PAPER THREE

Ohio Resurgent?

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Our purpose in writing these three papers is to help focus public interest and the upcoming gubernatorial debate on what we believe is one of the most important issues of the campaign: the future of the state's economy. This is a topic that has vexed Ohio's political leaders over the past four decades, and the challenge remains. If the problems were easy to define and fix, we would have solved them by now. These papers are not intended to promote a specific set of policy recommendations, but instead to provide the framework for candidates to engage in a constructive debate about what Ohio's course should be for the next four years.

In the first paper, we traced Ohio's relative decline in economic well-being from its postwar high more than 60 years ago. This decline has been painfully felt in the pockets of Ohio's citizens, as state per capita income has fallen from 9 percent above the national average in 1953 to more than 9 percent below in 2016. At the root of this reversal in Ohio's economic clout has been the loss of 700,000 high-paying manufacturing jobs in the state. The loss of these jobs reflects long-term structural forces that, for the most part, are outside the control of Ohio's policymakers. Increased domestic and foreign competition and changing consumer preferences have played a role, but the most significant influence has been automation on the factory floor. Ohio's challenge is not one of moving on from manufacturing. It is in developing and attracting new products and industries with profit margins that can provide earnings sufficient to support families and economic mobility for Ohio's population.

As Ohio's economy has shifted from one based on making things to one based more on providing services, workers in the state have had to adapt. Our second paper explored Ohio's evolving demand for and supply of skilled workers. By most measures, Ohio's workforce is better educated than ever before. Although this upgrading of worker education and skill needs to continue, there is lack of alignment in the state as to what kind of training is needed, how it should be structured and who should pay. Additionally, significant issues remain regarding the well-being of Ohioans who work important jobs that pay low wages and provide limited benefits.

Responses to these issues are too often shaped by ideology rather than pragmatically informed by the realities of the marketplace. These are complex issues to talk about, no silver bullet exists, and we cannot simply copy public policies from other states and expect them to work in Ohio. Economic development is resource and context specific. Public policies that appear to be effective in California or Texas may also need California or Texas resources and tax bases to work.

In this third paper, we hope to enrich the debate over Ohio's economic future by posing a series of questions to the hopefuls for governor in the 2018 election. These questions are also appropriate for legislative candidates:

1. What will be your priority for initiatives aimed at improving Ohio's economy? Is it number of new jobs, number of well-paying jobs, median family income, or something else?
2. Governors of both parties have tried to stanch the relative decline of Ohio's economy and return to the prosperous 1950s and '60s. But to what extent can any state government, through either program initiatives or tax policy, exert a significant influence on the direction of a state's economy?
3. Gov. Kasich has launched several initiatives designed to create more jobs and help Ohio businesses and workers. Which of these would you continue as is? Which ones would you continue but modify, and which ones might you abolish altogether?
    a. Privatization of some Ohio Department of Development functions into a nonprofit corporation (JobsOhio)
    b. Creation of Office of Workforce Transformation
    c. Identification of nine industry clusters
    d. Reduction in personal income tax rates
    e. Establishment of a business income tax pass-through exemption to assist certain categories of small business
    f. Medicaid expansion
    g. Mandatory renewable energy standards
4. Do you think Ohio's energy, transportation, and water and sewer infrastructure is capable of supporting the state's goals for economic growth? If not, what would you do to keep Ohio competitive in this regard, whether

or not the federal government acts, and how should such efforts be paid for?

5. Do you think the current state tax structure is conducive to economic growth? If not, what would you do to change it?
6. Do you think targeted tax breaks and other financial incentives are appropriate tools for recruiting or retaining businesses? If so, at what level does the cost exceed the benefits? What measures other than tax incentives do you think are necessary to attract and retain jobs for Ohio?
7. Do you support what is known as "right-to-work" legislation, which limits the ability of unions to collect dues or service fees from nonmembers?
8. What portion of Ohio workers do you think needs a bachelor's degree or higher over the next five to10 years? What would you do to help achieve that goal, and who should pay for it?
9. What portion of Ohio workers do you think needs training beyond a high school diploma but less than a four-year degree (including apprenticeships)? What would you do to achieve that goal, and who should pay for it?
10. Should the state do more for "forgotten Ohio," those communities outside of major metropolitan areas that are losing jobs, and should it do more for the many Ohioans who work in important but low-paying jobs?
11. What would you do to help Ohio employers deal with the challenge of finding workers who can pass a drug test, while still ensuring a safe workplace?
12. What are the most important policy issues regarding Ohio's economy to be decided in Washington D.C.? How would you go about making sure Ohio's economic interests are effectively represented at the federal level?

In the remainder of this paper, we will examine these questions in more detail. We will begin at the intersection of politics and public policy by taking a look at what actions previous governors have tried to address these issues. We will then take a closer look at the issues involved with creating jobs and the challenges of matching the skills of Ohio workers with the needs of our employers. In the fourth section, we explore the "forgotten Ohio" issue and close with a discussion of federal policies that affect Ohio's future.

AN OPPORTUNITY MISSED?

