944	11	1.2%	19	14	2	12	-1
Davis County	240,204	244,845	4,641	1.9%	10	4,920	1,087	3,833	808
Duchesne County	14,397	14,646	249	1.7%	11	286	105	181	68
Emery County	10,782	10,473	-309	-2.9%	29	166	65	101	-410
Garfield County	4,763	4,630	-133	-2.8%	28	66	48	18	-151
Grand County	8,537	8,423	-114	-1.3%	24	114	69	45	-159
Iron County	34,079	34,920	841	2.5%	9	767	161	606	235
Juab County	8,310	8,570	260	3.1%	6	174	57	117	143
Kane County	6,037	6,037	0	0.0%	21	73	69	4	-4
Millard County	12,461	12,326	-135	-1.1%	23	191	106	85	-220
Morgan County	7,181	7,297	116	1.6%	14	117	28	89	27
Piute County	1,436	1,404	-32	-2.2%	26	21	15	6	-38
Rich County	1,955	1,983	28	1.4%	17	18	8	10	18
SaltLake County	902,777	918,279	15,502	1.7%	12	18,322	5,088	13,234	2,268
San Juan County	14,360	14,063	-297	-2.1%	25	252	76	176	-473
Sanpete County	22,846	23,219	373	1.6%	13	395	170	225	148
Sevier County	18,938	19,180	242	1.3%	18	357	157	200	42
Summit County	30,048	31,279	1,231	4.1%	3	487	103	384	847
Tooele County	41,549	44,431	2,882	6.9%	1	956	203	753	2,129
Uintah County	25,297	26,049	752	3.0%	7	467	155	312	440
Utah County	371,894	385,692	13,798	3.7%	4	10,169	1,595	8,574	5,224
Wasatch County	15,433	15,947	514	3.3%	5	292	75	217	297
Washington County	91,104	95,584	4,480	4.9%	2	1,737	662	1,075	3,405
Wayne County	2,515	2,509	-6	-0.2%	22	38	22	16	-22
Weber County	197,541	200,567	3,026	1.5%	16	3,910	1,380	2,530	496
Bear River MCD	136,712	138,600	1,888	1.4%		2,990	715	2,275	-387
WasatchFront MCD	1,389,252	1,415,419	26,167	1.9%		28,225	7,786	20,439	5,728
Mountainland MCD	417,375	432,918	15,543	3.7%		10,948	1,773	9,175	6,368
Central MCD	66,506	67,208	702	1.1%		1,176	527	649	53
Southwest MCD	142,006	147,369	5,363	3.8%		2,759	985	1,774	3,589
Uintah Basin MCD	40,627	41,639	1,012	2.5%		767	262	505	507
Southeast MCD	54,075	52,817	-1,258	-2.3%		823	389	434	-1,692
State of Utah	2,246,553	2,295,971	49,418	2.2%		47,688	12,437	35,251	14,166

Source: Utah Population Estimates Committee.

employment volatility of these previously rural settings has been replaced by the more steady growth of the larger and more diversified urban labor market.

Still other areas of the state outside the greater

Wasatch Area have become more independent and sizable economic and residential centers.⁷ Washington County (St. George), Cache County (Logan), and Iron County (Cedar City) are the most prominent examples of this

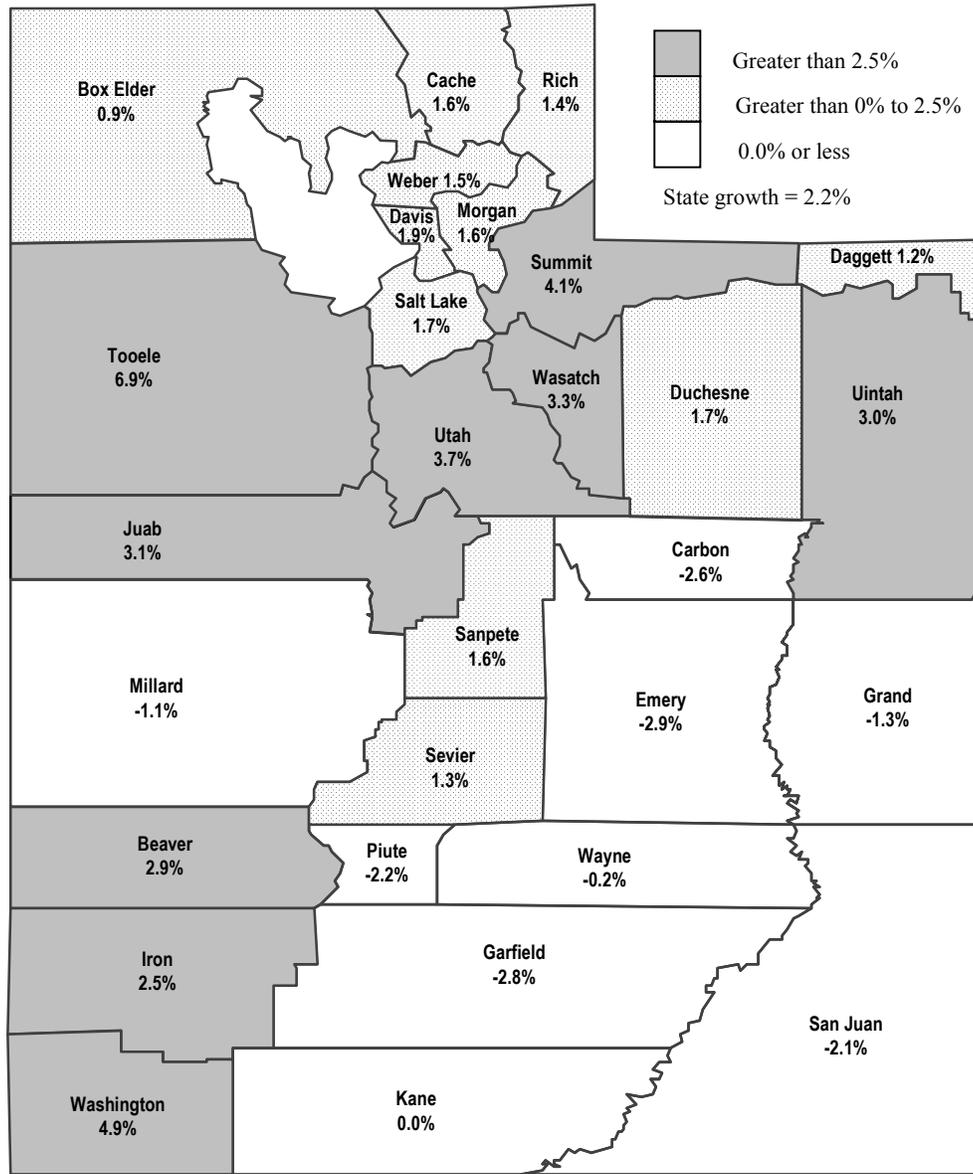
type of development path. Over time the economic base of each of these three counties has become larger and more diversified and the residentiary sectors have become more extensive. Population growth has also

Table 3
Population Estimates for Utah by County and Multi-County District
Selected Years 1940-2001

