



# PATHS for Texas: Interim Descriptive Statistics, Outcomes, Impacts, Survey Results, and Qualitative Summary

**2024 Update**

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## Executive Summary

The data presented in this report represent individuals who participated in PATHS for Texas from its start date in 2020 through June of 2024. As of June 2024, 2,524 individuals registered to participate in the PATHS for Texas program from four Texas Workforce Development Boards (WDB) across the state (Coastal Bend, Gulf Coast, Rural Capital Area, and North Texas). Of the 2,524 individuals who enrolled in PATHS, 2,029 (80%) individuals completed training and earned one or more certificates. When compared to the reference quarter (four quarters prior to earning a certificate through PATHS), on average, PATHS participants increased employment by 5.5 percentage points (from 72.8% to 78.3%), as well as increased their quarterly earnings by \$2,574 (from \$8,469 to \$11,043) eight quarters after earning their certificate. Those who earned certificates in the Business, Hospitality, Information Technology, Medical, Retail, and Transportation and Logistics industries saw increases in employment and earnings compared to the reference period, while those earning certificates in Entrepreneurship, and in the Skilled Trades saw flat or slight decreases in employment, and Insurance, which saw a decline in earnings.

When matched with a comparison group of demographically similar individuals with similar employment histories to determine the impact of program participation, and while there is some variation across the Boards and by outcome measure, it is generally the case that participation in PATHS is associated with a positive, and statistically significant, increase in both unconditional quarterly earnings (\$990) and quarterly employment (9.5% percentage points) over the comparison group.

We also report on the outcomes of two surveys completed in the past three years: one survey of active PATHS participants, and one of inactive participants. Responses indicate that flexible training arrangement, follow-up with participants after program completion, and information regarding family counseling services represent growth opportunities for service providers.

Finally, and while it will be expanded upon in next year's final report, we report preliminary findings from an implementation evaluation of PATHS. Input provided by key stakeholders yielded several lessons learned, including those related to flexibility, collaboration, and leadership. In terms of flexibility, respondents highlighted the value in PATHS ability to pivot its industry focus in response to COVID-19. Regarding collaboration, respondents frequently cited their collaboration between one another throughout the PATHS funding period as a unique experience in the state's Workforce Solutions space. And, regarding leadership, respondents underscored the importance of an effective and confident managerial presence to the successful implementation of the PATHS for Texas program.

## Data Sources

The evaluation of PATHS for Texas draws from multiple data sources, including participant records maintained by each Texas Workforce Board, Texas Workforce Commission (TWC) unemployment insurance (UI) earnings and benefits claim files, The Workforce Information System of Texas (TWIST) and WorkInTexas (WIT) records. The outcomes and impacts data include data only for those participants for whom social security numbers were available, earned a certificate, and whose income data, therefore, could be found in the UI wage data.

Two caveats should be noted about UI earnings data used for this evaluation. First, UI earnings records have known coverage gaps. Workers in industries with high levels of self-employment or independent contracting, and others employed in the gig economy are less likely to be in a UI-covered position. Researchers therefore acknowledge that the outcomes reported here for individuals who are self-employed or working in the gig economy are likely undercounted in actual labor market outcomes. Further, workers who obtain employment outside of the state of Texas will not be found in the Texas UI earnings data. Second, UI earnings records are subject to review and correction by workers and employers as part of the claim's determination process for UI benefits. Therefore, numbers reported here are based on the most recently available records.<sup>1</sup>

An additional limitation of the UI wage data is a significant (4.5 month) lag between employment and the time that the University of Texas at Austin's Ray Marshall Center (RMC) receives data from the TWC. UI wage data used in this report was received by the RMC in May 2024 for 4<sup>th</sup> quarter 2023. UI wage data for 2018 through 2023 was used to produce outcomes and impacts for this report.

## PATHS for Texas Demographics and Other Descriptive Statistics

The data presented in Tables 1-4 below present basic demographics with some disaggregation by Board, industry of training, and other categories. In terms of demographics for all participants, almost two-thirds (61%) of PATHS participants through June of 2024 were female, and were nearly evenly divided by race, with 30% White, 26% Black, 28% Hispanic. Slightly less than half (47%) of participants fell between the ages of 20 and 39 years old. Interestingly, 41% of participants reported having completed high school or earned a GED, 29% having attended some college, and 17% reported having earned a college degree. This skew towards relatively high educational attainment for high school and some college (compared to national averages of 26% and 19% respectively), while national averages for associate and bachelor's degree holders is just over 30%, may be indicative of PATHS' outreach and recruitment

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<sup>1</sup> Any discrepancies are expected to be quite small.

strategies, of the effects of the COVID pandemic on the labor market, or some combination of these and other factors.<sup>2</sup>

When only those who earned certificates (80% of total participants) are considered, most of these patterns persist. It is notable that 88% of certificate earners were participants in programs operated by two of the four participating Boards: Rural Capital Area (48%) and Gulf Coast (40%).

Of the various training categories, Hospitality, Kitchen Safety, and Customer Service had the largest number of certificate earners at 38% (764 certificate earners), followed by Retail at 11% (218 certificate earners).

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<sup>2</sup> Data Source: 2022 American Community Survey Public Use Microdata, U.S. Department of Commerce, U.S. Census Bureau



Table 1: Paths Demographics Through June 2024

	Counts	Percentages
<b>Total Number of Participants</b>	<b>2,524</b>	<b>100%</b>
<b>Number of Participants with SSNs</b>	2,135	85%
<b>Number of Participants without SSNs</b>	389	15%

	Counts	Percentages
<b>Gender</b>		
Female	1,548	61%
Male	966	38%
Missing/Unknown	10	0%
<b>Race</b>		
White	754	30%
Black	645	26%
Hispanic	717	28%
Asian	105	4%
Two Or More Races	41	2%
Other	85	3%
Missing/Unknown	177	7%
<b>Age</b>		
14 - 19 years	267	11%
20 - 29 years	661	26%
30 - 39 years	521	21%
40 - 49 years	406	16%
50 - 59 years	314	12%
60 years and older	158	6%
Missing/Unknown	197	8%
<b>Education Level</b>		
Less than 12th grade	226	9%
12th grade or GED	1,039	41%
Attended College	732	29%
College Degree	433	17%
Missing/Unknown	94	4%
<b>Veteran</b>		
No	2,347	93%
Yes	55	2%
Missing/Unknown	122	5%

Table 2: PATHS Other Characteristics Through June 2024

Board	Counts	Percentages
Rural Capital Area	1,118	44%
Gulf Coast	1,083	43%
North Texas	177	7%
Coastal Bend	146	6%
<b>Status</b>		
Completed	2,002	79%
Active	340	13%
Inactive	182	7%
<b>Cancelled/Inactive Reason</b>		
Cancelled/refunded with vendor	131	5%
Dropped Out after 30 days	51	2%
Has not participated in 14+ days	0	0%
<b>Earned a Certificate</b>		
Yes	2,029	80%
Missing/Unknown	495	20%
<b>Training Category</b>		
Hospitality, Kitchen Safety, Customer Svc	764	30%
Retail	218	9%
Childhood Education/Childcare/Instr.	181	7%
Skilled Trades	176	7%
Entrepreneurship	164	6%
Medical	163	6%
Skills Development/8D Problem Solving	104	4%
Information Technology	85	3%
Business Office Administration	80	3%
Real Estate	18	1%
Transportation/Logistics	14	1%
Insurance	10	0%
Other	38	2%
Missing/Unknown	509	20%
<b>Employment Status at Enrollment</b>		
Employed	1,700	67%
Unemployed	749	30%
Student	62	2%
Missing/Unknown	13	1%
<b>Retail or Customer Service Experience</b>		
0-1 Year	431	17%
1-2 Years	25	1%
2-5 Years	374	15%
5+ Years	691	27%
Missing/Unknown	1,003	40%
<b>Received TWIST Services</b>		
Missing/Unknown	2,364	94%
Yes	160	6%

Table 3: PATHS Demographics for Certificate Earners Through June 2024

	Counts	Percentages
<b>Total Number of Participants</b>	<b>2,029</b>	<b>100%</b>
<b>Number of Participants with SSNs</b>	1,752	86%
<b>Number of Participants without SSNs</b>	277	14%
<b>Gender</b>		
Female	1,293	64%
Male	727	36%
Missing/Unknown	9	0%
<b>Race</b>		
White	618	30%
Black	539	27%
Hispanic	582	29%
Asian	84	4%
Two Or More Races	36	2%
Other	76	4%
Missing/Unknown	94	5%
<b>Age</b>		
14 - 19 years	219	11%
20 - 29 years	485	24%
30 - 39 years	420	21%
40 - 49 years	362	18%
50 - 59 years	281	14%
60 years and older	145	7%
Missing/Unknown	117	6%
<b>Education Level</b>		
Less than 12th grade	215	11%
12th grade or GED	849	42%
Attended College	581	29%
College Degree	370	18%
Missing/Unknown	14	1%
<b>Veteran</b>		
No	1,946	96%
Yes	41	2%
Missing/Unknown	42	2%

**Table 4: PATHS Other Characteristics for Certificate Earners Through June 2024**

<b>Board</b>	<b>Counts</b>	<b>Percentages</b>
Rural Capital Area	968	48%
Gulf Coast	809	40%
Coastal Bend	135	7%
North Texas	117	6%
<b>Status</b>		
Completed	2,002	99%
Active	26	1%
Inactive	1	0%
<b>Cancelled/Inactive Reason</b>		
Dropped Out after 30 days	1	0%
Cancelled/refunded with vendor	0	0%
Has not participated in 14+ days	0	0%
<b>Training Category of Certificates Earned</b>		
Hospitality, Kitchen Safety, Customer Svc	764	38%
Retail	218	11%
Skilled Trades	189	9%
Early Childhood Education/Childcare/Child Instruction	181	9%
Entrepreneurship	164	8%
Medical	163	8%
Skills Development/8D Problem Solving	104	5%
Information Technology	85	4%
Business Office Administration	80	4%
Real Estate	18	1%
Transportation/Logistics	14	1%
Insurance	10	0%
Other	38	2%
Missing/Unknown	1	0%
<b>Employment Status at Enrollment</b>		
Employed	1,347	66%
Unemployed	610	30%
Student	59	3%
Missing/Unknown	13	1%
<b>Retail or Customer Service Experience</b>		
0-1 Year	350	17%
1-2 Years	17	1%
2-5 Years	302	15%
5+ Years	629	31%
Missing/Unknown	731	36%
<b>Received TWIST Services</b>		
Missing/Unknown	1,894	93%
Yes	135	7%

## PATHS for Texas Outcomes

In terms of outcomes, it is important to reiterate that results represent employment and earnings reported to the TWC UI wage system through the fourth quarter of 2023. As the RMC receives additional quarters of data, and as those participants still enrolled complete their training programs, outcomes values are subject to change.

Table 5 below shows the total counts of PATHS participants through December 2023, participants with SSNs through December 2023, participants with SSNs who earned at least one certificate through December 2023, and participants with SSNs who earned at least one certificate through December 2023 (4<sup>th</sup> quarter 2023) who were found in the UI wage data.

**Table 5: PATHS for Texas Participant Counts**

Description	Counts
Total Number of PATHS Participants through June 2024	2,524
Number of PATHS Participants with SSNs through June 2024	2,135
Number of PATHS Participants with SSNs and at least one certificate through June 2024	2,029
Number of PATHS Participants with SSNs and One Certificate through 4th quarter 2023 (found in the UI wage data)	1,456

The following outcomes tables display outcomes for the following categories:

- **Quarterly Employment** – percentage of individuals found in the UI wage data with earnings above zero.
- **Quarterly Average Earnings** – average quarterly earnings for all individuals found in the UI wage data with earnings greater than zero.
- **Filed UI Claim** – percentage of individuals that filed for unemployment insurance benefits.
- **Received UI Benefits** – percentage of individuals that received unemployment insurance payments.

