

A List of Markets in the Sample

In this section, we list the 398 median-sized markets in our sample. The definition of a market in our study is a city, or alternatively, a Census “place”. NPRG reports list the cities a CLEC provides services to, and the “city” concept can be best approximated by an incorporated place defined by the Census Bureau. An incorporated place is usually a city, town, village, or borough established to provide governmental functions for a concentration of people.

Table A.1: List of Markets in the Sample

State	Market	# business establishments				
		1998	1999	2000	2001	2002
AL	Birmingham city	5606	5552	5440	5415	5489
AL	Dothan city	2357	2357	2311	2287	2428
AL	Huntsville city	5390	5446	5486	5406	5647
AL	Mobile city	5555	5547	5350	5312	5363
AL	Montgomery city	5466	5424	5333	5262	5417
AL	Tuscaloosa city	2648	2650	2618	2574	2619
AZ	Chandler city	2595	2724	2892	3157	3509
AZ	Flagstaff city	2158	2194	2234	2247	2419
AZ	Glendale city	3748	3826	3872	3927	4072
AZ	Mesa city	7577	7699	7819	7876	8386
AZ	Scottsdale city	7923	8185	8461	8614	9017
AZ	Tempe city	6094	6119	6233	6166	6191
AZ	Tucson city	13095	13144	13022	13033	13398
AR	Fort Smith city	2636	2560	2505	2458	2577
AR	Hot Springs city	2275	2256	2243	2263	2398
AR	Little Rock city	7126	7319	7353	6889	7130
AR	North Little Rock city	2234	2236	2226	2198	2288
CA	Anaheim city	7248	7262	7223	7266	7534

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State	Market	# business establishments				
		1998	1999	2000	2001	2002
CA	Arden-Arcade CDP ^a	3054	3046	3020	2937	3001
CA	Bakersfield city	4578	4639	4699	4813	4994
CA	Berkeley city	3743	3813	3845	3791	3722
CA	Beverly Hills city	5244	5309	5434	5473	5458
CA	Burbank city	3532	3558	3563	3613	3713
CA	Burlingame city	2242	2232	2268	2229	2214
CA	Campbell city	2007	2042	2046	2037	2048
CA	Carlsbad city	2624	2700	2911	3009	3222
CA	Chico city	2025	2042	2060	2055	2160
CA	Chula Vista city	2636	2712	2805	2854	3036
CA	Concord city	3396	3308	3299	3347	3360
CA	Costa Mesa city	4285	4332	4419	4458	4621
CA	Culver City city	2109	2183	2171	2170	2179
CA	El Cajon city	2802	2860	2911	2922	3061
CA	El Monte city	3299	3282	3327	3322	3295
CA	Escondido city	3397	3479	3512	3549	3744
CA	Fremont city	4664	4724	4896	4843	4779
CA	Fresno city	10630	10608	10654	10616	10907
CA	Fullerton city	2431	2592	2634	2667	2763
CA	Garden Grove city	2479	2591	2647	2755	2748
CA	Glendale city	4708	4745	4858	4953	5089
CA	Hayward city	3838	3909	3921	3875	3985
CA	Huntington Beach city	4543	4654	4745	4759	4922
CA	Irvine city	5971	6403	6791	7070	7440
CA	Long Beach city	7916	8013	8062	8140	8115

Continued on next page^aCDP: Census Designated Place

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State	Market	# business establishments				
		1998	1999	2000	2001	2002
CA	Modesto city	4766	4852	4861	4861	5190
CA	Mountain View city	2494	2504	2550	2511	2477
CA	Napa city	2375	2431	2502	2532	2658
CA	Newport Beach city	5083	5097	5174	5171	5215
CA	Oakland city	9771	9893	10119	10211	10395
CA	Oceanside city	2132	2247	2263	2240	2472
CA	Ontario city	3062	3170	3243	3293	3543
CA	Orange city	4150	4276	4392	4422	4622
CA	Oxnard city	2577	2579	2609	2620	2629
CA	Palo Alto city	2508	2530	2571	2513	2453
CA	Pasadena city	5159	5179	5237	5200	5337
CA	Pleasanton city	2775	2819	2868	2866	2854
CA	Pomona city	2007	2000	2018	2027	2105
CA	Rancho Cucamonga city	2367	2449	2518	2579	2811
CA	Redding city	3048	3022	3035	3019	3251
CA	Redwood City city	2904	2976	3069	3008	3010
CA	Riverside city	5340	5458	5504	5493	5828
CA	Sacramento city	9331	9311	9404	9434	9585
CA	Salinas city	2352	2362	2353	2384	2499
CA	San Bernardino city	3176	3092	3056	3045	3181
CA	San Buenaventura (Ventura) city	3380	3427	3406	3432	3576
CA	San Leandro city	2584	2569	2557	2609	2651
CA	San Mateo city	3067	3080	3054	3015	2986
CA	San Rafael city	3219	3290	3278	3273	3264
CA	Santa Ana city	7242	7265	7419	7481	7717

