TALENT-DRIVEN ECONOMIC DEVELOPMENT

A new vision and agenda for regional and state economies



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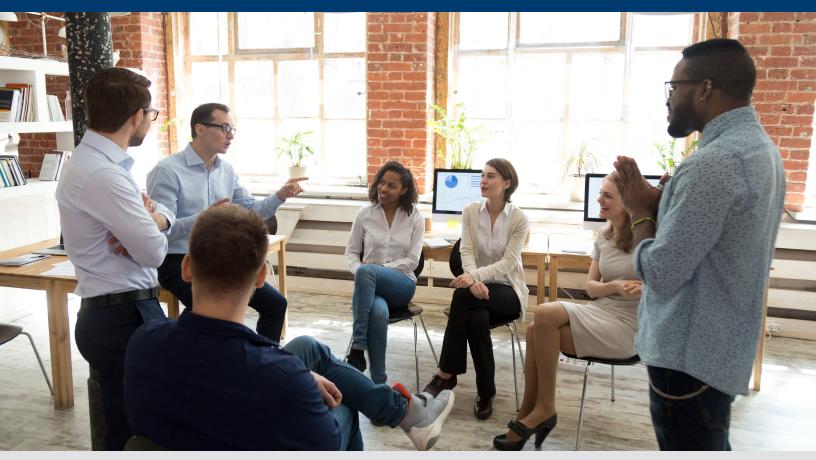
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Executive summary

1. Economies grow when they develop and deploy their people in ways that maximize their productive potential

Structural shifts in the labor market now mean that human capabilities are the fundamental driver of regional and state economic development. The collective knowledge of the U.S. population is worth approximately \$240 trillion, far exceeding the value of other inputs to economic growth. Educational attainment—the core, albeit imperfect, metric for gauging knowledge and skills—is one of the best predictors of economic success for an individual, organization, or community. How talent is developed and deployed, therefore, is of fundamental concern to local and state economic development organizations.

2. Economic development objectives-business growth and worker prosperity-are mired by two labor market challenges

First, talent development pathways are too unclear and unequal, limiting the supply of prepared workers. Broadly, three issues undermine talent development: (1) the U.S. favors a narrow "four-year degree for all" pathway to good jobs, (2) alternative pathways beyond traditional higher education are difficult for individuals to navigate, and (3) the entire talent development system suffers from racial and economic inequities that restrict the nation's productive potential.

Second, private sector hiring and training norms have shifted in ways that undermine inclusive talent development and deployment. Depending on the estimate used, the U.S. corporate sector invests anywhere between \$90-\$590 billion annually in training, but it tends to disproportionately go to highly educated workers, which limits inclusive talent development. Meanwhile, changing corporate norms and power imbalances between companies and workers undermine talent deployment by inserting unnecessary barriers between job seekers and jobs, including degree inflation, experience inflation, non-poaching agreements, and outright discrimination.

3. Economic development organizations (EDOs) were not originally designed to address these labor market challenges, hindering their effectiveness in a talent-driven economy

Workforce quality is paramount to core economic development interests such as business attraction, retention, and expansion, and 95% of executives rate the availability of skilled labor as "very important" or "important" to their investment location decision. But each year, only 2% of the country's \$50 billion in economic development incentives goes to job training, even as the return on investment from customized training is about ten times that of traditional tax incentives.

4. Economic development organizations can reorient their activities and expand their capabilities by generating talent intelligence, developing talent incentives, and supporting talent systems

The economic development field is not a monolith, and there are roles and responsibilities that EDOs are filling now or could fill with renewed focus. Drawing on a review of dozens of local and state initiatives, and interviews with over 50 leaders in workforce development, economic development, and education, we outline the challenges and potential applications for EDOs in these three areas:

EXISTING CAPABILITY: RESEARCH

Economic development organizations can raise awareness of key economic challenges and opportunities through rigorous research on regional trends and targeted outreach to business leaders to motivate action.

New application: Generate talent intelligence research products, outreach campaigns, and feedback mechanisms that help employers communicate skills needs and adopt hiring practices that address talent constraints efficiently and equitably.

EXISTING CAPABILITY: RESOURCES

Economic development organizations, typically city and state economic development departments, can deploy financial benefits or customized services to attract, expand, and retain businesses.

New application: Develop talent incentives that utilize public financing and/or technical services to encourage employers to invest in worker skills and productivity.

EXISTING CAPABILITY: RELATIONSHIPS

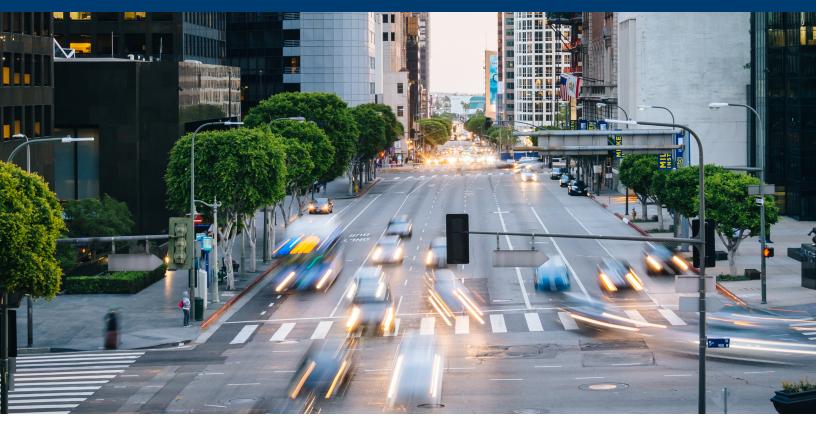
Economic development organizations can co-anchor systemic change by pushing the business community to address major socio-economic challenges.

New application: Support talent systems by helping businesses engage with the education and training system, from middle school through post-secondary education.

5. Five discrete priorities for economic development leaders.

Taken together, the framework provides one vision for how a talent-focused regional or state economic development approach can better accomplish its core mandate: help firms grow and create good jobs. How should economic development leaders proceed? We conclude the paper with five discrete priorities for economic development leaders:

- I. Realign state economic development spend to invest in proven **training solutions**, such as customized job training grants and community college partnerships.
- II. Target economic development incentives towards **opportunity-rich business practices** that help build local talent pipelines.
- III. Develop and disseminate **new skills-based hiring tools** that facilitate more efficient and equitable hiring practices.
- IV. Test new local **talent financing solutions**, such as revolving learning funds, that target training toward high-demand jobs.
- V. Experiment with new regional **Talent Exchange** intermediaries that connect middle schools, high schools, community colleges, higher education institutions, and in-demand skills providers with businesses in key growth sectors.



Introduction

During the 20th century, the sociologist Harvey Molotch contended that cities measured their success by population growth. Local "growth machines" consisting of developers, elected officials, and local institutions such as newspapers all benefited from—and therefore rallied around—population growth.¹ And if the fuel of the growth machine was population, its core asset was land. Land appreciation enhanced profits for landowners, boosted tax revenue for politicians, and was often accompanied by job growth that satisfied residents. Economic development organizations and local business leadership groups—which were invented in cities across America in the 20th century—worked with businesses and government to boost the local economy and, in many ways, represented the primary interests of the growth machine.

By 2010, the total value of America's urban land stood at \$25 trillion—an impressive figure, but one that pales in comparison to the new core driver of America's local economies: its people.²

Ultimately, cities exist for the benefit of their people. Cities that provide their residents with the opportunities and resources to participate fully in society align with common notions of fairness, justice, and morality. And to be clear, people are not commodities to be optimized, nor defined only by the knowledge they exchange for income. But that collective knowledge—or what economists call the "human capital stock"—is also the main source of any region's economic prosperity. One study estimates the value of the nation's collective knowledge at \$240 trillion, approximately 10 times the value of America's urban land.³

Yet, local and state economic development policy is still trying to respond to a world in which—to paraphrase the economist William Kerr—talent is any economy's most precious resource.⁴

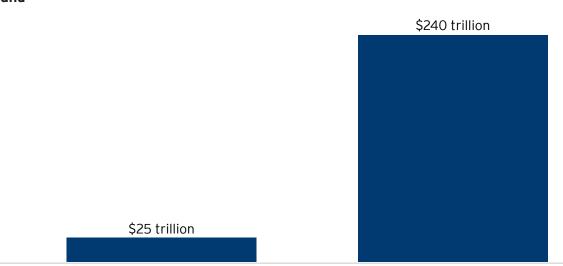
This paper argues that there is a significant upside to recalibrating the nation's local and state economic development system to train its sights on talent development and deployment rather than its current overwhelming focus of business attraction and marketing (see sidebar for how we define these terms).



This paper argues that there is a significant upside to recalibrating the nation's local and state economic development system to train its sights on talent development and deployment.

FIGURE 1

America's human capabilities are worth approximately ten times the value of its urban land



Source: Michael S. Christian, "Net Investment and Stocks of Human Capital in the United States, 1975-2013," (Washington: Bureau of Economic Analysis, 2016); David Albouy, Gabriel Ehrlich, and Minchul Shin, "Metropolitan Land Values," The Review of Economics and Statistics 100, no. 3 (October 25, 2017): 454-66, https://doi.org/10.1162/rest_a_00710.

Key terms

Talent development: investments in the knowledge, capabilities, and skills of America's workforce through education, training, and social support.

Talent deployment: the policies, processes, and norms that shape how people access jobs that allow them to deploy their knowledge productively in ways that enhance their prosperity.

Economic development system: entities that primarily work with and through businesses to achieve a broader economic or societal outcome, including city/county economic development agencies, regional economic development organizations, chambers of commerce, and industry cluster intermediaries. Distinct from educational institutions and workforce development agencies (the traditional workhorses of talent development), the economic development system works directly with or on behalf of businesses—and more broadly the regional economy-by providing business attraction, retention, and attraction incentives and services; researching, marketing, and promoting the local economy; and representing the interests of the business community in regional strategies as well as policy debates.

Two reasons necessitate this evolution.

First, economic development organizations must evolve their value proposition to meet the most pressing concern of existing or potential businesses: workforce quality. Businesses cannot grow without a capable workforce, and right now regional economies are undermined by frictions that limit both the development and deployment of workers.

Research has always shown that local economies develop only if their people do first, and today's tight labor markets have presented the case for inclusive talent development. Amidst historically low unemployment, and unable to effectively attract talent due to declining interstate mobility, economic development organizations are being forced to rethink homegrown talent development. That includes examining the systemic biases and barriers that have prevented residentsparticularly those disadvantaged by structural racism and economic inequities-from acquiring the skills and social supports that propel them into good jobs. In short, the combination of tight labor markets and the continued importance of human capital to business growth has provided economic development leaders with a new mandate to center talent development in their institutions, or risk irrelevance.

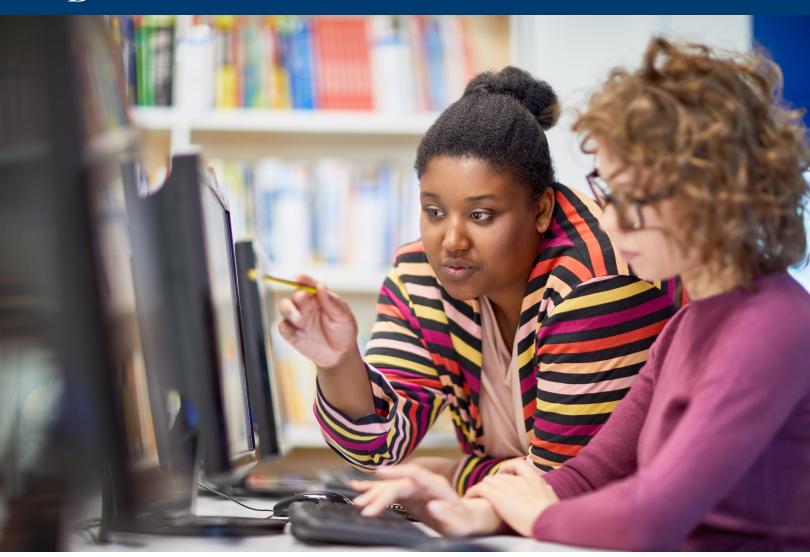
Second, while it has not been their historic mandate to engage in workforce preparation issues directly, an evolved economic development organization could offer a compelling value proposition focused squarely on the demand side of labor markets, complementing the education and training system's focus on labor supply. The value proposition involves three core resources that economic development organizations can bring to bear: research, resources, and relationships.

 Research refers to how economic development organizations can raise awareness of key challenges and opportunities by documenting regional trends and sharing intelligence with business leaders to motivate action.

- **Resources** refers to the estimated \$50 billion in economic development incentives that local and state governments provide to businesses each year. This figure is insignificant compared to the \$943 billion localities and states spent on education in 2016, but large relative to the nation's \$5 billion investment in federal job training programs. Yet, only about 2% of economic development incentives, or about \$1 billion per year, go to job training. This is a striking disconnect, for two reasons. First, workforce drives business site selection decisions; 95% of executives rate the availability of skilled labor as "very important" or "important" in their site selection factors.⁵ Second, the return on investment from customized job training incentives, as measured by job creation, is about ten times that of traditional tax incentives.⁶
- Relationships are the third part of the value proposition. As this paper will argue, no single American institution has been able to engage employers comprehensively in regional talent development and deployment efforts. Exceptional coalitions of industry, unions, community colleges, workforce boards, philanthropies, and social service providers have been built to prepare workers for in-

demand jobs, but coordination costs are high and employer engagement has historically been difficult. Economic development staff arguably have the relationships, trust, and credibility with the local business community to pilot new training models, experiment with outreach campaigns to shift business practices, and help move "industry engagement" in talent development from one-off partnerships to a more coherent, long-term system. Many EDOs at the vanguard are already part of these coalitions, but more needs to be done to centralize and fund these activities as part of economic development practice, while ensuring they benefit communities and workers, not only the private sector.