Outcomes for PATHS participants are processed by linking individual participants' social security numbers (SSNs) to the Texas Workforce Commission's (TWC) unemployment insurance (UI) wage data. Participants who did not provide SSNs are excluded from the outcomes processing.

**Table 6: PATHS Participants with SSNs Who Earned a Certificate By Year Certificate Was Earned through December 2023 – Employment and Earnings Outcomes Through December 2023 (Outcomes for low counts have been removed)**

Outcome Measure	Four Qtrs Before Earning a Certificate	Qtr Certificate Earned	1st Qtr After Receiving Certificate	2nd Qtr After Receiving Certificate	3rd Qtr After Receiving Certificate	4th Qtr After Receiving Certificate	6th Qtr After Receiving Certificate	8th Qtr After Receiving Certificate	10th Qtr After Receiving Certificate	All Qtrs After Receiving Certificate
<b>Number of Participants That Earned a Certificate:</b>										
2020	14	14	14	14	14	14	14	14	14	14
2021	327	327	327	327	327	327	327	327	327	102
2022	606	606	606	606	606	606	269	.	.	.
2023	509	509	444	241	153	.	.	.	.	.
<b>Overall Counts</b>	1456	1456	1391	1188	1100	947	610	341	116	
<b>Certificate Earners: Quarterly Employment</b>										
2020	57.1%	64.3%	50.0%	42.9%	50.0%	50.0%	71.4%	50.0%	42.9%	54.0%
2021	72.7%	76.2%	80.7%	82.6%	83.2%	80.7%	82.9%	79.5%	.	.
2022	75.7%	83.5%	85.3%	83.5%	81.9%	81.7%	.	.	.	.
2023	69.8%	71.9%	73.0%	.	.	.	.	.	.	.
<b>Overall Average Quarterly Employment</b>	72.8%	77.6%	79.9%	.	.	80.9%	78.3%	.	.	.
<b>Certificate Earners: Average Qrtly Earnings</b>										
2020	\$7,087	\$8,067	\$7,733	\$8,948	\$9,117	\$8,560	\$7,252	\$9,711	\$11,780	\$8,507
2021	\$8,044	\$8,528	\$8,922	\$9,575	\$10,077	\$10,395	\$10,916	\$11,079	.	.
2022	\$7,488	\$7,427	\$9,802	\$9,317	\$9,516	\$8,795	.	.	.	.
2023	\$10,049	\$10,122	\$10,861	.	.	.	.	.	.	.
<b>Overall Average Quarterly Earnings</b>	\$8,469	\$8,548	\$9,889	.	.	\$9,345	\$11,043	.	.	.
<b>Certificate Earners: Filed UI Claim</b>										
2020	10.7%	14.3%	14.3%	.	14.3%	.	.	.	.	3.2%
2021	9.5%	4.6%	2.1%	1.5%	3.1%	1.8%	0.9%	1.5%	.	.
2022	0.8%	0.3%	0.2%	0.5%	.	.	.	.	.	.
2023	1.3%	.	0.2%	.	.	.	.	.	.	.
<b>Overall Filed UI Claim</b>	3.0%	1.3%	0.8%	.	.	0.6%	1.5%	.	.	.
<b>Certificate Earners: Received UI Benefits</b>										
2020	12.5%	.	.	.	14.3%	.	.	.	.	1.6%
2021	12.2%	4.9%	2.1%	1.5%	2.8%	1.5%	0.6%	1.2%	.	.
2022	1.0%	0.2%	0.2%	0.5%	.	.	.	.	.	.
2023	1.4%	.	.	.	.	.	.	.	.	.
<b>Overall Received UI Benefits</b>	3.8%	1.2%	0.6%	.	.	0.5%	1.2%	.	.	.

Note: TWC UI wage data available through 4<sup>th</sup> quarter 2023 as of this reporting. UI wage data only reflects earnings of W-2 wage earners and does not include 1099 earnings.

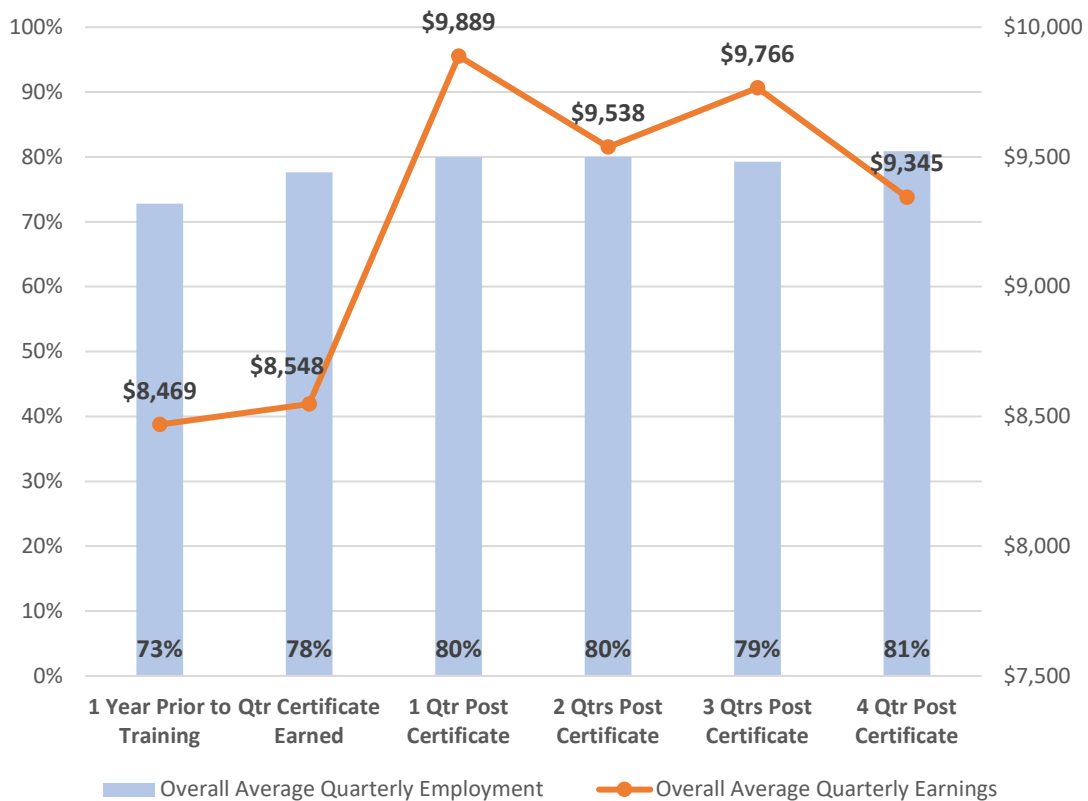
Table 6 shows counts of PATHS participants that earned a certificate in the years 2020 through 2023. The table further shows quarterly outcomes four quarters prior to earning a certificate, the quarter the certificate was earned, and one, two, three, four, six, eight, and ten quarters after the certificate was earned. Since TWC UI wage data was only available through 4<sup>th</sup> quarter 2023, only immediate short-term outcomes are available for most participants that earned their certificate in 2023.

The counts for the 2023 certificate earners drop at two and three quarters after receiving certificates (due to the lag in UI wage data) and their respective outcomes have been blanked out. The actual outcomes figures are blanked out since they may not accurately represent the overall cohort outcomes.

In addition to employment and average earnings outcomes, outcomes for PATH participants who filed for unemployment insurance (UI) benefits and participants that received UI benefits are listed in the table. Please note that the group of individuals that filed an UI claim are not necessarily the same group of individuals that received UI benefits. The outcomes reflect the percentage of individuals that filed UI claims during the specified quarters and the percentage of individuals that received UI benefits during the specified quarters.

Figure 1 below shows quarterly outcomes one year prior to earning a certificate, the quarter the certificate was earned, and one, two, three, and four quarters after the certificate was earned for the 2020 through 2023 cohorts combined. Due to the lag in the TWC UI wage data, four quarter outcomes will not be available for much of the 2023 cohort until May 2025. Therefore, their outcomes are underrepresented in the outcomes below.

**Figure 1: PATHS Participants with SSNs Who Earned a Certificate – Employment and Earnings Outcomes 2020 – 2023 (N = 1456)**



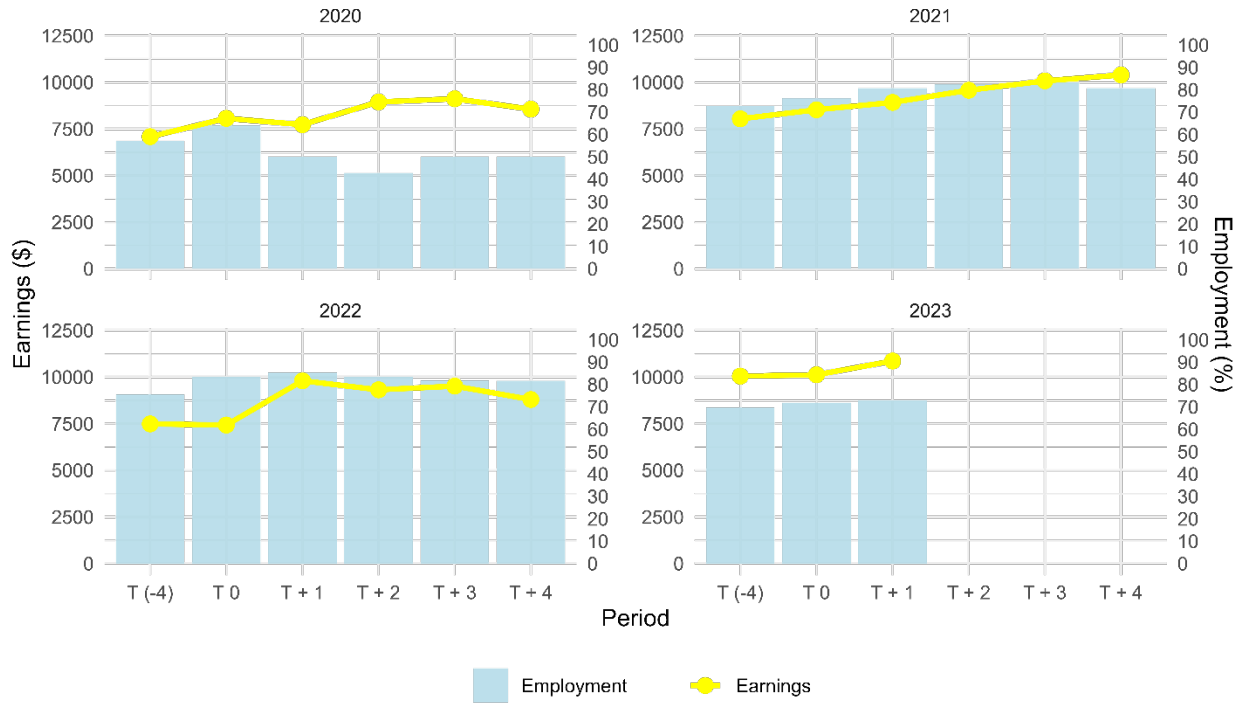
Note: TWC UI wage data available through 4<sup>th</sup> quarter 2023 as of this reporting. UI wage data only reflects earnings of W-2 wage earners and does not include 1099 earnings.

When compared to the reference quarter (one year prior to earning a certificate through PATHS), on average, PATHS 2020 through 2023 participants increased employment by 8 percentage points (from 73% to 81%), and quarterly earnings increased by \$876 (from \$8,469 to \$9,345) four quarters post certificate. Figure 2 looks at the earnings and employment outcomes more closely by separating out the cohort years to provide more detail and remove influence that inflation and employment trends might have depending on the year an individual entered the program.<sup>3</sup>

<sup>3</sup> T (-4) represents treatment period minus four quarters. T 0 represents treatment quarter (quarter certificate was earned). T+1 through T+4 represent one to four quarters post treatment.



