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The Cleveland Health Tech Corridor: An Analysis of Economic Trends, 2000-2011

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Prepared for:
**The Cleveland Foundation &
Living Cities**

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August 2012

**THE CLEVELAND
HEALTH TECH
CORRIDOR:

AN ANALYSIS
OF ECONOMIC
TRENDS, 2000-
2011**

**Center for
Economic
Development**

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INTRODUCTION

The Health Tech Corridor (“HTC”) is the designation given to a 3-mile stretch of land that extends from Downtown Cleveland to the University Circle neighborhood. It passes through 10 unique and diverse Cleveland neighborhoods along its path. The HTC, a public-private collaboration, contains a vibrant cluster of companies specializing in health care, medical technology, and ancillary activities. The aim of the HTC is to harness existing potential to redevelop its surrounding area.

The HTC boasts an impressive concentration of world-class health care institutions, major academic institutions, cutting-edge business incubators, and thriving high-tech and health care companies. It also houses some of the region’s strongest anchor institutions: Case Western Reserve University, Cleveland State University, Cuyahoga Community College, the Cleveland Institute of Art, the Cleveland Clinic Foundation, University Hospitals, the Louis Stokes VA Medical Center, and St. Vincent Charity Medical Center. The close proximity of companies and institutions along the HTC has created a fertile environment in which to facilitate the growth of a globally-competitive center of innovation.

This report provides a look into the conditions of the HTC over time by examining economic trends from 2000 to 2011. The 11-year time period was selected to understand the economic conditions of the HTC prior to, and since, the recession of 2008. In addition to discussing the trends over the entire 11-year time period, special attention is paid to changes that occurred from 2010 to 2011, the last year of the study period. The designation of the corridor as the Health Tech Corridor and its redevelopment may only show up in the data of the past year or two.

METHODOLOGY

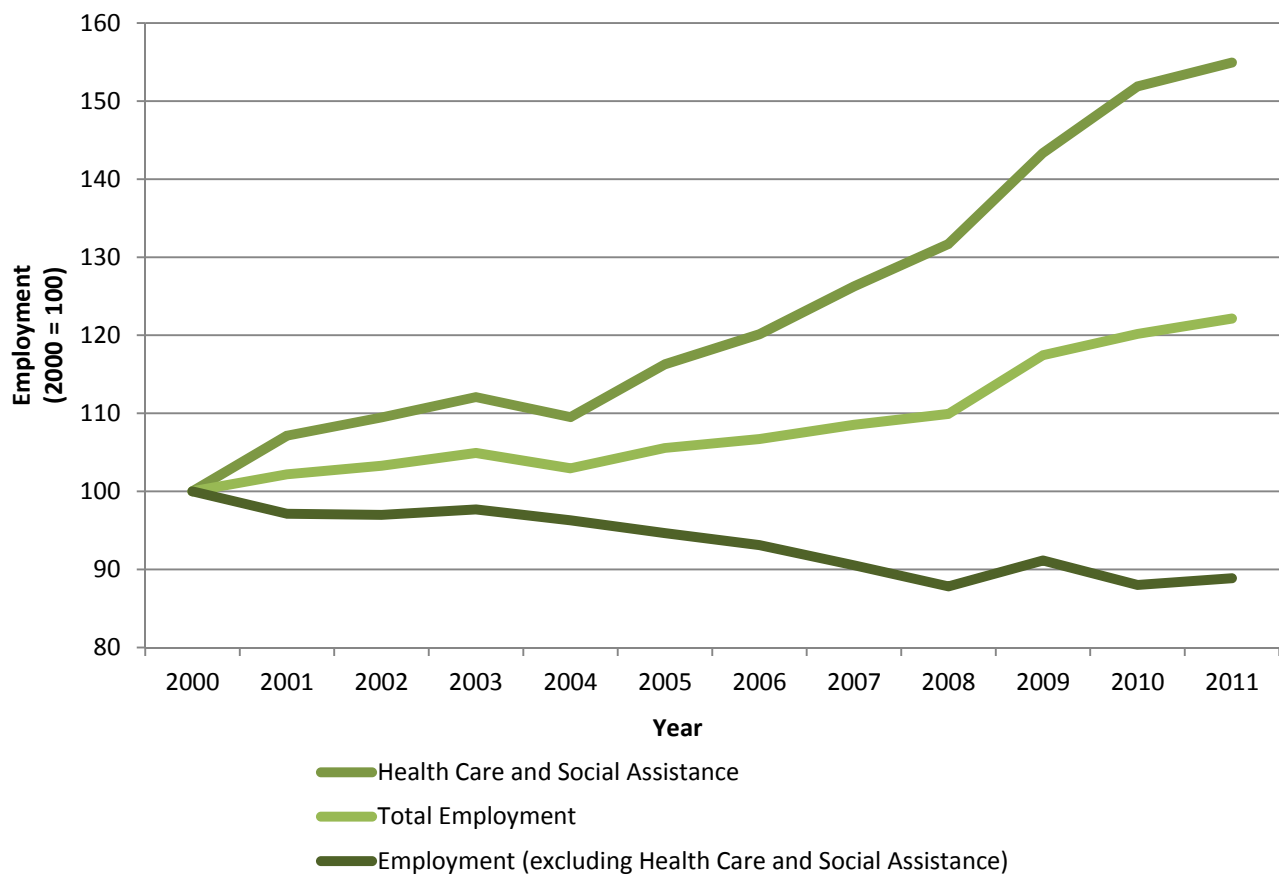
Four measures are used here to examine the economic trends within the HTC: employment, payroll, average wage, and number of establishments.

Data for this report were retrieved from the Quarterly Census of Employment and Wages (“QCEW”) database, which is managed and maintained by the Center for Economic Development at Cleveland State University’s Maxine Goodman Levin College of Urban Affairs (“Center”). The QCEW includes information such as company name, address, city, county, North American Industry Classification System (NAICS) code, employment, and wages for most establishments with paid employees in Ohio. It features data for the years 2000 to 2011 that is aggregated by industry and region. Although the database includes company-level information, only industry level data can be reported due to confidentiality restrictions. As a result, information for some smaller sectors is suppressed throughout this report.

EMPLOYMENT

Total employment in the HTC grew 22.1% between 2000 and 2011, reaching 59,598 in 2011. Employment increased every year during the 11-year period, except in 2004 when 968 jobs were lost. The bulk of employment growth in the HTC was driven by the *Health Care and Social Assistance* sector. In this sector, employment increased by 54.9% or 13,502 jobs between 2000 and 2011. As shown in Figure 1, without the *Health Care and Social Assistance* sector, total employment in the HTC would not have increased, but rather declined by 11.1%.