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State	Market	# business establishments				
		1998	1999	2000	2001	2002
CA	Santa Barbara city	3867	3908	3891	3883	3912
CA	Santa Clara city	4338	4415	4432	4414	4284
CA	Santa Clarita city	3351	3470	3348	3408	3623
CA	Santa Fe Springs city	2327	2339	2372	2383	2424
CA	Santa Monica city	5997	6099	6257	6184	6207
CA	Santa Rosa city	5625	5650	5759	5718	5950
CA	Simi Valley city	2151	2161	2259	2330	2439
CA	South San Francisco city	2200	2218	2240	2231	2201
CA	Stockton city	4729	4765	4793	4791	5071
CA	Sunnyvale city	3390	3343	2874	2748	2615
CA	Thousand Oaks city	4551	4654	4755	4868	5086
CA	Torrance city	5621	5599	5731	5687	5778
CA	Visalia city	2471	2495	2539	2551	2639
CA	Walnut Creek city	3852	3807	3824	3811	3675
CO	Arvada city	2506	2640	2642	2697	2800
CO	Aurora city	4843	4864	4890	4845	4867
CO	Boulder city	5820	5837	5499	5409	5405
CO	Castlewood CDP	2262	2245	2357	2477	2536
CO	Colorado Springs city	10429	10607	10788	10834	11215
CO	Englewood city	2294	2277	2318	2286	2219
CO	Fort Collins city	2804	2930	3000	3090	3274
CO	Grand Junction city	2237	2254	2319	2349	2462
CO	Greeley city	2068	2092	2084	2134	2227
CO	Lakewood city	5133	5215	5352	5320	5018
CO	Longmont city	2019	2110	2150	2170	2305

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State	Market	# business establishments				
		1998	1999	2000	2001	2002
CO	Pueblo city	2526	2541	2498	2484	2484
CO	Westminster city	2144	2194	2339	2410	2573
CT	Bridgeport city	2301	2290	2252	2242	2226
CT	Danbury city	2327	2332	2353	2313	2340
CT	Hartford city	3167	3152	3102	3092	3095
CT	New Haven city	2755	2723	2741	2735	2748
CT	Norwalk city	2874	2946	2955	2938	2921
CT	Stamford city	4614	4644	4611	4590	4523
CT	Waterbury city	2277	2262	2222	2185	2222
DE	Wilmington city	4411	4585	4630	4619	4635
FL	Altamonte Springs city	2326	2332	2266	2195	2279
FL	Boca Raton city	5652	5687	5784	5838	6000
FL	Cape Coral city	2117	2245	2323	2394	2649
FL	Coral Gables city	3974	3999	3944	3977	4068
FL	Coral Springs city	3434	3561	3717	3831	4101
FL	Coral Terrace CDP	2072	2098	2089	2091	2107
FL	Daytona Beach city	2179	2151	2113	2062	2164
FL	Deerfield Beach city	2069	2088	2031	2058	2183
FL	Delray Beach city	2138	2131	2165	2180	2340
FL	Fort Lauderdale city	9724	9688	9678	9655	9995
FL	Fort Myers city	2146	2131	2062	2040	2185
FL	Gainesville city	2500	2438	2428	2395	2487
FL	Hialeah city	6782	6722	6734	6748	7032
FL	Hollywood city	4940	4960	4995	4984	5102
FL	Kendall CDP	2758	2796	2773	2769	2834

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State	Market	# business establishments				
		1998	1999	2000	2001	2002
FL	Lakeland city	2505	2503	2447	2407	2539
FL	Melbourne city	2123	2113	2126	2081	2184
FL	Miami Beach city	3128	3100	3205	3251	3376
FL	Miami Springs city	4030	3956	3882	3901	3910
FL	Naples city	2234	2326	2343	2363	2374
FL	North Miami city	3121	3093	3039	2968	2925
FL	Oakland Park city	4013	3979	3966	3912	3805
FL	Ocala city	2889	2856	2862	2857	3042
FL	Orlando city	8316	8300	8239	8149	8326
FL	Palm Beach Gardens city	2885	2970	2947	3009	3064
FL	Panama City city	2695	2684	2664	2622	2777
FL	Pensacola city	3016	2955	2869	2866	2902
FL	Plantation city	2999	3070	3119	3134	3035
FL	Pompano Beach city	3373	3319	3348	3312	3459
FL	Sarasota city	3321	3370	3331	3410	3504
FL	St. Petersburg city	5873	5748	5756	5697	5885
FL	Sunrise city	2565	2617	2740	2825	2966
FL	Tallahassee city	4809	4888	4699	4685	4850
FL	Tampa city	11137	11165	11086	11243	11702
FL	West Palm Beach city	4765	4780	4792	4766	4984
GA	Albany city	2341	2287	2259	2192	2293
GA	Athens-Clarke County ^b	2439	2452	2448	2466	2597
GA	Augusta-Richmond County ^c	3982	3949	3832	3824	3964
GA	Columbus city	3991	3985	3883	3900	4047

Continued on next page^bAthens-Clarke county is a consolidated city-county.^cAugusta-Richmond county is a consolidated city-county.

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State	Market	# business establishments				
		1998	1999	2000	2001	2002
GA	Dunwoody CDP	2247	2246	2234	2191	2083
GA	Macon city	2979	2908	2862	2799	2801
GA	Roswell city	3377	3482	3536	3531	3499
GA	Sandy Springs CDP	4854	4931	4844	4775	4767
GA	Savannah city	4674	4629	4584	4531	4719
GA	Vinings CDP	2214	2206	2258	2248	2187
ID	Boise City city	6032	6310	6408	6379	6473
ID	Idaho Falls city	2159	2250	2197	2242	2413
IL	Arlington Heights village	3059	3134	3129	3080	3057
IL	Aurora city	2499	2594	2627	2648	2827
IL	Bloomington city	2013	2024	2026	2003	2088
IL	Champaign city	1906	1899	1842	1830	1879
IL	Decatur city	2226	2191	2125	2089	2105
IL	Des Plaines city	2985	3015	2935	2893	2809
IL	Downers Grove village	2220	2284	2260	2260	2309
IL	Elgin city	2219	2233	2261	2297	2419
IL	Elk Grove Village village	2602	2615	2630	2585	2598
IL	Evanston city	2147	2159	2128	2091	2119
IL	Hinsdale village	2605	2543	2037	1811	1648
IL	Joliet city	2722	2746	2766	2783	2897
IL	Naperville city	3908	3979	4103	4146	4373
IL	Northbrook village	2892	2932	2964	2887	2822
IL	Palatine village	2061	2088	2103	2129	2134
IL	Peoria city	3729	3725	3579	3489	3567
IL	Rockford city	4565	4577	4547	4497	4526

