

= Economy of Ohio =

The economy of Ohio nominally would be the 25th largest global economy behind Sweden and ahead of Nigeria according to the 2013 World Bank projections , and the 24th largest global economy behind Sweden and ahead of Norway according to the 2013 International Monetary Fund projections . The state had a projected GDP of \$ 526 @. @ 1 billion in 2013 , up from 517 @. @ 1 in 2012 , and up from 501 @. @ 3 in 2011 , according to the Bureau of Economic Analysis . In 2013 , Ohio was ranked in the top ten states for best business climate by Site Selection magazine , based on a business @-@ activity database . The state was edged out only by Texas and Nebraska for the 2013 Governor 's Cup award from the magazine , based on business growth and economic development . A new report by the Quantitative Economics and Statistics Practices (QUEST) of Ernst & Young in conjunction with the Council On State Taxation (COST) , ranks Ohio as third in the nation for friendliest tax environment . The study , " Competitiveness of state and local business taxes on new investment , " provides a state @-@ by @-@ state comparison of tax liabilities . The top five states ranked with the lowest effective tax rate on new investment are : (1) Maine (3 @. @ 0 %) ; (2) Oregon (3 @. @ 8 %) ; (3) Ohio (4 @. @ 4 %) ; (4) Wisconsin (4 @. @ 5 %) ; and (5) Illinois (4 @. @ 6 %) .

Ohio is commonly noted as the Nation 's Industrial Capital , dating to its roots in the Rust Belt and Ohio 's present @-@ day intelligence and scientific dominance . Ohio was one of four states in the U.S. to have areas make the Intelligent Community Forum 's list of global Smart 21 Communities for 2014 , with Columbus , Ohio receiving the honors . The state has 5 of the top 115 colleges in the nation , according to U.S. News and World Report 's 2010 rankings , while the Ohio State University was ranked # 10 by the same magazine for awarding degrees to Fortune 500 CEOs . The state was ranked # 8 by the same magazine in 2008 for best high schools , while overall , in 2010 the state 's schools were ranked # 5 in the country by Education Week . It was second only to Texas in having the most U.S. cities in the top 30 best places for new college graduates , according to BusinessWeek in 2010 .

Ohio is considered a center of science and industry , with museums dedicated to such in Columbus , COSI , the Great Lakes Science Center in Cleveland , the Imagination Station in Toledo , and the Boonshoft Museum of Discovery in Dayton . The state includes many historically strong industries , such as banking and insurance , which accounts for 8 % of the gross state product , motor vehicle manufacturing , research and development , and steel production , accounting for 14 @-@ 17 % of the nation 's raw output . More traditional industries include agriculture , employing one out of seven Ohioans , and new and developing sectors include bioscience , green , information , and food processing industries . Ohio is the biggest manufacturer of plastics and rubber in the country , has the largest bioscience sector in the Midwest , and ranked fourth in the country for green economic growth through 2007 .

The state is recognized internationally as the " Fuel Cell Corridor " , while Toledo is recognized as a national solar center , Cleveland a regenerative medicine research hub , Dayton an aerospace and defense hub , Akron the rubber capital of the world , Columbus a technological research and development hub , and Cincinnati a mercantile hub .

Wal @-@ Mart is the largest private sector employer in Ohio with approximately 49 @, @ 700 employees as of April 2014 . The largest Ohio employer with headquarters in Ohio is the Cleveland Clinic , with approximately 41 @, @ 400 employees and headquarters in Cleveland . The largest employer at a single location in Ohio is Wright Patterson Air Force Base in Dayton . 70 % of the nation 's electrometallurgical ferroalloy manufacturing employees are located in Ohio .

= = Overview = =

The economy of Ohio nominally would be the 25th largest global economy behind Sweden and ahead of Nigeria according to the 2013 World Bank projections , and the 24th largest global economy behind Sweden and ahead of Norway according to the 2013 International Monetary Fund projections . The state had a projected GDP of \$ 526 @. @ 1 billion in 2013 , up from 517 @. @ 1 in

2012 , and up from 501 @. @ 3 in 2011 , according to the Bureau of Economic Analysis .

A new report by the Quantitative Economics and Statistics Practices (QUEST) of Ernst & Young in conjunction with the Council On State Taxation (COST) , ranks Ohio as third in the nation for friendliest tax environment . The study , " Competitiveness of state and local business taxes on new investment , " provides a state @-@ by @-@ state comparison of tax liabilities . The top five states ranked with the lowest effective tax rate on new investment are : (1) Maine (3 @. @ 0 %) ; (2) Oregon (3 @. @ 8 %) ; (3) Ohio (4 @. @ 4 %) ; (4) Wisconsin (4 @. @ 5 %) ; and (5) Illinois (4 @. @ 6 %) . In 2013 , Ohio was ranked in the top ten states for best business climate by Site Selection magazine , based on a business @-@ activity database . The state was edged out by Texas and Nebraska for the 2013 Governor 's Cup award from the magazine , based on business growth and economic development . Ohio was ranked # 11 by the council for best friendly @-@ policy states according to their Small Business Survival Index 2009 . The Directorship 's Boardroom Guide ranked the state # 13 overall for best business climate , including # 7 for best litigation climate . Forbes ranked the state # 8 for best regulatory environment in 2009 . Ohio has 5 of the top 115 colleges in the nation , according to U.S. News and World Report 's 2010 rankings , and was ranked # 8 by the same magazine in 2008 for best high schools . Overall , the state 's schools were ranked # 5 in the country in 2010 . The year ending July 2011 saw the state ranked fourth in the nation in job creation behind Texas , California , and New York .

Ohio 's private sector is composed of 921 @, @ 000 employers , which hire around 50 @. @ 4 % of Ohio 's non @-@ farm private workforce . Ohio has a developing technology sector and is home to over 28 @, @ 000 employers that employ nearly 820 @, @ 000 people ; its rate of technology operations is 14 % higher than the US average . Between 2006 and 2014 , Ohio 's employment is expected to grow by 290 @, @ 700 jobs , or approximately 5 @. @ 0 % . Personal income grew an average of 3 @. @ 1 % in 2008 . About 659 @, @ 900 people are employed in Ohio 's manufacturing sector . Major manufacturing employers include AK Steel , Timken , and Honda . In 2007 , foreign @-@ based companies employed 229 @, @ 500 Ohioans , led by Japan , United Kingdom , Germany , France , and Switzerland .

Ohio 's exports constituted 3 @. @ 2 % of total U.S. exports in 2009 , with top destinations being Canada at \$ 14 @. @ 2 billion , followed by Mexico , China , United Kingdom , Greece , Brazil , Japan , Germany , France , and Australia . In 2009 the state was the nation 's 7th largest exporter with \$ 34 @. @ 1 billion . 13 , 092 companies exported in 2009 , with transportation equipment accounting for \$ 9 @. @ 9 billion , machinery \$ 4 @. @ 9 billion , chemicals \$ 4 @. @ 4 billion , and computer and electronics products \$ 2 @. @ 4 billion .

As of 2010 , Ohio was # 6 in the country for Fortune 500 companies with 23 . They include Cardinal Health at # 17 , Procter & Gamble at # 22 , Kroger at # 23 , Macy 's at # 103 , Nationwide Insurance at # 118 , Goodyear Tire and Rubber at # 141 , Progressive Insurance at # 161 , American Electric Power at # 172 , Eaton Corporation at # 194 , and Owens Corning at # 432 .

= = Major employers = =

The following is a list of the top ten employers with headquarters in Ohio , as of April 2014 .
The following is a list of the top Ohioan employers anywhere in the world , as of 2013 .

= = Industries = =

= = Aerospace and defense = =

Dayton is designated as the state 's aerospace hub due to its high concentration of aerospace and aviation technology . In 2009 , Governor Ted Strickland designated Dayton as Ohio 's aerospace innovation hub , the first such technology hub in the state . Aircraft engine manufacturing accounts for nearly 75 % of Ohio 's aerospace and defense industry workforce .