Figure 1: HTC Employment Index, 2000-2011



Source: Quarterly Census of Employment and Wages (QCEW)

Other sectors that saw growth between 2000 and 2011 included *Transportation and Warehousing; Real Estate and Rental and Leasing; Public Administration; Educational Services; and Management of Companies and Enterprises* (Table 1).

Between 2010 and 2011, the post recession year, total employment grew 1.6% (Table 1). Moreover, the majority of sectors saw growth over that period. The *Professional, Scientific, and Technical Services*

sector experienced the largest percent growth in employment between 2010 and 2011 with an increase of 29.4%; this sector employed 970 people by 2011. *Health Care and Social Assistance* gained the largest number of employees (754) from 2010 to 2011, reaching over 38,000 employees.

Table 1: HTC Employment by Sector

Sector	2011 Emp.	2000-2011		2010-2011	
		Change	% Change	Change	% Change
Health Care and Social Assistance	38,077	13,502	54.9%	754	2.0%
Educational Services	8,984	526	6.2%	-146	-1.6%
Accommodation and Food Services	1,641	2	0.1%	65	4.1%
Other Services (except Public Administration)	1,537	-61	-3.8%	12	0.8%
Arts, Entertainment, and Recreation	1,165	-477	-29.1%	-43	-3.5%
Wholesale Trade	1,005	-531	-34.6%	6	0.6%
Professional, Scientific, and Technical Services	970	-23	-2.3%	220	29.4%
Manufacturing	963	-1,323	-57.9%	53	5.8%
Public Administration	957	S	S	-16	-1.6%
Management of Companies and Enterprises	937	43	4.9%	30	3.3%
Administrative and Support Services	923	-145	-13.6%	-84	-8.3%
Retail Trade	578	-553	-48.9%	14	2.5%
Construction	528	-537	-50.4%	42	8.7%
Finance and Insurance	364	-9	-2.5%	46	14.5%
Real Estate, Rental, and Leasing	360	48	15.2%	26	7.7%
Information	252	-164	-39.4%	-13	-5.0%
Transportation and Warehousing	156	74	91.0%	-7	-4.3%
Mining, Quarrying, and Oil and Gas Extraction	S	S	S	S	S
Utilities	S	S	S	S	S
Unclassified	S	S	S	S	S
Total	59,598	10,806	22.1%	963	1.6%
Total (excluding Health Care and Social Assistance)	21,521	-2,696	-11.1%	210	1.0%

Notes:

Sectors are sorted by 2011 employment.

S denotes data suppressed due to confidentiality restrictions.

Source:

Quarterly Census of Employment and Wages (QCEW)

As shown in Table 1, not all sectors performed as well as those mentioned above. *Manufacturing* saw a 57.9% decrease in employment, the greatest decline of all sectors between 2000 and 2011. The number of jobs in this sector declined steadily over the 11-year period, though there was a modest 2% increase from 2002 to 2003 and a 5.8% increase from 2010 to 2011. By 2011, there were just over 960 manufacturing jobs remaining in the HTC. Other sectors that saw declines in employment from 2000 to

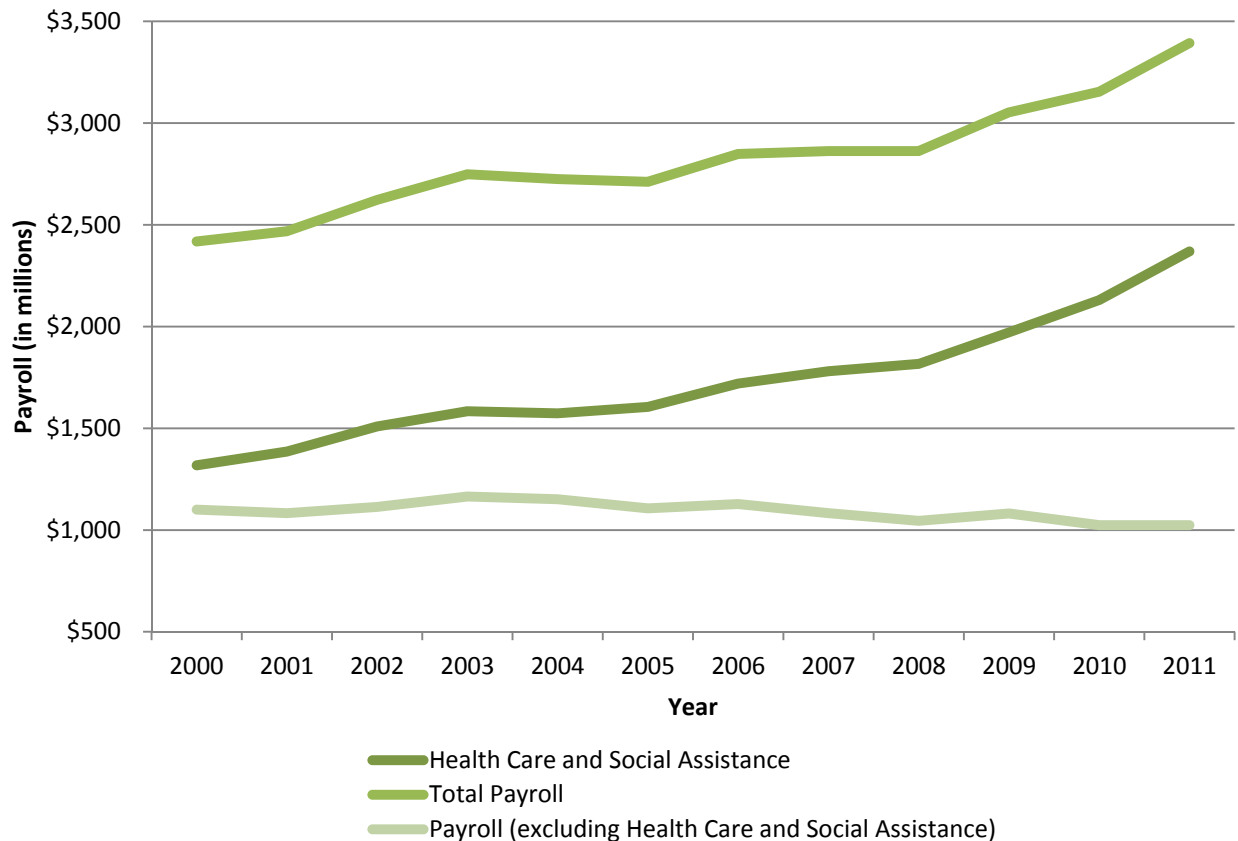
2011 were *Construction; Retail Trade; Information; Wholesale Trade; Arts, Entertainment, and Recreation; Finance and Insurance; and Professional, Scientific, and Technical Services.*

From 2010 to 2011, the largest decline in number of employees came from *Educational Services*, which lost 146 employees or 1.6% of its employees. Declines in employment from 2010 to 2011 were also seen in other sectors like *Administrative and Support Services; Information; and Transportation and Warehousing* (Table 1). Annual employment data for each major sector between 2000 and 2011 is located in Appendix A.