**Figure 2: Earnings and Employment Outcomes for Certificate Earners by Cohort Year**



**Table 7: PATHS Participants with SSNs Who Earned a Certificate by Board Employment and Earnings Outcomes Through December 2023 (Outcomes for low counts have been removed)**

Outcome measure	Four Qtrs Before Earning a Certificate	Qtr Certificate Earned	1st Qtr After Receiving Certificate	2nd Qtr After Receiving Certificate	3rd Qtr After Receiving Certificate	4th Qtr After Receiving Certificate	6th Qtr After Receiving Certificate	8th Qtr After Receiving Certificate	10th Qtr After Receiving Certificate	All Qtrs After Receiving Certificate
<b>Number of Participants That Earned a Certificate:</b>										
Coastal Bend	114	114	94	66	62	54	53	21	18	
Gulf Coast	684	684	654	494	410	290	212	183	83	
North Texas	20	20	20	17	17	14	10	4	.	
Rural Capital Area	638	638	623	611	611	589	335	133	15	
<b>Overall</b>	<b>1456</b>	<b>1456</b>	<b>1391</b>	<b>1188</b>	<b>1100</b>	<b>947</b>	<b>610</b>	<b>341</b>	<b>116</b>	
<b>Certificate Earners: Quarterly Employment</b>										
Coastal Bend	56.6%	70.2%	86.2%							
Gulf Coast	70.9%	68.7%	71.1%	73.1%						
North Texas	67.5%	80.0%	80.0%	76.5%	70.6%	64.3%				
Rural Capital Area	77.9%	88.4%	88.3%	84.6%	82.2%	83.7%				
<b>Overall Average Quarterly Employment</b>	<b>72.8%</b>	<b>77.6%</b>	<b>79.9%</b>							
<b>Certificate Earners: Average Qrtly Earnings</b>										
Coastal Bend	\$5,856	\$5,359	\$4,528							
Gulf Coast	\$9,087	\$9,768	\$10,817	\$10,427						
North Texas	\$8,540	\$7,772	\$8,844	\$8,675	\$9,443	\$9,202				
Rural Capital Area	\$8,203	\$8,005	\$9,924	\$9,342	\$9,884	\$9,140				
<b>Overall Average Quarterly Earnings</b>	<b>\$8,469</b>	<b>\$8,548</b>	<b>\$9,889</b>							
<b>Certificate Earners: Filed UI Claim</b>										
Coastal Bend	0.4%	0.9%	.							
Gulf Coast	5.7%	2.5%	1.7%	1.6%						
North Texas	.	5.0%	.	.	.	.				
Rural Capital Area	0.7%	.	.	0.2%	0.3%	0.3%				
<b>Overall Filed UI Claim</b>	<b>3.0%</b>	<b>1.3%</b>	<b>0.8%</b>							
<b>Certificate Earners: Received UI Benefits</b>										
Coastal Bend	0.2%	0.9%	.	.						
Gulf Coast	6.9%	2.2%	1.2%	1.6%	1.7%					
North Texas	.	5.0%	.	.	.	.				
Rural Capital Area	1.1%	.	.	0.2%	0.3%	0.2%				
<b>Overall Received UI Benefits</b>	<b>3.8%</b>	<b>1.2%</b>	<b>0.6%</b>							

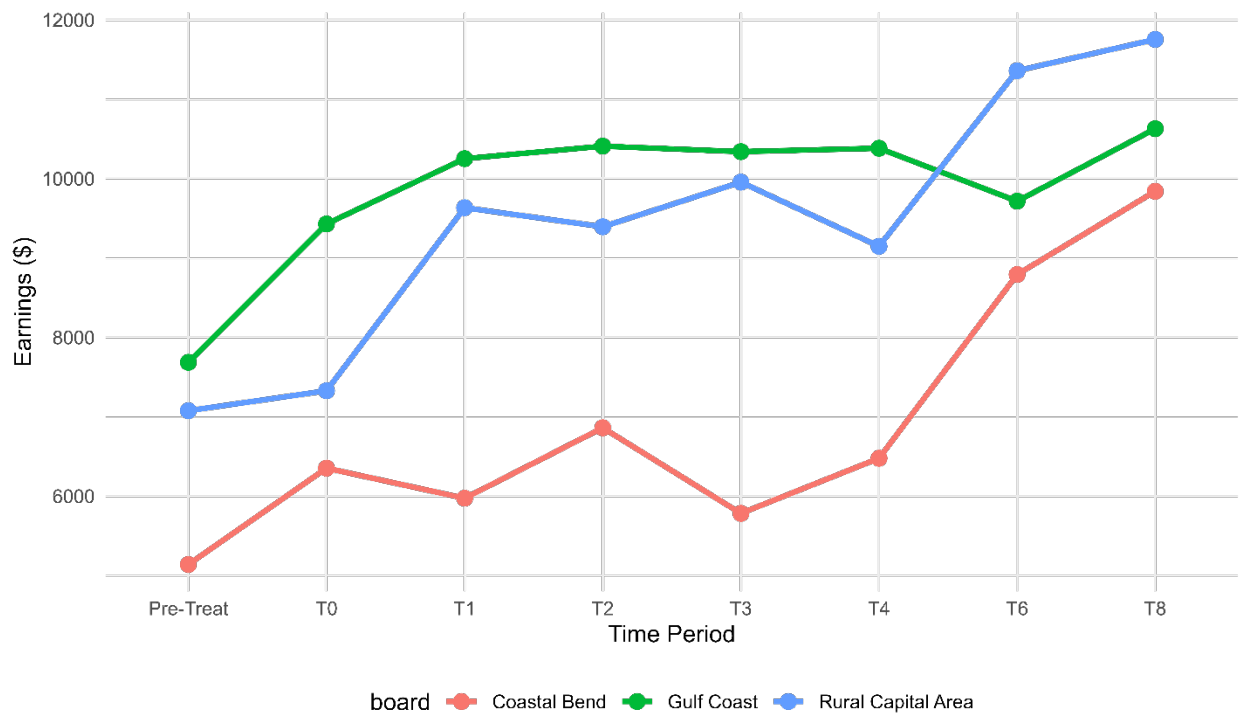
Note: TWC UI wage data was available through 4<sup>th</sup> quarter 2023 as of this reporting. UI wage data only reflects earnings of W-2 wage earners and does not include 1099 earnings.

Table 7 above shows outcomes for PATHS participants who earned a certificate by each of the Texas Workforce Boards that are participating in the PATHS for Texas program. As stated for Table 6, outcomes have been blanked out for low cohort counts since they do not accurately reflect the outcomes for the whole cohort.

The Rural Capital Area participants had employment increase by about 10.4 percentage points over the reference quarter (from 77.9% to 88.3%), Coastal Bend participants had employment increase by nearly 30 percentage points by the first quarter after earning a certificate (from 56.6% to 86.2%), and Gulf Coast participants saw employment increase by a more modest 2.2 percentage points by the second quarter after earning a certificate (from 70.9 to 73.3). Participant employment for North Texas increased by 12.5 percentage points by the 1<sup>st</sup> quarter after receiving their PATHS certificate but declined to below pre-treatment levels by the 4<sup>th</sup> quarter after completing the program.

With regards to earnings, Gulf Coast, Rural Capital Area and North Texas each demonstrated earnings increases over the reference quarters, while Coastal Bend demonstrated a slight decline.

**Figure 3: PATHS Participants with SSNs Who Earned a Certificate  
Earnings Outcomes by Board  
2020-2022**



Note: TWC UI wage data available through 4<sup>th</sup> quarter 2023 as of this reporting. UI wage data only reflects earnings of W-2 wage earners and does not include 1099 earnings.

Figure 3 above shows the average conditional<sup>4</sup> quarterly earnings by Board for the 2020, 2021 and 2022 cohorts. Outcomes for North Texas are not displayed due to the low count (n=4 by 8 quarters post-treatment). Outcomes for 2023 are also not displayed due to the lag in UI wage data and the lack of four quarters outcomes post certificate.

All three Boards displayed above show increases in earnings from one year prior to earning a certificate (pre-treat) to four, six, and eight quarters out post certificate. Coastal Bend experienced a 71.1% increase in average quarterly earnings from the reference period (one year prior to training) to six quarters post certificate. Gulf Coast experienced a 26.4% increase in earnings from the reference period to six quarters post certificate. Rural Capital Area experienced a 60.5% increase from the reference period to six quarters out post certificate. The values for pre-treatment are calculated by averaging the conditional earnings values of the four quarters prior to entering treatment. The labels on the x-axis indicate the quarter-time relative to the point of exiting the program (i.e. T1 is one quarter after earning a PATHS certificate).

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<sup>4</sup> Conditional earnings only include individuals with earning greater than zero. Individuals with zero earnings are not included in the average.

**Table 8: PATHS Participants with SSNs Who Earned a Certificate by Training Category Through 2023**

(Note: The individuals in the training categories listed below did not necessarily work in those industries. They received certificates in the training categories.)

Outcome measure	Four Qtrs Before Earning a Certificate	Qtr Certificate Earned	1st Qtr After Receiving Certificate	2nd Qtr After Receiving Certificate	3rd Qtr After Receiving Certificate	4th Qtr After Receiving Certificate	6th Qtr After Receiving Certificate	8th Qtr After Receiving Certificate	10th Qtr After Receiving Certificate
<b>Number of Participants That Earned a Certificate:</b>									
Business Office Administration	79	79	79	43	23	21	18	13	6
Entrepreneurship	138	138	138	100	75	.	.	.	.
Hospitality, Kitchen Safety, Customer Svc	669	669	669	625	604	603	347	145	26
Information Technology	72	72	58	55	53	45	36	29	18
Insurance	10	10	10	8	8	8	8	2	.
Medical	160	160	146	146	145	124	90	74	34
Real Estate	17	17	17	13	.	.	.	.	.
Retail	195	195	174	146	140	132	110	77	31
Skilled Trades	48	48	43	14	14	.	.	.	.
Transportation/Logistics	6	6	6	6	6	5	.	.	.
Other	61	61	50	31	30	8	.	.	.
Missing/Unknown	1	1	1	1	.	.	.	.	.
<b>Overall</b>	<b>1456</b>	<b>1456</b>	<b>1391</b>	<b>1188</b>	<b>1100</b>	<b>947</b>	<b>610</b>	<b>341</b>	<b>116</b>

Note: TWC UI wage data was available through 4<sup>th</sup> quarter 2023 as of this reporting. UI wage data only reflects earnings of W-2 wage earners and does not include 1099 earnings.

