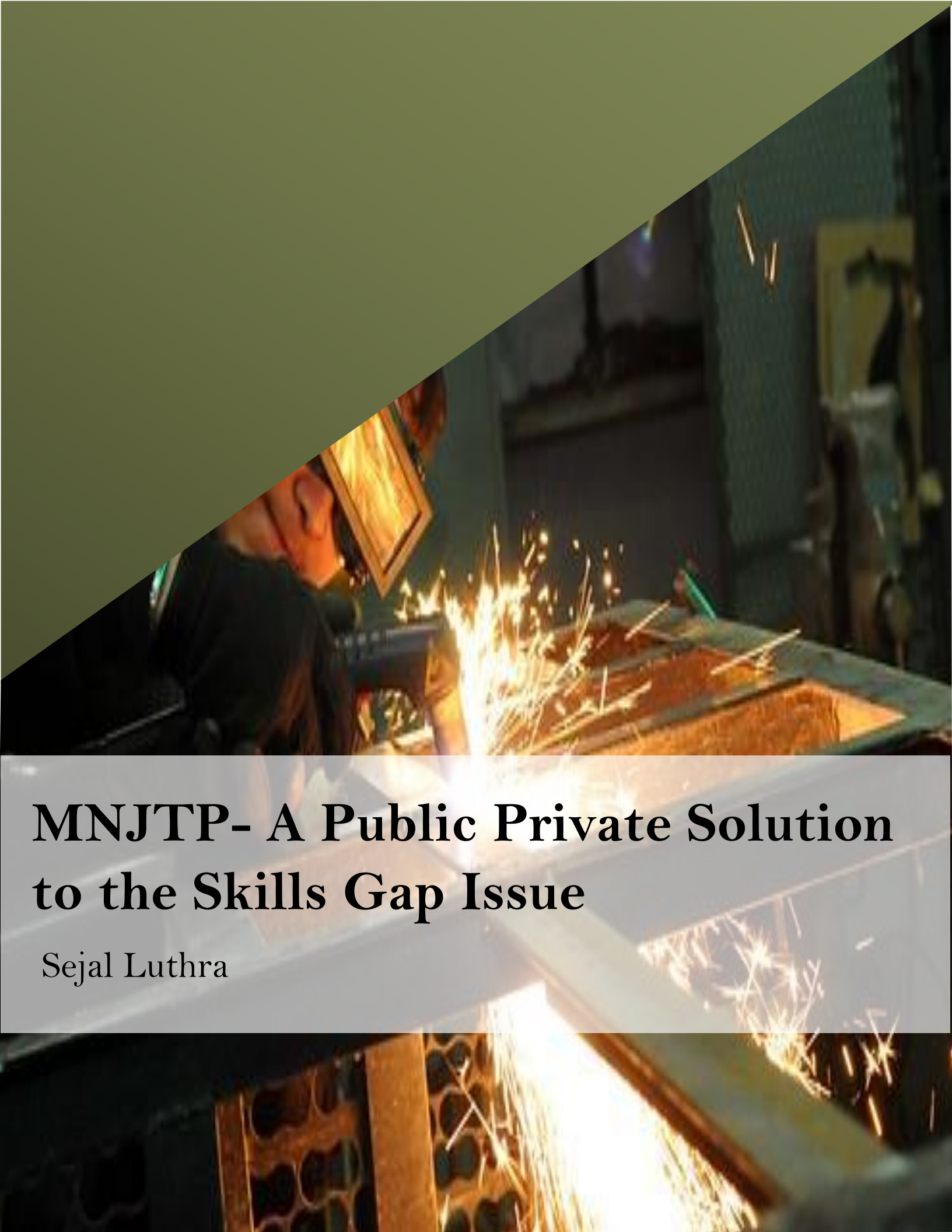


MNJTP- A Public Private Solution to the Skills Gap Issue

Sejal Luthra

I. Introduction

Throughout the history of all nations, the measure of how well an economy is doing is indicated by the growth of its local industries and businesses. Since these businesses are responsible for employing millions of individuals and adding to the state's per capita income, governments have tried to support and incentivize the private sector when the marketplace was inadequate to produce the desired outcomes. Modern state and local governments have used various tools to spur economic development including tax incentives, cash grants, workforce training and capital subsidies.

