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Policy Research and Strategic Planning Office
A State Affiliate of the U.S. Census Bureau

GROSS DOMESTIC PRODUCT OF OHIO

January 2009

Ted Strickland, Governor of Ohio
Lee Fisher, Lt. Governor of Ohio
Director, Ohio Department of Development

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Lee Fisher, Lt. Governor
Director, Ohio Department of Development

Dear Fellow Ohioan:

I am pleased to present to you Ohio's Gross Domestic Product Report, which contains the most current facts and statistics on the size and direction of all 20 major sectors of our state's economy.

At $466.3 billion, our Gross Domestic Product makes Ohio the seventh largest state economy and contributes 3.4 percent of the national total. If Ohio were a separate country, it would be the 26th largest in the world.

Our manufacturing heritage continues to drive Ohio's economy into the 21st century. The manufacturing sector contributed $85.1 billion to Ohio's economy in 2007, ranking the state third in the nation. Manufacturing represented 18.2 percent of the state's total economic output and 5.3 percent of the entire nation's output. Within manufacturing, the electrical equipment and appliances as well as the plastics and rubber products industries were ranked first in the nation for total output.

Ohio's diversity of industries has placed our state among world market leaders. This diversity is complemented by an unmatched business environment that encourages the corporate growth and profitability necessary for success on the job, and a variety of cultural, educational, and recreational opportunities that provide comfortable, satisfying lifestyles away from the workplace. Ohio's unique combination of life and work amenities makes Ohio a leader in providing the kind of balance employees strive for in their lives.

I invite you to review the attached report to expand your understanding of Ohio's large and diverse economy. We welcome your input; if you have any questions or comments, please contact John Magill, Chief Strategic Officer at (614) 466-2116.

Sincerely,

Lee Fisher
Lieutenant Governor
Director, Ohio Department of Development

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GROSS DOMESTIC PRODUCT FROM OHIO

JANUARY 2009

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INTRODUCTION

INTRODUCTION

This report provides an overview of Ohio's economy and its role in the U.S. economy. It looks at the production of goods and the provision of services by people using capital located here – i.e., the Gross Domestic Product (GDP) from Ohio.

There are three major sections after this introduction and highlights. The first describes the composition of Ohio's economy, comparing it with other states and the national distribution of economic activity. The second focuses on output by sector and major industries within each sector, further probing the relative concentrations in Ohio, the key industries or groups within major industries, and recent trends here and across the nation. The last is an appendix containing a section on terminology (which readers may wish to review before proceeding) and data tables for those seeking a more detailed understanding and recent history of economic activity here. The graphs and most of the discussions herein are based on, and refer to, the appendix tables.

The report details industry estimates, concentrating on 1997-2006, which were prepared by the U.S. Bureau of Economic Analysis (BEA). The detailed GDP estimates for those years are based on state and local taxes, value-added reports and company financial data. The BEA also has released a revised total estimate and initial sector estimates for 2007. Both of the latter will be further revised next year when more information becomes available. Many figures in this report have been revised from previous report based on the BEA's incorporation of initial data from 2006 and revised data from 2005 for Annual Survey of Manufactures as well as 2005 State and Local Government Finance data (both Census Bureau products), as well as the routine revisions made by the BEA. See Broda and Coakley (2008) and Woodruff, et.al. (2007) for more details. The U.S. Bureau of the Census, other federal agencies, and several private sector organizations developed additional statistics cited in this report.

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RECENT CHANGES IN OHIO'S ECONOMY

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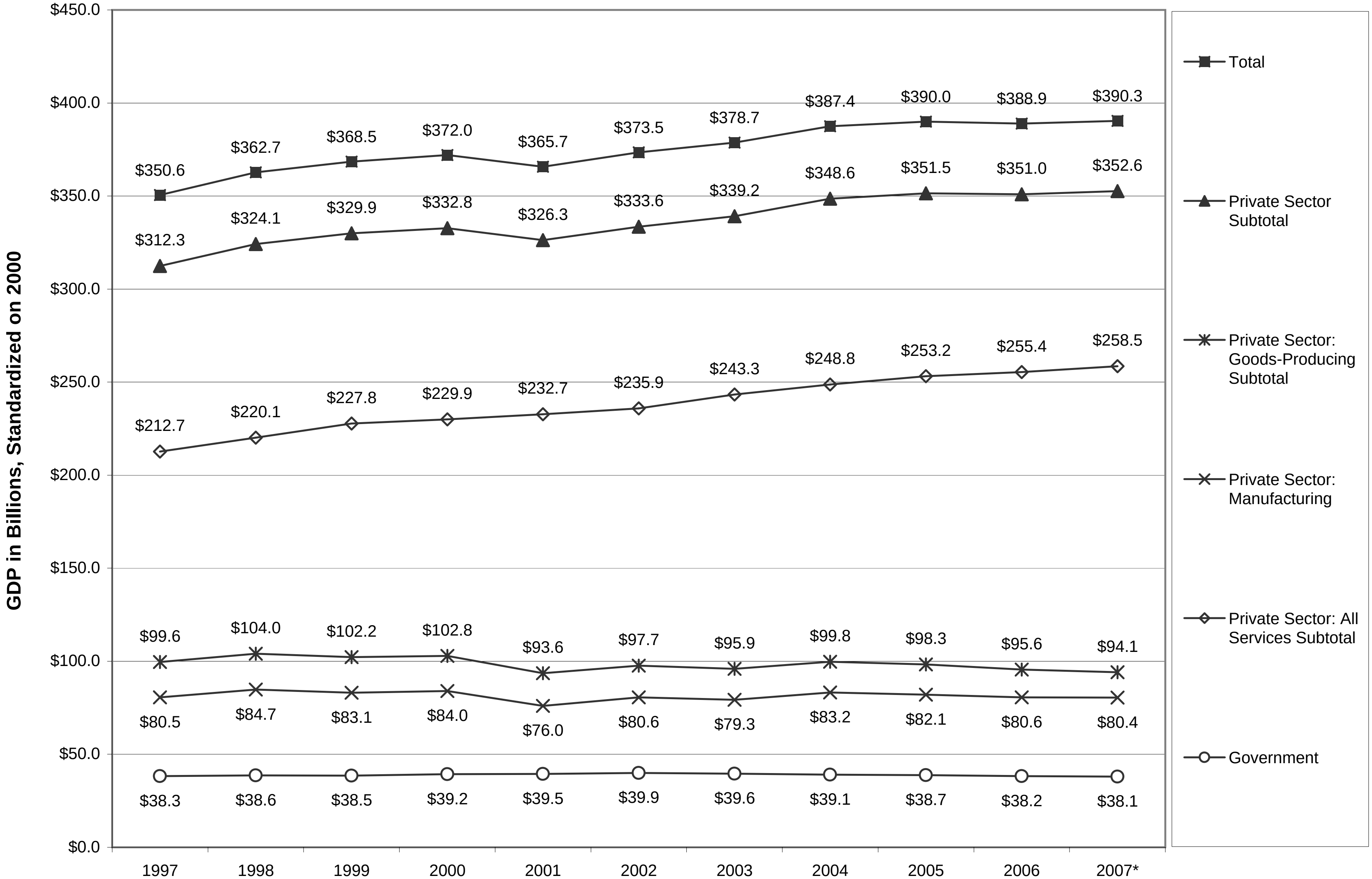
Changes in Ohio's Economic Output, 1997-2007

After the Effects of Inflation Have Been Removed



Source: U.S. BEA

* - Preliminary

REMOVING THE EFFECTS OF INFLATION

The use of chained dollars in the chart above removes the effects of price changes incorporating inflation – or in rare cases, deflation – and permits comparison between years of the *volumes* of goods produced and services provided. Overall, the GDP figures, standardized on the year 2000 and displayed above, show real growth in the output of goods and services from 1997 through 2000 ($350.6 billion (B) to $372.0B), a drop in 2001 ($365.7B), and an increase through 2005 ($390.0B) – after which output remained virtually unchanged. The net change in Ohio in real output from 1997 through 2007 was 11.3 percent. This overall pattern mostly reflects the changes in the private sector, which grew 12.9 percent. Government services fluctuated from year to year, and were 0.6 percent lower in 2007 than in 1997 ($38.3B vs. $38.1B).

Similar analyses can be done for the components of the private sector. The collective output of goods producers in this time period peaked at $104.0B in 1998, declined to a low point of $93.6B in 2001, recovered to $99.8B in 2004, and slipped to $94.1B in 2007. This largely reflects changes in manufacturing output; the corresponding figures are $84.7B, $76.0B, $83.2B, and $80.4B. Data from appendix table A2 show that net growth in durable goods production was offset by the net drop in non-durable goods manufacturing: 6.4 percent vs. -12.9 percent. (Recall that durable goods output is twice that of non-durable goods.) Output from agriculture-forestry-fishing-hunting fluctuated, but was greater in 2007 than in 1997. On the other hand, the volume of goods produced by mining and construction has steadily fallen since 1999.

The collective output of private sector service-providers increased each year and was 21.5percent greater in 2007 than in 1997. However, this is not uniformly true of every individual service sector. Some showed greater-than-average growth even though output may have declined in the interim. These include retail trade, transportation-and-warehousing, information, finance and insurance, and professional and technical services. Health care and social assistance grew at the average rate for private sector services. Others showed slower-than-average service growth. These include utilities, wholesale trade, real estate-rental-leasing, the management of companies and enterprises, educational services, arts-entertainment-recreation, and accommodations and food services. Administrative and waste services fell and recovered during this time, and other services excluding government (NAICS 81) fluctuated but were lower in 2007 than in 1997.

The following sections provide more information about sectors and major industries: their relative concentration in Ohio's economy, industry groups driving the concentration within them (or exceptions if the latter are sparse), how they may have changed here during the last few years, and a comparison with corresponding national trends.

See Table A2

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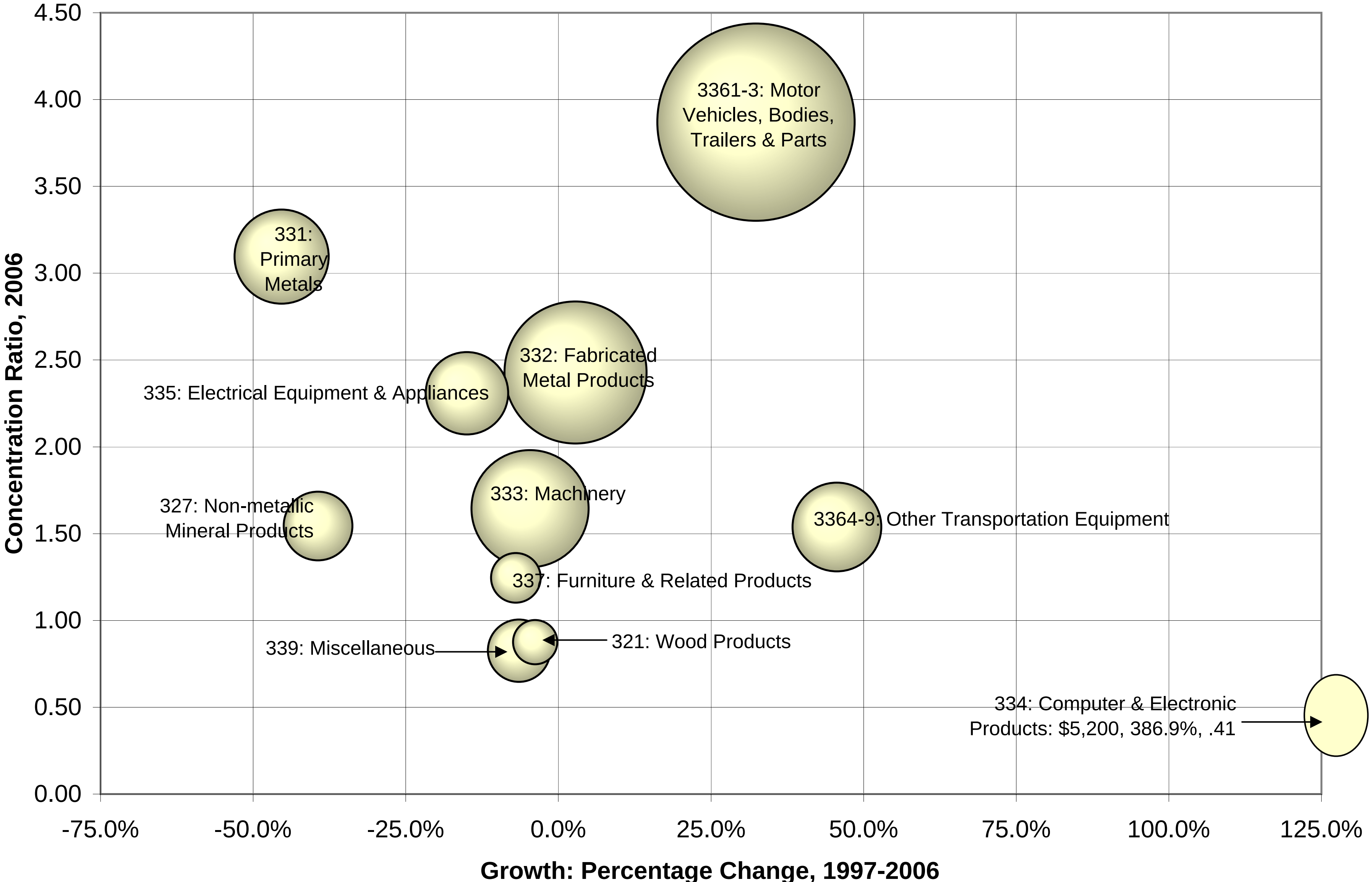
Ohio GDP: Growth, Concentration, & Size:

Manufacturing Durable Goods



Source: U.S. BEA

DURABLE GOODS PRODUCTION

As noted earlier, manufacturing is the largest sector in Ohio's economy and is concentrated here. This is especially characteristic of durable goods production. Major industries concentrated in Ohio include, in descending order, motor vehicles-bodies-trailers-parts (NAICS 3361-3363), primary metals, fabricated metal products, electrical equipment and appliances, machinery, nonmetallic mineral products, other transportation equipment (3364-3369), and furniture and related products. In particular, it is the first five major industries that drive durable goods concentration in Ohio so high. (See the chart above. The sizes of the bubbles indicate the size of major industries' contributions to GDP in Ohio. Motor vehicles, etc., was the largest in 2006 at $19.28B. Dollar figures in these sector discussions are standardized on 2000.)

With few exceptions, GDP data provide no specific information about industry groups within major industries. However, employment data from County Business Patterns (CBP) (U.S. Bureau of the Census, 2008) for the state and the nation can be used to calculate concentration ratios for industry groups within major industries, thereby providing further insight into the sectors.[3] For example, CBP data indicate that vehicle assembly (3361) and parts production (3363) are particularly concentrated in Ohio, while the manufacture of trailers and bodies (3362) is relatively sparse. Additional data confirm this concentration in assembly and parts production: in 2007, 22.2 percent of the cars and 12.9 percent of the light trucks assembled in the U.S. came from six high-volume plants in Ohio. Combining the two means that 16.3 percent of U.S. light vehicle production originated in Ohio, making it the 2nd-ranked source for light vehicles (Ward's Communications, 2008). Data from ELM International (2008) show Ohio with the second-largest number of establishments in America directly supplying parts to vehicle assemblers.

CBP data also show that, except for other transportation equipment (3369), activity in the remaining transportation groups (3364-3366) is not concentrated here. The concentration in other transportation equipment probably reflected the activity at Honda's motorcycle assembly plant and the M1 tank plant.

CBP data illuminate other major industries as well. Activity in all of the primary metal groups is concentrated in Ohio: iron and steel mills and ferroalloy production (3311), steel products made from purchased steel (3312), aluminum smelting and products (3313), and, generally, the production of other metals – notably copper (3314). Foundry employment (3315) is also concentrated here (U.S. Bureau of the Census, 2008). Data from other sources show Ohio's prominent role in steel production: typically one-eighth to one-sixth of U.S. raw steel production originates in Ohio (American Iron & Steel Institute, 1974-2004; International Iron and Steel Institute, 2007; Ohio Steel Council, 2007).

Activity in eight of the nine fabricated metal (332) groups is more or less concentrated in Ohio (U.S. Bureau of the Census Bureau, 2008; the exception is architectural and structural metals - 3323). Activities include shaping metal pieces by forging, heat-treating, coating, stamping, bending, forming, machining, engraving and/or welding purchased materials.

(Stampings for motor vehicles are now classified as motor vehicle parts (33637).) Products include cutlery, unpowered hand tools, boilers, containers, hardware, nuts, bolts, screws, rivets, springs, wires, valves and plumbing fixtures, bearings, safes, ladders, washers, tanks, and the output of machine shops. (Washing machines and military weapons are classified elsewhere.) In this case, CBP data lead to the conclusion that it is the combination of a variety of such goods made in large volume that results in Ohio's 3rd rank in industry GDP.

Activity in machinery manufacturing is concentrated in six of the seven industry groups: industrial machinery (3332), heating, ventilation, air conditioning, and commercial refrigeration equipment (3334), metalworking machinery (3335), engines, turbines and power transmission equipment (3336), general purpose machinery (3339) , and, to a lesser extent, machinery for commercial and service industries (3333), (U.S. Bureau of the Census, 2008). As with fabricated metals, it is the combination of a variety of goods made in large volume that results in Ohio's overall 4th rank in industry GDP.

Ohio is the leading source for electrical equipment and appliances in the U.S. Activity is more or less concentrated in all four groups: electric lighting equipment (3351), household appliances (3352), electrical equipment (3353) such as motors, generators (except turbines, which are classified elsewhere), transformers, switching equipment, relays, and industrial controls, and other electrical equipment and components (3359) such as batteries, wires, and cables (U.S. Bureau of the Census, 2008).

Manufacturing non-metallic mineral products (327) is concentrated in Ohio. CBP data point to clay (3271), glass (3272), lime and gypsum (3274) and other materials (3279) as the concentrated groups driving production here (U.S. Bureau of the Census, 2008).

As previously mentioned, durable goods production in Ohio increased from 1997 to 2000, dropped in 2001, and gradually increased through 2005. Aggregate output in 2006 was slightly smaller than 2005, but remained 5.6 percent greater than in 1997. These summary statements mask the varying trends of industries illustrated above. On one hand, there was the off-scale high growth of computers and electronic products plus the relatively high growth in both motor vehicles-bodies-parts-trailers and other transportation equipment. On the other hand, real output in 2006 was lower than 1997 for primary metals, electrical equipment and appliances, machinery, non-metallic mineral products, wood, furniture and related products and miscellany, while fabricated metal products showed little net change during the period. The manufacture of computer and electronic products, wood products, and miscellaneous products is not concentrated in Ohio.[4]

Overall durable goods manufacturing in Ohio has grown at a slower pace than characterized the nation. As mentioned above, durable goods production in Ohio in 2006 was 5.6 percent greater than it was in 1997. This contrasts with a national increase of 53.4 percent during the same time. However, an industry-by-industry comparison tells a different story. In some instances, industries in Ohio grew at rates similar, but not necessarily equal to the nation as a whole; notably computer and electronic products – off-scale high; motor vehicles-bodies-parts-trailers and other transportation equipment – better than average; and fabricated metal products – slight. In few cases, industrial output across the nation was greater in 2006 than 1997, but was lower in Ohio; these include machinery, wood and miscellaneous products. In other cases, national output fluctuated or fell, and output from Ohio simply fell further: non-metallic mineral products, primary metals, electrical equipment and appliances, and furniture and related products.[5]

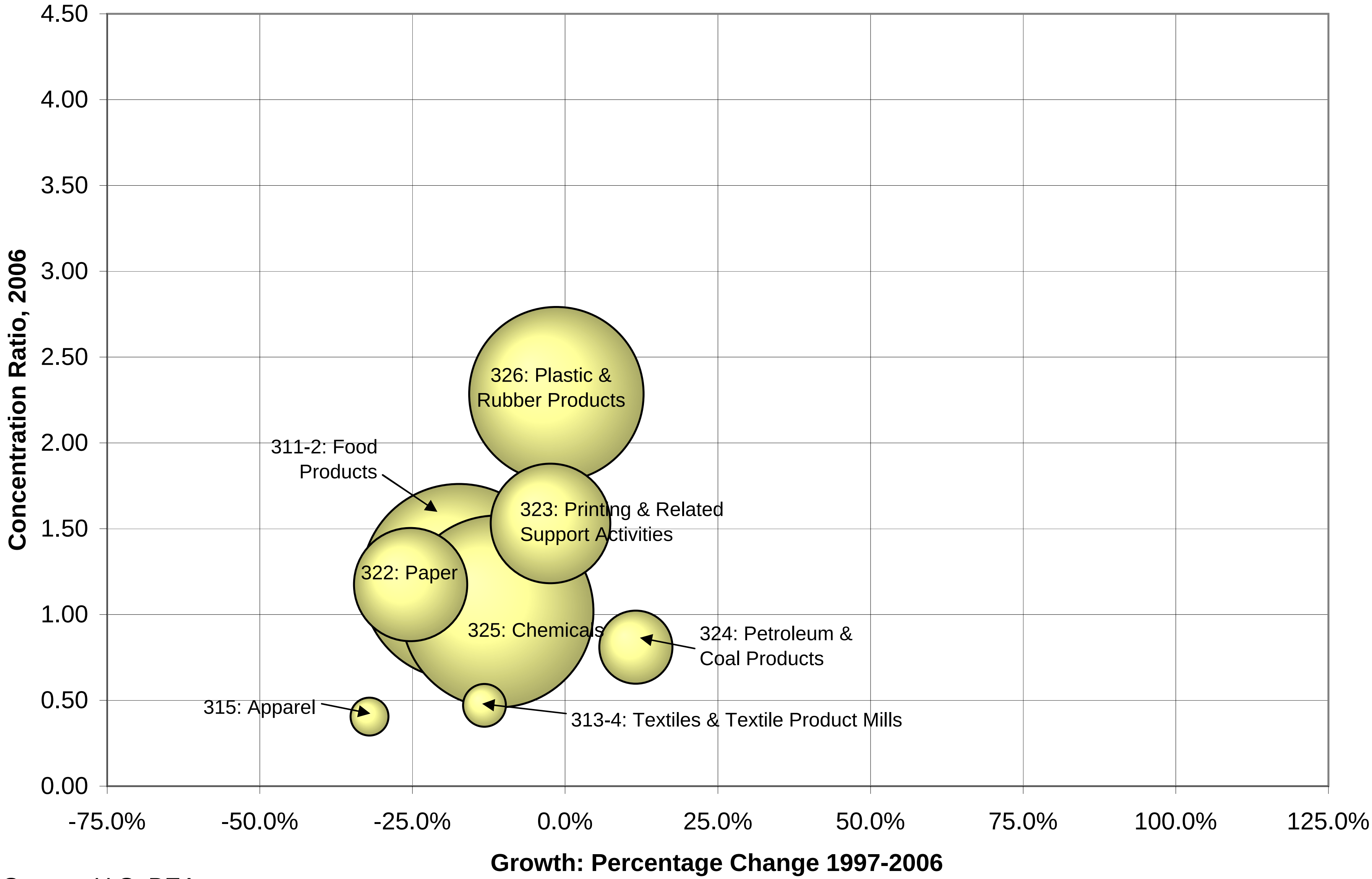
Initial figures for 2007 show virtually no change from 2006 in durable goods production in Ohio, while the nation as a whole grew 4.88 percent. Two notable changes playing divergent roles in durable goods production in Ohio include a slight decrease in iron and steel production (Ohio Steel Council, 2009) and an increase in light vehicle production (Ward's, 2008).