Local and state economic development leaders recognize the importance of a skilled workforce, especially in the wake of Amazon's talent-motivated decision to invest its second corporate headquarters in Northern Virginia. But behavior and institutional change is slow. It requires trailblazing innovators, fast followers, and eventual widespread adoption of new tools and organizational approaches. This report aims to guide that transition.



The opportunity: Economies develop when they invest in and successfully deploy people in the labor market

alent is the world's most precious resource," argues William Kerr in his new book The Gift of Global Talent. His argument draws on how structural shifts in the labor market now mean that educational attainment—the core, albeit imperfect, metric for gauging knowledge and skills—is one of the best predictors of economic success for an individual, firm, or community.

- For **individuals**, education or training beyond high school has clear benefits in the labor market. The earnings gap between the typical college and high school graduate soared from 38% in 1980 to over 70% in the postrecession period. What is most striking is that this wage premium has been maintained even as the share of workers with a college degree has increased three-fold since 1980.¹⁰ A recent Brookings analysis finds that a worker with a high school diploma has a 28% chance of holding a good or promising job; that chance increases to 38% for those with some college or a certificate, 51% for those with an associate degree, and a 70% chance for those with at least a bachelor's degree. 11 While earnings for college graduates vary considerably by degree, educational institution, and socio-economic background, there is still clearly a link between individual education and prosperity.
- For businesses, there is a clear and growing demand for workers with education and training beyond high school. Two-thirds of new jobs now require post-secondary education or an equivalent credential. 12 In a survey of more than 1,600 businesses, Bridging the Talent Gap, a nonprofit research organization, finds that a range of small, medium, and large businesses in 22 communities across six states reported that workers with higher levels of formal education were more likely to have workplace-relevant skills. Meaning that, regardless of the workplace conditions or specific skills required, employers viewed more education and training as an important contributor to success on the job. 13
- For local and state economies, educational attainment powerfully relates to prosperity. Educational attainment—as measured by high school and college completion—is one of two main factors (along with patenting rates) that explain the long-run divergence in state-level per capita incomes.¹⁴

These statistics point to a universal goal for a city or state's economic development: establish conditions in which people have the freedom and resources to develop their talents and deploy them in ways that realize their own potential.¹⁵

Importantly, this definition has two parts: talent development and talent deployment.

Talent development occurs via several channels. U.S. local and state governments annually invest nearly \$1 trillion in basic and higher education, and the private sector invests anywhere between \$90 and \$590 billion annually in on-the-job training. But individuals develop in countless other ways too. Families, peers, mentors, and communities influence any individual's life course. There is no way to quantify these "investments," but we know that social and environmental conditions outside of any individual's control will influence their economic trajectory.¹⁶

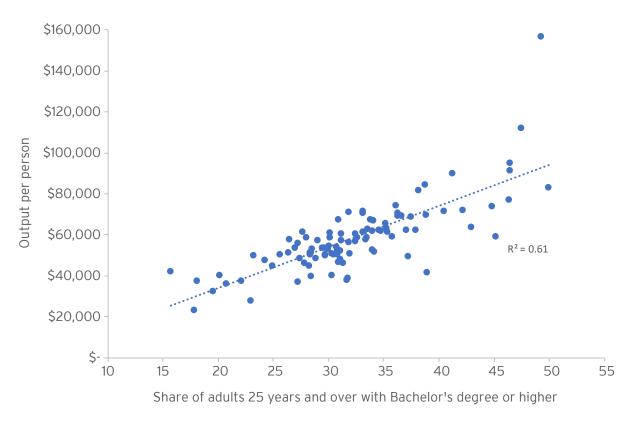
Talent deployment occurs via the labor market. Individuals know many things, but they contribute only a subset of that knowledge to the economy (what economists call their "human capital"). This is a function of both what they know, but also whether they can access jobs that allow them to deploy that knowledge productively. In this way, business growth and job creation-metrics that are already the focus of economic developmentare critical to creating demand for talent. Without local demand for workers, talent development simply results in brain drain.¹⁷

The interplay of talent development and deployment partly explains why large, highly educated metropolitan areas are thriving in the modern economy. Controlling for education and other characteristics, being in a highly educated region makes an individual more likely to participate in the labor market and find employment, especially for women and less-educated workers.¹⁸ Scale matters as well: The larger a region, the better the chance at a productive match between workers and jobs.¹⁹

FIGURE 2

Skills powerfully relate to regional prosperity

Output per person vs. BA attainment rate by top 100 metro



Source: Brookings analysis of ACS and BEA data.



The challenges: labor market and institutional challenges

Challenge Set 1: Labor market challenges

In a theoretical well-functioning labor market, individuals can match their talents with the job and skill requirements of businesses and receive wage compensation in line with their contributions. In reality, it has become clear that there are significant frictions that undermine the effective development and deployment of the nation's talent.

In the following section, we focus on two sets of labor market challenges—one involving labor supply and one involving labor demand—that are most relevant to local and state economic development leaders.

Education and training systems are too unequal and unclear

As a recent Brookings report summarizes, the basic outline of a successful journey to a career is clear: "Graduate from high school, enroll in a college or training program that is affordable and a good fit, earn a degree or credential, ideally gain some relevant work experience along the way, and then start a career."

Three core challenges complicate this journey for many young Americans.

First, economic inequities and structural racism strongly influence a young person's chance to succeed in education and training. Research shows that the most significant predictor of educational outcomes is parental income.²¹ Beyond class concerns, structural racism refers to the intentional public policies related to K-12 education, housing, and financial wealth building that have created a structurally unequal economic playing field on which Black, Latino or Hispanic, and Native American populations are now asked to compete as individuals.²² The good news is that college completion rates among these groups have increased dramatically in recent years. But they have not yet reached par with whites, suggesting many inequities remain. These inequities do not reflect the intrinsic desire or talents of the students themselves, but the structure of the systems they must navigate. Disadvantaged students disproportionately attend schools that are under-resourced or have worse academic outcomes.²³

The second challenge: The completion of a post-secondary degree or credential is essential to obtaining a quality job, but many students do not complete this journey due to the declining affordability of higher education, the wide variation in higher education quality and outcomes, and insufficient student-level supports.

The previous section outlined that completing post-secondary education yields rewards—the typical college graduate earns 73% more than a typical high school graduate. Pursuing higher education is a shrewd move, but only if you can complete the degree. Today, 45 million individuals have started but not completed college.²⁴ The need to support themselves and their families often limits the ability of low-income students to start or complete higher education. With less time and resources, higher education becomes a journey of fits and starts, especially since colleges and universities vary considerably in their ability to support low-income or first-generation students.²⁵ Oftentimes, the institutions serving the least-prepared students have the fewest resources. Yet, when making decisions about college, students often do not

have the information at hand or the freedom to make decisions that minimize these risks.

For those that do complete higher education, labor market outcomes can vary significantly by institution and degree. Community colleges-a critical talent development source-exemplify this variation. Technical degrees and certificates in high-demand fields offer students upward earnings mobility, especially when they are responsive to local labor markets.²⁶ But economist Harry Holzer also finds that nearly half of students receiving two-year associate's degrees receive them in "general studies" or "liberal studies"-fields that offer little financial reward upon completion.²⁷ Those that start and do not finish, or finish without a valuable skill set, are not earning enough to warrant the significant educational investment and are left to contend with student loan debts.28

The third challenge here is that alternative job training pathways remain underfunded and difficult to navigate. As mentioned above, training models that provide learners with in-demand technical skills and generalized skills such as communications and critical thinking have shown promise. These models often provide financial support to trainees as well as an in-demand associate's degree or certificate in partnership with local employers and either high schools or community colleges. The exceptional programs have benefitted both businesses and students, but the very notion of these pathways as "alternative" reveal the complexity of pursuing them. Information barriers, the nation's historical stigmatization of technical education, the limited counseling infrastructure to guide individuals to these programs, and the need to organize and engage businesses to make them effective often the limit the uptake and scale of technical education and work-based learning (at least in its current form). Greater national and state investment in programs that combine two-year degrees and credentials with on-the-job training could help scale what works.²⁹

Along with higher education, reforms to the public workforce system have embraced in-

demand training pathways as part of the services it provides to underemployed or unemployed adults. But this system suffers from continual disinvestment. Annual inflation-adjusted job training funding from the Department of Labor declined from \$17 billion in 1979 to \$5 billion in 2018, a 70% drop.30 These existing funds flow to states, then to a network of regional workforce investment boards that-due to dwindling resources-focus on employment placement rather than upskilling, which one recent estimate suggests costs up to \$12,000. For all these reasons, workforce development has been viewed by businesses, arguably unfairly, as more of a social service than as viable source of technically trained talent.31

Employer training and hiring models can undermine talent development and deployment

The next set of challenges involve business practices and norms related to workforce training.

The first challenge involves the erosion within companies of long-term career ladders supported by on-the-job training. The financial and preparation barriers to college completion discussed above are particularly devastating, because the onus is increasingly on individuals to develop relevant skills and signal them to employers.

In a past era, businesses may have recruited entry-level workers, trained them, and promoted them throughout their careers.³² Business still train: Accenture finds that 72% of large companies and 57% of small companies offer training to entry-level employees. *Training* magazine estimates that the U.S. corporate sector spends about \$88 billion on training. The Georgetown Center on Education and the Workforce estimates a much higher number: \$590 billion annually.³³ But previous research suggests most of this spending targets highly educated workers, not those that may need the training most for their own upward mobility.³⁴

The brutal irony is that college completion can be a necessary achievement to receive employerprovided training.

If employers care so much about skills, why aren't they training? Economic models have always predicted that businesses will invest below the societally optimal amount of worker training. One part of this stems from the cost and risk associated with a new hire.³⁵ Making a bad hire is costly-businesses want to minimize turnover-and therefore they are rationally risk averse when hiring. Even if worker quality is high, poaching is a concern. Unlike investments in physical capital or technology, people (thankfully) have choices about whether to stay in a job or not. Given this agency, businesses hesitate to train workers if they presume a short tenure will undermine the return on investment.³⁶

For individual businesses, this risk aversion may be rational, but it leads to economy-wide underinvestment in workers. Moreover, new research indicates that employers may be too risk averse. In describing hiring practices, education investor Ryan Craig observes that "employers are not seeing the talent they (think they) need, so they are resorting to degree inflation, experience inflation, and leaving positions unfilled."³⁷

Many education and labor market experts argue that firms place too much weight on a fouryear college degree and, in doing so, ignore other skilled and competent workers without this credential. Indeed, the Harvard Business School and Accenture found in a survey of 600 employers that "degree inflation—the rising demand for a four-year degree for jobs that previously did not require one—is a substantive and widespread phenomenon that is making the U.S. labor market more inefficient."38 Similarly, experience inflation explains why 61% of fulltime jobs seeking "entry-level" applicants require at least three years of experience.³⁹ Credential inflation and experience inflation are more recent frictions, exacerbated by automated hiring processes increasingly used by employers to screen out applicants.40

Hiring frictions extend beyond degree and experience inflation. Implicit or explicit racial discrimination in hiring remains prevalent to this day.⁴¹ Partly due to these hiring practices, the average Black worker has a lower employment rate and earns a lower wage compared to his white counterpart, even when controlling for educational attainment.⁴²

Finally, any discussion of talent development and deployment challenges would be incomplete without mentioning institutional changes that have created power imbalances between corporations and workers. Job security has diminished as corporate America has increasingly favored to "just-in-time" hiring and temporary employment relationships. One recent estimate finds that U.S. companies spend about \$27 billion on talent acquisition.⁴³ In 2016, U.S. staffing companies employed an average of 3.2 million temp and contract workers per week–up from 2.2 million in 2009.⁴⁴ The number of workers placed by staffing firms has increased six times faster than employment overall.⁴⁵ These staffing models

maximize business flexibility but likely also increase worker insecurity.

Compounding these structural changes in private sector hiring, declining unionization has limited collective bargaining power among less-skilled workers in particular. And workers in smaller communities where a few employers have outsized power in the local labor market are at a further disadvantage, due to the ability of businesses to set noncompetitive wages and benefits. Indeed, "low-road" employer practices—those that seek to minimize labor costs at the expense of job quality or worker productivity—seem to be increasing.

To summarize, it will be very difficult for the U.S. economy to remain competitive without addressing its too narrow, too confusing, and too unequal talent development system. Even solving for that wicked problem itself, however, would still leave these challenges on the demand side of labor markets.

Challenge Set 2: Institutional challenge

As the previous section argues, regional economies suffer from both talent development and talent deployment challenges, implicating both education and training systems as well as employers. This section explores the conundrum for economic development organizations: They were not designed to address this challenge, but their effectiveness in supporting business growth and quality job creation requires that it get solved.

Economic development organizations' traditional outcome metrics are influenced by talent development and deployment

Recall our definition of economic development organizations: entities that primarily work with and through businesses to achieve a broader economic or societal outcome. These entities

include city/county economic development agencies, regional economic development organizations, chambers of commerce, and industry intermediaries.

And recall our preferred goal for economic development at its broadest and most ambitious: establish conditions in which people have the freedom and resources to develop their talents and deploy them in ways that realize their own potential.

In practice, EDOs often judge their success much differently, typically associating the impact of their activities with local job creation, capital investment, and firm attraction. Given this mandate, economic development organizations arrive at these labor market challenges much differently than education and training providers. Oftentimes they are trying to solve growth constraints as quickly and cheaply as possible

for their core customer: existing or potential businesses.