In fall 1960, a group of 100 business leaders from The Ohio State University Alumni Advisory Council proposed that the state invest $15 million in an engineering research center on campus. The proponents argued that Ohio was falling behind other states in high-tech research, particularly in electronics and materials. If the state didn't up its investment in these areas, the business leaders warned, Ohio would fall further behind and suffer a significant loss of jobs and tax revenues by 1970. The Ohio State administration and its Alumni Association rallied behind the proposal and managed to get it approved by the Ohio House, only to have it die in the Senate.[1]

Meanwhile, several other states did make the kinds of investments the business leaders had championed. Some of those states have thrived in the decades since, while Ohio's economy has faltered, just as the Ohio State alumni had predicted. Was this a missed opportunity that could have changed the direction of the state's economy? It is tempting to conclude that, yes, state officials blew it: had they supported the Ohio State proposal, Ohio's future would have been secured. But real life is seldom so tidy.

JOBS FOR OHIO

A long succession of Ohio political leaders has tried to jump-start the state's economy. Five years after the Ohio State Alumni Advisory Council proposal was made, Ohio Governor James A. Rhodes proposed a $25 million Transportation Research Center in Marysville to be run by Ohio State's College of Engineering. The project, which was conceived of as a way of leveraging Ohio State's strength in transportation engineering to attract high-tech jobs to the state, was quickly approved by state legislators. And the investment paid dividends when it proved critical in attracting Honda to Ohio 10 years later.

Gov. Rhodes, whose catchphrase was "jobs and progress," was one of the first governors in the country to tout the state's role in economic development. He went on to become one of only six U.S. governors to serve four four-year terms (1963-71 and 1975-83). Rhodes expanded the state's higher education system with the goal of placing a campus within 30 miles of each student and, at the same time, improved vocational education. Rhodes served in many ways as a model for his successors:

1. Gov. John Gilligan (1971-1975) upgraded the Ohio Department of Development and sought to attract more service- and technology-oriented firms to diversify Ohio's industrial base.
2. Gov. Richard Celeste (1983-1991) initiated the Eminent Scholars program and Edison Technology Centers to tie business and universities together to support high-tech job creation and retention in Ohio.
3. Gov. George Voinovich (1991-1999) continued these programs and strengthened the role of local development efforts and private/public partnerships across the state.
4. Gov. Robert Taft (1999-2007) initiated a phased-in reduction of business and income taxes and established the Third Frontier program to provide early-stage and venture capital for high-tech business expansion in Ohio.
5. Gov. Ted Strickland (2007-2011) continued the phased reduction of business and income taxes and established the University System of Ohio to make higher education more supportive of economic development.
6. Gov. John Kasich (2011-2019) privatized Ohio's development efforts, created special tax incentives for small businesses, and worked to transform the public workforce system to be more closely aligned with business job skill needs.

Despite these initiatives, Ohio has remained on a disappointing trajectory in terms of both job creation and income growth. Does this reflect a failure of policy on the state level or broader trends in the national and international economic environment?

Comparing Ohio's per capita income to the nation overall and to our five neighboring states suggests that the fault does not lie, at least not solely, with the state or even with the actions of its leaders. We are experiencing what economists call "path dependencies." Our way forward is freighted by our past. The very industries that provided opportunity and well-being between the end of the Second World War and the end of the Vietnam War, the institutions erected to reinforce the competitive advantage of those industries ranging from educational expectations to unions, and the implicit social contract that existed among capital, labor, and government hurt entrepreneurship and deflected capital investment from our state and directed it toward others. There was a strong sense throughout U.S. regions that benefited from manufacturing during the era of assembly-line mass production that the economy and life would not change. But they did.

Table 3.1 shows that Ohio's decline relative to the nation as a whole is part of a pattern largely shared with our border states, except in two cases: Pennsylvania and Kentucky.

In Pennsylvania's case, it is important to note that the western half of the state (including Pittsburgh) is more like Ohio in that it has faced a decline in heavy manufacturing, but the eastern edge (including Philadelphia) is part of the thriving East Coast metropolitan economy.

Kentucky's per capita income has increased, but the state started with a manufacturing base far below Ohio's and still trails its

Table 3.1 Ratio of Per Capita Personal Income for Ohio and Neighboring States to National Average (100), 1960-2015

State	1960	1970	1980	1990	2000	2010	2015
Ohio	105	101	98	94	93	91	90
Pennsylvania	101	100	100	100	99	104	103
Michigan	105	104	102	98	99	87	89
Indiana	99	96	93	91	92	87	87
Kentucky	71	78	81	80	81	82	86
West Virginia	72	77	80	74	73	80	76

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Per Capita Personal Income at bea.gov/itable.

neighbor to the north in per capita income.

Looking beyond Ohio and its neighbors to other Great Lakes states, such as Wisconsin and Illinois, the similar pattern of decline over the past half-century is evident. In other words, states of the industrial Midwest largely lost ground in terms of per capita personal income compared to the nation as a whole. On the other hand, the big winners over this period were states such as Massachusetts, which saw its ratio to U.S. per capita income grow from 113 in 1960 to 130 in 2015, and Virginia, which grew from 83 to 108.

It is possible that these statewide totals are so broad they may mask the success or failure of individual state policy changes. It is also important to remember that jobs are not usually created on a statewide basis, but on a local basis — within regional labor and housing markets. Pittsburgh is a good example. While former industrial cities in Pennsylvania, such as Erie and Scranton, have continued to struggle, Pittsburgh has emerged as a model many point to for job growth and economic revitalization. After being hit hard by closing steel plants in the 1980s, Pittsburgh resurrected itself as a regional center for medical care, research and digital technology.[2] The specific ingredients of the "Pittsburgh Miracle" may not be replicable elsewhere, but the city's resurgence does demonstrate the ability of local areas to bounce back and underscores the importance of statewide strategies incorporating and complementing local efforts.