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State	Market	# business establishments				
		1998	1999	2000	2001	2002
IL	Schaumburg village	3514	3533	3583	3596	3624
IL	Skokie village	2652	2646	2628	2652	2557
IL	Springfield city	4319	4297	4304	4218	4295
IN	Elkhart city	2767	2730	2692	2683	2753
IN	Evansville city	4121	4070	4019	3904	3956
IN	Fort Wayne city	6027	5980	6003	5947	6018
IN	Lafayette city	2172	2190	2214	2200	2248
IN	Muncie city	2199	2197	2152	2122	2183
IN	South Bend city	3128	3144	3081	2975	2915
IA	Cedar Rapids city	3697	3676	3628	3562	3697
IA	Davenport city	2920	2898	2833	2864	2933
IA	Des Moines city	6011	6004	5768	5746	5660
IA	Sioux City city	2404	2409	2402	2385	2382
KS	Kansas City city	2845	2826	2808	2726	2764
KS	Lawrence city	2294	2297	2316	2282	2342
KS	Olathe city	2197	2376	2442	2455	2601
KS	Overland Park city	5107	5249	5346	5371	5462
KS	Topeka city	3857	3827	3780	3752	3783
KS	Wichita city	9646	9648	9651	9657	9851
KY	Bowling Green city	2163	2163	2149	2151	2279
KY	Lexington-Fayette	7389	7484	7587	7548	7677
KY	Louisville city	8925	8807	8695	8587	8482
KY	Owensboro city	2082	2066	2067	2042	2103
LA	Baton Rouge city	7131	7088	7021	6923	7007
LA	Lafayette city	4853	4882	4816	4815	5166

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State	Market	# business establishments				
		1998	1999	2000	2001	2002
LA	Lake Charles city	2529	2510	2513	2481	2621
LA	Metairie CDP	5660	5691	5608	5504	5525
LA	New Orleans city	10088	9975	9995	9977	9999
LA	Shreveport city	5552	5513	5444	5405	5599
ME	Portland city	3179	3215	3239	3234	3378
MD	Annapolis city	3249	3268	3275	3278	3461
MD	Baltimore city	12802	12554	12400	12219	12339
MD	Bel Air South CDP	2227	2264	2304	2391	2448
MD	Bethesda CDP	3789	3785	3894	3856	3848
MD	Columbia CDP	3024	3186	3242	3218	3245
MD	Frederick city	2285	2247	2262	2289	2301
MD	Gaithersburg city	2248	2290	2335	2395	2607
MD	Hagerstown city	2301	2311	2373	2382	2414
MD	North Bethesda CDP	2386	2392	2458	2421	2355
MD	Rockville city	2381	2422	2415	2475	2589
MD	Silver Spring CDP	2698	2904	2548	2461	2566
MD	Towson CDP	2648	2653	2635	2587	2548
MA	Barnstable Town city	2020	2098	2096	2105	2112
MA	Cambridge city	3639	3676	3687	3610	3507
MA	Framingham CDP	2077	2109	2098	2113	2107
MA	New Bedford city	2063	2139	2162	2200	2210
MA	Springfield city	2968	3531	3813	4093	3248
MA	Worcester city	4151	4321	4341	4351	4338
MI	Ann Arbor city	3797	3809	3770	3742	3691
MI	Clinton CDP	2240	2241	2257	2196	2271

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State	Market	# business establishments				
		1998	1999	2000	2001	2002
MI	Dearborn city	2633	2679	2735	2744	2771
MI	Detroit city	11343	11238	11041	10989	10982
MI	Farmington Hills city	4062	4035	4047	4031	3906
MI	Flint city	3707	3631	3508	3472	3393
MI	Grand Rapids city	4702	4611	4506	4529	4299
MI	Kalamazoo city	2724	2703	2362	2299	2267
MI	Kentwood city	2061	2076	2038	2032	2051
MI	Lansing city	3368	3338	3318	3270	3241
MI	Livonia city	4163	4154	4128	4087	4032
MI	Rochester Hills city	2284	2324	2318	2348	2382
MI	Southfield city	5506	5504	5496	5405	5051
MI	Sterling Heights city	2738	2759	2796	2829	2774
MI	Troy city	4967	4977	4703	4703	4542
MI	Warren city	3537	3463	3240	3097	3098
MN	Bloomington city	3865	3854	3823	3731	3688
MN	Duluth city	3036	3023	3031	3035	3059
MN	Edina city	3156	3175	3122	3079	3005
MN	Minneapolis city	11358	11439	11511	11431	11338
MN	Minnetonka city	2470	2520	2560	2591	2614
MN	Plymouth city	2163	2282	2356	2376	2474
MN	Rochester city	2416	2480	2529	2590	2708
MN	St. Louis Park city	2776	2754	2744	2715	2601
MN	St. Paul Park city	7620	7698	7766	7825	7752
MS	Jackson city	5267	5153	4943	4797	4994
MO	Chesterfield city	2203	2238	2270	2251	2350

