

NOACA

Technical Memorandum

CTPP County Level Journey to Work Data



The Northeast Ohio Areawide Coordinating Agency (NOACA) is a public Organization serving the counties of and municipalities & townships within Cuyahoga, Geauga, Lake, Lorain and Medina (covering an area with 2.1 million people). NOACA is the agency designated or recognized to perform the following functions:

- **Serve as the Metropolitan Planning Organization (MPO), with responsibility for comprehensive cooperative and continuous planning for highways, public transit, and bikeways, as defined in the Transportation Equity Act for the 21st Century.**
- **Perform continuous water quality, transportation-related air quality and other environmental planning functions.**
- **Administer the area clearinghouse function, which includes providing local government with the opportunity to review a wide variety of local or state applications for federal funds.**
- **Conduct transportation and environmental planning and related demographic, economic and land use research.**
- **Serve as an information center for transportation and environmental and related planning.**
- **At NOACA Governing Board direction, provide transportation and environmental planning assistance to the 172 units of local, general purpose government.**

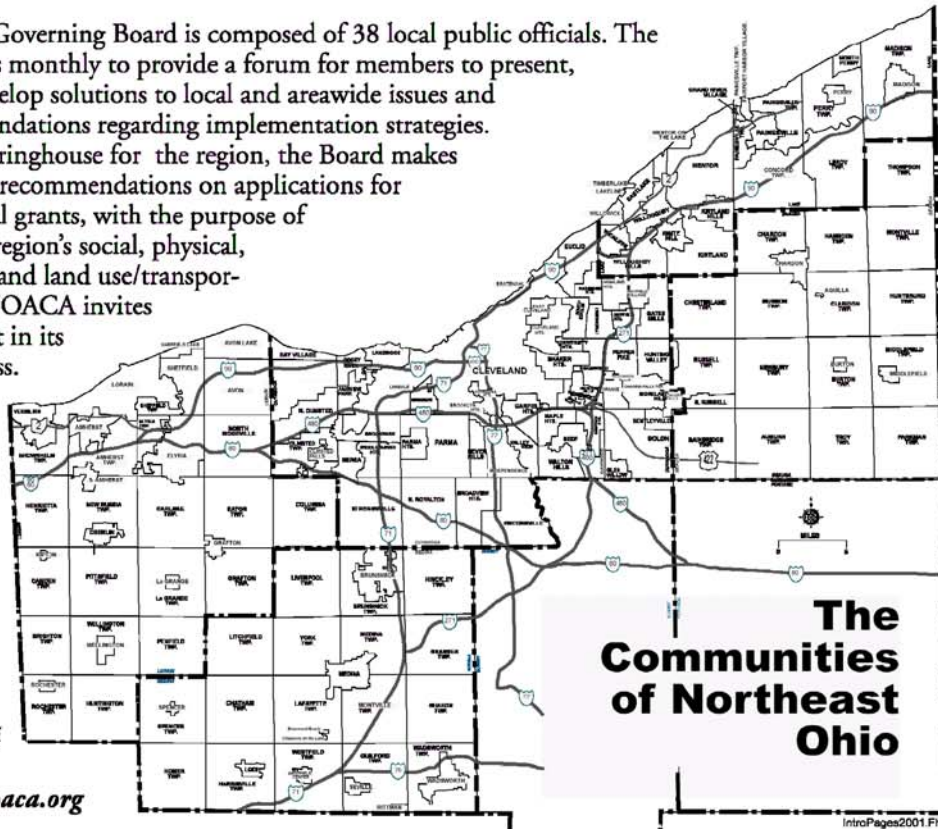
The NOACA Governing Board is composed of 38 local public officials. The Board convenes monthly to provide a forum for members to present, discuss and develop solutions to local and areawide issues and make recommendations regarding implementation strategies. As the area clearinghouse for the region, the Board makes comments and recommendations on applications for state and federal grants, with the purpose of enhancing the region's social, physical, environmental and land use/transportation fabric. NOACA invites you to take part in its planning process.

Feel free to participate, to ask questions and to learn more about areawide planning. For more information, call:

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**CTPP County Level
Journey to Work Data**

June 2003

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Introduction

Population data plays a crucial role in planning efforts at NOACA. For the majority of the time, this data is handled behind the scenes in the NOACA Travel Demand Model and in various planning activities. As NOACA staff undertakes the effort to compile the necessary population statistics from the United States' 2000 Census to use as input to our planning efforts, it will also be publishing as much of this information as is possible for the larger NOACA audience. It is hoped that this data may find additional planning uses in the hands of our local governments, public agencies, and the general public.

This document provides information on the Journey to Work Data released for counties as part of the ongoing release of 2000 Census data. Journey to Work data is derived from people's answer to question 22 on the "long form" of the 2000 Census. The long form is answered by about 1 in 6 households and then statistically expanded to represent the entire population. The question asked is "At what location did this person work LAST WEEK? If this person worked at more than one location, print where he or she worked more last week."

Year 2000 Journey to Work Data

Chart 1 on the following page summarizes Journey to Work data for the counties of Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, and Summit. For each county the number of journeys that are within the county, the number of commutes in, the number of commutes out, and the net impact on the county is provided. Also provided are the number of trips between contiguous counties and the number of trips to other non-contiguous counties. Tables 1a and 1b provide a listing of trips for Geauga, Lake, Lorain, Medina, Portage, and Summit Counties to or from adjacent counties outside the seven county area. These trips represent a significant portion of the trips identified as other in Chart 1 and subsequent charts.