While rarely framing the problem in these terms, economic development organizations care about talent development and deployment to the extent they are a binding constraint on business creation, attraction, and retention (at least in a period of high demand for labor).⁴⁹ Our broader argument is that the definition of economic development needs to better align to the importance of talent as a driver of development, but even for improving these traditional metrics a region's workforce quality is fundamental.

• For the purposes of **business attraction**, talent influences location decisions more than any other factor. Over 95% of the executives surveyed by Area Development in its 28th annual Corporate Survey rated availability of skilled labor as "very important" or "important" in their site selection factors. 50 As one site selector put it to us: "For 80% of our clients, talent is the key driver. This involves both quality and cost of talent, with quality rated much higher. In this world, flexibility is

extremely important, meaning flexibility in delivery, often through direct partnerships with training providers. But the training space, as it's currently formulated, is very fragmented and unclear to businesses."⁵¹

Recent anecdotes reflect the importance of talent to business location decisions. When asked why Amazon selected to locate its new headquarters in Northern Virginia, a spokesperson explained that it would allow the company to "have even greater success in attracting the best talent." When asked why storage-container manufacturer Sterilite built a new facility in lowa, one economic development official explained, "Workforce was a big part of it. How are you going to fill 500 seats? That's usually the No. 1 concern of anyone for a new location: How are you going to get up and running with a reliable and experienced workforce?" 53

 For the purposes of business retention and expansion, filling open positions now demands a more skilled workforce, as two-thirds of new jobs require post-secondary education

FIGURE 3

Talent influences traditional economic development metrics



ATTRACTION

OVEr of the executives surveyed by Area Development in its 28th annual Corporate Survey rated availability of skilled labor as "very important" or "important" in their site selection factors



RETENTION AND EXPANSION

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of new jobs require post-secondary education or a credential. Meanwhile, nearly half of U.S. businesses (46%) perceive a talent shortage

Source: Brookings analysis of ACS and BEA data.

or a credential. Meanwhile, nearly half of U.S. businesses (46%) perceive a talent shortage, according to ManpowerGroup.⁵⁴ For example, Shipt—a Birmingham-based online grocery delivery company—was recently purchased by Target, an infusion that would create nearly 1,000 jobs. Concerned that Shipt may leave for a larger market, the City of Birmingham co-developed a retention strategy with the company primarily via new investments in talent development.⁵⁵

Across a diverse range of industries and communities, these anecdotes suggest that the goals of talent development and economic development—even when isolated to the narrow concern of business attraction—are aligning.

The current role of economic development organizations in talent development and deployment is limited

At this point, however, it is important to raise the core institutional challenge motivating this paper: Economic development organizations have, with some exceptions, traditionally played a limited role in addressing talent development and deployment barriers.

Public economic development approaches to workforce issues differ by the level of government. At the state level, economic development agencies research and market workforce assets to recruit companies in key industries. Most states offer firms a training grant or credit as part of their incentive strategy, but it is typically offered as part of a business recruitment package. Increasingly, economic development commissioners and agency heads are working closely with their equivalents in higher education and workforce development, but the remit for talent development still typically remains in these latter two agencies. At the local level, while exceptions exist, city and county economic development agencies typically have very little direct role in these issues, instead referring local businesses to public workforce boards or community colleges to address workforce constraints.

Regional business groups, chambers of commerce, and public-private economic development groups play a slightly different role. Regional business leadership groups often have the mandate to organize the business community around pressing economic issues, which have frequently included weighing in on education policy debates and recruiting employers in sector partnerships or industry councils to meet shared workforce needs. Additionally, public-private EDOs and chambers of commerce lead regional promotion activities, which have made them prime candidates for "talent attraction" campaigns. Similar to business attraction, this involves marketing a community's labor market prospects and quality of life to footloose, educated workers-a topic this paper treats separately from talent development and deployment.

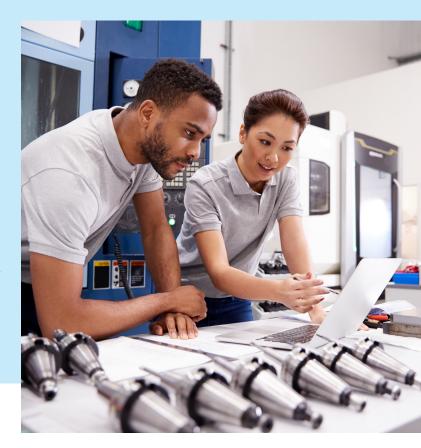
Is the role for EDOs in talent development limited for good reason?

There are several counter arguments as to why economic development organizations do not (or should not) play a greater role in talent development and deployment.

The first counterargument is that there are other institutions better positioned to engage and organize employers. Since workforce development boards were designed to be the nation's key labor market intermediary, should we be investing more in them to improve their industry engagement capabilities? Or should we invest more in community colleges, which are often the actual training providers involved in sector partnerships? Others argue that new national intermediaries are best positioned to deliver solutions. These take various forms but include global staffing companies that add a training component in addition to their placement function (e.g. Allegis Group, Adecco, ManpowerGroup), national nonprofit skill-orindustry-specific intermediaries that provide customized training to employers (Per Scholas, Year Up, LaunchCode), or for-profit train-and-place startups (Apprenti, Revature, Guild Education).

A second counterargument is that the value proposition of economic development organizations requires changing employer behavior. But that isn't really a classic market failure; if businesses don't want to invest in job training or engage in partnerships, that's their decision. And if worker-friendly hiring and training practices matter to profitability, then businesses that pursue low-road approaches will eventually lose profits.⁵⁶

Third, even if the value proposition is justified, economic development organizations focus too myopically on business outcomes alone, at the expense of goals related to worker and community prosperity. Employer-driven training may focus on too ardently on the current skills needs of employers and fail to prepare individuals with more durable skills—such as critical thinking, teamwork, and communications—that can prepare them for their next job if their current technical skills become obsolete due to automation or global offshoring.





Framework for Action: Economic development organizations can recalibrate or expand capabilities to better support talent development and deployment

he second part of the previous section acknowledges that the economic development field is not a monolith, and there are varied roles and responsibilities that EDOs are filling now, or could fill with renewed focus. Therefore, the framework presented here seeks to allow for that variation, conceding that there is no one-size-fits-all way for economic development organizations to evolve.

Drawing on a review of dozens of local and state initiatives, and interviews with over 50 leaders in workforce development, economic development, and education, we outline the challenges, responses, and roles for economic development organizations in three key areas:

EXISTING CAPABILITY: RESEARCH

Economic development organizations can raise awareness of key economic challenges and opportunities through rigorous research on regional trends and targeted outreach to business leaders to motivate action.

New application: Generate talent intelligence research products, outreach campaigns, and feedback mechanisms that help employers communicate skills needs and adopt hiring practices that address talent constraints efficiently and equitably.

EXISTING CAPABILITY: RESOURCES

Economic development organizations, typically city and state economic development departments, can deploy financial benefits or customized services to attract, expand, and retain businesses.

New application: Develop talent incentives that utilize public financing and/or technical services to encourage employers to invest in worker skills and productivity.

EXISTING CAPABILITY: RELATIONSHIPS

Economic development organizations can co-anchor systemic change by pushing the business community to address major socio-economic challenges.

New application: Support talent systems by helping businesses engage with the education and training system, from middle school through post-secondary education.

1. Generating talent intelligence

Constraint: Individuals and businesses suffer from lack of information.

In one respect, labor market challenges arise from a lack of information, coordination, and proper signaling between employers and workers. Contrary to economic theory, individuals and businesses do not operate with perfect—or even good—information about the value of skills and credentials in the labor market. For individuals, this uncertainty may result in the underinvestment or mis-investment in their own skills and competencies. The financial and opportunity costs of investing in post-secondary education and training can be high, and many individuals do not have the time or the resources to learn valuable skills—especially if they are

raising a family or can't take time off from their current job to attend training programs.

At the same time, employers often claim they cannot find the talent that they need to fill open positions. This partly derives from risk aversion and biases. Employers express their hiring uncertainty by relying on college degrees and prior experience as proxies for employability, potentially undervaluing capable applicants that do not check these boxes or who could do the job after being upskilled. Hiring decisions are also subject to racial discrimination in the labor market.

Action: Serve as talent intelligence providers.

Ultimately, this disconnect derives from bad information flow. Individuals are not certain

where to invest in their skills and competencies, while businesses are not providing information about their needs or are using outdated signals. As a result, labor markets suffer. Economic development organizations—entities that have historically provided research on the local economy—are well positioned to be talent intelligence providers.

Help clarify and build awareness for talent needs

First, EDOs can provide research and awareness **building** to promote public, private, and civic investments in new talent strategies. Where economic development organizations will likely be most valuable is providing locally tailored workforce-related research in ways that spur action in the business community. Data-driven reports that document talent shortages or talent advantages have been a precursor to major initiatives in regions like Indianapolis, Nashville, Tenn., and San Diego.⁵⁷ In Akron, Ohio, ConxusNEO, a new talent intermediary, has worked with the city's public schools, local community colleges, and business community to analyze and map career pathways in key sectors such as advanced manufacturing and information technology.⁵⁸

Understanding workforce advantages and disadvantages not only helps improve decisionmaking among the local talent development system, but it also prepares economic development organizations to have a more substantive conversation with existing and prospective businesses as they pursue retention and expansion activities.

These efforts will be most effective if they complement—not replace—existing national efforts related to talent research, awareness, and information provision. National technological platforms aim to provide clearinghouses for jobs, skills, credentials, and earnings to better inform decisionmaking by stakeholders. Major national efforts include:

- U.S. Chamber of Commerce's Talent Pipeline Management Academy, which works with employers and business intermediaries in hundreds of communities to help businesses-often in a particular sectordetermine their hiring needs, the skills and competencies associated with those jobs, and then select training "suppliers." Under this system, employers take command of talent development as they would any other supply chain decision: determine the need, signal the need, and choose the best supplier to address the need. As evidence of the upside associated with defining employer skills needs as well as the challenges of doing so, the U.S. Chamber has now launched a Job Data Exchange pilot that works with a select group of human resources departments to create transparent job descriptions and hiring requirements in select cities.⁵⁹
- Labor markets also suffer from an incredible variation in how workers use degrees and credentials to signal their employability. The nonprofit Credential Engine is gathering and standardizing information on the thousands of credentials offered by education and training providers in a Credential Registry.
- Other major technology platforms are pursuing similar efforts. Burning Glass
 Technologies and Emsi are providing realtime labor market information to inform decisionmaking. LinkedIn has long served as a clearinghouse for business-applicant matching. And Google is now partnering with the state of Virginia's network of educational institutions, employers, and state agencies to pilot its Pathways tool, with the ultimate objective of allowing individuals to Google not only open jobs in their area, but relevant education and training programs that lead to those jobs.⁶⁰

Few individual communities will be able to generate the kind of talent information infrastructure that will rival the scale and sophistication of large national efforts such as the Credential Registry or the Job Data Exchange, to say nothing of LinkedIn or Google. There may not be a need for local communities to invest their scarce resources in, for example, a Cleveland Job Data Exchange or a Sacramento Credential Registry, when these national platforms already exist. But these national undertakings also need local partners to populate their platforms. Connecting relevant employers, educational institutions, and workforce intermediaries into these national networks would be a valuable role for EDOs.

Influence employer practices

Second, EDOs can provide new intelligence that influences employer practices to help them improve their own talent strategies. A recent report examining the hiring and training practices of middle-market companies-those with revenues between \$10 million and \$1 billion, and which account for one-third of U.S. private sector jobs-provides useful context as to why this type of intervention is warranted. Nearly four out of 10 middle-market executives acknowledge their growth is constrained by a lack of talent, but the report also found that middle-market companies "offer wages that are too low, use rigid and overly prescriptive HR and recruiting systems, and have unrealistic expectations regarding skills and experience."61

Since employer practices impact labor market outcomes, research and outreach campaigns that codify best-in-class hiring approaches could be valuable to both employers and the broader society. ⁶² This requires a different type of awareness building and behavior change, one for which no clear public policy solution exists, but there is plenty of recent experimentation among new intermediaries focusing on how employers are communicating skills needs.

Economic development organizations are well-practiced in communicating the needs of businesses back to their communities. But, at their most impactful, the exchange goes two ways-chambers of commerce and other business leadership groups are well-positioned to shape

employer behavior or address outdated hiring practices, especially if workforce shortages and high turnover are the chief concern of their members.

There are two complementary strategies here: private employer outreach and public awareness building.

- In private, these conversations are already occurring between economic development leaders and executives experiencing hiring challenges. Starting with the bottom-line human resources metrics-cost-to-hire and time-to-hire-EDOs can simply lay out the facts. If companies are struggling to hire, are they paying competitive wages, offering competitive benefits, or pursuing hiring strategies that eliminate educational or racial biases (either implicit or explicit)? Are they overlooking local talent pools? These conversations are not always easy—especially if they confront the explicit and implicit racial biases often embedded in hiring practices-but ultimately they provide one route (regulation and wage floors is another) to more equitable and efficient hiring environments.
- Public awareness and recognition campaigns are also needed. Brookings's Chad Shearer, Isha Shah, and Mark Muro have recommended communities adopt "choice employer" designations to signal the value of paying living wages, offering benefits, and investing in workers. 63 The Aspen Institute has offered a "job quality framework" that can serve as one template for businesses to follow.⁶⁴ Importantly, targeted regional awareness and employer behavior-change campaigns are underway to explicitly address racial biases. In Minneapolis-Saint Paul, the newly formed Center for Economic Inclusion is doing just this. Through its partnership with the Itasca Project—an employer-led civic alliance—the Center provides a direct connection to capable talent for businesses throughout the region, and offers coaching to human resources leaders and supervisors to help build inclusive workplaces.