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State	Market	# business establishments				
		1998	1999	2000	2001	2002
MO	Columbia city	3111	3170	3185	3158	3321
MO	Independence city	2542	2563	2482	2415	2452
MO	Joplin city	2125	2168	2150	2139	2308
MO	Kansas City city	13556	13547	13461	13172	13352
MO	Springfield city	6153	6198	6236	6261	6404
MO	St. Charles city	2125	2100	2106	2082	2128
MO	St. Joseph city	2211	2234	2205	2169	2294
MO	St. Louis city	8349	8255	8135	7983	8111
MT	Billings city	3871	3919	3958	3987	4162
MT	Great Falls city	2089	2089	2102	2061	2131
MT	Missoula city	2441	2405	2380	2350	2497
NE	Lincoln city	6058	6231	6404	6408	6545
NE	Omaha city	12717	12712	12898	12830	12893
NV	Las Vegas city	11410	12002	12168	12236	12951
NV	Paradise CDP	6749	7149	7323	7421	8338
NV	Reno city	6352	6493	6475	6464	6653
NV	Sparks city	2091	2103	2148	2158	2281
NV	Spring Valley CDP	2932	3254	3360	3458	3646
NH	Manchester city	3073	3061	3064	3046	3184
NH	Nashua city	2518	2538	2534	2498	2515
NJ	Clifton city	2372	2400	2411	2378	2355
NJ	Edison CDP	3229	3309	3368	3419	3463
NJ	Elizabeth city	2139	2150	2192	2210	2269
NJ	Hackensack city	2472	2459	2449	2429	2583
NJ	Jersey City city	4495	4605	4494	4659	4663

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State	Market	# business establishments				
		1998	1999	2000	2001	2002
NJ	Newark city	4927	4933	4945	4983	5269
NJ	Paterson city	2117	2083	2036	2087	2181
NJ	Toms River CDP	2413	2414	2454	2502	2635
NJ	Union CDP	2015	2013	1975	1936	1883
NJ	Wayne CDP	2072	2063	2099	2095	2151
NM	Albuquerque city	13581	13696	13579	13431	13916
NM	Las Cruces city	2245	2293	2263	2241	2262
NM	Santa Fe city	3923	3968	3405	3247	3339
NY	Albany city	3114	3132	3062	3023	3119
NY	Buffalo city	6597	6468	6395	6523	6539
NY	Garden City village	2117	2156	2133	2172	2124
NY	Great Neck Plaza village	2359	2376	2384	2340	2289
NY	Rochester city	5311	5307	5265	5227	5183
NY	South Farmingdale CDP	2058	2068	2098	2076	2139
NY	Syracuse city	4284	4238	4211	4241	4289
NY	White Plains city	2505	2560	2571	2584	2600
NY	Yonkers city	4094	4089	4147	4171	4180
NC	Asheville city	4086	4086	4134	4135	4344
NC	Cary town	2492	2581	2663	2741	2860
NC	Durham city	4826	4836	4915	4922	5098
NC	Fayetteville city	3159	3174	3101	3057	3141
NC	Greensboro city	8529	8583	8554	8496	8676
NC	Greenville city	2114	2165	2206	2189	2271
NC	High Point city	2670	2710	2776	2784	2809
NC	Raleigh city	9424	9593	9579	9608	9917

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State	Market	# business establishments				
		1998	1999	2000	2001	2002
NC	Wilmington city	4536	4555	4517	4475	4720
NC	Winston-Salem city	5859	5818	5799	5752	5976
ND	Fargo city	2939	2984	2984	2999	3229
OH	Akron city	5534	5499	5331	5299	5277
OH	Cincinnati city	10255	10123	10028	9917	9680
OH	Cleveland city	12315	12254	12024	11820	11641
OH	Dayton city	3832	3760	3722	3689	3665
OH	Mentor city	2064	1999	1987	2045	2086
OH	Shaker Heights city	2207	2238	2281	2281	2128
OH	Toledo city	7687	7604	7494	7393	7278
OH	Youngstown city	2121	2053	2016	1918	1899
OK	Edmond city	2128	2246	2386	2417	2659
OK	Norman city	2393	2398	2423	2420	2562
OK	Tulsa city	14136	14108	14022	13865	14093
OR	Beaverton city	2235	2233	2211	2181	2124
OR	Bend city	2617	2752	2836	2968	3341
OR	Eugene city	5741	5729	5731	5680	5666
OR	Medford city	2748	2781	2792	2829	2926
OR	Salem city	3917	3970	3941	3975	4033
OR	Tigard city	2813	2791	2774	2765	2878
PA	Allentown city	2940	2517	2442	2420	2393
PA	Bethlehem city	2204	2210	2234	2197	2254
PA	Erie city	2592	2565	2542	2477	2483
PA	Municipality of Monroeville borough	1972	1992	1974	1981	1960
PA	Pittsburgh city	10968	10960	10920	10822	10708