In any event, it makes sense to dig deeper to see what can be learned about where good politics and good policy might intersect, particularly in four key areas:

- Creating jobs
- Training skilled workers
- Helping forgotten Ohio
- Shaping national policy

JOBS FIRST

State development efforts have traditionally clustered around one of two approaches: 1) attract jobs directly by reducing the cost of doing business in a particular jurisdiction through tax cuts and other direct financial incentives, or 2) attract jobs indirectly by investing in improving worker skills, promoting access to new technologies, upgrading local infrastructure and promoting entrepreneurship.[3]

Results from these two approaches have been mixed nationally. Texas has been very successful in attracting and growing jobs by touting its low tax costs. Kansas has not. Massachusetts has been very successful on the public investment side; Illinois less so. Of course, Texas has oil and gas and the refineries along the Gulf of Mexico, and Kansas does not. Massachusetts has the electronics legacy of World War II and Cold War defense research, along with MIT, Harvard and Northeastern University's co-op engineering education program; Illinois does not.

Over the years, Ohio has pursued various initiatives reflecting both tax reduction and human capital approaches to development, but historically the state has focused more on reducing the costs of doing business. The success of such efforts is difficult to measure. Political leaders are quick to point to various business climate rankings when the results are favorable, but independent research has found little correlation between the rankings and job or income growth.[4] For example, Ohio has placed in the top 10 of Site Selection magazine's rankings on business climate for four straight years, one of the few non-Southern states to do so. Although this ranking is regarded as more credible than many others, Ohio has continued to lag the national average in job creation during this period.[5]

Chasing Smokestacks?

In the 1960s and '70s, Ohio stressed attracting large manufacturing plants. When it opened in 1966, the General Motors plant in Lordstown was touted as the largest and most technologically advanced at the time. By 1985, the Lordstown plant boasted 12,000 employees and injected more than half a billion dollars annually into the local economy. Although it began shedding jobs in the 1990s, the Lordstown facility still employs 2,000 workers. It has emerged from the restructuring of General Motors after the Great Recession as one of the most productive plants in the world.[6] However, its employment headcount has dropped by 10,000 people.

Honda began making motorcycles in Ohio in 1979 and cars in 1982. While employment at Lordstown was declining, Honda was expanding and now directly employs more than 14,000 workers and indirectly is responsible for another 20,000 jobs at parts suppliers around the state. These are jobs that pay good wages and offer good benefits.[7]

Not all of these deals worked out as well as Honda did for Ohio. The best-known failure was the incentive-laden plan that brought a Volkswagen Rabbit plant to New Stanton, Pennsylvania, in 1978. The plant never produced the 20,000 jobs that were expected, and it closed entirely in 1988, leaving 2,500 workers jobless, an empty 2.8 million-square-foot facility and taxpayers with a $70 million loss. Former Pennsylvania Gov. Richard Thornburgh later observed that it may be better "to have 50 small companies with 100 employees each" than one with 5,000.[8] Sony took over the plant to manufacture video glass in 2003, employing 3,000 workers at its peak, but closed in 2010 with the onset of the Great Recession. Today, the site has been repurposed and is aimed at attracting a diversified set of businesses.[9]

Although some states, particularly in the South, have been successful in attracting large auto assembly plants since then, many states have shifted away from the approach that some critics have called "smokestack chasing," in favor of greater emphasis on diversification. However, the bidding war that has erupted among cities and states after Amazon announced plans for a second headquarters suggests that political leaders are still willing to chase big deals that come with big promises of jobs.

Going Diversified

One of the fundamental dilemmas officials at the state level face is whether to try to expand their existing economic base or try to become more broadly diversified. Diversification is an increasingly attractive goal because it is assumed to provide the state with a buffer against the ups and downs of a changing economy. But diversification requires venturing into less-familiar industries in which the state or political subdivision does not have historically demonstrated advantage.

The dilemma faced by political leaders and economic development professionals in Ohio is that they do not get to select the economy they desire. The private sector chooses its locations, and the private market rewards and punishes companies for their business decisions. The private sector controls the demand side of the site-selection market. State and local governments have three roles. First, they act as facilitators or matchmakers. Economic developers link the supply side of the site-selection market (real estate, talent and location) to the demand side (companies looking to locate their businesses). Second, economic developers are marketers of the state's competitive resources. Third, they can try to lower the transaction costs involved with opening a new business establishment and mitigate the investment risk the company takes on when it invests in a new location.

In Ohio, manufacturing stands at the center of this dilemma. Manufacturing has been declining in terms of employment for 50 years, and that is not likely to change. However, the state is a very competitive location for different manufacturing industries, which could produce good-paying jobs and generate an enormous spin-off through their supply chains and through services provided to the business and its workers.[10]

Ohio has moved to a blended approach to economic development by: (1) targeting industries where regions of the state have demonstrated competitive advantage, (2) actively marketing to industries where the state may be able to satisfy future competitive requirements, and (3) supporting technology-based business formation and product development. The Kasich administration formalized the first two parts of its strategy by identifying nine targeted industries where average salaries in Ohio are twice what they are in the state's remaining industries.[11] These are:

- Advanced manufacturing (the use of advanced technology to improve processes and products)
- Aerospace and aviation
- Automotive

- Biohealth
- Financial services
- Food processing
- Information technology
- Logistics and distribution
- Shale energy and petrochemicals

Five of the nine (advanced manufacturing, aerospace, automotive, food processing and petrochemicals) are manufacturing-related industries. The others are industries in which Ohio has an existing competitive advantage. One of the benefits of this approach is that it recognizes Ohio's complex economic geography, which is based on a dispersed set of population centers (as opposed to one dominant area, as is the case with metropolitan Boston in Massachusetts or Chicago in Illinois), each with unique advantages. Such an approach also allows for efforts that support and encourage small and medium businesses, instead of focusing exclusively on larger ones. Small manufacturers and would-be entrepreneurs are more likely to need support in the form of technology transfer, venture capital and business incubation space.