**Table 9: PATHS Participants with SSNs Who Earned a Certificate by Training Category Through 2023**

Outcome measure	Four Qtrs Before Earning a Certificate	Qtr Certificate Earned	1st Qtr After Receiving Certificate	2nd Qtr After Receiving Certificate	3rd Qtr After Receiving Certificate	4th Qtr After Receiving Certificate	6th Qtr After Receiving Certificate	8th Qtr After Receiving Certificate	10th Qtr After Receiving Certificate
<b>Certificate Earners: Quarterly Employment</b>									
Business Office Administration	68.4%	76.0%	73.4%						
Entrepreneurship	76.5%	66.7%	70.3%	66.0%					
Hospitality, Kitchen Safety, Customer Svc	79.2%	89.7%	89.1%	86.2%	84.3%	83.6%			
Information Technology	67.0%	59.7%	69.0%	78.2%	81.1%				
Insurance	50.0%	60.0%	60.0%	62.5%	50.0%				
Medical	59.5%	55.0%	61.0%	67.8%	70.3%	69.4%			
Real Estate	69.1%	58.8%	64.7%	69.2%					
Retail	66.8%	77.4%	85.6%	86.3%	83.6%				
Skilled Trades	65.6%	66.7%	60.5%						
Transportation/Logistics	79.2%	100.0%	100.0%	83.3%	83.3%	80.0%			
Other	70.5%	67.2%	66.0%						
Missing/Unknown									
<b>Certificate Earners: Average Qrtly Earnings</b>									
Business Office Administration	\$11,390	\$11,963	\$14,504						
Entrepreneurship	\$9,726	\$8,916	\$10,153	\$11,220					
Hospitality, Kitchen Safety, Customer Svc	\$7,722	\$7,529	\$9,554	\$9,374	\$9,936	\$9,120			
Information Technology	\$7,376	\$8,503	\$8,286	\$7,762	\$7,618				
Insurance	\$6,844	\$5,464	\$6,669	\$5,447	\$5,684				
Medical	\$4,866	\$5,317	\$7,244	\$7,616	\$8,087	\$8,098			
Real Estate	\$7,566	\$6,211	\$7,703	\$8,134					
Retail	\$8,206	\$8,773	\$8,102	\$9,481	\$9,402				
Skilled Trades	\$9,834	\$12,242	\$13,619						
Transportation/Logistics	\$7,563	\$8,035	\$7,050	\$8,267	\$7,289	\$9,558			
Other	\$20,396	\$22,031	\$22,947						
Missing/Unknown									

**Table 10: UI Claims and UI Benefits Reception for PATHS Participants with SSNs Who Earned a Certificate by Training Category Through 2023**

Outcome measure	Four Qtrs Before Earning a Certificate	Qtr Certificate Earned	1st Qtr After Receiving Certificate	2nd Qtr After Receiving Certificate	3rd Qtr After Receiving Certificate	4th Qtr After Receiving Certificate	6th Qtr After Receiving Certificate	8th Qtr After Receiving Certificate	10th Qtr After Receiving Certificate
<b>Certificate Earners: Filed UI Claim</b>									
Business Office Administration	3.5%	.	.	.	.	.	.	.	.
Entrepreneurship	0.5%	.	.	.	.	.	.	.	.
Hospitality, Kitchen Safety, Customer Svc	0.8%	0.5%	0.2%	0.2%	0.3%	0.3%	.	.	.
Information Technology	11.1%	6.9%	3.5%	7.3%	5.7%	.	.	.	.
Insurance	.	.	.	.	.	.	.	.	.
Medical	13.9%	5.6%	3.4%	2.1%	1.4%	0.8%	.	.	.
Real Estate	.	.	.	.	.	.	.	.	.
Retail	2.3%	1.0%	1.7%	0.7%	2.9%	.	.	.	.
Skilled Trades	.	.	.	.	.	.	.	.	.
Transportation/Logistics	.	.	.	.	.	.	.	.	.
Other	.	.	.	.	.	.	.	.	.
Missing/Unknown	.	.	.	.	.	.	.	.	.
<b>Certificate Earners: Received UI Benefits</b>									
Business Office Administration	5.4%	.	.	.	.	.	.	.	.
Entrepreneurship	0.5%	.	.	.	.	.	.	.	.
Hospitality, Kitchen Safety, Customer Svc	1.1%	0.3%	0.2%	0.2%	0.3%	0.2%	.	.	.
Information Technology	13.2%	5.6%	3.5%	7.3%	5.7%	.	.	.	.
Insurance	.	.	.	.	.	.	.	.	.
Medical	17.0%	5.6%	2.7%	2.1%	1.4%	0.8%	.	.	.
Real Estate	.	.	.	.	.	.	.	.	.
Retail	2.8%	1.0%	0.6%	0.7%	2.1%	.	.	.	.
Skilled Trades	.	.	.	.	.	.	.	.	.
Transportation/Logistics	.	.	.	.	.	.	.	.	.
Other	.	.	.	.	.	.	.	.	.
Missing/Unknown	.	.	.	.	.	.	.	.	.

Table 9 shows earnings and employment outcomes by training category. As stated above the table, the individuals in the training categories listed did not necessarily work in those industries; they received certificates in those industries. As with the other outcomes tables, outcomes with low cohort counts were removed since they do not accurately represent the whole cohort.

The outcomes in Tables 9 and 10 show that individuals with the highest relative percentage of filings for UI claims and the highest relative percentage of receiving UI benefits were in the Business, Information Technology, and Medical training categories. It's also worth noting that individuals who received certificates in Information Technology and Medical experienced a drop in employment but not in earnings during the quarter they earned a certificate.

Potentially interesting are the outcomes disaggregated by training category. All certificate earnings categories showed eventual earnings and employment increases (noted by the green highlighted cell) from their reference quarter with the exception of Insurance (for earnings) and entrepreneurship (for employment).



## PATHS for Texas Impacts

A quasi-experimental research design was employed to conduct an impact analysis for PATHS for Texas certificate earners who earned a certificate between 2020 and 2022. Mahalanobis matching allowed researchers to identify suitable comparison individuals who possess similar pre-treatment demographic and economic characteristics to those participating in PATHS for Texas programming. The pool of comparison individuals was drawn from the TWC TWIST, WIT, UI wage and claims datasets. Due to the lag in the TWC UI wage data, 2023 treatment members were not included in this impact analysis since four quarters of wage outcomes were not available at the time of this analysis. This is a continuation of the impact analysis produced in June 2023 and results reflect continuing and updated trends identified in the last round of analysis (June 2023).

### Methodology:

Data on treatment (PATHS for Texas certificate holders) were first analyzed to determine the average number of quarters a participating individual remained in treatment. Most certificate earners entered and exited the program within a single quarter or exited the program in the following quarter with a few exceptions for participants who spent slightly longer time periods earning their certificate(s). In a small number of cases, the treatment period lasted almost 1 year (extended engagement). Researchers accounted for the potential bias these treatment individuals could exert on the impact analysis by removing them from the dataset, but this accounted for less than 1% of the total treatment cases.

Once the pool of treatment cases was subset to exclude potential biases, Mahalanobis matching allowed researchers to identify individuals from the pool of potential comparison observations that possessed similar demographic and pre-treatment economic characteristics to their matched treatment observation. The Mahalanobis matching process is a measure of distance between observations based on standard-deviations of multiple variables. The process allows treatment individuals to be paired with a comparison observation based on their similarities in the dataset. Treatment cases were first matched to comparison individuals by geographic location (Workforce Board area), the start year and quarter of treatment (or start year and quarter of TWIST/WIT registration for the potential comparison pool), and whether the individual had an earnings dip of 20% or more in the four quarters prior to start. Once the data was subset to only match on these essential criteria, treatment individuals were matched on a core set of pre-treatment economic characteristics, demographics, and Board-specific matching variables. A balance test was conducted by Board to determine whether the matching process was successful in building a comparison group that was similar to the treatment group on economic variables. An expanded balance test was conducted to determine demographic differences across treatment and

comparison groups by Board. Demographic variables were added in the matching process on a Board-specific basis when differences in aspects of race, gender, and education level could potentially bias the impact results. Table 11 below displays which variables were ultimately able to be balanced on after making these Board-specific adjustments.

**Table 11: Covariates Used in the Mahalanobis Matching  
By Board**

	Rural Capital Area	Coastal Bend	Gulf Coast
<b>Economic Attributes</b>			
Average Earnings 4 Years Prior		√	√
Had earnings dip of 20% or more	√	√	√
Maximum earnings dip in prior 2 years, percent	√	√	√
Employed at Entry Period	√	√	√
Eligible for UI based on work history	√	√	√
Percent of time employed; 4 years prior	√	√	√
Time since 1st observed earnings, quarters	√	√	√
Any UI benefits in prior year		√	√
Any UI claims in prior year	√	√	√
<b>Demographics</b>			
Age	√	√	√
White	√	√	√
Black	√	√	√
Hispanic	√	√	√
Race Unknown	√	√	√
Gender	√	√	√
Education Level		√	

Note: √ = Differences between the treatment and control group for identified variables are not statistically significant at  $p < .01$ .

It important to note, that in the previous cycle of analysis, comparison individuals were able to be matched for Rural Capital Area on all but one of the economic attributes. This is generally the threshold for acceptability that the Ray Marshall Center accepts. However, in this year’s report, comparison individuals were unbalanced on two economic variables for Rural Capital Area: average earnings 4 years prior and any UI benefits received in the prior year. In the case of average earnings 4 years prior, treatment individuals averaged lower earnings 4 years prior against the matched comparison group and this difference was statistically significant. We deemed the remaining bias on this variable after matching acceptable because it would likely underestimate the treatment effect on earnings and employment, allowing impacts to be, at worst, conservative estimates for PATHS certificate earners.

This report presents impacts for PATHS certificate earners for whom adequate matching could be performed. Although four Boards currently provide PATHS for Texas programming, North Texas was excluded from the Board-specific impact reporting due to their relatively low sample size that would make impact analysis impractical at this stage. However, outcomes for treatment and matched comparison groups for North Texas were included in the overall impact analysis that combines outcomes across Boards.

The impacts figures display the average quarterly employment and unconditional<sup>5</sup> earnings of the matched treatment and comparison members. Impact figures illustrate the unadjusted net difference in average earnings over time, regardless of employment status (i.e., unconditional earnings) and average employment rates from prior to training, at the final quarter of training (quarter certificate was earned), and four quarters of the post-treatment period. The unadjusted net effects in the impact tables are the difference between mean outcomes for the matched treatment and comparison groups. The “Impact Measure” in the tables are generated in regression models that control for remaining differences in pre-treatment demographic and economic characteristics between the two groups. Impact tables include data from all available post-treatment quarters.

Over 25% of PATHS certificate earners, entered the program in 2023. However, without a sufficient number of post-treatment quarters for which to evaluate short- and mid-term outcomes, researchers determined that they should be excluded from the analysis until more post-treatment data becomes available through the TWC UI wage dataset.

The final sample size for the impact analysis is presented in Table 12. Across all boards, there are less comparison individuals than treatment after matching which is a common feature of Mahalanobis matching. Comparison individuals are assigned weights to balance the sample distribution between treatment and controls (i.e. a comparison individual may be matched to multiple treatment individuals due to strong similarities to various treatment cases).

**Table 12: Sample Size for Treatment and Comparison Groups  
By Board**

Board	Comparison (n)	Treatment (n)
Coastal Bend	40	53
Gulf Coast	282	290
North Texas	9	10
Rural Capital	432	585

<sup>5</sup> Unconditional earnings include individuals with zero earnings when calculating averages.

Table 13 below provides a snapshot of the impact analysis by Board and an overall impact measure for the two outcomes of interest: quarterly employment and average quarterly earnings. The yellow highlighted figures indicate whether an impact measure was statistically significant. The following sections will provide a closer look at outcomes from each board.