See Tables A2, A5, A9, A11-A14, A16

Ohio Department of Development

Ohio GDP: Growth, Concentration, & Size:

Manufacturing Non-durable Goods



Source: U.S. BEA

NON-DURABLE GOODS PRODUCTION

The production of non-durable goods is concentrated in Ohio, although not to the extent of durable goods. As may be expected, though, the concentration is focused in a few sectors, notably plastic and rubber products (NAICS 326) and printing and related support activities (323). Slight concentrations are evident in paper (322) and chemical (325) production as well as food products – the combination of food processing (311) and beverage production (312). Production from other, smaller sectors is relatively sparse.

Again, CBP data provide further insight into groups driving production in the state. Both plastic (3261) and rubber (3262) products manufacturing – especially the latter – are concentrated here, making Ohio the leading state in that major industry. Other major industries have only particular groups concentrated here. CBP data show the concentration of chemical production reflects the manufacture of basic chemicals such as industrial gases, pigments, dyes, chlorine, etc. (3251), plastic resins, synthetic rubber, etc. (3252), paints, coatings and adhesives (3255), soaps and cleaners (3256), and other preparations such as inks and explosives (3259). Paper production reflects the conversion of paper products (3222) to things such as corrugated items, boxes, bags, stationary, envelops, coatings, laminates, other treatments, etc., from purchased paper, not the actual manufacture of paper itself (3221).[6] Particular food products concentrated here include food for animals (3111), specialty foods and the preservation of fruits and vegetables (3114), and, to a lesser extent, bakeries (3118) and other food products such as snacks, coffee and tea, syrups, seasonings, dressings, spices, popcorn, etc. (3119) (U.S. Bureau of the Census, 2008).

The production of non-durable goods in Ohio slid from 1997 through 2001. Although it grew for a couple of years, it has trended downward since 2004. Overall production in 2006 was 11.3 percent lower than in 1997. This summary masks the variety of changes seen in the constituent industries. Production in most industries fluctuated, ending more or less lower. Petroleum and coal products is the only major industry experiencing net growth.

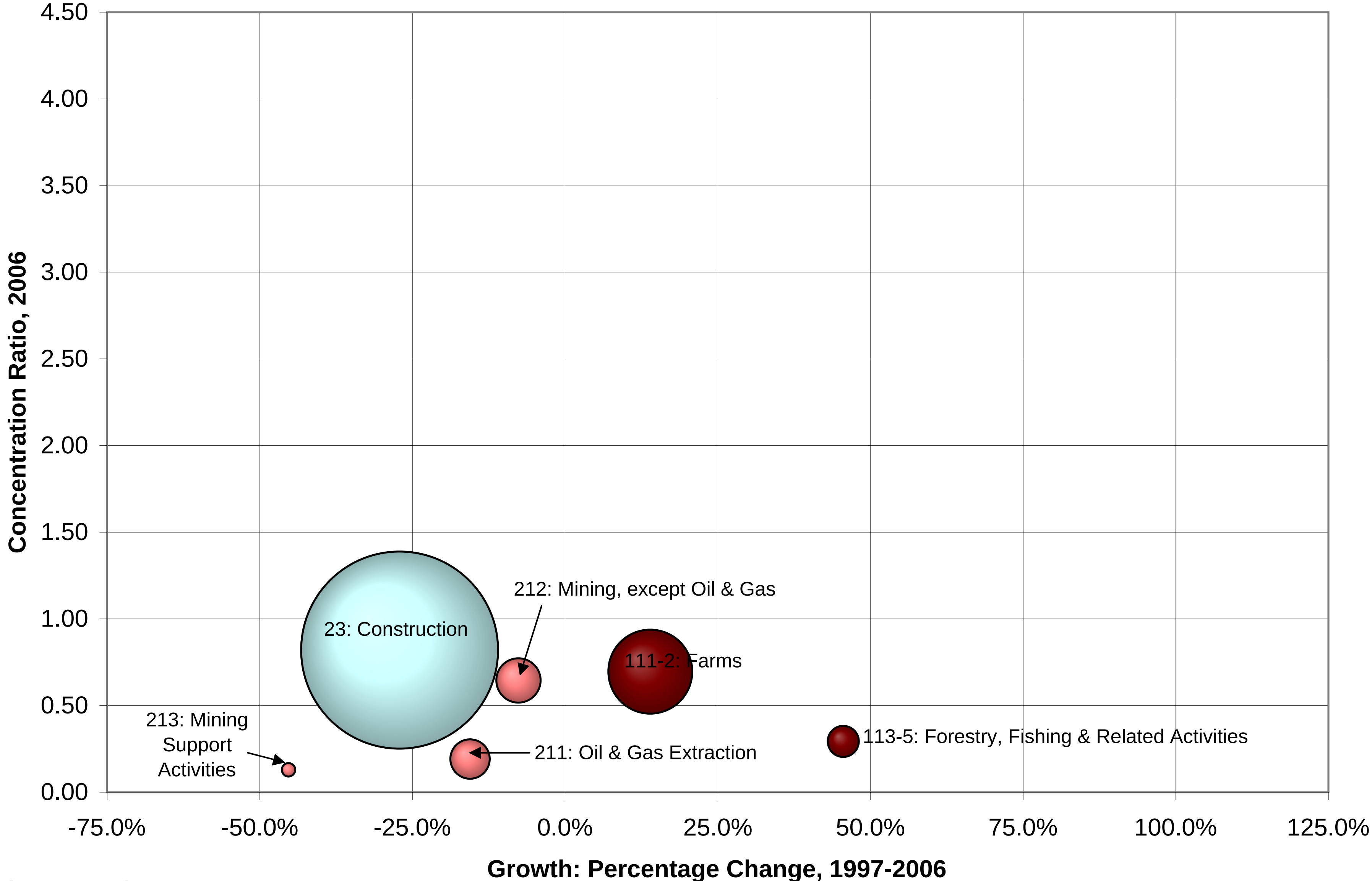
Non-durable goods manufacturers across the nation have not fared as badly as those in Ohio, with 2006 output 2.1 percent below 1997's level. As in Ohio, national output in 2006 was below 1997 for many industries. The only exceptions were chemicals, and products made from coal, petroleum, plastics and rubber. The net change in these industries is slight.

Initial figures for 2007 show a 1.85 percent drop from 2006 in non-durable goods production in Ohio. This is slightly more pronounced than the national decline of 1.08 percent.

See Tables A2, A5, A9, A11-A14, A16

Ohio GDP: Growth, Concentration, & Size:

Non-manufacturing Goods-Producing Industries



Source: U.S. BEA

NON-MANUFACTURING GOODS-PRODUCING INDUSTRIES

The graph above shows that none of the non-manufacturing goods-producing sectors or major industries is concentrated in Ohio. However, data from other sources indicate specific exceptions; in 2006, Ohio was the 6th-ranked source for corn and soy beans with 4.5 and 6.8 percent, respectively, of national production (U.S. Bureau of the Census, 2007: tables 825 & 826).[7]

The graph above also shows that output from most of the non-manufacturing goods producing major industries was lower in 2006 than 1997. Sometimes these are year-to-year fluctuations, such as with farm production and mining in the earlier years covered. However, support activity for mining is still well below its 1997 peak, construction activity gradually-but-steadily declined after 1999, and mining – except for oil and gas – has dropped since its peak in 2000. The notable exception was the above-average real net growth from forestry, fishing, and related activities despite the drop in 2001. Farm production also has risen since 2002.

Across the nation, output from both farming and forestry-etc. has grown a little faster than the economy overall, while construction activity grew from 1997 through 2001, but fell back to its 1997-level by 2006. The volume of oil and gas extracted peaked in 1999 and dropped to about 80 percent of its 1997 output by 2006. The volume of material other than oil and gas mined peaked in 2000, dipped, and recovered in 2006 to levels exceeding 1997. Support activities for mining dipped after 2000, approached the 2000-level by 2006, but remained below the 1997 level.

Initial figures for 2007 show an increase of 9.6 percent in the agricultural sector from 2006 in Ohio. This is greater than the corresponding national estimate of 1.4 percent. Bear in mind, though, that this is a volatile sector.

Initial figures for 2007 also show virtually no change from 2006 in mining production across the country, but a 3.2 percent decline in mining activities in Ohio. Construction activity in Ohio and the nation dropped by over 12 percent.

See Tables A2, A5, A9, A11-A14, A16

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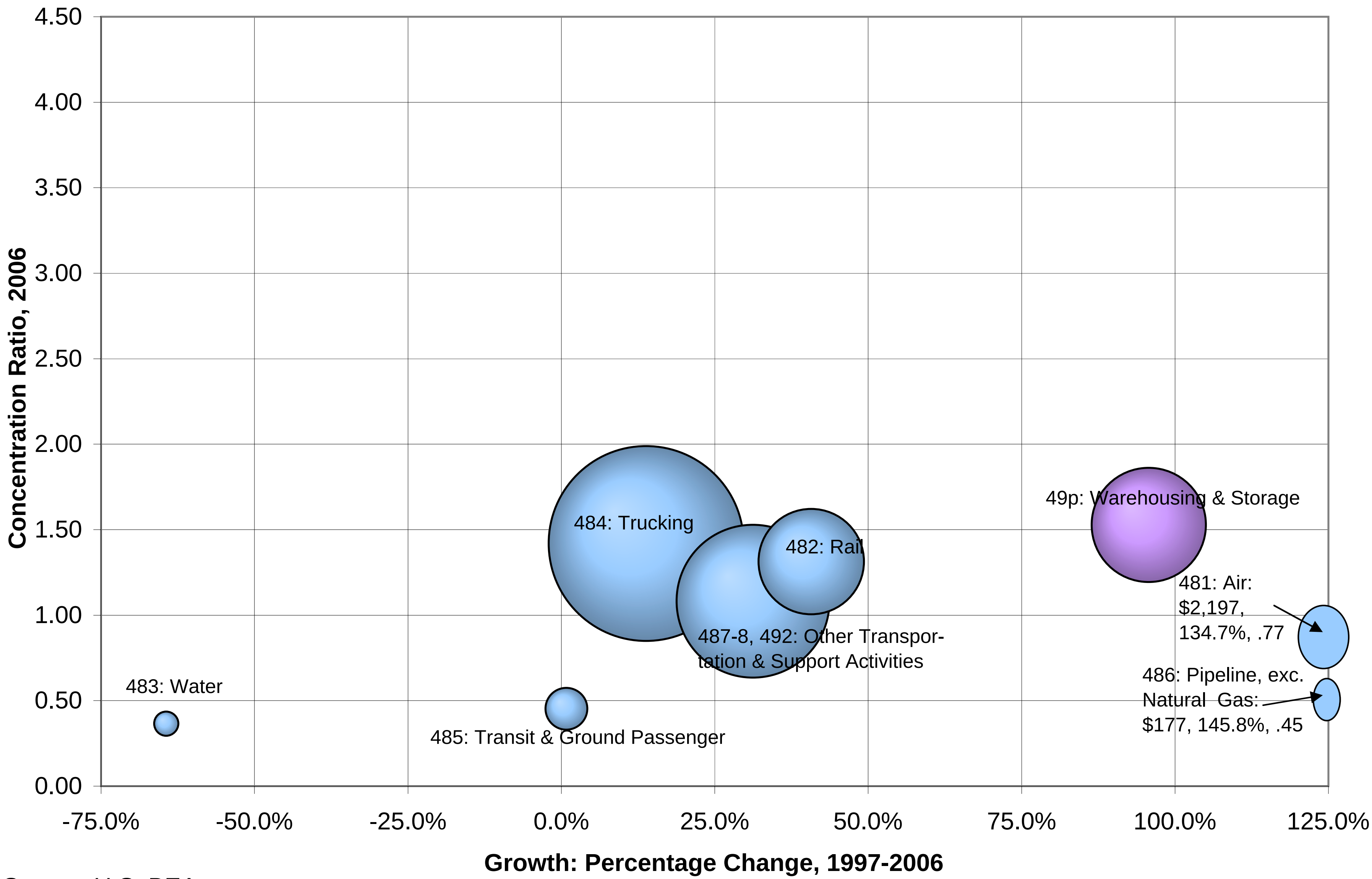
Ohio GDP: Growth, Concentration, & Size:

Transportation & Warehousing (exc. Postal Service)



Source: U.S. BEA

SERVICES: TRANSPORTATION AND WAREHOUSING

The provision of transportation and warehousing services in Ohio are, overall, close to proportional with the nation, but some of the constituent major industries are more or less concentrated here, while others are relatively sparse. The chart above shows that truck transportation (NAICS 484) is the largest one in this sector, as well as being concentrated here. CBP data specify general freight trucking (4841) as the concentrated group (U.S. Bureau of the Census, 2008). Rail (482) is the only other major transportation activity concentrated here, but the CBP program does not collect data on rail Industries.