	1940	1950	1960	1970	1980	1990	1997	1998	1999	2000	2001	Average Annual Growth Rates for Each Period							
												1940s	1950s	1960s	1970s	1980s	1990s	2000-2001	
Beaver County	4,900	4,800	4,300	3,850	4,400	4,782	5,870	5,705	5,951	6,023	6,198	-0.2%	-1.1%	-1.1%	1.3%	0.8%	3.0%	2.9%	
Box Elder County	18,900	19,800	25,500	28,150	33,500	36,509	40,735	41,507	42,399	42,860	43,245	0.5%	2.6%	1.0%	1.8%	0.9%	1.6%	0.9%	
Cache County	29,900	33,600	36,100	42,550	57,700	70,560	85,974	88,326	89,874	91,897	93,372	1.2%	0.7%	1.7%	3.1%	2.0%	2.9%	1.6%	
Carbon County	18,700	24,800	21,200	15,750	22,400	20,169	20,654	20,695	20,500	20,396	19,858	2.9%	-1.6%	-2.9%	3.6%	-1.0%	0.3%	-2.6%	
Daggett County	600	400	1,200	650	750	706	786	783	884	933	944	-4.0%	11.6%	-5.9%	1.4%	-0.6%	1.5%	1.2%	
Davis County	15,500	31,200	65,600	99,600	148,000	188,471	224,356	229,450	235,364	240,204	244,845	7.2%	7.7%	4.3%	4.0%	2.4%	2.5%	1.9%	
Duchesne County	8,700	8,100	7,200	7,400	12,700	12,600	14,332	14,177	14,293	14,397	14,646	-0.7%	-1.2%	0.3%	5.5%	-0.1%	1.9%	1.7%	
Emery County	7,000	6,300	5,500	5,150	11,600	10,329	11,089	11,059	11,095	10,782	10,473	-1.0%	-1.3%	-0.7%	8.5%	-1.2%	1.0%	-2.9%	
Garfield County	5,300	4,100	3,500	3,150	3,700	3,970	4,603	4,570	4,650	4,763	4,630	-2.5%	-1.6%	-1.0%	1.6%	0.7%	2.1%	-2.8%	
Grand County	2,200	1,900	6,400	6,600	8,250	6,591	8,170	8,197	8,329	8,537	8,423	-1.5%	12.9%	0.3%	2.3%	-2.2%	3.1%	-1.3%	
Iron County	8,400	9,700	10,900	12,300	17,500	20,910	30,254	31,687	32,879	34,079	34,920	1.4%	1.2%	1.2%	3.6%	1.8%	5.4%	2.5%	
Juab County	7,400	5,900	4,500	4,600	5,550	5,831	7,735	7,898	8,021	8,310	8,570	-2.2%	-2.7%	0.2%	1.9%	0.5%	4.1%	3.1%	
Kane County	2,600	2,300	2,700	2,450	4,050	5,150	5,982	6,012	6,073	6,037	6,037	-1.2%	1.6%	-1.0%	5.2%	2.4%	2.2%	0.0%	
Millard County	9,700	9,300	7,900	7,050	9,050	11,333	12,243	12,246	12,236	12,461	12,326	-0.4%	-1.6%	-1.1%	2.5%	2.3%	1.1%	-1.1%	
Morgan County	2,600	2,500	2,800	4,050	4,950	5,561	6,705	6,889	6,973	7,181	7,297	-0.4%	1.1%	3.8%	2.0%	1.2%	2.7%	1.6%	
Piute County	2,200	1,900	1,400	1,150	1,350	1,267	1,328	1,372	1,433	1,436	1,404	-1.5%	-3.0%	-1.9%	1.6%	-0.6%	0.7%	-2.2%	
Rich County	2,000	1,700	1,700	1,600	2,150	1,728	1,882	1,889	1,978	1,955	1,983	-1.6%	0.0%	-0.6%	3.0%	-2.2%	1.2%	1.4%	
Salt Lake County	213,700	279,000	387,800	461,500	625,000	728,298	858,306	870,735	885,216	902,777	918,279	2.7%	3.3%	1.8%	3.1%	1.5%	2.4%	1.7%	
San Juan County	4,600	5,300	8,900	9,700	12,400	12,448	14,392	14,779	14,573	14,360	14,063	1.4%	5.3%	0.9%	2.5%	0.0%	2.1%	-2.1%	
Sanpete County	15,900	13,800	11,100	11,000	14,800	16,355	21,825	22,445	22,513	22,846	23,219	-1.4%	-2.2%	-0.1%	3.0%	1.0%	4.2%	1.6%	
Sevier County	12,300	12,000	10,600	10,150	14,900	15,434	17,902	18,294	18,555	18,938	19,180	-0.2%	-1.2%	-0.4%	3.9%	0.4%	2.1%	1.3%	
Summit County	8,600	6,700	5,700	5,900	10,400	15,690	26,224	27,674	28,799	30,048	31,279	-2.5%	-1.6%	0.3%	5.8%	4.2%	7.6%	4.1%	
Tooele County	8,800	15,000	18,000	21,600	26,200	26,581	33,457	35,476	38,294	41,549	44,431	5.5%	1.8%	1.8%	1.9%	0.1%	3.3%	6.9%	
Utah County	10,000	10,300	11,700	12,800	20,700	22,230	25,163	24,262	25,004	25,297	26,049	0.3%	1.3%	0.9%	4.9%	0.7%	1.8%	3.0%	
Utah County	56,900	83,000	108,300	139,300	220,000	265,766	334,658	344,820	358,463	371,894	385,692	3.8%	2.7%	2.5%	4.7%	1.9%	3.3%	3.7%	
Wasatch County	5,800	5,500	5,300	5,950	8,650	10,134	13,307	14,132	14,560	15,433	15,947	-0.5%	-0.4%	1.2%	3.8%	1.6%	4.0%	3.3%	
Washington County	9,200	9,800	10,400	13,900	26,400	48,988	82,078	84,579	88,105	91,104	95,584	0.6%	0.6%	2.9%	6.6%	6.4%	7.7%	4.9%	
Wayne County	2,300	2,200	1,700	1,450	1,950	2,163	2,406	2,421	2,492	2,515	2,509	-0.4%	-2.5%	-1.6%	3.0%	1.0%	1.5%	-0.2%	
Weber County	57,100	85,000	112,100	126,700	145,000	158,673	186,993	189,553	193,508	197,541	200,567	4.1%	2.8%	1.2%	1.4%	0.9%	2.4%	1.5%	
Bear River MCD	50,800	55,100	63,300	72,300	93,350	108,797	128,591	131,722	134,251	136,712	138,600	0.8%	1.4%	1.3%	2.6%	1.5%	2.4%	1.4%	
Wasatch Front MCD	297,700	412,700	586,300	713,450	949,150	1,107,584	1,309,817	1,332,103	1,359,355	1,389,252	1,415,419	3.3%	3.6%	2.0%	2.9%	1.6%	2.4%	1.9%	
Mountainland MCD	71,300	95,200	119,300	151,150	239,050	291,590	374,189	386,626	401,822	417,375	432,918	2.9%	2.3%	2.4%	4.7%	2.0%	3.6%	3.7%	
Central MCD	49,800	45,100	37,200	35,400	47,600	52,383	63,439	64,676	65,250	66,506	67,208	-1.0%	-1.9%	-0.5%	3.0%	1.0%	2.8%	1.1%	
Southwest MCD	30,400	30,700	31,800	35,650	56,050	83,800	128,787	132,553	137,658	142,006	147,369	0.1%	0.4%	1.1%	4.6%	4.1%	6.3%	3.8%	
Utah Basin MCD	19,300	18,800	20,100	20,850	34,150	35,536	40,281	39,222	40,181	40,627	41,639	-0.3%	0.7%	0.4%	5.1%	0.4%	1.8%	2.5%	
Southeast MCD	32,500	38,300	42,000	37,200	54,650	49,537	54,305	54,730	54,497	54,075	52,817	1.7%	0.9%	-1.2%	3.9%	-1.0%	1.3%	-2.3%	
State of Utah	551,800	695,900	900,000	1,066,000	1,474,000	1,729,227	2,099,409	2,141,632	2,193,014	2,246,553	2,295,971	2.3%	2.6%	1.7%	3.3%	1.6%	2.8%	2.2%	

Source: Utah Population Estimates Committee.