Table 1a: Year 2000 Work Trips from Adjacent Counties

		TO					
		Lorain	Medina	Summit	Portage	Gauga	Lake
FROM	Erie	3,923					
	Huron	1,501					
	Ashland	648	720				
	Wayne		4,667	3,948			
	Stark			21,094	2,256		
	Mahoning				1,171		
	Trumbull				1,863	3,900	
	Ashtabula					2,265	5,775

Chart 1: Year 2000 Journey to Work Data

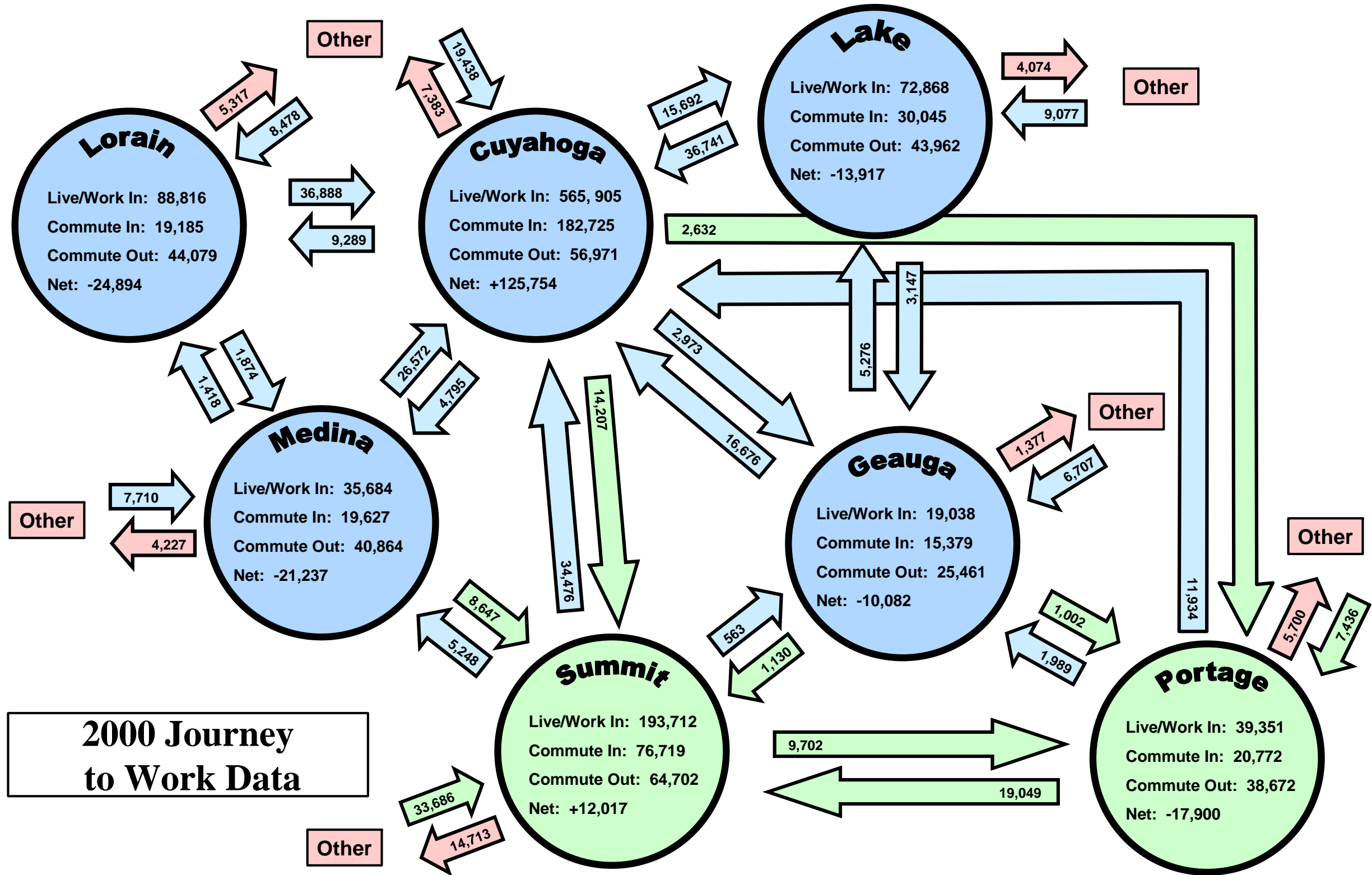


Table 1b: Year 2000 Work Trips to Adjacent Counties

		FROM					
		Lorain	Medina	Summit	Portage	Geauga	Lake
TO	Erie	1,594					
	Huron	421					
	Ashland	91	307				
	Wayne		1,726	1,095			
	Stark			7,665	1,578		
	Mahoning				603		
	Trumbull				1,449	310	
	Ashtabula					257	1,200

It is clear from Chart 1 that Cuyahoga County remains the biggest draw for work trips. Trips to work within Cuyahoga County outnumber work trips leaving Cuyahoga County by 125,754. Summit is the only other county of the seven shown that has more commuters entering the county (12,017) to go to work than leaving it.

Although this data does not include information regarding trip length, these figures none-the-less support the notion that increasing numbers of people are comfortable living significant distances from work. In a sense, the net increases in trips conceal a loss. Residential tax dollars and associated close to home spending are accruing to the counties at the origin end of these trips. This ultimately reduces the available resources to maintain the infrastructure supporting the existing jobs.

Tables 2a and 2b provide a listing of cross county trips beginning or ending in one of NOACA's five counties.

Table 2a: Year 2000 Cross County Work Trips to NOACA Counties

		TO				
		Cuyahoga	Lorain	Medina	Geauga	Lake
FROM	Erie	985		24	6	26
	Huron	399		102	0	19
	Ashland	448			13	11
	Wayne	1,193	145		0	55
	Stark	2,443	50	770	27	142
	Mahoning	1,117	31	62	107	56
	Trumbull	1,976	47	41		135
	Ashtabula	2,683	134	36		
	Lorain				70	342
	Medina				32	307
	Summit		588			1,148
	Portage		152	314		436
	Geauga		68	43		
	Lake		277	65		
	Other Ohio	2,505	528	495	100	252
	Other Non-Ohio	5,689	386	371	187	373

Table 2b: Year 2000 Cross County Work Trips from NOACA Counties

		FROM				
		Cuyahoga	Lorain	Medina	Geauga	Lake
TO	Erie	286		10	0	2
	Huron	36		32	0	9
	Ashland	38			6	8
	Wayne	163	53		8	0
	Stark	565	62	445	82	108
	Mahoning	268	15	33	105	10
	Trumbull	281	27	24		119
	Ashtabula	397	138	45		
	Lorain				68	277
	Medina				43	65
	Summit		970			1,157
	Portage		182	322		307
	Geauga		70	32		
	Lake		342	307		
	Other Ohio	1,967	680	373	182	292
Other Non-Ohio	3,382	672	571	316	520	

About 1.5 % (11,244) of total work trips to Cuyahoga County come from counties adjacent to the six counties surrounding it. When additional trips from other Ohio counties and the rest of the nation are considered over 2.5% of work trips to Cuyahoga County originate from non-adjacent counties. However, Medina County actually leads in the non-adjacent county work trip category. 4.3 % of its work trips originate from non-adjacent counties.