However, since the 1970-80s, there has been a persistent debate driving the labor market outcomes in the US – the existence of a perceived "skills gap". Partly due to workplace transformations driven by technology, the demand for skilled labor has increased relative to the demand for unskilled labor (Heckman, 1998) coupled with the supply of skilled workers not matching the specific occupational demand of employers (Wilson 2014). The National Association of Manufacturing warned employers that a gap of 5.3 million skilled workers would develop by 2010 and expand to 21 million by 2020 (NAM, 2003; Freeman, 2006). Evidence from unfilled vacancies and reported difficulties in hiring, cited in employer surveys, centered on the idea that workers do not have the right mix of skills (McCarthy, 2014) and that the high school and college training was not sufficient to prepare employees for rapidly changing technical work (Preparing Students for the Uncertain Future: Why America's Educators Are Ready to Innovate — but Their Education Systems Are Not 2019).

In Michigan, as of 2018 fourth quarter, there were 204,000 skilled trade job vacancies but only 183,000 unemployed, increasing the job vacancy rate to 4.7 vacancies for every 100 positions filled in 2018 up from 3.5 in 2015 (US Bureau of Labor Statistics). In addition, an expected 545,000 new skilled trades jobs are going to be created by 2026, according to 2018 Michigan Job Vacancy Survey.

In response to the emerging skilled labor shortage crisis, many state and local governments including Michigan have developed programs and tools to bridge the gap between what employers require and what employees offer. These range in the array of career readiness programs in high schools to tuition free

community colleges and more. Recognizing the importance of employer involvement and collaboration, many of these programs closely involve the private sector as sponsors for work-based learning through public private partnerships.

In this paper, I focus on one such innovative Michigan program that brings together public and private entities to invest in providing value to our current workers. The Michigan New Jobs Training Program is an economic incentive program that allows for businesses to leverage the job training strengths of local community colleges to help employers fill newly created jobs. Shedding some light on how this program works, what impact it has and understanding its incentives can help future policy leaders to design effective solutions to the critical issue we face today. In the following subsections I plan to explore the following questions i) What are the key characteristics of the current program ii) What are the incentives for firms to participate? iii) What are the incentives for community colleges to participate. The paper ends with a literature review section followed by discussion and conclusion.

II. Program overview and Descriptive Statistics

Program Overview

The Michigan New Jobs Training Program, designed as an economic development incentive in 2008, allows for businesses to partner with one of the state's 28 community colleges to develop a training program that produces highly trained employees to meet employer's labor needs.

Eligibility: There are no restrictions on the type of training delivered, employer size, or industries served. However, there are two conditions that need to be fulfilled – Employers should be creating full-time "new jobs" and that pay at least 175% of the Michigan minimum wage when the contract is signed.

Process: Eligible and interested employers can reach out to a local community college to establish an agreement specifying their training needs and projected budgetary cost. The final agreements need to be further approved by community college board of trustees and Michigan Community College Association (MCCA) and notified to Michigan Department of Treasury.

Funding: These localized job training programs are funded with the state individual income tax captured from wages of the new employees receiving the training for the length of the agreement. There is also an overall state spending limit of $50 million in any calendar year on MNJTP agreements.

Benefits: MNJTP leverages the job training strengths of local community colleges to meet the specific training needs of employers thus helping in reducing the skills gap. It is beneficial for employers as they pay the cost of training for new employees with dollars that would otherwise have been paid to the state for withholding taxes thus effectively the program costs the employer nothing. Additionally, the employer is not required to utilize the community college for training. MNJTP can be used to support training that happens at the company site, delivered by the employer's own corporate trainers

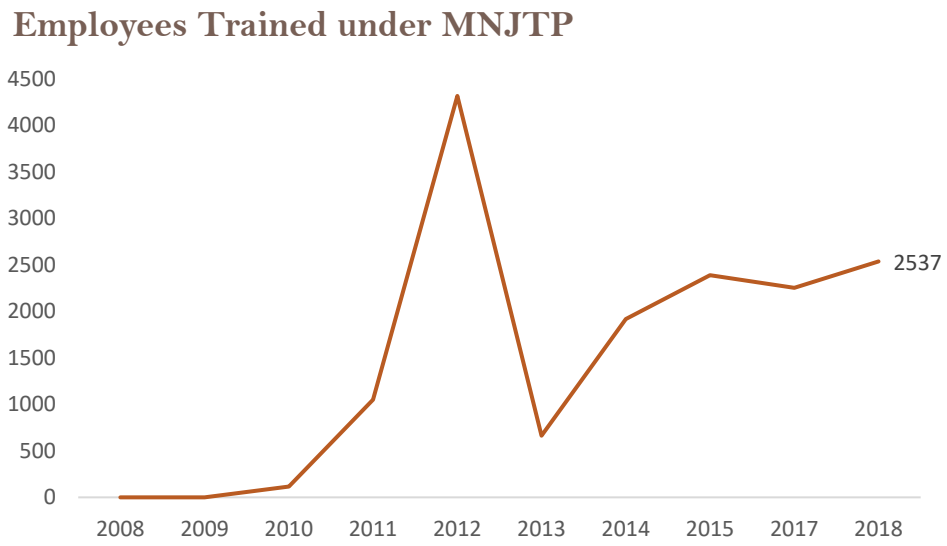
Limitations: One limitation of this program is that it leverages only community colleges as the delivery vehicle for training needs. Extending the program to other educational and private institutes can be a scope for expansion.

