

An Economic Profile of Middlesex County

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According to figures from the US Bureau of Labor Statistics' *Quarterly Census of Employment and Wages*, Middlesex County hosted a total private-sector workforce of 330,530 in 2012. But in which industries do these hundreds of thousands of employees operate? What are the specific economic activities happening here? Comparing the distribution of jobs by sector at the local, state and national level through location quotients reveals the industry mix that comprises the County's economic base.

In this mode of analysis, a **basic industry** is a sector of the local economy that employs individuals for production beyond the consumption needs of the local market. These industries capture additional profits from exporting goods and services to external markets, generating wealth that grows the local economy. Compared to national sector-based employment figures, Middlesex County is a net exporter of wholesale trade operations; professional, scientific and technical services; management of companies and enterprise; and administration, support, waste management, and remediation services; transportation and warehousing; and information (fig 1). Between 2002 and 2012, three of the six classified basic industries (management of companies and enterprises; administration, support, waste management and remediation services; and transportation and warehousing) increased employment numbers and export market share despite the economy's overall contraction in 2008. Conversely, three of the County's basic industries (wholesale trade; professional, scientific, and technical services; and information) saw production for export to external markets decrease. Two industries that were basic in 2002, manufacturing and finance and insurance, are no longer basic industries in the context of the national market.

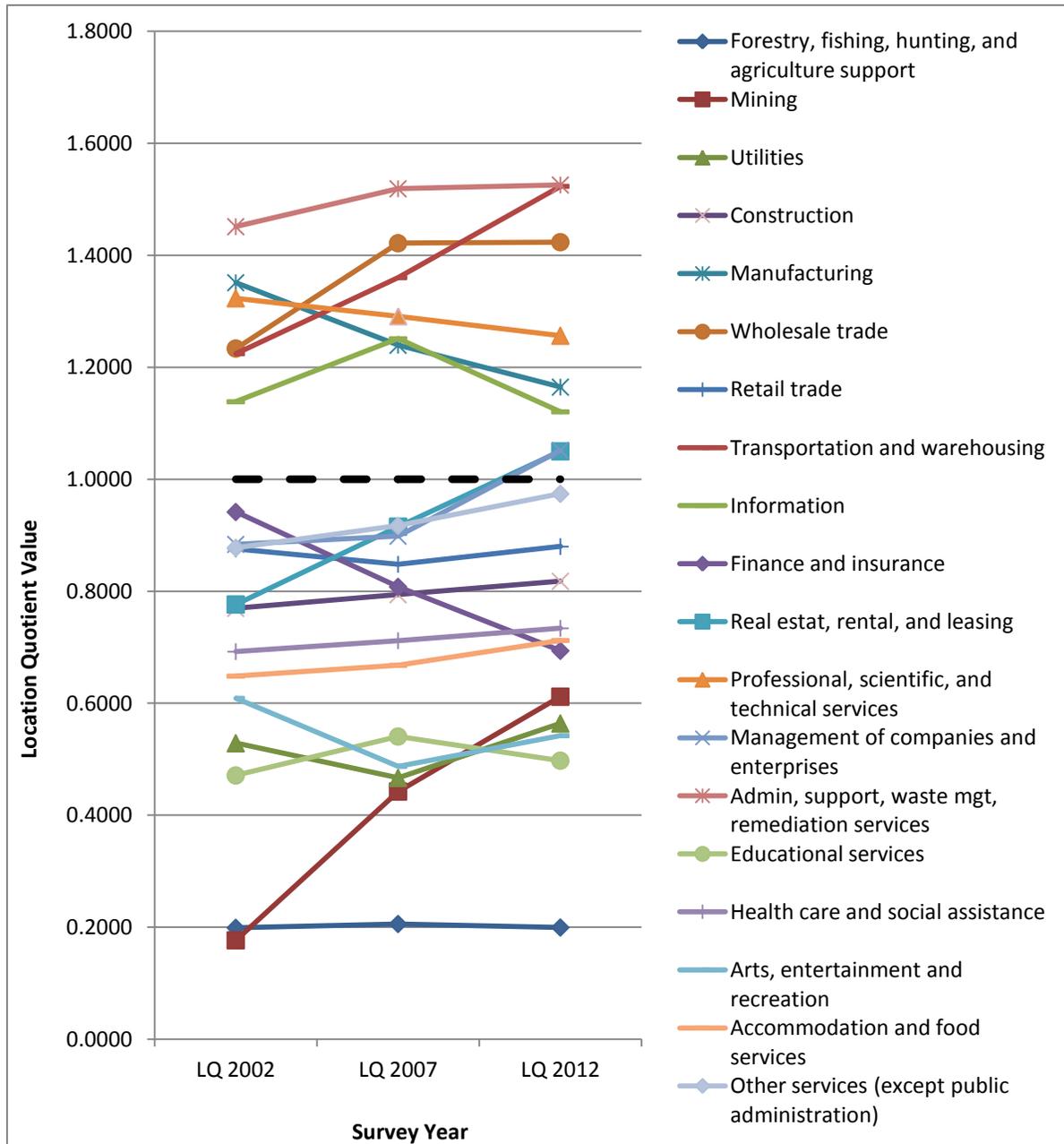
Figure 1: Chart showing location quotients for 20 broad industry classifications in Middlesex County