Revenge of the Megadeal

While the ardor for megadeals cooled somewhat after Pennsylvania's Rabbit plant closed in 1988, the lure of big facilities never disappeared. In 1992, BMW transformed Spartanburg, South Carolina, from a struggling textile town into a global motor vehicle competitor. Tennessee won Volkswagen's second attempt to manufacture in the United States when it opened its plant in 2011. In August, Wisconsin announced a deal with electronics giant Foxconn to locate in the state a $5 billion plant that promises to open with 3,000 workers. Wisconsin offered a record $3 billion in incentives. The nonpartisan Wisconsin Fiscal Bureau estimated that it could be 25 years or more before state taxpayers break even. But, if history is any guide, in 25 years, automation will have reduced employment in that plant considerably.[12]

After the Foxconn deal was approved, the Wall Street Journal reported that Michigan had offered a larger incentive package in terms of dollar value, but Wisconsin carried the day because its proposal included cash payments for unused tax credits, while Michigan's offer did not. In other words, Wisconsin will transfer cash to Foxconn whether or not Foxconn pays taxes.[13]

The politics of these deals are very difficult for elected officials because of the enormous pressure to emerge from the competition a "winner." While the perceived benefits of succeeding in one of these competitions are immediate, the costs are usually less direct and more remote, often occurring long after the officials involved have left office. This gives the employer an overwhelmingly strong bargaining position. Amazon's decision to shop the site of its second headquarters and a potential 50,000 high-paying tech jobs touched off a bidding war among 238 communities, including some in Ohio. The usually business-friendly Site Selection magazine described this process as the "Hunger Games of economic development."[14]

While it makes sense politically and strategically to demonstrate an openness to any employer who wants to locate in Ohio, the escalating costs of these megadeals may be reaching the point where the risk is not worth the reward. Jobs Ohio does have a return on investment model that it uses to evaluate these proposed deals, but details have not been made public because of what the agency feels are competitive concerns.[15]

An alternative strategy might be to avoid bidding wars for large firms unless the state enjoys a significant competitive advantage and instead focus more resources on nurturing smaller homegrown firms that can develop into tomorrow's mega-firms, or what one think tank has called the "home-grown gazelles."[16] Although many small businesses may fail, the successful ones can create a lot more jobs at much less cost. Ohio and the Midwest are having some success in growing a flourishing array of small tech firms.[17]

Additional Issues

Attracting headline-making deals is only one part of the complex puzzle involving state government interventions to spur economic growth. Even if Ohio continues to pursue this blended, targeted-industries approach, some interesting questions remain:

1. **Non-targeted industries** – What is the state's policy position on supporting non-targeted industries, such as food service, hospitality and home health care? These industries provide thousands of essential jobs, but at the low end of the pay scale.

2. **Tax policy** – What is the proper level of business taxation? Over the past quarter-century, a reduction of the tax burden on business has been high on the agenda of state officials. In 2005, Ohio adopted a major business tax overhaul designed to spur economic growth in the state. Six years later, a study by the accounting firm Ernst and Young done on behalf of the Business Roundtable, which supported the changes, found that it had reduced the effective tax rate on new business investments by 50 percent as intended, moving Ohio from 31st in terms of tax burden to third-best among the 50 states. A 2012 study by the Tax Foundation and KPMG found the same thing.[18]

   In 2013, Ohio adopted additional tax cuts designed to help small businesses by exempting part of their income from the personal income tax. Critics argued that these changes primarily helped wealthy professionals, such as lawyers and physicians, rather than created jobs.[19]

3. **Right to work** – Twenty-six states have what are called "right-to-work" laws that are intended to restrict the collective-bargaining power of labor unions. Proponents argue that such legislation improves business climate and encourages job creation. Opponents argue that it hurts workers and leads to lower pay and benefits. Independent research is inconclusive. Some states with right-to-work laws, such as Texas, have thrived, while other states without such legislation, such as Massachusetts, have thrived as well.[20]

   Ohio is currently one of the 24 states that do not have this legislation. A statewide ballot issue to adopt right to work in Ohio failed in the latter part of 1958. The Ohio General Assembly did pass a bill in 2011 to limit the bargaining power of public employee unions, but it was repealed shortly thereafter in a statewide referendum. Since that time, legislation has passed in neighboring states, including Michigan, Wisconsin, Kentucky and West Virginia. Governor Kasich has said it is not a priority for him, but proponents of the legislation have vowed to continue the fight.[21] The next governor will have to decide whether right-to-work legislation is something she or he will support, oppose or remain neutral on.

4. **Energy** – Ohio is one of 29 states with mandatory renewable energy portfolios for electricity production. Proponents argue that this is the best way to allow an emerging industry to grow, which will lead to more jobs and a cleaner environment. Opponents argue that the government should not intervene in the marketplace in this case and that such standards would cause a loss of jobs in the fossil fuels industry.