The aerospace and defense industry employs 16 @, @ 000 Ohioans . Employment has been

increasing after 2003 , despite an overall decrease in employment since the industry 's peak at 37 @, @ 000 employees in 1990 . In 2005 , Ohio ranked fifth among US states in the production of aerospace products and parts , and eighth in the number of aerospace industry workers . Recently the states ' employees have ranked # 1 in value produced per worker . Ohioan workers in the aerospace industry made an annual average salary of \$ 75 @, @ 765 in 2005 , compared to \$ 48 @, @ 208 in for workers in the manufacturing sector generally . Nearly 75 % of the state 's aerospace and defense employees work in the aircraft engine manufacturing sub @-@ sector ; only Connecticut has larger aircraft engine workforce .

Notable aerospace and defense companies in Ohio include GE Aviation , Timken , Goodrich Corporation , GE Honda Aero Engines , CFM International , and Aircraft Braking Systems . France @-@ based CIRCOR Aerospace , Inc . , which develops systems for aerospace fluid control , has a commercial unit located in the state . Boeing 's Central Ohio Aerospace and Technology Center in Heath is a venture amongst five of the top 10 U.S. defense contractors , including Atlantic Inertial Systems , Honeywell , Kearfott , Northrop @-@ Grumman , L3 Communications , and Raytheon , which is also the headquarters of the Air Force Metrology and Calibration Program Office . RTI International Metals 's location in Niles produces titanium used in every France @-@ based Airbus aircraft . RTI was originally headquartered in Niles before moving to Pittsburgh in the 21st century , while Airbus has invested \$ 4 @. @ 3 billion in the state . Makino 's Global Titanium Research and Development Center is located in Mason . Nextant Aerospace has manufacturing facilities at the Cuyahoga County Airport .

Defense systems play a smaller role in the industry . Ohio corporations were awarded around \$ 5 @. @ 5 billion of United States Department of Defense procurements . Notable defense contractors include Goodyear Tire and Rubber Company in Akron , Lockheed Martin in Akron , which won a contract to develop a space @-@ ship in 2003 and produces the vertical launch ASROC missile , and Armor Holdings Aerospace and Defense Group in Fairfield . United Kingdom @-@ based BAE Systems has a large facility in West Chester producing armored vehicles , armor kits , and ballistic glass .

The Joint Systems Manufacturing Center in Lima , in cooperation with General Dynamics , assembles armored combat vehicles , including the Expeditionary Fighting Vehicle and M1A2 Abrams tank . Columbus @-@ based Zyvex Performance Materials develops the Piranha Unmanned Surface Vessel . Gravitational Energy Corporation , located in Cuyahoga Falls , proliferates Gravity Assisted Power (GAP) machines in cooperation with DriPowder , LLC to the military .

The United States Department of Defense currently maintains a large Supply Center in Whitehall , a suburb of Columbus .

Wright @-@ Patterson Air Force Base , located in Dayton , and partially named for the Wright Brothers from Ohio who are generally credited with inventing the airplane , employs 27 @, @ 400 residents . The Air Force estimates that Wright @-@ Patterson 's annual economic impact on the Dayton region is \$ 5 @. @ 1 billion .

= = = Bioscience = = =

In 2008 , Ohio was ranked # 1 in the Midwest and 4th in the nation for biotech industry strength by Business Facilities magazine . As of 2008 , there were over 1 @, @ 100 biotech related firms operating in the state , employing 1 @. @ 4 million residents overall in direct or indirect related fields , including healthcare , with \$ 2 @. @ 5 billion in investment in 2007 , making it an international leader . Ohio had three city @-@ regions in the top 30 biotech locations in the country , with Cleveland @-@ Akron ranked # 20 , Columbus # 22 , and Cincinnati # 28 .

The overall economic impact of the bioscience industry in Ohio , including healthcare , amounted to \$ 148 @. @ 2 billion in 2007 , representing 15 @. @ 7 % of Ohio 's economic output . Half of the biotech industry is located in northeast Ohio , with 574 firms , while central and southern Ohio are home to around 200 each . 635 companies are FDA @-@ certified to manufacture medical devices . Biotech research and development employs directly 12 @, @ 415 residents , while agricultural

bioscience contributed the largest economic impact , at \$ 10 @. @ 7 billion . Medical device manufacturers employ 9 @, @ 757 residents .

= = = Healthcare = = =

Major hospital employers include the Cleveland Clinic Health System with 41 @, @ 400 employees , Catholic Healthcare Partners in Cincinnati with 28 @, @ 200 , University Hospitals of Cleveland with 21 @, @ 800 , OhioHealth in Columbus with 15 @, @ 300 , ProMedica in Toledo with 14 @, @ 500 , and Premier Health Partners in Dayton with 14 @, @ 000 . Healthcare REIT , Inc . , an S & P 500 company headquartered in Toledo , is a major healthcare real estate firm . VRI , one of the nation 's largest in @- @ home medical health monitoring solutions companies , recently announced the relocation of their headquarters to Franklin .

In 2011 , Dayton was ranked the # 3 city in the United States for excellence in health care . The ranking is from HealthGrade 's list of America 's Top 50 Cities for Hospital Care . Other Ohio cities listed include Cincinnati at # 6 and Cleveland at # 16 . Also in 2011 , the cities of Cincinnati and Dayton were ranked # 1 and # 4 in the nation for emergency room care . Then in 2013 , HealthGrades ranked the Dayton region number one in the nation for the lowest hospital mortality rate .

Ohio is home to world class medical facilities , led by the Cleveland Clinic , which has locations throughout the world . In 2009 , U.S. News and World Report ranked the clinic as the fourth best hospital in the country , and the # 1 heart center in the country for the 15th year in a row . The Ohio State University Medical Center was ranked # 21 . Overall , the magazine ranked 16 Ohio hospitals among the best hospitals in the nation , making the state # 3 in the country in total . The Cincinnati Children 's Hospital Medical Center ranked # 6 in the nation for pediatric hospitals , and overall , four children 's hospitals in Ohio ranked among the best .

Apart from U.S. News and World Report , in 2010 , HealthGrades ranked nine Ohio hospitals in the top 50 in the United States and 27 of Ohio 's hospitals as Distinguished Hospitals for Clinical Excellence , with the majority of these hospitals in the Cleveland and Dayton areas . They also ranked 37 Ohio hospitals in the 5 % of the country for emergency care service .

Child magazine ranked Cincinnati Children 's # 4 , Nationwide Children 's Hospital in Columbus # 6 , including # 1 for emergency care , and Rainbow Babies & Children 's Hospital in Cleveland # 9 . University Hospitals Case Medical Center in Cleveland was named in the top 15 for major teaching hospitals , while Riverside Methodist Hospital in Columbus and Hillcrest Hospital in Mayfield Heights ranked in the top 16 for minor teaching hospitals . Southwest General Health Center in Middleburg Heights was ranked in the top 15 for large community hospitals , and Mercy Hospital Clermont in Batavia Union Hospital in Dover Sycamore Medical Center in Miamisburg and Wooster Community Hospital in Wooster ranked in the top 16 for medium @- @ sized community hospitals .

In 2009 , Thomson @- @ Reuters named the Kettering Medical Center in Kettering , The Ohio State University Medical Center in Columbus , Good Samaritan Hospital in Cincinnati , and Grandview Medical Center in Dayton to their top 30 list of teaching hospitals with cardiovascular programs . Thomson @- @ Reuters also rated the Kettering Health Network of Kettering , Ohio as one of the top 10 hospital networks for clinical excellence in the United States for 2009 and 2010 .

= = = = Pharmacies = = = =

Ohio is home to pharmacy chains including Discount Drug Mart in Medina , and previously Phar @- @ Mor , which was headquartered in Youngstown , and Revco , which was headquartered in Twinsburg .

= = = Education = = =

Ohio 's medical colleges are sixth in the nation in terms of economic impact , resulting in 425 @, @ 000 direct or indirect positions and \$ 37 @. @ 2 billion .

The University System of Ohio is the nation 's largest comprehensive public system of higher education . Member universities include the University of Cincinnati , which has a \$ 3 + billion annual economic impact and is the largest employer in Cincinnati , Kent State University , which contributes a \$ 1 @. @ 9 billion economic impact in Northeast Ohio , and the University of Toledo , which contributes a \$ 1 @. @ 1 billion economic impact in Northwest Ohio .