Historic Changes

Charts 2, 3 and 4 on the following pages display changes in Journey to Work totals between the 2000 Census and the 1990, 1980 and 1970 Censuses. Data from the 1970 Census includes a “Not Reported” category for place of work. This category reflects those individuals who said they were working but failed to indicate where they worked. In later censuses these answers are allocated by the census to areas on a statistical basis. For this analysis the “Not Reported” responses were allocated to allow for the comparisons to be made.

An examination of these charts reveals information about the changes in work trip habits over the past 20 years. From these changes one can also infer other information about the population in northeast Ohio. Most notable is that despite an overall increase in work trips, Cuyahoga County has posted continuing losses in internal work trips. It is the only one of the seven counties displayed for which this is true. It suggests that not only residents, but also jobs are leaving the county. Table 3a & 3b display data on the total number of trips into and out of the NOACA region for 1970, 1980, 1990, and 2000 from Portage and Summit, from the outer ring of counties (Ashland, Ashtabula, Erie, Huron, Mahoning, Stark, Trumbull, and Wayne), and from other areas beyond that ring.

Chart 2: 1990 to 2000 Change in Journey to Work

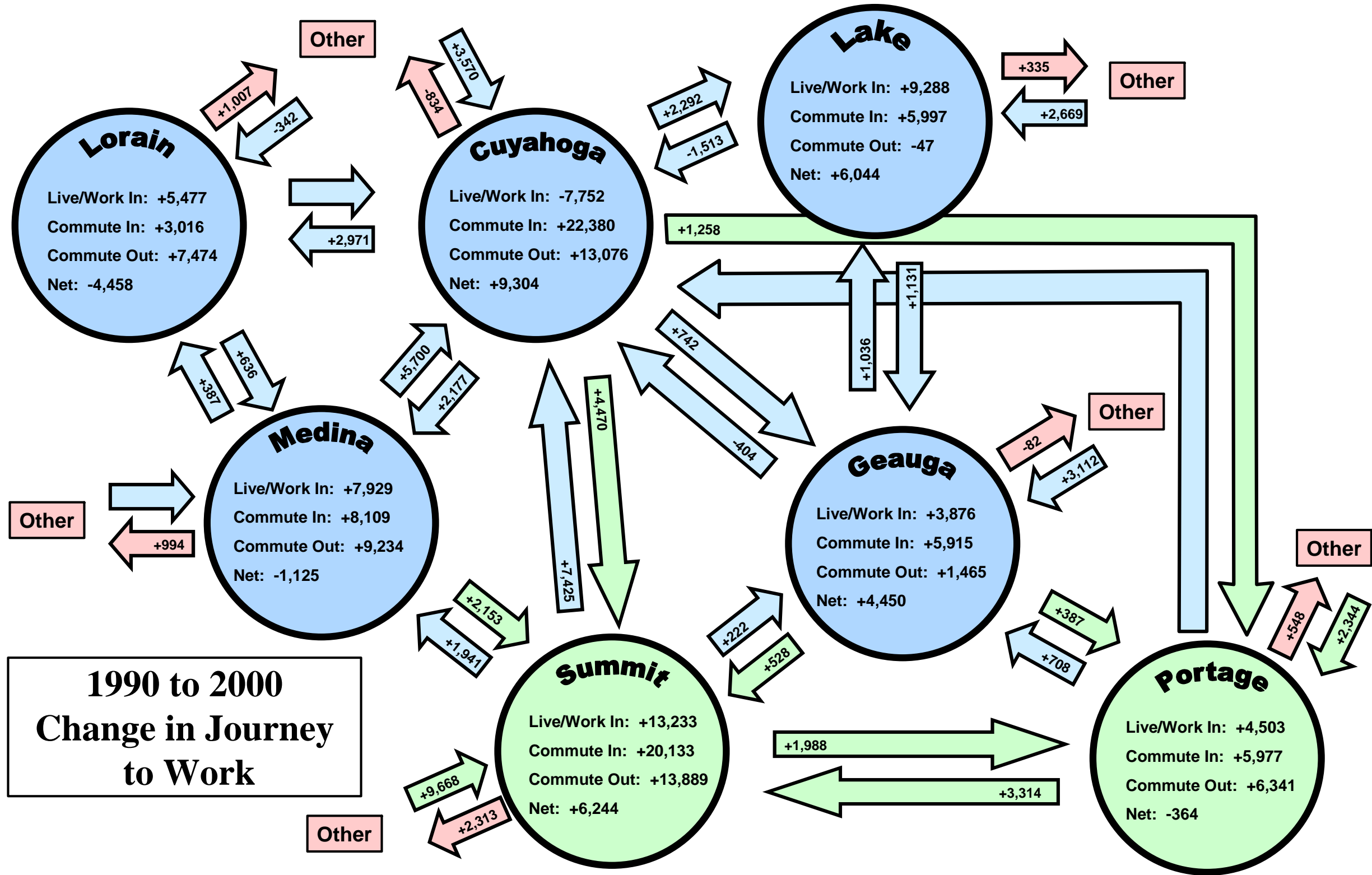


Chart 3: 1980 to 2000 Change in Journey to Work

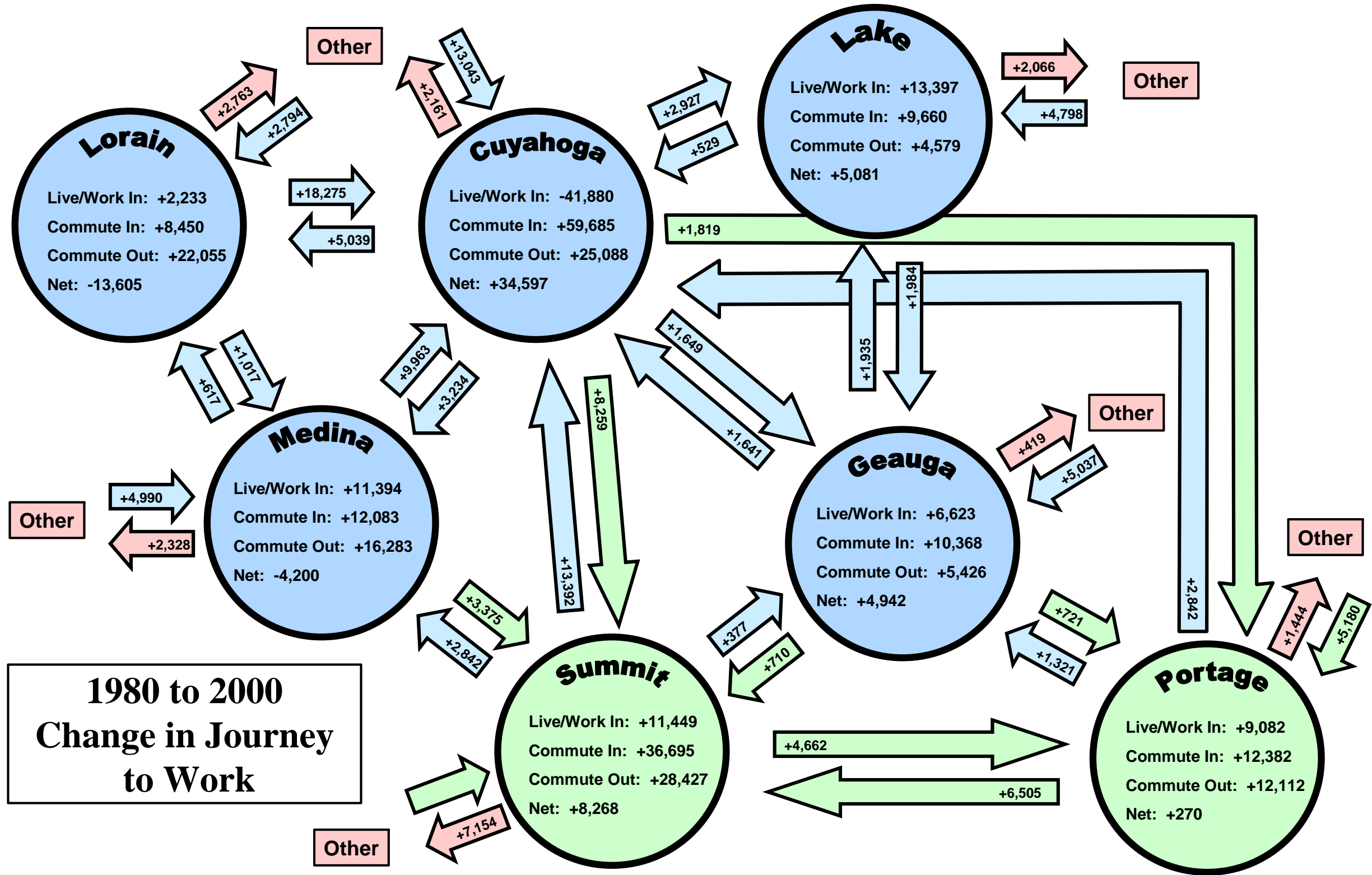


Chart 4: 1970 to 2000 Change in Journey to Work

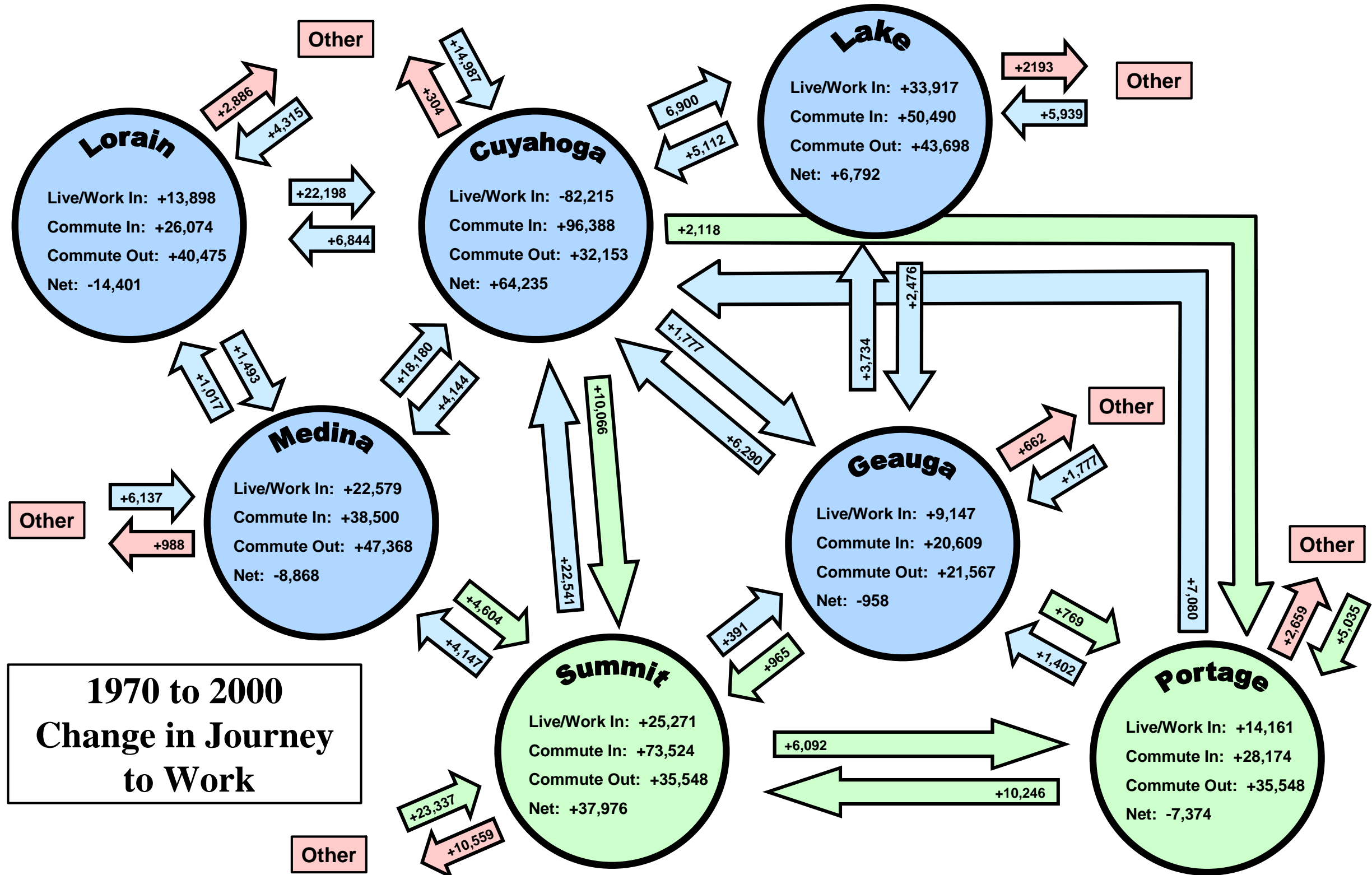


Table 3a: Work Trips to the NOACA Region

	1970	1980	1990	2000
Portage & Summit	19,358	34,247	44,062	56,848
Outer Ring	11,706	17,645	25,473	36,682
Other	1,185	2,048	10,140	10,886
Total	32,249	53,940	79,675	104,416

Table 3b: Work Trips from the NOACA Region

	1970	1980	1990	2000
Portage & Summit	9,777	13,481	20,309	30,556
Outer Ring	4,185	4,772	8,702	9,281
Other	9,463	6,878	9,255	8,955
Total	23,425	25,131	38,266	48,792