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State	Market	# business establishments				
		1998	1999	2000	2001	2002
PA	Radnor Township CDP	2675	2645	2574	2580	2526
PA	Scranton city	2275	2264	2212	2167	2163
RI	Cranston city	2074	2112	2121	2102	2101
RI	Providence city	4665	4701	4769	4771	4821
RI	Warwick city	2909	2869	2892	2871	2925
SC	Charleston city	3627	3584	3576	3581	3818
SC	Columbia city	4646	4605	4567	4530	4547
SC	Greenville city	3215	3246	3191	3168	3207
SC	Myrtle Beach city	2828	2807	2688	2669	2689
SC	North Charleston city	3157	3207	3186	3159	3298
SD	Rapid City city	2477	2509	2470	2503	2627
SD	Sioux Falls city	4227	4325	4403	4447	4614
TN	Chattanooga city	7200	7097	7006	6971	6998
TN	Clarksville city	2141	2122	2075	2096	2120
TN	Jackson city	2421	2402	2372	2348	2394
TN	Knoxville city	6152	6085	6052	5957	6036
TX	Abilene city	3090	3076	3013	2979	3049
TX	Amarillo city	4345	4309	4305	4256	4429
TX	Arlington city	7212	7269	7151	7180	7256
TX	Beaumont city	3530	3498	3461	3427	3606
TX	Brownsville city	2445	2492	2523	2545	2710
TX	Carrollton city	2877	2920	3032	3015	3125
TX	Corpus Christi city	6488	6504	6381	6359	6597
TX	El Paso city	10902	10836	10719	10614	10842
TX	Fort Worth city	12282	12172	12167	12246	12481

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Table A.1 – *Continued from previous page*

State	Market	# business establishments				
		1998	1999	2000	2001	2002
TX	Garland city	3615	3638	3595	3683	3655
TX	Grand Prairie city	2258	2248	2269	2261	2342
TX	Irving city	5363	5548	5668	5809	5790
TX	Laredo city	3636	3726	3795	3855	4130
TX	Longview city	2667	2662	2636	2655	2785
TX	Lubbock city	5659	5628	5613	5604	5865
TX	McAllen city	3260	3281	3282	3262	3423
TX	Mesquite city	2122	2156	2122	2121	2206
TX	Midland city	2996	2914	2861	2810	3091
TX	Odessa city	2455	2393	2340	2314	2397
TX	Pasadena city	2074	2134	2073	2046	2136
TX	Plano city	5241	5498	5804	6097	6624
TX	Richardson city	3659	3647	3640	3702	3710
TX	San Angelo city	2314	2323	2316	2248	2386
TX	Tyler city	3141	3133	3098	3140	3286
TX	University Park city	2498	2526	2497	2463	2435
TX	Waco city	2778	2789	2723	2669	2770
TX	Wichita Falls city	2574	2573	2577	2546	2592
UT	Murray city	2041	2071	2123	2074	2048
UT	Ogden city	2660	2697	2706	2747	2837
UT	Salt Lake City city	6976	7266	7284	7147	7202
UT	Sandy city	2390	2452	2548	2566	2743
VA	Alexandria city	4434	4458	4451	4258	4402
VA	Arlington CDP	5082	5118	5144	5151	5277
VA	Chesapeake city	4332	4344	4391	4383	4671

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Table A.1 – *Continued from previous page*

State	Market	# business establishments				
		1998	1999	2000	2001	2002
VA	Hampton city	2454	2409	2388	2342	2400
VA	Lynchburg city	2595	2670	2667	2642	2632
VA	Newport News city	3725	3696	3666	3576	3684
VA	Norfolk city	5252	5151	5197	5157	5297
VA	Richmond city	6592	6238	6341	6222	6216
VA	Roanoke city	3471	3434	3405	3396	3450
VA	Virginia Beach city	9754	9935	9992	9911	10060
WA	Bellevue city	6716	6698	6686	6616	6497
WA	Bellingham city	3320	3356	3302	3279	3308
WA	Kent city	2800	2835	2881	2867	2801
WA	Kirkland city	2730	2793	2791	2776	2702
WA	Lynnwood city	2316	2333	2389	2400	2443
WA	Olympia city	2648	2640	2615	2635	2747
WA	Redmond city	2267	2284	2302	2282	2267
WA	Shoreline city	2335	2353	2330	2308	2237
WA	Spokane city	6500	6449	6403	6338	6393
WA	Tacoma city	4857	4721	4680	4611	4793
WA	Vancouver city	3599	3666	3807	3879	3991
WA	Yakima city	2624	2601	2563	2541	2576
WV	Charleston city	2452	2456	2412	2355	2373
WV	Huntington city	2086	2057	2025	2012	2030
WI	Appleton city	2944	2945	2933	2872	2883
WI	Brookfield city	2382	2378	2350	2355	2349
WI	Eau Claire city	2117	2157	2145	2154	2211
WI	Green Bay city	3193	3262	3294	3286	3407

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Table A.1 – *Continued from previous page*

State	Market	# business establishments				
		1998	1999	2000	2001	2002
WI	Kenosha city	2201	2178	2183	2208	2147
WI	Madison city	7359	7406	7430	7453	7570
WI	Milwaukee city	12955	12893	12840	12747	12843
WI	Racine city	1950	1904	1883	1859	1887
WI	Waukesha city	2412	2403	2392	2397	2373
WY	Casper city	2144	2155	2186	2172	2292