= = = Agriculture = = =

Ohio 's agricultural industries represent \$ 93 billion of the state 's economic output , employing one in seven Ohioans directly or indirectly . Ohio 's agricultural market exports many different products . Ohio ranks 1st in the production of Swiss cheese out of all 50 states , 2nd in eggs , 3rd in tomatoes , 6th in soybeans , and 9th in corn for grain . The agriculture and food processing and eatery industries are heavily intertwined in Ohio . For example , Ohio being the 3rd largest producer of tomatoes in the United States in turn has the world 's largest ketchup processing plant in Fremont . They are # 16 in the nation for beef production , and # 5 in flower production .

The number of farms in Ohio stood at 75 @, @ 700 , as of 2007 , covering 14 @, @ 200 @, @ 000 acres (57 @, @ 000 km2) of land . 47 @. @ 5 % of all farms are operated by residents aged 35 ? 54 . The average farm size was 188 acres (0 @. @ 76 km2) . However , the number of farms slowly decreased from 2006 , where the number of farms in Ohio stood at 76 @, @ 200 . The amount of land used for farms in Ohio also decreased from 2006 , where 14 @, @ 300 @, @ 000 acres (58 @, @ 000 km2) of land were used for agriculture . However , the dairy sector of Ohio 's agriculture industry is growing . The estimated number of dairy cows in Ohio increased from 274 @, @ 000 in 2006 to 276 @, @ 000 in 2007 . Estimated dairy production in Ohio increased from 4 @, @ 860 @, @ 000 @, @ 000 pounds in 2006 to 4 @, @ 980 @, @ 000 @, @ 000 pounds in 2007 . There a total of 1 @, @ 270 @, @ 000 cattle , 4 @, @ 000 @, @ 000 hogs , and 141 @, @ 000 sheep in the state .

In October 2010 , the Kinsman neighborhood in Cleveland was designated to be the location of the largest urban agriculture district in the United States , roughly 28 acres , where cultivation and entrepreneurial operations will exist .

= = = Horticulture and floriculture = = =

Ohio is a lead producer of horticulture products , from greenhouse and nursery plants to bulbs . The state is a producer of white ash trees for landscaping , totalling 25 @, @ 000 annually . California , Florida , Texas , Michigan , and Ohio accounted for 42 % of the nation 's production of bedding plants in 2002 . Oberer 's Flowers , headquartered in Dayton , is the nation 's fifth @- @ largest florist , while Aris Horticulture , headquartered in Barberton , is a world leader in research and breeding . Lake County Nursery offers over 1 @, @ 000 varieties of plants and California @- @ based Monrovia Nursery Company , a global leader , operates nurseries in Springfield .

= = = Energy = = =

The energy sector of Ohio is composed of thousands of companies and cities representing the oil , natural gas , coal , solar , wind energy , fuel cell , biofuel , geothermal , hydroelectric , and other related industries . Oil and natural gas accounts for \$ 3 @. @ 1 billion annually in sales while ethanol generates \$ 750 million . The state is second nationally in solar energy industry manufacturing as Toledo is considered a national solar hub , nicknamed " Solar Valley . " It is recognized internationally as the " Fuel Cell Corridor " , and Hamilton is poised to become the biggest municipal provider of renewable energy in the Midwest , and one of the largest in the country , with over 70 % . In 2008 , the state led the country in alternative energy manufacturing according to Site Selection Magazine , while the natural gas industry has experienced growth due to the Great Shale Gas Rush .

Several notable energy companies are headquartered in the state , including American Electric Power , Columbia Gas of Ohio , DPL Inc . , Marathon Petroleum Company , American Municipal

Power , Inc . , Cliffs Natural Resources , Murray Energy , FirstEnergy , Oxford Resource Partners LP , AB Resources , American Hydrogen Corporation , and IGS Energy . Rolls @-@ Royce North America 's Energy Systems Inc . , a subsidiary of United Kingdom @-@ based Rolls @-@ Royce plc , is headquartered in Mt . Vernon , specializing in gas compression , power generation , and pipeline technologies . Ultra Premium Oilfield Services and V & M Star Steel operate steel production facilities in the state , which cater to energy exploration .

Ohio consumed 160 @. @ 176 TWh of electricity in 2005 , fourth among U.S. states , and has a storied history in the sector , including the first offshore oil drilling platform in the world , and a modern , renewable energy economy along with the traditional nuclear , oil , coal , and gas industries .

= = = Research and development = = =

Ohio is a major research and development center , home to many institutions . In 2008 , institutions and companies in the state won 10 R & D 100 Awards , given annually to the top 100 innovations recognized by R & D Magazine , finishing second behind California . The Ohio State University is among the country 's top public research institutions at # 7 . Ohio is ranked in the top eight for states conducting clinical trials , including conducting the most clinical trials per capita .

In 2006 , the state had a high @-@ tech payroll of \$ 9 @. @ 8 billion , with 155 @, @ 174 high @-@ tech employees at 10 @, @ 756 high tech locations . In 2005 , industry in Ohio spent \$ 5 @. @ 9 billion on research and development , with colleges spending \$ 1 @. @ 5 billion , but by 2009 , \$ 8 @. @ 2 billion in R & D contracts were identified , ranking 13th nationally . Ohio receives around \$ 2 @. @ 7 billion annually in federal R & D funds , ranking # 9 .

= = = Insurance = = =

Ohio is a major center for insurance corporations , ranking 6th out of all 50 states in the insurance industry , based on overall employment , and Ohio ranks 4th in casualty insurance out of all 50 states . As far as gross state product , from the period of 1990 ? 1999 Ohio insurance contribution to Ohio 's gross state product grew about 161 % from \$ 2 @. @ 6 billion to \$ 6 @. @ 8 billion , despite population growth from 1990 to 2000 of only about 4 @. @ 67 % , from 10 @, @ 847 @, @ 115 to 11 @, @ 353 @, @ 140 . Ohio 's insurance employment is expected to grow continuously at a rate of 9 @. @ 8 % . Ohio is home to the 3rd most claim examiners in the United States , out of all 50 states .

Five Fortune 500 companies are Ohio @-@ based insurance companies . These companies are :

Nationwide Insurance , in Columbus

Progressive Corporation , in Mayfield

American Financial Group , in Cincinnati

Cincinnati Financial , in Cincinnati

Ohio Casualty , a subsidiary of Liberty Mutual , in Fairfield .

Safelite Group , Inc . , a subsidiary of the world 's largest vehicle glass replacement and repair company Belron SA of South Africa , is headquartered in Columbus and provides solutions to insurance companies for vehicle glass replacement and repair . Medical Mutual of Ohio is headquartered in Cleveland and the largest medical insurance company in Ohio .

= = = Financial services = = =

Ohio is home to three commercial banks that rank among the largest commercial banks in the United States as measured by asset size . Up until 2008 , Ohio had four banks among the Top 25 , however the acquisition of Cleveland @-@ based National City Corp. by Pittsburgh @-@ based PNC Financial Services eliminated the fourth .

KeyBank , headquartered in the Key Tower in Cleveland

Fifth Third Bank , the bank holding company for Fifth Third Bank N.A. headquartered in Cincinnati . Currently second to PNC in market share in the state , and tops among Ohio @-@ based banks in

the state .

Huntington Bancshares , the bank holding company for The Huntington National Bank headquartered in the Huntington Center in Columbus

Wright @-@ Patt Credit Union , headquartered in Dayton , has 23 member centers , nearly \$ 2 billion in assets , and serves over 202 @,@ 000 member @-@ owners .

The Federal Reserve Bank of Cleveland is located in the state . Other notable institutions headquartered in the state include FirstMerit Corporation , Commerce National Bank , First Federal Bank of the Midwest , Liberty Savings Bank , and Park National Bank .

Germany @-@ based BMW operates a financial subsidiary in Dublin .

= = = Automobile manufacturing = = =

Ohio @-@ native Charles Kettering invented the self @-@ starter for the automobile , an advancement which contributed to the mainstreaming of the transport .

The current state of the motor vehicle industry in Ohio is mixed and dotted . In 2002 , the Ohio motor vehicle industry produced about \$ 16 billion of items . This is about 14 % of the automobile production of the United States , and Ohio outputs every state in production of motor vehicles except for Michigan . These \$ 16 billion account for approximately 4 @.@ 1 % of Ohio 's gross state product ; however , the motor vehicle industry only accounts for 1 @.@ 1 % of the United States ' output . In 2003 , Ohio was able to produce about 1 @,@ 885 @,@ 000 motor vehicles , accounting for 15 @.@ 6 % of the United States ' production , and , again , more than any state except for Michigan , in which 928 @,@ 000 of these were automobiles .