   Strong majorities of both houses of the Ohio Legislature voted to end mandatory standards in 2016, but the bill was vetoed by Gov. Kasich. A second similar bill passed the House in early 2017. As of this writing, it is waiting in the Senate, pending negotiations with the governor's office. If an agreement is not reached, this issue will face the next governor.[22]

   Purchased power agreements, where utilities commit to buy power from affiliates, is another energy-related issue. Two major cases are now before state regulators. Utilities argue that these agreements are a hedge against market volatility necessary to assure adequate supply of electricity. Critics, including the Ohio Manufacturers' Association, argue that they are a form of corporate welfare that will drive up electricity costs.[23]

5. **Applied research** – A strong body of evidence supports the critical role of university research as a stimulus to economic development.[24] A 2012 study by an Ohio Board of Regents (OBOR) task force, which included business leaders, educators and public officials, concluded that Ohio was a "third-tier state" in terms of supporting technology commercialization.[25]

   The OBOR report referred to two national rankings as appropriate benchmarks. Ohio ranked 29th among the 50 states in the Milken Foundation State Technology and Science Index in 2010 and 25th in the Kauffman Foundation's New Economy Index. Since then, the results have been mixed. In 2016 Ohio ranked 26th in the Milken Index. The Kauffman Foundation changed its methodology in 2012, so a direct comparison is not possible, but the Foundation's "Growth Entrepreneurship" ranking placed Ohio seventh among the 25 largest states, an improvement from 13th the year before.[26]

In fact, both federal and business-sponsored research funding in Ohio is less than one would expect, given the size of the state's economy. In 2015 Ohio accounted for only 2.2 percent of federal research and development obligations and 2.1 percent of business-paid research and development even though Ohio accounts for 3.4 percent of the country's economic activity.[27]

The issue facing the next governor will be to determine which benchmarks to use and whether to continue existing tech transfer programs, such as Ohio Third Frontier, expand them, modify them or develop something different.

6. **Infrastructure** – What is the state's priority in maintaining the infrastructure needed to support targeted as well as non-targeted industries? Ohio does have a comprehensive infrastructure renewal program through the Ohio Public Works Commission; however, funds are limited compared to needs both in Ohio and nationally. The deterioration of state and national infrastructure (not just roads and bridges but airports, docks, dams, water-treatment facilities, the energy grid, internet access, public transit and railroads) is widely acknowledged by both business and political leaders.[28] Data compiled by the Center on Budget and Policy Priorities, a think tank that advocates spending more on infrastructure, show that Ohio's state and local investment in capital projects as a share of the state's GNP slipped from slightly above the national average in 2000 to 10 percent below by 2014.[29]

   Not only would a comprehensive infrastructure upgrade improve the competitiveness of Ohio businesses, it would also provide thousands of high-paying jobs for people with and without a college degree. Since there is already a reported shortage of some critical skills in this area, an expanded construction program might be paired with an expanded training and apprenticeship program to bring more workers into the field. Although jobs associated with infrastructure improvements are sometimes identified as temporary, a long-term (10-year) plan would provide stability that many other jobs lack.

   However, progress in addressing infrastructure challenges has been slow because of the large price tag involved and the lack of agreement regarding how to pay for improvements. Infrastructure is a particularly important issue for Ohio because of its aging transportation network and its location as a hub of logistics activity. If agreement can't be reached with the General Assembly regarding infrastructure funds and priorities, an alternate route would be for the governor to go directly to the people via statewide ballot initiative.

WORKERS FOR OHIO

The Elusive Skills Gap

In Paper Two, we discussed the issues involved in preparing Ohio workers for jobs of the future. We reviewed the various projections on what has been called the "skills gap" and found a surprising lack of consensus about how large of a gap there really is, or in some cases, if one even exists.

In December 2016, the Governor's Executive Workforce Board, a group of 25 leaders representing employers, labor unions, nonprofit agencies and public officials, reached its own conclusion. The board set a goal that "65 percent of Ohioans aged 25-64 will have a degree, certificate or other postsecondary workforce credentials of value in the workplace by 2025." Gov. Kasich quickly accepted the group's recommendations.[30]

The Executive Workforce Board did not elaborate on why it chose this goal or what education and training goals were for various subgroups. However, the board's recommendations very closely parallel recommendations contained in a 2013 report from the Georgetown Center on Education and the Workforce.

This table compares the educational recommendations contained in the Georgetown report with the Census Bureau's American Community Survey estimates on educational attainment levels among Ohioans age 25 or older in 2015. Comparing the data shows that only modest improvement is needed in all categories except in raising the share of residents in the state with bachelor's degrees and lowering the share of Ohioans with a less than a high school diploma.

If we accept the goal of upgrading educational levels of Ohio's workforce to be both politically necessary and feasible, a number of challenging questions still must be answered.

Table 3.2 Educational Attainment of Ohioans 25 and Older in 2015 Compared to Georgetown Center Projected Workforce Need by 2020

Category	Census 2015	Georgetown 2020
Master's Degree or Higher	9.7%	10.4%
Bachelor's Degree	16.4%	20.5%
Associate Degree	8.2%	9.9%
Some College	20.7%	22.2%
High School Diploma or Less	44.8%	37.0%

Sources: U.S. Census Bureau, "Educational Attainment, Ohio," *American Community Survey 5-Year Estimate, 2011-2015*, Table S1501 at factfinder.census.gov; Georgetown University Center on Education and the Workforce, "Ohio 2010-2020 Total Job Openings," *Job Growth and Education Requirements Through 2020*, (July 16, 2013), 80.

College Degrees: How Much Is Enough?