PAYROLL

From 2000 to 2011, after adjusting for inflation, total payroll in the HTC grew 40.3% from \$2.42 billion in 2000 to \$3.39 billion in 2011 (Figure 2). The HTC experienced almost continuous annual growth in payroll, except for minute decreases from 2003 to 2005 and 2007 to 2008.

Figure 2: HTC Total Payroll, 2000-2011



Note: Data are inflated to 2011 dollars.

Source: Quarterly Census of Employment and Wages (QCEW)

The increase in payroll in the HTC can be largely attributed to two key sectors. The first, *Health Care and Social Assistance*, increased its payroll by 79.7% over the 11-year period, and accounted for \$2.37 billion dollars of the \$3.39 billion generated in the HTC in 2011 (Table 2). The second sector, *Educational Services*, grew its payroll by 6.2% from 2000 to 2011 and contributed \$471.67 million in payroll in 2011. Together, these two sectors represented 83.7% of the HTC's total payroll in 2011.

Total payroll in the HTC increased 7.6% from 2010 to 2011 for a net growth of \$238.46 million. This growth was driven largely by the following sectors: *Health Care and Social Assistance*; *Management of Companies and Enterprises*; *Professional, Scientific, and Technical Services*; and *Manufacturing* (Table 2). Without *Health Care and Social Assistance* specifically, total payroll would have grown less than 0.1%.

Table 2: HTC Payroll by Sector (in millions)

Sector	2011 Payroll	2000-2011		2010-2011	
		Change	% Change	Change	% Change
Health Care and Social Assistance	\$2,369.10	\$1,050.92	79.7%	\$238.49	11.2%
Educational Services	\$471.67	\$27.36	6.2%	-\$29.81	-5.9%
Management of Companies and Enterprises	\$92.76	\$42.20	83.5%	\$15.72	20.4%
Professional, Scientific, and Technical Services	\$57.71	-\$1.79	-3.0%	\$7.36	14.6%
Arts, Entertainment, and Recreation	\$54.65	-\$5.35	-8.9%	-\$0.48	-0.9%
Public Administration	\$50.63	S	S	-\$1.59	-3.0%
Wholesale Trade	\$49.21	-\$24.19	-33.0%	\$0.55	1.1%
Manufacturing	\$38.90	-\$68.69	-63.8%	\$2.55	7.0%
Other Services (except Public Administration)	\$36.69	-\$9.65	-20.8%	\$0.90	2.5%
Accommodation and Food Service	\$34.36	\$8.59	33.3%	\$1.21	3.7%
Construction	\$33.30	-\$31.68	-48.8%	\$1.60	5.1%
Administrative and Support Services	\$24.14	-\$4.08	-14.5%	-\$2.05	-7.8%
Information	\$20.88	-\$5.93	-22.1%	\$1.55	8.0%
Finance & Insurance	\$19.66	\$0.88	4.7%	\$1.29	7.0%
Retail Trade	\$17.02	-\$28.91	-62.9%	\$1.09	6.8%
Real Estate and Rental and Leasing	\$8.70	\$0.32	3.8%	-\$0.10	-1.1%
Transportation and Warehousing	\$4.22	\$1.13	36.6%	-\$0.16	-3.6%
Mining, Quarrying, and Oil and Gas Extraction	S	S	S	S	S
Utilities	S	S	S	S	S
Unclassified	S	S	S	S	S
Total	\$3,393.03	\$974.56	40.3%	\$238.46	7.6%
Total (excluding Health Care and Social Assistance)	\$1,023.93	-\$76.36	-6.9%	-\$0.03	-0.0%

Notes:

Sectors are sorted by 2011 payroll.

Data are inflated to 2011 dollars.

S denotes data suppressed due to confidentiality restrictions.

Source:

Quarterly Census of Employment and Wages (QCEW)

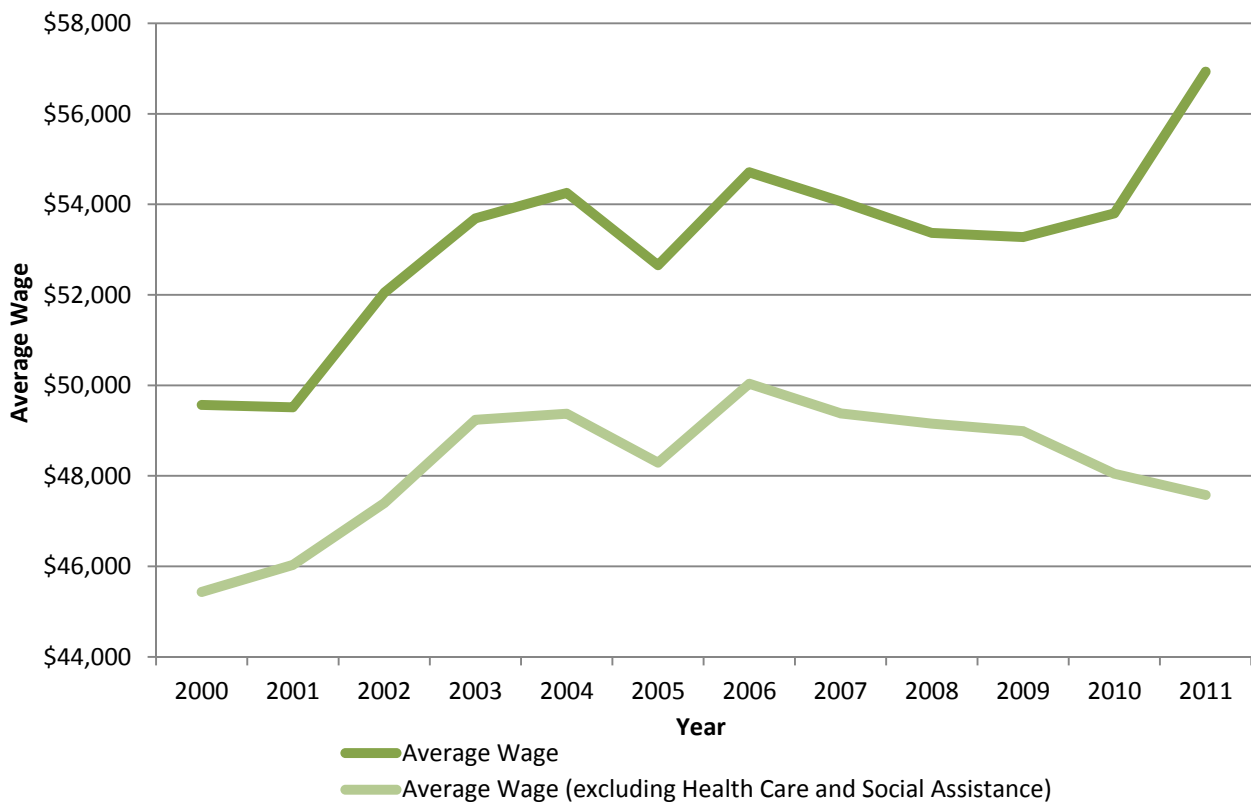
Despite the overall growth in total payroll, a few sectors experienced payroll losses from 2000 to 2011. The largest declines in payroll were exhibited by the following sectors: *Manufacturing, Retail Trade, Construction, and Wholesale Trade*. These sectors also showed significant declines in employment from 2000 to 2011.