The Ohio Department of Development estimates that there are 555 motor vehicle production establishments in Ohio , and that by employing around 138 @,@ 000 people , Ohio motor vehicle production employees account for 12 @.@ 7 % of the United States ' motor vehicle production employees . Despite sharp losses since 1999 , the motor vehicle production industry was able to recover in 2001 , producing a net gain of 148 @,@ 000 vehicles . General Motors produced the plurality of motor vehicles in Ohio , with 36 @.@ 5 % of the production of motor vehicles in Ohio , followed closely by Honda with 35 @.@ 9 % . Other major motor vehicle producers in Ohio include DaimlerChrysler (with 17 @.@ 5 % of production) and Ford (with 10 @.@ 5 % of production) . However , despite the growth listed above , employment statistics and outlooks are much more grim .

In 2004 , the number of people employed in the motor vehicle assembly industry in Ohio was reported to be around 31 @,@ 000 , down from about 40 @,@ 000 throughout the 1990s , while in the motor vehicle parts production industry in Ohio , in December 1997 , employment stood at approximately 122 @,@ 000 employees ; however , that number dropped by about 26 % to 90 @,@ 000 employees by 2004 . Despite the growth facts above , the loss of employment is more likely to directly affect Ohio 's economy . The Ohio Bureau of Labor Market Information estimates that there will be 3 @,@ 300 less assembly employees and 2 @,@ 400 less parts manufacturing employees in 2012 than 2002 . Major firms operating in the state include Ford , Honda , and General Motors . Some major motor vehicle assembly production plants in the state include the Toledo Complex , Lordstown Assembly , Marysville Auto Plant , East Liberty Auto Plant , Ohio Assembly , and Toledo North Assembly . France @-@ based Faurecia Group operates a division in Toledo .

In June 2010 , auto parts manufacturer Sanoh America , located in Streetsboro , announced a \$ 3 @.@ 5 million , 35 @,@ 000 @-@ square @-@ foot (3 @,@ 300 m²) expansion of their North American headquarters , while Austria @-@ based automotive part manufacturer Miba announced \$ 30 million in new investments at production sites around the state . In September of that year , the new 87 @,@ 100 @-@ square @-@ foot (8 @,@ 090 m²) R & D facility of Amtex , Inc . , a subsidiary of Japan @-@ based Hayashi Telempu Co. based in Lebanon , became operational in Plymouth .

= = = Iron and steel = = =

Ohio is considered the historical center of steel production in the U.S. The state produces annually around 14 million tons , with a \$ 7 @. @ 2 billion state economic impact . The largest steel foundry in North America is located in Columbus , Columbus Castings . It was formerly part of Buckeye Steel Castings , which traces its root back to the 19th century .

Ohio produces between 14 % and 17 % of the United States ' raw steel . The sector of objects made from purchased steel in Ohio ranks 2nd out of all 50 states , and 3rd in the sector of iron , steel , and ferroalloys .

Seventy percent of the United States ' electrometallurgical ferroalloy manufacturing employees are located in Ohio . The entire industry as a whole , although not as concentrated as the electrometallurgical ferroalloy manufacturing sector , employs 34 @, @ 000 paid workers at 234 individual workplaces . Ohio 's 234 workplaces make up 9 @. @ 5 % of the United States industry 's workplaces , and the 34 @, @ 000 paid workers make up 13 @. @ 6 % of the United States industry 's workers . Of these workers and workplaces , the sector of iron , steel , and ferroalloys make up the largest sector in Ohio 's industry , with 17 @, @ 000 paid workers in 73 workplaces .

However , despite Ohio 's large presence in the iron and steel market , employment rates have declined in Ohio , generally attributed to weakening national economy . Between 1998 and 2005 , the number of Ohio iron and steel industry workers decreased from 52 @, @ 700 to 34 @, @ 000 . The Ohio Department of Development predicts the decreases will continue in coming years . The average annual salary for iron and steel industry workers in Ohio was \$ 59 @, @ 686 , compared the national industry average of \$ 53 @, @ 352 .

There are three Fortune 500 iron and steel manufacturers with world headquarters in Ohio : AK Steel , located in Westchester , Timken Company , located in Canton , and Worthington Industries , located in Columbus . Other notable companies include Russia @-@ based Severstal , which has facilities located in Warren and Steubenville , Luxembourg @-@ based Mittal Steel USA , which has facilities in Columbus and Cleveland , United States Steel Corporation in Lorain , Cliffs Natural Resources in Cleveland , and Republic Engineered Products , North America 's largest supplier of specialty bar quality steel , located in Canton . V & M Star Steel , a subsidiary of France @-@ based Vallourec , broke ground on a \$ 650 million production facility in Youngstown in June 2010 .

In August 2010 Arizona @-@ based International Technical Coatings announced plans to construct a 667 @, @ 000 @-@ square @-@ foot (62 @, @ 000 m2) , \$ 15 million production facility in Columbus , while Pro @-@ Tec , a joint venture between U. S. Steel and Japan @-@ based Kobe Steel headquartered in Leipsic , announced in September 2010 a \$ 290 million , 415 @, @ 000 @-@ square @-@ foot (38 @, @ 600 m2) expansion of existing facilities .

= = = Rubber and plastics = = =

One of Ohio 's historically strong industries is the rubber and plastics industry . Ohio ranks 1st of all 50 states in rubber and plastics production , producing around \$ 17 @. @ 4 billion of rubber and plastics shipments annually . Eight Fortune 1000 rubber and / or plastics corporations are located in Ohio :

Goodyear Tire & Rubber , Akron
Parker Hannifin , Cleveland
Owens @-@ Illinois , Perrysburg , Ohio
Owens Corning , Toledo
Cooper Tire & Rubber , Findlay
PolyOne , Avon Lake
Ferro Corporation , Cleveland
A. Schulman , Akron

Ohio ranks 1st in the gross state product of the rubber and plastics industry of any state . For the 5 @-@ year period of 2000 ? 2004 , inflation @-@ adjusted production increased around 10 % . In addition , in this period , the US rubber and plastics industry only grew 6 % .

Ohio exported around \$ 1 @. @ 3 billion worth of rubber and plastics shipments in 2006 . Rubber and plastics exports make up for 7 @. @ 3 % of total sales . Canada is the largest importer of Ohio 's

\$ 1 @. @ 3 billion worth of exports , accounting for 46 % of this amount . The Census Bureau expects that an addition \$ 1 @. @ 1 billion worth of material is indirectly exported , through the means of other goods that are made from rubbers and plastics , including motor vehicles and machinery .

However , despite increased production , employment has been decreasing in Ohio 's rubber and plastic industry . In 2000 , Ohio employed around 92 @, @ 000 rubber and plastics industry workers . By 2006 , those rates have declined by about 26 % to about 69 @, @ 000 workers . The Ohio Bureau of Labor Market Information predicts that , from 2004 to 2014 , there will be 11 @, @ 200 less workers in Ohio 's industry . They also predict that plastics employment in Ohio will decrease by 13 @. @ 7 % , and that rubber products employment will decrease by 20 @. @ 7 % . The industry currently employs about 73 @, @ 000 Ohio workers , and employs about 12 @. @ 3 % of the United States ' rubber employees , and 7 @. @ 8 % of the United States ' plastics employees .

In October 2010 , Sweden @-@ based Hexpol AB announced the acquisition of Solon @-@ based Excel Polymers for \$ 215 million .

In August 2011 , China @-@ based A3T L.L.C broke ground on their North American headquarters in Akron and signed an R & D agreement with the University of Akron .

= = = Other manufacturing = = =

= = = = History = = = =

In 1837 , William Procter and James Gamble founded a candle and soapmaking business in Cincinnati called Procter & Gamble . In the 1880s , the company introduced the product Ivory , a bar of soap . Eventually they began manufacturing Crisco , and sponsored radio dramas , which led to the name " soap operas " . Today Procter & Gamble is the 8th largest company in the world by market capitalization fully diversified in household products , and has 135 @, @ 000 employees worldwide , with manufacturing operations located throughout the state , and their headquarters still based in Cincinnati .

