

The Value of Technical College Graduates in Tennessee

By: Scottie McCormick Tudor

Introduction

Economic developers are discovering that companies have a large gap between workforce needs and workforce participation. To ensure that the region is thriving economically and growing at a healthy rate, there needs to be ample amounts of trained workforce to fill the gap. Specifically, the need is for workers with a certificate or degree from technical colleges, because technical degrees carry great value. It is important for technical institutions to work directly with companies to make sure the workforce is aligning with the needs of the companies, so that the region is best served. It is also important for companies to do their part as well by partnering with the local technical colleges and creating apprenticeship and internship programs to engage the future workforce. The opportunity for further economic prosperity is strong if technical college certificates and degrees are leveraged and taken full advantage of, so that the need of industry is met within the community. Looking at existing initiatives and successful programs in our State and similar responses from other states to the issue will help paint the picture of the importance of a strong workforce to the economy. Looking at the coursework completed within UT CIS and reflecting on the best-practices developed in the courses will create a framework for the opportunity to fill the gap in the workforce for a better economic outlook.

Background

Information on community and organization

Within the State of Tennessee specifically, the Tennessee Board of Regents (TBR) is the system responsible for governing the States' 40 community and technical colleges. TBR's vision is a Tennessee population and workforce with the knowledge and skills to be competitive in the

economy. The institutions provide over 500 programs of study for students to choose from, at little to no cost thanks to the Tennessee Promise and Tennessee Reconnect last-dollar scholarship programs. In 2021, Tennessee Colleges of Applied Technology (TCATs) across the State had the highest enrollment in history at around 19,000, largely in part to the opportunity for free tuition. In 2020-2021, the top TCAT program cluster enrollments were in Mechanic and Repair Technologies, Health Professions and Related Programs, Precision Production, Construction Trades, and Agriculture Operations. While this data suggests that students are taking advantage of the programs that correlate to their community industries, data from the U.S. Census and TBR shows that there are still areas with a strong demand for additional higher education credentials.

The economic and fiscal impact of TBR and its institutions, highlighted in a study by the Center for Economic Research in Tennessee (CERT), demonstrates the importance of the technical college graduates in Tennessee's economy. According to the study, students who graduated from a TBR institution earned a total of \$940.7 million a year in their careers. This number is \$224 million higher than they would have earned without a postsecondary degree. The report dives into the significant impact community colleges and TCATs have on their regional economies, and how they support employment, income and spending, industry, and tax revenue.

Gaining a technical degree not only benefits the economy and the State, but also benefits the student. Technical college is quicker, cheaper, and more flexible than traditional four-year degrees. Students can get a degree in half the time for 100% less in Tennessee. Income potential is higher and faster, resulting from the focus on a specific in-demand career and entering the workforce more quickly. The earlier CTE is introduced in school, the more beneficial for the student as well. Time and money are saved by starting the technical courses in middle and high

school, allowing for students to gain credit through dual-enrollment and work-based learning apprenticeships.

To create a strong workforce with technical degree graduates, support from the private sector is integral. There is a need to engage private sector companies to assist in designing and supporting technical degrees, as well as provide opportunities for students to learn on the job. There are many benefits for private sector employees from offering this support, so it is a win-win situation for both the company and the student. Some examples of benefits for a private sector company that provides internships are having a skilled workforce, improved productivity, reduced turnover, customizable training, and employee retention and diversity. Some programs, such as the Federal Apprenticeship Program and Federal OJT (On-the-Job Training) programs even offer tax breaks and incentives for meeting the criteria. Part of the responsibility of an economic developer is making sure that their local industry is aware of the benefits of creating programs like this and helping them along the way to establish their plan to incorporate students into their workforce. Relationships can be created by meeting one-on-one with your industries and encouraging them to do their part to solve the workforce gap by supporting their educational partners and creating programs to incorporate the workforce of tomorrow.