Very few sectors experienced payroll losses between 2010 and 2011. Those sectors that did were *Administrative and Support Services; Educational Services; Transportation and Warehousing; Public Administration; Real Estate and Rental and Leasing; and Arts, Entertainment, and Recreation*. Appendix B contains annual payroll data for the years 2000 to 2011 for each major sector in the HTC.

AVERAGE WAGE

The average wage for the HTC was \$56,932 in 2011, an increase of 14.9% since 2000. The changes in average wage for all sectors were erratic during the 11-year period (Appendix C). Excluding the *Health Care and Social Assistance* sector from the mix, a very different trend is expressed (Figure 3). Without this sector, the overall average wage for the HTC trended down since 2006 and grew only 4.7% from 2000 to 2011.

Figure 3: HTC Average Wage for All Sectors, 2000-2011



Source: Quarterly Census of Employment and Wages (QCEW)

High volatility of average wages can be seen in many sectors during the 2004 to 2009 period (Appendix C). A boom and bust took place during those middle years, which ended with some sectors entering a period of recovery while others continued to decline. Overall, most HTC workers ended the first decade of the 21st century with higher wages than when they started.

A comparison of sectors shows a wide range of changes both positive and negative between 2000 and 2011 (Table 3). The *Management of Companies and Enterprises* sector experienced the largest increase in average wage from 2000 to 2011; its average wage increased \$42,436 per employee, or 75%. Other sectors that saw large percent increases in average wage during this time period included: *Accommodation and Food Service; Information; Arts, Entertainment, and Recreation; and Health Care and Social Assistance*. *Construction* also saw an increase in average wage; however, it should be noted this resulted from significant decreases in employment that outpaced declines in payroll.

A number of sectors saw decreases in average wage between 2000 and 2011. The greatest declines took place in the following sectors: *Transportation and Warehousing; Retail Trade; Other Services; and Manufacturing* (Table 3).

Between 2010 and 2011 the average wage for all sectors grew by 5.8% (average wage declined by 1.0% if *Health Care and Social Assistance* is excluded). This growth was driven largely by *Management of Companies and Enterprises, Information, and Health Care and Social Assistance*. Average wages declined in seven sectors, with *Professional, Scientific, and Technical Services* experiencing the greatest decline (Table 3).

Annual average wage data for each major sector is located in Appendix C.

Table 3: HTC Average Wage by Sector

Sector	2011 Avg Wage	2000-2011		2010-2011	
		Change	% Change	Change	% Change
Management of Companies and Enterprises	\$99,036	\$42,436	75.0%	\$14,034	16.5%
Information	\$82,758	\$18,364	28.5%	\$10,002	13.7%
Construction	\$63,102	\$2,070	3.4%	-\$2,206	-3.4%
Health Care and Social Assistance	\$62,219	\$8,579	16.0%	\$5,133	9.0%
Professional, Scientific, and Technical Services	\$59,497	-\$421	-0.7%	-\$7,668	-11.4%
Finance and Insurance	\$54,060	\$3,697	7.3%	-\$3,782	-6.5%
Public Administration	\$52,918	S	S	-\$784	-1.5%
Educational Services	\$52,504	-\$33	-0.1%	-\$2,424	-4.4%
Wholesale Trade	\$48,952	\$1,177	2.5%	\$243	0.5%
Arts, Entertainment, and Recreation	\$46,910	\$10,379	28.4%	\$1,263	2.8%
Manufacturing	\$40,407	-\$6,662	-14.2%	\$451	1.1%
Retail Trade	\$29,443	-\$11,174	-27.5%	\$1,183	4.2%
Transportation and Warehousing	\$27,062	-\$10,778	-28.5%	\$182	0.7%
Administrative and Support Services	\$26,156	-\$263	-1.0%	\$146	0.6%
Real Estate and Rental and Leasing	\$24,144	-\$2,661	-9.9%	-\$2,147	-8.2%
Other Services (except Public Administration)	\$23,876	-\$5,136	-17.7%	\$405	1.7%
Accommodation and Food Service	\$20,940	\$5,215	33.2%	-\$94	-0.4%
Mining, Quarrying, and Oil and Gas Extraction	S	S	S	S	S
Utilities	S	S	S	S	S
Unclassified	S	S	S	S	S
Total	\$56,932	\$7,365	14.9%	\$3,132	5.8%
Total (excluding Health Care and Social Assistance)	\$47,558	\$2,123	4.7%	-\$469	-1.0%

Notes:

Sectors are sorted by 2011 average wage.

Data are inflated to 2011 dollars.

S denotes data suppressed due to confidentiality restrictions.