Figure 4
Population Growth Rates by County: Fiscal Year 2001



Source: Utah Population Estimates Committee.

become more stable, and in the case of Washington and Iron counties, quite rapid.

Long Term State Population Growth Trends

The west was the most rapidly growing region of the

country in the 1990s. Nevada (66.3 percent increase), Arizona (40.0 percent), Colorado (30.6 percent), Utah (29.6 percent) and Idaho (28.5 percent) were the top five fastest-growing states in the nation (13.2 percent) from 1990 to 2000. This is a continuation of the long-term

general westward and southern shift of the national population. Among the mountain states (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming) Colorado was for many decades the largest, its population having surpassed one million by the

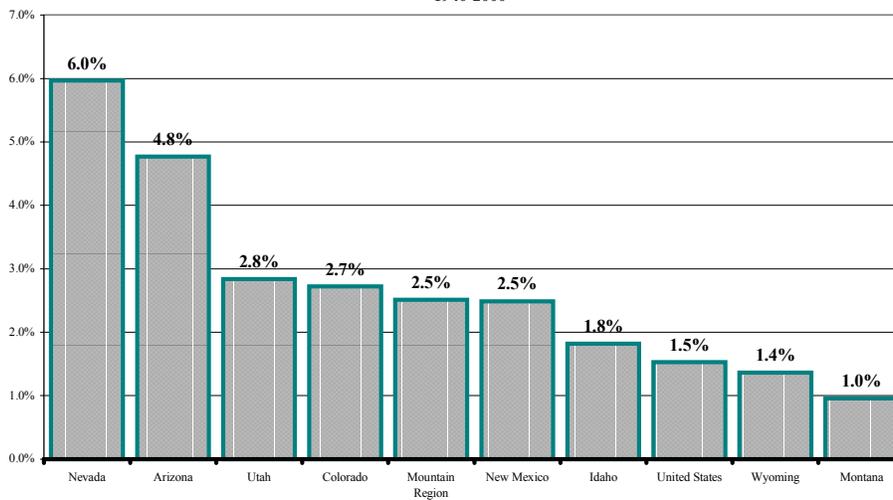
1930 census and 4.3 million by 2000. In 1960 Arizona, with a population of 1.3 million, began an extraordinary 40-year growth path, surpassing Colorado in the 1980s to become the largest of the mountain states with a population of 5.1 million in 2000. The total population of Utah was just over half a million in 1940 (as were the populations of New Mexico, Idaho and Montana) and surpassed the one million mark by the 1970 census (as did New Mexico). From 1940 to 2000, population growth rates of Arizona and Nevada far exceeded those of the other states in the region, while the growth rate of the Utah population has been somewhat above the mountain states average and almost twice the national rate (Figure 5).

Because of Utah's relatively high fertility rate, the natural increase component has provided nearly 80 percent of the population growth since 1950, with the balance coming from net in-migration to the state. This has varied as economic cycles have either forced people to move from the state to find employment (as in the 1980s) or enticed people to move to the state for economic opportunities (as in the 1970s and 1990s). Employment-related migration is generally concentrated in young age groups who often bring children and continue to have them once they migrate. In Utah this has reinforced the relative youth of the population and has further contributed to the high rates of natural increase.⁸

The Utah Population Estimates Committee and Its Methods

The Utah Population Estimates Committee (UPEC) prepares annual estimates of county populations and, on an occasional basis, smaller areas. The Demographic and Economic Analysis Section of the Utah Governor's Office of Planning and Budget coordinates UPEC and provides staff support. Committee members represent state government agencies, universities and other entities that contribute data and analysis to the estimation process. UPEC has been in existence for nearly 50 years, although its responsibilities were not institutionally formalized until Gov. Leavitt issued an executive order in 1997.⁹

Figure 5
Average Annual Rates of Change of the Resident Population
1940-2000



Source: U.S. Bureau of the Census.

Standard population estimation techniques involve taking the most recent decennial count of the population as a base then adding subsequent natural increase (births minus deaths) and net migration (which may be positive or negative). UPEC estimates the July 1 population each year. So, the births, deaths and net migration from July 1 of the previous year are cumulated to arrive at the current year July 1 population. For the July 1, 2001 estimates, fiscal year 2001 natural increase and net migration are added to the July 1, 2000 population estimates. More formally:

$$P_{(7/1/2001)} = P_{(7/1/2000)} + B_{(7/1/2000 \text{ to } 7/1/2001)} - D_{(7/1/2000 \text{ to } 7/1/2001)} + M_{(7/1/2000 \text{ to } 7/1/2001)}$$

Where:

P is population

B is births

D is deaths

M is net migration (gross in-migration minus gross out-migration)

Because vital records data are provided, the real work of the Committee is to estimate net migration. UPEC uses three primary estimation methods based on school enrollment data, Utah State Tax Commission (tax exemption) records, and membership records of the Church of Jesus Christ of Latter-day Saints (LDS). These are supplemented with additional relevant symptomatic data (housing permits, employment, utility connections, etc.) and

committee deliberation. Individual county estimates are summed to arrive at the state total.

UPEC uses the School Enrollment Method to estimate net migration by applying year-over percent changes in school enrollments to the population of the previous year. In the current estimates, the fall 2000 enrollments for grades 1 through 8 are survived and aged then compared with the fall 2001 enrollments of grades 2 through 9.¹⁰ The result is an estimate of the student net migration. This difference is scaled up by the ratio of the July 1, 2000 total population divided by the 2000 fall enrollment for grades 1 through 8, which results in an estimate of net migration for the year ending July 1, 2001. The accuracy of the method depends upon the quality of the data and the stability of the ratio of school enrollment to the total population. The later depends upon the age structure and public education participation rates.¹¹

The Tax Exemption Method applies the year-over growth rate in the number of exemptions claimed on tax returns filed with the Utah State Tax Commission to the beginning population. In this case, the percentage change in the number of exemptions claimed from calendar year 2000 as compared to calendar year 1999 is applied to the July 1, 2000 estimate to derive the July 1, 2001 population.

For the decade of the 1990s, the Tax Exemption Method was the most accurate of the three UPEC methods.¹² The accuracy of this method is dependent upon a constant ratio of total tax exemptions to the population over time and consistent taxation policies and practices.