Existing Programs in Tennessee

In Tennessee, the Legislature has already put emphasis on the need for workforce and industry alignment. In 2013, the Labor Education Alignment Program (LEAP) was established to address these needs in an ongoing grant program in collaboration with the Tennessee Higher Education Commission, Governor's Office, Legislature, and other State agencies. The LEAP program was implemented to award grants to communities for the purpose of collaborating with regional K-12 schools, higher education institutions, and employers to develop workforce at an

early age to ensure skills that match the demands of employers. After an application and selection process, the stakeholders can use the funding to create tailored workforce pipelines that meet the highly technical skills deficit the local industries need. Twelve projects were funded totaling \$10 million in the first year (2014) and catered towards sectors with the largest skills gap including advanced manufacturing, mechatronics, information technology, and career readiness. The outcome of these projects included developing more CTE offerings, dual-enrollment programs in high-schools, new programs at TCATs and community colleges, increasing employer engagement with students, internships, and more. While this program is promising, further funding is needed to ensure that the entire State is being served by the program.



LEAP Service Areas

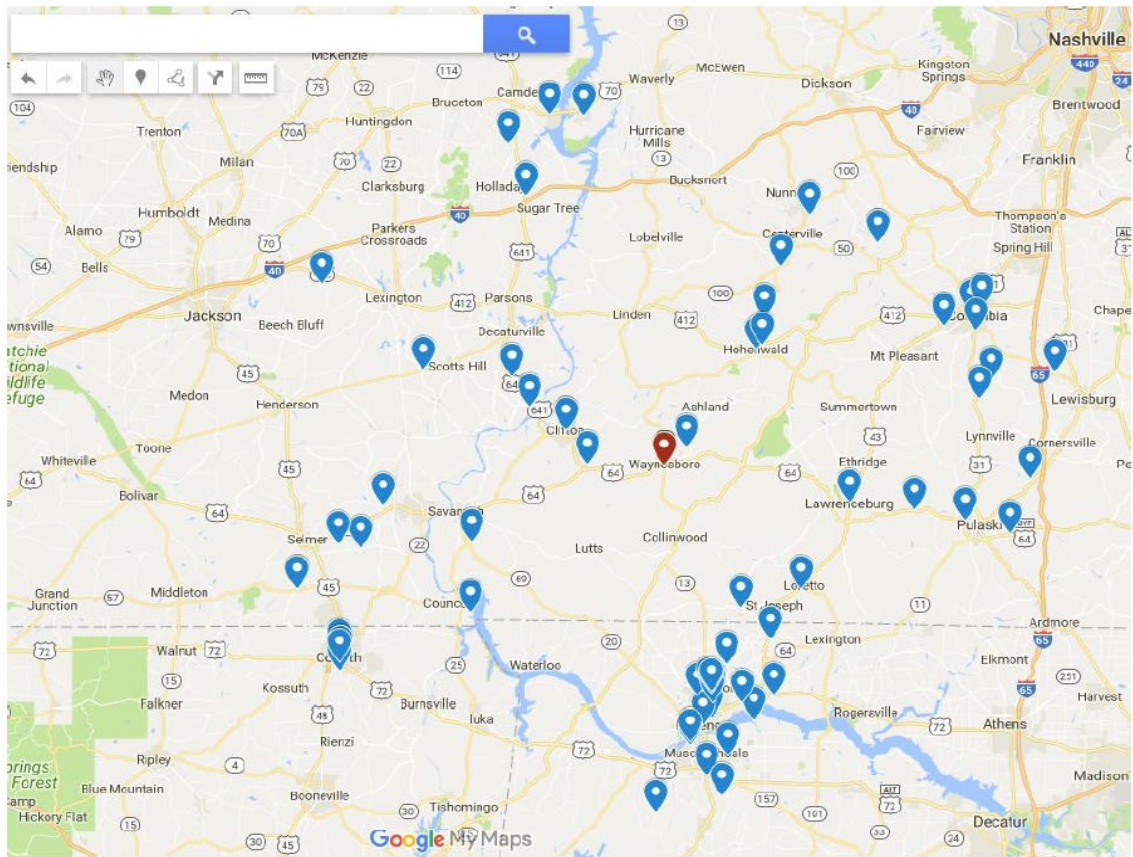
Another program in Tennessee that emphasizes the importance of technical education is the Governor’s Investment in Vocational Education (GIVE) program. The GIVE program was built off of the LEAP program’s framework and was enacted in 2019 by the Governor’s Office. The funding from the initiative goes to communities to build work-based learning programs, establish apprenticeships, and double dual-enrollment and CTE offerings for students and the

workforce of tomorrow. The first round of grants that were awarded in 2019 served 8,000 students in rural communities, and the second round is estimated to serve 7,500 more. The Governor has already invested \$50 million in the program, further demonstrating the importance of technical degrees in Tennessee's economy.