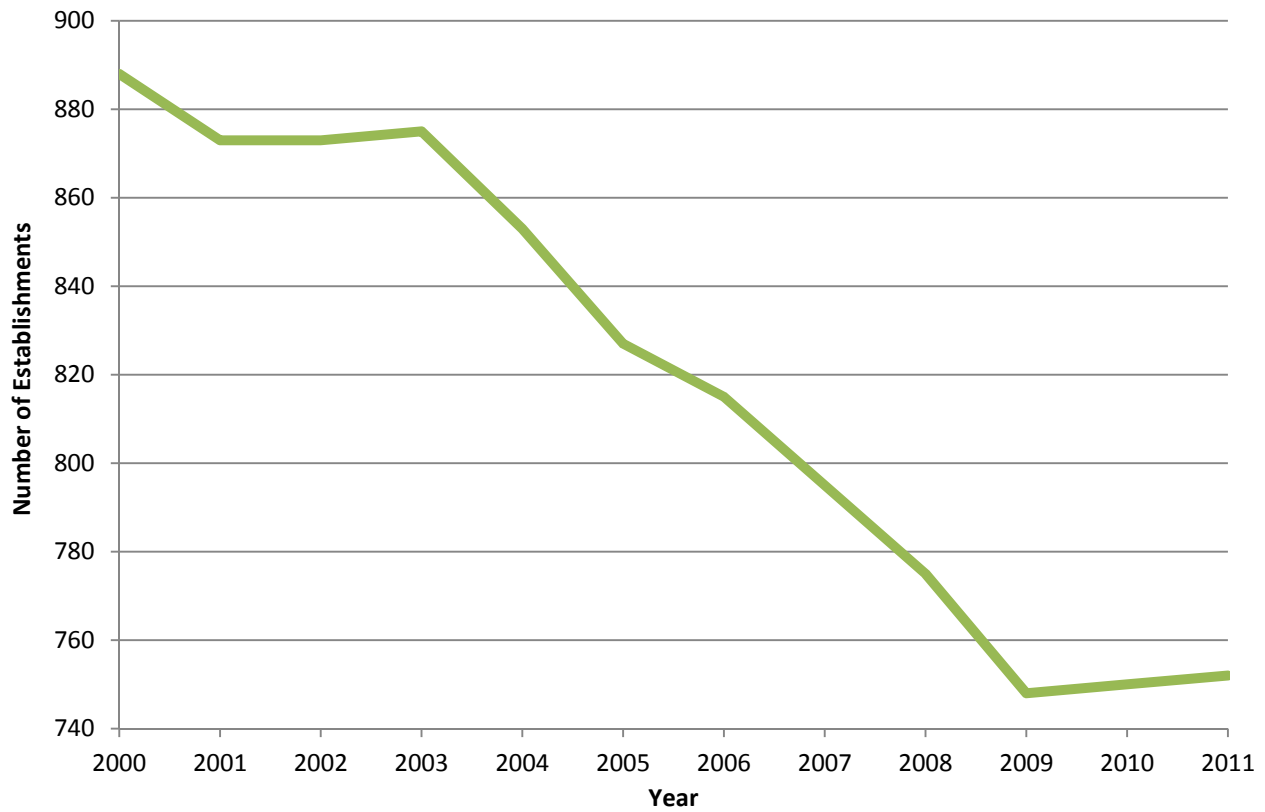
Source:

Quarterly Census of Employment and Wages (QCEW)

ESTABLISHMENTS

The HTC housed 752 establishments in 2011. Between 2000 and 2011, the total number of establishments decreased by 15.3% or 136 establishments. The year-to-year examination in Figure 4 shows that, for the most part, the number of establishments declined annually over the 11-year period, except for periods of nominal growth from 2001 to 2003 and 2009 to 2011. Given the general decline in establishments, it is likely the gains in employment and payroll seen in the HTC between 2000 and 2011 resulted from the growth of existing firms (Tables 1, 2, 4). The growth in the number of establishments observed between 2009 and 2011 may be the result of real estate redevelopment occurring in the HTC.

Figure 4: HTC Establishments, 2000-2011



Source: Quarterly Census of Employment and Wages (QCEW)

In 2011, the largest shares of establishments were in the following sectors: *Other Services*; *Health Care and Social Assistance*; and *Professional, Scientific, and Technical Services* (Table 4). From 2000 to 2011, *Health Care and Social Assistance* and *Other Services* experienced the largest declines in number of establishments with losses of 39 and 29 establishments, respectively. Without *Health Care and Social Assistance*, the HTC would have lost only approximately 100 establishments, a decrease of 12.8%. The largest increase in number of establishments occurred in the *Educational Services* sector (11 establishments).

The HTC experienced a nominal net increase of 2 establishments between 2010 and 2011 (Table 4). Again, this supports the notion that overall growth in the HTC came from the expansion of existing firms.

Annual establishment data for each major sector can be found in Appendix D.

Table 4: HTC Establishments by Sector

Sector	2011 Est	2000-2011		2010-2011	
		Change	% Change	Change	% Change
Other Services (except Public Administration)	118	-29	-19.7%	2	1.7%
Health Care and Social Assistance	93	-39	-29.5%	-3	-3.1%
Professional, Scientific, and Technical Services	87	3	3.6%	3	3.6%
Retail Trade	68	-5	-6.8%	1	1.5%
Accommodation and Food Service	67	-1	-1.5%	-1	-1.5%
Manufacturing	55	-28	-33.7%	1	1.9%
Wholesale Trade	53	-25	-32.1%	0	0.0%
Finance and Insurance	41	-6	-12.8%	1	2.5%
Educational Services	35	11	45.8%	0	0.0%
Administrative and Support Services	28	4	16.7%	0	0.0%
Real Estate and Rental and Leasing	25	-6	-19.4%	-2	-7.4%
Construction	21	-13	-38.2%	2	10.5%
Arts, Entertainment, and Recreation	19	1	5.6%	-1	-5.0%
Management of Companies and Enterprises	12	0	0.0%	0	0.0%
Transportation and Warehousing	11	1	10.0%	0	0.0%
Information	11	-8	-42.1%	-1	-8.3%
Public Administration	5	S	S	0	0.0%
Mining, Quarrying, and Oil and Gas Extraction	S	S	S	S	S
Utilities	S	S	S	S	S
Unclassified	S	S	S	S	S
Total	752	-136	-15.3%	2	0.3%
Total (excluding Health Care and Social Assistance)	659	-97	-12.8%	5	0.8%

Notes:

Sectors are sorted by 2011 establishments.

S denotes data suppressed due to confidentiality restrictions.

Source:

Quarterly Census of Employment and Wages (QCEW)

CONCLUSION

The *Health Care and Social Assistance* sector accounted for much of the economic activity within the HTC between 2000 and 2011. As witnessed throughout this report, as well as in the proceeding appendix tables, *Health Care and Social Assistance* consistently represented significant shares of employment, payroll, and establishments within the HTC. Moreover, by excluding *Health Care and Social Assistance* from examination, large reductions can be seen in each of these measures. Despite this fact, the *Health Care and Social Assistance* sector does not represent the whole story of the HTC. The *Educational Services*; *Management of Companies and Enterprises*; and *Professional, Scientific, and Technical Services* sectors also ranked highly in many of the same measures.