Descriptive statistics

1) Size of the program

Having been launched since 2010, the Michigan New Jobs Training Program has trained a total of 15,240 new employees over the decade. In 2018, the program trained 2537 new employees, had in effect 171 agreements with 75 3-digit industries and existed in 21 out of 28 community colleges. The trend of employees trained over the last decade is shown in the figure below:

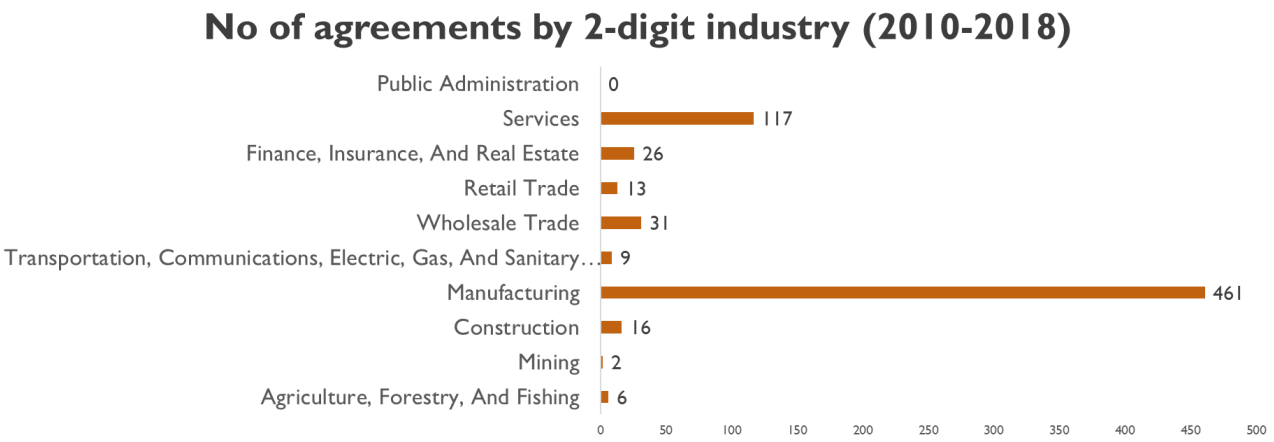
Figure 1: Trend of new employees trained under MNJTP



2) Types of participating industries

The most common 2-digit industry during the whole period is manufacturing which signed the most agreements (461) followed by Services (117) and Wholesale Trade (31). The most common 3-digit industry for an employer with an agreement is motor vehicle and equipment manufacturing with the original agreement amounts within this industry totaling almost $38.8 million in 2018, followed by metalworking machinery and miscellaneous fabricated metal products, the only two industries whose agreement amounts exceeded 2 million in 2018. All these 3 industries fall under manufacturing. The share of different industries in number of agreements signed over the last decade is shown in the figure below:

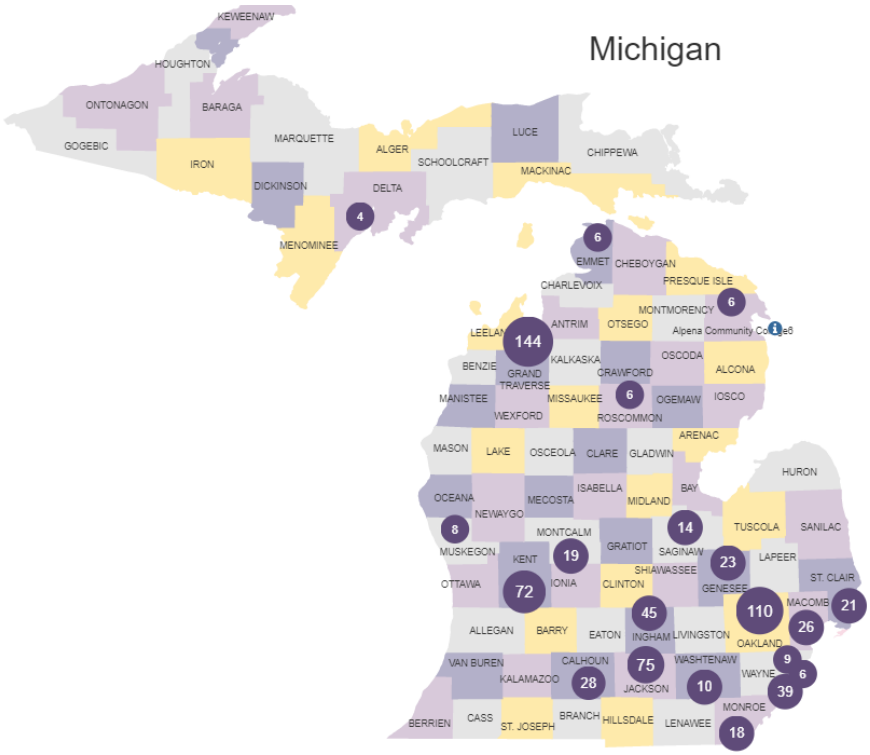
Figure 2: Number of agreements by 2-digit industry