Other transportation and support services (487, 488, 492) collectively are close to proportional with the nation. All of the other major transportation industries are relatively sparse, but CBP data point to three groups that are exceptions: non-scheduled air transportation (air-charter and air-taxi services – 4812), the pipeline transport of crude oil (4861), and courier services (4921) specializing in parcel delivery regardless of mode (U.S. Bureau of the Census, 2008).

The chart above also shows that the overall above-average growth of the sector from 1997 through 2006 is due primarily to the high growth of air (481) and pipeline (486) transportation (natural gas is excluded), which more than offset the shrinking water transportation industry (483). Trucking, rail, and other transportation and support activities had their ups and downs, but showed growth. Transit-ground passenger activity fluctuated, with 2006 essentially the same as 1997.

Many of the changes described above are part and parcel of national trends: air, rail, truck, pipeline transportation (excluding natural gas), and other transportation and support activities grew more or less rapidly in Ohio and the U.S.; in fact, the growth of air and pipeline transportation in Ohio was faster than the national average. Across the nation, transit-ground passenger transportation services grew modestly, while water transportation declined.

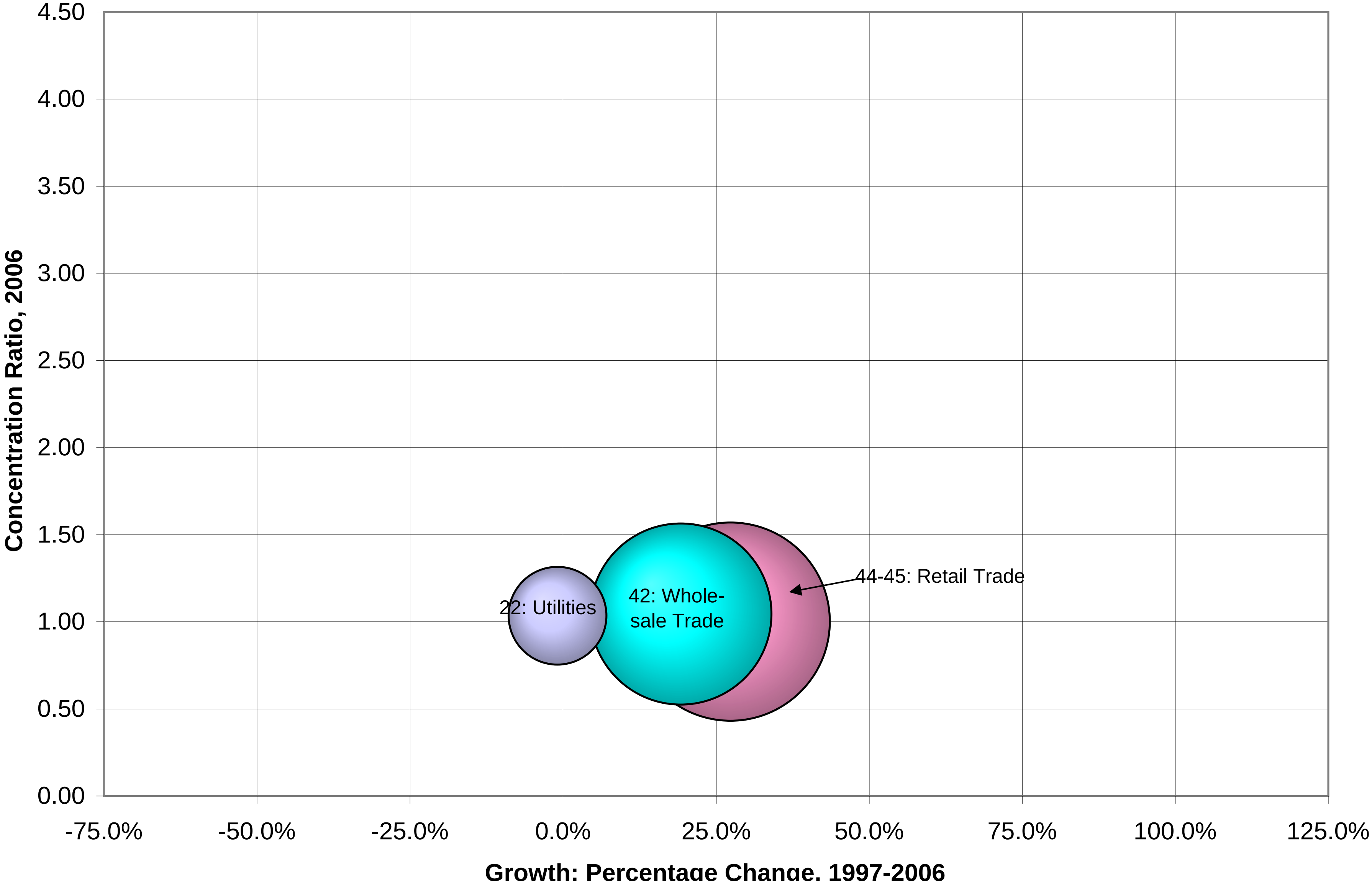
Warehousing and storage activity (493) is concentrated in Ohio, and the volume of services provided nearly doubled from 1997 through 2006. The only interruption to growth occurred in 2001. The growth of corresponding services in the nation as a whole was above average, but not as rapid as here.

Initial figures for 2007 show continuing faster-than-average growth of the sector here and across the country.

See Tables A2, A5, A9, A11-A14, A16

Ohio GDP: Growth, Concentration, & Size:

Utilities, Wholesale & Retail Trades



Source: U.S. BEA

SERVICES: UTILITIES, WHOLESALE AND RETAIL TRADE

The provision of utility services in Ohio is essentially proportional with the nation. CBP data reveal electric power generation, transmission, and distribution (NAICS 2211) to be the industry group with the vast majority of sector jobs – and the jobs in electric power generation are slightly concentrated here (U.S. Bureau of the Census, 2008). Similarly, electricity production in Ohio during 2005 was 3.87 percent of national output (U.S. Bureau of the Census, 2007: 912) while Ohio's portion of the GDP that year was 3.56 percent. On the other hand, natural gas distribution (2212) jobs in Ohio are nearly proportional with those across the country, while water and sewage jobs (2213) are relatively sparse here (U.S. Bureau of the Census, 2008).

Wholesale activity in Ohio is essentially proportional to the nation as a whole. However, CBP industry group data show an interesting variation: wholesalers distributing products of manufacturing industries concentrated in Ohio also tend to have employment concentrated here. This could be thought of as a carry-over effect. Wholesale jobs concentrated here include those dealing in motor vehicles, parts and tires (4231), metals and minerals (except petroleum) (4235), hardware, plumbing and heating equipment (4237), machinery and equipment (4238), paper products (4241), and chemicals and plastics (4246). Electrical equipment wholesalers (4236) are an exception to this tendency, while grocery wholesalers (4244) are virtually proportional (U.S. Bureau of the Census, 2008).

Retail activity in Ohio is proportional with the nation as a whole. The four groups more or less concentrated here are department stores (4521), florists (4531), on-line and mail order shopping (4541), and vending machine operators (4542) (U.S. Bureau of the Census, 2008).

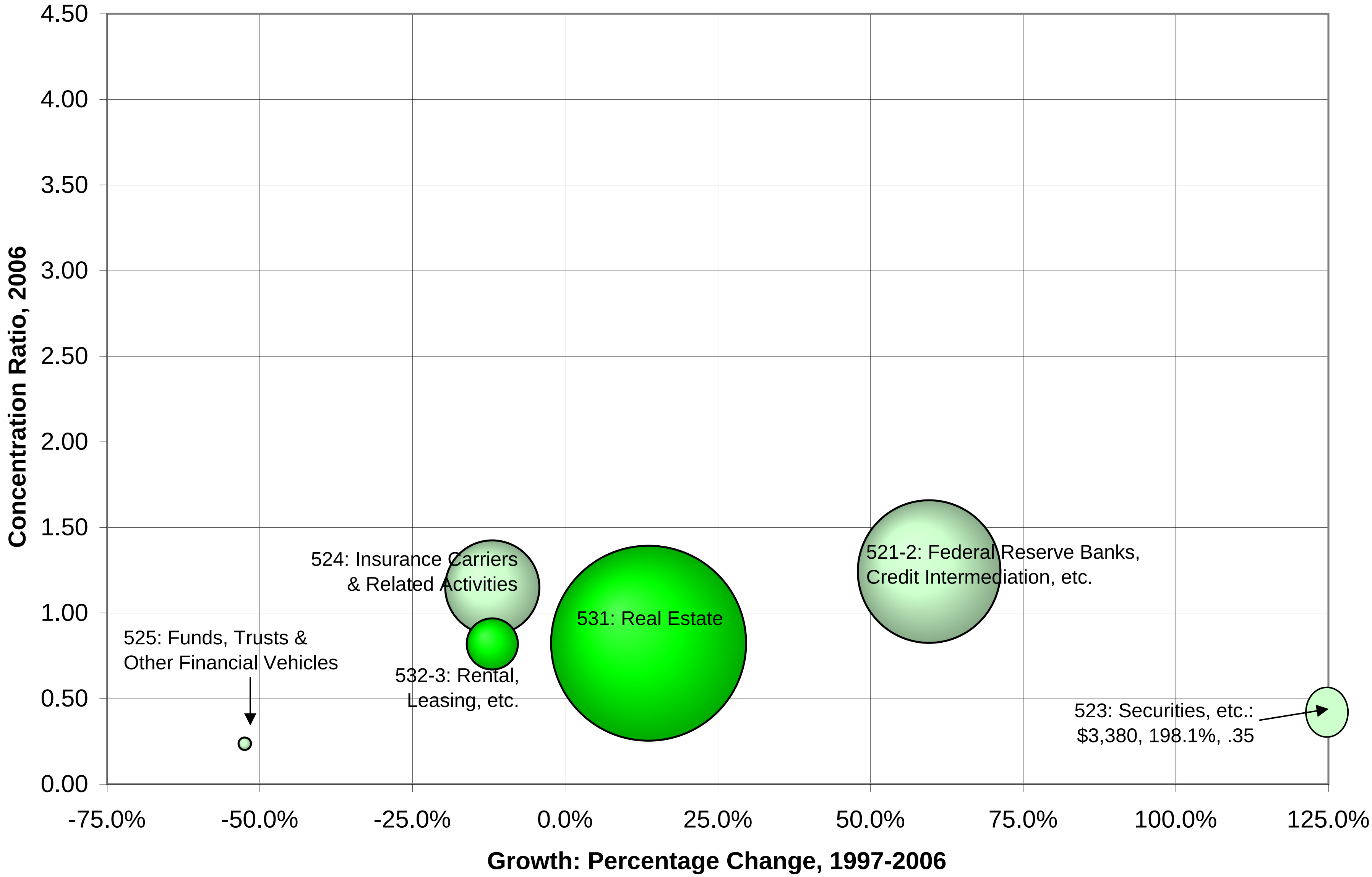
Higher-than-average growth characterized wholesale and retail trade from 1997 through 2006, while services provided by utilities fluctuated with 2006 levels very close to those of 1997. Retail trade, the largest of the three, grew the most and almost without interruption; the same may be said of slower-but-still-faster-than average pace of wholesale trade. The history of wholesale and retail trade in Ohio are just less rapid parts of the corresponding national growth.

Initial figures for 2007 show growth from 2006 in the utilities and retail sectors, but wholesale trade is marginally off. Things were slightly better for the nation as a whole.