Similarly, the LDS Membership Method applies the annual growth rate in membership to the base population to compute total population. The LDS Church provides total membership for each county to UPEC. The data is used only for the internal technical work of the committee and is kept strictly confidential. The accuracy of this method over time depends upon a constant ratio of LDS Church membership to the population and consistency in church membership accounting practices.

Each of the three methods resulted in estimated net in-migration to the state of 9,238 (School Enrollment Method), 1,223 (LDS Membership Method), 12,852 (Tax Exemption Method). Data and analysis provided by committee members confirmed positive net migration to the state as well. Each county was individually evaluated and the committee arrived at the preferred methodology for each. One element of the evaluation was the identification of "outlier" estimates, defined as an estimate that is not within two percent of the average of the

three methods. This year, the outlier calculations did not impact the estimates. In the case of 14 counties, the committee adopted the average of three estimates as the official population estimate. The Tax Exemption Method was used in 10 counties, the School Enrollment Method for four counties and the LDS Membership Method for one county (Tables 4 and 5).

Experimental Housing Unit Method

For some time there have been discussions in UPEC about developing an experimental housing unit model for population estimation purposes. A trial method was designed and implemented to produce a state level July 1, 2001 housing unit method population estimate for the state. Although this particular model is, in some regards, more complicated than most basic housing unit methods, it unfortunately yields an estimate that is unrealistically high. The lesson learned from this exercise is that if UPEC were to seriously pursue using a methodology of this type at the county level, explicit modeling of other factors and dynamics is necessary to render the method viable.

The monthly building permit data for this exercise are single-family home and multifamily dwelling data maintained by the Bureau of Economic and Business Research, University of Utah.

Comparison of Basic and Experimental Housing Unit Methods

The **basic housing unit method** is:

$$POP_t = (H_t \times OCC_t \times PPH_t) + (GQ_t)$$

where the variables are for a given area and given point in time (t):
 POP is population
 H is residential housing units
 OCC is the occupancy rate (1 minus the vacancy rate)
 PPH is persons per household
 GQ is the group quarters population

Changes to the housing stock from one period to the next are calculated as follows:

$$H_t = H_o + (PERMITS_{0,t-lag} \times BEFACT_t) - (DEMOL_{0,t})$$

where
 H_t is stock of residential housing units at a point in time t
 H_o is stock of residential housing units reported in the decennial census
 PERMITS_{0,t-lag} is the number of residential building permits subsequent to the decennial census with a time lag factor from the estimation date
 BEFACT_t is the percentage of permitted housing that is actually built (or started) for time t
 DEMOL_{0,t} is the number of demolitions of housing units in the time since the decennial census¹³

Calculation of housing stock in the BEBR experimental housing unit method is:

The stock of single-family units for months following April 1, 2000 is computed as follows:

$$SF_t = SF_{t-1} + SFBP_{t-12}$$

where:
 SF_t is the stock of single-family (owner) units at time t
 t is measured in months
 SFBP_{t-12} is the number of monthly single-family unit building permits issued 12 months prior

Total multifamily units for months subsequent are computed as follows:

$$MF_t = MF_{t-1} + MFBP_{t-12}$$

where:
 MF_t is the stock of multifamily (rental) units at time t
 t is measured in months
 MFBP_{t-12} is the number of multifamily unit building permits issued 12 month prior

Table 4
UPEC July 1, 2001 Estimates and Implied Net Migration by Method

	July 1 Population		Natural Increase	School Enrollment		LDS Membership		Tax Exemption		Average of Three Methods		Estimate Based on Judgement	
	2000	2001		July 1, 2001	Implied Net Migration	July 1, 2001	Implied Net Migration	July 1, 2001	Implied Net Migration	July 1, 2001	Implied Net Migration	July 1, 2001	Implied Net Migration
Beaver County	6,023	6,198	71	6,198	104	6,054	-40	6,080	-14	6,111	17	6,198	104
Box Elder County	42,860	43,245	504	43,390	26	43,229	-135	43,115	-249	43,245	-119	43,245	-119
Cache County	91,897	93,372	1,761	94,111	453	93,523	-135	92,482	-1,176	93,372	-286	93,372	-286
Carbon County	20,396	19,858	112	19,950	-558	19,881	-627	19,743	-765	19,858	-650	19,858	-650
Daggett County	933	944	12	851	-94	992	47	944	-1	929	-16	944	-1
Davis County	240,204	244,845	3,833	244,255	218	245,404	1,367	244,875	838	244,845	808	244,845	808
Duchesne County	14,397	14,646	181	14,683	105	14,609	31	14,892	314	14,728	150	14,646	68
Emery County	10,782	10,473	101	10,531	-352	10,503	-380	10,385	-498	10,473	-410	10,473	-410
Garfield County	4,763	4,630	18	4,551	-230	4,641	-140	4,699	-82	4,630	-151	4,630	-151
Grand County	8,537	8,423	45	8,137	-445	8,558	-24	8,574	-8	8,423	-159	8,423	-159
Iron County	34,079	34,920	606	35,086	401	35,295	610	34,920	235	35,100	415	34,920	235
Juab County	8,310	8,570	117	8,570	143	8,398	-29	8,477	50	8,482	55	8,570	143
Kane County	6,037	6,037	4	6,072	31	5,940	-101	6,098	57	6,037	-4	6,037	-4
Millard County	12,461	12,326	85	12,425	-121	12,341	-205	12,213	-333	12,326	-220	12,326	-220
Morgan County	7,181	7,297	89	7,375	105	7,278	8	7,297	27	7,317	47	7,297	27
Piute County	1,436	1,404	6	1,426	-16	1,443	1	1,404	-38	1,424	-18	1,404	-38
Rich County	1,955	1,983	10	2,023	58	1,984	19	1,942	-23	1,983	18	1,983	18
Salt Lake County	902,777	918,279	13,234	915,023	-988	908,947	-7,064	918,279	2,268	914,083	-1,928	918,279	2,268
San Juan County	14,360	14,063	176	14,096	-440	14,031	-505	13,371	-1,165	13,833	-703	14,063	-473
Sanpete County	22,846	23,219	225	23,219	148	23,180	109	23,527	456	23,309	238	23,219	148
Sevier County	18,938	19,180	200	19,567	429	19,152	14	19,180	42	19,300	162	19,180	42
Summit County	30,048	31,279	384	30,494	62	29,834	-598	31,279	847	30,536	104	31,279	847
Tooele County	41,549	44,431	753	42,775	473	44,431	2,129	44,191	1,889	43,799	1,497	44,431	2,129
Uintah County	25,297	26,049	312	25,775	166	25,499	-110	26,049	440	25,774	165	26,049	440
Utah County	371,894	385,692	8,574	386,938	6,470	384,589	4,121	385,549	5,081	385,692	5,224	385,692	5,224
Wasatch County	15,433	15,947	217	15,947	297	15,962	312	16,342	692	16,084	434	15,947	297
Washington County	91,104	95,584	1,075	95,168	2,989	94,130	1,951	95,584	3,405	94,961	2,782	95,584	3,405
Wayne County	2,515	2,509	16	2,428	-103	2,502	-29	2,598	67	2,509	-22	2,509	-22
Weber County	197,541	200,567	2,530	199,977	-94	200,697	626	200,567	496	200,414	343	200,567	496
Bear River MCD	136,712	138,600	2,275	139,524	537	138,736	-251	137,539	-1,448	138,600	-387	138,600	-387
Wasatch Front MCD	1,389,252	1,415,419	20,439	1,409,405	-286	1,406,757	-2,934	1,415,209	5,518	1,410,457	766	1,415,419	5,728
Mountainland MCD	417,375	432,918	9,175	433,379	6,829	430,385	3,835	433,170	6,620	432,311	5,761	432,918	6,368
Central MCD	66,506	67,208	649	67,635	480	67,016	-139	67,399	244	67,350	195	67,208	53
Southwest MCD	142,006	147,369	1,774	147,075	3,295	146,060	2,280	147,381	3,601	146,839	3,059	147,369	3,589
Uintah Basin MCD	40,627	41,639	505	41,309	177	41,100	-32	41,885	753	41,431	299	41,639	507
Southeast MCD	54,075	52,817	434	52,713	-1,796	52,973	-1,536	52,073	-2,436	52,586	-1,923	52,817	-1,692
State of Utah	2,246,553	2,295,971	35,251	2,291,042	9,238	2,283,027	1,223	2,294,656	12,852	2,289,575	7,771	2,295,971	14,166