One of the most comprehensive and coordinated local talent intelligence campaigns is Skillful, which combines many of the elements listed above-employer outreach to promote the benefits of skills-based hiring practices, outreach to career coaches to enable them to deploy skills-based practices with job seekers and

hiring organizations, and alignment between educational programs and industry employment needs. Its success in Colorado has resulted in the initiative being replicated in Indiana, and the formation of the Skillful State Network, an alliance of state governors formed to share and accelerate workforce innovation.

SKILLFUL | Colorado

What is the intervention?

Skillful, a nonprofit initiative of the Markle Foundation, develops skills-based training and employment practices in collaboration with state governments, local employers, educators, and workforce development organizations. The intervention targets the nearly 70% of Americans without college degrees, to help them get good jobs based on the skills they have or the skills they can learn.

How was it executed?

Skillful's strategy is rooted in learning from operations in Colorado and Indiana, which provided proven practices that are shared through the Skillful State Network, a bipartisan collaboration among 27 governors to accelerate the development and deployment of skills-based practices.

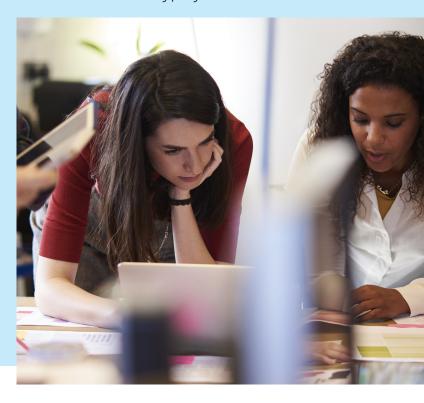
Skillful first launched in Colorado in March 2016, and expanded to Indiana in October 2018. Partners include Microsoft Philanthropies, LinkedIn, Walmart, Lumina Foundation, Purdue University, and Purdue Extension, with support from state governors and regional workforce boards.

Key initiatives include:

Outreach and training for employers: Skillful works with local partners to offer employers step-by-step

guidance on adopting skills-based practices through online resources, trainings, and workshops. One partnership is with the Boulder Chamber and Workforce Boulder County, who deliver Skillful training to employers who are shifting their practices, creating more flexible ways to bring on and develop their employees.

Support for career coaches: Skillful's Coaching Initiative provides skill building for career coaches through the Skillful Governor's Coaching Corps (SGCC). The participants in this intensive training program come from a diverse



mix of organizations, including public workforce centers, community colleges, K-12 schools, and nonprofits from across the state. Skillful launched the first SGCC in Colorado in 2017 with Governor John Hickenlooper, and has received continued support from Governor Jared Polis. Indiana's SGCC launched in 2019, with support from Governor Eric Holcomb.

The SGCC is complemented by the Skillful Coaching Community of Practice, an online community for career coaches, which uses the collaboration tool Microsoft Teams to extend its reach across geographies and organizations. The platform enables coaches to access tools and information that help them to better serve job seekers.

Access to digital tools and resources: Skillful has invested in digital solutions to provide support at scale. One such solution is the Skillful Job Posting Generator, available on Skillful.com, which makes creating skills-based job postings easy for hiring managers. Through tech partnerships, such as those with BrightHive, SkillsEngine, PAIRIN, Emsi, and Burning Glass Technologies, Skillful has created tools to provide better insights into skills data, and solutions that support the implementation of skills-based practices.

How much did it cost?

Microsoft Philanthropies invested \$25.8 million in 2017 a part of a three-year partnership with the Markle Foundation to accelerate Skillful's pilot in Colorado and subsequent expansion to additional states. Other partners, including those listed above, also contribute financially, as well as committing time and resources to the projects.

What is the impact?

In Colorado, the 300-plus career coaches participating in the Skillful Governor's Coaching Corps and Skillful Coaching Community of Practice serve approximately 20,000 job seekers per month.

Skillful partners with more than 100 organizations in Colorado, including local workforce agencies, employer associations, state and local government agencies, community-based nonprofits, community colleges, K-12 educators, and other local training providers.

To date, Skillful has trained 800 businesses in Colorado, and continues to extend its reach in Indiana and through the Skillful State Network.

For more information: skillful.com.

2. Developing talent incentives

Constraint: Existing economic development incentive approaches are not well-targeted to address the private sector's underinvestment in job training.

Labor markets are suffering from underinvestment in worker training. National funding for the workforce development system has been undergoing a structural decline, and private sector on-the-job training is too often bypassing front-line or mid-skill workers. For many reasons, individual Americans and their families have historically been responsible for investing in their own education and training, with student loans as the predominant mechanism and higher education the default pathway. But rising education costs have meant that this pathway is increasingly difficult for Americans that cannot afford college, or whose need to work while in school prevents successful college completion. And it does little for incumbent workers looking to re-skill but with responsibilities that prevent them from attending college full time.

On the employer side, many small and midsized companies lack the financial resources or technical expertise to engage in effective talent development. Yet the overwhelming share of the billions of dollars in incentives target large employers. The incentives also do not address training needs directly, and subsidize businesses to make site selection decisions they likely would have already made.

Action: Orient resources such as incentives and customized services toward talent development.

New talent incentive solutions

Focusing economic development incentives more on job training is a logical step for local and state governments, for four reasons:

- From a growth perspective, well-designed training tax credits and/or skill grants address talent shortages, a binding constraint to opening and expansion for many firms.
- From a shared prosperity perspective, using public subsidies for investments in education and workforce development is more likely to distribute the benefits of incentives to workers that need training, in addition to employers.
- From a fiscal perspective, customized job training incentives achieve greater returns at lower costs than traditional incentives.⁶⁵
- From an efficiency perspective, pushing training resources into the domain of employers—rather than simply subsidizing higher education or workforce training in general—also ensures that the training is more relevant, as in-firm/on-the-job training tends to outperform classroom-based training because it more closely resembles the activities eventually done on the job.⁶⁶

Indeed, most U.S. states offer some sort of talent incentive. A few states have created training tax credits modeled on the researchand-development tax credit. Such an incentive compensates businesses for the social benefits they are providing in the overall economy, and mitigates potential losses if employees leave before they can recapture the cost.⁶⁷ This approach affords more flexibility and perhaps greater scale, but it also means public policymakers have little control over who gets hired and whether it is benefitting those struggling most in the labor market.

The more common approach is customized job training grants; 39 states have these types of incentives.⁶⁸ But overall public spending on job training is small compared to job creation tax credits, property tax abatements, and tax increment financing payments. These traditional tax incentives remain a popular tool because they align with the realities of the political cycle, can draw on deferred tax revenues as opposed to discretionary funding, and position a city and state with the necessary ammunition in corporate-site selection battles.

There are several reasons why cities and states need to change this mix to focus more on talent development. Providing economic development resources for customized job training solutionsincluding taking on the task of training and validating new hires-has been proven to work better than traditional tax incentives, even though it accounts for only 2% of incentive spending. Under this regimen, governments (typically state governments) subsidize community colleges to provide tailored training to individual employers. In the United States, the return on investment from customized job training incentives, as measured by job creation, is about ten times that of traditional incentives such as job creation tax credits or property tax abatements.69

As cities and states consider this evolution, there are several promising models, including some that do not rely on discretionary resources. Michigan's New Jobs Training Program was created in 2008 as an employer-specific customized job training incentive that leverages the state's 21 community colleges (see sidebar). Similar programs exist in Iowa and Missouri.⁷⁰

Michigan New Jobs Training Program | Michigan

What is the intervention?

The Michigan New Jobs Training Program (MNJTP) was established by state law in 2008. Designed as an economic development tool, it allows community colleges to provide free training for employers that are creating new jobs in Michigan. The training for the newly hired workers is paid by bonding against and then capturing the future state income tax associated with the new employee's wages. There are no restrictions by industry or employer size. The program operates as an economic development incentive to attract businesses to locate or expand into the region by providing flexible funding for new employee training. Employers cannot use the program to provide training for incumbent workers, as the program is intended to increase the aggregate employment level in the state.

How is it executed?

The MNJTP incentive only applies to businesses creating new jobs. These new jobs must result in a net increase in employment in Michigan for the employer, and the wage paid for the job must be at least 175% of the state minimum wage.

Employers then initiate the process by communicating their training needs to one of the 21 participating local community colleges. Colleges work with businesses to design, develop, and deliver training programs. The program funds a wide range of training costs, including skill assessment and testing, subcontracted services with public universities and colleges for degree programs, or training facilities and supplies.

Colleges report on an annual basis to the Michigan Department of Treasury on all existing NJTP agreements. The Michigan Department of Treasury is involved in the administration and oversight of the individual income tax withholding aspects of the program.

How much does it cost?

The state government created a \$50 million cap on the amount of outstanding training agreements at any one time, which was quickly reached after the creation of the program.

In 2012, \$2.9 million of state individual income tax revenue was diverted to reimburse colleges for job training expenses. However, this revenue loss was more than offset by additional state income tax (\$1.6 million), sales tax (\$1.7 million), and state and local property tax (\$2.8 million).

What is the impact?

As of September 2018, the program has served 194 employers and supported 21,855 new jobs over the past decade.

In 2013, Anderson Economic Group conducted a quasievaluation of the MNJTP's impact through 2012. The evaluation found that the state had facilitated 31 MNJTP agreements, ranging in size from \$47,000 to \$19.6 million. These agreements were largely concentrated in the Detroit and Grand Rapids regions. The vast majority of agreements were with manufacturing firms (79%), followed by finance and insurance (11%).

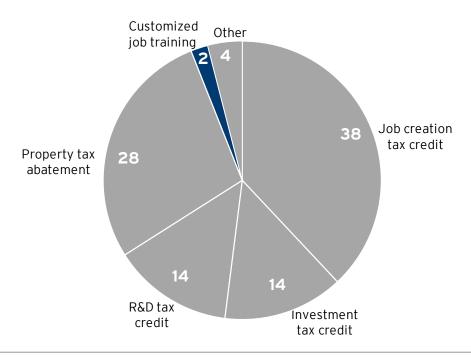
For more information:

- Overview: https://www.mcca.org/uploads/
 ckeditor/files/MCCA_MNJTP_Statewide_Funding_
 Prioritization_Process.pdf_
- Evaluation: https://www.andersoneconomicgroup.com/the-economic-benefits-of-the-michigan-new-jobs-training-program/

FIGURE 4

Customized job training accounts for 2% of total state incentives

Types of Incentives, national averages, 2015



Source: Timothy J Bartik, *Making Sense of Incentives: Taming Business Incentives to Promote Prosperity* (Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 2019).

Local talent incentive reforms are also underway.

- The City of Birmingham has recently developed a new suite of talent incentives that aim to attract and retain tech employers, particularly focused on connecting struggling workers.⁷¹
- Prosper Portland, the Oregon city's economic development arm, has created policies through its Enterprise Zone program that provide additional incentives to companies that meet certain standards of job quality and are willing to participate in training or provide internships to disadvantaged youth.⁷² In addition, in its Portland Means Progress campaign, the city is using incentives to stoke business behavior change, specifically by providing a menu of inclusive business practices—raising wages above \$15, offering work experience to disadvantaged youth,
- doing business with entrepreneurs of color, providing internal diversity and inclusion training—that challenge the private sector to deliver greater community benefit.
- Economic development organizations in Indianapolis and San Diego have implemented similar incentive reforms that deploy an "inclusive economic development menu" of activities.⁷³ These incentives follow key principles of inclusive economic development, in that they are reserved for employers that are creating quality jobs and have agreed to train and hire locally or other community engagement activities.⁷⁴

Talent advisory services

Beyond financial subsidies to individuals or companies, there is a second type of support that economic development organizations could offer:

talent-focused business retention and expansion services (BRE). BRE services target local businesses to determine any local issues that may be constraining growth, and then creates solutions addressing the constraints to avoid job losses and facilitate job gains. Strong economic development organizations are already working with employers to connect them with training providers, typically through referrals to existing community college programs. But rarely are BRE services customized to the specific workforce needs of the company.

Next-generation BRE could involve advisory services that provide talent pipeline management and execution, human resource and operations planning support, or some combination thereof. Ascend Indiana, an industry-led training intermediary in Indianapolis, is pursuing such an approach. Ascend provides tailored consulting services to help employers develop talent pipeline solutions. Essentially, Ascend acts as an intermediary between employers and higher educational institutions. It enters into contractual agreements to deliver customized talent pipelines for individual companies and then works with higher education institutions to train and connect younger workers.⁷⁵

Ascend focuses mainly on higher education graduates, but could this consulting services model evolve to focus on workers with less education? The current public workforce system was created to help individuals with persistent employment challenges, and prioritizes quick placement rather than in-demand skills provision. At its best, the public workforce system has been able to provide critical support to both workers and businesses, but it is under-resourced. As workforce expert Steven Dawson writes, "the business community undervalues [workforce] services because at best we are only solving half of the equation. While we help businesses find

and train employees, we have not learned how to help them redesign their businesses—leveraging their investments in their workers so that they can achieve operational excellence."⁷⁶

This represents an evolution from traditional public workforce development services and traditional BRE services. And to be clear, this type of technical assistance is not widespread in the economic development field (see sidebar), but there is precedent in other public programs. The national network of Manufacturing Extension Partnership centers provides customized services to small and medium-sized manufacturers to improve production processes, upgrade technological capabilities, and facilitate product innovation.⁷⁷ That program generates hundreds of thousands of new jobs and a nearly 15:1 return on investment for the U.S. Treasury.⁷⁸

Such service offerings require professionals that act less as traditional economic developers and more as operations, strategy, and human resources consultants, and bring with them years of private sector experience. Talent service providers must offer valuable insights about how workforce planning and training enhances bottom-line operations and strategy. This requires high-level management expertise plus the problem-solving and communication skills often found in private sector consulting.