See Tables A2, A5, A9, A11-A14, A16

Ohio GDP: Growth, Concentration, & Size:

Finance, Insurance, Real Estate, Rental, & Leasing



Sources: U.S. BEA

SERVICES: FINANCE, INSURANCE, REAL ESTATE, RENTAL AND LEASING

The graph above shows two major industries somewhat concentrated in Ohio: insurance carriers and related activities (NAICS 524) and the combination of Federal Reserve banks (521) and credit intermediation (522). CBP data point to insurance carriers (5241) – those businesses actually writing the policies and assuming the risks – as the ones concentrated here. Brokers, agents and related activities (5242) appear a little sparse. The financial concentration in Ohio reflects the presence of a Federal Reserve bank (5211) in Cleveland and activities related to credit intermediation (NAICS 5233) (U.S. Bureau of the Census, 2008).[8]

While the finance and insurance sector as a whole (52) experienced faster-than average growth, this is due to the very high growth rate of the securities and investment industry (523): 198.1 percent. This was the second highest rate of growth of any major industry (computer and electronic products – 334 – was the highest), and more than compensated for the dramatic decline in the smaller funds-trusts-other financial vehicles (525): 52.4 percent. The activity level of insurance carriers and agents fluctuated, ending 11.9 percent lower. On the other hand, services provided by the Federal Reserve Bank and credit intermediation establishments grew continuously since 2000 at a faster-than-average pace. The experiences of these industries in Ohio corresponded with their national experiences.

Real estate (531) appears to be the single largest major industry in Ohio, but the large GDP number is much more indicative of the role of mortgages in the economy than the activity of real estate offices.[9] Neither it nor rental and leasing services, etc. (532-533) is concentrated here. However, CBP data indicate that general rental centers (5323) are something of an exception (U.S. Bureau of the Census, 2008).

Activity in real estate was greater in 2006 than in 1997, giving it the appearance of growth rate very close to the overall average for the economy. However, activity peaked in 2002 and has drifted lower since. Similarly, activity in rental and leasing services, etc., peaked in 2000 and declined each year thereafter. The activity level in 2006 was 11.9 percent below that of 1997. Across the country real estate growth was uninterrupted, but rental and leasing, etc. decreased after 2000. Net growth rates for the national industries were greater than in Ohio.

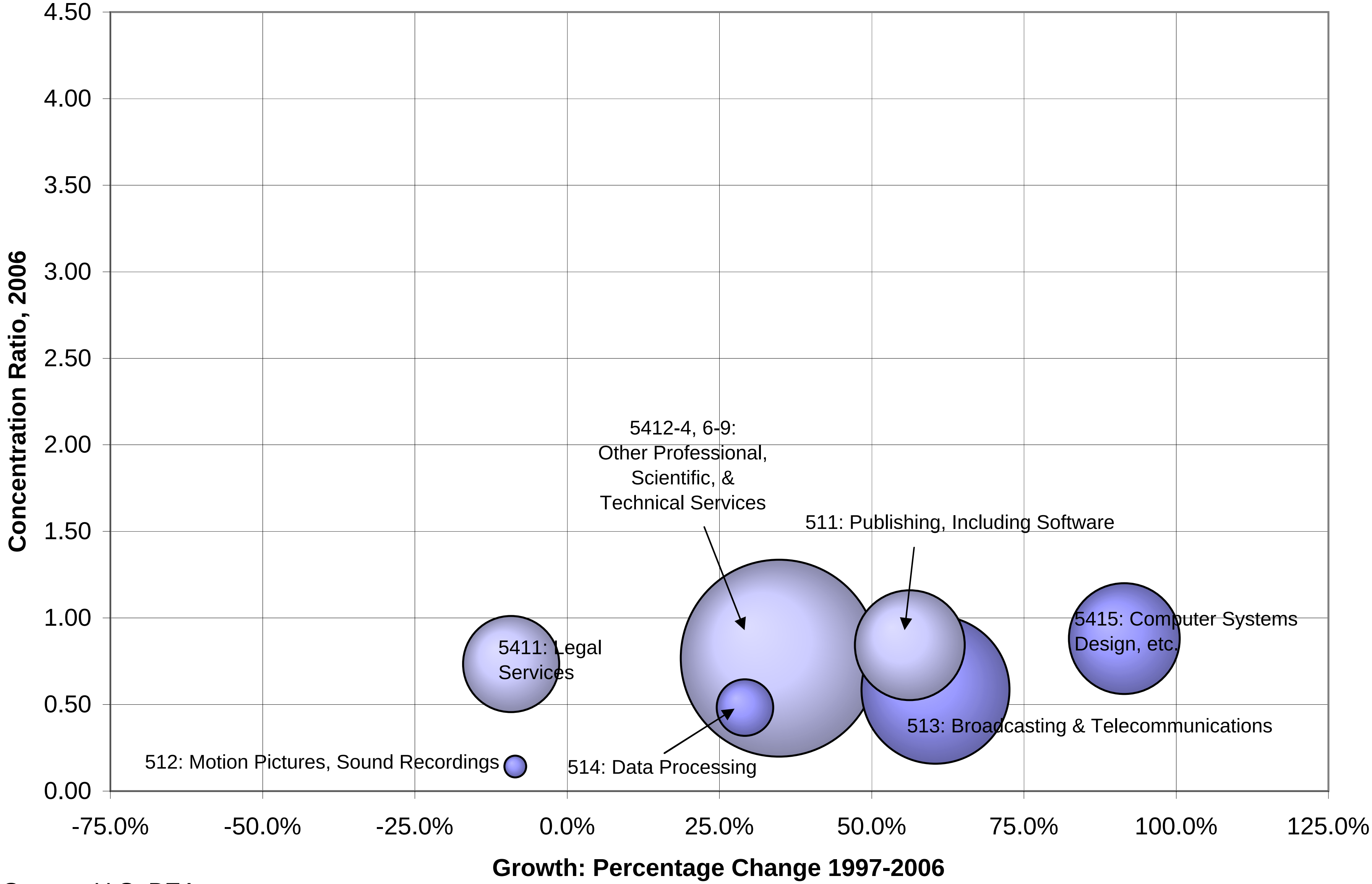
Initial figures for 2007 show the contraction of business in the finance and insurance sector, with Ohio being hit harder than the nation as a whole. On the other hand, business continued to expand in Ohio's real estate-rental-leasing sector at a faster-than-average for the state, but below that of the corresponding national industry.

See Tables A2, A5, A9, A11-A14, A16

Ohio | Department of Development

Ohio GDP: Growth, Concentration, & Size:

Information, Professional & Technical Services



Source: U.S. BEA

SERVICES: INFORMATION AND PROFESSIONAL-AND-TECHNICAL

The activities of the information (NAICS 51) and professional-and-technical (54) service sectors are not concentrated in Ohio, nor are the activities of their constituent major industries and industry groups. The only exception is the one-group major industry of Internet publishing and broadcasting (5161) (U.S. Bureau of the Census, 2008). Establishments in this industry publish or broadcast content only on the Internet. The content may be news, periodicals, books, games, entertainment, radio or videos (Office of Management and Budget, 2002).

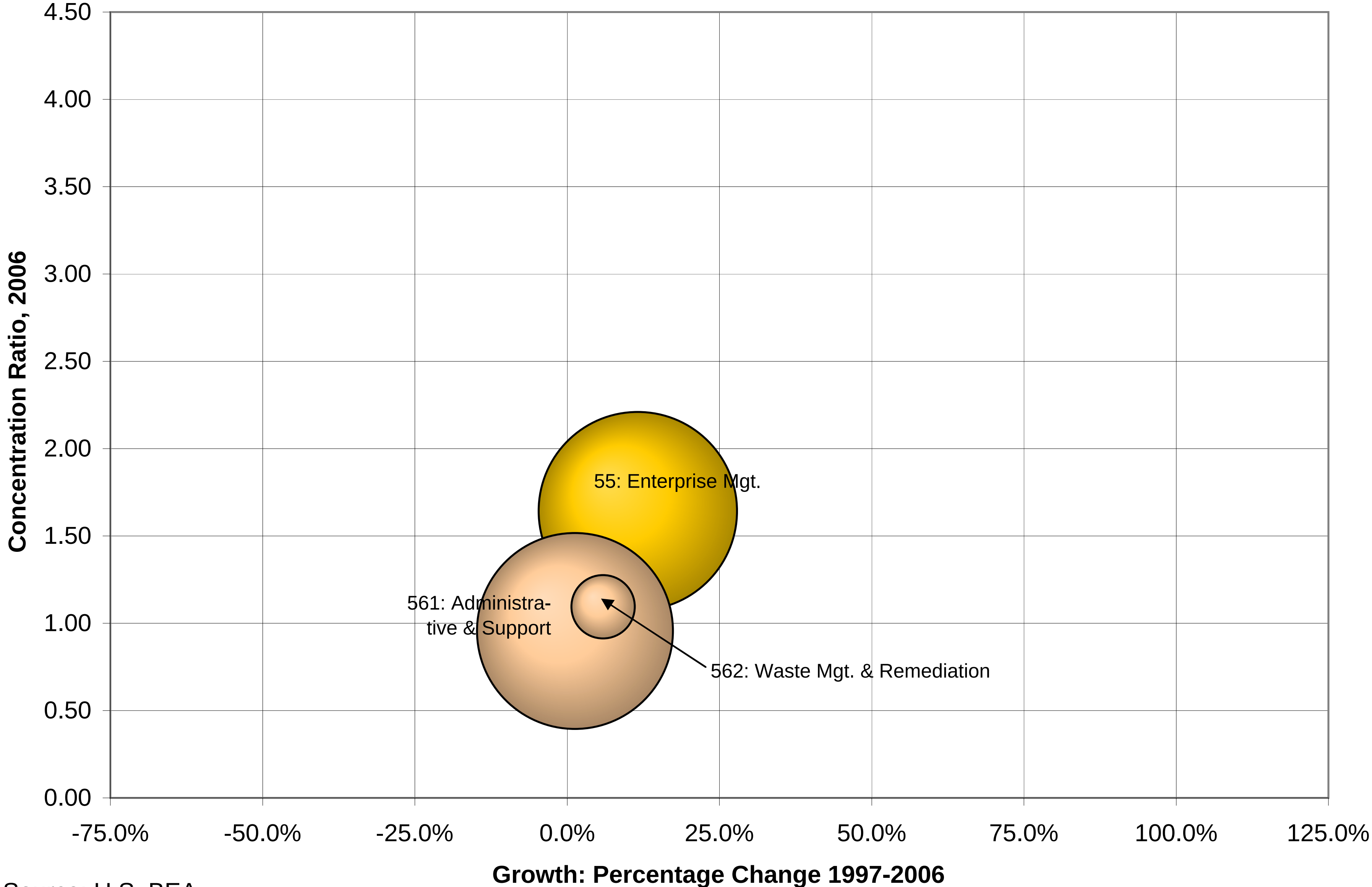
While none of the major industries is concentrated here, most experienced faster-than-average growth from 1997 through 2006. As fast as the growth was for these industries in Ohio, it usually was not nearly as rapid as for the corresponding industries experienced in the nation as a whole. The exception was computer systems design and related services, which grew 91.5 percent in Ohio compared with the national average of 82.5 percent.

On the other hand, motion picture and sound recording activity (512) and legal services (5411) fluctuated from year to year, with the former showing a net decrease of 8.5 percent and the latter a net decrease of 9.2 percent in Ohio. However, both industries experienced net growth across the nation.

Initial figures for 2007 show the expansion activity in both sectors at rates faster than average for the state, but slightly below those of the corresponding national industries.