The Georgetown Center analysis for Ohio estimates 30.9 percent of the job openings between 2010 and 2020 will require a bachelor's degree or higher. Based on census data, 26.1 percent of Ohioans age 25 and older had a bachelor's degree or higher in 2015, but among the critical 25-34 age group, 31.5 percent did. So, if present growth continues, Ohio should be able to meet this overall goal.

Beyond the issue of the appropriate number of degrees in the workforce, attention has increasingly turned to how higher education investments should be distributed by specialty. Some states have moved aggressively into channeling students into "high-demand" STEM (science, technology, engineering and math) disciplines. Kentucky, for example, has adopted a plan to directly incentivize its colleges and universities to emphasize STEM degrees and de-emphasize liberal arts.[31]

Supporters of the liberal arts, however, argue that their disciplines in fact produce the kind of graduates employers say they need most — people who are skilled at communications, problem-solving and teamwork.[32] A Harvard researcher recently highlighted that employment in occupations requiring analytical and social skills has outpaced the rate of growth in STEM jobs.[33] Others warn that more attention should be paid to regional differences in demand for skills instead of force-feeding a one-size-fits-all approach to skill development. Failing to respect what jobs the local economy can support risks creating skilled workers who will leave for other states. A more differentiated approach to skill development offers the potential to leverage competitive advantages associated with individual regional economies.[34]

This raises a series of important policy questions for Ohio:

1. Even if the state has enough degrees overall, are they in the specialties that are needed most? If not, is it better to depend on the free market to provide the needed skills or is some sort of government intervention appropriate?
2. Does it matter that Ohio has historically offered low state financial support and high tuition for college?[35] What implication does that have for student debt loads and upward mobility for historically excluded groups?
3. What about the research missions of Ohio's universities? Job growth is closely associated with high levels of research activity. Is Ohio doing enough to support this?

Mid-level Skills: Definition Elusive

No other aspect of workforce development has attracted as much recent attention as apprenticeships and other mid-level training. These programs are aimed at providing skilled, good paying jobs for people without a four year college degree. These mid-level skills are usually defined as those obtained through associate degrees, apprenticeships, certificates or some college beyond high school. Beyond that, there is little agreement about the mix of credentials needed to meet demand or the total number of jobs requiring workers with mid-level skills. For example, the National Skills Coalition estimates 51 percent of all job openings in Ohio over the next 10 years will require mid-level skills, the Georgetown Center predicts 31 percent, and the Ohio Office of Labor Market Information projects 13 percent.

The National Skills Coalition did not provide detailed estimates of which specific components of mid-level skills would be required. The Georgetown Center did estimate that an associate degree would be required for 9.9 percent of jobs open between 2010 and 2020. The Census Bureau estimated that 8.2 percent of Ohioans over age 24 held associate degrees in 2015, compared to 8.1 percent nationally and 7.3 percent of Ohioans in 2010. If Ohio maintains the same rate of growth from 2015 to 2025 as it did for the period 2010 to 2015, it should be able to meet this goal.

Apprenticeships have long been used to develop valuable skills and trades, but they have been receiving renewed interest due to the heightened focus on mid-level skills in Ohio and nationwide. German employers have been particularly successful at utilizing apprenticeships to create a skilled, globally competitive workforce, particularly in manufacturing. Sixty percent of German high school students participate in such programs, compared to less than 5 percent in the United States. Although wholesale imposition of the German system on American workers and companies is not feasible, many political leaders, employers and workforce advocates have called for an expansion of apprenticeship opportunities in the United States. President Trump and the National Skills Coalition have advocated increase the number of apprenticeships by tenfold but have not elaborated on how to get there.

According to the U.S. Department of Labor, Ohio had 16,237 active apprentices in federal Registered Apprenticeship programs in 2016, third-largest among all states.[36] The Governor's Office of Workforce Transformation has made expansion of apprentice programs a priority, as have many localities in the state. However, it is not clear what the ultimate goal is and how long it will take to get there.

Certification programs increasingly provide another avenue for developing mid-level skill talent. These programs may be offered through secondary or postsecondary institutions or through industry organizations. Some certification programs have been developed to serve the talent needs of specific businesses; others attempt to address skill demands for entire industries. Yet, there are questions regarding how many and what kinds of certifications are needed, who should pay for such programs, and whether certifications have the same portability for workers as associate degrees.

For Ohio to move ahead in developing mid-level skills, it needs to be able to address the following questions:

1. Even if the number of associate degrees being produced is about right, are they distributed appropriately?
2. What are the goals for apprenticeships over the next 10 years, and what should be the distribution between manufacturing and nonmanufacturing?
3. What other mid-level skills are needed, and what training level is appropriate?

The Forgotten 35 Percent

Even if the ambitious goal of 65 percent of Ohio workers having training beyond high school is met, that leaves people with a high school diploma or less. With this being the case, state leaders need to ask themselves what responsibility, if any, the state has in supporting these workers. For example, what is an appropriate minimum wage? Ohio's minimum wage, which is indexed to the Consumer Price Index, stands at $8.30 per hour in 2018 for most employees (compared to the national minimum of $7.25).[37] A wage too high can slow job growth, but a wage too low slows demand and puts people on public assistance who shouldn't be. What responsibility does the state or federal government have in ensuring that these workers have access to benefits, such as health insurance?