Perhaps the most striking information revealed by these tables is that between 1980 and 1990 a large number of workers opted for much longer commutes to work in the NOACA Region. In 1990 about 13% and in 2000 roughly 10% of work trips coming to the NOACA region from beyond its borders were from areas beyond the outer ring. Additionally, in 1990 about 24%, and in 2000 about 18% of work trips leaving the NOACA region were going to areas outside that ring. These trips represent workers who are choosing to make long commutes to their jobs.

A final comparison across time is displayed in Table 4 below. The ratio (TI/TO) of total trips in and out of each county and the region is shown for each census year. This ratio includes the purely internal trips associated with each area. Also shown is the ratio (CI/CO) of commutes into and out of each area.

For TI/TO, values greater than one reflect areas where the county is a net importer of workers. Areas with values less than one are those that export residents to jobs in other counties. Cuyahoga County and the NOACA region remain net importers of workers. For Geauga, Lake, and Medina counties, one can observe what appears to be a trend towards an increase in this value. This suggests that these counties are developing a larger job base for their residents. Lorain County on the other hand shows a decrease in this value over time. This suggests, as would be anecdotally supported by major downsizing in some industries located in the county over time, that an increasing number of residents are finding jobs outside the county.

CI/CO is a more direct look at the extent to which an area might meet the definition of “bedroom community”. For this metric, values near one indicate an equal exchange of commuters in and out of the area suggesting a mix of residential and employment uses in

Table 4**Cuyahoga**

Year	Internal	Total In	Total Out	TI/TO	Commute In	Commute Out	CI/CO
1970	648,120	734,457	672,938	1.09	86,337	24,818	3.48
1980	607,785	730,825	639,668	1.14	123,040	31,883	3.86
1990	573,657	734,002	617,552	1.19	160,345	43,895	3.65
2000	565,905	748,630	622,876	1.20	182,725	56,971	3.21

Geauga

Year	Internal	Total In	Total Out	TI/TO	Commute In	Commute Out	CI/CO
1970	9,891	13,808	22,932	0.60	3,917	13,041	0.30
1980	12,415	17,426	32,450	0.54	5,011	20,035	0.25
1990	15,162	24,626	39,158	0.63	9,464	23,996	0.39
2000	19,038	34,417	44,499	0.77	15,379	25,461	0.60

Lake

Year	Internal	Total In	Total Out	TI/TO	Commute In	Commute Out	CI/CO
1970	38,951	52,423	73,132	0.72	13,472	34,181	0.39