Note: Totals may not add due to rounding.

Source: Utah Population Estimates Committee.

Table 5
UPEC 2001 County Population Estimates: Analysis of Outliers

	July 1 Population	Natural Increase	July 1 Population Estimate			Outlier			No Outlier Average			Final Estimate			Selected Method
			School Enrollment	LDS Membership	Tax Exemption	School Enrollment	LDS Membership	Tax Exemption	Estimate	Implied Net Migration	Growth Rate	Estimate	Implied Net Migration	Growth Rate	
Beaver County	6,023	71	6,198	6,054	6,080	6,198	6,054	6,080	6,111	17	1.5%	6,198	104	2.9%	School
Box Elder County	42,860	504	43,390	43,229	43,115	43,390	43,229	43,115	43,245	-119	0.9%	43,245	-119	0.9%	No Outlier
Cache County	91,897	1,761	94,111	93,523	92,482	94,111	93,523	92,482	93,372	-286	1.6%	93,372	-286	1.6%	No Outlier
Carbon County	20,396	112	19,950	19,881	19,743	19,950	19,881	19,743	19,858	-650	-2.6%	19,858	-650	-2.6%	No Outlier
Daggett County	933	12	851	992	944	851	992	944	929	-16	-0.5%	944	-1	1.1%	Tax Exemption
Davis County	240,204	3,833	244,255	245,404	244,875	244,255	245,404	244,875	244,845	808	1.9%	244,845	808	1.9%	No Outlier
Duchesne County	14,397	181	14,683	14,609	14,892	14,683	14,609	Outlier	14,646	68	1.7%	14,646	68	1.7%	No Outlier
Emery County	10,782	101	10,531	10,503	10,385	10,531	10,503	10,385	10,473	-410	-2.9%	10,473	-410	-2.9%	No Outlier
Garfield County	4,763	18	4,551	4,641	4,699	4,551	4,641	4,699	4,630	-151	-2.8%	4,630	-151	-2.8%	No Outlier
Grand County	8,537	45	8,137	8,558	8,574	Outlier	8,558	8,574	8,566	-16	0.3%	8,423	-159	-1.3%	Simple Average
Iron County	34,079	606	35,086	35,295	34,920	35,086	35,295	34,920	35,100	415	3.0%	34,920	235	2.5%	Tax Exemption
Juab County	8,310	117	8,570	8,398	8,477	8,570	8,398	8,477	8,482	55	2.1%	8,570	143	3.1%	School
Kane County	6,037	4	6,072	5,940	6,098	6,072	5,940	6,098	6,037	-4	-0.0%	6,037	-4	-0.0%	No Outlier
Millard County	12,461	85	12,425	12,341	12,213	12,425	12,341	12,213	12,326	-220	-1.1%	12,326	-220	-1.1%	No Outlier
Morgan County	7,181	89	7,375	7,278	7,297	7,375	7,278	7,297	7,317	47	1.9%	7,297	27	1.6%	Tax Exemption
Piute County	1,436	6	1,426	1,443	1,404	1,426	1,443	1,404	1,424	-18	-0.8%	1,404	-38	-2.2%	Tax Exemption
Rich County	1,955	10	2,023	1,984	1,942	2,023	1,984	1,942	1,983	18	1.4%	1,983	18	1.4%	No Outlier
Salt Lake County	902,777	13,234	915,023	908,947	918,279	915,023	908,947	918,279	914,083	-1,928	1.3%	918,279	2,268	1.7%	Tax Exemption
San Juan County	14,360	176	14,096	14,031	13,371	14,096	14,031	Outlier	14,063	-473	-2.1%	14,063	-473	-2.1%	No Outlier
Sanpete County	22,846	225	23,219	23,180	23,527	23,219	23,180	Outlier	23,200	129	1.5%	23,219	148	1.6%	School
Sevier County	18,938	200	19,567	19,152	19,180	Outlier	19,152	19,180	19,166	28	1.2%	19,180	42	1.3%	Tax Exemption
Summit County	30,048	384	30,494	29,834	31,279	30,494	29,834	31,279	30,536	104	1.6%	31,279	847	4.1%	Tax Exemption
Tooele County	41,549	753	42,775	44,431	44,191	42,775	44,431	44,191	43,799	1,497	5.4%	44,431	2,129	6.9%	LDS
Uintah County	25,297	312	25,775	25,499	26,049	25,775	25,499	26,049	25,774	165	1.9%	26,049	440	3.0%	Tax Exemption
Utah County	371,894	8,574	386,938	384,589	385,549	386,938	384,589	385,549	385,692	5,224	3.7%	385,692	5,224	3.7%	No Outlier
Wasatch County	15,433	217	15,947	15,962	16,342	15,947	15,962	Outlier	15,955	305	3.4%	15,947	297	3.3%	School
Washington County	91,104	1,075	95,168	94,130	95,584	95,168	94,130	95,584	94,961	2,782	4.2%	95,584	3,405	4.9%	Tax Exemption
Wayne County	2,515	16	2,428	2,502	2,598	2,428	2,502	2,598	2,509	-22	-0.2%	2,509	-22	-0.2%	No Outlier
Weber County	197,541	2,530	199,977	200,697	200,567	199,977	200,697	200,567	200,414	343	1.5%	200,567	496	1.5%	Tax Exemption
State of Utah	2,246,554	35,251	2,291,042	2,283,027	2,294,656				2,289,496	7,691	1.9%	2,295,971	14,166	2.2%	

Note: The final estimate is the Committee decision and selected methods vary among counties.

Source: Utah Population Estimates Committee.

Housing and rental vacancy rates for 1999, 2000, and 2001 are from the Housing Vacancy Survey conducted by the Census. All other data (vacancy rates, beginning housing stock, beginning occupied housing stock, persons per household, group quarters population) are from the 2000 Census.