Location Quotients (LQ) for Middlesex County, NJ						
National Comparison						
NAICS Code	Second-Degree Industry Code	Description	LQ 2002	LQ 2007	LQ 2012	2012 Sector Classification
11----		Forestry, fishing, hunting, and agriculture support	0.0561	0.0622	0.0641	nonbasic
21----		Mining	0.0160	0.0370	0.0331	nonbasic
22----		Utilities	0.4553	0.3840	0.4878	nonbasic
23----		Construction	0.6060	0.6114	0.6576	nonbasic
31----		Manufacturing	1.0587	0.9498	0.8267	nonbasic
42----		Wholesale trade	1.6900	↑ 1.8677	↓ 1.8466	basic
44----		Retail trade	0.8792	0.8659	0.9055	nonbasic
54----		Professional, scientific, and technical services	1.7143	↓ 1.6431	↓ 1.5279	basic
55----		Management of companies and enterprises	1.0387	↑ 1.1114	↑ 1.4381	basic
56----		Admin, support, waste mgt, remediation services	1.5916	↓ 1.5773	↑ 1.7010	basic
61----		Educational services	0.4689	0.5335	0.4823	nonbasic
62----		Health care and social assistance	0.7107	0.7510	0.7708	nonbasic
48----		Transportation and warehousing	1.5633	↑ 1.7105	↑ 1.8569	basic
51----		Information	1.2466	↑ 1.3631	↓ 1.1200	basic
52----		Finance and insurance	1.0951	0.9380	0.7868	nonbasic
53----		Real estate, rental, and leasing	0.6855	0.8584	0.9855	nonbasic
71----		Arts, entertainment and recreation	0.5017	0.4367	0.5272	nonbasic
72----		Accommodation and food services	0.5438	0.5719	0.6049	nonbasic
81----		Other services (except public administration)	0.7727	0.8895	0.9441	nonbasic
99---		Unclassified establishments	4.5306	↓ 3.0944	↑ 3.7946	basic

Note: Industries with a quotient greater than one are **basic** industries, or industries that employ individuals for production beyond the needs of the local market and thus constitute a source of profit from export that builds wealth within the County.

The economic position of Middlesex County is different within the State of New Jersey as compared to the country overall. In this context, the County has eight classified basic industries and is a net exporter in manufacturing; wholesale trade; professional, scientific, and technical services; management of companies and enterprises; administration, support, waste management and remediation services; transportation and warehousing; information; and real estate, rental, and leasing. Two of these industries (management of companies and enterprises, and real estate, rental and leasing) emerged as basic industries in Middlesex County between 2007 and 2012 (figure 2).