1980	59,471	79,856	98,854	0.81	20,385	39,383	0.52
1990	63,580	87,628	107,589	0.81	24,048	44,009	0.55
2000	72,868	102,913	116,830	0.88	30,045	43,962	0.68

Lorain

Year	Internal	Total In	Total Out	TI/TO	Commute In	Commute Out	CI/CO
1970	74,918	81,927	92,420	0.89	7,009	17,502	0.40
1980	86,583	97,318	108,607	0.90	10,735	22,024	0.49
1990	83,339	99,508	119,944	0.83	16,169	36,605	0.44
2000	88,816	108,001	132,895	0.81	19,185	44,079	0.44

Medina

Year	Internal	Total In	Total Out	TI/TO	Commute In	Commute Out	CI/CO
1970	13,105	16,811	29,180	0.58	3,706	16,075	0.23
1980	24,290	31,834	48,871	0.65	7,544	24,581	0.31
1990	27,755	39,273	59,385	0.66	11,518	31,630	0.36
2000	35,684	55,311	76,548	0.72	19,627	40,864	0.48

Table 4 (continued)

NOACA							
Year	Internal	Total In	Total Out	TI/TO	Commute In	Commute Out	CI/CO
1970	867,177	899,426	890,602	1.01	32,249	23,425	1.38
1980	903,319	957,259	928,450	1.03	53,940	25,131	2.15
1990	905,362	985,037	943,628	1.04	79,675	38,266	2.08
2000	944,856	1,049,272	993,648	1.06	104,416	48,792	2.14

an area. Values nearing zero indicate an area that is serving primarily as a place of residence. This would be consistent with the concept of a bedroom community. Values above one indicate an area is attracting workers disproportionately.

In the NOACA area, both NOACA and Cuyahoga County have values greater than one for this metric. Cuyahoga County's value is decreasing over time, while the region's appears to be relatively stable. Similar to TI/TO Geauga, Lake, and Medina Counties show a trend toward increases in this metric. This further supports the notion that these counties are developing significant job bases of their own. When viewed in reference to Cuyahoga County's decrease it appears likely that these jobs were once in Cuyahoga. Lorain County's value seems relatively stable. When viewed in conjunction with its TI/TO trend, this suggests that Lorain County is generating enough new jobs to partially offset losses.

Future Efforts

NOACA staff will continue its efforts to report on Journey to Work Trends as data is released at smaller geographic levels. Staff hopes that developing a metric or metrics to assess this data will aid in understanding its meaning and import for regional planning practice.