For the purposes of this analysis, owner-occupied units (assumed to be synonymous with the BEBR single-family unit data) and rental units (assumed equivalent to the BEBR multifamily units) are accounted for separately. A standard housing model generally uses total units and does not separate single and multifamily units. The percentage of permits that are eventually built is quite high in Utah and demolitions quite low, so these have been omitted from the model.

Utah-specific vacancy rates were set as follows:

	Single-family	Multi-family
1999	1.7%	10.1%
April 1 2000	2.1%	6.5%
Bal. of 2000	1.8%	7.6%
2001	2.0%	7.2%
2002	2.2%	10.0%

Persons per household were held constant as those reported in the 2000 Census for Utah: 3.28 for owner-occupied (single-family) and 2.75 for rental (multifamily). The monthly compounded growth rate of the Utah group quarters population from April

1, 1990 to April 1, 2000 was 0.277 percent. This was applied on a monthly basis to derive the July 1, 2001 group quarters population.

This method produced a population estimate for July 1, 2001 of 2,303,449, which is 7,478 (0.3 percent) higher than the UPEC estimate. It is within a close enough range that further refinement could yield potentially reasonable estimates. In order to refine the model, the following factors should be explicitly treated:

1. Second homes and cabins, particularly in Washington, Rich, Wasatch, Kane and Summit counties;
2. Variations in persons per household (by housing type, ethnicity, tenancy, household type and age);
3. Refinement of rental and owner-occupied single-family and multifamily units and the relationships between these across time;
4. Demolitions (these will be small);
5. Differences between permits and completions;
6. Account for "doubling up;"
7. Refinement of vacancy rates; and
8. Detailed treatment of group quarters.

This housing unit population estimation experiment resulted in an estimate that is clearly somewhat inflated. In order to address the causes of the overestimation error, a

more detailed and extensive data development and modeling effort should be undertaken.

U.S. Bureau of the Census Population Estimates

The Population Division of the Bureau of the Census also produces postcensal and intercensal county population estimates. In the past these estimates have been quite close to those produced by UPEC. For example, the July 1, 1999 Census estimate for Utah was 8,783 *higher* than UPEC, less than one half of one percent difference (0.4 percent).¹⁴ However, the July 1, 2001 estimates are significantly lower than those of UPEC, specifically 26,182 or 1.1 percent lower than the UPEC estimate. What makes this difference so unusual is the fact that it is just 15 months after the decennial census. The major difference is in the net migration component with the Census indicating a net out-migration from the state of 5,580. This is in contrast to the 14,166 positive net in-migration to the state estimated by UPEC—a swing of 19,746. Interestingly, the Census estimates a positive net in-migration to the state of international immigrants of 7,424 and a negative or net out domestic migration of 13,004. Another unusual factor in these estimates is the discrepancy between the natural increase components, with the Census reporting a natural increase

component that is 1,462 less than that of UPEC. This is a significant and apparently unexplained source of difference (Tables 6, 7 and 8).

On a county level, some of the greatest percentage differences were some of the smaller counties such as Daggett, San Juan, and Piute. This is expected because small numerical differences lead to large percentage differences in small counties. However, significant percentage differences also occurred in Salt Lake, Utah and Cache counties. The Census relies entirely on Internal Revenue Service tax records to develop its domestic migration estimates. It has long been known that this tends to result in underestimation errors in counties with a large university presence. However, the magnitude of the difference in Cache (Utah State University) and Utah

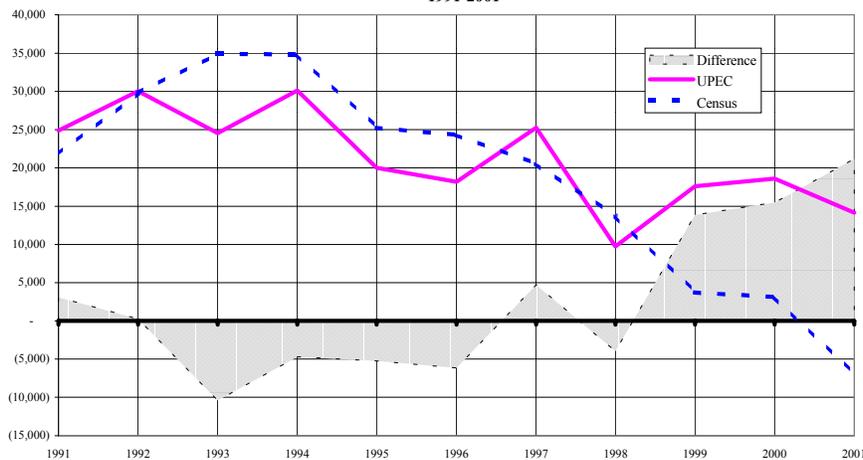
(Brigham Young University and Utah Valley State College) counties is unusually large, particularly given that the estimates are only 15 months subsequent to the enumeration. However, this does not provide an explanation for the other (particularly Salt Lake County) differences. The Census is apparently aware and concerned about estimation anomalies as the following statement is posted on their website:

The introduction of the Census 2000 results as the base for population estimates, coupled with issues identified in input data provided by external sources, could lead to some uncertainty in the estimated population change since April 1, 2000. For a detailed description of issues related to input data, please refer to the Technical Statement for State and County Estimates.

The technical note explains that the one-time tax rebate from the IRS coupled with a changes in the address file used by the IRS may explain "net county migration rates that appear exaggerated compared to historical values." This is an acknowledgment that the Census questions its own July 1, 2001 estimates.¹⁵ The Census continues to study these discrepancies (Figures 6 and 7).

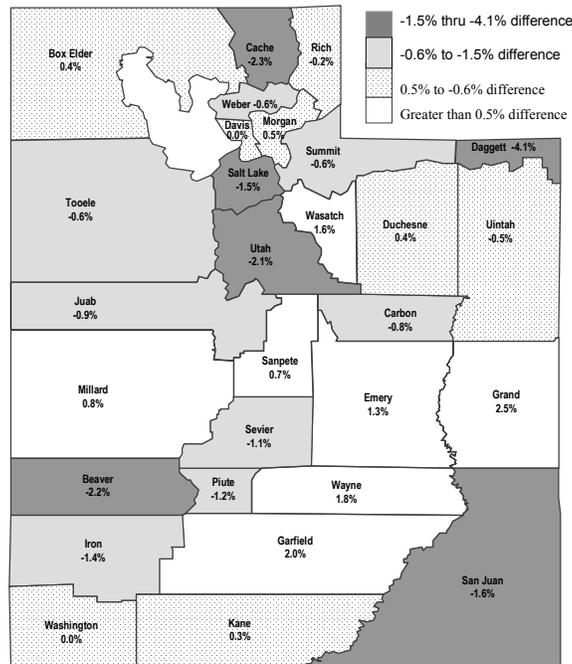
After each new decennial census, population estimates from the previous decade are revised. UPEC completed this work in the summer of 2001 while the Bureau of the Census released their revisions in April of 2002. The state level pattern of migration is somewhat different from that of UPEC, although the two series were reasonably close except in 1993 and 1999. However, Census estimates were greater than those of

Figure 6
Implied Net Migration for Utah
UPEC and U.S. Bureau of the Census Estimates
1991-2001



Source: Utah Population Estimates Committee and U.S. Bureau of the Census.