The K-12 Foundation

Although training beyond high school is increasingly critical in the modern economy, ensuring that all students graduate from Ohio high schools equipped with the basic skills to pursue opportunities in the workplace, as well as in college and training programs, is also important. Ohio school districts have steadily improved their graduation rates over the past 15 years, and most comparisons of state performance data rank Ohio schools somewhere in the middle on various metrics, or roughly around the national averages.[38] Thus, it's fair to conclude that Ohio's K-12 system isn't holding Ohio back compared to other states, but it also doesn't provide a competitive edge overall.

Still, the state is struggling with a number of contentious issues, such as the appropriate standards for measuring and comparing district performance, charter schools and funding differences among districts. The Governor's Executive Workforce Board also identified a significant gap in expectations between Ohio's employers and its educators.[39] Employers want new employees to be more job-ready, requiring minimal additional training. Educators think their job is to prepare students for success at lifelong learning because job requirements are likely to change for them perhaps several times.

Governor Kasich attempted to address this by proposing that three business executives be added to each local school board. This proposal did not meet with much support from educators or legislators and was eventually dropped. More recently the governor has supported changing the reporting line of the Department of Education from the Board of Education to his office. At the time of this writing, it is not clear whether this proposal will be adopted.

Nevertheless, the challenge is a real one. Employers need people ready to handle the jobs they are hired for, but they will also need workers who can adapt to new skills as those jobs change. This does not lend itself to a simple solution, but perhaps the next governor may want to begin by bringing educators and businesspeople together to find some common ground.

Long Lead Times

In our first paper, we discussed the impact of automation on Ohio jobs, particularly in manufacturing. This trend is likely to continue, placing an even greater premium on being able to retrain people in a timely way. Yet, for the most part, Ohio is following a training timeline developed 100 years ago: two years or more for associate degrees, four years or more for bachelor's degrees, three years or more for doctorates and professional degrees, and from one to six years for apprenticeships. Perhaps it is time to re-envision postsecondary education and training, allowing a quicker route to a degree or credential. The time needed to complete programs should not be cut just for speed's sake or to improve completion numbers. The goal should be the "just right" time — neither short shrift nor overly long — needed to acquire relevant knowledge and skills. There have been some efforts to streamline degree and credential programs — for example, Ohio has developed three-year pathways to some four-year degrees — but more needs to be done.

A Workforce Crisis

In Paper Two, we discussed the workforce challenges related to substance abuse, including opioid addiction and marijuana use. One of the challenges facing employers in particular and society at large is whether there is a difference in risk between addiction to painkillers and casual use of marijuana. This poses two policy-related questions to the next governor:

1. Do you see a difference in risk between opioid addiction and casual use of marijuana? What should the state do or not do to help employers deal with this problem?
2. For high-risk opioid abusers, what should Ohio be doing to see that they are provided with incentives to seek treatment and rehabilitation, and, for those who have done so, what, if anything, should the state do to encourage employers to hire them?

Tyranny of the Business Cycle

All the projections used to identify future skill levels assume slow but steady growth in the state's economy. This is not an unreasonable assumption, but an economic downturn is inevitable at some point. Recessions have a way of wreaking havoc on people and on businesses. For example, in response to the last recession, employers across the country reduced apprenticeships by 19 percent from 2008 to 2011, according to the Department of Labor, and the number did not rebound to 2008 levels until 2015.[40] It's unfortunate, but an apprenticeship is not very meaningful without a job to attach it to. Moreover, when the economy does recover, shortages tend to develop quickly because the pipeline has dried up.

There is no easy solution. However, one option would be that the state could work with businesses to set up some sort of rainy day fund similar to the one for the state's general funds budget. Such a fund could be used to keep the pipeline for skills training in high-demand occupations flowing until the economic cycle turns back to growth.

What's Next for Workforce Transformation?

The Governor's Office of Workforce Transformation was established to bring some order to the patchwork of offices and agencies responsible for preparing Ohio workers for the new economy. The discussion of labor force issues in this section highlights the complex relationship between worker supply and demand in Ohio's changing economy. Consequently, a key question facing the next governor is what he or she wants for this office. The answer will be an important indicator of what the approach may be to bring more good jobs for Ohio workers.

Some of the questions the next governor will need to address include:

1. Should the five-year-old Governor's Office of Workforce Transformation be continued, and if so, be more aggressive, less aggressive or about the same?
2. Now that the state has accepted the goal of 65 percent of the workforce having some training beyond high school by 2025, what does that mean exactly? How much emphasis should be placed on apprenticeships versus certificates, or doctorates compared to associate degrees? And would the state be better off with goals expressed as a range, rather than something to the nearest tenth of a percent?
3. At what pace should these goals be implemented? Should there be a crash program to fill the biggest gaps as soon as possible or a more incremental approach that provides more flexibility to adjust to changes in a dynamic jobs market?
4. How do we get better alignment between skills needed by employers and training offered to workers? Does it make sense to focus more on credentials, on job-specific skills, or a combination of both?