Attachments

200, 1990, 1980, 1970
Journey to Work Tables

WORK

RESIDENCE	WORK									
	Cuyahoga	Geauga	Lake	Lorain	Medina	Five County	Portage	Summit	Seven County	
Cuyahoga	565,905	2,973	15,692	9,289	4,795	598,654	2,632	14,207	615,493	
Geauga	16,676	19,038	5,276	68	43	41,101	1,002	1,130	43,233	
Lake	36,741	3,147	72,868	277	65	113,098	307	1,157	114,562	
Lorain	36,888	70	342	88,816	1,874	127,990	182	970	129,142	
Medina	26,572	32	307	1,418	35,684	64,013	322	8,647	72,982	
Five County	682,782	25,260	94,485	99,868	42,461	944,856	4,445	26,111	975,412	
Portage	11,934	1,989	436	152	314	14,825	39,351	19,049	73,225	
Summit	34,476	563	1,148	588	5,248	42,023	9,702	193,712	245,437	
Seven County	729,192	27,812	96,069	100,608	48,023	1,001,704	53,498	238,872	1,294,074	
Ashland	448	13	11	648	720	1,840	8	153	2,001	
Ashtabula	2,683	2,265	5,775	134	36	10,893	100	113	11,106	
Erie	985	6	26	3,923	24	4,964	11	39	5,014	
Huron	399	0	19	1,501	102	2,021	0	46	2,067	
Mahoning	1,117	107	56	31	62	1,373	1,171	1,096	3,640	
Stark	2,443	27	142	50	770	3,432	2,256	21,094	26,782	
Trumbull	1,976	3,900	135	47	41	6,099	1,863	1,038	9,000	
Wayne	1,193	0	55	145	4,667	6,060	63	3,948	10,071	
Fifteen County	740,436	34,130	102,288	107,087	54,445	1,038,386	58,970	266,399	1,363,755	
Other in State	2,505	100	252	528	495	3,880	737	2,526	7,143	
Other Out of State	5,689	187	373	386	371	7,006	416	1,506	8,928	
Total	748,630	34,417	102,913	108,001	55,311	1,049,272	60,123	270,431	1,379,826	

Source: US Census Bureau <http://www.census.gov/population/www/cen2000/commuting.html>

WORK

										Fifteen	Other - In	Other - Out	Total	Total
	Ashland	Ashtabula	Erie	Huron	Mahoning	Stark	Trumbull	Wayne	County	State	of State	Other	Total	
Cuyahoga	38	397	286	36	268	565	281	163	617,527	1,967	3,382	5,349	622,876	
Geauga	6	257	0	0	105	82	310	8	44,001	182	316	498	44,499	
Lake	8	1,200	2	9	10	108	119	0	116,018	292	520	812	116,830	
Lorain	91	138	1,594	421	15	62	27	53	131,543	680	672	1,352	132,895	
Medina	307	45	10	32	33	445	24	1,726	75,604	373	571	944	76,548	
Five County	450	2,037	1,892	498	431	1,262	761	1,950	984,693	3,494	5,461	8,955	993,648	
Portage	8	127	17	15	603	1,578	1,449	38	77,060	612	351	963	78,023	
Summit	46	196	47	10	460	7,665	447	1,095	255,403	1,373	1,638	3,011	258,414	
Seven County	504	2,360	1,956	523	1,494	10,505	2,657	3,083	1,317,156	5,479	7,450	12,929	1,330,085	
Ashland	16,778	0	31	388	0	73	17	1,712	21,000	3,645	92	3,737	24,737	
Ashtabula	0	32,964	0	0	151	37	485	0	44,743	141	805	946	45,689	
Erie	11	0	27,650	2,358	0	0	15	15	35,063	1,814	139	1,953	37,016	
Huron	264	0	4,048	18,310	18	7	0	19	24,733	2,745	93	2,838	27,571	
Mahoning	0	72	15	0	76,682	2,548	19,210	30	102,197	4,244	2,661	6,905	109,102	
Stark	14	39	30	11	1,158	140,537	172	3,026	171,769	4,504	961	5,465	177,234	
Trumbull	0	892	0	7	12,003	202	71,061	18	93,183	818	3,484	4,302	97,485	
Wayne	565	28	2	17	24	1,672	32	39,739	52,150	2,121	216	2,337	54,487	
Fifteen County	18,136	36,355	33,732	21,614	91,530	155,581	93,649	47,642	1,861,994	25,511	15,901	41,412	1,903,406	
Other in State	3,514	88	3,554	4,357	7,745	15,440	2,003	4,364	48,208	3,247,300	108,588	3,355,888	3,404,096	
Other Out of State	110	1,482	211	41	3,717	621	4,449	253	19,812	130,795	122,821,119	122,951,914	122,971,726	
Total	21,760	37,925	37,497	26,012	102,992	171,642	100,101	52,259	1,930,014	3,403,606	122,945,608	126,349,214	128,279,228	

Source: US Census Bureau <http://www.census.gov/population/www/cen2000/commuting.html>

WORK

RESIDENCE	WORK									
	Cuyahoga	Geauga	Lake	Lorain	Medina	Five County	Portage	Summit	Seven County	
Cuyahoga	573,657	2,231	13,400	6,318	2,618	598,224	1,374	9,737	609,335	
Geauga	17,080	15,162	4,240	85	69	36,636	615	602	37,853	
Lake	38,254	2,016	63,580	959	44	104,853	148	495	105,496	
Lorain	31,057	11	155	83,339	1,238	115,800	76	579	116,455	
Medina	20,872	17	174	1,031	27,755	49,849	189	6,494	56,532	
Five County	680,920	19,437	81,549	91,732	31,724	905,362	2,402	17,907	925,671	
Portage	10,163	1,281	447	143	192	12,226	34,848	15,735	62,809	
Summit	27,051	341	623	514	3,307	31,836	7,714	180,479	220,029	
Seven County	718,134	21,059	82,619	92,389	35,223	949,424	44,964	214,121	1,208,509	
Ashland	323	0	0	376	349	1,048	14	101	1,163	
Ashtabula	2,204	1,276	4,297	83	2	7,862	78	77	8,017	
Erie	875	0	11	3,537	15	4,438	18	41	4,497	
Huron	240	0	0	1,208	44	1,492	0	33	1,525	
Mahoning	840	30	59	47	8	984	747	711	2,442	
Stark	1,905	20	61	144	447	2,577	1,381	15,966	19,924	
Trumbull	1,314	2,041	97	114	32	3,598	1,661	495	5,754	
Wayne	651	12	15	110	2,686	3,474	60	3,161	6,695	
Fifteen County	726,486	24,438	87,159	98,008	38,806	974,897	48,923	234,706	1,258,526	
Other in State	2,363	96	199	933	274	3,865	415	1,313	5,593	
Other Out of State	5,153	92	270	567	193	6,275	305	1,046	7,626	
Total	734,002	24,626	87,628	99,508	39,273	985,037	49,643	237,065	1,271,745	