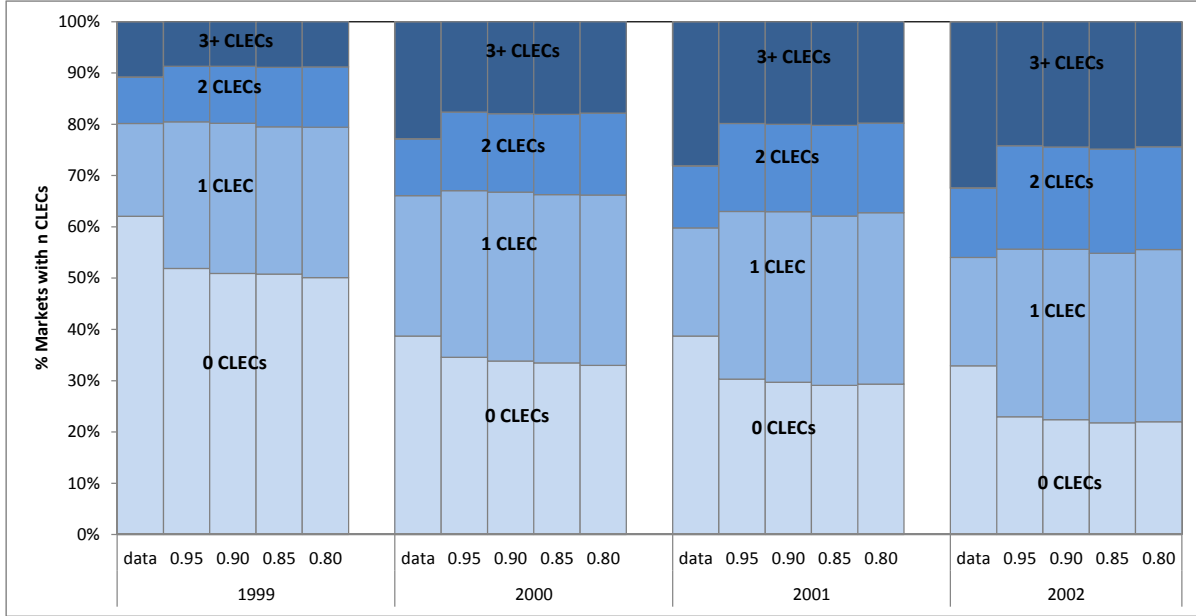
B Robustness Analysis: Different Discount Factors

To understand if the choice of discount factors has any impact on the fit of the model, we repeat our exercise in Section 6 and compare the fit of the model using different discount factors. Figure B.1 shows the percentage of markets with n CLECs from 1999 to 2002 for $n = 0, 1, 2$, and above. It shows the distribution of market structure from data as well as that from the model prediction using different discount factors (0.95, 0.90, 0.85 and 0.80). From this figure, we can see that the fit of the model is robust to different choices of the discount factor. If anything, our current choice (0.95) fits the data the best.

Similarly, to see if the choice of discount factors affects the counterfactual simulation results significantly, we repeat our exercise in Section 7 when a subsidy equaling 5% of the entry cost mean averaged across the two types is applied to every entrant in every local market. Table B.2 presents the change in the share of markets with n CLECs from 1999 to 2002 for $n = 0, 1, 2$, and above when such a subsidy is applied. This table suggests that the effect of a 5% subsidy is relatively robust to different choices of the discount factor.

In summary, Figure B.1 and Table B.2 suggest that our results are stable across our choices of the discount factor.

Figure B.1: Distribution of Market Structure: Data vs. Model Prediction using Different Discount Factors



C Robustness Analysis: Different Discretizations

As explained in Appendix A in the main part of the article, we use a fairly coarse discretization of the state space to estimate the model. In this section, we re-estimate the model using finer discretizations. Specifically, in *Robustness 1*, we discretize the market size into three bins with cutoffs of 5,000 and 10,000. In *Robustness 2*, we discretize the number of type-1 potential entrants into three bins with cutoffs of 15 and 25. In *Robustness 3*, we discretize the number of type-2 potential entrants into three bins with cutoffs of 10 and 20. Table C.3 presents the estimation

Table B.2: The Effect of Subsidies using Different Discount Factors: Change in the Percentage of Markets with n CLECs under a 5% Subsidy

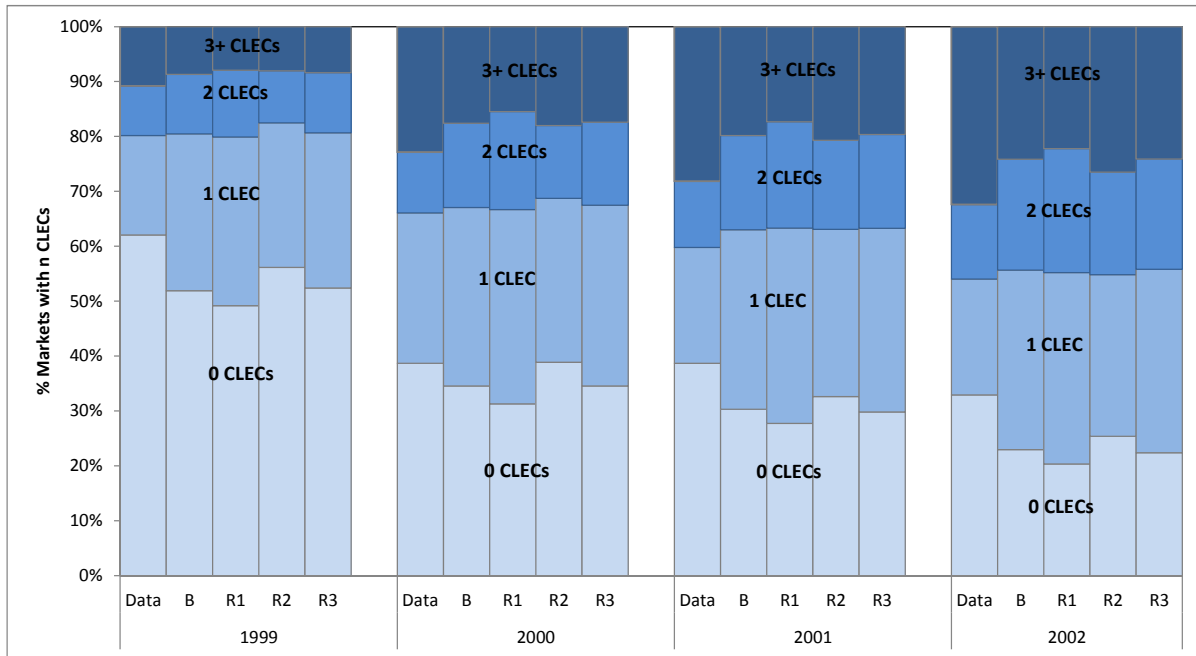
CLECs	beta = 0.95				beta = 0.90				beta = 0.85				beta = 0.80			
	0	1	2	3+	0	1	2	3+	0	1	2	3+	0	1	2	3+
1999	-0.20	0.02	0.06	0.12	-0.18	0.02	0.06	0.11	-0.17	0.02	0.05	0.10	-0.16	0.02	0.04	0.10
2000	-0.20	-0.06	0.07	0.20	-0.18	-0.05	0.07	0.17	-0.17	-0.06	0.07	0.16	-0.16	-0.05	0.06	0.15
2001	-0.18	-0.11	0.05	0.23	-0.17	-0.09	0.05	0.22	-0.15	-0.09	0.05	0.20	-0.15	-0.08	0.05	0.19
2002	-0.15	-0.15	0.01	0.30	-0.14	-0.14	0.02	0.27	-0.14	-0.13	0.03	0.24	-0.13	-0.13	0.03	0.23