See Tables A2, A5, A9, A11-A14, A16

Ohio GDP: Growth, Concentration, & Size:
Enterprise Mgt., Administrative & Support, Waste Mgt. & Remediation



Source: U.S. BEA

SERVICES: ENTERPRISE MANAGEMENT, ADMINISTRATIVE AND SUPPORT, WASTE MANAGEMENT AND REMEDIATION

The management of companies and enterprises (NAICS 55) is concentrated in Ohio. CBP data are consistent with the GDP data for this one-group sector (U.S. Bureau of the Census, 2008). This concentration undoubtedly includes the relatively large number of the Fortune U.S.-1,000 companies headquartered in Ohio – 59 (Fortune, 2008) – as well as the subsidiary and regional offices of those and other companies. The value of services provided fluctuated during the 1997-2006 period, with a near-average net change of 11.6 percent expansion. This stands in marked contrast with the national experience where the industry saw services contract by 6.1 percent.

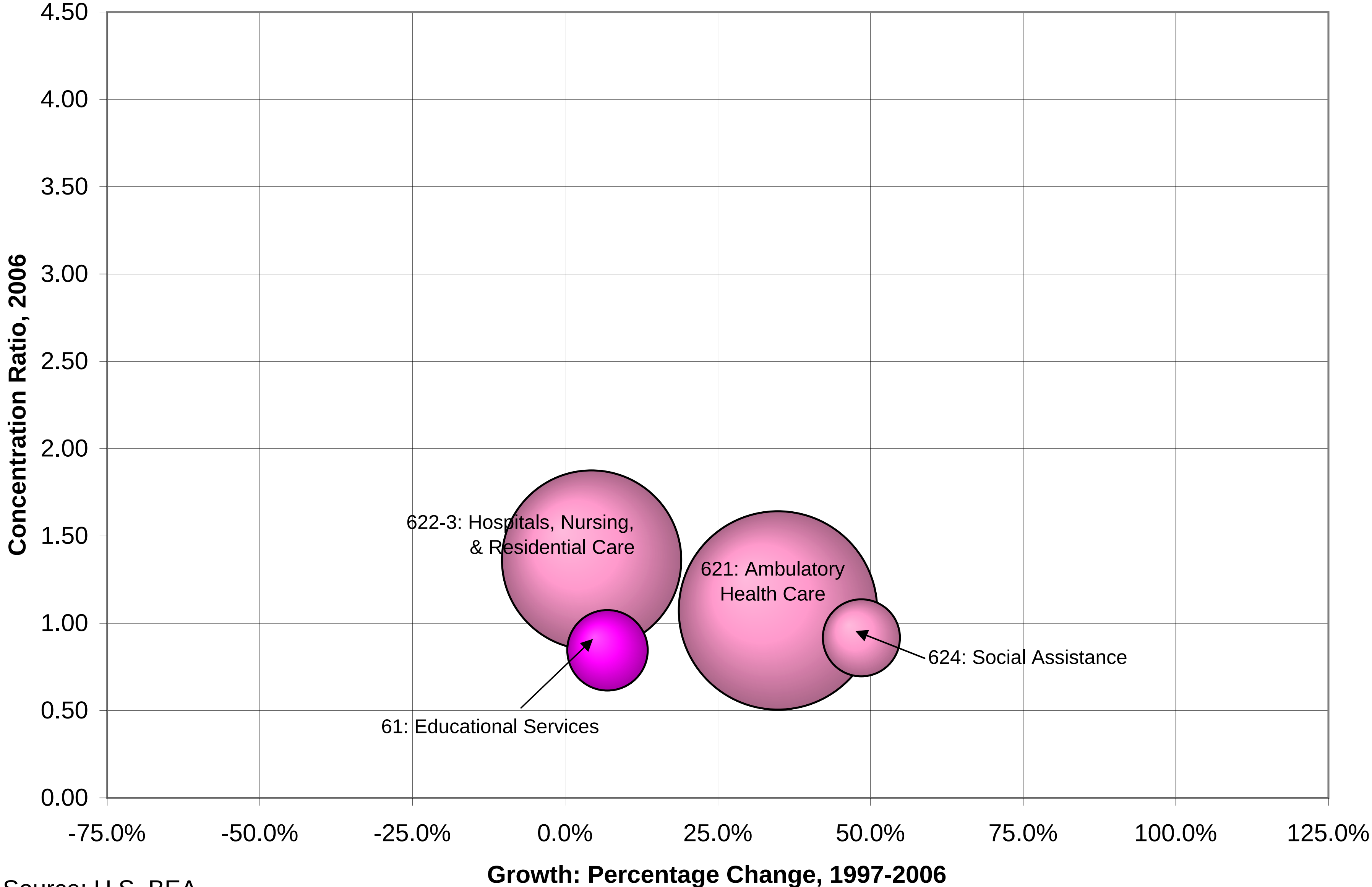
On the other hand, administrative and support services (561) in Ohio are essentially proportional to the national average. CBP data indicate that all of the groups within this major industry also are more or less proportional with their national counterparts, and none is notably concentrated here. Administrative and support services have grown during the last few years, but aggregate activity levels remain below the pre-2001-recession peak. The net change from 1997 was 1.3 percent. The national recovery of this major industry has been stronger, surpassing pre-recession levels.

Waste management and remediation services (562) include collecting, treating, incinerating or otherwise disposing waste materials (except sewage, which is classified as a utility service), recovering recyclables, and operating landfills. Activities in this major industry in Ohio appear, overall, slightly concentrated. CBP data show a concentration in waste treatment and disposal (5622) and remediation and other waste management services (5629) (U.S. Bureau of the Census, 2008). This concentration may be, in part, a consequence of manufacturing's concentration in Ohio. This is consistent with the fact that 6.39 percent of toxic chemical releases in the country during 2005 occurred in Ohio (U.S. Bureau of the Census, 2007: table 368). Activity in this industry fluctuated, but was 5.9 percent greater in 2006 than 1997. Expansion at the national level has been more rapid.

Initial figures for 2007 show a slight contraction of management activity from 2006 in Ohio and almost no change at the national level. This contrasts with administrative and waste management services, which expanded faster than average in Ohio, although not quite as the corresponding national rate.

See Tables A2, A5, A9, A11-A14, A16

Ohio GDP: Growth, Concentration & Size:
Health Care, Social Assistance, & Education



Source: U.S. BEA

SERVICES: HEALTH CARE, SOCIAL ASSISTANCE, AND EDUCATION

As whole, the health care and social assistance sector (NAICS 62) appears somewhat concentrated in Ohio, but the chart above illustrates how the major industries vary. Ambulatory health care (621) is roughly proportional with the nation; hospitals, nursing and residential care facilities (622 and 623 combined) are concentrated here; while social assistance (624) is relatively sparse. CBP data particularly point to nursing and community care facilities (6231 and 6233), and, to a lesser extent, general hospitals (6221) and other ambulatory health care services (6219) as the specific sources of the concentration. A concentration in vocational rehabilitation (6243) is the exception in social assistance (U.S. Bureau of the Census, 2008).

Overall, the provision of health care and social assistance in Ohio grew faster than average, but the chart above reveals that most of the growth occurred in ambulatory health care and social assistance. Service provided by hospitals, nursing, and residential care facilities fluctuated but was only slightly greater in 2006 than in 1997. The corresponding paces of growth for the nation as a whole were greater.

Initial figures for 2007 show a fractional increase from 2006 in health care and social assistance activity in Ohio. This is faster than the state's overall rate of growth, but lower than the corresponding rate of the national sector. Nevertheless, the growth of this sector here continues uninterrupted.

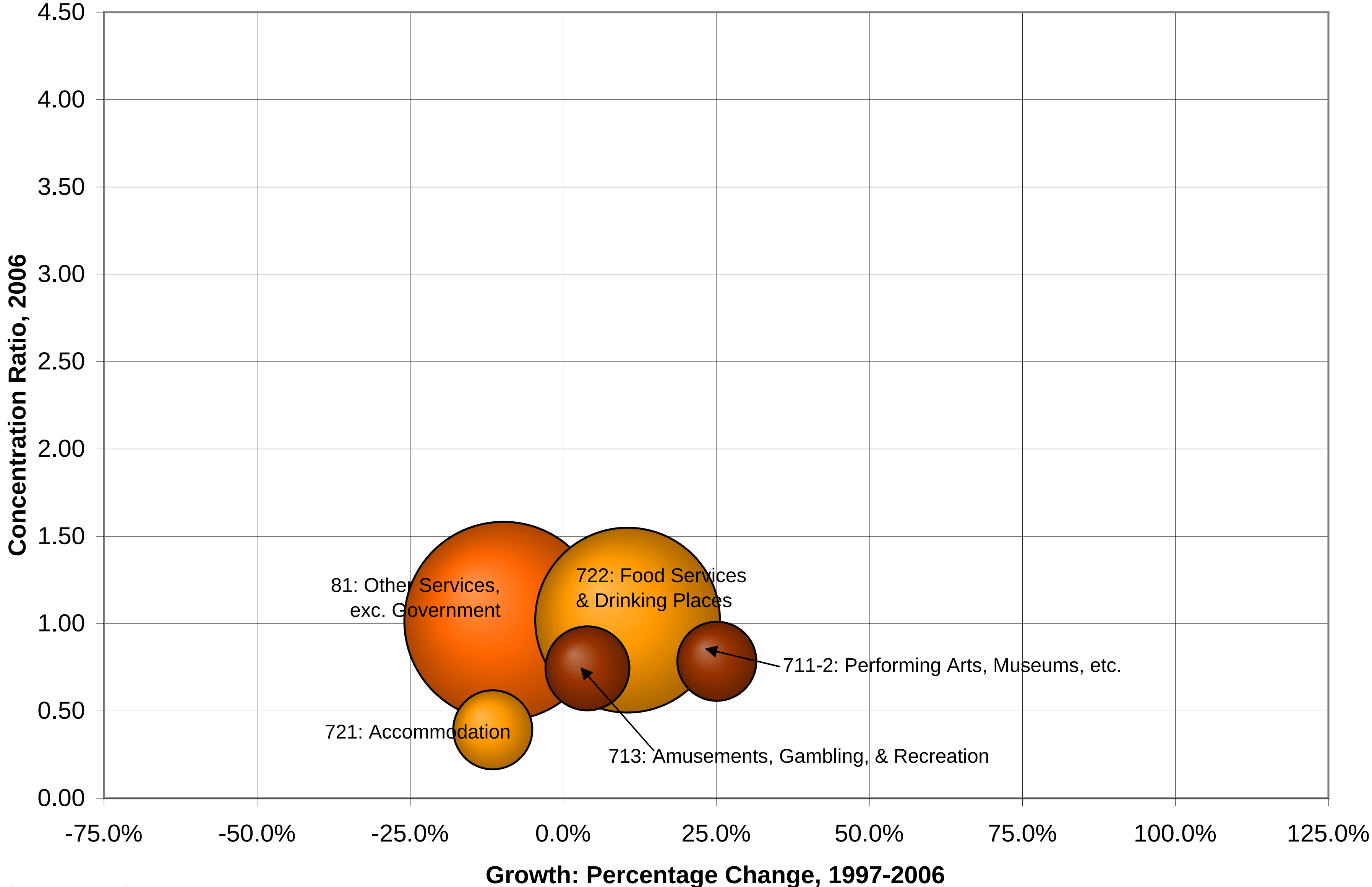
The chart above also shows that educational services (61) are not concentrated in Ohio. CBP data show no exceptions. The provision of educational services fluctuated over the years; it has slowly grown since 2002 with 2006 activity 6.9 percent greater than in 1997. This is similar to the national experience. Initial figures for 2007 indicate continued growth in Ohio and across the county.