Figure 7
Differences Between UPEC and Census July 1, 2001 Estimates
 (Census minus UPEC)



Source: Utah Population Estimates Committee and U.S. Bureau of the Census.

UPEC from 1993 to 1999. Now that these revisions are complete, the question arises as to whether UPEC should control to their results. UPEC did control to Census *state* totals in the intercensal revisions for the 1950s, 1960s, 1970s, and 1980s, however, has never controlled to the Census *county* totals.¹⁶

Is there Out-Migration From Utah in 2002?

While the Census estimates net out-migration from Utah in the year ending July 1, 2001, it is important to note that all of the UPEC methods and symptomatic data indicated net in-migration to the state. The data were decisive. What about 2002? Is there net out-migration from the state? This, of course, will be upcoming work for UPEC and the data necessary for UPEC methods is not yet available. However, other symptomatic data suggest

that there is likely a small net out-migration from the state in year ending July 1, 2002. But the data are not definitive.

Certainly, the indicators of a post-Olympic economic slowdown in the Utah are pervasive. Perhaps the clearest evidence is the reduction in employment. There are 17,300 fewer jobs in Utah in June of 2002 than there were in June of 2001. Other indicators reinforce the existence of the slowdown as compared to a year ago—a flat residential real estate market, an increased unemployment rate, and falling state revenues. But the slowdown of the Utah economy does not necessarily translate into net out-migration. People migrate if expected conditions are better elsewhere. Since the recession is national in scope, it is not clear that net out-migration from Utah will necessarily occur. When people become unemployed, other

income-earning members of the household may be able to sustain it until the economy recovers. “Doubling-up” or sharing of resources within family and non-family households are alternatives to leaving an area. The current evidence indicates that a small net out-migration may be occurring from Utah in 2002, although the UPEC estimation methods may eventually tell a different story.

Summary

The general results of this study are:

- The Utah population continued to grow in fiscal year 2001, but at a slower rate than during the boom of the 1990s.
- There was net in-migration to the state of 14,166 in 2001.
- State level fiscal year births, deaths, and natural increase were at record levels.

- Experimentation with a housing unit method was promising, but revealed the need to develop a more complex methodology.
- The long-term population growth rate for Utah is well below that of Arizona and Nevada, but more rapid than the average of the mountain region and the nation.
- The 2001 Census population estimate for Utah, which is significantly lower than the UPEC estimate, is suspect because of their reliance on IRS data for the domestic migration component.
- UPEC adopted the state level (but not the county level) intercensal total population revisions in the 1950s, 1960s, 1970s, and 1980s. The revision for the 1990s was done prior to those produced by the Census.
- UPEC data and methods definitively indicate net in-migration to the state in fiscal year 2001.
- Current data is somewhat ambiguous but does suggest the possibility of a small net out-migration in fiscal 2002.

Notes

¹The longest run of consecutive annual positive net in-migration to the state was a 15-year period beginning in 1969.

²Since 1940, the net migration component has exceeded the natural increase component on only

four occasions. The first two (1943 and 1946) resulted from military operations during WWII, while the second two (1992 and 1994) occurred during this most recent sustained economic expansion.

³The crude death rate declined from 8.1 per 1,000 persons in 1941 to 5.4 per 1,000 in 1981. Subsequently it has remained generally constant between 5.2 and 5.5 per 1,000 population.

⁴See Table 16 on page 45 of "Demographics," *2002 Economic Report to the Governor*, Utah Governor's Office of Planning and Budget.

⁵See Pam Perlich, "Demographic Trends Affecting Public Education in Utah," *Utah Economic and Business Review*, Volume 60, Numbers 11 and 12, November/December 2000.

⁶See Curtis P. Harding, "The New Utah," *Utah Economic and Business Review*, Volume 33, Number 9, September 1973.

⁷The Greater Wasatch Area includes Davis, Salt Lake, Utah, Weber, Box Elder, Juab, Morgan, Summit, Tooele and Wasatch counties.

⁸Natural increase (births minus deaths for a given year) is computed from data provided by the Utah Department of Health, Bureau of Health Statistics. Net migration is a residual calculation derived by subtracting the natural increase amount for the total amount of population change from one year to the next.

⁹For a more extensive treatment of the history of UPEC see Natalie Gochnour, (UPEC

Chair), "Population Estimates: The Utah Experience," Utah Governor's Office of Planning and Budget, 1999.

¹⁰A survival rate of .9998 was applied to the 2000 fall enrollment of grades 1 through 8.

¹¹Compared to other states, Utah has the highest share of school age persons in the total population and among the highest public education participation rates.

¹²See Pam Perlich, "Revised Intercensal Estimates for the 1990s," *Utah Economic and Business Review*, Volume 61, Numbers 5 and 6, May/June 2001.

¹³This is the specification given in David A. Plane and Peter A. Rogerson, *The Geographical Analysis of Population with Applications to Planning and Business*, New York: John Wiley and Sons, Inc., 1994, pages 142 - 146.

¹⁴These are the unrevised 1999 estimates produced before the release of Census 2000.

¹⁵The U.S. Bureau of the Census tracks the state-to-state movements of individual tax filers to estimate migration, quite a different approach than the Tax Exemption method used by UPEC. For an explanation of the Bureau of the Census estimation methodology see the online document "Methodologies for Estimates of State and County Populations," <http://eire.census.gov/popest/topics/methodology/states.php> downloaded August 1, 2002.

¹⁶The U.S. Bureau of the Census began producing county estimates in 1970.

A NOTE TO OUR READERS

Due to rising postage and printing costs, the Utah Business Statistics time series data will no longer be published in the *Utah Economic and Business Review*. The data will be updated and available on our web site.