3) Concentration of agreements by location of community college

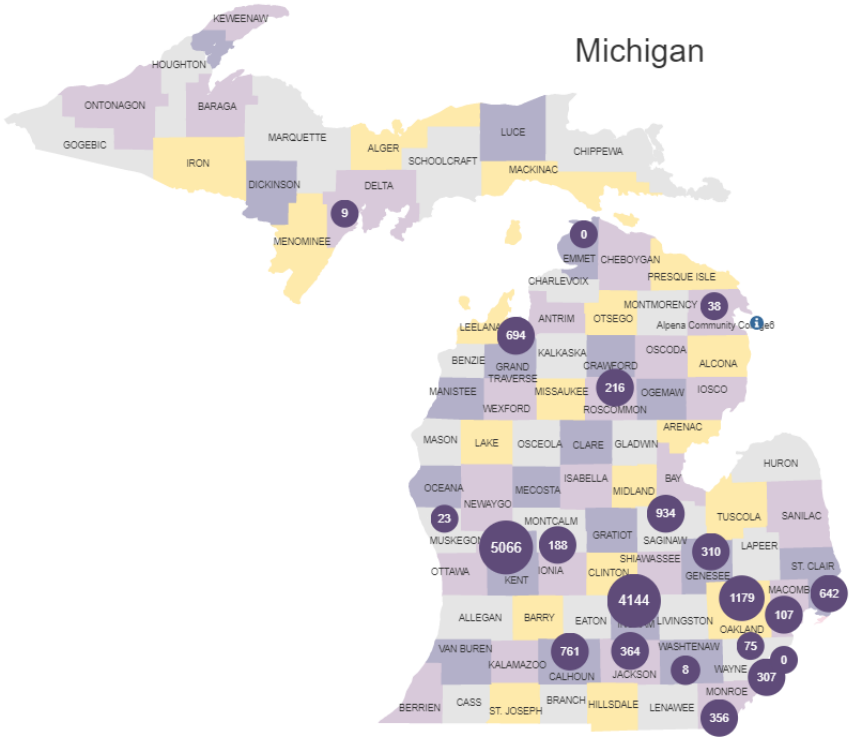
Community colleges participated varyingly throughout the state – while some colleges like Northwestern Community College, Oakland and Jackson community colleges were active in signing agreements in all the years, other colleges located far off from the hot spots including Alpena, Bay and Kirtland were the ones least active in program participation. The south-eastern region of Michigan has more clusters of participating colleges as compared to rest of the state. Understanding the concentration of training contracts through the state geographically can help us in gauging the relationship between location of industry hotspots and vicinity to a community college. The geographical map of the state with number agreements signed by participating community colleges by county is shown in the figure below:

Figure 3: Number of agreements signed by community college



Similarly, the number of employees trained overall varied by different community colleges. While some colleges had lesser contract agreements, they ended up training more employees per training contract. For example, Lansing community College in Ingham county had in effect a total of 45 agreements through 2010-2018 but it trained overall 4,144 individuals, a turnover of 92 employees trained per contract on average. On the other hand, Northwestern Community College in Grand Traverse county had in effect 144 agreements, the highest during the whole period, but ended up training a total of 694 employees, a turnover of 4.8 employees trained per contract on average. This variability may be due to difference in type of contracts and industries served or training capacity of individual colleges, but looking at the data can give us insight into why are contract agreements dispersed the way they are and why certain colleges produce more trained employees than others.

Figure 4: Number of employees trained by community college



III. Economic Incentives for Firms

The most effective incentive for employers to engage in the MNJTP program is its funding mechanism. Participating employers effectively pay zero training cost as the employers are essentially paying for employee training with dollars that would otherwise have been paid to the state for individual income taxes. However, an additional burden that employers have to face due to program participation is the eligibility condition of minimum wage to be paid. To understand when and how it will be effective for employers to engage in MNJTP training, I create a menu of possible choices an employer in Michigan could face when he decides to invest in employee training.