For a fully bundled solution, these intermediaries must also be able to connect businesses to training providers that can actually train current or prospective employees.⁷⁹ To do so equitably, they need to also have connections to individuals and institutions that are trusted by lower-income communities and communities of color. It is an ambitious type of intermediary function, but one that is being pursued with good results in Cuyahoga County, Ohio (see sidebar).

SkillUp | Cuyahoga County, Ohio (Cleveland)

What is the intervention?

SkillUp is a free advisory service created to facilitate employer investment in their own business and talent, with the understanding that great employer practices drive business growth. SkillUp is run by the Cuyahoga County Department of Development and complements traditional economic development and sector partnership efforts in the region by offering marketplace insights and alignment as well as enhanced business growth capabilities.

SkillUp provides the following services to employers of any size in any industry:

- Business Concierge Service: Coordinates regional services and resources to solve business challenges and drive results.
- 2. Training Service: Helps a business to create its own industry-recognized apprenticeship program by creating a training plan and roadmap for the technical, foundational, and people skills needed to grow businesses. Financial incentives are provided to the business to offset training-related risks and expenses.
- **3. Talent Brokerage Service:** Helps the employer create a talent supply chain to recruit, train, and retain the highest quality talent at the lowest cost by facilitating a relationship with human services organizations, assisting with recruiting talent, and leveraging available hiring incentives, subsidies and tax credits.

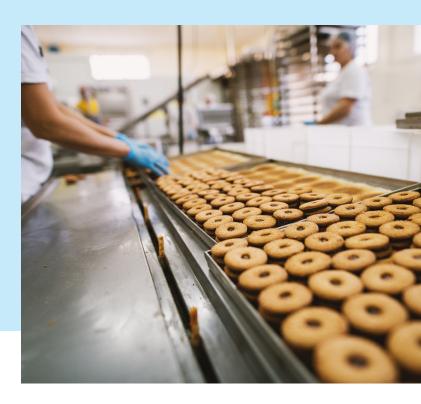
SkillUp provides customized services to address employers' barriers to growth, such as lack of time, resources, and expertise to plan and execute strategic initiatives that support business growth.

How is it executed?

SkillUp aims to contact every business in Cuyahoga County-directly or via regional EDOs and other entities—to offer services through 12 full-time team members with diverse private sector expertise.

SkillUp starts every relationship with the Business Concierge Service, a guided organizational needs assessment that helps a company identify business challenges and facilitates brainstorming to design solutions. The Business Concierge Service complements existing BRE efforts by increasing access to and utilization of existing services and resources including capital, real estate, business growth services, and municipal government relations.

If training or talent shortages are a business challenge, the SkillUp Training Service provides customized roadmaps for



employers to identify training and national skill standard providers, and a list of specific and measurable training tasks. Roadmaps connect the dots and align existing training courses to fit the unique training needs of any employer. SkillUp provides financial incentives to a business by reimbursing for training-related expenses (i.e. tuition, transportation, uniforms). Higher skill levels command higher wage values in the market, so the greater the wage increase, the greater the reimbursement value. For every \$1 post-training hourly wage increase, Cuyahoga County reimburses the employer up to \$1,000 for out-of-pocket, training-related expenses, up to a maximum of \$25,000 per worker, per training plan (e.g. A \$2 per hour wage increase will create a maximum reimbursement limit of \$2,000). SkillUp supports training for new hires, incumbent workers, or temp-agency workers who work or live in Cuyahoga County.

How much does it cost?

SkillUp has a budget allocation of \$3 million per year, utilizing discretionary funding. It is currently operating under budget, producing positive early results with only approximately \$1 million in annualized expenditures to date.

What is the impact?

As of 2019-Q1, the initiative has served 262 businesses in 15 industries, with the vast majority in manufacturing, health

care, construction and logistics. More than 30% of these businesses self-report being certified by the U.S. Small Business Administration.

The Training Service has produced roadmaps for 100 unique skills and standards, with the majority in technical areas such as medical and laboratory, machine operating, operations, information technology, and material handling. Collectively, 30 businesses have offered training to 390 trainees, with 13 organizations receiving training reimbursement for 103 workers at an average cost to Cuyahoga County of \$879 per worker, or \$90,494 total. Cuyahoga County verified that workers received fully paid training and wage increases, with an average hourly wage increase of \$2.83 (\$1.70 median), totaling more than \$350,000-creating a nearly 4x public return on investment.

SkillUp started with its Training Service, and has expanded to deliver the services outlined above. New services are being developed to address additional issues that prevent businesses and residents from thriving, including a new performance coaching model. SkillUp continues to work with business leaders to discover new use cases for the three available services—so as with all emerging products, the full potential of SkillUp has not yet been realized.

For more information: www.cuyahogacounty.us/skillup

Other entities in the customized "train and place" marketplace

Businesses want training solutions that allow for customization, flexibility, speed, and risk minimization. Outsourced staffing models aim to address all four needs, and are growing in popularity.

In 2016, U.S. staffing companies employed an average of 3.2 million temp and contract workers per week-up from 2.2 million in 2009.80 The number of workers placed by staffing firms has increased six times faster than employment overall.⁸¹ Employers rely on staffing companies to recruit employees and executives, provide guidance on human resource practices, and-increasingly-to train workers. About 90% of staffing companies provide training to temporary or contract employees. Many employers use staffing firms to preview a candidate's on-the-job performance before making a permanent hiring decision. Yet, turnover rates among temporary and contract employees are high and growing: 386% in 2017, up from 352% in 2016.82 Staffing agencies are also expensive, charging between 1.65 and 2.10 times the employee's base salary, with built-in profits for the staffing company.⁸³

Startup intermediaries are also competing in this part of the marketplace. Skills providers like Penn Foster are partnering with staffing companies to provide as-needed training.⁸⁴ Employer-facing intermediaries such as Guild

Education are experimenting with online education and training partnerships with major employers including Walmart and the Walt Disney Company. Outsourced apprenticeship provider Apprenti, which provides paid training and education services before placing individuals in information technology positions, is now operating in nearly 12 locations across the country.⁸⁵

"Last-mile training providers" such as the Flatiron School and General Assembly, as well as "on-ramps" such as i.c. stars and LaunchCode, are also competing in this space, with the former group focused more on college-educated individuals and the latter targeting populations without a degree. On-ramps, in particular, are a nascent but promising approach to more economically and racially inclusive digital skills training, in that they offer career support and case management in addition to training.⁸⁶

Programs such as Year Up, Per Scholas, and Genesys Works explicitly target lower-income youth for skills training, and then connect those talent pools to technology and financial services companies. These programs have achieved nationwide scale not as philanthropic or corporate social responsibility ventures, but as customized, fee-for-service talent solutions.⁸⁷

3. Supporting talent systems

Constraint: Structural inequities and lack of connection between education and work undermine talent development.

Talent intelligence can better motivate employers and clarify labor market frictions. Talent incentives can enable investments in workers. Both sets of solutions influence employer behavior through lighter-touch information provision, financial support, or technical services. But neither intervention helps employers engage

with education and training institutions to address the talent development system's leakage problem.

There are two interrelated challenges here. First, educational inequities: Preparedness gaps are structural, start early, and widen over time, becoming harder to address later in life. To sustain long-term economic development and social mobility, regions must invest in high-quality education systems that facilitate learning inside and outside the classroom, beginning early in childhood and continuing through young adulthood.88

A second challenge is the disconnect between school and work, a uniquely American problem when compared to advanced-economy peers. When working properly, the talent development system should endow students with the skills to succeed in an increasingly demanding workplace and, at the same time, equip them with the academic and social infrastructure to prepare them for adult life. This school-to-work transition is harder for American youth than peer countries such as Germany and Japan, according to the Organisation for Economic Co-operation and Development .89 A recent report by an association of human resource officers called the schoolto-work transition a "long, painful process." The report noted, "[many] employers are reluctant to hire recent college graduates because so many fail at their first, second, and even third jobs," and this transition is even more difficult for Americans with less education.90

These challenges intersect. A young person's "employability" is subjective, but generally it derives from the acquisition of both technical skills and foundational skills (i.e. communication, teamwork, etc.). Compared to children growing up in low-income and less-educated families, children raised in prosperous families and communities are not only likelier to receive a more rigorous technical education, but they also learn "soft skills" and are exposed to the social networks that allow them to succeed in a white-collar world.⁹¹

Public education, where a majority of children from lower-income or less-educated families attend school, could be one way to try to equalize exposure to careers and work environments. The challenge, however, is that businesses—and economic development organizations by extension—have historically not engaged these secondary education systems.

Action: Recruit and/or integrate businesses to sector partnerships and career-connected learning consortiums.

While not a panacea, broadening young people's access to quality educational and work-related experiences can further learning and skill development. The final part of this framework examines how economic development organizations can connect businesses to the education system earlier and more comprehensively, improving the readiness of young people for career success.

Deeper business engagement in high school and post-secondary education is needed

This section outlines how economic development organizations can tap into their relationships with industry to support talent development partnerships focused on career-connected training.

• Sector partnerships: Today, the strongest connections between educational institutions and employers are community college's vocational certificate programs, which satisfy in-demand skills needs. In areas such as advanced manufacturing, health care, and information technology, regions have successfully built sector partnerships or industry councils that map the hiring and skills needs of employers in a given sector, then communicate those needs back to training providers, ideally drawing on industryrecognized credentials.⁹³ These partnerships focus on training for high-demand occupations in growing sectors, with the recognition that aligning training programs across groups of firms with similar skills needs would aggregate demand and justify investment in resources to train workers.⁹⁴

In this structure, community colleges or community-based training providers typically serve as the education partner, with workforce development organizations, industry associations, or economic development entities (or some combination thereof) serving as the coordinating intermediary. Businesses with similar workforce needs-often organized

by industry or supply chain—co-determine their shared skills and competencies and co-develop training curricula with the community college. Training partnerships eliminate the tragedy-of-commons dynamic by minimizing the ability of employers to "free ride" on another company's investment in the education system. The partnerships build enough demand for a training provider to justify investment in the degree or certificate program, and spread public or philanthropic resources across many businesses instead of a single employer.

- Career-connected learning: In countries such as Germany and Switzerland, businesses begin their engagement with young people well before they arrive at college, a norm that does not exist to the same degree in the United States. Increasingly, however, educators and employers are viewing career-connected learning-programs related to career awareness, exploration, preparation, and training—as an attractive way to engage youth as early as middle school. Career-connected learning, also referred to as work-based learning or experiential learning, involves a continuum of activities 95:
 - Career awareness and exploration activities such as business visits, industry speakers, career fairs, informational interviews, and job shadowing.
 - Career preparation activities in the classroom or workplace that use practical experience to facilitate learning, including experiential learning projects in partnership with employers and internships.
 - Career training activities focused on employment placement and post-secondary educational attainment, including apprenticeships or on-the-job training aligned with a credential.

The infusion of "career" into the world of education is not new, but it is enjoying a recent renaissance as new evidence documents its

benefits. In a literature review, the psychologist Maureen Kenny and her co-authors cite evidence that career-connected learning has "demonstrated promise at the secondary school level as a model for connecting academic learning to work preparation, enhancing positive student attitudes, academic motivation and goal articulation for school and career, and equipping young people with both academic and noncognitive work readiness skills for the transition from high school into meaningful work and life."96 A number of initiatives integrate high-quality academics and skills training with work-based learning experiences through internships and co-ops. These include job-training programs mentioned earlier such as Year Up and high school programs such as Career Academies, Linked Learning, and the Center for Advanced Professional Studies (CAPS).97

These reviews suggest that career-connected experiences can inspire those who learn better through practical application rather than theory, and in doing so discover new goals and capabilities within themselves, especially when this learning creates relationships with adults who can provide educational, professional, and emotional support. When young people feel like they can do something, and that someone is supporting them as they attempt to do it, it is no surprise that they are more likely to thrive—especially if they have previously felt marginalized by society.

Evidence links this development to employment for youth that grow up in disadvantaged communities. Brookings's Martha Ross and her co-authors found that low-income youth were much more likely to be working in a well-paying job by adulthood if they had engaged in "relationship-based career and technical education programs," which they defined as participation in a cooperative education experience, internship, or apprenticeship that also involved work-oriented mentorship from an adult. Put simply, in-demand technical skills training plus emotional and social support from a professional mentor can be a powerful combination.

But the reality is that career-connected learning requires not only additional resources and alignment, but also systemic behavior and cultural change among the education (particularly secondary education) and corporate sectors. After evaluating a work-based learning demonstration in three California school districts, the organization Jobs for the Future concluded that "hearts and minds change will require prolonged commitment of a broad range of individuals and organizations within and beyond the school." Specifically, the efforts would (1) require greater support from intermediary organizations outside of the school system, and (2) broader and deeper employer engagement.¹⁰⁰ Career-connected learning experiments are occurring from the bottom-up among individual schools and districts, and from the top-down through new state systems-change efforts. Organic experimentation and innovation among individual schools is critical, but eventually there needs to be an intermediary with a systems-level mandate to solve for significant coordination challenges.