<http://www.business.utah.edu/BEBR>

Table 6
Comparison of UPEC and U.S. Bureau of the Census Estimates
1999-2001

	UPEC			Census			Census-UPEC			(Census/UPEC)-1		
	July 1 Population			July 1 Population			Difference			Percent Difference		
	1999	2000	2001	1999	2000	2001	1999	2000	2001	1999	2000	2001
Beaver County	5,951	6,023	6,198	5,978	6,024	6,059	27	1	-139	0.5%	0.0%	-2.2%
Box Elder County	42,399	42,860	43,245	42,378	42,872	43,397	-21	12	152	-0.0%	0.0%	0.4%
Cache County	89,874	91,897	93,372	90,299	91,625	91,208	425	-272	-2,164	0.5%	-0.3%	-2.3%
Carbon County	20,500	20,396	19,858	20,574	20,365	19,703	74	-31	-155	0.4%	-0.2%	-0.8%
Daggett County	884	933	944	877	932	905	-7	-1	-39	-0.8%	-0.1%	-4.1%
Davis County	235,364	240,204	244,845	235,912	240,259	244,840	548	55	-5	0.2%	0.0%	-0.0%
Duchesne County	14,293	14,397	14,646	14,395	14,377	14,709	102	-20	63	0.7%	-0.1%	0.4%
Emery County	11,095	10,782	10,473	10,916	10,846	10,609	-179	64	136	-1.6%	0.6%	1.3%
Garfield County	4,650	4,763	4,630	4,649	4,751	4,724	-1	-12	94	-0.0%	-0.3%	2.0%
Grand County	8,329	8,537	8,423	8,358	8,517	8,633	29	-20	210	0.3%	-0.2%	2.5%
Iron County	32,879	34,079	34,920	32,883	33,960	34,448	4	-119	-472	0.0%	-0.3%	-1.4%
Juab County	8,021	8,310	8,570	8,076	8,285	8,489	55	-25	-81	0.7%	-0.3%	-0.9%
Kane County	6,073	6,037	6,037	5,986	6,065	6,058	-87	28	21	-1.4%	0.5%	0.3%
Millard County	12,236	12,461	12,326	12,416	12,416	12,424	180	-45	98	1.5%	-0.4%	0.8%
Morgan County	6,973	7,181	7,297	6,991	7,165	7,337	18	-16	40	0.3%	-0.2%	0.5%
Piute County	1,433	1,436	1,404	1,426	1,441	1,387	-7	5	-17	-0.5%	0.3%	-1.2%
Rich County	1,978	1,955	1,983	1,924	1,966	1,979	-54	11	-4	-2.7%	0.6%	-0.2%
Salt Lake County	885,216	902,777	918,279	891,116	899,698	904,331	5,900	-3,079	-13,948	0.7%	-0.3%	-1.5%
San Juan County	14,573	14,360	14,063	14,403	14,399	13,836	-170	39	-227	-1.2%	0.3%	-1.6%
Sanpete County	22,513	22,846	23,219	22,550	22,818	23,376	37	-28	157	0.2%	-0.1%	0.7%
Sevier County	18,555	18,938	19,180	18,693	18,877	18,961	138	-61	-219	0.7%	-0.3%	-1.1%
Summit County	28,799	30,048	31,279	29,004	29,976	31,103	205	-72	-176	0.7%	-0.2%	-0.6%
Tooele County	38,294	41,549	44,431	38,079	41,641	44,157	-215	92	-274	-0.6%	0.2%	-0.6%
Uintah County	25,004	25,297	26,049	25,203	25,254	25,926	199	-43	-123	0.8%	-0.2%	-0.5%
Utah County	358,463	371,894	385,692	361,631	370,588	377,411	3,168	-1,306	-8,281	0.9%	-0.4%	-2.1%
Wasatch County	14,560	15,433	15,947	14,577	15,410	16,200	17	-23	253	0.1%	-0.1%	1.6%
Washington County	88,105	91,104	95,584	88,049	91,232	95,590	-56	128	6	-0.1%	0.1%	0.0%
Wayne County	2,492	2,515	2,509	2,442	2,532	2,554	-50	17	45	-2.0%	0.7%	1.8%
Weber County	193,508	197,541	200,567	193,697	197,264	199,435	189	-277	-1,132	0.1%	-0.1%	-0.6%
Bear River MCD	134,251	136,712	138,600	134,601	136,463	136,584	350	-249	-2,016	0.3%	-0.2%	-1.5%
Wasatch Front MCD	1,359,355	1,389,252	1,415,419	1,365,795	1,386,027	1,400,100	6,440	-3,225	-15,319	0.5%	-0.2%	-1.1%
Mountainland MCD	401,822	417,375	432,918	405,212	415,974	424,714	3,390	-1,401	-8,204	0.8%	-0.3%	-1.9%
Central MCD	65,250	66,506	67,208	65,603	66,369	67,191	353	-137	-17	0.5%	-0.2%	-0.0%
Southwest MCD	137,658	142,006	147,369	137,545	142,032	146,879	-113	26	-490	-0.1%	0.0%	-0.3%
Uintah Basin MCD	40,181	40,627	41,639	40,475	40,563	41,540	294	-64	-99	0.7%	-0.2%	-0.2%
Southeast MCD	54,497	54,075	52,817	54,251	54,127	52,781	-246	52	-36	-0.5%	0.1%	-0.1%
State of Utah	2,193,014	2,246,553	2,295,971	2,203,482	2,241,555	2,269,789	10,468	-4,998	-26,182	0.5%	-0.2%	-1.1%

Note: The 1999 estimates are from the revised intercensal series.

Source: Utah Population Estimates Committee, U.S. Bureau of the Census.

Table 7
Comparison of Components of Change: UPEC vs. U.S. Bureau of the Census
July 1, 2001 Estimates

	July 1 Estimate		Population Change	Fiscal Year Births	Fiscal Year Deaths	Natural Increase	International Net Migration	Domestic Net Migration	Total Net Migration
	2000	2001							
UPEC	2,246,553	2,295,971	49,418	47,688	12,437	35,251	na	na	14,166
Census	2,241,555	2,269,789	28,234	46,317	12,528	33,789	7,424	-13,004	-5,580
Difference	4,998	26,182	21,184	1,371	-91	1,462			19,746

Sources: U.S. Bureau of the Census and Utah Population Estimates Committee.

Table 8
Comparisons of UPEC and U.S. Bureau of the Census Estimates
Utah Population and Net Migration
July 1 Population, 1990-2001

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
State Total Population												
UPEC	1,729,227	1,780,870	1,838,149	1,889,393	1,946,721	1,995,228	2,042,893	2,099,409	2,141,632	2,193,014	2,246,553	2,295,971
Census	1,731,223	1,779,780	1,836,799	1,898,404	1,960,446	2,014,177	2,067,976	2,119,784	2,165,960	2,203,482	2,241,555	2,269,789
Difference (Census - UPEC)	1,996	-1,090	-1,350	9,011	13,725	18,949	25,083	20,375	24,328	10,468	-4,998	-26,182
Population Change												
UPEC		51,643	57,279	51,244	57,328	48,507	47,665	56,516	42,223	51,382	53,539	49,418
Census		48,557	57,019	61,605	62,042	53,731	53,799	51,808	46,176	37,522	38,073	28,234
Difference (Census - UPEC)		-3,086	-260	10,361	4,714	5,224	6,134	-4,708	3,953	-13,860	-15,466	-21,184
Utah Natural Increase	26,707	26,765	27,237	26,683	27,212	28,483	29,494	31,263	32,478	33,798	34,927	35,251
Implied Net In-Migration												
UPEC		24,878	30,042	24,561	30,116	20,024	18,171	25,253	9,745	17,584	18,612	14,167
Census		21,792	29,782	34,922	34,830	25,248	24,305	20,545	13,698	3,724	3,146	-7,017
Difference (Census - UPEC)		-3,086	-260	10,361	4,714	5,224	6,134	-4,708	3,953	-13,860	-15,466	-21,184
Ratio (UPEC/Census)		1.14	1.01	0.70	0.86	0.79	0.75	1.23	0.71	4.72	5.92	-2.02
Diff as Share of UPEC Net Migration		-12%	-1%	42%	16%	26%	34%	-19%	41%	-79%	-83%	-150%

Note: The 1990s estimates are from the revised intercensal series.

Sources: Utah Population Estimates Committee, U.S. Bureau of the Census, Utah Department of Health, Bureau of Vital Records.

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VOLUME 62 NOS. 7 & 8



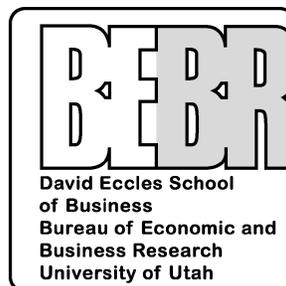
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