**Table 13: Impact Measures by Board and Overall 2020-2022**

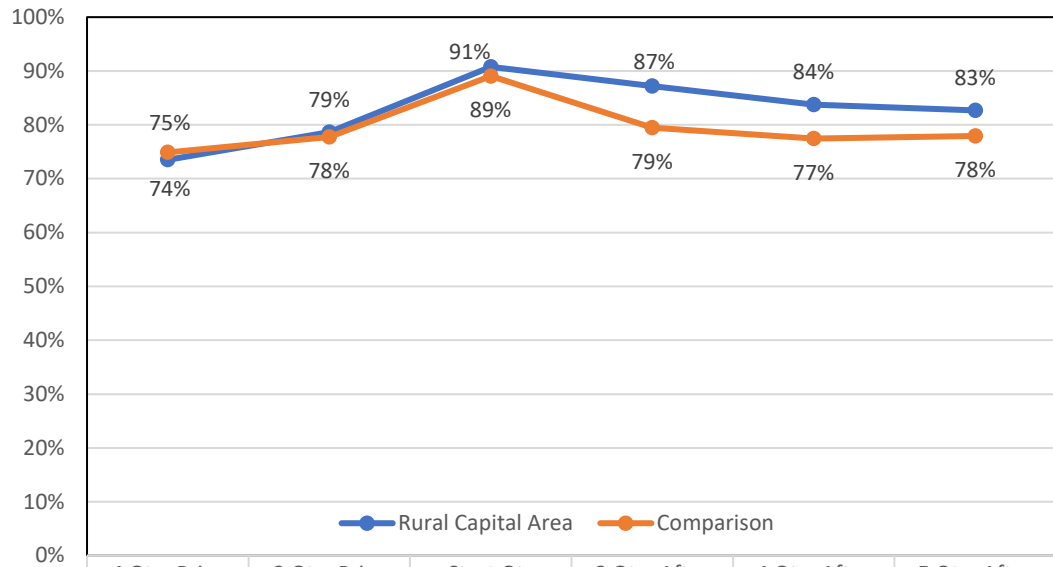
Impact measure	All Qtrs After Receiving a Certificate:		Unadjusted Net Effect	Impact Measure
	Treatment Group	Comparison Group		
<b>Quarterly Employment</b>				
Coastal Bend	79.0%	67.1%	11.9%	17.3% **
Gulf Coast	74.6%	66.1%	8.5%	10.8% **
North Texas	.	.	.	.
Rural Capital Area	85.3%	77.8%	7.5%	9.7% **
<b>Overall</b>	<b>81.3%</b>	<b>73.5%</b>	<b>7.8%</b>	<b>9.5% **</b>
<b>Average Quarterly Earnings</b>				
Coastal Bend	\$5,412	\$5,259	\$153	\$1,518 *
Gulf Coast	\$7,964	\$7,445	\$519	\$1,261 **
North Texas	.	.	.	.
Rural Capital Area	\$8,301	\$8,269	\$32	\$1,017 **
<b>Overall</b>	<b>\$8,004</b>	<b>\$7,832</b>	<b>\$172</b>	<b>\$990 **</b>

Note: \*\*=significant at p<.01; \*= significant at p<.05

### Rural Capital Area:

In Figure 4 below, the impact of participation in PATHS for Texas in the Rural Capital Area is examined by looking at participant employment over time in relation to comparison group employment. The analysis includes all PATHS certificate earners who completed the program between 2020 and 2022. The figure demonstrates that the average rate of employment for both groups showed a slight decline from the quarter certificates were earned through four quarters after employment, but the negative trend was less pronounced for PATHS participants relative to the comparison group's decline.

**Figure 4: Employment Rates Over Time  
Rural Capital Area Certificate Earners vs Comparison Group  
2020-2022**



	4 Qtrs Prior	2 Qtrs Prior	Start Qtr	2 Qtrs After	4 Qtrs After	5 Qtrs After
Counts	585	585	585	585	585	571
Rural Capital Area	74%	79%	91%	87%	84%	83%
Comparison	75%	78%	89%	79%	77%	78%

Note: TWC UI wage data available through 4th quarter 2023 as of this reporting. UI wage data only reflects earnings of W-2 wage earners and does not include 1099 earnings.

In Figure 5 below, the impact of participation in PATHS for Texas in the Rural Capital Area is examined by looking at participant earnings over time, regardless of employment status (i.e., unconditional earnings), in relation to the comparison group’s unconditional earnings. The analysis shows that Rural Capital Area had lower average earnings prior to PATHS entry compared to the same period for the comparison group and at the time when PATHS participants earned their certificate (“Start Qtr”) comparison individuals still demonstrated a slight edge over certificate earners. However, increases in earnings for PATHS participants caught up to reduce the gap in quarterly earnings at the 2<sup>nd</sup> and 5<sup>th</sup> quarters. We can interpret this earnings graph as a slightly higher rate of increase in earnings for PATHS certificate earners against the comparison group, indicating a positive treatment effect that was found in the impact table analysis.

**Figure 5: Unconditional Earnings Over Time  
Rural Capital Area Certificate Earners vs. Comparison Group  
2020-2022**



Note: TWC UI wage data available through 4<sup>th</sup> quarter 2023 as of this reporting. UI wage data only reflects earnings of W-2 wage earners and does not include 1099 earnings.

Table 14 below presents findings from the impacts analysis model comparing outcomes of 585 Rural Capital Area PATHS certificate earners to the outcomes of a matched comparison group. The table presents impacts only for certificate earners for whom adequate matching could be performed. Participation in the Rural Capital Area was positively associated with the two outcome measures of interest. The data identified a positive and statistically significant measure for the PATHS certificate earners of \$1,017 in earnings and 9.7% in employment.

**Table 14: Rural Capital Area Impact Analysis  
2020-2022**

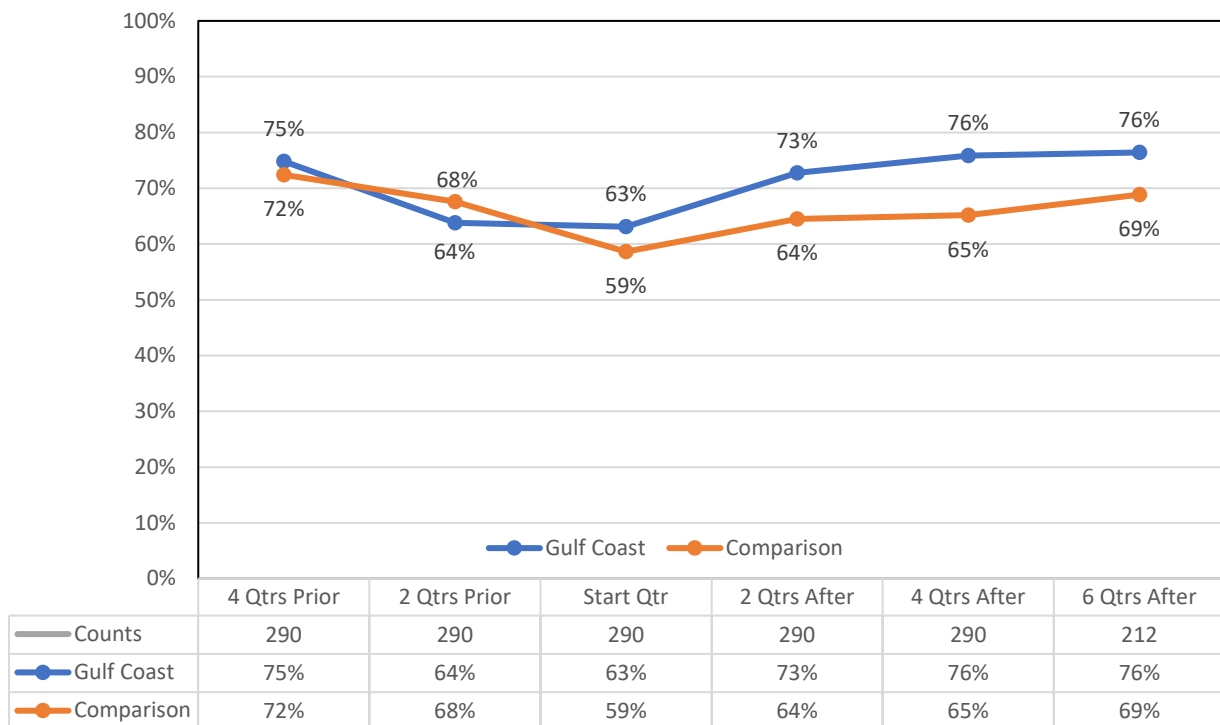
Impact measure	All Qtrs After Receiving a Certificate: Treatment Group	All Qtrs After Receiving a Certificate: Comparison Group	Unadjusted Net Effect	Impact Measure	
<b>Quarterly Employment</b>	85.3%	77.8%	7.5%	9.7%	**
<b>Average Quarterly Earnings</b>	\$8,301	\$8,269	\$32	\$1,017	**

Note: \*\*=significant at p<.01; \*=significant at p<.05

## Gulf Coast:

In Figure 6, the impact of participation in PATHS for Texas in the Gulf Coast Board area is examined by looking at participant employment over time in relation to comparison group employment. The analysis includes all PATHS certificate earners who completed the program between 2020 and 2022. The figure demonstrates that the average rate of employment for certificate earners began to outpace the comparison group by the start of the post-treatment period and continued to outpace the employment rate of the comparison group throughout the analysis period.

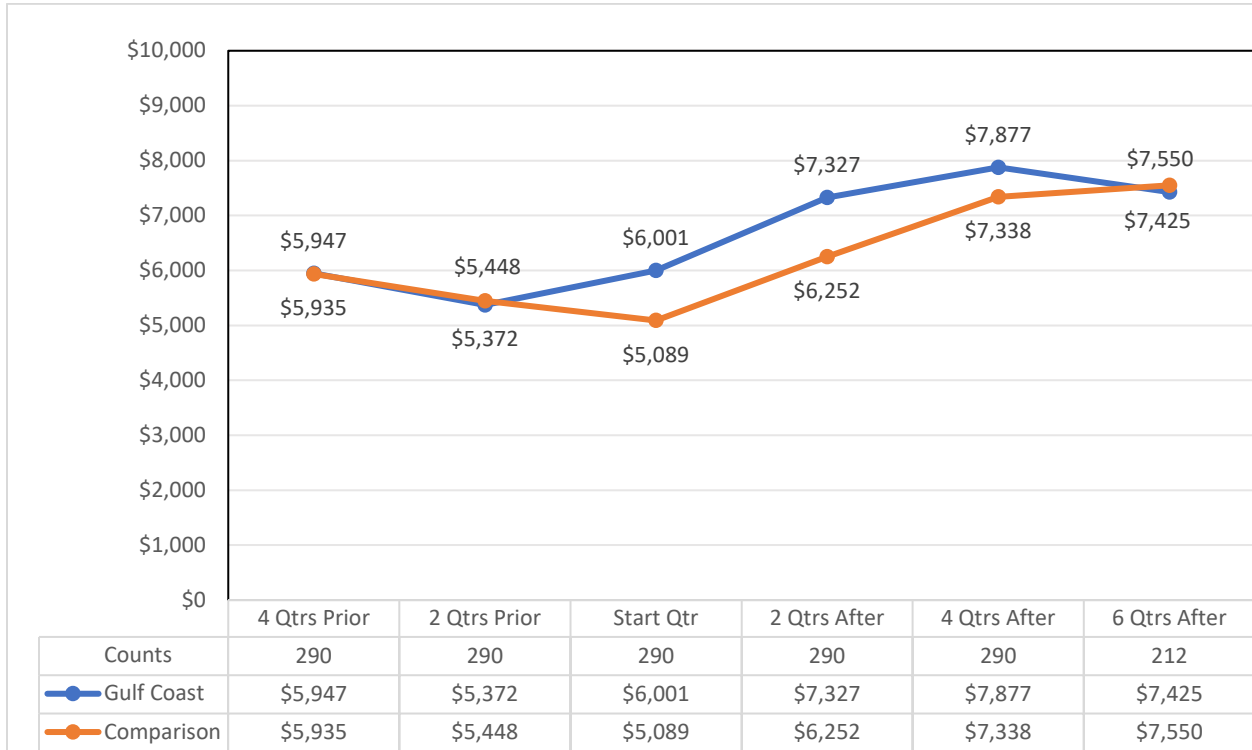
**Figure 6: Employment Rates Over Time  
Gulf Coast Certificate Earners vs Comparison Group  
2020-2022**



Note: TWC UI wage data available through 4<sup>th</sup> quarter 2023 as of this reporting. UI wage data only reflects earnings of W-2 wage earners and does not include 1099 earnings.

In Figure 7, the impact of participation in PATHS for Texas in the Gulf Coast is examined by looking at participant earnings over time, regardless of employment status (i.e., unconditional earnings), in relation to the comparison group’s unconditional earnings. The analysis shows that Gulf Coast certificate earners began to outpace average quarterly earnings at the start of the post-treatment period and outpaced earnings through the 4<sup>th</sup> quarter of the post-treatment period. At the 6<sup>th</sup> quarter of the post-treatment period, earnings for the comparison group slightly outpace those of the comparison group which may be explained by the fact that comparison individuals appear to “catch up” to the earnings levels for PATHS certificate earners in the Gulf Coast area by this period.