From the analysis conducted, it appears that the expansion of existing firms and establishments has been the driving force behind growth in the HTC. The number of establishments present in the HTC declined significantly beginning in 2003 and has yet to recover to previous levels. Nonetheless, employment, payroll, and average wage experienced net increases over the 11-year time period studied here. Whether this trend will continue is purely speculative. However, given the rapid growth and development within the HTC over the last few years, especially in the University Circle and MidTown neighborhoods, and the increased collaboration and member partners throughout the HTC, it is expected that more businesses will locate in the HTC and that number of establishments, employment, payroll, and average wage will continue to grow. An update of this analysis with 2012 data may show additional growth in the HTC.

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APPENDICES

Appendix A: HTC Annual Employment by Major Sector, 2000-2011

Sector	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2000-2011		2010-2011	
													Change	% Change	Change	% Change
Health Care and Social Assistance	24,574	26,330	26,904	27,541	26,914	28,577	29,519	31,027	32,364	35,227	37,323	38,077	13,502	54.9%	754	2.0%
Educational Services	8,457	8,269	8,753	8,820	8,997	8,882	8,644	8,389	8,089	9,192	9,130	8,984	526	6.2%	-146	-1.6%
Accommodation and Food Service	1,639	1,564	1,671	1,530	1,715	1,809	1,968	1,645	1,593	1,627	1,576	1,641	2	0.1%	65	4.1%
Other Services (except Public Administration)	1,597	1,571	1,551	1,443	1,419	1,425	1,543	1,476	1,565	1,564	1,525	1,537	-61	-3.8%	12	0.8%
Arts, Entertainment, and Recreation	1,642	1,725	1,672	1,626	1,432	1,455	1,322	1,336	1,316	1,235	1,208	1,165	-477	-29.1%	-43	-3.5%
Wholesale Trade	1,536	1,550	1,413	1,341	1,320	1,180	1,137	1,213	1,146	1,031	999	1,005	-531	-34.6%	6	0.6%
Professional, Scientific, and Technical Svcs	993	865	981	915	924	972	991	960	982	938	750	970	-23	-2.3%	220	29.4%
Manufacturing	2,286	2,059	1,933	1,972	1,825	1,525	1,339	1,144	1,098	976	910	963	-1,323	-57.9%	53	5.8%
Public Administration	S	S	S	840	853	902	949	928	895	898	972	957	S	S	-16	-1.6%
Mgmt of Companies and Enterprises	893	738	692	770	708	780	843	919	893	922	906	937	43	4.9%	30	3.3%
Administrative and Support Services	1,068	1,052	1,000	1,199	1,126	1,017	807	905	879	1,043	1,007	923	-145	-13.6%	-84	-8.3%
Retail Trade	1,131	1,053	941	925	849	853	715	722	639	558	564	578	-553	-48.9%	14	2.5%
Construction	1,065	1,045	885	1,002	890	849	899	925	797	714	485	528	-537	-50.4%	42	8.7%
Finance & Insurance	373	352	377	370	399	410	418	364	355	359	318	364	-9	-2.5%	46	14.5%
Real Estate and Rental and Leasing	313	306	281	258	235	253	304	292	313	347	335	360	48	15.2%	26	7.7%
Information	416	446	417	402	408	356	351	377	344	318	266	252	-164	-39.4%	-13	-5.0%
Transportation & Warehousing	82	150	148	111	85	92	103	131	151	154	163	156	74	91.0%	-7	-4.3%
Mining, Quarrying, and Oil and Gas Extraction	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Utilities	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Unclassified	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Total	48,791	49,852	50,393	51,197	50,230	51,498	52,066	52,951	53,631	57,299	58,634	59,598	10,806	22.1%	963	1.6%
Total (excluding Health Care and Social Assistance)	24,217	23,522	23,489	23,657	23,316	22,922	22,547	21,924	21,267	22,073	21,311	21,521	-2,696	-11.1%	210	1.0%

Notes: Sectors are sorted by 2011 employment; S denotes data suppressed due to confidentiality restrictions.

Source: Quarterly Census of Employment and Wages (QCEW)

Appendix B: HTC Annual Payroll by Major Sector, 2000-2011 (in millions)

<u>Sector</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Health Care and Social Assistance	\$1,318.18	\$1,385.63	\$1,509.50	\$1,583.93	\$1,573.92	\$1,604.77	\$1,720.27	\$1,780.13	\$1,816.91	\$1,971.42	\$2,130.61	\$2,369.10
Educational Services	\$444.31	\$442.92	\$480.41	\$497.26	\$515.00	\$502.71	\$501.26	\$453.84	\$457.40	\$505.54	\$501.48	\$471.67
Mgmt of Companies and Enterprises	\$50.56	\$52.35	\$45.87	\$51.44	\$49.95	\$59.36	\$66.17	\$72.66	\$67.24	\$71.68	\$77.04	\$92.76
Professional, Scientific, and Technical Svcs	\$59.50	\$52.39	\$58.83	\$56.40	\$58.66	\$60.70	\$64.62	\$64.47	\$62.94	\$62.93	\$50.35	\$57.71
Arts, Entertainment, and Recreation	\$60.00	\$60.59	\$59.87	\$60.36	\$59.18	\$52.47	\$52.31	\$54.40	\$56.02	\$59.53	\$55.13	\$54.65
Public Administration	S	S	S	\$43.41	\$43.99	\$44.47	\$52.30	\$50.71	\$53.69	\$54.81	\$52.22	\$50.63
Wholesale Trade	\$73.40	\$72.80	\$70.21	\$67.32	\$65.62	\$57.19	\$60.88	\$61.69	\$55.58	\$48.53	\$48.66	\$49.21
Manufacturing	\$107.58	\$95.40	\$91.48	\$94.78	\$88.19	\$72.48	\$70.82	\$60.13	\$54.42	\$45.15	\$36.35	\$38.90
Other Services (except Public Administration)	\$46.34	\$47.20	\$49.74	\$49.25	\$43.81	\$41.30	\$40.74	\$39.14	\$39.64	\$40.26	\$35.79	\$36.69
Accommodation and Food Services	\$25.77	\$26.04	\$27.30	\$26.97	\$32.40	\$35.23	\$39.90	\$40.28	\$33.99	\$32.14	\$33.15	\$34.36
Construction	\$64.98	\$63.47	\$55.89	\$69.05	\$53.27	\$50.87	\$54.63	\$58.71	\$45.72	\$42.82	\$31.70	\$33.30
Administrative and Support Services	\$28.22	\$27.32	\$27.50	\$47.16	\$40.66	\$37.54	\$28.36	\$32.13	\$31.08	\$32.42	\$26.19	\$24.14
Information	\$26.81	\$30.48	\$30.20	\$27.12	\$27.25	\$23.38	\$23.43	\$27.00	\$23.49	\$23.03	\$19.33	\$20.88
Finance and Insurance	\$18.78	\$17.93	\$22.30	\$21.07	\$22.42	\$22.95	\$24.57	\$20.68	\$20.45	\$20.55	\$18.37	\$19.66
Retail Trade	\$45.92	\$43.21	\$37.89	\$35.22	\$34.38	\$29.39	\$26.03	\$24.94	\$20.80	\$18.35	\$15.93	\$17.02
Real Estate and Rental and Leasing	\$8.38	\$7.60	\$7.61	\$7.34	\$6.08	\$6.12	\$9.07	\$7.38	\$8.25	\$10.41	\$8.80	\$8.70
Transportation and Warehousing	\$3.09	\$5.19	\$5.06	\$3.47	\$2.54	\$2.49	\$3.36	\$4.09	\$3.88	\$3.49	\$4.38	\$4.22
Mining, Quarrying, and Oil and Gas Extraction	S	S	S	S	S	S	S	S	S	S	S	S
Utilities	S	S	S	S	S	S	S	S	S	S	S	S
Unclassified	S	S	S	S	S	S	S	S	S	S	S	S
Total	\$2,418.48	\$2,468.39	\$2,622.84	\$2,748.78	\$2,725.07	\$2,711.66	\$2,848.41	\$2,862.80	\$2,862.25	\$3,052.69	\$3,154.57	\$3,393.03
Total (excluding Health Care and Social Assistance)	\$1,100.29	\$1,082.76	\$1,113.34	\$1,164.86	\$1,151.16	\$1,106.89	\$1,128.14	\$1,082.67	\$1,045.34	\$1,081.28	\$1,023.96	\$1,023.93