Source: US Census Bureau <http://www.census.gov/population/www/cen2000/commuting.html>

WORK

										Fifteen	Other - In	Other - Out	Total	Total
	Ashland	Ashtabula	Erie	Huron	Mahoning	Stark	Trumbull	Wayne	County	State	of State	Other	Total	
Cuyahoga	35	209	133	41	202	1,428	287	105	611,775	2,439	3,338	5,777	617,552	
Geauga	8	237	15	0	23	141	315	0	38,592	299	267	566	39,158	
Lake	0	902	7	0	54	207	51	6	106,723	367	499	866	107,589	
Lorain	237	12	1,521	377	44	80	26	38	118,790	505	649	1,154	119,944	
Medina	161	0	28	17	41	342	26	1,346	58,493	423	469	892	59,385	
Five County	441	1,360	1,704	435	364	2,198	705	1,495	934,373	4,033	5,222	9,255	943,628	
Portage	13	27	0	12	536	1,483	1,352	82	66,314	507	358	865	67,179	
Summit	51	49	20	39	265	6,627	577	1,143	228,800	1,144	1,348	2,492	231,292	
Seven County	505	1,436	1,724	486	1,165	10,308	2,634	2,720	1,229,487	5,684	6,928	12,612	1,242,099	
Ashland	16,225	0	49	314	28	56	0	977	18,812	2,771	146	2,917	21,729	
Ashtabula	6	30,253	0	0	51	51	447	0	38,825	230	938	1,168	39,993	
Erie	73	5	26,373	1,765	0	0	0	0	32,713	1,764	161	1,925	34,638	
Huron	288	0	3,093	17,677	0	0	9	13	22,605	1,995	160	2,155	24,760	
Mahoning	0	71	0	0	77,206	2,256	15,705	25	97,705	3,513	2,684	6,197	103,902	
Stark	34	9	5	16	973	133,438	257	2,084	156,740	3,699	895	4,594	161,334	
Trumbull	0	785	0	0	14,912	164	69,833	17	91,465	686	3,846	4,532	95,997	
Wayne	336	0	10	14	20	1,289	22	36,840	45,226	1,568	281	1,849	47,075	
Fifteen County	17,467	32,559	31,254	20,272	94,355	147,562	88,907	42,676	1,733,578	21,910	16,039	37,949	1,771,527	
Other in State	2,821	189	3,011	3,822	5,164	11,184	1,670	2,462	35,916	2,942,547	93,215	3,035,762	3,071,678	
Other Out of State	42	1,228	176	36	3,609	718	3,788	151	17,374	117,892	110,091,803	110,209,695	110,227,069	
Total	20,330	33,976	34,441	24,130	103,128	159,464	94,365	45,289	1,786,868	3,082,349	110,201,057	113,283,406	115,070,274	

Source: US Census Bureau <http://www.census.gov/population/www/cen2000/commuting.html>

WORK

RESIDENCE		Cuyahoga	Geauga	Lake	Lorain	Medina	Five County	Portage	Summit	Seven County
	Cuyahoga	607,785	1,324	12,765	4,250	1,561	627,685	813	5,948	634,446
	Geauga	15,035	12,415	3,341	15	11	30,817	281	420	31,518
	Lake	36,212	1,163	59,471	13	0	96,859	23	395	97,277
	Lorain	18,613	0	98	86,583	857	106,151	0	256	106,407
	Medina	16,609	0	107	801	24,290	41,807	73	5,272	47,152
	Five County	694,254	14,902	75,782	91,662	26,719	903,319	1,190	12,291	916,800
	Portage	9,092	668	225	10	92	10,087	30,269	12,544	52,900
	Summit	21,084	186	324	160	2,406	24,160	5,040	182,263	211,463
	Seven County	724,430	15,756	76,331	91,832	29,217	937,566	36,499	207,098	1,181,163
Ashland	201	0	0	359	172	732	0	75	807	
Ashtabula	1,482	716	3,169	5	0	5,372	28	29	5,429	
Erie	535	0	0	3,650	0	4,185	0	4	4,189	
Huron	189	0	0	1,163	16	1,368	0	17	1,385	
Mahoning	386	0	10	62	0	458	466	533	1,457	
Stark	917	12	71	10	238	1,248	641	11,060	12,949	
Trumbull	523	930	127	0	0	1,580	872	205	2,657	
Wayne	499	0	0	29	2,174	2,702	23	2,597	5,322	
Fifteen County	729,162	17,414	79,708	97,110	31,817	955,211	38,529	221,618	1,215,358	
Other in State	1,663	12	148	208	17	2,048	130	669	2,847	
Other Out of State	0	0	0	0	0	0	0	0	0	
Total	730,825	17,426	79,856	97,318	31,834	957,259	38,659	222,287	1,218,205	

Source US Department of Commerce, Bureau of Economic Analysis <http://www.bea.doc.gov/bea/regional/reis/jtw/>