**Figure 7: Unconditional Earnings Over Time  
Gulf Coast Certificate Earners vs. Comparison Group  
2020-2022**



Note: TWC UI wage data available through 4<sup>th</sup> quarter 2023 as of this reporting. UI wage data only reflects earnings of W-2 wage earners and does not include 1099 earnings.

Table 15 presents findings from the impacts analysis comparing outcomes of 290 Gulf Coast PATHS certificate earners to the outcomes of a matched comparison group. The table presents impacts only for certificate earners for whom adequate matching could be performed. Participation in PATHS for Texas in the Gulf Coast service area was positively associated and statistically significant for earnings and employment outcomes. The data identified a positive and significant impact measure for PATHS certification of \$1,261 in earnings. It also identified a positive and statistically significant impact measure of 10.8% in employment.

**Table 15: Gulf Coast Impact Analysis  
2020-2022**

Impact measure	All Qtrs After Receiving a Certificate: Treatment Group	All Qtrs After Receiving a Certificate: Comparison Group	Unadjusted Net Effect	Impact Measure
<b>Quarterly Employment</b>	74.6%	66.1%	8.5%	10.8% **
<b>Average Quarterly Earnings</b>	\$7,964	\$7,445	\$519	\$1,261 **

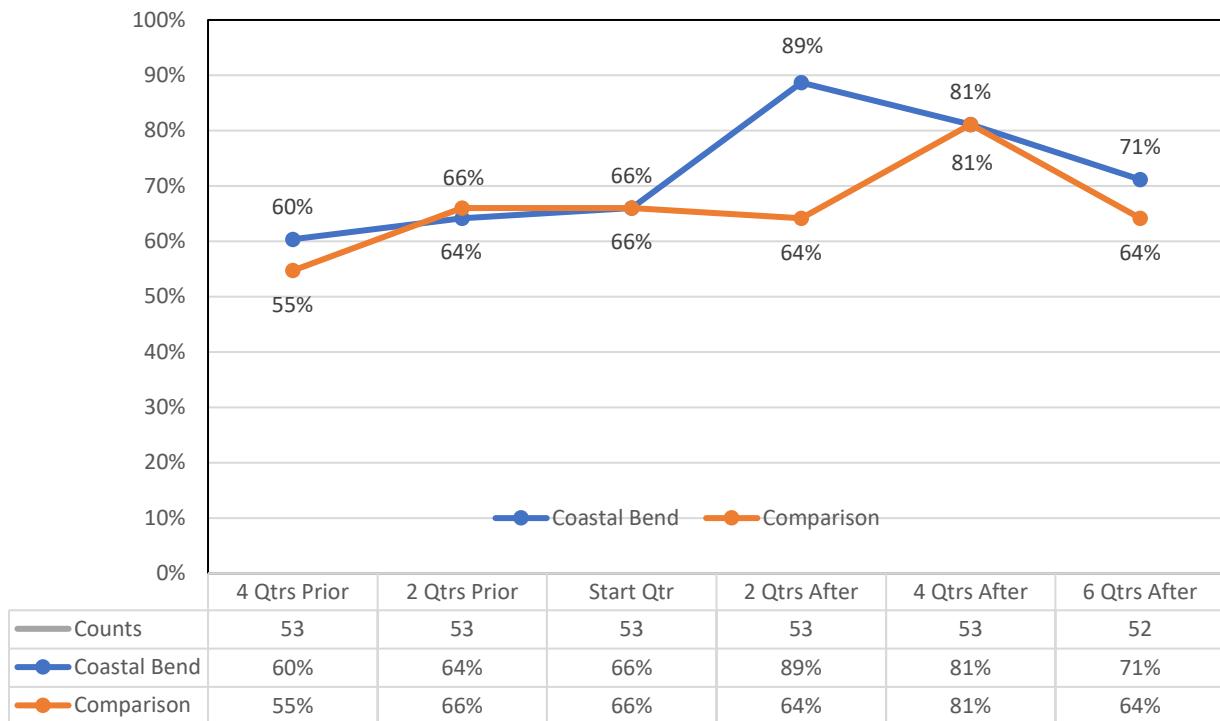
Note: \*\*=significant at p<.01; \*=significant at p<.05



## Coastal Bend:

In Figure 8, the impact of participation in PATHS for Texas in Coastal Bend is examined by looking at participant employment over time in relation to comparison group employment. The analysis includes all PATHS certificate earners who completed the program between 2020 and 2022. The figure demonstrates that the PATHS certificate earners saw a large jump in employment within two quarters after the treatment period with comparison group members catching up by the 4<sup>th</sup> post-treatment quarters. Both groups saw declines in employment rate by quarter 6 post-treatment, however the decline in employment for the treatment group was shallower than those in the comparison group. The large variation between employment rates may be explained by regional trends that are controlled for in the impact analysis and PATHS certificate earners may be more resistant to regional economic performance declines that affect employment than their comparison group counterparts.

**Figure 8: Employment Rates Over Time  
Coastal Bend Certificate Earners vs Comparison Group  
2020-2022**

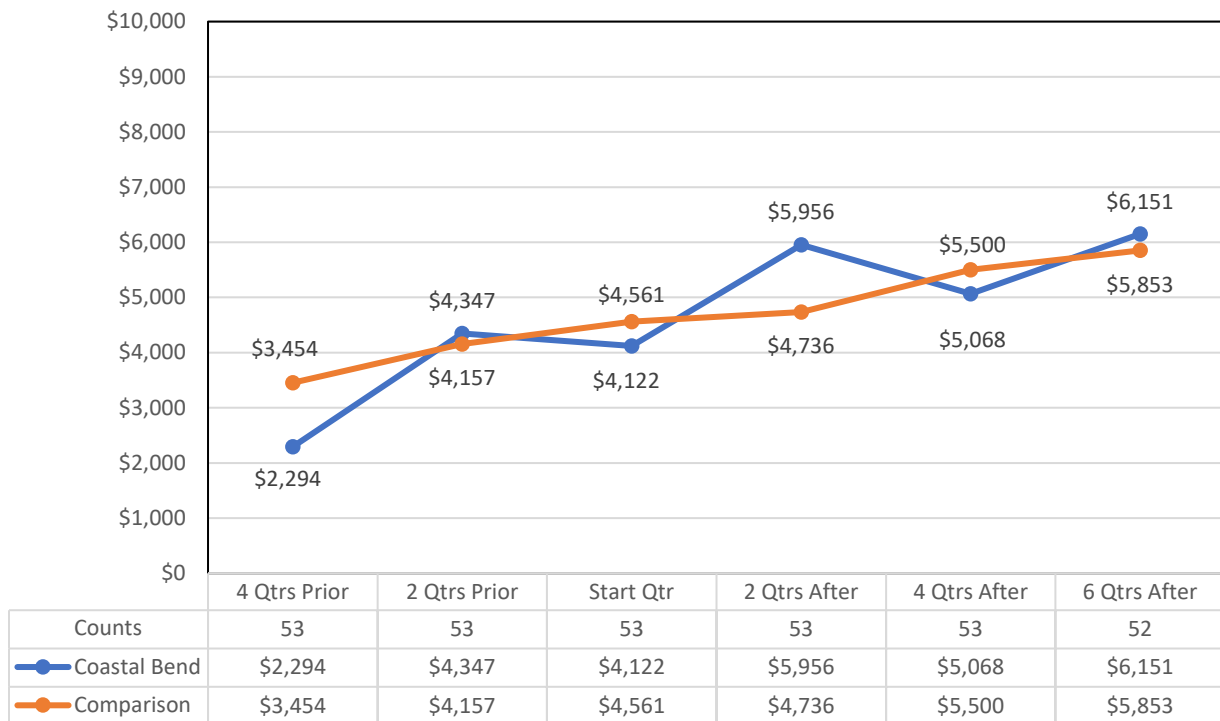


Note: TWC UI wage data available through 4<sup>th</sup> quarter 2023 as of this reporting. UI wage data only reflects earnings of W-2 wage earners and does not include 1099 earnings.

In Figure 9, the impact of participation in PATHS for Texas in the Coastal Bend is examined by looking at participant earnings over time, regardless of employment status (i.e., unconditional earnings), in relation to the comparison group's unconditional earnings. The analysis shows that PATHS certificate earners in the Coastal Bend Service Area had fluctuating earnings outcomes between the period of program

completion through the 6<sup>th</sup> post-treatment quarter. Meanwhile, the comparison group had a steady, but shallower trend in their earnings outcomes. In general, earnings outcomes between the exit quarter and the 6th-post treatment quarter appear to be rising at a higher rate than the comparison group despite fluctuations.

**Figure 9: Unconditional Earnings Over Time  
Coastal Bend Certificate Earners vs. Comparison Group  
2020-2022**



Note: TWC UI wage data available through 4<sup>th</sup> quarter 2023 as of this reporting. UI wage data only reflects earnings of W-2 wage earners and does not include 1099 earnings.

Table 16 below presents findings from the impacts analysis comparing outcomes of 53 Coastal Bend PATHS certificate earners to the outcomes of a matched comparison group. The table presents impacts only for certificate earners for whom adequate matching could be performed. Participation in PATHS for Texas in the Coastal Bend service area was positively associated with the two outcome measures of interest. This positive association with the treatment was also statistically significant. The data identified a positive and significant impact for PATHS certification of \$1,518 in earnings and 17.3% in employment.

**Table 16: Coastal Bend Impact Analysis  
2020-2022**

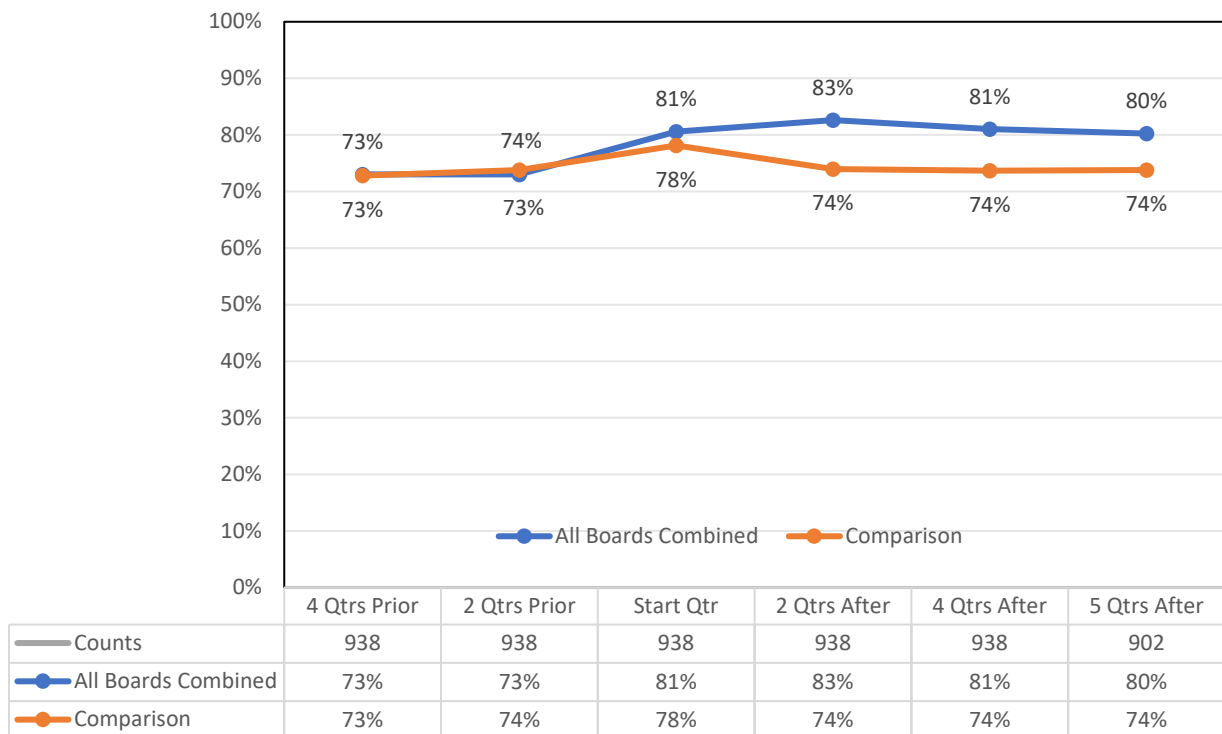
Impact measure	All Qtrs After Receiving a Certificate: Treatment Group	All Qtrs After Receiving a Certificate: Comparison Group	Unadjusted Net Effect	Impact Measure
<b>Quarterly Employment</b>	79.0%	67.1%	11.9%	17.3% **
<b>Average Quarterly Earnings</b>	\$5,412	\$5,259	\$153	\$1,518 *

Note: \*\*=significant at p<.01; \*=significant at p<.05

**Overall:**

In Figure 10, the combined impact of participation in PATHS for Texas overall is examined by looking at participant employment over time in relation to comparison group employment. The analysis includes all PATHS certificate earners who completed the program between 2020 and 2022. The figure demonstrates that the average rate of employment for certificate earners began to outpace the comparison group by the start of the post-treatment period and continued to do so throughout the post-treatment period of analysis.