Success stories in Tennessee

Through programs like LEAP and GIVE, as well as the shift in focus towards technical degrees and workforce readiness, Tennessee has had success. For example, Wayne County identified that Forestry Management, Timber Harvesting, and Wood Products Manufacturing were industries that were struggling to get trained employees, and it was hurting their existing largest industry that had been around for a century. The existing forestry industry employs over 400 jobs directly in Wayne County, which is significant in a rural area. Forestry accounts for 15% of Wayne County's total economy. According to one study done in 2018, the LQs (location quotients) were particularly high for the most concentrated industries, and by no surprise-logging and sawmills were one of the highest. As seen in the map below, there are 53 Sawmill and Wood Product companies within a 50-mile radius of Waynesboro. Through studies like this and surveys from local industry, Wayne County was able to further strengthen their knowledge on what their community needed in terms of workforce so they could strategically plan how to further strengthen their forestry industry.

Map 2. Wood Product Manufacturing (NAICS 3219) within 50 miles of Waynesboro, TN



Note: The red icon in the map is Waynesboro, TN.

After identifying the clear need for forestry workers, multiple entities including the County JECDB, the Wayne County Forestry Association, the University of Tennessee, and the State came together to create infrastructure that would support the future of the wood product industry. Through grants and collaboration, they were able to create the Agriculture Center and construction began in 2021. The center, which is located in the Wayne County Industrial Park, will house the UT Extension and Soil and Conservation offices, including an outdoor classroom, a 125-person training/meeting room, and a livestock and farming pavilion. Matching in their support, local industry has plans to chip in by donating equipment for learning purposes.

Another program created that was based off of clear industry need is the CDL driver program added at TCAT Parsons. TCAT Parsons is an extension of TCAT Crump and was created for extra space and programs that were needed to support the community. Along with the truck driving program, the facility also houses a diesel power technology program, and a heavy equipment technology program. According to the U.S. Bureau of Labor Statistics, about 230,000 truck drivers will be needed nationally per year for the next decade. This is a result of an aging population, as well workers transferring to other occupations. 90.5% of Tennessee communities depend exclusively on trucks to move their goods, further demonstrating the need for CDL truck drivers. TCAT Parsons was able to identify this need, therefore creating a full-time certificate program for truck driving to add drivers to the existing 70,000 already employed in the area. The program is a 2-month program that prepares the student for the commercial driver's license exam, which has to be passed to become employed as a commercial truck driver. At the Parsons location, both the licensure and job placement rate are 100%, and upon employment drivers see a median wage of \$50,200 a year, which is a great living and family wage. Graduates have no issue securing employment due to the high demand for truck drivers in the State and nationally, and they are able to jump start a career with little to no debt.

Another example of industry aligning with technical colleges is the establishment of a new TCAT at the monumental Blue Oval City operation in West Tennessee. In September of 2021, Governor Bill Lee announced that Ford Motor Company and Korean battery manufacturer SK Innovation would be partnering to create an electric vehicle (EV) manufacturing operation at the long-standing 3,600-acre Memphis Regional Megasite. This operation will be one of the largest battery and vehicle operations in the United States, resulting in over a \$5.6 billion capital investment into the State. The project is expected to directly create over 5,800 new jobs for

Tennesseans and another 20,000 indirect jobs. This historic investment into the State will require a workforce that is ready to fill these unprecedented numbers, and the State and region has been quick to develop a plan for this. TCAT Jackson is creating a \$40 million campus to sit at Blue Oval City to tackle the workforce training head-on. The campus will serve as the training center for Ford, as well as the subsequent suppliers that will inevitably locate near the plant. TBR, TCAT Jackson, Ford and SK Innovation are all collaborating to develop a curriculum that will best serve the project, catering to the high complexity nature of the new EV positions. While this is uncharted territory due to the relatively new emergence of EV, the State and the region have shown their support to ensure that a trained workforce is ready to lift this mega-project off the ground.