In 1866 , Henry Sherwin and Edward Williams founded Sherwin @-@ Williams , a general building supplies company , in Cleveland . Their first factory was opened on the Cuyahoga River in 1873 , and today the company has four manufacturing and distribution facilities in Ohio , located in Columbus , Cincinnati , Grove City , and Bedford Heights , and numerous locations throughout the country and world , with their world headquarters maintained in Cleveland . The company employs 3 @, @ 394 residents alone just in the Cleveland @-@ area .

In 1879 , James Ritty , a saloon owner , invented a mechanical cash register , paving way for its production through the National Cash Register Company , based in Dayton . The company prospered through the 21st century , producing automated teller machines , barcode scanners , and other related products , employing thousands . It was eventually relocated to Georgia in 2009 .

In 1886 Ohio @-@ native Charles Martin Hall helped pioneer the Hall ? Héroult process , which made aluminum inexpensive to produce . He sold his share in 1888 to the Pittsburgh Reduction Company , known today as Alcoa . Alcoa has operations in the state , including facilities in Cleveland which manufacture aluminum wheels for Automobili Lamborghini .

In 1907 , a janitor named James Spangler working for the Hoover family invented the first electronically portable vacuum cleaner . Production of the device began at a factory in New Berlin (later renamed North Canton) , and today the company is known as The Hoover Company , with its headquarters still located in North Canton .

In 1918 , the Parker Appliance Company was founded in Cleveland , later becoming the Parker Hannifin Corporation . They manufacture motion and control technologies , with locations throughout Ohio , the country , and the world . Their headquarters is maintained in Cleveland , employing 2 @, @ 201 residents in the local area .

= = = = Present = = = =

Overall , Ohio is home to 21 @, @ 250 manufacturing operations . Cincinnati is ranked # 6 , Cleveland # 10 , and Columbus # 19 respectively in the nation for manufacturing jobs . Ohio leads the nation in general @-@ purpose machinery production and is # 2 in metalworking machinery production . In 2004 , Ohio was third in the nation for major industrial operations , and second in the nation for total manufacturing payroll . Ohio was third in the nation in manufacturing GDP in 2008 , but has lost 106 @, @ 629 manufacturing jobs and over 1 @, @ 000 manufacturers since 2007 .

Crown Equipment Corporation , headquartered in New Bremen , employs 8 @, @ 300 residents in the state and is the 7th largest manufacturer of heavy @-@ duty equipment in the world . They recently unveiled 20 new fork @-@ lift models employing fuel cell technology , bringing that total product @-@ specific inventory to 29 models . Ametek Technical and Industrial Products is headquartered in Kent and a manufacturer of industrial products with sales of \$ 950 million in 2009 . Headquartered in Toledo , Libbey , Inc. is the leading producer of glass tableware products in the Western Hemisphere .

Miamisburg @-@ based NewPage Corporation is the largest producer of coated paper in North America , with sales of \$ 3 @. @ 1 billion . Verantis Corporation , headquartered in Middleburg Heights , is a leading global environmental engineering company .

Germany @-@ based ThyssenKrupp has several operations in the state , including AIN Plastics in Columbus , Ken @-@ Mac Metals in Cleveland , Copper and Brass sales divisions in Toledo , Cleveland , and Dayton , a ThyssenKrupp Industrial Services division in Toledo , and a ThyssenKrupp Bilstein of America sales division in Hamilton . ThyssenKrupp Krause is located in Cleveland , Vertical System Elevators in Cincinnati as well as other ThyssenKrupp Elevator divisions in Cincinnati , Westerville , Northwood , and Broadview Heights , and Rotek Incorporated is located in Aurora , which underwent an \$ 82 million facility expansion in 2008 .

United Kingdom @-@ based Mondi Group has facilities in Lancaster . Brush Wellman is headquartered Mayfield Heights and is a global supplier of alloy , precious metals , electronic , and engineered material systems and products , with a major facility in Elmore . Liebert is a manufacturer of environmental , power , and monitoring systems located in Columbus .

Headquartered in Cleveland and founded in 1932 , MTD Products employs 6 @, @ 800 residents in the state and is a major manufacturer of heavy duty lawn equipment . Advanced Drainage Systems headquartered in Hilliard employs 3 @, @ 900 residents and specializes in manufacturing industrial components and equipment . Aleris International , headquartered in Beachwood , employs 8 @, @ 500 residents and is one of the world 's largest recyclers of aluminum and zinc , manufacturing alloy sheet metal . Park @-@ Ohio , Inc . , located in Cleveland , operates in 16 countries with over 3 @, @ 000 employees . Mallory Marine is a manufacturer of aquatic travel components and located in Cleveland . Cincinnati @-@ based Michelman , Inc. is a global leader in developing water @-@ based barrier and functional coating .

Newark @-@ based The Longaberger Company is a manufacturer of home and lifestyle products , and Brooklyn is home to the American Greetings Corporation , the world 's largest publicly traded greeting card manufacturer .

Sweden @-@ based Trelleborg AB recently announced they were moving their Wheel Systems Americas headquarters from Hartsville to Fairlawn . Westlake @-@ based Nordson Corporation is a leading global manufacturer of precision equipment . Parma @-@ based GrafTech International Limited is a leading global manufacturer of carbon and graphite products with facilities on four continents .

ESCORT is a lead manufacturer of radar detection devices and navigational services headquartered in West Chester .

New Jersey @-@ based Hartz Mountain Corporation , a pets @-@ product manufacturer , announced an expansion of their existing operations in the state in 2010 . Little Tikes is a toy manufacturer headquartered in Hudson with global operations .

In August 2010 , Switzerland @-@ based WICOR announced plans for a manufacturing operation in Urbana , while in September of that year Italian @-@ owned Eurostampa North America announced plans for the construction of a new \$ 7 @. @ 2 million , 70 @, @ 000 @-@ square @-@

foot (6 @, @ 500 m2) facility in the Roselawn neighborhood of Cincinnati , which broke ground later month and will also serve as their headquarters .

GE Lighting is headquartered in Cleveland , with manufacturing operations in the state , including Bucyrus , which was awarded \$ 60 million for expansion in September 2010 in becoming the Global Center of Excellence for the manufacturing of energy @-@ efficient light bulbs . In October 2010 , West Virginia @-@ based Simonton Windows announced it was moving its headquarters to Columbus . Deceuninck North America , a subsidiary of Belgium @-@ based Deceuninck NV , is headquartered in Monroe and operates one of the largest vinyl window extruders in North America .

Australia @-@ based Blastmaster announced in September 2010 plans to locate their North American headquarters in the Columbus area . In October 2010 , California @-@ based Avery Dennison opened their Customer Innovation Center in Miamisburg to showcase their RFID technology .

===== Chemicals =====

Hexion Specialty Chemicals is headquartered in Columbus employing 6 @, @ 900 residents , and is a lead manufacturer of resins and coatings . Momentive Performance Materials is in the process of moving their global headquarters to Columbus following a recent merger with Hexion . Lubrizol Corporation is a provider of specialty chemicals headquartered in Wickliffe and a Fortune 500 company . Kentucky @-@ based Ashland Performance Materials is located in Dublin . Columbus is home to the world 's largest clearinghouse of chemicals data , CAS , or Chemical Abstracts .

===== Robotics and lasers =====

In June 2010 , Yaskawa America announced the construction of their new North American headquarters in Dayton , a 300 @, @ 000 @-@ square @-@ foot (28 @, @ 000 m2) facility , which broke ground in August . KC Robotics , located in Fairfield , is a major distributor of robots , including Yaskawa 's Motoman .

Robotics Research , located in Cincinnati , is a lead developer of robotic technology . FANUC Robotics America , Inc. has a regional headquarters located in Mason . Other companies include YAC Robot Systems in Hamilton , Bellevue Manufacturing Company in Bellevue , and Adept Technology , which has an office in Cincinnati .

Lockheed Martin in Akron manufacturers laser @-@ enhanced sniper systems for the Department of Defense . AT & F Steel in Cleveland operates the largest Hybrid Laser Arc Welding facility in the United States . Elyria @-@ based RIDGID , a division of Missouri @-@ based Emerson , manufacturers hand @-@ held laser devices .