Any employer looking to train its new employees has to incur two types of direct costs – wages paid to the employee during the training period and the actual training cost which may include costs of hiring an instructor, equipment etc.

$$Total\ Training\ Cost = Wages\ Paid + Actual\ Training\ Cost$$

I review 4 training options available to employers in Michigan:

1. **Employer sponsored training**: An employer providing internal OJT to its new employees will pay the training cost and pay hourly wages to its employees for the duration of the training period
2. **The Going PRO Talent Fund Award**: The Going Pro Talent Fund makes awards to employers to assist in training, developing and retaining current and newly hired employees. Talent fund provides reimbursement of the training cost incurred to the employer according to following schedule:
    a. Classroom/ Customized Training up to $1,500 per person
    b. On-the-Job Training for new employees up to $1,500 per person
    c. In 2019, Average Award Per Person = $1,293
3. **Michigan Works! OJT:** This program provides reimbursement up to 50% of the new employee's wages during the OJT training time to the employer. The eligibility conditions are that the requirement positions must be full-time and pay at least $12.00 per hour
4. **MNJTP**: MNJTP provides 100% reimbursement of the training cost incurred to the employer by the MNJTP provision of diversion of state income tax withheld from new employees.

I tabulate the simulated costs for a 3 month training for the 4 training options an employer can face under two situations: First for a case of a high paying technical manufacturing job that involves a high training cost and second for a case where all employers either pay the minimum wage or program eligibility wage and incur average training cost in the state. I have included my tabulation tables in Appendix I and my table calculations in Appendix II attached at the end of the document.

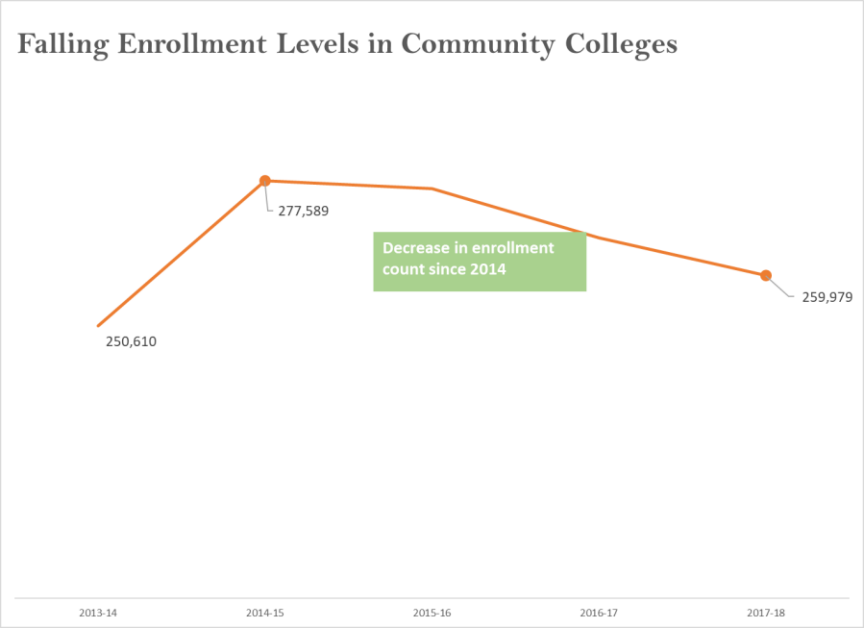
Calculations of total training costs for the menu of options show that MNJTP can be an attractive program for employers only when the training costs are equivalent to at least 26 credit hours in Michigan (at 168$ per credit hour) which is usually the case for high wage technical jobs mostly in the manufacturing sector. This is what is also observed in our study of participating industries – Manufacturing industries are the ones that have signed the highest number of agreements in the state.

For cases however that involve low training and equipment cost, an employer is better off using other training options available due to the high eligibility wage requirement for MNJTP.

IV. Economic Incentives for Community Colleges

To understand the incentives for community colleges to participate in this program, I look at the enrollment numbers for all community colleges in the state. As shown in the figure below, we find that since 2014, there has been a decline in the number of students enrolling in these colleges. This decline can be attributed to a push for 4-year post-secondary education (Krupnick 2017) as well as the stigma associated with studying in 2-year vocational schools (Warren 2016). Nevertheless, falling enrollment numbers in community colleges can act as an incentive for these institutions to engage with employers and leverage their expertise to benefit their local economy.