results from these robustness analyses. We include the baseline results for comparison. From this table, we can see that the estimates of all parameters are fairly robust. Figure C.2 compares the fit of the model using our baseline discretization to the model fit of these robustness analyses. This figure suggests that the fit of the model is also relatively robust.

Table C.3: Robustness Analyses: Different Discretizations

	Baseline	Robustness 1	Robustness 2	Robustness 3
α (market size effect)	0.150*** (0.023)	0.154*** (0.013)	0.132*** (0.013)	0.154*** (0.011)
γ (competition effect)	-0.026 (0.021)	-0.042*** (0.013)	-0.007 (0.014)	-0.029*** (0.011)
μ_1 (entry cost mean for type 1)	10.082*** (0.918)	9.815*** (0.474)	9.515*** (0.450)	10.244*** (0.467)
μ_2 (entry cost mean for type 2)	9.671*** (0.917)	9.429*** (0.473)	9.099*** (0.445)	9.827*** (0.460)

Figure C.2: Distribution of Market Structure: Data vs. Model Prediction using Different Discretizations



B: Baseline; R1-R3: Robustness 1 - Robustness 3

D Synergy in Entering Neighboring Markets

In the article, we assume that entry decisions are independent across markets. However, it is possible that entry decisions across markets are correlated due to spillover effects. For example, entering one market may lower the cost of entering a nearby market. We investigate this possibility and estimate an extended model where a potential entrant’s entry costs depend on whether the firm is already operating in a neighboring market. Specifically, we define a firm-market-level dummy variable that equals 1 if the CLEC is already providing services in a market (of any size) within 100 miles, and 0 otherwise. Table D.4 shows that in 15.8% the 57517 firm-year-city combinations where a CLEC is a potential entrant to the market, the CLEC is already present in a neighboring market as defined above.^d

Table D.4: Summary Statistics on Presence in Neighboring Markets

	Mean	Std. Dev.	Min	Max
$\mathbb{1}(\text{presence in a neighboring market})$	0.158	0.365	0	1
Obs. (firm-year-city) ^a		57517		

^aA firm is a potential entrant.

To investigate the possible spillover effect of entry, in this section, we include the “neighboring presence” dummy in our model. Specifically, we allow it to affect the entry cost mean: the entry cost mean for a type- i firm f in market c is now $\mu_i + \lambda \mathbb{1}(\text{neighbor presence}_{fc})$. All other aspects of the model remain the same. This is a parsimonious way of capturing potential synergy effects of entering contiguous markets. We borrow the idea of allowing a firm’s presence in a neighboring market to affect firms’ entry decisions from Nardotto, Valletti, and Verboven (2012). As will be explained later, we ignore firms’ strategic consideration of how their entry into a market now affects their entry into neighboring markets in the future. The estimation results are presented in Table D.5. We include our baseline results in the table for comparison.

The estimate of λ is -0.062 (about 0.3% of the estimated entry cost mean), indicating that a potential entrant with neighboring presence has a slightly lower entry cost on average. But the estimate is statistically insignificant. The estimates of the other parameters (parameters common

^dOf the 2,067 firm-year-city combinations where a CLEC enters the city in a given year, the majority (71.8% of them) have no simultaneous entry into neighboring markets by the same CLEC.

Table D.5: Estimation Results: Baseline Model vs. Model with Neighboring Presence Dummy

Parameter	Baseline	Robustness Analysis
α (market size effect)	0.150*** (0.023)	0.143*** (0.012)
γ (competition effect)	-0.026 (0.021)	-0.018*** (0.013)
μ_1 (entry cost mean for type 1)	10.082*** (0.918)	9.915*** (0.446)
μ_2 (entry cost mean for type 2)	9.671*** (0.917)	9.456*** (0.438)
λ (neighboring presence effect)		-0.062 (0.062)