Other National Workforce Programs

While analyzing the State of Tennessee's approach to workforce development, it is also important to look at other surrounding states' programs and initiatives to combat the skills gap in their pipeline. Alabama Works, for example, is the State of Alabama's workforce development arm that aims to "recruit, train, and empower a highly skilled workforce driven by business and industry needs and to be the competitive advantage for Alabama's economic growth." Alabama Works also partners with agencies such as the Alabama Workforce Council, the Alabama Department of Commerce, and the Alabama Department of Labor. Alabama Works uses many tools to address workforce needs, but one worth noting is the American Graduate: Getting to Work program. The program, which is sponsored by Alabama Public Television, is a series of videos aimed to spotlight the technical college career path and the industries that fall underneath it. For example, there is a section named the Career Forward that consists of short educational videos that highlight opportunities in industries within Alabama that the State has deemed in-

demand. Some of the videos include content on co-ops for high school students, Alabama's need for truck drivers and what the career looks like, apprenticeship opportunities, WIOA funding opportunities, the soft skills curriculum called Ready to Work, and much more. An education section highlights CTE and career pathways, as well as videos on the skills gap within the Alabama economy. According to the 2021 Community Service Report, Alabama Public Television (APT) has dedicated itself to providing vital information to its residents that they may not get anywhere else. This information includes the need for a skilled workforce and ways to obtain education so that residents can have a better quality of life and the power to increase their own well-being.

Another Alabama program that provides a positive economic impact for the state is the Alabama Technology Network (ATN). ATN, which is an entity of the Alabama Community College System, serves all 67 counties. Their mission is to "support industry by creating customized workforce training, technical assistance, and engineering services designed to improve Alabama business and industry and sustain jobs." Many companies have been successful using ATN's training resources such as Connector Manufacturing Company of America, Firestone Building Products, Briggs and Stratton Corporation, 3M, and Phifer. In 2021 alone, ATN contributed to 2,541 new and retained jobs and \$43.7 million in new investment.

Applicable TCED Coursework

The courses within the UT CIS Tennessee Certified Economic Developer Program teach many valuable lessons for Economic Developers, and much can be drawn from the material when it comes to strengthening the plan for closing the skills gap within the workforce pipeline. An example of a course that helped with this paper and is integral to community economic developers to implement is the Strategic Planning Course. This course emphasized the

importance of a strategic plan, proving that a goal without a plan is just a dream. A strong strategic plan includes research, data, a vision, as well as a performance evaluator to meet the goal. Having a strategic plan in place is important so that the shared vision of the economy can be easily translated to all the community partners, further helping reach the goal.

Another example of a course referenced heavily while writing this Capstone paper is the Workforce Development course. It offered many resources to economic developers who are interested in strengthening their workforce and talent attraction program. The course provided many data resource examples so that communities are able to find the relevant data they need in order to support their case for industry specific training. For example, Dr. Younger provided information on how to locate and understand reliable workforce data, so that it is able to be clearly communicated between partners and stakeholders. Resources provided, and that were used to research for this paper, were the Bureau of Labor Statistics (BLS), the U.S. Department of Commerce, the State Department of Labor and Workforce Development, On the Map, and Career Builder/EMSI. The BLS website can become overwhelming to users, however Dr. Younger was able to break down the process step-by-step so that the data was easier to find and interpret. She also provided various State Labor Market Information (LMI) websites that includes employment and wage data, labor force estimates, employment forecasts, and more information that is crucial when painting a picture of what type of local industries deserve the most training resources. Her course also touched on how to create a labor shed, as well as how to analyze it and compare it to other regions. An education data tool provided that proved to be useful was the National Center for Education Statistics (NCES) College Navigator tool. This tool allows for a national search of any higher education institutions, that can be filtered by institution

type, degree level, location and more. This is a great tool to be able to compare institutions within your area to other successful institutions around the country.

Another great resource touched on in the Workforce Development course was the Center for Economic Research in Tennessee (CERT). CERT is housed within the Department of Economic and Community Development and is a great resource to have when custom data is needed within a quick turn-around. The CERT team is always available to pull economic data and able to customize it to the industry and area that the stakeholder needs. This is all free of charge through the State and is another great tool to have in the economic development toolbox. During CERT's presentation, the speaker also touched on the LEAP report, referenced earlier in this paper. The LEAP report is a great resource for communities wanting to customize their training to meet the demands on the market. Finally, the Tennessee Higher Education Commission's Academic Supply and Occupational Demand Report was explained, adding to the resources that can be utilized to tell a community's workforce story.