See Tables A2, A5, A9, A11-A14, A16

Ohio | Department of Development

Ohio GDP: Growth, Concentration & Size:

Various Other Private Sector Services



Source: U.S. BEA

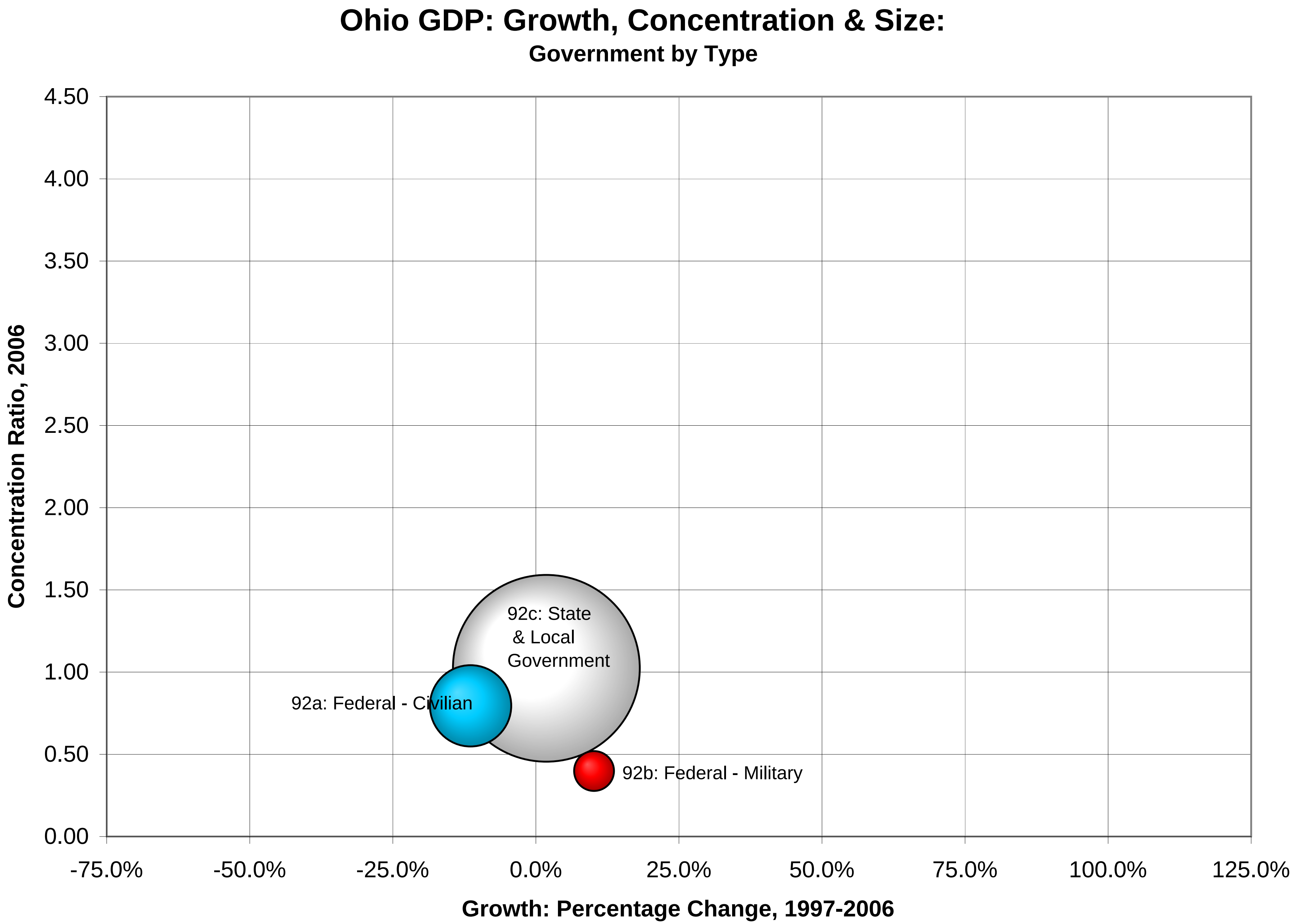
VARIOUS OTHER PRIVATE SECTOR SERVICES

The remaining private sector services are not concentrated in Ohio. While places serving food and drink (NAICS 722) and other services overall (81) are essentially proportional with those throughout the country, those providing accommodations (721), amusements, gambling, recreation, or arts-related activities (711-713) are relatively sparse. CBP data point to a few exceptions where services may be concentrated: rooming and boarding houses (7213), limited service eating and drinking places (7222 and 7224), commercial equipment repair and maintenance (excluding auto and electric – 8113), personal care such as hair, nails, or dieting (8121), funeral homes and cemeteries (8122), and civic and social organizations (8134) (U.S. Bureau of the Census, 2008).

Activity in the performing arts-museums-etc. industry in Ohio appears to have expanded relatively rapidly despite the occasional interruption. Similarly, amusements, gambling and recreation seems little changed since 1997, but actually steadily rose from 1997 through 2004 and dropped thereafter. On the other hand, the expansion of food services and drinking places, though not steady, kept pace with the economy as a whole from 1997 through 2006. This contrasts with the decline of accommodation services. Other non-governmental services (81) have not recovered to pre-2001-recession levels. The national experiences of these industries were more positive, except for other non-governmental services – which showed virtually no net change.

Initial figures for 2007 show growth in the arts-entertainment-recreation and accommodations-food service sectors here and across the country. Other non-governmental services appear to have grown around the nation, but remain unchanged from the 2006 level here in Ohio.

See Tables A2, A5, A9, A11-A14, A16



Source: U.S. BEA

FEDERAL, STATE, AND LOCAL GOVERNMENTS

Taken together, the services provided by federal, state and local government agencies verge on the sparse side in Ohio. However, the graph above illustrates the differences between the three parts of the sector. The vast majority of services provided by government agencies here are accomplished by state and local agencies. A concentration ratio close to 1.00 means that services provided by the state and local governments here collectively are in the middle of the range of those provided in other states. Such services slowly grew from 1997 through 2002, and then slowly contracted so that they were only 1.8 percent greater in 2006 than in 1997.

This is a distinct contrast with the federal government. The civilian part of the federal government – including the Postal Service (Downey and Aman, 2006) – plays a relatively small role in the state's economy. The military's role is even smaller, despite the presence of facilities such as the Defense Supply Center (Columbus), Wright-Patterson Air Force Base (Dayton), and two Defense Finance and Accounting Service centers (Cleveland and Columbus). Data from other sources are consistent with GDP figures: in 2005, 2.30 percent of the value of Dept. of Defense contracts went to firms in Ohio, 2.24 percent of the Defense Department's payroll went to Ohio (retired military are excluded), and civilian and military personnel numbered 28,497 – 1.60 percent of total Defense employment (U.S. Bureau of the Census, 2007: tables 494 and 496). Military activity in Ohio increased for a few years after 2001, and then dropped off a little; it remains 10.2 percent higher than in 1997. On the other hand, the larger civilian services have gradually decreased by 11.4 percent since 1997.

Initial figures for 2007 show a fractional decrease from 2006 in total governmental services in Ohio, while governmental services throughout the country grew at a slower-than-average rate.

See Tables A2, A5, A9, A11-A14, A16

Gross Domestic Products for Metropolitan Areas in Ohio, 2001-2006
(in millions chained dollars standardized on 2001, except percentages)

							Real Change	
State/Metropolitan Area	2001	2002	2003	2004	2005	2006	Amount	Percent
U.S.*	$10,058,168	$10,206,715	$10,456,036	$10,818,567	$11,145,245	$11,493,317	$1,435,149	14.3%
Ohio*	$374,719	$382,631	$388,022	$396,953	$399,535	$398,475	$23,756	6.3%
Akron, OH	$20,729	$21,366	$22,021	$22,600	$23,170	$22,895	$2,166	10.4%
Canton-Massillon, OH	$10,913	$10,972	$11,040	$11,140	$11,263	$10,987	$74	0.7%
Cincinnati-Middletown, OH-KY-IN	$75,968	$77,912	$79,137	$80,777	$82,040	$81,692	$5,724	7.5%
Cleveland-Elyria-Mentor, OH	$83,939	$84,074	$86,284	$89,131	$89,144	$88,982	$5,043	6.0%
Columbus, OH	$69,975	$71,839	$72,238	$73,939	$74,870	$75,806	$5,831	8.3%
Dayton, OH	$28,550	$28,972	$29,104	$29,488	$29,848	$30,091	$1,541	5.4%
Huntington-Ashland, WV-KY-OH	$6,482	$6,796	$6,792	$6,974	$6,995	$7,105	$623	9.6%
Lima, OH	$3,489	$3,620	$3,561	$3,678	$3,706	$3,692	$203	5.8%
Mansfield, OH	$3,365	$3,522	$3,584	$3,670	$3,695	$3,631	$266	7.9%
Parkersburg-Marietta-Vienna, WV-OH	$4,284	$4,361	$4,279	$4,484	$4,371	$4,432	$148	3.5%
Sandusky, OH	$2,535	$2,614	$2,675	$2,701	$2,683	$2,645	$110	4.3%
Springfield, OH	$3,220	$3,112	$3,028	$3,067	$3,064	$3,097	-$123	-3.8%
Toledo, OH	$21,671	$22,326	$22,725	$22,868	$22,812	$22,807	$1,136	5.2%
Weirton-Steubenville, WV-OH	$2,754	$2,931	$2,803	$2,835	$2,900	$2,698	-$56	-2.0%
Wheeling, WV-OH	$3,488	$3,568	$3,668	$3,785	$3,857	$3,822	$334	9.6%
Youngstown-Warren-Boardman, OH-PA	$14,346	$14,682	$14,702	$14,883	$14,950	$14,955	$609	4.2%

Note: * - Figures for 2002-2006 generated by PR&SP.

Source: U.S. BEA (2008).

Prepared by: Policy Research & Strategic Planning, Ohio Dept. of Development. Telephone 800/848-1300, or 614/466-2116 (DL, 12/08).

REAL GROWTH IN METROPOLITAN AREAS

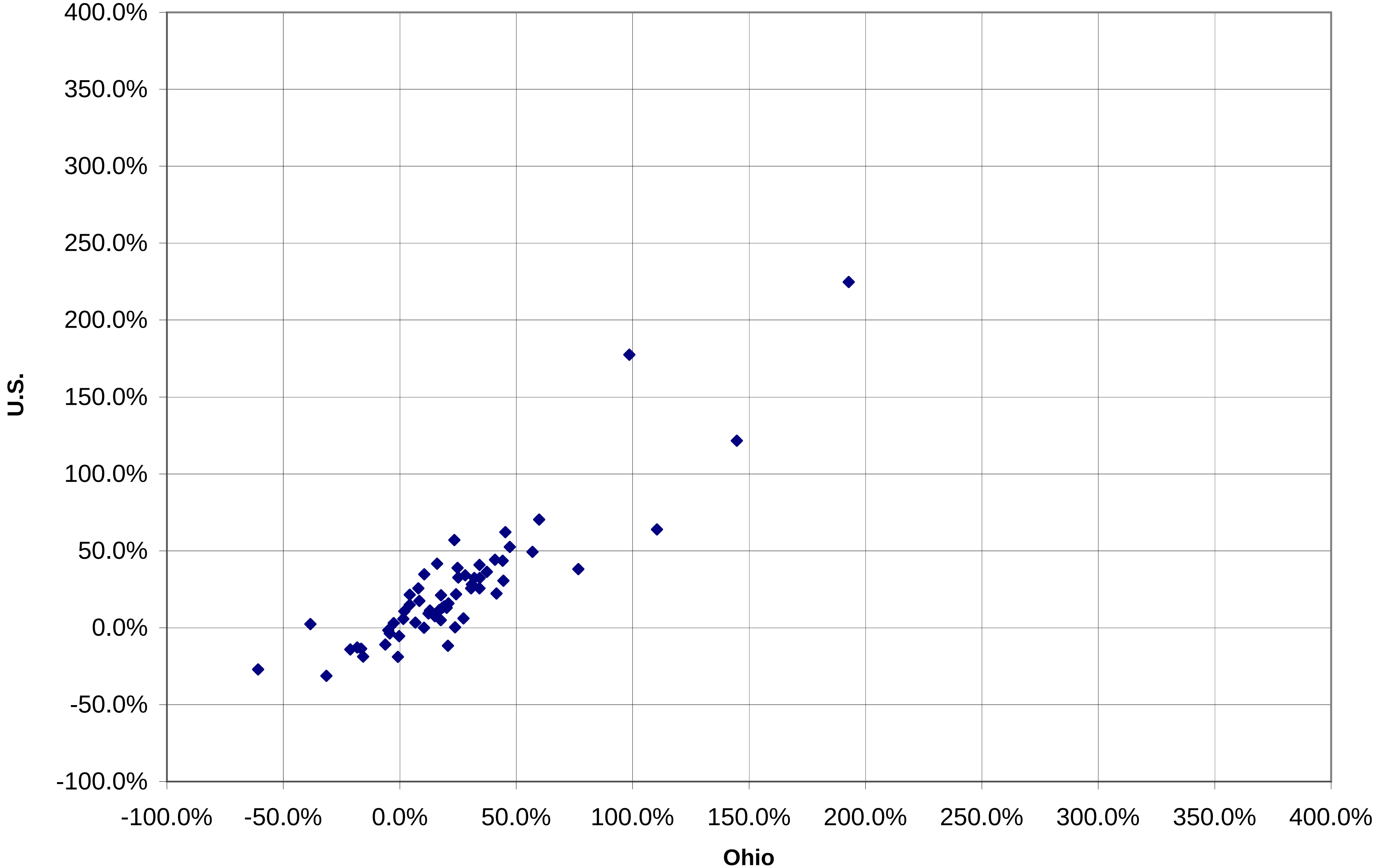
The table above displays changes in economic output from metropolitan areas (MAs) wholly or partially in Ohio. The figures have been standardized on 2001, thereby removing the effects of inflation. Figures for Ohio and the nation are included for comparison.