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Appendix B, Continued

Sector	2000-2011		2010-2011	
	Change	% Change	Change	% Change
Health Care and Social Assistance	\$1,050.92	79.7%	\$238.49	11.2%
Educational Services	\$27.36	6.2%	-\$29.81	-5.9%
Mgmt of Companies and Enterprises	\$42.20	83.5%	\$15.72	20.4%
Professional, Scientific, and Technical Svcs	-\$1.79	-3.0%	\$7.36	14.6%
Arts, Entertainment, and Recreation	-\$5.35	-8.9%	-\$0.48	-0.9%
Public Administration	S	S	-\$1.59	-3.0%
Wholesale Trade	-\$24.19	-33.0%	\$0.55	1.1%
Manufacturing	-\$68.69	-63.8%	\$2.55	7.0%
Other Services (except Public Administration)	-\$9.65	-20.8%	\$0.90	2.5%
Accommodation and Food Services	\$8.59	33.3%	\$1.21	3.7%
Construction	-\$31.68	-48.8%	\$1.60	5.1%
Administrative and Support Services	-\$4.08	-14.5%	-\$2.05	-7.8%
Information	-\$5.93	-22.1%	\$1.55	8.0%
Finance and Insurance	\$0.88	4.7%	\$1.29	7.0%
Retail Trade	-\$28.91	-62.9%	\$1.09	6.8%
Real Estate and Rental and Leasing	\$0.32	3.8%	-\$0.10	-1.1%
Transportation and Warehousing	\$1.13	36.6%	-\$0.16	-3.6%
Mining, Quarrying, and Oil and Gas Extraction	S	S	S	S
Utilities	S	S	S	S
Unclassified	S	S	S	S
Total	\$974.56	40.3%	\$238.46	7.6%
Total (excluding Health Care and Social Assistance)	-\$76.36	-6.9%	-\$0.03	0.0%

Notes: Sectors are sorted by 2011 employment.
 Data are inflated to 2011 dollars.
 S denotes data suppressed due to confidentiality restrictions.

Source: Quarterly Census of Employment and Wages (QCEW)

Appendix C: HTC Annual Average Wage by Major Sector, 2000-2011

<u>Sector</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Mgmt of Companies and Enterprises	\$56,600	\$70,932	\$66,281	\$66,808	\$70,521	\$76,131	\$78,462	\$79,091	\$75,299	\$77,749	\$85,002	\$99,036
Information	\$64,394	\$68,299	\$72,479	\$67,452	\$66,852	\$65,618	\$66,809	\$71,612	\$68,228	\$72,482	\$72,755	\$82,758
Construction	\$61,032	\$60,716	\$63,153	\$68,887	\$59,830	\$59,894	\$60,769	\$63,444	\$57,365	\$59,942	\$65,308	\$63,102
Health Care and Social Assistance	\$53,640	\$52,625	\$56,108	\$57,513	\$58,481	\$56,157	\$58,276	\$57,374	\$56,140	\$55,964	\$57,086	\$62,219
Professional, Scientific, and Technical Svcs	\$59,918	\$60,586	\$59,990	\$61,663	\$63,457	\$62,449	\$65,204	\$67,181	\$64,091	\$67,069	\$67,165	\$59,497
Finance and Insurance	\$50,363	\$50,886	\$59,114	\$56,980	\$56,271	\$55,920	\$58,791	\$56,854	\$57,603	\$57,194	\$57,842	\$54,060
Public Administration	S	S	S	\$51,657	\$51,595	\$49,286	\$55,093	\$54,669	\$60,011	\$61,014	\$53,701	\$52,918
Educational Services	\$52,537	\$53,562	\$54,886	\$56,376	\$57,244	\$56,597	\$57,990	\$54,102	\$56,548	\$54,997	\$54,928	\$52,504
Wholesale Trade	\$47,775	\$46,978	\$49,689	\$50,216	\$49,714	\$48,468	\$53,558	\$50,858	\$48,486	\$47,072	\$48,709	\$48,952
Arts, Entertainment, and Recreation	\$36,531	\$35,119	\$35,798	\$37,131	\$41,319	\$36,071	\$39,579	\$40,716	\$42,554	\$48,213	\$45,647	\$46,910
Manufacturing	\$47,069	\$46,342	\$47,316	\$48,057	\$48,333	\$47,518	\$52,877	\$52,572	\$49,561	\$46,279	\$39,956	\$40,407
Retail Trade	\$40,617	\$41,045	\$40,251	\$38,084	\$40,511	\$34,466	\$36,383	\$34,547	\$32,575	\$32,869	\$28,260	\$29,443
Transportation and Warehousing	\$37,840	\$34,499	\$34,084	\$31,129	\$29,925	\$27,026	\$32,687	\$31,172	\$25,624	\$22,680	\$26,880	\$27,062
Administrative and Support Services	\$26,419	\$25,979	\$27,500	\$39,340	\$36,103	\$36,905	\$35,155	\$35,518	\$35,370	\$31,081	\$26,010	\$26,156
Real Estate and Rental and Leasing	\$26,805	\$24,840	\$27,104	\$28,403	\$25,866	\$24,199	\$29,836	\$25,270	\$26,329	\$30,015	\$26,291	\$24,144
Other Services (except Public Administration)	\$29,013	\$30,044	\$32,070	\$34,139	\$30,873	\$28,987	\$26,409	\$26,524	\$25,333	\$25,744	\$23,471	\$23,876
Accommodation and Food Services	\$15,724	\$16,651	\$16,340	\$17,626	\$18,899	\$19,472	\$20,274	\$24,481	\$21,343	\$19,753	\$21,034	\$20,940
Mining, Quarrying, and Oil and Gas Extraction	S	S	S	S	S	S	S	S	S	S	S	S
Utilities	S	S	S	S	S	S	S	S	S	S	S	S
Unclassified	S	S	S	S	S	S	S	S	S	S	S	S
Total	\$49,568	\$49,514	\$52,048	\$53,690	\$54,252	\$52,655	\$54,707	\$54,065	\$53,369	\$53,276	\$53,801	\$56,932
Total (excluding Health Care and Social Assistance)	\$45,435	\$46,031	\$47,398	\$49,240	\$49,372	\$48,290	\$50,035	\$49,382	\$49,153	\$48,987	\$48,047	\$47,578