WORK

										Fifteen	Other - In	Other - Out	Total	Total
	Ashland	Ashtabula	Erie	Huron	Mahoning	Stark	Trumbull	Wayne	Fifteen County	State	of State	Other	Total	
Cuyahoga	15	192	122	33	94	150	117	60	635,229	1,471	2,968	4,439	639,668	
Geauga	0	150	0	0	4	14	170	0	31,856	450	144	594	32,450	
Lake	0	887	0	0	0	37	40	0	98,241	48	565	613	98,854	
Lorain	66	0	1,106	278	0	22	41	0	107,920	143	544	687	108,607	
Medina	106	0	25	0	4	158	17	864	48,326	154	391	545	48,871	
Five County	187	1,229	1,253	311	102	381	385	924	921,572	2,266	4,612	6,878	928,450	
Portage	0	71	0	0	511	997	1,465	49	55,993	424	412	836	56,829	
Summit	10	28	19	0	189	3,958	331	548	216,546	675	1,317	1,992	218,538	
Seven County	197	1,328	1,272	311	802	5,336	2,181	1,521	1,194,111	3,365	6,341	9,706	1,203,817	
Ashland	15,814	0	21	193	0	39	0	877	17,751	2,036	323	2,359	20,110	
Ashtabula	0	33,266	0	0	110	0	534	0	39,339	71	766	837	40,176	
Erie	0	0	26,843	1,331	0	0	0	0	32,363	669	230	899	33,262	
Huron	184	0	2,514	15,865	0	0	0	0	19,948	1,230	169	1,399	21,347	
Mahoning	0	24	0	0	84,087	1,913	14,608	19	102,108	3,076	2,684	5,760	107,868	
Stark	20	0	0	0	1,147	136,273	250	1,603	152,242	2,132	1,080	3,212	155,454	
Trumbull	0	661	0	0	11,452	147	75,680	0	90,597	330	3,736	4,066	94,663	
Wayne	226	0	37	24	0	1,091	15	34,125	40,840	995	260	1,255	42,095	
Fifteen County	16,441	35,279	30,687	17,724	97,598	144,799	93,268	38,145	1,689,299	13,904	15,589	29,493	1,718,792	
Other in State	2,428	0	2,679	3,307	3,247	10,749	1,175	1,928	28,360	2,595,882	85,728	2,681,610	2,709,970	
Other Out of State	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	18,869	35,279	33,366	21,031	100,845	155,548	94,443	40,073	1,717,659	2,609,786	101,317	2,711,103	4,428,762	

Source US Department of Commerce, Bureau of Economic Analysis <http://www.bea.doc.gov/bea/regional/reis/jtw/>

WORK

RESIDENCE

	Cuyahoga	Geauga	Lake	Lorain	Medina	Five County	Portage	Summit	Seven County
Cuyahoga	648,120	1,196	8,791	2,445	651	661,204	514	4,141	665,859
Geauga	10,386	9,891	1,542	137	0	21,955	233	165	22,353
Lake	31,629	670	38,951	319	54	71,624	20	281	71,924
Lorain	14,690	105	289	74,918	381	90,383	23	179	90,586
Medina	8,392	42	71	401	13,105	22,012	178	4,043	26,232
Five County	713,217	11,905	49,645	78,220	14,191	867,177	969	8,809	876,955
Portage	4,854	587	427	32	20	5,920	25,190	8,804	39,913
Summit	11,934	172	120	110	1,101	13,438	3,610	168,441	185,489
Seven County	730,006	12,665	50,192	78,361	15,312	886,535	29,769	186,053	1,102,357
Ashland	126	0	0	227	47	400	16	74	490
Ashtabula	1,278	409	1,647	0	0	3,334	35	8	3,376
Erie	270	0	0	2,357	11	2,638	0	0	2,638
Huron	113	0	22	812	8	956	0	0	956
Mahoning	314	34	408	0	0	756	461	205	1,422
Stark	663	0	0	0	0	663	636	7,750	9,049
Trumbull	390	701	153	0	62	1,306	936	241	2,482
Wayne	340	0	0	64	1,249	1,653	97	2,239	3,989
Fifteen County	733,500	13,808	52,423	81,821	16,689	898,241	31,949	196,570	1,126,759
Other in State	957	0	0	106	122	1,185	0	338	1,523
Other Out of State	0	0	0	0	0	0	0	0	0
Total	734,457	13,808	52,423	81,927	16,811	899,426	31,949	196,907	1,128,282

WORK

RESIDENCE	WORK									Fifteen County	Other - In State	Other - Out of State	Other - Elsewhere	Total Other	Total
	Ashland	Ashtabula	Erie	Huron	Mahoning	Stark	Trumbull	Wayne							
Cuyahoga	16	175	0	0	123	155	140	43	666,511	491	1,289	4,646	6,426	672,938	
Geauga	0	58	0	0	8	0	209	0	22,628	0	0	304	304	22,932	
Lake	0	555	0	0	34	13	21	0	72,547	0	13	572	585	73,132	
Lorain	53	0	581	228	0	28	0	31	91,506	37	0	877	914	92,420	
Medina	48	0	0	0	0	869	0	796	27,946	12	0	1,223	1,234	29,180	
Five County	117	788	581	228	166	1,065	370	870	881,139	539	1,301	7,621	9,461	890,602	
Portage	0	0	0	0	316	614	995	22	41,859	70	0	546	616	42,475	
Summit	0	0	0	0	107	1,457	107	343	187,503	0	0	1,910	1,910	189,413	
Seven County	117	788	581	228	588	3,136	1,471	1,235	1,110,501	609	1,301	10,077	11,988	1,122,490	
Ashland	14,097	0	0	223	0	31	0	386	15,227	1,962	0	290	2,252	17,479	
Ashtabula	0	30,301	0	0	73	0	429	0	34,179	0	370	500	870	35,049	
Erie	0	0	24,265	969	0	0	0	0	27,872	310	0	289	599	28,471	
Huron	41	0	1,694	14,209	0	0	0	0	16,901	874	0	239	1,113	18,014	
Mahoning	0	16	0	0	87,346	1,765	10,348	0	100,897	2,273	854	3,381	6,509	107,406	
Stark	0	0	0	0	720	122,151	172	757	132,849	1,220	0	1,530	2,749	135,598	
Trumbull	0	287	0	0	9,723	208	67,798	0	80,497	462	2,492	1,424	4,379	84,876	
Wayne	196	0	0	0	0	852	0	28,520	33,557	326	0	436	762	34,319	
Fifteen County	14,451	31,392	26,541	15,628	98,450	128,143	80,217	30,898	1,552,479	8,036	5,018	18,167	31,221	1,583,702	
Other in State	1,204	0	2,354	2,287	2,744	8,250	284	1,158	19,803	2,234,484	53,309	37,051	2,324,845	2,344,650	
Other Out of State	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	15,655	31,392	28,895	17,915	101,193	136,392	80,501	32,056	1,572,282	2,242,520	58,327	55,218	2,356,066	3,928,352	