===== Nanotechnology =====

Kent State University was one of the inventors of the modern liquid crystal display at their Liquid Crystal Institute .

Through 2005 , Ohio was ranked in the top ten for states with the best environment for nanotechnology development . The Center for Multifunctional Polymer Nanomaterials and Devices at the Ohio State University was awarded \$ 22 @. @ 5 million from the Third Frontier around the start of the 21st century with a goal of returning \$ 78 million in research and commercialization . The University of Dayton Research Institute was also awarded investments from the state . Other major research institutes include the Institute for Nanoscale Science and Technology at the University of Cincinnati . The University of Toledo is home to professor Abdul @-@ Majeed Azad , a world @-@ renowned nanotechnologist who won a Nano50 Award from NASA in 2007 for developing a method of converting steel mill waste into nanoscale iron particles , and is also a recent recipient of the Fulbright Distinguished Chair Award .

Nanotek Instruments , a Dayton area company , is a nanomaterial research and development company focused on bringing nanotechnology into consumer applications . Founded in 1997 ,

Nanotek Instruments currently holds some of the oldest intellectual property on the " wonder material " graphene . Nanotek 's current research focuses on using the properties of graphene in energy storage applications such as Li @-@ ion batteries and supercapacitors . Their research on graphene based supercapacitors was selected as one of the top five nanotechnologies of 2010 .

In 2007 , Nanotek Instruments spun off Angstrom Materials for the purpose of mass @-@ producing graphene materials . Angstrom Materials , also located in Dayton , is currently the world 's largest producer of nano graphene platelets . Angstrom 's graphene platelets are being used in multiple research areas including energy storage , thermal management , nanocomposites , transparent conducting films , sensor , and lithium ion batteries .

Other Ohio companies involved in nanotechnology development include MesoCoat , the winner of three R & D 100 awards ; SRICO in Columbus ; Cleveland Clinic ; Zyvex Performance Materials (developers of the Piranha Unmanned Surface Vessel) ; PowderMet , a leading research and development operation and winner of over 80 federal government grants ; General Electric , NanoFilm , Procter & Gamble , Battelle Memorial Institute , NanoSpense , First Solar , Goodyear Tire and Rubber , and Midwest Optoelectronics , among others .

= = = Logistics = = =

The Columbus / Dayton corridor is considered one of two " centroids " in America 's logistics sector . This is evident in the Dayton region , in part , with the expansion of a 1 @,@ 000 @,@ 000 @-@ square @-@ foot (93 @,@ 000 m²) distribution center by Caterpillar Inc. and a major Payless ShoeSource distribution center . Transportation and warehousing employs 183 @,@ 000 Ohioans , amounting to a \$ 12 billion industry , or 3 @.@ 6 % of the GSP . Since 2003 , Ohio has added 21 @,@ 500 logistics jobs .

Ohio has the 8th largest highway system , and 4th largest interstate system in the country . Ohio 's trucking industry ranks 4th in the nation with a total economic output of \$ 5 @.@ 2 billion . The state ranks third in the country in total value of inbound and outbound shipments at \$ 907 billion , and first in value of outbound shipments at \$ 244 billion .

Ohio has the fourth largest rail system , and is ranked third in total economic output at \$ 1 @.@ 3 billion .

Major employers include BAX Global , now part of Germany @-@ based DB Schenker ; Total Quality Logistics , UPS , FedEx , Roadway Express , CSX Corp , Pacer International , and ABX Air . Parsec Inc . , based in Cincinnati , controls 45 % of the nation 's intermodal transportation business . The logistics headquarters of ThyssenKrupp Industrial Services North America is located in Northwood .

Wooster @-@ based TechniGraphics is leading provider of imagery and geospatial services to the U.S. intelligence community .

In 2009 , CSX began the construction of a \$ 175 million intermodal facility in North Baltimore , employing OCR technology from the Saudi Arabia @-@ based Gulf Stevedoring Contracting Company . As part of their " National Gateway " project , it is a rival to Norfolk Southern 's " Heartland Corridor " project . Norfolk Southern operates a large intermodal facility in Columbus as part of their " Heartland Corridor , " which the company recently constructed .

Cleveland Ships in October 2010 announced a bid to take over Northrop Grumman 's shipbuilding operations , and later that month Canada @-@ based Great Lakes Feeder Lines announced the Port of Cleveland was a target for its U.S. international container service headquarters , the first on the Great Lakes .

= = = Food processing = = =

Ohio 's food processing industry produces \$ 23 @.@ 5 billion in food shipments annually . The frozen food industry is the largest sub @-@ industry , surpassing even the state of California by \$ 700 million in frozen food shipments , in which Ohio ships \$ 2 @.@ 4 billion of frozen food shipments annually . Ohio also ranks 1st out of every state in the United States in frozen food

shipments and Ohio 's frozen food industry accounts for 20 @. @ 7 % of the United States ' frozen food processing .

Several of the world 's largest food operating plants are operated in Ohio : the world 's largest yogurt processing plant is operated by France @-@ based Groupe Danone in Auglaize County , which announced an \$ 88 million expansion of its facilities in 2011 ; Campbell 's operates the world 's largest soup processing plant in Napoleon , Heinz operates the world 's single largest ketchup processing plant in Fremont , and General Mills operates the world 's largest frozen pizza processing plant in Wellston . Pierre 's Ice Cream , headquartered in Cleveland , is undergoing an \$ 8 million , 35 @, @ 000 @-@ square @-@ foot (3 @, @ 300 m2) facility expansion of their operations .

Major food processing companies in Ohio include Kroger (Cincinnati) , T. Marzetti Company (Columbus) , The J.M. Smucker Co . (Orrville) , The Iams Company (Cincinnati) , Sunny Delight Beverages (Cincinnati) , and Givaudan (Cincinnati) . The Boston Beer Company and Jim Beam Brands has operations in Cincinnati . Other food processing sub @-@ industries that Ohio leads in include pet food (8 @. @ 4 % of the nation 's pet food , ranking in 2nd) , ketchup and dressings (7 @. @ 6 % of the nation 's ketchup and dressing production , ranking 2nd) , cookies and crackers (9 @. @ 9 % of the nation 's production , ranking 4th) , and soft drinks (6 @. @ 2 % of the nation 's production , ranking 4th) . The county with the most food processing facilities is Hamilton County , followed by Franklin County and Stark County .

Alpine Cheese in Winesburg is the exclusive manufacturer in the Western hemisphere of Norwegian Jarlsberg cheese . In October 2010 , Coca Cola announced a \$ 120 million expansion of their existing facilities in Columbus .

== == Eateries == ==

Major eateries headquartered in Ohio include Bob Evans Restaurants (Columbus) and Wendy 's (Dublin) . Buffalo Wild Wings was founded in Columbus in 1982 . The first Arby 's was located in Boardman . Charley 's Grilled Subs is headquartered in Columbus . Perkins Restaurant and Bakery was founded in Cincinnati . TravelCenters of America , which is the second @-@ largest truck stop chain in the country , is headquartered in Westlake . It is also Fortune 500 company .

== == Wineries and fine dining == ==

Through 2008 , the state was home to 124 wineries , up from 75 in 1999 , producing 4108 employment positions . The industry generated \$ 458 million in revenues and \$ 124 million in wages . 2 @. @ 2 million visitors toured Ohio 's wineries during that year , while the state ranked # 11 nationally in production and # 9 in grape production . Notables include Lake Erie Wineries , Chalet Debonne Vineyards , and Ferrante Winery and Ristorante .

Cameron Mitchell Restaurants is headquartered in Columbus .

== == Information == ==

Ohio @-@ native Thomas Edison helped contribute to the modern communications world through many of his inventions , including his stock ticker , Kinetoscope , phonograph , and his contributions to the telegraph . Ohio resident Granville Woods invented the telephony , which he sold to the American Bell Telephone Company .

Ohio is in the 1st quintile in the information industry , in terms of establishments for the information industry . In 2002 , Ohio had reached 4 @, @ 143 establishments , which are 3 % of the United States ' information establishments . Information establishments include printing and publishing establishments , broadcasting establishments , and telecommunications establishments . The Ohio Supercomputer Center is one of the largest supercomputer facilities in the country .