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Appendix C, Continued

Sector	2000-2011		2010-2011	
	Change	% Change	Change	% Change
Mgmt of Companies and Enterprises	\$42,436	75.0%	\$14,034	16.5%
Information	\$18,364	28.5%	\$10,002	13.7%
Construction	\$2,070	3.4%	-\$2,206	-3.4%
Health Care and Social Assistance	\$8,579	16.0%	\$5,133	9.0%
Professional, Scientific, and Technical Svcs	-\$421	-0.7%	-\$7,668	-11.4%
Finance and Insurance	\$3,697	7.3%	-\$3,782	-6.5%
Public Administration	S	S	-\$784	-1.5%
Educational Services	-\$33	-0.1%	-\$2,424	-4.4%
Wholesale Trade	\$1,177	2.5%	\$243	0.5%
Arts, Entertainment, and Recreation	\$10,379	28.4%	\$1,263	2.8%
Manufacturing	-\$6,662	-14.2%	\$451	1.1%
Retail Trade	-\$11,174	-27.5%	\$1,183	4.2%
Transportation and Warehousing	-\$10,778	-28.5%	\$182	0.7%
Administrative and Support Services	-\$263	-1.0%	\$146	0.6%
Real Estate and Rental and Leasing	-\$2,661	-9.9%	-\$2,147	-8.2%
Other Services (except Public Administration)	-\$5,136	-17.7%	\$405	1.7%
Accommodation and Food Services	\$5,215	33.2%	-\$94	-0.4%
Mining, Quarrying, and Oil and Gas Extraction	S	S	S	S
Utilities	S	S	S	S
Unclassified	S	S	S	S
Total	\$7,365	14.9%	\$3,132	5.8%
Total (excluding Health Care and Social Assistance)	\$2,143	4.7%	-\$469	-1.0%

Notes: Sectors are sorted by 2011 employment.
 Data are inflated to 2011 dollars.
 S denotes data suppressed due to confidentiality restrictions.

Source: Quarterly Census of Employment and Wages (QCEW)

Appendix D: HTC Annual Number of Establishments by Major Sector, 2000-2011

Sector	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2000-2011		2010-2011	
													Change	% Change	Change	% Change
Other Services (except Public Administration)	147	148	148	144	138	135	132	123	121	117	116	118	-29	-19.7%	2	1.7%
Health Care and Social Assistance	132	137	131	121	112	113	107	108	104	91	96	93	-39	-29.5%	-3	-3.1%
Professional, Scientific, and Technical Svcs	84	78	86	81	86	83	75	72	83	84	84	87	3	3.6%	3	3.6%
Retail Trade	73	74	68	70	71	70	68	66	66	60	67	68	-5	-6.8%	1	1.5%
Accommodation and Food Service	68	61	69	70	65	64	71	70	69	70	68	67	-1	-1.5%	-1	-1.5%
Manufacturing	83	80	74	71	68	65	64	64	61	61	54	55	-28	-33.7%	1	1.9%
Wholesale Trade	78	78	71	72	71	67	64	62	54	55	53	53	-25	-32.1%	0	0.0%
Finance & Insurance	47	43	44	45	44	43	41	43	39	39	40	41	-6	-12.8%	1	2.5%
Educational Services	24	27	28	29	31	29	31	31	31	30	35	35	11	45.8%	0	0.0%
Administrative and Support Services	24	24	26	34	34	27	26	24	26	27	28	28	4	16.7%	0	0.0%
Real Estate and Rental and Leasing	31	27	28	31	29	29	33	29	30	29	27	25	-6	-19.4%	-2	-7.4%
Construction	34	29	33	35	32	29	27	25	23	23	19	21	-13	-38.2%	2	10.5%
Arts, Entertainment, and Recreation	18	20	20	22	21	21	22	21	21	20	20	19	1	5.6%	-1	-5.0%
Mgmt of Companies and Enterprises	12	11	11	13	13	13	13	14	13	12	12	12	0	0.0%	0	0.0%
Transportation & Warehousing	10	11	11	11	10	8	9	10	9	8	11	11	1	10.0%	0	0.0%
Information	19	20	20	20	22	20	20	24	17	14	12	11	-8	-42.1%	-1	-8.3%
Public Administration	S	S	S	3	3	8	8	5	5	5	5	5	S	S	0	0.0%
Mining, Quarrying, and Oil and Gas Extraction	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Utilities	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Unclassified	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Total	888	873	873	875	853	827	815	795	775	748	750	752	-136	-15.3%	2	0.3%
Total (excluding Health Care and Social Assistance)	854	844	840	840	821	798	788	770	752	725	731	731	-123	-14.4%	5	0.8%

Notes: Sectors are sorted by 2011 employment; S denotes data suppressed due to confidentiality restrictions. Source: Quarterly Census of Employment and Wages (QCEW)