Figure 2: A time series of location quotients for industries in Middlesex County, NJ (state-level comparison)



The County's economic performance can also be considered against industry-specific growth trends at the national level. The **shift-share model** disaggregates changes in employment over time into three distinct dimensions: (1) national share, (2) industry shift, and (3) regional shift. First, national share predicts employment numbers by industry in the County based on the overall national employment growth rate. Next, the industry shift component calculates employment figures that the County could expect if local industrial changes precisely mirrored industry shifts at a national scale. Lastly, the regional shift analysis incorporates actual observed employment figures from the current year to determine the differential between local and national industry growth rates, yielding a summary of the industries that over- and under-performed within the County as compared to the country.

Between 2002 and 2012, Middlesex County gained jobs in 12 out of 20 sectors (figure 3). Middlesex County growth rates outperformed national figures in ten industries: forestry, fishing, hunting and agriculture support; mining; construction; wholesale trade; management of companies and enterprises; health care and social assistance; transportation and warehousing; real estate; accommodation and food service; and other services (figure 4).

Figure 3: Comparing employment figures in 2002 and 2012

Sectoral Employment in Middlesex County				
NAICS	Industry Code Description	2002	2012	Change
11----	Forestry, fishing, hunting, and agriculture support	208	228	20
21----	Mining	26	79	53
22----	Utilities	865	801	(64)
23----	Construction	12,993	10,974	(2,019)
31----	Manufacturing	51,658	29,401	(22,257)
42----	Wholesale trade	30,457	31,204	747
44----	Retail trade	42,360	40,209	(2,151)
54----	Professional, scientific & technical services	36,600	36,045	(555)
55----	Management of companies & enterprises	5,650	8,605	2,955
56----	Admin, support, waste mgt, remediation services	38,752	40,585	1,833
61----	Educational services	2,935	3,758	823
62----	Health care and social assistance	30,543	38,674	8,131
48----	Transportation & warehousing	20,007	23,065	3,058
51----	Information	13,456	8,957	(4,499)
52----	Finance & insurance	19,949	13,076	(6,873)
53----	Real estate & rental & leasing	4,460	5,721	1,261
71----	Arts, entertainment & recreation	2,895	3,112	217
72----	Accommodation & food services	17,791	21,258	3,467
81----	Other services (except public administration)	10,526	12,829	2,303
99----	Unclassified establishments	2,999	1,949	(1,050)
	Total	345,130	330,530	(14,600)

Figure 4: Components of shift-share analysis for Middlesex County

Note: Industries that lost jobs but have a positive regional shift between 2002 and 2012, such as construction, outperformed the nation overall by contracting at a lesser rate.

Shift-Share Analysis for Middlesex County, 2002-2012					
Industry Code Description	Actual 2002 Employment Reported by the US Census Bureau	National Share	Industry Shift	Regional Shift	Actual 2012 Employment Reported by the US Census Bureau (equals sum across columns)
Forestry, fishing, hunting, and agriculture support	208	214	0	14	228
Mining	26	27	14	38	79
Utilities	865	890	-87	-2	801
Construction	12,993	13,364	-2,503	114	10,974
Manufacturing	51,658	53,132	-12,696	-11,034	29,401
Wholesale trade	30,457	31,326	-656	534	31,204
Retail trade	42,360	43,568	-1,642	-1,718	40,209
Professional, scientific, and technical services	36,600	37,644	5,791	-7,390	36,045
Management of companies and enterprises	5,650	5,811	864	1,930	8,605
Admin, support, waste mgt, remediation services	38,752	39,857	926	-198	40,585
Educational services	2,935	3,019	905	-166	3,758
Health care and social assistance	30,543	31,414	6,884	376	38,674
Transportation and warehousing	20,007	20,578	277	2,211	23,065
Information	13,456	13,840	-3,132	-1,750	8,957
Finance and insurance	19,949	20,518	-971	-6,471	13,076
Real estate, rental and leasing	4,460	4,587	-314	1,448	5,721
Arts, entertainment and recreation	2,895	2,978	203	-68	3,112
Accommodation and food services	17,791	18,298	2,225	735	21,258
Other services (except public administration)	10,526	10,826	450	1,552	12,829
Unclassified establishments	2,999	3,085	-585	-550	1,949
Total	345,130	354,975	-4,049	-20,395	330,530

*Purple indicates an industry in which Middlesex County outperformed national trends in that industry.