As of 2002 , there were approximately 106 @, @ 754 workers in Ohio working in the information industry . The total industry ranks 8th out of all 50 states in the number of establishments , and 9th

in the number of paid workers , which was 106 @, @ 754 in 2002 .

A prime sector in Ohio 's information industry is the broadcasting sector . The broadcasting sector ranks 9th out of all 50 states in the number of establishments , which is 1 @, @ 954 , 11th in number of paid workers , and 11th to its contribution to Ohio 's gross state product , which is \$ 6 @. @ 6 billion .

= = = Telecommunications , data , and information technology = = =

In the second half of 2010 , telecommunications companies announced \$ 540 million in investments and projects in the state , to result in over 20 @, @ 000 new employment positions .

Major telecommunication employers with headquarters in the state include Cincinnati Bell , Ohio Bell , a subsidiary of AT & T in Cleveland ; Ohio Telecom in Port Clinton , RACO Industries in Blue Ash , First Communications in Akron , and Horizon Telcom , Inc. in Chillicothe . Companies with operations in the state include L @- @ 3 Communications , Time Warner , AT & T , Verizon , Sprint , SBA Networks , Collabera Inc . , Cavalier Telephone , Waveland Communications , Embarq , Open Range Communications , Russell Cellular , and Windstream Communications . Frontier Communications in 2010 announced \$ 150 million in investment in the state to upgrade systems and high @- @ speed internet services .

Miamisburg @- @ based Teradata is the world 's largest data warehousing and enterprise analytics company , and Richfield @- @ based OEConnection is the world 's largest online automotive parts exchange , or OPSX . One Call Now , headquartered in Troy , is the nation 's largest information notification service and part of INC Magazine 's fastest @- @ growing companies list three years in a row , while OneCommand , headquartered in Mason , is the nation 's leading integrated and automated , personalized communications firm .

Hyland Software is located in Cleveland and employs 1100 + . India @- @ based Tata Group operates an information center Reno , while a software consultancy subsidiary Tata Consultancy Services located in Milford recently won a Workforce One Investment Board of Southwest Investing in People Award . Virginia @- @ based Computer Sciences Corporation has operations in Dayton , and Zethus Software is located in Youngstown . Razorleaf Corporation , headquartered in Stow , develops software solutions with companies such as Aras and Microsoft . Columbus is home to the Microsoft Heartland District . Bluemile is an award winning firm headquartered in Columbus specializing in data technology solutions . Bryan @- @ based Ruralogic is a subsidiary of Cleveland @- @ based Attevo , a global information technology consulting firm with their European headquarters in London , focused on insourcing solutions .

Convergys Corporation , the largest holder of outsourced SAP licenses in the world , is headquartered in Cincinnati . Dublin @- @ based Glomark @- @ Governan is a world leader in Enterprise Value Creation systems . QC Software is headquartered in Cincinnati and a leading provider of Tier 1 warehouse control systems . Hilliard @- @ based Redemtech , a division of Micro Center , is a world leader in technology change management . Veeam Software is located in Dublin , and TOA Technologies is a global leader in cloud computing @- @ based mobile workforce management and based in Ohio 's " Silicon Suburb " of Beachwood .

In July 2010 , AT & T announced the construction of a \$ 120 million data center in Akron , their 9th facility dedicated to such for the eastern seaboard of the United States , which was followed by the announcement in August of the construction of a \$ 20 million Involta data facility , also in Akron , which will be constructed to meet LEED certification .

In October 2010 , South Korea @- @ based Nautilus Hyosung , a leading ATM manufacturer , began operating their global software headquarters in Miamisburg . In December 2010 , France @- @ based Alcatel @- @ Lucent announced a \$ 20 @. @ 2 million project to move existing operations in Columbus to a new 60 @, @ 000 @- @ square @- @ foot (5 @, @ 600 m2) facility in the city , followed by New Jersey @- @ based Zycus , a software solution company , which announced in January 2011 it was opening offices in the state .

Diebold , the world 's third largest ATM manufacturer , announced in 2011 it would construct a new \$ 100 million headquarters in the Akron / Canton area .

=== Publishing ===

A main sector of the industry is the publishing sector . It ranks 9th out of all states in the number of establishments , which is 1 @, @ 015 , 10th in the number of employees , and 13th in its contribution to the gross state product . McGraw @-@ Hill operates a division in Columbus , Brown Publishing Company distributes over 70 publications throughout the state , and was recently sold to Ohio Community Media ; American Legal Publishing Corporation , headquartered in Cincinnati , codifies ordinances for 1 @, @ 800 cities and counties , and Knight @-@ Ridder has its roots in Akron , although now headquartered in California .

Block Communications , located in Toledo , owns major newspapers such as the Pittsburgh Post @-@ Gazette , as well as numerous television stations and networks from Idaho to Illinois . The E.W. Scripps Company , headquartered in Cincinnati , is a major American media company with newspapers from Florida , Texas , to California , and owns television stations located in markets from Baltimore to Phoenix .

=== Legal ===

Ohio is home to some of the world 's leading legal firms , including Jones Day and Squire , Sanders & Dempsey , headquartered in Cleveland . The state is also home to some of the United States ' largest firms , including Baker Hostetler in Cleveland , Taft Stettinius & Hollister , Frost Brown Todd , and Dinsmore & Shohl in Cincinnati , and Vorys , Sater , Seymour and Pease in Columbus .

=== Retail ===

Ohio is home to major retailers such as Macy 's , Elder @-@ Beerman , Luxottica , Abercrombie & Fitch Co . , Limited Brands , Victoria 's Secret , Pink (Victoria 's Secret) , Bath & Body Works , Express , Big Lots , Inc . , Value City , Tween Brands , Lane Bryant and DSW . Lululemon Athletica , Gap , Inc , Eddie Bauer and JCPenney also have major distribution centers in Columbus .

=== Tourism ===

In 2009 voters approved a ballot initiative allowing the construction of four new casinos in the state . Thirty months later Horseshoe Casino Cleveland , developed by Rock Gaming LLC and Caesars Entertainment Corporation , became Ohio 's first casino , when it opened on May 14 , 2012 . Hollywood Toledo , developed and operated by Penn National Gaming , opened 2 weeks later on May 29 followed by Hollywood Columbus , which opened on October 8 , 2012 . Horseshoe Cincinnati is expected to be the state 's fourth and final full @-@ service casino when it opens on March 4 , 2013 .

Ohio is especially famous for two of the largest amusement parks in North America which draw tourists from around the world : Cedar Point in Sandusky and Kings Island in Mason . Other major attractions include the Rock and Roll Hall of Fame in Cleveland ; the Pro Football Hall of Fame in Canton ; the Bass Islands near Sandusky ; the National Museum of the United States Air Force , the world 's largest and oldest military aviation museum located in Dayton ; The Wilds , one of the world 's largest conservation centers located in Cumberland ; the Columbus Zoo and Aquarium , the nation 's premier zoo ; Lake Erie ; and the annual Arnold Sports Festival in Columbus . Other notable attractions include the Toledo Museum of Art , the National McKinley Birthplace Memorial in Niles , the Egypt Valley Wildlife Area in Belmont County , the Stan Hywet Hall and Gardens in Akron , the Cincinnati Zoo and Botanical Garden , the Great Lakes Science Center in Cleveland , the Center of Science and Industry in Columbus , the Boonshoft Museum of Discovery in Dayton , the 125 historic covered bridges located throughout the state and the Great Serpent Mound in Adams County .

Toledo is the future home of the National Great Lakes Museum , making it the largest Great Lakes

Museum , a collaborative project of the Great Lakes Historic Society and Port Authority of Toledo to be opened in 2012 .

Notable hospitality venues include the Ritz @-@ Carlton and InterContinental Suites in Cleveland , Westin 's The Great Southern Hotel and the Hyatt Regency in Columbus , and The Cincinnati Hotel in Cincinnati .

= = = Film = = =

The motion picture industry has had a steady presence in the state for decades . Production companies include Hemlock Films , Tri @-@ C , Access Video , Creative Technology , Second Story Productions , and Shadetree Films in the Cleveland area ; Media Magic Productions , which includes an Emmy @-@ winning producer , and Classic Worldwide Productions in the Toledo area ; BCB Productions , Mills James , one of the nation 's largest independent production companies , I 'AMedia , Arginate Studios , Media Source , and Ascension 7 Films in the Columbus area ; and Bright Light Productions , J. Cage Productions , and Panoptic Media in the southwestern Ohio area . Studios and sound stages include RISE Studios and CSI Production Concepts in Cincinnati , Cleveland Audio Visual , and Gaiam Inc. in West Chester .