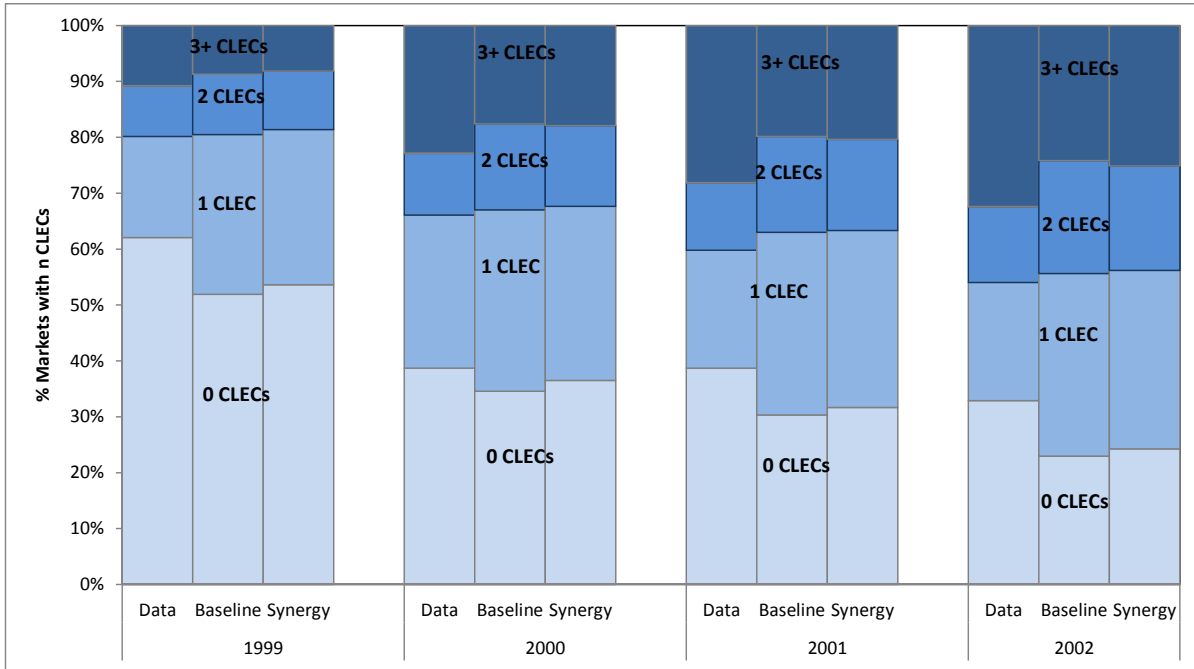
to both models) are fairly robust. The estimates of μ_1 and μ_2 are 9.915 and 9.456, slightly smaller than the baseline estimates (10.082 and 9.671).

More importantly, both the model fit and the counterfactual simulation results are robust as well. Figure D.3 compares the fit of the baseline model and the extended model with cost synergy. It suggests that the two models generate a similar fit to the data. Table D.6 compares counterfactual simulation results. Specifically, Table D.6(a) presents the change in the share of markets with n CLECs from 1999 to 2002 for $n = 0, 1, 2$, and above when a subsidy equaling 5% of the entry cost mean averaged across the two types is applied to every entrant in every local market. Table D.6(b) presents the results for a 10% subsidy. Both Tables D.6(a) and D.6(b) show that the simulated effect of subsidies is similar across the baseline model and the extended model with cost synergy.

Note that we have to impose two restrictions on this extended model to make the model tractable. First, we impose that firms are not strategic about having a neighboring presence. In theory, when “neighboring presence” has an impact on the entry cost, a firm’s entry decision is not independent across markets. A firm might strategically enter a market in order to enter other close-by markets. Thus, characteristics of the close-by markets may influence a firm’s decision to enter a market. This interdependence renders the whole U.S. a single market, implying a very large state space in the model. This is prohibitive for estimating the model and for computing an equilibrium of the counterfactual simulations. Therefore, we have to ignore such strategic considerations to make estimation and the counterfactual simulations possible.

Second, we add only one state variable (whether a CLEC has a neighboring presence) to the

Figure D.3: Model Fit Comparison: Baseline Model vs. Extended Model with Cost Synergy



state space. In fact, given that a potential entrant’s neighboring presence is observable to all other potential entrants, we should replace “the number of type-1 potential entrants” and “the number of type-2 potential entrants” in the state space with “the number of type-1 potential entrants with neighboring presence”, “the number of type-1 potential entrants without neighboring presence”, “the number of type-2 potential entrants with neighboring presence”, and “the number of type-2 potential entrants without neighboring presence”. Together with market size and the number of incumbents, these state variables make the state space too big for our data, and consequently, we cannot obtain good conditional choice probabilities in the first step of the estimation. This is because with more state variables, we need to slice our data into more cells when computing the conditional entry probabilities in the first stage of the estimation. As a result, these cells become rather sparsely populated.

Table D.6: The Simulated Effect of Subsidies: Baseline Model vs. Extended Model with Cost Synergy

(a) 5% Subsidy								
CLECs	Baseline Model				Synergy Model			
	0	1	2	3+	0	1	2	3+
1999	-0.200	0.023	0.059	0.118	-0.210	0.025	0.061	0.123
2000	-0.197	-0.064	0.065	0.195	-0.214	-0.058	0.065	0.207
2001	-0.179	-0.106	0.052	0.233	-0.194	-0.107	0.045	0.255
2002	-0.153	-0.151	0.008	0.296	-0.161	-0.155	0.001	0.316

(b) 10% Subsidy								
CLECs	Baseline Model				Synergy Model			
	0	1	2	3+	0	1	2	3+
1999	-0.379	-0.052	0.112	0.320	-0.397	-0.056	0.106	0.347
2000	-0.314	-0.223	0.002	0.535	-0.328	-0.226	-0.004	0.557
2001	-0.278	-0.249	-0.051	0.579	-0.284	-0.255	-0.058	0.596
2002	-0.216	-0.281	-0.125	0.622	-0.221	-0.278	-0.125	0.624