Real net growth from 2001 to 2006 is evident in 14 of the 16 MAs; Springfield and Weirton-Steubenville are the exceptions. Springfield's output, although improved from 2003, is still below the 2001 figure, while output from Weirton-Steubenville appears to be fluctuating. The greatest growth in absolute terms occurred in the three largest MAs: Cincinnati-Middletown (including the portions in Kentucky and Indiana), Cleveland-Elyria-Mentor, and Columbus. Each grew between $5 and $6 billion (B). Despite the portions in Kentucky and Indiana, it is probably safe to say that the combined growth of these three accounts for over one-half the economic growth in Ohio since 2001, and more than doubles the combined growth of 13 other MAs.

The role of Cincinnati, Cleveland and Columbus in Ohio's economy also accounts to a significant degree for the state's overall growth rate. Their range of rates – from 6.0 to 8.3 percent – encompasses the state's overall rate of 6.3 percent. However, the fastest growth appeared in three other MAs: Akron – 10.4 percent, and Huntington-Ashland and Wheeling – each at 9.6 percent. It should be noted, though, that none of the MAs in Ohio even approached the growth rate of the national economy: 14.3 percent.

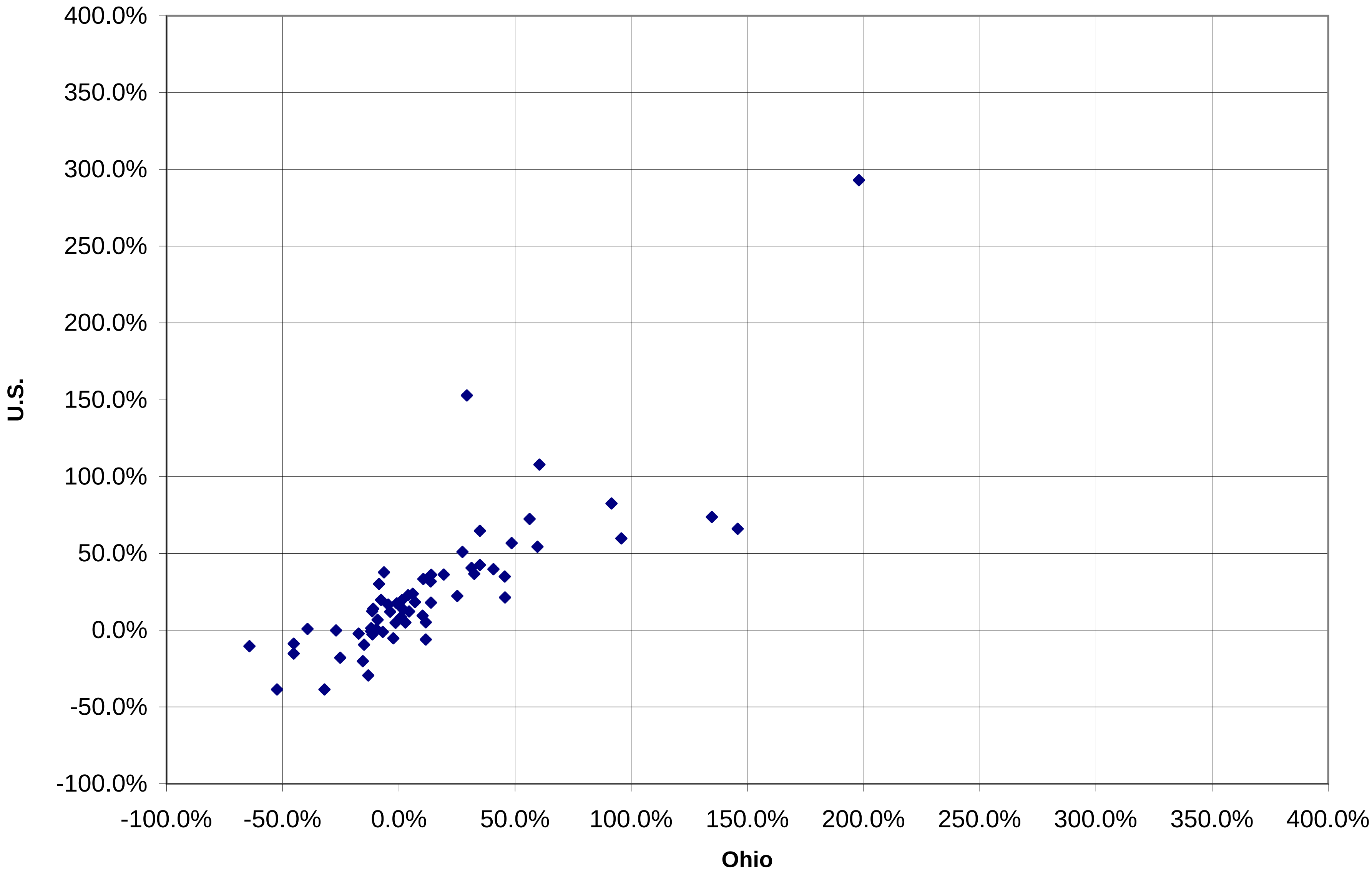
Although real net growth from 2001 through 2006 is evident for the 14 MAs, 2006 was a year in which output slide from 2005 levels in nine MAs: Akron, Canton-Massillon, Cincinnati-Middletown, Cleveland-Elyria-Mentor, Lima, Mansfield, Sandusky, Weirton-Steubenville, and Wheeling. In addition, output from Toledo and Youngstown-Warren-Boardman was essentially unchanged from 2005. These numbers indicate that the weakness of Ohio's economy in 2006 was widely distributed with only Columbus and Dayton as larger islands of continued growth.

The Association of Percentage Changes in GDP (1990-1997)
for Ohio and the U.S.



Source: U.S. BEA

The Association of Percentage Changes in GDP (1997-2006)
for Ohio and the U.S.



Source: U.S. BEA

PAST CHANGES AND FORECASTS FOR THE FUTURE

Throughout most of the 1990s, Ohio's overall economic growth nearly matched the nation as a whole. After adjusting for inflation, the volume of goods and services originating in Ohio increased by 22.3 percent from 1990 through 1997. The corresponding national increase was 22.8 percent. Real growth occurred in all sectors of the economy. The growth rate in Ohio was greater than the nation in some sectors: agriculture-forestry-fishing, mining, construction, non-durable goods manufacturing, transportation, wholesale and retail trade, and government services. The growth in Ohio was slower than average in other sectors: durable goods manufacturing, communications, utilities, finance-insurance-real estate, and non-governmental services. (Organizations and individuals were classified using the SIC system in this period.)

Growth continued in the 1997-2007 period, but there is no denying that growth in Ohio was slower than the national average. Ohio's economy grew by 6.1 percent from 1997 to 2000, shrank with the recession of 2001 (growth of -1.7percent), and grew 6.6 percent from 2001 to 2005. It contracted .3 percent in 2006, and grew .4 percent in 2007. The corresponding figures for the U.S. economy as a whole were 13.1 percent, .9 percent, 10.8 percent, 3.1 percent, and 2.0 percent.[10] (Organizations and individuals were classified using the NAICS in this period.)

Despite this disjuncture between Ohio's experience and that of the nation, the charts on pages 50 and 51 – the first covering 1990-1997, the second covering 1997-2006 – illustrate the close association between changes in industry output in Ohio with the corresponding changes for the country.[11] This means that what was happening nationally was a fairly reliable indicator of what was happening in Ohio; greater increases across the nation much more often than not were accompanied by greater increases in Ohio, while lesser increases and declines across the country usually were accompanied by the same here.

The close ties of Ohio's economy with the nation's mean that forecasts for industries and the economy as a whole may serve as approximations of what to expect here.[12] During the long term of 2006 through 2016, Figueroa and Woods (2007), U.S. Dept. of Labor economists, forecast an average annual growth rate of 2.9 percent. As has been true in the past, some sectors may be expected to grow at faster rates than others. The faster ones are expected to be wholesale and retail trade, information, finance-insurance-real estate-leasing, professional-scientific-technical services, managing companies and enterprises, administrative support-waste management-remediation, health care and social assistance, and arts-entertainment-recreation. (See the table on the following page.)

Generally, employment growth is associated with real growth in output, but this is not always the case. For example, Figueroa and Woods (2007) predict that real growth will occur in agriculture-etc., mining, utilities and manufacturing; however, the number of jobs in those sectors is expected to decline. (Again, see the table on the following page.)

The Ohio Dept. of Job and Family Services' Labor Market Information Division (ODJFS-LMI) (2008) also published its forecast for employment change by sector from 2006 through 2016. They expect a slower rate of job growth – or a faster rate of job losses – in every sector when compared with Figueroa and Woods (2007). The only exception is mining. The implication, based on the overall association of economic expansion and job growth, is that Ohio's economy probably will grow less rapidly than the American economy.

Table: Annual Average Growth Rates Forecast for 2006-2016

	Figueroa & Woods (2007)		ODJFS-LMI	Differences in Job Growth Rates
Sector	U.S. GDP	Jobs in U.S.	Jobs in Ohio	(U.S. Minus Ohio)
Total*	2.9%	1.0%	0.5%	0.5%
Agriculture, etc.	2.2%	-0.8%	-0.9%	0.1%
Mining	1.0%	-0.2%	0.2%	-0.4%
Utilities	0.9%	-0.6%	-0.8%	0.2%
Construction	1.4%	1.0%	0.9%	0.1%
Manufacturing	2.4%	-1.1%	-1.9%	0.8%
Wholesale trade	5.0%	0.7%	0.6%	0.1%
Retail trade	3.8%	0.4%	-0.1%	0.5%
Transportation & warehousing	2.9%	1.1%	1.1%	0.0%
Information	5.3%	0.7%	-0.3%	1.0%
Finance, insurance, real estate, etc., combined	3.7%	1.4%	0.8%	0.6%
Professional, scientific & technical services	3.4%	2.6%	1.7%	0.9%
Management of companies & enterprises	3.1%	1.4%	1.4%	0.0%
Administrative support, etc.	3.8%	1.9%	1.3%	0.6%
Education	2.0%	1.9%	1.6%	0.3%
Health care & social assistance	3.6%	2.4%	2.0%	0.4%
Arts, etc.	4.0%	2.7%	1.8%	0.9%
Accommodation & food services	1.4%	1.1%	0.8%	0.3%
Other private sector services	2.3%	0.4%	0.9%	0.4%
Federal government services	0.6%	-0.4%	-0.9%	0.5%
State and local government services	2.0%	0.7%	0.3%	0.4%

* - The self-employed, private household workers, and unpaid family workers are included here.
Sources: Figueroa & Woods (2007), ODJFS-LMI (2008).

See Tables A17-A20