Conclusion

In conclusion, having a pipeline of workers with a technical college certification or degree is vital to the economy. While having a four-year degree is important for some careers, the economy cannot survive on white-collar workers alone. The economic impact of technical degrees is strong; it increases the workforce pipeline, lowers unemployment rate, adds to the state's gross domestic product, and supports economic prosperity in the community. Economic prosperity in turn has a ripple effect of positivity on our national economy by increasing people's ability to travel, spend money in other states, create tax revenue, and continue to enhance our nation and quality of life. Partnering specifically with industry is vital when creating technical college programs to ensure that public funds are being used fiscally responsible. A strong

partnership includes studying the needs of the local economy by using tools such as the LEAP report, taking advantage of grant programs such as the GIVE grant, studying other state's successful programs like Alabama Works, and bringing it all together to set the community and its workforce up for success. Projects such as Blue Oval City and their adjacent new TCAT facility show the need for workforce and industry alignment and will be a large-scale example of the success that comes with the collaboration. Smaller scale projects such as the Wayne County Agriculture Center will also show the benefits by supporting existing industry, which in turn will help recruit new industry in the future. While Tennessee is definitely moving in the right direction by shifting focus to workforce and labor alignment, increased technical training opportunities, rural development, and industry growth, further resources and funding will be required so that 100% of State of Tennessee is served by these programs and resources. The future of the coming generation depends on having superior opportunities for Tennesseans, and this is possible if the focus is continued on growth, education, and economic prosperity for all.

Works Cited

“American Graduate-Getting to Work.” Alabama Public Television, 6 Oct. 2020,

<https://aptv.org/education/american-graduate/>.

College Navigator - National Center for Education Statistics,

<https://nces.ed.gov/collegenavigator/>.

“Colleges of Applied Technology.” Tennessee Board of Regents,

<https://www.tbr.edu/institutions/colleges-applied-technology>.

Davis, Jessica. “Ribbon Cutting Held for New TCAT Parsons Campus.” WBBJ TV, 22 Oct.

2021, <https://www.wbbjtv.com/2021/10/22/ribbon-cutting-held-for-new-tcat-parsons-campus/>.

“Governor's Investment in Vocational Education (GIVE).” Tennessee State Government -

TN.gov, <https://www.tn.gov/rural/search-for-grants---resources.html>.

“Heavy and Tractor-Trailer Truck Drivers: Occupational Outlook Handbook.” U.S. Bureau of

Labor Statistics, U.S. Bureau of Labor Statistics, 18 Apr. 2022,

<https://www.bls.gov/ooh/transportation-and-material-moving/heavy-and-tractor-trailer-truck-drivers.htm>.

“Leap Report.” Report, 2020, <https://www.tn.gov/thec/research/leap.html>.

“Memphis Regional Megasite Lands \$5.6 Billion Investment from Ford Motor Company and SK

Innovation - News.” Tennessee Department of Economic and Community Development,

<https://tnced.com/news/memphis-regional-megasite-lands-5-6-billion-investment-from-ford-motor-company-and-sk-innovation/>.

“Resources for Alabama's Public Workforce System.” AlabamaWorks, 9 Feb. 2022,
<https://alabamaworks.com/resources/#employer>.

“Supply and Demand Report.” Tennessee State Government - TN.gov,
<https://www.tn.gov/thec/research/supply-and-demand.html>.

Tennessee, Department of Economic and Community Development, and Sally Avery. Economic Reach and Impact of TBR, 2018.

Thomas, Douglas. “Manufacturing Industry Statistics.” NIST, Applied Economics Office, 2 Nov. 2021.

Yusuf, Omer. “TCAT Appoints New Leader for College's Future Ford Blue Oval City Campus in Stanton.” The Commercial Appeal, Memphis Commercial Appeal, 5 May 2022,
<https://www.commercialappeal.com/story/money/business/2022/05/04/ford-electric-vehicles-blue-oval-city-tcat-campus-tennessee-college-of-applied-technology-jackson/9646688002/>.