Kansas City exemplifies both the benefits and shortcomings of bottom-up experimentation. According to a Kauffman Foundation report, Kansas City's schools have a "significant amount of innovative, high-quality career and technical education programming...but an education-to-employment 'system integrator' that coordinates, catalyzes, and monitors activity does not exist. Due to the nonexistence of an 'easy button' for business-education partnerships; business partners state they are becoming weary."

Bottom-up efforts are present in Colorado and Washington as well, but those states also exemplify recent top-down attempts to systematize career-connected learning. Through strong leadership from each governor, Colorado and Washington have established audacious career-connected learning goals. According to a recent Bain report, "articulating these goals opens up conversations with key players on how they will contribute and to what they will commit. Getting firm commitments from employers is hard. Most would rather develop a small

program on the side, within their corporate social responsibility budget, rather than risk devoting meaningful resources to an unproven system."102

In both scenarios, successful implementation will require that businesses engage across a range of activities: opening their doors to tours, job shadowing, summer employment, internships, and apprenticeships. They should connect employees that want to be mentors, coaches, or curriculum advisors, and financially support intermediaries that facilitate the process. This intense level of engagement demands that businesses view career-connected learning as a legitimate, albeit long-term, talent pipeline development strategy.

But for career-connected learning to take off, it requires several policy conditions to be in place. First, education policies and outcome metrics must value career-connected learning, otherwise faculty and students will not be able to engage. Typically, neither community colleges nor high schools are held accountable for employability outcomes.

Second, there must be the career awareness capacity to help students understand and pursue career-connected learning, and the ability for educators to deliver quality career-connected learning.

Third, employers want a single window as they consider partnerships. Too often, businesses are overwhelmed by uncoordinated requests from school districts, colleges, or workforce boards to serve on advisory councils or participate in partnerships.

Economic development organizations can make the case for business engagement in career-connected learning

For these strategies to work, they require private sector intelligence, buy-in, and resources. In ways that are different than workforce and educational institutions, economic development organizations oftentimes have the industry expertise, trust, and credibility with employers to explain the value

of these partnerships. To be clear, EDOs will not always be the best fit to *lead* on career-connected learning partnerships, either at the high school or postsecondary level. In many communities, workforce investment boards, community colleges, or state intermediaries have the expertise and track record to garner credibility among business leaders. But in other instances, these institutions simply do not have the capacity to serve their students *and* establish relationships with employers.¹⁰³

Because many business leaders may initially be skeptical, career-connected learning recruitment efforts will be best done business-to-business. For instance, in Washington, Governor Jay Inslee tasked the former CEO of the Seattle Metropolitan Chamber of Commerce, Maud Daudon, with creating the state's plan for career-connected learning. She then recruited leaders from the state's largest businesses to sit on the plan's task force.¹⁰⁴

Such a recruitment pitch begins with the employer return on investment. Engaging students earlier can help them understand career pathways and expose them to workplace skills and norms. The employer champions in Colorado and Washington certainly expect that career-connected learning can help them build more sustainable talent pipelines, and there is strong evidence that they are right. Work-based learning opportunities such as apprenticeships have economic payoffs for workers, with earnings gains of about \$6,000 per year in the ninth year of enrollment. But they also provide a productivity benefit to employers.¹⁰⁵

At the post-secondary level, we know quality, industry-driven training partnerships can deliver strong results for workers and firms. The WorkAdvance initiative, a four-city workforce pilot, found that sector partnerships could successfully connect low-income individuals to good jobs for about \$5,000 to \$7,000 per trainee. But sector partnerships are a significant undertaking that require a broad suite of expertise and services:

- The industry knowledge and business connections to engage and recruit employers
- The community awareness and connections to recruit a wide pool of potential trainees, including those from disadvantaged backgrounds that have faced structural barriers to labor market success
- Knowledge of and ability to execute industryrecognized technical and "soft skills" training
- Resources to provide financial support to individuals for training and other cost barriers such as transportation or child care
- Coaching and supportive services for trainees, from program entry to job placement

Sector partnerships and apprenticeships have been rigorously evaluated, but the business return-on-investment for activities targeting middle and high school students-such as job shadows, worksite tours, or employee mentoring and engagement-are less well documented. While these lighter-touch activities may not yield immediately measurable return-on-investment, they certainly help students. And they may also make participating employers more attractive to community-minded employees. According to an Allegis Group report, 82% of millennial workers "consider corporate social responsibility a major factor when deciding where to work, and 66% would take a pay cut to work for a more socially responsible company."107 Providing opportunities for employees to substantively invest time in their communities is part of a talent attraction and retention strategy.

Economic development organizations could be potential systems integrators for career-connected learning

If employer recruitment is difficult, implementation is even harder. Effectively implementing career-connected learning is a massive coordination effort that requires both (1) solving technical problems and (2) facilitating behavior change among schools and businesses.¹⁰⁸

Behavior change is rooted in hard-to-move factors like institutional norms and culture, but it likely will have to draw on a combination of enlightenment and self-interest. Leadership is key. A report examining Washington's landscape of career-connected learning summarized this dynamic: "Elected officials (e.g. city mayors), school district superintendents, local Chambers of Commerce, and business leaders have tremendous influence in unifying a vision, bringing resources to the table and setting community and company cultures that value career connected learning. Leadership sets the tone, and effective implementation requires alignment at all operational levels." 109

Behavior change is difficult, but so is "alignment at all operational levels." Business leaders—enabled by economic development intermediaries—play a fundamental role in making the case, but business-facing intermediaries may also be the best implementers for career-connected learning systems. We explore several instances below in which economic development organizations serve as systems integrators.

EDOs as lead integrator

Chambers of commerce and other regional economic development organizations are already integrating businesses with high schools and community colleges (see sidebar):

• In Houston, the Greater Houston Partnership's UpSkill Houston initiative has engaged 90 employers in four key sectors including petrochemical, commercial and industrial construction, health care, and transportation. The Partnership has organized sector councils to articulate the skills needs of businesses in these areas, and communicate them back to community colleges and workforce agencies.¹¹⁰

- The Milwaukee region's economic development group-Milwaukee 7-has challenged the seven-county region's employers to engage young people in work-related experiences ranging from shadow days to career coaching to internships and apprenticeships. The GROW HERE initiative provides businesses a platform to interact with school districts and cultivate their future workforce through a series of career-connected activities. GROW HERE has set a bold goal of 200,000 workbased learning experiences between 2016 and 2020.¹¹¹
- In 2016, the Baton Rouge Area Chamber introduced an online platform to pair businesses with classrooms based on teacher-provided lesson plans and industry-offered expertise. Powered by Nepris, one of several new online platforms that facilitate career-connected learning, the Virtual Schoolhouse connects business leaders that want to volunteer as guest speakers, project panelists, and mentors, and offers virtual internships for public school students in Baton Rouge.
- SCK LAUNCH is a partnership between the Bowling Green Area Chamber of Commerce, the Bowling Green Independent School District, Warren County Public Schools, and local businesses to provide a career experience to every high school graduate. The partnership provides eighth graders with career exposure opportunities, and connects high school students with career shadowing in priority industry sectors. SCK LAUNCH also exposes educators to industry through Educator Externships.

SA Works | San Antonio

What is the intervention?

SA Works develops career pathways and experiential learning opportunities for San Antonio and Bexar County students and educators, and connects employers with P-12, post-secondary systems, and workforce training providers to identify and define critical skills gaps and align education programs and curricula designed to fill specific workforce needs.

How was it executed?

SA Works is an industry-led coalition initially housed at the San Antonio Chamber of Commerce and sponsored by H-E-B, a grocery chain. In 2016, SA Works transitioned to the San Antonio Economic Development Foundation (SAEDF), in an effort to better integrate San Antonio and Bexar County's economic and workforce development programs. This expanded its short-, mid-, and long-term talent pipeline around three key areas: cultivating talent via K-12 partnerships, incumbent workers, and retention and recruitment of talent in partnership with other workforce stakeholders.

In addition to its convening role, SA Works also offers work-based learning opportunities and produces local labor market information, including a biannual jobs report focused on three in-demand industries and, most recently, an IT and Cybersecurity Demand Occupation and Education Report. The work-based learning opportunities include summer internship programs, a job shadow day, and teacher externships.

Internships focus on connecting high school students to local employers for meaningful, paid opportunities. They range from six to eight weeks, and interns work a minimum

of 20 hours a week. Participating organizations include H-E-B, HOLT CAT, Joeris General Contractors, CPS Energy, Bexar County, Toyota, Valero Energy, Firstmark Credit Union, Jungle Disk, and the City of San Antonio. In 2018, over 1,000 high school students in the region registered.

The job shadow day is a half-day onsite engagement activity that immerses students in a hands-on work environment in many of San Antonio's leading industries including health care, bioscience, IT, cybersecurity, and manufacturing.

Teacher externships connect teachers with industry experts and trained educators regarding their field of instruction to further project-based learning in the classroom.

Employers who want to receive funding from the Bexar County Skills Development Fund are required to participate in at least one of the three SA Works experiential learning programs.



How much does it cost?

SA Works was initially financed in 2015 through a grant from H-E-B. Since then, it has secured additional private sector funding from HOLT CAT, USAA, JPMorgan Chase, Toyota Motor Manufacturing Texas, and Accenture Federal Services, among others, as well as public sector funding from the economic development departments at both the City of San Antonio and Bexar County.

What is the impact?

Since its launch, SA Works has progressively increased the number of students, employers, and teachers served each year. In 2016, more than 1,700 students participated in job shadowing with 59 employers; 573 students interned with 14 employers; and 151 teachers had externships with 29 employers. By 2018, more than 4,200 students participated in job shadowing with 145 employers; 899 students interned with 35 employers (directly placed by SA Works); and 275 teachers had externships with 37 employers.

For more information:

- Organization: http://www.sanantonioworks.org/
- Employer engagement:
 http://www.sanantonioworks.org/wpcontent/uploads/2016/04/SAWorks_;
 EmployerInternshipToolkit_Finaledits.pdf; and
 https://www.bexar.org/2792/Skills-DevelopmentProgram
- Local Workforce Information:
 http://www.sanantonioworks.org/wp-content/uploads/2019/02/SA-Works-IT-Cyber-Demand-Occupation-and-Education-Report-Jan-2019.
 pdf; and http://www.sanantonioworks.org/uncategorized/saworks-2018-jobs-report/

EDOs in a supportive role

Chambers and regional economic development organizations need not lead coordination if the school district or a separate intermediary is already providing it. For example, Denver Public Schools operates CareerConnect, which ambitiously aims to "fundamentally transform student learning experiences, post-secondary opportunities, and workforce development." Embedded in over 60 schools with support from over 300 business, higher education, and nonprofit partners, CareerConnect offers the full spectrum of career-connected learning

opportunities, from awareness and exposure to CareerLaunch internships and CareerResidency apprenticeships.

Supported through a combination of corporate, philanthropic and—importantly—public bond revenues, CareerConnect has raised over \$20 million to bring its student participation levels from 4,200 in 2014 to over 18,000 in 2017. Participating students are 30% more likely to graduate. Ninety-eight percent of employers rated their engagement in career exposure activities as "good or excellent," and 86% of employers reported that interns were able to

productively contribute to their businesses within two weeks.¹¹⁴ Staff is housed within Denver Public Schools, but CareerConnect utilizes business leadership groups such as the Denver Metro Chamber of Commerce to conduct employer outreach and recruitment.

Creating a new career-connected learning system is going to take significant startup resources to build out the necessary infrastructure in order to deliver impact. As my Brookings colleague John Ratliff argues, "Efforts to align educational and training programs with the needs of employers have met with some success in the past, but the complexity and rapidly changing nature of today's labor market require a more coordinated approach. The lack of architecture to create clear pathways from education into the workforce in high-demand fields wastes efforts at collaboration among stakeholders and results in inconsistent engagement by employers. This lack of alignment limits the effectiveness of

regional workforce development activities and opportunities for workers in every state."115

Drawing on his experience building the EARN workforce training initiative in Maryland, Ratliff recommends that states "establish a competitive grant program that invests state funds in strategic partnerships that promote collaboration and alignment between employers in highdemand and growth industries and the providers of educational, workforce, and training programs that prepare workers for those industries. Each funded partnership should be required to develop a detailed plan to educate and train workers for the industry and to place trained workers in jobs." More than 850 employers have participated in the 59 industry partnerships across the state, training thousands of workers and generating an employer satisfaction rate of 99%. Maryland has invested \$8 million in the program. Similar approaches are underway in Massachusetts, Rhode Island, Tennessee, and New York.



Going forward: Five key economic development priorities

s the above section highlights, economic development organizations are already evolving their activities—research and awareness, incentives, as well as systemic collaboration between business, government, and civil society—to support dynamic and fluid labor markets that embolden worker prosperity and enable business growth.

The three-part framework-and the diversity of approaches and tools utilized within each pillar-seeks to provide economic development leaders with a menu of activities to support talent development and deployment, acknowledging that every region and state is unique and different organizational activities require varying levels of resources, technical expertise, and stakeholder coordination. Some of these are relatively low-cost interventions aimed at many individuals or businesses, while others will reserve resources for more limited, higher impact interventions.

The framework provides a vision for how a talentfocused regional or state economic development approach can better accomplish its core mandate: help firms grow and create good jobs. How should economic development leaders proceed? We conclude the paper with five key economic development priorities:

1. Realign state economic development resources to invest in proven training solutions

Evidence supports the following changes to economic development approaches:

State governments should recalibrate their incentives programs to focus more on **customized job training**. In an upcoming book, economist Tim Bartik offers a useful scenario in which localities and states cut their incentive spending in half to \$25 billion, but increase the share of customized job training incentives to about 20% of total incentive spending, or about \$4 billion. As noted earlier, the return on investment from customized job training incentives, as measured by job creation, is about ten times that of traditional incentives such as job creation tax credits or property tax abatements.