**Figure 10: Employment Rates Over Time for All Boards Combined  
Certificate Earners vs Comparison Group  
2020-2022**



Note: TWC UI wage data available through 4<sup>th</sup> quarter 2023 as of this reporting. UI wage data only reflects earnings of W-2 wage earners and does not include 1099 earnings.

In Figure 11, the combined impact of participation in PATHS for Texas across all Boards is examined by looking at participant earnings over time, regardless of employment status (i.e., unconditional earnings), in relation to the comparison group’s unconditional earnings. The treatment and comparison group averages appear to follow a similar trajectory with fluctuations in earnings that make it difficult to deduce visually the direct impact that PATHS certification has on this outcome variable. At the quarter of program completion, comparison individuals on average are earnings over \$200 more in that quarter. At 5 quarters post-treatment, the treatment group gains a modest edge in average quarterly earnings. This would indicate, visually, a slightly steeper earnings trendline for treatment individuals against their matched comparison group.

**Figure 11: Unconditional Earnings Over Time for All Boards Combined  
Certificate Earners vs. Comparison Group  
2020-2022**



Note: TWC UI wage data available through 4<sup>th</sup> quarter 2023 as of this reporting. UI wage data only reflects earnings of W-2 wage earners and does not include 1099 earnings.

Table 17 presents findings from the impact analysis comparing outcomes of 938 PATHS certificate earners to the outcomes of a matched comparison group. The table presents impacts only for certificate earners for whom adequate matching could be performed. Participation in PATHS for Texas across the four Boards was positively associated with the two outcome measures of interest. This positive association with the treatment was also statistically significant for both earnings and employment. The

data identified a positive and statistically significant impact measure for PATHS certification of \$990 in earnings and 9.5% in employment.

**Table 17: Impact Analysis for All Boards Combined  
2020-2022**

Impact measure	All Qtrs After Receiving a Certificate: Treatment Group	All Qtrs After Receiving a Certificate: Comparison Group	Unadjusted Net Effect	Impact Measure	
<b>Quarterly Employment</b>	81.3%	73.5%	7.8%	9.5%	**
<b>Average Quarterly Earnings</b>	\$8,004	\$7,832	\$172	\$990	**

Note: \*\*=significant at p<.01; \*=significant at p<.05

### Discussion:

In general, the impact analysis for the first 3 years of the PATHS for Texas program shows that participation in the program had a positive impact on earnings and employment. This is consistent with findings from the previous interim impact analysis conducted in June 2023. Impacts, in general were more statistically significant given the larger sample size now introduced into the impact models. Conducting a Board-level analysis of the program reinforces the findings from the overall impact analysis of the program. The addition of the final cohort of PATHS certificate earners from 2023 and 2024 in the final iteration of the report will benefit from a larger sample size and greater time horizon to assess if impacts are sustained in the long-term for earlier cohorts and continue to be positive and statistically significant in the short-term for the most recent certificate earners.

The matching process went through several rigorous tests to determine the best ways to accurately measure impacts without limiting the sample size. Examples of this process include removing all treatment and comparison individuals below the age of 21 (due to limited employment history) and adding a dummy variable that indicated whether a treatment or comparison individual fit the NAICS profile associated with participating in the treatment one quarter prior to entering services. In these two alternative matching scenarios, the magnitude and direction of the treatment coefficient did not change, though statistical significance may have been reduced as more treatment individuals were removed from the sample.

A significant change to the matching criteria, may have influenced the impact analysis as researchers chose to identify comparison individuals by their start year and quarter that they registered with TWIST or WIT to seek employment assistance. The idea behind this modification was to capture comparison individuals at a similar economic moment as their matched treatment individuals. In the prior analysis,

comparison individuals were matched only on start year which could make impact more difficult to analyze given the fact that a comparison individual may have sought job assistance at the beginning of the year where treatment individuals entered the PATHS program at the end of the year. This change limited the number of potential comparison individuals that could be matched with PATHS program participants, but allowed for a more intuitive quasi-experimental design that closely mimics the division into treatment and control should this have been a randomized assignment into PATHS programming or status-quo services.

### PATHS for Texas Survey Responses

Two surveys were made available to each Board to gather responses from PATHS for Texas participants. One survey was for active PATHS participants who completed training and the second survey was for inactive PATHS participants. There were 634 individuals that completed the active PATHS survey and 25 individuals that responded to the inactive PATHS survey. Table 18 below shows the responses for the active PATHS participants.

Table 18: PATHS Active Participants Survey Responses

What county do you live in? (Summarized by Board)	Counts	Percentage
RURAL CAPITAL	506	80%
COASTAL BEND	84	13%
NORTH TEXAS	35	6%
GULF COAST	9	1%
<i>Total Responses</i>	634	100%
Name of training(s)/course(s) taken. (select all that apply)		
Hospitality-Customer Service Training	202	29%
National Retail Federation Retail Bundle	64	9%
Customer Service & Sales	37	5%
Restaurant Service Training	29	4%
Business of Retail: Operations & Profit	22	3%
Retail Industry Fundamentals	20	3%
Business Office Administration	7	1%
Covid 19 Retail Operations	5	1%
COVID 19 Customer Conflict Prevention	4	1%
IT Support Specialist	4	1%
Medical Assistant	4	1%
Medical Office Administration	3	0%
Security IT	3	0%
Medical Billing and Coding	2	0%
Pharmacy Technician	1	0%
Principals of Retailing	1	0%
Other	300	42%
<i>Total Responses</i>	708	100%
Name of training(s)/course(s) taken. OPEN TEXT		
Health and Safety	74	30%
Electric Training/Apprenticeship	65	26%
Safety Training	24	10%
Child Care/Early Education	20	8%
Kitchen Skills	20	8%
Supervisor/Leadership	11	4%
8D Training	8	3%
Restaurant Safety and Service Training	5	2%
Manufacturing	4	2%
Robotics	3	1%
Skilled Trades/Apprenticeship	2	1%
Grant Paperwork	1	0%
Information Technology	1	0%
Problem Solving	1	0%

Other	8	3%
<i>Total Responses</i>	247	100%
<b>How have you benefited from the training provided by PATHS? (select all that apply)</b>		
Received a certificate	386	29%
Better at my job	328	25%
Improved self-confidence	286	21%
Pay increase	83	6%
Gained employment in a similar occupation/industry	72	5%
Promotion/Advancement with your current employer	43	3%
Not benefited	42	3%
Gained employment in a new occupation/industry	38	3%
Promotion/Advancement in a similar occupation/industry	14	1%
Other	39	3%
<i>Total Responses</i>	1331	100%
<b>How have you benefited from the training provided by PATHS? OPEN TEXT</b>		
Acknowledgement of improvements needed	1	5%
Did not benefit	1	5%
Educational	1	5%
Eligible for a raise with progress	1	5%
Entrepreneurial Education	1	5%
Grant	1	5%
Health and Safety	5	25%
Knowledge	1	5%
No response received back from inquiries	2	10%
Obtained License	1	5%
Self growth in the industry	3	15%
Other	2	10%
<i>Total Responses</i>	20	100%
<b>How to you rate your skill level based on the training you received?</b>		
High	378	64%
Medium	196	33%
Low	15	3%
<i>Total Responses</i>	589	100%
<b>Looking ahead, do you think this training will (select all that apply):</b>		
Improve your job performance	454	47%
Advance your career	268	28%
Help you get a job	118	12%
Help you change careers	68	7%
None of the above	31	3%
Help you get a better job	.	0%
Other	23	2%



	<i>Total Responses</i>	962	100%
<b>Looking ahead, do you think this training will - OPEN TEXT</b>			
	Be better safety aware	4	50%
	All of the above	1	13%
	Be a better trainer	1	13%
	Help communicate how to improve our area in hopes of justifying pay increases	1	13%
	You can take your credits from JATC to college afterward and continue your education for other field	1	13%
	<i>Total Responses</i>	8	100%
<b>What would make PATHS for Texas better? What else could we offer? Thoughts/feedback:</b>			
	It was great/informational	34	30%
	More hands on/interactive/role playing	13	12%
	Nothing	10	9%
	Different time options	6	5%
	Instructor/Chef was great	6	5%
	Shorter	4	4%
	Better communications/clear instructions	3	3%
	It was great/offer more classes	3	3%
	More information/labs/visibility	3	3%
	No PATHS training offered, just information.	3	3%
	Streamline check-in process	3	3%
	Waiting for a call back/response	3	3%
	Better Instructors	2	2%
	Breakfast/snacks	2	2%
	Examples on what you can do when a customer is upset.	2	2%
	More indepth/concise	2	2%
	No PATHS training, just infomation on a grant opportunity.	2	2%
	Provide copies of training material	2	2%
	Always can be better. Support the environment for our kids.	1	1%
	How to calibrate thermometers	1	1%
	In depth behavior strategies.	1	1%
	JATC apprenticeship does an awesome job at helping the future union electricians.	1	1%
	Make it easier.	1	1%
	Provide online training instead.	1	1%
	Repetitious information	1	1%
	Safety and knowledge	1	1%
	Too cold	1	1%
	<i>Total Responses</i>	112	100%

The majority of responses (80%) came from the Rural Capital Area, followed by the Coastal Bend (13%). Individuals enrolled in 'Hospitality-Customer Service' training provided the majority of responses (29%), followed by the 'Other' training category (42%). Based on open text responses, the 'Other' training category was mostly health and safety (30%), Electric Training/Apprenticeship (26%) and Safety Training (10%). When the respondents were asked how they benefitted from the training, most respondents selected 'Received a Certificate' (29%), 'Better at my job' (25%), and 'Improved self-confidence' (21%).

The respondents were asked to rate their skill level after receiving their training, the 97% of the respondents rated their skill as "High" (64%) or "Medium" (33%) with only 3% of the respondents rating themselves low. Finally, when asked to look ahead of their training, the respondents replied that the training they received will 'Improve their job performance' (47%) and 'Advance your career' (28%).

The results of the active participant survey appear to be generally positive as far as assessment of the program and its impact on success. Rural Capital Area Coastal Bend, and North Texas provided adequate representation in their responses proportional to the number of participants they had enter PATHS-funded programs. Gulf Coast had a very limited number of responses (9) compared to their overall participation levels (1,083 as of April 2023). It is likely there was an error distributing surveys to Gulf Coast area PATHS participants and attempts can be made before the final report to increase response rates from participants and certificate earners before the final reporting period.