Since the Ohio Film Tax Credit was signed in July 2009 , twelve projects have received approval with a combined budget of \$ 76 @. @ 4 million through spring 2011 . The legislation makes eligible projects over \$ 300 @, @ 000 in production costs to receive up to 25 % reimbursement up to \$ 5 million and 35 % for locally employing . The legislation resulted in 9 movies filmed or planned in northeast Ohio alone in 2010 , resulting \$ 9 @. @ 46 million in wages for 3700 local employees , with an economic impact of \$ 24 @. @ 3 million for local businesses . In 2010 expenditures on film in the state were estimated to total over \$ 31 million , filming in locations that include Akron and Cincinnati also . In 2011 , Marvel Studios announced it would be filming portions of " The Avengers " in the Cleveland area , the largest film production in state history .

Other films that went into production in 2011 included " Boot Tracks " starring Stephen Dorff , " Confession " starring Danny Glover and Melissa Leo , " The Yank " starring Fred Willard , and the film adaptation of " I , Alex Cross " . The video game Galaxy Command is also slated for production . These productions will contribute to a further \$ 17 @. @ 1 million economic impact on the state .

Academy Award @-@ winning films with production occurring in Ohio have included Terms of Endearment , The Silence of the Lambs , The Deer Hunter , Rain Man , and Traffic . Other notable films include Air Force One , Men in Black , Shawshank Redemption , The Rainmaker , The Soloist , Eight Men Out , Tango and Cash , Major League , Spider @-@ Man 3 , A Christmas Story , and Happy Gilmore .

= = = Oil and natural gas = = =

Ohio is in the early stages of the development and exploration of the Utica @-@ Point Pleasant deposits in Ohio with more than 1 @, @ 000 wells drilled . The hydraulic fracturing process enables energy companies to tap into shale deposits to extract oil , natural gas , natural gas liquids , and condensate .

= = = Personal income = = =

Ohio was # 8 in the U.S. for personal income earned in 2005 , at \$ 373 billion . The average income for the top 5 % in the state was \$ 174 @, @ 026 in 2008 . Over two decades , the bottom 20 % average income bracket increased 11 @. @ 6 % to \$ 18 @, @ 337 , while the middle 20 % increased by 8 @. @ 9 % to \$ 49 @, @ 051 .

According to the Bureau of Labor Statistics in 2008 , the average annual salary for Ohioans was \$ 39 @, @ 820 . The highest paid professionals in the state were concentrated in the medical fields . Anesthesiologists , with average annual income of \$ 211 @, @ 060 , were the highest paid , followed by oral and maxillofacial surgeons at \$ 206 @, @ 670 , surgeons at \$ 206 @, @ 570 , orthodontists

at \$ 200 @, @ 770 , obstetricians and gynecologists at \$ 186 @, @ 740 , physicians at \$ 170 @, @ 730 , and dentists at \$ 165 @, @ 400 . Average annual income for other selected professionals include airline pilots at \$ 121 @, @ 330 , computer and information research scientists at \$ 99 @, @ 730 , physicists at \$ 98 @, @ 150 , chief executives at \$ 159 @, @ 730 , financial managers at \$ 109 @, @ 740 , aerospace engineers at \$ 94 @, @ 530 , biomedical engineers at \$ 72 @, @ 150 , art directors at \$ 83 @, @ 110 , police officers at \$ 49 @, @ 890 , chefs at \$ 43 @, @ 230 , housekeepers at \$ 19 @, @ 450 , construction laborers at \$ 37 @, @ 600 , steel workers at \$ 50 @, @ 690 , and elevator repairmen at \$ 70 @, @ 270

The state of Ohio 's residents have an overall \$ 35 @, @ 511 per capita personal income as of 2009 , up from \$ 33 @, @ 338 in 2006 .

Incomes vary by county . The median family income in Cuyahoga County is \$ 54 @, @ 506 , where the Cleveland Clinic is the single largest employer . Cleveland also has emerging biotechnology and financial concentrations . It is also worthwhile to note that while some cities in Ohio have declining populations , the overall growth in per capita income in Ohio increased by 4 @. @ 6 % from 2005 to 2006 .

= = Housing = =

According to the United States Census Bureau , there are an estimated 5 @, @ 045 @, @ 356 houses in Ohio , of which 4 @, @ 499 @, @ 506 , or about 89 @. @ 2 % are estimated to be occupied ; this is 0 @. @ 8 % above the national average rate of occupation . Houses with a mortgage are estimated to cost owners about \$ 1 @, @ 216 per month , which is \$ 186 below the national average . The United States Census Bureau also estimates that 3 @, @ 150 @, @ 239 houses are owner @-@ occupied , or about 70 % , which is 2 @. @ 7 % above the national average , and that an estimated 1 @, @ 349 @, @ 267 houses are renter @-@ occupied . The median house value is \$ 135 @, @ 200 , which is a significant \$ 50 @, @ 000 below the national average . Also , there are an estimated 545 @, @ 850 unoccupied houses . It is also interesting to note that the plurality of houses in Ohio were built from 1940 to 1959 (1 @, @ 175 @, @ 325 houses) , and that 3 @, @ 058 @, @ 721 houses are in some way dependent on utility gas .

In late 2009 , the average home value in Cleveland was \$ 139 @, @ 900 , Cincinnati \$ 149 @, @ 900 , and Columbus \$ 164 @, @ 900 . Clear Capital 's Home Data Index in July 2009 showed that Cleveland , Columbus and Cincinnati led the nation in home value increases , up 19 @. @ 6 , 15 @. @ 6 and 12 @. @ 9 percent . The top five counties through November 2006 for average listing price were Geauga County at \$ 388 @, @ 822 , Ottawa County at \$ 314 @, @ 786 , Union County at \$ 306 @, @ 872 , Warren County at \$ 267 @, @ 236 , and Hamilton County at \$ 237 @, @ 965 .

Some historians suggest Ohio is the birthplace of public housing , having submitted the first application for such to the Public Works Administration in 1933 . The state was also the first to establish a local public housing authority . Ernest J. Bohn , a Romanian immigrant to Cleveland , is credited as a pioneer in public housing .

= = Taxation = =

A new report by the Quantitative Economics and Statistics Practices (QUEST) of Ernst & Young in conjunction with the Council On State Taxation (COST) , ranks Ohio as third in the nation for friendliest tax environment . The study , " Competitiveness of state and local business taxes on new investment , " provides a state @-@ by @-@ state comparison of tax liabilities . The top five states ranked with the lowest effective tax rate on new investment are : (1) Maine (3 @. @ 0 %) ; (2) Oregon (3 @. @ 8 %) ; (3) Ohio (4 @. @ 4 %) ; (4) Wisconsin (4 @. @ 5 %) ; and (5) Illinois (4 @. @ 6 %) .

According to the Small Business & Entrepreneurship Council , Ohio 's top personal income tax rate ranks # 25 as of 2014 . The rate has been steadily declining since the 2005 tax reform , dropping from \$ 11 @, @ 506 @. @ 20 + 7 @. @ 5 % of excess over \$ 200 @, @ 000 in 2004 to \$ 8 @, @ 671 @. @ 63 + 5 @. @ 421 % of excess over \$ 208 @, @ 500 in 2013 . Ohio has replaced its corporate

income tax with a gross receipts tax called the Commercial Activity Tax (CAT) . Businesses with annual taxable gross receipts of more than \$ 150 @, @ 000 are subject to an annual minimum CAT of \$ 150 . Businesses with annual taxable gross receipts in excess of \$ 1 million are subject to the annual minimum CAT of \$ 150 plus apply a CAT effective rate of .26 % on receipts above \$ 1 million on a quarterly basis (with a \$ 250 @, @ 000 quarterly exclusion) . Ohio is # 24 in average property taxes at 3 @. @ 016 % of personal income , but the taxes vary by city and district . The state is # 19 in overall average percentage of income used for sales , excise , and gross receipt taxes at 2 @. @ 927 % .

Below are the simple personal income tax rates for Ohio :