OHIO VERSUS THE WORLD

Decisions made by others, including the federal government, have a lasting impact on the welfare of Ohioans. Some of these are obvious, such as trade policy or Medicaid funding. Others are less obvious, such as the value of the dollar, which dramatically affects exports of Ohio manufactured goods, or the future of federal installations. Federal facilities, such as the NASA Glenn Research Center near Cleveland, the Defense Supply Center Columbus and the Wright-Patterson Air Force Base near Dayton, are sources of thousands of well-paying middle-class jobs. Wright-Patterson is Ohio's single-largest employer at one location, with 27,600 workers, two-thirds of whom are civilians.[41] The Defense Supply Center provides 7,600 jobs, and the NASA Glenn Center employs 3,200 workers, 855 of whom hold at least a bachelor's degree.[42]

Ohio's elected officials are active on many of these federal issues that affect the state, but Ohio policymakers, particularly the next governor, must determine which issues, going forward, are likely fruitful investments of time and energy and which are not. For example:

1. What should be the highest priorities for advancing Ohio's interests in Washington? For example, Gov. Kasich has been out front in offering bipartisan alternatives to fund Ohio's Medicaid expansion. Sens. Brown and Portman have worked across party lines on issues of unfair trade practices and opioid addiction.
2. To what degree should Ohio work with neighboring states, which are also, in a sense, competitors, to support a common agenda? Ohio participates in a number of organizations, such as the Northeast-Midwest Institute and the Great Lakes Council, that work to influence federal policy. Do these organizations offer an opportunity to serve as a force multiplier to counteract the loss of congressional seats due to population losses?
3. To what extent should the governor try to reconcile differences among Ohio interest groups on issues such as trade, where various groups may have disparate objectives? For example, the debate over NAFTA has revealed deep splits among businesses based on how much they depend on export sales or imported parts. Ohio's auto assembly plants serve as a classic example. Is it worth state officials' time to try to develop a common position, or is that a fool's errand?

FORGOTTEN OHIO

We have previously discussed the two components of the forgotten Ohio. The term applies to both certain geographical areas of the state and certain groups of workers. Sometimes these overlap; sometimes they do not. The loss of manufacturing jobs has been felt throughout the Buckeye State, but some areas have suffered more than others. Generally, the state's larger metropolitan areas with more diverse economies, such as Columbus, Cincinnati and Cleveland (and to a lesser extent Toledo, Dayton and Akron), have been able to replace at least some of their lost manufacturing jobs.

However, many of Ohio's rural areas and smaller cities have had a much more difficult time growing or attracting new jobs to replace those lost in manufacturing. Ashtabula, Hamilton, Lima, Mansfield, Portsmouth, Port Clinton, Springfield, Steubenville and many other similar communities continue to face a downward spiral of declining population, aging infrastructure and inadequate public services. These areas will never return to what they were, but they deserve something better than being written off. The Ohio General Assembly included a $60 million tax incentive for investment in rural areas in the latest budget bill, but Gov. Kasich vetoed the bill, arguing it was too broadly worded. He offered to work with legislators on alternative language, but critics of the bill argue that similar programs in other states have failed to deliver the promised economic growth.[43]

Another option for these distressed areas might be an investment fund targeted toward infrastructure improvements, such as clearing dilapidated properties or providing high-speed internet, which might help attract more jobs to those areas. For example, the Ohio General Assembly is currently considering a bill to expand high-speed internet access to 300,000 households currently lacking this capability.[44]

Even in more prosperous communities, opportunity has eluded many Ohioans who are working, but in low-paying jobs. Many of these low-wage workers are women and single parents. Many are black or Hispanic. Many are employed as food service workers, housekeepers, custodians, cashiers, laborers or home health aides.

In many cases, these workers who contribute valuable service to their communities lack the employer-paid health care, retirement plans and other benefits available to higher-wage workers. They are often vulnerable to events they can't control, such as in the case of sudden illness. They depend on state-established protections, including the minimum wage and health insurance. For example, about half of the more than 650,000 people newly eligible for Medicaid in Ohio under the 2014 expansion are employed or married to working spouses. Yet, their wages are so low that they meet eligibility requirements that household income not exceed $27,720 annually for a family of three.[45]

These workers are usually the ones most directly affected by political decisions involving health insurance, minimum wage and unemployment insurance. Although it is important to maintain an incentive for those in low-wage jobs to work, it is also important to recognize that these workers deserve a fighting chance to support their families and to better themselves.

This presents two related sets of questions for the next governor:

1. Do you think the state has a role in providing additional help for poorer, more isolated areas of the state that have lagged in economic growth? If so, what would you propose and how would you pay for it?
2. Do you think the state has a role in helping Ohioans who work but in low-wage jobs? If so, what would you do and how would you pay for it? Do you support a work requirement for Medicaid?

CONCLUSIONS: WHERE HOPE AND REALITY MEET

This paper has explored the intersection of politics and economic realities. We recount how Ohio governors of both political parties have consistently tried to improve the lives of Ohio workers and the state's economic vitality. Some of these efforts have been more successful than others, but none has significantly altered the state's trend of relative economic decline.

We argue that four areas deserve more attention from the gubernatorial candidates because they hold promise for improving the lives of Ohioans. These four issue areas center on how best to: 1) stimulate the creation of new jobs in industry clusters that have the potential both to diversify the state's economy and exploit its competitive advantages; 2) align the needs of Ohio employers with the skills of Ohio workers, particularly in the mid-level skill range, and streamline education and training programs; 3) address the unique challenges of Ohio workers and Ohio communities that have been unable to adapt to and compete in the modern economy; and 4) engage allies and develop effective political coalitions to shape federal policies that impact Ohio.

Ohio's next governor needs to be prepared to articulate, gain support for, adopt and implement a comprehensive strategy to move the state forward. Although understanding the past is important, the governor's vision and actions must not be directed at recreating the Ohio that was, but on building the foundation for the Ohio that can be.

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The findings, conclusions, and recommendations expressed in this report are the product of research conducted by the authors and do not represent the views of either the John Glenn College of Public Affairs or The Ohio State University.