The dual mandate embedded in **sector partnerships and career-connected learning** delivers good outcomes for both businesses and individuals, especially lower-income workers. But

currently there are limited resources to support the infrastructure costs of these partnerships. A portion of state funds recouped from traditional tax incentives could be redeployed directly to support the necessary civic infrastructure to sustain regional training partnerships.

2. Ensure that economic development incentives motivate opportunity-rich employer practices

Even for economic development incentives that are not explicitly about workforce training, city and state governments can incentivize businesses to participate in community partnerships that support existing and potential workers. For instance, in exchange for publicly provided incentives, cities and states could follow the Portland Enterprise Zone model and ask businesses to sign equity-focused public benefit agreements in which they commit to opportunityenhancing activities such as hosting job fairs and career days, partnering with local schools, and reserving internship and apprenticeship slots for disadvantaged youth. This approach requires strong partnerships between economic development organizations and non-profit and community-based partners, but ensures that public subsidies are in line with societal objectives.

3. Develop and disseminate new intelligence related to employer hiring practices

Economic development organizations should become leading providers of labor market intelligence that catalyzes action among businesses, education leaders, and policymakers. One new domain could be codifying and disseminating practices that favor skills-based hiring over pedigree-based hiring. Uniquely connected to local business communities, chambers of commerce are well-positioned to enable businesses to adopt skills-based hiring practices that improve both efficiency and

equity, replicating the successful integration of curriculum such as Skillful in Colorado. Chambers will continue to translate the needs of business to the political system, but increasingly their value proposition can be to dispense intelligence back to businesses that can enhance bottom-line competitiveness and social inclusion. Skills-based hiring is a notable example that accomplishes both.

4. Test new local talent financing solutions

Acknowledging that many states will not pursue the reforms listed above, local economic development and workforce leaders should not wait. They can experiment with and evaluate new talent financing solutions.

Cities could experiment with new types of talent financing models that target individuals, not businesses, but aimed squarely at satisfying employer demand. These "pay it forward" financing solutions are being tested in workforce development organizations such as the San Diego Workforce Partnership. In collaboration with the University of California San Diego Extension, the Partnership will provide low-income individuals with free training on data science, web design, and software development, as part of its TechHire program. Each participant receives career coaching and "barrier busting" funds throughout the training to pay for transportation, interview clothes, and other life expenses. The training will culminate in a three-month paid internship, with the option for full-time placement. In exchange for the up-front investment, trainees pay back a portion of their salary for a set period of time. Payments are tied to outcomes and favorably capped. Repayments from earlier cohorts can be reinvested back in the program, creating what education investor Michael Horn refers to as a local "revolving learning fund." The initial capital necessary to start the program is being provided by philanthropy, but there is no reason why these funds could not also include capital from local employer networks and discretionary city economic development funds.

5. Assemble regional Talent Exchanges that systematically engage employers in education and training

Currently, there are few regional labor market institutions that have the resources, expertise, and relationships to both help individuals struggling in the labor market and help businesses struggling to secure talent. These functions are distributed across a range of education, workforce, and industry providers.

One way to bring all these stakeholders together is through regional Talent Exchanges, a new type of labor market intermediary superstructure that connects middle schools, high schools, community colleges, higher education institutions, and in-demand skills providers with businesses in key growth sectors. Talent Exchanges would essentially combine sector partnerships and career-connected learning pipelines to provide a single window for businesses to partner with education and training institutions to prepare their workforce.

How would such Exchanges be created? What would they do? Who would work in them? Creating the Exchanges would involve emulating models in Indiana, Maryland, Massachusetts, and Rhode Island that provide state funding to build out local institutional capacity. Their function would be to break down talent development and deployment barriers.

On the development side, the Exchanges could have dedicated staff embedded in middle and high schools to facilitate career awareness, exploration, and training across a racially and socio-economically diverse student population, emulating effective models in Boston, Denver, and San Antonio. Career and technical educators would work with industry leaders to embed key themes and skills into experiential learning. Employers could be incentivized to have their employees serve as "industry adjuncts" in middle and high schools or as work-based mentors—recognizing that it boosts employee retention

among more civically minded millennial and Gen Z workers, markets their company, and provides the necessary human and social capital investments to prepare their future workforce. Economic development organizations could organize employers in these activities.

Post-secondary educational institutions and workforce boards would also be critical partners in the Exchanges, coming together with human resources leaders from top employers to tailor post-secondary education to key economy-wide needs.

In addition to helping lend more coherence to the talent development system, Talent Exchanges could also generate revenue through consulting arms that provide direct, customized technical assistance to individual businesses. Some cities could experiment with their own services practices—such as in Cleveland and Indianapolis—but others could serve as local franchises of successful "train-and-place" intermediaries who can scale nationally, either physically or online. The fee-for-service arms

of Talent Exchanges could deploy former private sector human resources and operations experts to help companies create tailored talent development plans, build an individual pipeline, and get reimbursed upon successful placement and retention of trainees. This approach de-risks hiring for local business leaders, who may be initially skeptical of an intermediary.

These solutions providers would not replace staffing companies—although some staffing-training hybrids may compete in this space—but the Exchange consulting practices could develop a successful niche because they charge less (due to the public subsidy) and deliver higher retention and lower turnover to businesses hiring the increasingly diverse American workforce. They could accomplish this by providing—in addition to technical training—pedagogical models, case management, and coaching to motivate and support diverse trainees, as well as cultural awareness and onboarding strategies that better prepare businesses to be welcoming environments.



Conclusion

he items outlined above are ambitious. The conditions are not in place in most communities to finance and coordinate a comprehensive strategy to develop the economy through investments in people. Yet, an overwhelming body of evidence suggests that local economies will only develop if their people do first, so status quo biases embedded in modern economic development have high costs.

Our argument is that this is shortsighted—in regard to both the prosperity of our communities and also the value proposition of economic development organizations themselves.

Most importantly, a focus on talent development and deployment moves economic development approaches toward a more sustainable dual mandate: dynamic and fluid labor markets that enable business growth and embolden worker prosperity, especially for those that have struggled most due to structural biases like racism.

There is a bottom-line perspective too: Businesses can't outgrow their local talent bases. To move statistics such as the number of jobs created, economic development organizations must work to provide environments in which firms can invest and grow. If their top binding constraint to growth is an available workforce, then even the most traditional practice of economic development is impossible without talent development.

Read any economic development publication and it will become clear that the field has recognized the importance of a skilled workforce. But behavior and institutional change is slow. It requires vanguard innovators, fast followers, and eventual widespread adoption. This report aims to provide one framework for how economic development organizations can practically utilize their research, resources, and relationships to support talent development and deployment.

Endnotes

- 1 Harvey Molotch, "The City as a Growth Machine: Toward a Political Economy of Place," *American Journal of Sociology* 82 (2) (1976): 309-32.
- **2** David Albouy, Gabriel Ehrlich, and Minchul Shin, "Metropolitan Land Values," *The Review of Economics and Statistics* 100 (3) (2017): 454-66.
- **3** Estimates of the U.S. human capital stock vary based on the methodology used. Michael Christian values the U.S. human capital stock at \$240 trillion in 2013. Gang Liu estimated that the human capital stock was \$153 trillion in 2006. Michael S. Christian, "Net Investment and Stocks of Human Capital in the United States, 1975-2013," (Washington: Bureau of Economic Analysis, 2016). Gang Liu, "Measuring the Stock of Human Capital for International and Intertemporal Comparisons," Measuring Economic Sustainability and Progress, (2014): 493-544.
- **4** William Kerr, *The Gift of Global Talent: How Migration Shapes Business, Economy & Society* (Palo Alto, CA: Stanford University Press, 2018)
- **5** Matthew Tarleton and Evan Robertson, "Quality of Place and Its Role in Corporate Location Decisions," *Site Selection Magazine*, 2014.
- **6** Timothy J. Bartik, *Making Sense of Incentives: Taming Business Incentives to Promote Prosperity,* (Kalamazoo: W.E. Upjohn Institute for Employment Research, 2019).
- 7 Ibid.
- **8** Robert E. Lucas, Jr. "On the Mechanics of Economic Development," *Journal of Monetary Economics* 22 (1988): 3-42. Robert J. Barro, "Economic Growth in a Cross-Section of Countries," *Quarterly Journal of Economics* 106 (1991): 407-443. Edward L. Glaeser and Albert Saiz, "The Rise of the Skilled City," Working Paper No. 10191 (Cambridge, MA: National Bureau

- of Economic Research, 2003). Enrico Moretti, "Human Capital Externalities in Cities," Working Paper 9461 (Cambridge, MA: National Bureau of Economic Research, 2003).
- **9** Brookings analysis of U.S. census data. Rebecca Diamond, "U.S. Workers' Diverging Locations: Causes and Inequality Consequences." In Susan M. Wachter and Lei Ding, eds., Shared Prosperity in America's Communities (Philadelphia: University of Pennsylvania Press, 2016).
- **10** Claudia Goldin and Lawrence F. Katz, The Race between Education and Technology (Cambridge, MA: The Belknap Press of Harvard University Press, 2008).
- 11 Chad Shearer and Isha Shah, "Opportunity Industries" (Washington: Brookings Institution, 2018).
- **12** Anthony P. Carnevale and Stephen J. Rose, "The Economy Goes to College" (Washington: Georgetown Center on Education and the Workforce, 2015).
- 13 Bridgett Strickler and others, "Bridging the Talent Gap through Data Insights and Community Action." In Stuart Andreason and others eds., *Investing in America's Workforce: Improving Outcomes for Workers and Employers* (Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 2018).
- **14** Paul W. Bauer and others, "State Growth Empirics: The Long-Run Determinants of State Income Growth" (Cleveland, OH: Federal Reserve Bank of Cleveland, 2007).
- **15** Maryann Feldman and Michael Storper, "Economic growth and economic development: Geographic dimensions, definitions, and disparities." In Gordon Clark and others, eds, *The New Handbook of Economic Geography* (Oxford: Oxford University Press, 2016).

- **16** Raj Chetty and others, "Where Is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States," Working Paper 19843 (Cambridge, MA: National Bureau of Economic Research, 2014).
- 17 George Washington Institute of Public Policy and RW Ventures, LLC, "Implementing Regionalism: Connecting Emerging Theory and Practice to Inform Economic Development" (Washington: George Washington University, 2011).
- **18** John V. Winters, "Human capital externalities and employment differences across metropolitan areas of the USA." *Journal of Economic Geography* 13 (5) (2012): 799-822.
- **19** Gilles Duranton and Diego Puga, "MicroFoundations of Urban Agglomeration Economies," in *Handbook of Regional and Urban Economics*, vol. 4 (Elsevier, 2004), 2063-2117.
- **20** Martha Ross and others, "Pathways to High-Quality Jobs for Young Adults" (Washington: Brookings Institution, 2018).
- **21** Jesse Rothstein, "Inequality of Educational Opportunity? Schools as Mediators of the Intergenerational Transmission of Income" (Washington: Center for Equitable Growth, 2017).
- **22** Isabel V. Sawhill, Scott Winship, and Kerry Searle Grannis, "Pathways to the Middle Class: Balancing Personal and Public Responsibilities" (Washington: Brookings Institution, 2012).
- **23** Harry J. Holzer, "The US Labor Market in 2050: Supply, Demand and Policies to Improve Outcomes," (Washington: Brookings Institution, 2019).
- **24** Ibid.
- **25** David Leonhardt and Sahil Chinoy, "The College Dropout Crisis," *The New York Times*, May 24, 2019.
- 26 Ben Backes, Harry J. Holzer, and Erin

- Dunlop Velez, "Is it worth it? Postsecondary education and labor market outcomes for the disadvantaged," *IZA Journal of Labor Policy* 4 (1) (2015).
- 27 Harry J. Holzer, "Worker Skills and the US Labor Market: What Role Should Policy Play?" In ed. Michael R Strain, *The US Labor Market: Questions and Challenges for Public Policy* (Washington: American Enterprise Institute, 2016).
- **28** As of July 8, 2019, the total amount of outstanding US student loans is \$1.6 trillion. Accessed at: fred.stlouisfed.org/series/SLOAS#0
- **29** Harry J. Holzer and Sandy Baum, *Making College Work: Pathways to Success for Disadvantaged Students* (Washington: Brookings Institution Press, 2017).
- **30** Harry J. Holzer, "Workforce Development as an Antipoverty Strategy" (Washington: Urban Institute, 2008).
- **31** Noelle St. Clair, "Report on Workforce Development Needs and Opportunities." In Stuart Andreason and others eds., *Investing in America's Workforce: Improving Outcomes for Workers and Employers* (Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 2018).
- **32** Peter Cappelli, "Talent Management for the Twenty-First Century," *Harvard Business Review*, March 2008.
- 33 Anthony P. Carnevale, Artem Gulish, and Jeff Strohl, "College Is Just the Beginning" (Washington: Georgetown Center on Education and the Workforce, 2015). Lorri Freifeld, "2018 Training Industry Report," *Training*, November 6, 2018. "Gen Z Rising: U.S. Edition | Accenture Strategy," accessed May 6, 2019, https://www.accenture.com/us-en/insight-gen-z-rising.
- **34** Robert Lerman, Signe-Mary McKernan and Stephanie Riegg, "Employer-Provided Training and Public Policy" (Washington: Urban Institute, 1999). Maureen Conway, "Investigating

Demand Side Outcomes: Literature Review and Implications" (Washington: Aspen Institute, 2003). Paul Osterman, "Employment and Training Policies: New Directions for Less Skilled Adults." In Harry J. Holzer and Demetra Smith Nightingale eds., Reshaping the American Workforce in a Changing Economy (Washington: Urban Institute Press, 2007).