Figure 4: Declining enrollments in community colleges



V. Literature Review

US is currently undergoing a huge labor shortage crisis evidenced through large number of vacancies, that are higher than number of people looking for work. The US economy had 7.4 million job openings in June 2019, but only 6 million people were looking for work, according to data released by the US

Department of Labor. Shortages in the labor market indicate that there are large gaps left by the current educational system that is preventing the current workforce to meet the state's labor market demand. Weak incentives for high schools and school districts (embedded in the funding structure) to align course curricula with market needs and greater push towards college enrollment leads to more focus on academic learning and under provision of technical and occupational skills training by high schools (Estelle 2019). Second, while it may seem reasonable for employers, who are directly affected by this issue, to be at forefront of engaging and investing in worker training, we see limited involvement by businesses and lack of effective collaboration. High costs of worker training and lower costs to convince policymakers to address the skill gap weaken the incentives for employers to invest in producing a skilled workforce and more to demand for public investment into worker training (Estelle 2019).

In light of these employer reports of worker shortages in skilled trades, employer-led and government sponsored trainings have become an attractive policy tool (Lerman 2013). These job trainings are especially helpful in dealing with the gaps left between what is learned at school and how to apply these and other skills at the workplace. Training usually not only benefits firms but also yields external benefits, including local economy growth, a robust workforce and improved local partnerships and networks (Lerman 2013). Moreover, the government by sponsoring employer led trainings generally gains by paying little for the training while reaping tax benefits from the increased earnings of workers.

Research on strategies that are effective in providing worker trainings suggest that job trainings work the best when they are demand driven and align with the specific needs of the employer (U.S. Departments of Labor, Commerce, Education, and Health and Human Services 2014). Findings from evaluations have found positive impacts on earnings and employment from work-based and work-integrated training models, including registered apprenticeships with particular employers, sectoral and industry-specific training, career pathways, and on-the-job training where a subsidy is offered to employers for a portion of wages for a set period (e.g., 50 percent of salary for six or nine months)

(Nightingale et al). Additionally, these trainings when provided through post-secondary educations can have positive labor market returns for students. As what is seen much of the federal investment in job training is directed to postsecondary institutions, particularly community colleges by provision of grants to increase capacity and build partnerships to accelerate learning (Mikelson et al. 2017).

Given the high returns to workers, employers and the public from provision of these trainings, forming industry partnerships with community colleges and other workforce development providers to meet the needs of specific economic sectors can prove to be an effective strategy for narrowing the skills gap.

VI. Discussion and Conclusion

Investment in skill training the youth to meet employer specific demand can be an effective workforce development strategy given the current state of the economy. Employers participating in on the job training programs benefit from financial incentives when they bring on new employees to teach trainees the skills they need to succeed in specific positions at the firm, effectively targeting both the skills gap problem and youth unemployment. This paper explored one skills training model: the Michigan New Jobs Training Program, that utilizes a unique public-private strategy to incentivize job training and meeting skills shortage in Michigan.

The MNJTP model illustrates how a well-designed incentive program can bring together relevant stakeholders to the table to not only address a critical state issue but also can serve all stakeholder interests. Exploration of the program model shows that this program is well suited for assisting employers with high cost, technical and customized training needs by providing attractive financial incentives for these technical job trainings as well as for helping workforce development partnerships between community colleges and employers. Given that Michigan is a hub for manufacturing industries and with the prevailing skilled labor shortage in this sector, the MNJTP program holds potential to serve these industries effectively. My study is a preliminary analysis of the program overview and incentives and its initial results show promise and warrants further exploration to determine how this program can be designed to provide the greatest possible benefits to all

stakeholders. Analysis of why certain industries and community colleges participate more than others, relationship between location of industrial hotspots and vicinity to community colleges can add further to the understanding of the program.

MNJTP provides competitive and customizable trainings but serves a relatively small number of industries and employers. To more fully realize the benefits of employee job trainings and evaluate its impact, these partnerships should strive to:

i) Collect qualitative data by surveying community colleges not participating to find out why

ii) Survey businesses to establish the extent of the skill gap problem they still face and their inputs for improving the program

iii) Incorporate industry recognized credentials into MNJTP programs and improving certifications

iv) Reduce bureaucratic processes and reporting requirements to encourage more participation from employers

v) Expand the scope for the program by designing incentives to encourage more employer participation, incorporating additional vehicles of training delivery and lifting the spending cap on the program expenditure.

The MNJTP model, when well designed and implemented, carries potentially significant benefits to employers and employees, as well as to the cultivation of a highly skilled labor force for the future.