In general, the positive impressions of the program indicated by the questions on benefits and skill-level assessment supplement the findings from the impact analysis.

Table 19: PATHS Inactive Participants Survey Responses

What county do you live in? (Summarized by Board)	Counts	Percentage
COASTAL BEND	23	92%
NORTH TEXAS	2	8%
GULF COAST	0	0%
RURAL CAPITAL	0	0%
<i>Total Responses</i>	25	100%
<b>Name of training(s)/course(s) taken. (select all that apply)</b>		
National Retail Federation Retail Bundle	18	69%
Customer Service & Sales	3	12%
COVID 19 Customer Conflict Prevention	2	8%
Covid 19 Retail Operations	2	8%
Business of Retail: Operations & Profit	1	4%
Business Office Administration	0	0%
Hospitality-Customer Service Training	0	0%
IT Support Specialist	0	0%
Medical Assistant	0	0%
Medical Billing and Coding	0	0%
Medical Office Administration	0	0%
Pharmacy Technician	0	0%
Principals of Retailing	0	0%
Restaurant Service Training	0	0%
Retail Industry Fundamentals	0	0%
Security IT	0	0%
Other	0	0%
<i>Total Responses</i>	26	100%
<b>Name of training(s)/course(s) taken. OPEN TEXT</b>		
Udemy	1	100%
<i>Total Responses</i>	1	100%
<b>Why were you unable to complete the PATHS training? (Select all that apply)</b>		
Lack of time	15	42%
Family problems	6	17%
Schedule conflicts	5	14%
Too difficult to work full-time and take an online course	5	14%
Health Issues	2	6%
Limited access to a computer	1	3%
Technology problems with the online training course	1	3%
My employer does not support or value this training	0	0%
Training was too difficult	0	0%
Prefer in person class/training	0	0%
Lack of interest in the material	0	0%

Poor or no WiFi	0	0%
Training took too much time	0	0%
Other	1	3%
<i>Total Responses</i>	36	100%
<b>Why were you unable to complete the PATHS training? OPEN TEXT</b>		
	0	0%
<i>Total Responses</i>	na	na
<b>What would make PATHS for Texas training better? What else could we offer? Thoughts/feedback:</b>		
Computer availability at my worksite.	1	100%
<i>Total Responses</i>	1	100%

Table 19 shows the survey responses from individuals who enrolled in training and for various reasons could not complete the training. Most responses (92%) came from the Coastal Bend area. Most of the respondents (69%) enrolled in the 'National Retail Federation Retail Bundle' training program. The top reasons for not completing training include 'Lack of Time' (42%), 'Family problems' (17%), 'Schedule conflicts' (14%), and 'Too difficult to work full-time and take an online course' (14%). While these responses are not necessarily representative of the full scope and geographic range of PATHS-funded programming, they still present some insight into the types of supports that program providers can consider offering to participants moving forward. Things like flexible training arrangements, follow-up, and information provision for family counseling services are all growth opportunities for service providers.

## PATHS For Texas Qualitative Assessment

### Overview:

As part of the impact assessment conducted by RMC, an implementation evaluation is included in this year's report and will be expanded in the final impact report. The purpose of the implementation evaluation is to identify best practices and lessons that can be applied to similar workforce development initiatives. The RMC research team has been a constant presence during the planning, implementation, and monitoring phase of the PATHS for Texas program since its inception in 2020. Through the course of the evaluation, researchers have attended monthly partner meetings, attended annual in-person gatherings, and conducted informal and semi-structured interviews with partnering Workforce Solutions Board (WSB) representatives from the four regions discussed in this report. Current findings allude to several factors that have allowed PATHS for Texas to successfully implement upskilling and job-training assistance that have currently reached over 2,500 individuals across the state. While PATHS for Texas participating boards are united under an overarching mission to provide job skill training certification, each WSB provides a unique perspective to the successes and challenges related to program implementation. The qualitative assessment is organized into five sections. The first four sections represent perspectives from the four Workforce Solutions Boards and covers the following topics: program planning, stakeholder involvement, adaptations to Covid-19, and recruitment. The final section covers common themes related to lessons learned over the course of PATHS for Texas implementation and best practices identified by researchers and stakeholders.

### Program Planning:

PATHS for Texas was initially conceived as a career pathways program for workers in the retail and services industry that represented a significant, but underserved area for career development given the limited opportunities for worker growth and upward mobility within the industry. The Wal-Mart foundation had awarded a multi-year, multi-million dollar grant that WSBs could pursue. Respondents noted that this privately sourced funding stream was atypical to the standard federal funding that WSBs in Texas typically receive through the Workforce Innovation and Opportunity Act (WIOA).

While the Texas Workforce Investment Council (TWIC) had initially set out to organize the program and distribute the funds to participating workforce solutions boards, they were ultimately unable to continue with the project. Workforce Solutions Greater Dallas took over as the funding facilitator and invited WSBs across Texas to submit proposals for how to utilize the private-funding opportunity and target the retail space that the Wal-Mart Foundation was interested in supporting. The collaborating WSBs of Coastal Bend, Gulf Coast, Rural Capital Area, and North Texas developed their proposal that

focused on upskilling in the retail-services space, drawing on past experiences in the Greater Dallas Area with the Retail Pays Grant. The initial goal for the PATHS for Texas program was to assist employers in investing in the development of hard- and soft-skills that increased productivity and long-term career potential for retail and service industry workers.

Program planning was conducted through a series of meetings between the implementing partner and participating WSBs. Initially, the program focused on typical retail industries like department and grocery stores, but quickly expanded to other industries that had employers interested in developing service-oriented skills in their workers.

### Stakeholder Involvement:

Each WSB engaged key stakeholders to inform them of no-cost training opportunities. Stakeholders included members of the workforce solutions ecosystem and major employers that had long-standing relationships with each regional WSB. In Coastal Bend, Board team members sought engagement with Goodwill Industries, Omni Hotels, and the Education Service Center. In Gulf Coast, primary stakeholders included community-based organizations, chambers of commerce, community colleges, and economic development corporations. The North Texas board engaged its workforce development ecosystem and a community college to build an upskilling curriculum for retail employees interested in moving into management. Rural Capital Area similarly sought engagement from major hotel and restaurant industry leaders and later in the manufacturing industry to assess needs for workers in customer-facing positions.

Overall, stakeholder involvement had a primary impact in the planning and sustainability of the program in each of the four WSBs. Stakeholders provided critical information on worker and employer needs and facilitated appropriate tailoring of services in the four regions without undermining the overall mission of the program to provide job-skill certification that could upskill workers into mid-level and financially lucrative careers.

### Covid-19 Adaptations:

The Covid-19 pandemic impacted each WSB's initial project scope and ability to connect to both employers and workers. The initial planning phase for PATHS programming prioritized upskilling employed workers. The Pandemic shifted employer needs as they had less time they could allocate to worker training. Additionally, unemployment grew drastically in each region which meant potential PATHS participants in the retail space no longer qualified based on their employment status. The program broadly adapted to Covid-19 by allowing flexibility on employment status for potential participants which allowed boards to provide training certification to unemployed workers until working

conditions stabilized across the state. The participating WSBs also adapted by identifying which trainings would be appropriate for retail workers moving into other industries. This allowed WSBs to consider upskilling workers that were formerly employed in the retail space so that they would have marketable skills in other industries such as IT, Healthcare, and Real Estate – industries that still had worker demand during the pandemic. WSBs also adapted by employing new technologies to train workers and jobseekers remotely, though each board has different impressions on the return on investment in these remote training options. Covid-19 also made new employer and stakeholder engagement difficult, which prompted WSBs to nurture the existing relationships they had developed prior to the Pandemic.

Overall, Covid-19 presented significant challenges that each WSB needed to address. The introduction of monthly partner video-calls likely mitigated the negative impact of the pandemic by allowing partners to brainstorm alternative avenues for successful program implementation while still maintaining its vision.

### **Recruitment:**

All WSBs engaged in some-level of mass participant recruitment either through email blasts to employers or passing out fliers at local retail hubs (shopping malls). These strategies generally had limited impact and Covid-19 further hindered the opportunity to raise awareness of PATHS programming in a meaningful way. WSBs found greater success when focusing on pre-existing employer relationships to recruit new participants, using PATHS programming as a potential solution to employer/specific problems, and focusing resources on identifying new industries for disconnected retail workers to employ customer-service related skills.

Coastal Bend particularly had success focusing their energy on pre-existing employers to recruit participants. Their partners at Goodwill Industries of South Texas agreed to set up a wage-increase model for employees that received PATHS certifications. This led to higher retention rates, career advancement into managerial positions, and worker uptake as awareness of potential benefits of PATHS participation grew. Similarly, North Texas was able to recruit new participants by offering PATHS programming as a solution to employer specific problems. Notable cases include bundling onboarding costs (such as background checks and fingerprinting for workers interacting with youth) with on-the-job training and offering PATHS training to help local businesses compete against operations that had a statewide or national presence.

A limitation noted in the qualitative research was the lack of proper pre-screening mechanisms to ensure participants that entered the program were willing to complete the program successfully. There were cases in which participants enrolled in PATHS training either online or in-person but left the

program due to personal issues or after finding another job. WSBs addressed this issue by generating materials to orient participants to PATHS and help set/manage expectations for potential enrollees.

### **Lessons Learned:**

In the final stages of the PATHS for Texas funding lifecycle, several discussions have been had related to the initiative's legacy and how programming has impacted the operational practices of the participating WSBs. The collaborating boards have all expressed positive sentiments on their experience implementing PATHS for Texas. When prompted to provide written answers related to best practices and lessons learned, WSBs frequently cited flexibility, collaboration, and leadership as components that were unique to this grant and should be modeled in future workforce development initiatives across the state.

#### *Flexibility*

PATHS for Texas deviated from traditional workforce solutions programs funded by federal dollars due to its ability to engage with clients that would not normally qualify for no-cost assistance due to income, employment status, and industry preference. Being a privately funded initiative, PATHS was able to capture a previously untapped market of workers seeking career advancement that could set them on a new employment and earnings trajectory. The Wal-Mart Foundation, as a funder, also allowed for some flexibility in their own requirements by helping WSBs think creatively about which industries and job-types qualified as "retail." Over the course of the program, WSBs were able to consider industries that were emerging during and after the Covid-19 pandemic that had a customer-facing component at the same time the retail industry was moving towards online/automated platforms.

This aspect of the PATHS for Texas program has inspired the participating Boards to seek other privately funded opportunities and advocate directly (or via the Wal-Mart Foundation) for policymakers to set aside funds for future projects that maintain this flexibility as a core element of their funding structure.

#### *Collaboration*

WSBs frequently cited their collaboration between one another throughout the PATHS funding period as a unique experience in the state's Workforce Solutions space. Prior to PATHS, the participating Boards operated without frequent engagement with other Boards across the state. This operational isolation meant that they were limited opportunities to learn best practices and adopt those practices in their own settings. Monthly partner calls, annual in-person meetings, and collective production of impact reports to the funder allowed WSBs to adopt successful practices and workshop solutions to problems that one or more of the boards were experiencing.



Participating Boards have expressed an interest in sharing these experiences with all 26 WSBs across Texas and the Texas Workforce Commission to encourage this collaboration to continue and be extended across initiatives.

### *Leadership*

Respondents indicated the importance of an effective and confident managerial presence to the successful implementation of the PATHS for Texas program. Each WSB indicated that Workforce Solutions Greater Dallas was critical to fostering a positive environment for the PATHS program to move forward and evolve with changing circumstances. Workforce Solutions Greater Dallas stepped into this role after TWIC could no longer administer the awarded funds and actively recruited WSBs to take advantage of the private-funding opportunity. Their experience in a previous privately funded initiative meant they were poised to facilitate the planning and implementation process effectively, promote data collection practices, and ensure monitoring and course-correction mechanisms were in place.