- Peter Cappelli, *Talent on Demand: Managing Talent in an Age of Uncertainty* (Cambridge, MA: Harvard Business Press, 2008).
- Robert Maxim and Mark Muro, "Automation and AI Will Disrupt the American Labor Force. Here's How We Can Protect Workers," *The Avenue*, February 25, 2019.
- Ryan Craig, "A New U: Faster + Cheaper Alternatives to College" (Dallas, TX: BenBella Books, Inc., 2018).
- Joseph B. Fuller and Manjari Raman, "Dismissed by Degrees How degree inflation is undermining U.S. competitiveness and hurting America's middle class" (Cambridge, MA: Harvard Business School and Accenture, 2017).
- Craig, A New U.
- Mary Hayes, 2019, "Why Companies Should Hire For Potential Over Pedigree: Q&A With Byron Auguste," *Forbes*, May 15, 2019.
- Daniel Borowczyk-Martins, Jake Bradley, and Linas Tarasonis, "Racial Discrimination in the U.S. Labor Market: Employment and Wage Differentials by Skill," *Labour Economics* 49 (2017): 106-27.
- Ross and others, "Pathways to High-Quality Jobs for Young Adults."
- Michael R Strain, *The US Labor Market: Questions and Challenges for Public Policy* (Washington: American Enterprise Institute, 2016).

- **44** "ASA Staffing Index," American Staffing Association, accessed May 6, 2019, https://americanstaffing.net/staffing-research-data/asa-staffing-industry-data/staffing-index/.
- Ibid.
- Strain, The US Labor Market: Questions and Challenges for Public Policy.
- José Azar, Ioana Marinescu, and Marshall I. Steinbaum, "Labor Market Concentration," Working Paper No. 24147 (Cambridge, MA: National Bureau of Economic Research, 2017).
- Paul Osterman, "In Search of the High Road: Meaning and Evidence," *Illinois ILR* 71 (2018): 3-34.
- Joseph Parilla, "Opportunity for Growth: How Reducing Barriers to Economic Inclusion Can Benefit Workers, Firms, and Local Economies" (Washington: Brookings Institution, 2017).
- **50** Matthew Tarleton and Evan Robertson, "Quality of Place and Its Role in Corporate Location Decisions," *Site Selection Magazine*, 2014.
- Interview with Chad Sweeney and Larry Gigerich, Ginovus LLC.
- "Jay Carney: Talent Drew Amazon to NY and Virginia CNN Video," accessed August 26, 2019, https://www.cnn.com/videos/business/2018/11/13/jay-carney-amazon-hq2.cnn-business.
- Jan Touney, "Townsend-Based Sterilite Builds a Factory on the Iowa Prairie," *telegram.com*, May 21, 2017.
- Talent Shortages at Record High: 45% of Employers Around the World Report Difficulty Filling Roles," accessed May 6, 2019, https://www.manpowergroup.com/media-center/news-releases/Talent+Shortages+at+Record+High+45+of+Employers+Around+the+World+Report+Difficulty+Filling+Roles.

- **55** Jerry Underwood, "Birmingham's Shipt to Create 881 Jobs in Major Expansion," *Made in Alabama*, July 12, 2018.
- **56** Peter Cappelli, "Is 'Skill' a Topic for Policy?" In ed. Michael R Strain, *The US Labor Market:* Questions and Challenges for Public Policy (Washington: American Enterprise Institute, 2016).
- **57** "Building San Diego's Talent Pipeline," San Diego EDC, accessed May 6, 2019 <u>sd-regional-edc.maps.arcgis.com/apps/Cascade/index.html?appid</u> =97fc15fd9df04152aa41d009a87ed8eb
- **58** "Our History | ConxusNEO," accessed May 6, 2019, http://conxusneo.jobs/our-history/.
- **59** "Job Data Exchange™ (JDX)," U.S. Chamber of Commerce Foundation, accessed August 27, 2019, www.uschamberfoundation.org/workforce-development/JDX.
- **60** "A Guide to Key Initiatives for the Connected Learn and Work Ecosystem," Credential Engine, accessed May 6 2019, Connected-Learn-and-Work-Ecosystem_FINAL_190314.pdf
- **61** National Center for the Middle Market and the Brookings Institution, "Help Wanted: How Middle Market Companies Can Address Workforce Challenges to Find and Develop the Talent They Need to Grow" (2017).
- **62** Ashley Putnam, "Addressing Bias and Equity in Hiring" (Philadelphia, PA: Federal Reserve Bank of Philadelphia, 2018).
- **63** Chad Shearer, Isha Shah, and Mark Muro, "Advancing Opportunity in Central Indiana" (Washington: Brookings Institution, 2018).
- **64** Steven L. Dawson, "Now or Never: Heeding the Call of Labor Market Demand" (Pinkerton Foundation, 2018).
- **65** Timothy Bartik, "A New Panel Database on

- Business Incentives for Economic Development Offered by State and Local Governments in the United States" (Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 2017).
- **66** What Works Centre for Local Economic Growth, "Employment Training Financial Incentives Toolkit" (2017).
- 67 Alastair Fitzpayne and Ethan Pollack, "Worker Training Tax Credit: Promoting Employer Investments in the Workforce" (Washington: Aspen Institute, 2018). Opportunity America, Brookings Institution, American Enterprise Institute, "Work, Skills, Community: Restoring Opportunity for the Middle Class" (2018).
- **68** Ellen D. Harpel, "Economic-Development-Incentive-Programs-for-Worker-Training," *Smart Incentives*, January 9, 2018.
- **69** Ibid.
- **70** Stuart Andreason, "Financing Workforce Development in a Devolutionary Era" (Atlanta, GA: Federal Reserve Bank of Atlanta, 2016).
- **71** Josh Carpenter, "Investing Not Incentivizing: Birmingham's Novel Approach to Retaining High-Tech Companies," *Biden Forum*, August 15, 2018.
- **72** Andy Reed, "Evolving Tax Incentives: A Shared Value Approach to Economic Development in Portland," *The Avenue*, May 29, 2018.
- **73** HR&A Advisors, Inc., "Inclusive Incentives: A Roadmap For Economic Development in Indianapolis" (2019).
- **74** Joseph Parilla and Sifan Liu, "Examining the Local Value of Economic Development Incentives" (Washington: Brookings Institution, 2018).
- **75** Ryan Donahue, Joseph Parilla, and Brad McDearman, "Rethinking Cluster Initiatives" (Washington: Brookings Institution, 2018).
- **76** Ibid.

- 77 John F. Sargent Jr., "The Manufacturing Extension Partnership Program," accessed May 6, 2019, https://www.everycrsreport.com/reports/ R44308.html.
- **78** Jim Robey and others, "The National-Level Economic Impact of the Manufacturing Extension Partnership (MEP): Estimates for Fiscal Year 2017" (Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, 2018).
- **79** Ryan Craig, "The Great Bundling of Work-Force Development" *Inside Higher Ed, February 8, 2019.*
- **80** Ibid.
- **81** Ibid.
- **82** "Turnover and Tenure," American Staffing Association, accessed May 6, 2019, https://americanstaffing.net/staffing-research-data/turnover-and-tenure/.
- **83** "Temporary Staffing Agency Fees US Bureau of Labor Statistics Data," September 28, 2017, https://meirxrs.com/temporary-staffing-agency-fees/.
- **84** Frank Britt, Cathi Canfield, and Jason A. Tyszko, "Can Next Gen Staffing Agencies Close the Skills Gap?" (Washington: U.S. Chamber of Commerce Foundation, 2018).
- **85** https://apprenticareers.org/
- **86** Strada Education Network, "On-Ramps to Good Jobs: Fueling Innovation for the Learning Ecosystem of the Future" (2019).
- 87 David Fein, "Scaling Up to Close the Opportunity Divide for Low-Income Youth: A Case Study of the Year Up Program" (Bethesda, MD: Abt Associates, 2016). Denver Frederick, "Plinio Ayala, CEO of Per Scholas, Joins Denver Frederick," https://denver-frederick.

- **88** Ibid.
- **89** "Transition from School to Work," OECD, updated November 9, 2018, <u>stats.oecd.org/Index.aspx?DataSetCode=EAG_TRANS</u>.
- **90** Martha Ross and Joseph Parilla, "Here's What American Universities Can Learn from Germany," *Washington Post*, July 27, 2016.
- **91** Jenny Nagaoka and others, "Foundations for Young Adult Success: A Developmental Framework" (Chicago: The University of Chicago Consortium on School Research, 2015).
- **92** Richard M. Lerner and others, "Positive youth development: a view of the issues," *The Journal of Early Adolescence* 25 (1) (2005): 10-16.
- **93** For more insights on sector partnerships: ExcelinEd, "Building Cross-Sector Partnerships to Support Career and Technical Education Pathways" (2018). Kyle Fee, Matt Klesta, and Lisa Nelson, "Addressing Employment Needs through Sector Partnerships: Case studies from across the Federal Reserve's Fourth District" (Cleveland, OH: Federal Reserve Bank of Cleveland, 2016).
- **94** Maureen Conway and Robert P. Giloth, Connecting People to Work: Workforce Intermediaries and Sector Strategies (Washington, Aspen Institute, 2014).
- **95** Matthew A. Poland, Randall Wilson, and Fran Kennedy, "Work-Based Learning System Development Guide" (Boston, MA: Jobs for the Future, 2017).
- 96 Mary G. Visher, Rajika Bhandari, and Elliott Medrich, "High School Career Exploration Programs: Do They Work?" Phi Delta Kappan 86 135-138. David Blustein, The Psychology of Working: A New Perspective for Career Development, Counseling, and Public Policy (New York, NY: Routledge, 2006). Maureen E. Kenny and others, "Achievement motivation among urban adolescents: Work hope, autonomy support, and achievement-related beliefs,"

Journal of Vocational Behavior 77 (2) (2010): 205-212. Janine Bempechat and others, "Fostering Positive Youth Development through Work-Based Learning: The Cristo Rey Model," *Teachers College Record* 116 (13) (2014): 232-252. Glenda Quintini and Sebastien Martin, "Same but Different: School-to-work Transitions in Emerging and Advanced Economies" (Paris: OECD, 2014).

97 Martha Ross and Natalie Holmes, "Meet the out-of-work" (Washington: Brookings Institution, 2017).

98 Ibid.

99 Ibid.

100 Ibid.

- **101** Donna M. Deeds, "The State of Career and Technical Education: Kansas City Regional Initiatives" (Kansas City, MO: Ewing Marion Kauffman Foundation, 2017).
- **102** Chris Bierly and Abigail Smith, "Making the Leap: How to Take the Promise of Career-Connected Learning to Scale" (Boston, MA: Bain & Company, 2019).
- **103** Sheila Maguire and others, "Tuning in to Local Labor Markets: Findings from the Sectoral Employment Impact Study (Philadelphia, PA: Public/Private Ventures, 2010).
- **104** "Career Connect Washington Recommendations," accessed May 6, 2019, http://www.wtb.wa.gov/careerconnectwa.asp.
- Assessment and Cost-Benefit Analysis of Registered Apprenticeship in 10 States" (Oakland, CA: Mathematica Policy Research, 2012). Susan Helper and others, "The Benefits and Costs of Apprenticeship: A Business Perspective" (Cleveland, OH: Case Western Reserve University, and Washington, D.C.: U.S. Department of Commerce, 2016).

- 106 Recent evaluations of efforts in Cleveland, New York, San Antonio, and Tulsa indicate that sector-based training strategies did increase earnings for lower-income participants. Mark Elliott and Anne Roder, "Escalating Gains: Project QUEST's Sectoral Strategy Pays Off" (New York: Economic Mobility Corporation, 2017). Richard Hendra and others, "Encouraging Evidence on a Sector-Focused Advancement Strategy" (New York: MDRC, 2016).
- **107** "How to Recruit and Retain Millennials and Gen Z," Allegis Group, accessed May 6, 2019, https://www.allegisgroup.com/en/insights/millennials-and-genz.

108 Ibid.

- **109** Verrenti Consulting, "Lessons in Career Connected Learning for Youth and Young Adults" (2017).
- **110** Greater Houston Partnership, 2018 Annual Report, accessed May 6, 2019, www.houston.org/sites/default/files/2019-02/2018%20Annual%20Report.pdf.
- 111 Milwaukee 7 Talent Partnership, 2017 Annual Report, accessed May 6, 2019, www.mke7.com/clientuploads/2017%20Annual%20Report%20 Grow%20Here.pdf.
- 112 "Partners," Nepris, accessed May 6, 2019. https://www.nepris.com/partners/list/detail/6. www.nepris.com/partners/list/detail/6.
- **113** "SCK Launch Community Plan," SCK Launch, accessed May 6, 2019, <u>scklaunch.com/wp-content/uploads/2018/05/2017-SCK-LAUNCH-Community-Plan.pdf.</u>
- 114 Denver Public Schools CareerConnect, 2016-2017 Annual Report, accessed May 6, 2019, drive.google.com/file/d/082PjSKljt0h5c0pkcy1FZ3hPU28/view.
- **115** John Ratliff, "Establish a strategic industries workforce challenge grant program" (Washington: Brookings Institution, 2019).

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