APPENDIX I

How much does an employee skill training cost in Michigan?
An example of 3-month training cost for an employee in a high wage technical job

Training Options	Wages Paid	Training Cost	Total Training Cost
Employer sponsored training	$8,640	$4,368	$13,008
Going Pro Talent Fund Award	$8,640	$4,368	$11,715
Michigan Works!	$4,320	$4,368	$8,688
MNJTP Training	$8,640	$0	$8,640

Hourly wage for manufacturing job: $18 Training cost roughly equivalent to 26 credit hours in Michigan: $4,368

How much does an employee skill training cost in Michigan?

An example of 3-month training cost for an employee in a low wage job

Training Options	Wages Paid	Training Cost	Total Training Cost
Employer sponsored training	$4,800	$1,062	$5,862
Going Pro Talent Fund Award	$4,800	-$231	$4,569
Michigan Works!	$2,880	$1,062	$3,942
MNJTP Training	$7,920	$0	$7920

Hourly wage under MNJTP: $16.5;
Hourly wage under Michigan works: $12;
Hourly wage under Going Pro and OJT: $10
Average Training Cost per Employee: $1062

APPENDIX II

CASE 1: For a high paying manufacturing job that requires a high training cost

I. Simulated cost of OJT by the employer

Note: The hourly wage during the training period will usually be less than what the worker would receive after acquiring the requisite skills.

Example:

Hourly Wage: $18

40 hours/week for 12 weeks

480 hours X $18.00/hour = $8,640

Simulated Training cost: Roughly equivalent to 26 credit hours in Michigan: $4,368

Employer PAYS = $8,640 + $4,368 = $13,008

II. Simulated cost of OJT through Going pro Talent fund

Hourly Wage: $18

40 hours/week for 12 weeks

480 hours X $10.00/hour = $8,640

Simulated Training cost: Roughly equivalent to 26 credit hours in Michigan: $4,368

YOUR Reimbursement = $1,293

Employer PAYS = $8,640 + $4,368 - $1,293= $11,715

III. Simulated cost of OJT by Michigan works!

Hourly wage: $18

40 hours/week for 12 weeks

480 hours X $18.00/hour = $8,640

OJT Reimbursement (50% hourly wage)

$9.00 X 480 hours = $4,320

YOUR Reimbursement = $4,320

Simulated Training cost: Roughly equivalent to 26 credit hours in Michigan = $4,368

Employer PAYS = $4,320 + $4,368= $8,688

IV. Simulated cost of MNJTP training

Hourly wage: $18

40 hours/week for 12 weeks

480 hours X $18/hour = $8,640

Simulated Training cost: Roughly equivalent to 26 credit hours in Michigan = $4,368

Your reimbursement: $4,368

Employer PAYS = $8,640 = $4,368 - $4,368= $8,640

CASE *2*: For jobs that pay at the minimum wage or eligibility wage

I. Simulated cost of OJT by the employer

Hourly Wage: $10

40 hours/week for 12 weeks

480 hours X $10.00/hour = $4,800

Training cost: Average Training Cost Per Person: $1,062

Employer PAYS = $4,800 + 1062 = $5862

II. Simulated cost of OJT through Going pro Talent fund

Hourly Wage: $10

40 hours/week for 12 weeks

480 hours X $10.00/hour = $4,800

Average Training Cost Per Person: $1,062

YOUR Reimbursement = $1,293

Employer PAYS = $4,800 + 1062 - $1,293= $4,569

III. Simulated cost of OJT by Michigan works!

Hourly wage: $12

40 hours/week for 12 weeks

480 hours X $12.00/hour = $5,760

OJT Reimbursement (50% hourly wage)

$6.00 X 480 hours = $2,880

YOUR Reimbursement = $2,880

Training cost: Average Training Cost Per Person: $1,062

Employer PAYS = $2,880 + $1,062= $3942

IV. Simulated cost of MNJTP training

Hourly wage (175% of minimum wage): $16.5

40 hours/week for 12 weeks

480 hours X $16.50/hour = $7,920

Average Training Cost Per Person: $1,062

Average Training Cost Per Person: $1,062

Your reimbursement: $1,062

Employer PAYS = $7,920 + $1,062 - $1,062= $7,920

References

Becker, Gary S. “Investment in Human Capital: A Theoretical Analysis.” *Journal of Political Economy* 70, no. 5, Part 2 (October 1962): 9–49. https://doi.org/10.1086/258724.

“Beyond-the-Skills-Gap.Pdf.” Accessed October 8, 2019. https://www.luminafoundation.org/files/resources/beyond-the-skills-gap.pdf.

“CCSSOTaskForceCareerReadiness120114.Pdf.” Accessed October 7, 2019. http://edstrategy.org/wpcontent/uploads/2017/09/CCSSOTaskForceCareerReadiness120114.pdf.

Clifton, Mike, and Lake Washington Institute of Technology. “High-Paying Trade Jobs Sit Empty, While High School Grads Line Up For University.” NPR.org. Accessed October 8, 2019. https://www.npr.org/sections/ed/2018/04/25/605092520/high-paying-trade-jobs-sit-empty-while-high-school-grads-line-up-for-university.

“Closing the Skills Gap 2019 Study.” Accessed October 12, 2019. https://workplacetrends.com/closing-the-skills-gap-2019-study/.

Closner, Catherine, Tyler Leighton, and Wayne Rourke. “JOB VACANCY SURVEY PILOT,” n.d., 16.

Estelle, Sarah. “Secondary CTE.” Accessed October 8, 2019. http://www.mackinac.org/26579.

———. “Workforce Development in Michigan.” Accessed October 13, 2019. http://www.mackinac.org/S2019-05.

Handel, Michael J. “Skills Mismatch in the Labor Market.” *Annual Review of Sociology* 29 (2003): 135–65.

“Hatch2013_report.Pdf.” Accessed October 8, 2019. https://reicenter.org/upload/documents/colearning/hatch2013_report.pdf.

Heckman, James. “What Should Be Our Human Capital Investment Policy?” *Fiscal Studies*, n.d., 17.

The Thomas B. Fordham Institute. “How Aligned Is Career and Technical Education to Local Labor Markets?” Accessed October 8, 2019. http://fordhaminstitute.org/national/research/how-aligned-career-and-technical-education-local-labor-markets.

Hughes, Dana (MDE). “Michigan Career Development Model,” n.d., 37.

“Labour-Market-Mismatch-and-Labour-Productivity-Evidence-from-PIAAC-Data.Pdf.” Accessed October 12, 2019. https://www.oecd.org/eco/growth/Labour-Market-Mismatch-and-Labour-Productivity-Evidence-from-PIAAC-Data.pdf.

Levesque, Karen, and National Center for Education Statistics. *Vocational Education in the United States: Toward the Year 2000*. U.S. Department of Education, Office of Educational Research and Improvement, 2000.

McGuinness, Seamus, Konstantinos Pouliakas, and Paul Redmond. “How Useful Is the Concept of Skills Mismatch?,” 2017, 32.

“Michigan Career Readiness Initiative Successes,” n.d., 1.

“Michigan Companies Struggle to Find Skilled Workers.” Accessed October 16, 2019. https://www.detroitnews.com/story/news/local/michigan/2017/09/17/michigan-companies-struggle-find-skilled-workers/105743136/.

“Michigan Talent: Take It From the Top | Site Selection Magazine.” Accessed October 11, 2019. https://siteselection.com/whitePapers/michigan-talent-a-white-paper-take-it-from-the-top.cfm.

“Michigan’s Forgotten Middle-Skill Jobs,” n.d., 30.

“MNJTP Brochure(8).Pdf.” Accessed November 25, 2019. https://www.mcca.org/uploads/ckeditor/files/MNJTP%20Brochure(8).pdf.

“Policy-Platform-CTE-2018.Pdf.” Accessed October 8, 2019. https://www.act.org/content/dam/act/unsecured/documents/pdfs/Policy-Platform-CTE-2018.pdf.

Sloane, Peter J. “Overeducation, Skill Mismatches, and Labor Market Outcomes for College Graduates.” *IZA World of Labor*, November 1, 2014. https://doi.org/10.15185/izawol.88.

Spaulding, Shayne. “Strategies for Promoting Successful Transitions to Adulthood, Higher Education, and the Workforce,” n.d., 25.

Stern, David, Neal Finkelstein, James R Stone Iii, John Latting, and Carolyn Dornsife.

“The Skills Gap 2019.” Accessed October 11, 2019. https://www.shrm.org/hr-today/trends-and-forecasting/research-and-surveys/pages/skills-gap-2019.aspx.

https://www.bc.edu/content/dam/files/schools/law/lawreviews/journals/bctwj/24_2/03_TXT.htm.

Wilson, Bryan. “HOW MANY MORE SKILLED WORKERS DO WE NEED?,” n.d., 16.

“Www.Mackinac.Org.” Accessed October 13, 2019. https://perma.cc/EQA6-FNHG.

Nightingale, Demetra Smith, and Lauren Eyster. “Results and Returns from Public Investments in Employment and Training,” n.d.

Robert I.Lerman. “Should Employer-Led Training Be the Framework for Workforce Development?,” 2013.